SPOTSYLVANIA COUNTY PLANNING COMMISSION MEETING AGENDA
August 18, 2021 - 7:00 PM

Call to Order

Pledge of Allegiance

Determination of a Quorom

Announcements

- Planning Update

Review and Approval of Minutes

- Review & Approval of Draft Minutes from August 4, 2021

Unfinished Business

Public Hearings

- CPA17-0002 Spotsylvania County Planning Commission - Draft 2021 Comprehensive Update

Public Comment

New Business

Adjournment

By Order of the Spotsylvania County Planning Commission: The Planning Commission reserves the right to amend this agenda on the day of the meeting. The Commission encourages the participation of all county citizens. For those with special needs, please notify the Planning Department Office of any accommodation required five days prior to the meeting you wish to attend.

Spotsylvania County
Planning Commission
Executive Summary

Print

Meeting Date:	August 18, 2021
Title:	Planning Update
Type:	No Action (Information Only)
Agenda Title:	Planning Update
Recommendation:	
Summary:	
Committee/Commission Summary:	
Review Date:	Status:
Financial Impact:	
Staff Contacts:	B. Leon Hughes, AICP, Director of Planning
Legal Counsel:	Alexandra Spaulding, Senior Assistant County Attorney
Additional Background/Other Considerations:	
Consequence of Denial/Inaction:	

ATTACHMENTS:

Name:	Description:	Type:
Planning_Update.pdf	Planning Update	Backup Material

Board of Supervisors
DEBORAH H. FRAZIER
BARRY K. JETT
KEVIN W. MARSHALL
TIMOTHY J. MCLAUGHLIN
DAVID ROSS
GARY F. SKINNER
CHRIS YAKABOUSKI

Department of Planning & Zoning

B. LEON HUGHES, AICP
Director

9019 OLD BATTLEFIELD BLVD., STE 320
SPOTSYLVANIA, VA 22553
(540) 507-7434

PLANNING UPDATE

August 4, 2021

UPCOMING PLANNING COMMISSION MEETINGS:

Wednesday August 18, 2021 Work Session Meeting 5:00 pm Merchant Square Building:

R20-0012 Courthouse Reserve, **Livingston District,** C-2 & R-2 to R-8 for 156 SFA

R20-0013 Porchlight Commons, **Battlefield District**, C-2 to R-8 for 60 age restricted SFA

Wednesday August 18, 2021 Planning Commission Meeting 7:00 pm Holbert Building:

CPA17-0002 Comprehensive Plan Update

COMMUNITY MEETINGS

We have asked applicants to engage citizens using alternative methods. Several applicants are sending notices and setting up web pages that allow citizens to submit comments in response to the notices.

Breckenridge Villas virtual Monday August 9, - Sunday August 22, 2021 www.BreckenridgeVillas.com
Tax Parcels 35-A-9 & 35-8-8A, 10300 & 10316 Courthouse Rd. Currently zoned Residential 1 (R-1) proposed Planned Development Housing 5 (PDH-5) for a 55+ villa style residential community.

NEW PUBLIC HEARING CASES

R21-0013 Dominion Hills, **Lee Hill,** R-2 to R-8 for 61 sfa homes

SUP21-0006 Sheetz, **Battlefield,** Fuel Dispensing Service with convenience store

SUP21-0007 IBEW Training Center, **Lee Hill,** Private School,

NEW PRELIMINARY PLATS

None

OTHER UPDATES

S-Power

Site Plans:

Compliance Items:
N/A

Technical Review Committee Meeting August 5, 2021 in Person and via WebEx:

9:15 PRE21-0030 Littek Salon TM#22A-3-39, **Chancellor District**

9:45 PRE21-0032 Wal-Mart Expansion TM#35-15-2, **Battlefield District**

10:15 ST21-0039 Spotsylvania Towne Center Renovation 13-A-107, **Courtland District**

Technical Review Committee Meeting August 12, 2021 in Person and via WebEx:

9:15 ST21-0037 Discount Tire TM#35-A-102, **Battlefield District**

Technical Review Committee Meeting August 18, 2021 in Person and via WebEx:

TBD

Spotsylvania County Planning Department Public Hearing Cases Status Report

Application #	Lead Staff	Applicant	Project Name	Tax Map #	Address	Description	Proffer Law	Application Complete	Status	Voting District
COMPREHENSIVE PLAN & CODE AMENDMENTS										
CPA17-0002	Jacob	Spotsylvania County Planning Commission	Comprehensive Plan Update	Multiple	Multiple	5 year review and update to the Comprehensive Plan per Code of VA	N/A	N/A	PC Public hearing scheduled 8/18/2021	Countywide
CA21-0002	Kimberly	Spotsylvania County Board of Supervisors	Camping Amendment	N/A	N/A	Amendment of County Code 14-10 to allow camping on private property	N/A	N/A	**BOS Approved 7/27/2021**	Countywide
CA21-0003	Jacob	Spotsylvania County Board of Supervisors	DSM Streets and Parking Amendments	N/A	N/A	Amendment of County Code Sections 23-5 and 23-6 to improve street design standards to accommodate large vehicles.	N/A	N/A	**BOS Approved 7/27/2021**	Countywide
REZONINGS & PROFFER AMENDMENTS										
R15-0006	Leon	David L. Hunter	The Towns at Point Seanna	69-5-B & 69-5-A5	4900 Corsair Terrace	Rezoning of approx. 47 acres from Resort Commercial (RC) and Resort Residential (RR) to Planned Development Housing 2 (PDH-2) for 81 townhouses.	Pre-7/2016	5/29/2015 (Applicant has consented to time extension)	BOS hearing TBD. PC recommended Denial 7-0 on 6/17/2021	Livingston
R18-0001	Leon	2600 SCR, LLC	2600 Acqua	23-A-49, 23-A-49B & 23-A-42	2618 & 2622 Salem Church Rd	Rezoning of 20.77 acres from Commercial 2 (C-2) & Residential 1 (R-1) to Mixed Use 4 (MU-4) for a multifamily residential community with 12,000 sf commercial.	2016	1/24/2018 (Applicant has consented to time extension)	Under Review	Courtland
R19-0003	Shannon	USGGB, LLC	Noah's Landing	24-A-64	East side Lafayette Blvd. at end of Marshall Drive and Normandy Ct	Rezoning of 18.5 acres from Residential 1 (R-1) to Planned Development Housing 8 (PDH-8) for 49 single family detached lots and 53 single family attached lots.	2016	8/31/2021 extension to 1/30/2022	Under Review	Battlefield
R19-0007	Brad	Tricord Homes Inc	Village at Crossroads Station	37-A-48, 49, 50, 52, 52A, 53, 54, 55	South of Rt. 17 between Crossroads Parkway and Thornton Rolling Road	Rezoning request for approximately 115 acres from Rural (Ru), Industrial 1 (I-1), and Commercial 3 (C-3) to Mixed Use (MU-2, MU-3, and MU-4) for 770 single family attached and detached and multifamily residential units.	2016	6/17/2019 (Extension granted)	Under Review	Berkeley
R19-0009	Shannon	Rappahannock Devt. Group, LLC and Sheri L. Kornegay	Lafayette Commons	24-A-49A, 24-A-57, 24-A-59, 24-A-60, 24-A-61, 24-A-62	111 Wakeview Dr., 3103 Lafayette Blvd., and 4 unaddressed properties	Rezoning request for approximately 27.5 acres from Residential 1 (R-1) to Mixed Use 2 & 3 (MU-2 & MU-3) for development of 217 single family attached units and up to 15,257 square feet of commercial space.	2016	8/31/2021 extension to 1/30/22	Under Review	Battlefield
R19-0012	Shannon	Chancellorsville Investment Co, LLC	Legends of Chancellorsville Proffer Amendment	9-A-107	North Side Rt. 3, west of Elys Ford Rd	Proffer amendment to R14-0006 to change building material requirements.	2019	8/31/2021 extension to 1/30/22	Under Review	Chancellor

KEY: TRC - Technical Review Committee meeting
PC - Planning Commission
BOS - Board of Supervisors

Spotsylvania County Planning Department Public Hearing Cases Status Report

Application #	Lead Staff	Applicant	Project Name	Tax Map #	Address	Description	Proffer Law	Application Complete	Status	Voting District
R20-0002	Shannon	International Development of Virginia LLC	Jackson Village Proffer Amendment	36-2-1, 35-A-88, 49-A-101, 35-4-1A	East side Jefferson Davis Hwy, south of Cosner's Corner	Amend proffers for Mixed Use zoned Jackson Village to allow 594 residential condominium units to be built as apartments instead.	2019	9/30/2021 extension to 1/30/22	Under Review	Lee Hill
R20-0008	Shannon	Rappahannock Devt. Group, Linda Curtis and Leigh Ann Curtis-Chapman	Saddle Creek	22-A-103,22-11-4B,22 11-5	11501 & 11513 Piedmont Dr.,6020 Harrison Rd	Rezoning of 47.9 acres from Residential 1 (R-1) to Planned Development Housing-3 (PDH-3) for 103 single-family detached units.	2019	7/8/2021 extension to 8/30/21	**BOS Approved 7/27/2021**	Salem
R20-0010	Brad	Luck Development	Ni Village	16 Parcels	0 River Run Parkway	Rezoning of 16 parcels totaling 323 acres from PDC, RU, I-2& VC to Mixed Use 3 (MU3) & Mixed Use 4 (MU4) for the development of SFA, SFD, MF residential and commercial uses allowed in the MU3 & MU4 districts.	2019	1/8/2021	Under Review	Berkeley
R20-0012	Shannon	Courthouse Green Development, LLC	Courthouse Reserves	47-A-63,64,70B,73,A10 & 47-4-A	0 Pool Drive	Rezoning of six parcels totaling 24.2 acres from Commercial 2 (C-2) and Residential 2 (R-2) to Residential 8 (R-8) for the development of 156 SFA homes.	2019	10/19/2020	Under Review	Livingston
R20-0013	Shannon	CeresMinRoad, LLC	Porchlight Commons	36-A-150,151 &154	4517 Mine Road	Rezoning of three parcels totaling 8.4 acres from Commercial 2 (C-2) to Residential 8 (R-8) for the development of 60 age-restricted townhomes.	2019	9/23/2020 (extension to 12/31/21)	PC work session scheduled on 8/18/2021	Battlefield
R20-0014	Brad	LID,LLC & IWG Thornburg, LLC	Thornburg Village	63-12-C,D,E & 27;63-A-32,33 & 37	6306 Jefferson Davis Hwy.	Rezoning of six parcels totaling 98.3 acres from Agricultural 2 (A-2) and Commercial 3 (C-3) to Planned Development Housing 5(PDH-5) and Commercial 3 (C-3) for the development of 162 single family detached and 212 single family attached units.	2019	12/11/2020	Under Review	Berkeley
R20-0015	Brad	Thornburg, LLC	Thornburg Commons	63-A-35 & 35C	0 Morris Road	Rezoning of two parcels totaling 59 acres from Agricultural 2(A-2) to Planned Development Housing 5 (PDH-5) for the development of 157 single family detached and 62 single family attached units.	2019	12/11/2020	Under Review	Berkeley
R21-0001	Brad	Jarrell Properties	Germanna Terrace	36-A-15	9919 Glenwood Drive	Rezoning of 35 acres from Commercial 3(C-3) and Residential 2(R-2) to Residential 12(R-12) for 320 MF units and 86 SFA units.	2019	TBD	Under Review	Lee Hill
R21-0002	Brad	Wajdi Abi Faraj	Tidewater Auto Service	25B-1-7	11325 Tidewater Trail	Rezoning of 0.57 acres from Residential 2 (R-2) to Commercial 3(C-3).	2019	3/10/2021	Under Review	Lee Hill
R21-0003	Brad	John Pendleton	Pendleton	35-A-32	9608 Leavells Road	Rezoning of 3.217 acres from RU to R-3 for 2 SFD units.	2019	3/30/2021	Under Review	Battlefield

KEY: TRC - Technical Review Committee meeting
PC - Planning Commission
BOS - Board of Supervisors

Spotsylvania County Planning Department Public Hearing Cases Status Report

Application #	Lead Staff	Applicant	Project Name	Tax Map #	Address	Description	Proffer Law	Application Complete	Status	Voting District
R21-0006	Shannon	TFO Wellesley Joint Venture, LLC	Broaddus Development Project	64-A-8B	0 Mudd Tavern Road	Rezoning of Tax Parcel 64-A-8 (Broaddus Property) from Agricultural 2 (A-2) to Industrial 2 (I-2) which totals 82 acres with 78.74 acres in Spotsylvania and a 3.26 acre portion in Caroline County for the development of an industrial park. This is a concurrent application for the rezoning of 116 acres in Caroline County from Rural Preservation (RP) to M-1 Industrial.	2019	4/21/2021	Under Review	Berkeley
R21-0007	Shannon	Fairchild Manor, LLC	Fairchild Property	47-6-2 & 47-6-1A	8601 Courthouse Road & 7204 Massaponax Church Road	Rezoning request for two parcels 14 acres from RU to MU-2 for 37 Single family detached and 18 single family attached units at the corner of Courthouse and Massaponax Church Roads.	2019	4/29/2021	Under Review	Berkeley
R21-0008	Brad	SES Properties, LLC	Staples Reserve	50-A-115	3736 Massaponax Church Road	Rezoning of 2 parcels totaling 42.98 acres from RU to PDH-2 for the development of 85 SFDs. Project is located on the east side of Massaponax Church Road (Route 608) approx. 0.26 miles north of intersection with Summit Crossing Road (Route 668).	2019	5/3/2021	Under Review	Berkeley
R21-0009	Brad	All American Mobility LLC	All American Mobility	35-A-119	10726 Courthouse Road	Rezoning of 2.36 acres from Residential 1 (R-1) to Commercial 2 (C-2) for a retail use.	2019	6/29/2021	Under Review	Courtland
R21-0010	Brad	Vakos Companies	Spotsylvania Courthouse Village	47-A-1,2,3,3A,46A,59,59A & 47-8-1	Brock Road and Robert E. Lee Drive	Rezoning of 9 parcels totaling of 20.52 acres from C-1, C-2 & RU to Mixed Use 3(MU-3) and Mixed Use 4(MU-4) for the development of 47 SFA units, 55 MF units and a total of 40,250 sq. ft. of retail space.	2019	TBD	Under Review	Livingston
R21-0011	Brad	Old Plank Partners LLC	Linwood Estates	21-10-1 & 2	7611 & 7613 Old Plank Road	Rezoning of 27 acres from Rural (RU) to Planned Development Housing (PDH-4) for the development of 64 SFD homes.	2019	TBD	Under Review	Chancellor
R21-0013	Shannon	Rob Gollahon	Domininon Hills	36B-2-6,5,4,3,2 & 36-13-F1pt	Lee Hill School Drive	Rezoning of 7.85 acres from Residential 2 (R-2) to Residential 8 (R-8) for the development of 61 SFA homes.	2019	TBD	Under Review	Lee Hil
R21-0014	Brad	Crossroads Associates LLC	Crossroads Station	37-A-41A & 37-9-6B	3120 Crossroads Station Blvd.	Proposed proffer amendment to remove limits on number of one bedroom units.	2019	TBD	Under Review	Berkeley
SPECIAL USE PERMITS										
SUP18-0010	Leon	Zakia Walizada	Vertex Auto Sales and Repair	23-A-144R	112 Pegram Ln	Special Use Permit to allow vehicle sales on a parcel less than 2 acres in the Commercial 3 (C-3) zoning district.	N/A	7/20/2018 (applicant has consented to a time extension)	Under Review	Courtland

KEY: TRC - Technical Review Committee meeting
PC - Planning Commission
BOS - Board of Supervisors

Spotsylvania County Planning Department Public Hearing Cases Status Report

Application #	Lead Staff	Applicant	Project Name	Tax Map #	Address	Description	Proffer Law	Application Complete	Status	Voting District
SUP21-0001	Brad	Capital Auto, LLC	Capital Auto Car Sales	36-17-A3	4714 Mine Road	Special Use Permit to allow vehicle sales on a parcel less than 2 acres in the Commercial 3 (C-3) zoning district.	N/A	3/16/2021	**PC recommended denial 6-0 on 8-4-2021. BOS scheduled for 9/14/2021**	Battlefield
SUP21-0002	Shannon	Cellco Partnership	Cellco/Verizon	64-A-3	3800 Guinea Station Rd	Special Use Permit to allow a 199' cell tower	N/A	3/15/2021	**BOS Approved on 8/10/2021**	Berkeley
SUP21-0004	Brad	Gary Wiseman	Platinum Auto Sales	24C-8-B	98 Fleming Street	Special Use Permit to allow vehicle sales on a parcel less than 2 acres in the Commercial 3 (C-3) zoning district.	N/A	4/8/2021	Under Review	Battlefield
SUP21-0005	Shannon	Trey Wills	Four Seasons RV Park	53-A-1 & 1B	16736 Days Bridge Road	Special Use Permit to allow the development of a 300 lot recreational vehicle campground resort on two parcels totaling 135 acres.	N/A	5/25/2021	Under Review	Livingston
SUP21-0006	Brad	HHH Holdings, LLC	Sheetz	35-13-3	0 Spotsylvania Pkwy	Special Use Permit to allow 12 fuel dispensing stations with a convienence store on 2.83 acres of an 8 acre parcel zoned Commercial-2 (C-2).	N/A	8/3/2021	Under Review	Battlefield
SUP21-0007	Brad	International Brotherhood of Elecrical Workers Local 70	IBEW Training Center	49-A-28	5631 Smith Station Road	Special Use Permit to allow the devlopment of a Private School	N/A	TBD	Under Review	Lee Hill
SUP21-0008	TBD	VL Jenkins Heating & Air Inc.	Jenkins	70-A-79C	5755 Courthhous Rd	Special Use Permit to allow HVAC contractors office with a storage unit on a 1.2 acre parcel zoned Agricultural 3(A-3)	N/A	TBD	Under Review	Livingston

Proffer Law
Key:
Pre 7/2016 - Proffer Guidelines in effect
2016 - Strict Proffer Law
2019 - New Proffer Law

KEY: TRC - Technical Review Committee meeting
PC - Planning Commission
BOS - Board of Supervisors

Spotsylvania County
Planning Commission
Executive Summary

Print

Meeting Date:	August 18, 2021
Title:	Review & Approval of Draft Minutes from August 4, 2021
Type:	Action
Agenda Title:	Review & Approval of Draft Minutes from August 4, 2021
Recommendation:	Approval
Summary:	
Committee/Commission Summary:	
Review Date:	Status:
Financial Impact:	
Staff Contacts:	Paulette Mann, Commission Secretary
Legal Counsel:	
Additional Background/Other Considerations:	
Consequence of Denial/Inaction:	

ATTACHMENTS:

Name:	Description:	Type:
pcmin21_0804.docx	Draft Minutes from August 4, 2021	Minutes

Spotsylvania County Planning Commission DRAFT

Board Room – Holbert Building, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES:	August 4, 2021	
Call to Order:	Ms. Maddox called the meeting to order at 7:00 p.m.	
Members Present:	Mary Lee Carter	Lee Hill
	Jennifer Maddox	Berkeley
	Richard Thompson	Courtland
	Dr. Raymond Bell	Salem
	Jacob Lane	Livingston
	Gerald Childress	Chancellor
Members Absent:	C. Travis Bullock	Battlefield
Staff Present:	Paulette Mann, Planning Commission Secretary	
	B. Leon Hughes, AICP, Director of Planning & Zoning	
	Alexandra Spaulding, Senior Assistant County Attorney	
	Kimberly Pomatto, CZA, Deputy Director of Planning & Zoning	
	Brad Robinson, CZA, Planner II	

Announcements: Mr. Hughes updated the Commission on upcoming cases, what's on the TRC agendas and community meetings.

Additionally, he introduced Cherie Wyatt, new Planner II, to the Commission.

Review and approval of minutes of July 7, 2021

Motion and vote: On a motion by Ms. Maddox, seconded by Mr. Thompson, the Commission voted to approve the minutes.

VOTE:

Ayes: 6 Dr. Bell, Ms. Carter, Ms. Maddox, Mr. Lane, Mr. Thompson and Mr. Childress
Nays: 0
Absent: 1 Mr. Bullock
Abstain: 0

Public Hearing(s):

SUP21-0001 Urfan & Uzair, LLC (Capital Auto): Requests a special use to allow vehicle sale, rental, and ancillary service establishment (small scale) on a parcel consisting of approximately 1.67 acres zoned Commercial 3 (C-3). The parcel is addressed as 4714 Mine Road and is located on the south side of Mine Road (Route 636) approximately 534 feet east of the Jefferson Davis Highway (Route 1) and Mine Road (Route 636) intersection. The parcel is located in the Primary

Development Boundary and the Primary Highway Corridor Overlay District. The property is designated for Commercial Land Use on the Future Land Use Map of the Comprehensive Plan. Tax Parcel 36-17-A3. Battlefield Voting District.

Ms. Maddox opened the public hearing.

Mr. Robinson presented the case. The application requests a Special Use Permit to allow a vehicle sale, rental, and ancillary service establishment (small scale) on a parcel containing 1.67 acres and zoned Commercial 3 (C-3). The parcel is identified as Tax Map 36-17-A3 and is located at 4714 Mine Road (Route 636) approximately 534 feet east of the Jefferson Davis Highway (Route 1) and Mine Road (Route 636) intersection. The property is currently developed with an existing 5,915 square foot vacant building and parking area that was formerly occupied by a Ruby Tuesday restaurant. The application proposes to adaptively reuse the property for used car sales to be known as Capital Auto, a dealership which was formerly located at 4601 Lassen Lane approximately 1.1 miles north of the property before ceasing operation at that location. The existing building will be utilized as the sales office and the existing parking area will be designated for customers, employees and display vehicles. No additional physical improvements to the property are proposed and the applicant has indicated no servicing of vehicles will occur on the site.

The Generalized Development Plan (GDP) proposes to allocate 19 spaces in the parking area for customers and 5 spaces for employees, with the remaining 86 spaces to be designated for display vehicles. Staff has recommended a condition limiting the number of display vehicles on the property to 86 vehicles, to ensure that all display vehicles are parked and stored in a designated parking space and that parking on the site does not exceed its capacity.

The site is accessed from a 30’ wide ingress and egress easement from Mine Road (Route 636) on the east side of the site. The same easement is also located along the south and rear side of the site and adjoining properties, providing additional access points from Jefferson Davis Highway (Route 1) and Spotsylvania Avenue (Route 1234). The applicant submitted within the GDP narrative a vehicle delivery statement indicating that delivery of stock vehicles will utilize the entrance from Mine Road (Route 636) using a RAM 3500 truck with a fifth wheel trailer. Staff has included in the conditions language prohibiting the use of large commercial haulers capable of accommodating more than 3 vehicles. The loading zone at the rear of the former restaurant will be used for the delivery and unloading of stock vehicles. The estimated daily vehicular trips generated by the proposed use is 160 trips per day which is lower than the 662 trips estimated for the previous restaurant use. No decrease in levels of service on Mine Road (Route 636) are anticipated as a result of this proposal.

Staff has conducted a Comprehensive Plan analysis and determined the proposed project to be consistent with the goals and objectives on the Comprehensive Plan.

Mr. Robinson discussed the following findings:

In Favor:

- The request is consistent with the Comprehensive Plan with respect to land use, public facilities and historic and natural resources goals and policies.
- The proposal allows for the reuse of an existing vacant commercial site.
- The estimated daily vehicular trips for the proposed use is less than the previous restaurant use and is not expected to have a negative impact on the transportation network.
- The proposal includes sidewalk improvements which will provide pedestrian connectivity in the area.

Against:

- The proposed use is not compatible with the development pattern of the immediate area; similar uses are concentrated further north along Route 1.
- The proposed commercial use is not compatible with the consumer service uses around the site.
- The proposed use will utilize a commercial site located in close proximity to major economic development activity in the County. The C-3 zoning of the property is the most generous of the County's commercial districts with regard to uses permitted by right, offering an opportunity for the property to be developed or redeveloped with a use more compatible with the surrounding area.

Mr. Robinson explained that special uses are generally compatible with other uses permitted in a district but which, because of their unique characteristics or potential impacts, require individual consideration of their design, configuration or operation at the particular location (Sec. 23-4.5.1). The proposal generally conforms to the commercial land use designation but would introduce a use currently contained primarily north of the site along Route 1. This segment of Mine Road provides services for nearby residential development in addition the use is not compatible with forthcoming economic development in the area. Staff notes that while a large scale vehicle sales establishment is permitted by right in the C-3 district, this segment of Mine Road does not contain parcels that are large enough to accommodate this use which limits its ability to be located along the corridor throughout the C-3 district. Based on staff's analysis and findings against noted above, staff recommends denial. Should the Planning Commission deem this application appropriate for approval, staff recommends approval be accompanied with the following conditions:

1. The project will be developed in conformance with the Generalized Development Plan titled "Special Use Permit, Generalized Development Plan, Capital Auto" dated February 19, 2021 and last revised July 12, 2021 as prepared by Sullivan, Donahoe & Ingalls, Inc.
2. Display vehicles will only be parked within designated parking spaces for vehicle display areas as depicted on the GDP.
3. No more than 86 display vehicles will be located on the site at any one time.

4. There will be no vehicle service (major or light) conducted on site.
5. Display vehicles will be delivered individually or via delivery trucks to the site utilizing the private access drive from Mine Road (Route 636) and the delivery truck path as depicted on the GDP. At no time shall delivery trucks block or park on the public street.
6. No large commercial haulers are permitted to deliver vehicles to the site. Large commercial haulers are defined as delivery trucks that can haul more than 3 vehicles.
7. The existing freestanding sign will be modified or replaced with a monument sign that meets the requirements of the Highway Corridor Overlay District (HCOD). The sign must also comply with the requirements in Sec. 23-5.8.2 of the Zoning Ordinance.
8. All existing landscaping improvements as depicted on the GDP will remain in place and will be maintained. Dead or diseased trees and plantings must be replaced with equivalent species, size, and quantity.
9. The parking area will be paved, striped, and maintained in accordance with the pavement design standards.
10. Submission and approval of a minor site plan is required prior to commencement of the use.

Dr. Bell inquired if the recommended conditions were made clear to the applicant.

Mr. Robinson stated yes.

Applicant, Charlie Payne, representing the applicant: He stated that his client has invested $15 million in the County and is prepared to spend another $10 million to make this dealership upscale. He intends to sell luxury cars and create 20 jobs. Mr. Payne stated that his client is willing to work with staff and asked for their favorable recommendation to the Board of Supervisors.

Dr. Bell stated that with the VA coming to the area he has concerns about another car dealership.

Mr. Lane agreed. He inquired about the location where he spent $15 million.

Mr. Robinson explained that he vacated the site and has leased the building to Enterprise and the use it was by-right.

Mr. Payne informed the Commission that this is not an additional car lot, it's a replacement, as Enterprise now operates off of Lassen Lane.

Mr. Lane stated that there could potentially be a recharge in development in this location since the VA is coming. He stated he believes the Rite Aid could potentially re-open or rebrand since it will be so close to the VA Medical Center.

There was discussion that occurred regarding whether car dealerships should be located within gateways to residential uses. Most of the car dealerships are located along the Route 1 corridor.

Mr. Hughes stated that this is not only about the VA. Staff doesn't suggest a proliferation of car dealerships in gateways to residential uses because of potential negative impacts on the residential property owners.

Dr. Bell stated that the tax base would be greater with luxury cars.

Ms. Spaulding reminded the Commission that staff creates conditions to help mitigate the impacts on adjacent properties and tax payers. The applicant really has no say in whether they agree or disagree with conditions.

Speaking in favor or opposition:

Ms. Mann read a letter submitted by Mr. Brandon Brown: He stated that he is opposed due to an excessive amount of car dealerships in the county already. He said the vacant Ruby Tuesday building is more appealing to him than another car dealership and that it will make the area look low end.

Ms. Maddox closed the public hearing.

Ms. Maddox stated that she likes the layout of the property compared to many others that they have seen for unloading of vehicles.

Ms. Carter stated that the applicant constructed a beautiful building on Lassen Lane and it was a great additon to the area. She stated that she doesn't feel this site is a good location due to it's proximity to a residential area.

Motion and vote: Ms. Maddox made a motion, seconded by Ms. Carter to deny the special use request. Should the Board wish to approve, the Commission recommends the conditions indentified in the staff report.. The motion passed 6-0.

Public Comment:

Phil Defibaugh, Oakridge Civic Association: He stated that he bought his vacation home on Lake Anna in 1979 and moved here full-time in 2005. He expressed his opposition to the proposed RV Park on Lake Anna due to traffic, RVs making the turns on poor roadways, and geological concerns related to impacts on wells.

New Business:

Mr. Lane inquired about the RV park and the status of the case.

Mr. Hughes stated that staff is awaiting revisions from the applicant.

Mr. Lane inquired if the case can bypass the Commission and go straight to the Board.

Mr. Hughes stated no, that isnot possible.

Adjournment

Motion and vote: On a motion by Mr. Thompson, seconded by Ms. Carter, a motion was made to adjourn.

VOTE:

Ayes: 6 Dr. Bell, Ms. Carter, Mr. Lane, Ms. Maddox, Mr. Childress, and Mr. Thompson
Nays: 0
Absent: 1 Mr. Bullock
Abstain: 0

The meeting adjourned at 7:45 p.m.

Spotsylvania County
Planning Commission
Executive Summary

Print

Meeting Date:	August 18, 2021
Title:	CPA17-0002: Draft 2021 Comprehensive Plan Update
Type:	Action, Resolution, Public Hearing, Power Point Presentation
Agenda Title:	CPA17-0002 Spotsylvania County Planning Commission - Draft 2021 Comprehensive Update
Recommendation:	Staff recommends approval of the draft Comprehensive Plan
Summary:	Proposed is a major update to the Spotsylvania County Comprehensive Plan consistent with the Code of Virginia §15.2-2230, 15.2-2223, 15.2-2224, and 9VAC25-830-170. Specifically, this update proposes to amend the 2013 Comprehensive Plan as last updated July 28, 2020, as follows: repeal and replace: Chapter 1 Introduction and Vision; Chapter 2 Future Land Use; Chapter 4 Public Facilities including Sub-Chapters 4A-4H; Chapter 5 Historic Resources; Chapter 6 Natural Resources; and Appendices C-D; and amend and re-ordain: Chapter 3 Transportation, including Sub-Chapter 3A; and Appendices A-B. Proposed Sub-Chapter 4G Parks and Recreation would result in repealing the Spotsylvania County Parks and Recreation Master Plan adopted March 2009, last revised February 2011. Universally, document footers will be updated to note a new adoption date. Additionally, throughout the Plan, there are numerous hyperlinks to electronic mapping resources and referenced plans, studies, resources intended as informational resources. To review the whole breadth of this updated, attached you will find clean and redline versions of the Comprehensive Plan and Appendices. Additionally, for reference sake the attached resolution notes all substantive changes throughout the document. These details have been conveyed within the public hearing advertisement posted in advance of this public hearing.
Committee/Commission Summary:	
Review Date:	Status:
Financial Impact:	N/A
Staff Contacts:	Leon Hughes, Director of Planning and Zoning; Kimberly

	Pomatto, Deputy Director of Planning and Zoning; Jacob Pastwik, Planner III
Legal Counsel:	Alexandra Spaulding, Senior Assistant County Attorney
Additional Background/Other Considerations:	These amendments were initiated by the Planning Commission for public hearing during the April 21, 2021 meeting. The Comprehensive Plan provides the County's vision for land use and development twenty years into the future. The Comprehensive Plan was updated as a whole last in 2013. There have been a number of Chapter specific updates since that time. This major update was initiated as part of a 5-year update cycle begun in late 2017. Planning staff have received regular direction on the formation of this major update over the course of numerous work sessions held with the Planning Commission to discuss subject matter. Community feedback has been collected throughout the course of the update. Written comments have been attached for reference and previously discussed with the Planning Commission. In light of the Covid-19 pandemic County resources developed a web based Comprehensive Plan interactive website whose public review and comment period ran between December 16, 2020 through January 31, 2021.
Consequence of Denial/Inaction:	The currently adopted Comprehensive Plan will remain in effect.

ATTACHMENTS:

Name:	Description:	Type:
2021_Comprehensive_Plan_(Complete_Clean).pdf	DRAFT 2021 Comprehensive Plan (Complete Redline)	Backup Material
2021_Comprehensive_Plan_(Complete_Redline).pdf	DRAFT 2021 Comprehensive Plan (Complete Redline)	Backup Material
2021_Comprehensive_Plan_Appendices_(Complete_Clean).pdf	Draft 2021 Comprehensive Plan Appendices (Complete Clean)	Exhibit
2021_Comprehensive_Plan_Appendices_(Complete_Redline).pdf	Draft 2021 Comprehensive Plan Appendices (Complete Redline)	Exhibit
Resolution_for_Approval.pdf	Planning Commission Resolution (Recommendation to the Board)	Resolution
Chapter_1_Introduction_and_Vision_and_Comprehensive_Plan_Process_Meeting_Minutes_Collection.pdf	Chapter 1 Introduction and Vision and Comprehensive Plan Process Meeting Minutes Collection	Minutes
	Chapter 2 Land Use	

Chapter_2_Land_Use_Meeting_Minutes_Collection.pdf	Meeting Minutes Collection	Minutes
Chapter_3_Transportation_Meeting_Minutes_Collection.pdf	Chapter 3 Transportation Meeting Minutes Collection	Minutes
Chapter_4_Public_Facilities_Meeting_Minutes_Collection.pdf	Chapter 4 Public Facilities Meeting Minutes Collection	Minutes
Chapter_5_Historic_Resources_Meeting_Minutes_Collection.pdf	Chapter 5 Historic Resources Meeting Minutes Collection	Minutes
Chapter_6_Natural_Resources_Meeting_Minutes_Collection.pdf	Chapter 6 Natural Resources Meeting Minutes Collection	Minutes
Compiled_Comp_Plan_Comments_(PDB_FLUM)_Prior_to_Geohub.pdf	Compiled Community Comments (Prior to Geohub Website Comment period)	Backup Material
Public_Comment_Period_Community_Feedback_and_Staff_Responses_Table.pdf	Public Comment Period (Website) Community Feedback and Staff Responses Table	Backup Material
RE__[EXTERNAL]__Re__Lake_Anna_Mixed_Use_Area_04022021.pdf	Post Geohub Website Community Feedback	Backup Material
VDOT_Transportation_Chapter_Review_Confirmation_Post_July_2020_Adoption_01042021.pdf	VDOT Transportation Chapter Review Confirmation Notification	Backup Material
Code_of_Virginia_References_Compiled.pdf	Code of Virginia References Compiled	Backup Material

DRAFT

SPOTSYLVANIA COUNTY

VIRGINIA

Comprehensive Plan

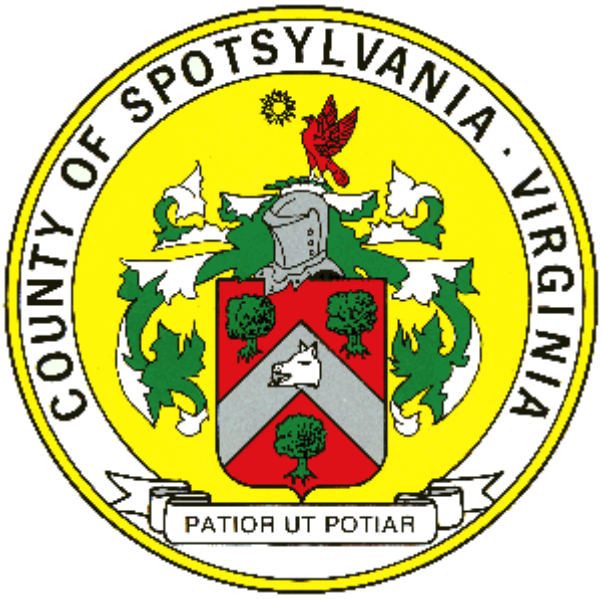
Adopted by the Spotsylvania County Board of Supervisors

DRAFT - [Insert approval date here]

Cover Page design/layout by Meggie Roche, Spotsylvania County Economic Development

Cover Page Photos

- Lighthouse image – Chris McCotter
- Mall image – Cafaro Company
- Battlefield image – National Park Service
- Merchant Square image – Sue Henderson
- Historic Courthouse image – Michelle McGinnis



SPOTSYLVANIA COUNTY COMPREHENSIVE PLAN

Adopted by the Spotsylvania County Board of Supervisors DRAFT

ACKNOWLEDGEMENTS

Thank you to the many people who contributed to development of this Comprehensive Plan.

Current Spotsylvania County Board of Supervisors

Timothy J. McLaughlin
Barry K. Jett
Kevin Marshall
Chris Yakabouski
David Ross
Gary F. Skinner
Dr. Deborah H. Frazier

Former Spotsylvania County Board of Supervisors Members

Greg Benton
Paul D. Trampe

Current Spotsylvania County Planning Commission

Mary Lee Carter
C.Travis Bullock
Jennifer Maddox
Gerald Childress
Richard Thompson
Dr. Raymond Bell
Jacob Lane

Former Spotsylvania County Planning Commission Members

Gregg A. Newhouse
Mike Medina
Howard Smith

Ed Petrovitch, County Administrator, and County Staff

Spotsylvania County Comprehensive Plan

Adopted DRAFT

TABLE OF CONTENTS

Chapter 1 **Introduction and Vision**

Chapter 2 **Land Use**

Table- Zoning Districts Complementary to Land Use Designations within the Primary Development Boundary

Table- Zoning Districts Complementary to Land Use Designations outside of the Primary Development Boundary

Tourism Zone Map

Technology Zone Map

Opportunity Zone Map

HUBZones Map

Primary Development Boundary Map

Future Land Use Map (County-wide)

Future Land Use Map – Primary Development Boundary Zoom

Electric Transmission Map

Chapter 3 **Transportation & Thoroughfare Plan**

Thoroughfare Plan Table

Thoroughfare Plan Map (Primary Development Boundary)

Thoroughfare Plan Map (County-wide)

Functional Classifications Map

Chapter 3A **Trailways Master Plan**

Trailways Master Plan Map

	Road Based Bicycle and Pedestrian Improvements Map
	Greenways Plan Map
Chapter 4	Public Facilities Plan
	Government Facilities Map
Chapter 4A	Schools
	Schools Map
Chapter 4B	Fire, Rescue, Emergency Management (FREM)
	First Response Zones Map
	5-Mile Response Map
	Population Density to Service Areas Map
Chapter 4C	Sheriff
	Public Safety Existing Facilities Map (Incl FREM)
Chapter 4D	Solid Waste
	5-Mile Service Areas Map
Chapter 4E	Water and Sewer
Chapter 4F	Libraries
Chapter 4G	Parks and Recreation
	Parks and Recreation Facilities and Needs Map
Chapter 4H	General Government
Chapter 5	Historic Resources
Chapter 6	Natural Resources
Appendix A	Land Use – Fort A.P. Hill Approach Fan Map and Joint Land Use Study (JLUS)
Appendix B	Transportation Priorities Exhibit

Appendix C Historic Resources

Appendix D Natural Resources

Geology and Mineral Resources Map

Steep Slopes Map

Hydric Soils Map

Erodibility (K Factor Whole Soil) Map

Septic Suitability Map

Depth to Water Table Map

Soil Drainage Map

Agricultural Suitability Map

Agricultural Soils Map

Forest Conservation Value Map

Ecological Cores Map

Note: The Comprehensive Plan contains numerous hyperlinks to electronic mapping resources, referenced plans, studies, other resources intended for informational resources. These links are meant as helpful resources and come from a variety of host sites maintained by others. They are intended to be updated administratively if links become broken. To report any broken links found please send an email to planning@spotsylvania.va.us.

Chapter 1

INTRODUCTION AND VISION

INTRODUCTION

The Spotsylvania County Comprehensive Plan presents a long range land use vision for the County. The Comprehensive Plan sets forth principles, goals, policies, and implementation techniques that will guide the development activity within the County and promote, preserve, and protect the health, safety, and general welfare of its citizens. Specifically, the Plan provides data and analysis on land use, transportation, housing, natural and historic resources, and public facilities and utilities. The purpose of this document is not to regulate, but rather guide land use, transportation, and infrastructure decisions. This guidance seeks to ensure continued economic and community vitality while ensuring necessary policies and infrastructure are in place to provide for the continuation of quality services to Spotsylvania's residents and businesses.

The majority of the Comprehensive Plan's policies focus on the next 20 years and provide guidance for development decisions. These policies can be amended as new information is available, or to address a change in circumstances, without straying from the basic vision and goals of the Plan. Therefore, the Comprehensive Plan is not a static document and should be changed if deemed appropriate. Changes to the document can be achieved through a Comprehensive Plan Amendment. The process entails public hearings before the Planning Commission and Board of Supervisors.

The County has established a Comprehensive Plan Vision Statement to guide the overall direction of the Comprehensive Plan, Comprehensive Plan updates, its Action Items, Goals, Objectives and Strategies. The Vision Statement is as follows:

Vision Statement

"Spotsylvania families will enjoy a community that remembers and respects its place in our nation's history and builds on the principles of our founding fathers to provide freedom and prosperity through limited government, respect for property rights, low taxes and pro-business policies for the 21st Century."

Legal Basis for the Plan

The County's Planning Commission is responsible for preparing the elements of the Comprehensive Plan under the Virginia Code, Section 15.2-2223 which states in the pertinent parts:

> "The local Planning Commission shall prepare and recommend a comprehensive plan for the physical development of the territory within its jurisdiction and every governing body shall adopt a comprehensive plan for the territory under its jurisdiction." The Code states that the purpose of the comprehensive plan is to achieve "a coordinated, adjusted and harmonious development of the territory which will, in accordance with present and probable future needs and resources, best promote the health, safety, morals, order, convenience, prosperity and general welfare of the inhabitants, including the elderly and persons with disabilities."

The Comprehensive Plan establishes goals, objectives, policies and implementation techniques that will provide the tools to help the decision makers guide the County's future development.

Section 15.2-2223 further states:

> "The Comprehensive Plan shall be general in nature, in that it shall designate the general or approximate location, character and extent of each feature, including any road improvement and any transportation improvements and shall indicate where existing lands or facilities are proposed to be extended, widened, removed, relocated, vacated, narrowed, abandoned or changed in use as the case may be. As part of the Comprehensive Plan, each locality shall develop a transportation plan that designates a system of transportation infrastructure needs and recommendations that may include the designation of new and expanded transportation facilities that support the planned development of the territory covered by the plan and shall include, as appropriate, but not limited to roadways, bicycle accommodations, pedestrian accommodations, railways, bridges, waterways, airports, ports, and public transportation facilities."

Section 15.2-2224 states in part that, "The Comprehensive Plan shall recommend methods of implementation and shall include a current map of the area covered by the Comprehensive Plan."

Amendment Process

Under Section 15.2-2229 the County Board of Supervisors may consider amendments to the Comprehensive Plan. The Comprehensive Plan is the document by which the County will evaluate rezoning and special use applications, public facility locations, and capital improvements for consistency with its development policies. If an application is determined to be inconsistent with the Comprehensive Plan, an amendment to the Comprehensive Plan may be considered. The application will be reviewed by the Planning Commission for consistency with the elements contained within the Plan.

The applicant should demonstrate that any change in land use designation or density/intensity:

- would benefit the public health, safety and welfare;
- is consistent with the Goals, Objectives, and Policies of the Comprehensive Plan and appropriate Development Districts (i.e., Primary Settlement);
- will not be detrimental to uses of property in the immediate vicinity of the subject property;
- has merit and value for the community as a whole; and
- will result in benefits (fiscal, aesthetic, employment, etc.) that will outweigh any significant impact of the change.

Growth Rates and Projections

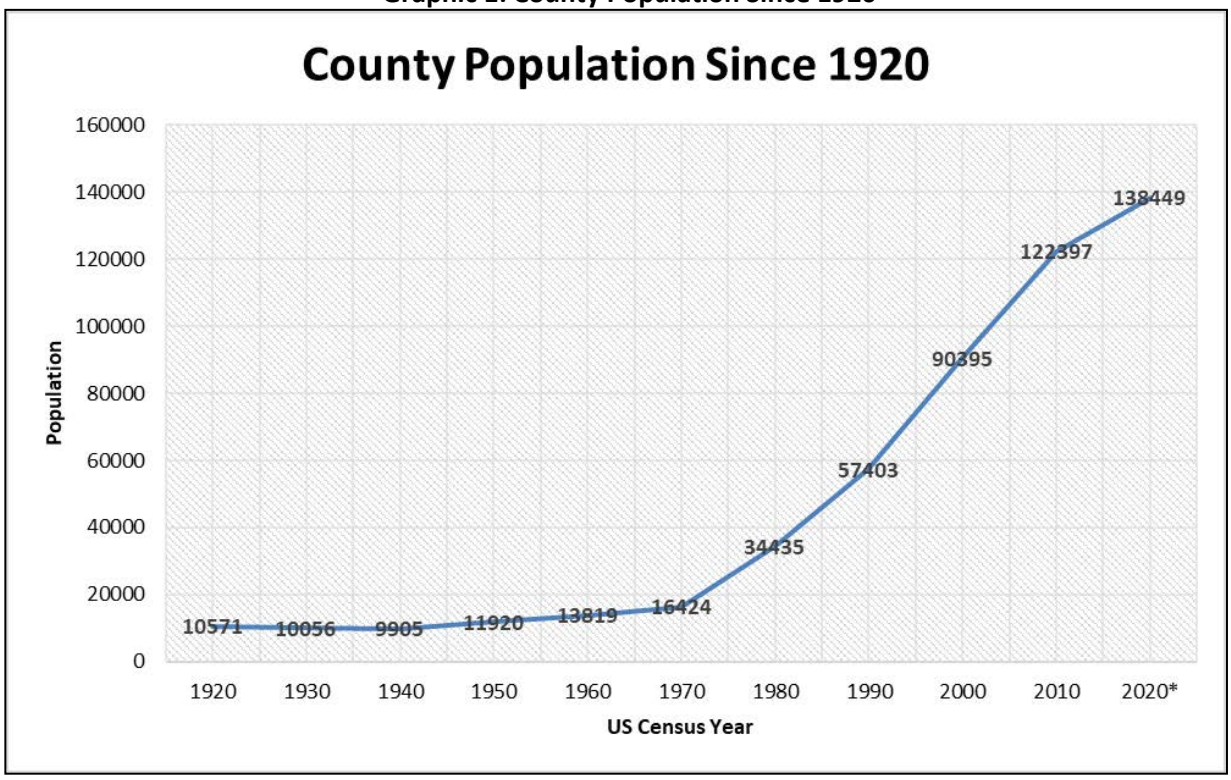
In 1990, the U. S. Census Bureau indicated that the County population totaled 57,403. By 2000, the population had increased to 90,395. This represented a 57.5 percent increase since 1990 or an average annual growth rate of 4.6 percent. The Census Bureau reported the County population to be 122,397 in 2010, a 35.4 percent increase since 2000, making Spotsylvania County one of the fastest growing counties in the nation. US Census population estimates as of 2020 are 138,449. This population figure represents a population increase of approximately 13.1% since 2010. This growth is principally due to the County's location along Interstate 95 midway between Washington, D.C. and Richmond as well as the high quality of life available. Continued growth is expected within Spotsylvania County and

surrounding localities in the region. For Spotsylvania County, based on Weldon Cooper estimates, the population is expected to be 159,641 in 2030, and 181,549 by 2040 (the end of the Planning period).

Population and Growth Rate

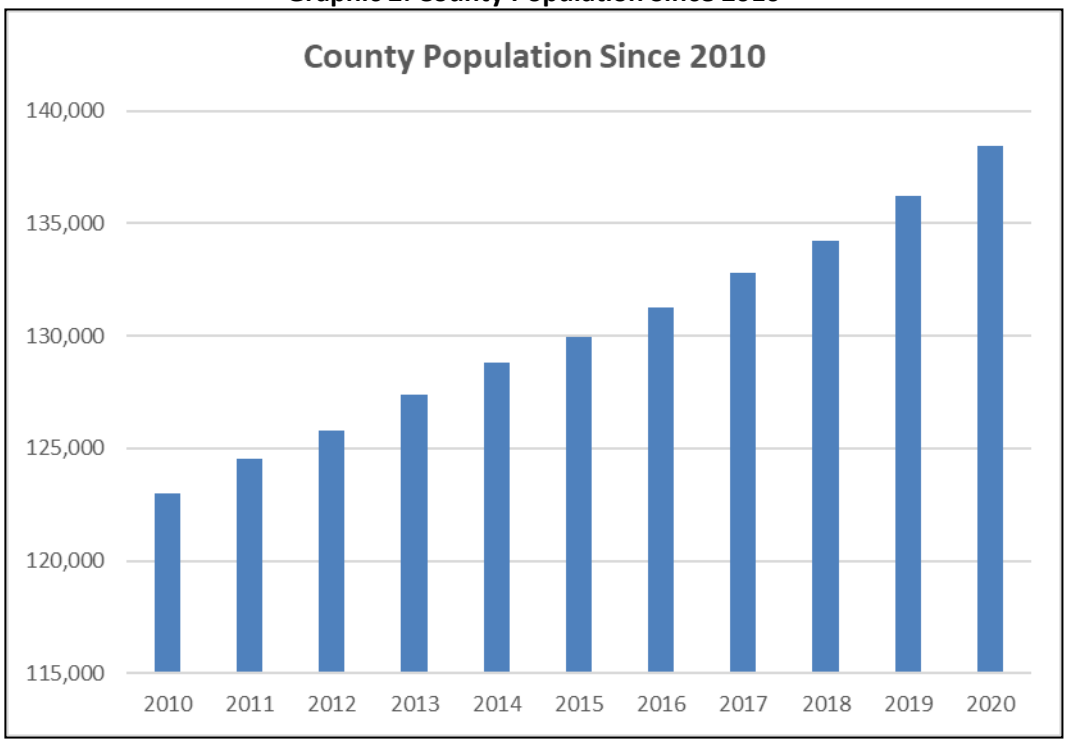
Below you will find historic and recent population tables for Spotsylvania County. Annual growth rate tracking since 2011 will also be found below:

Graphic 1: County Population Since 1920



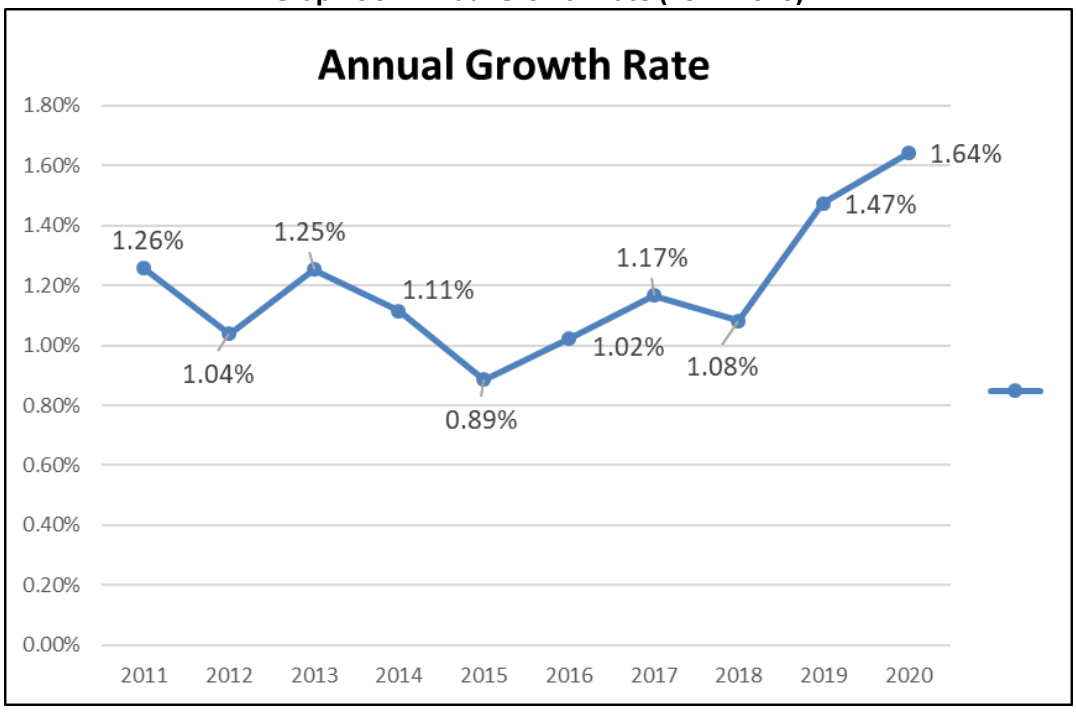
Source: US Census most recently available population estimate (2020*). All other figures based on historic decennial US Census'.

Graphic 2: County Population Since 2010



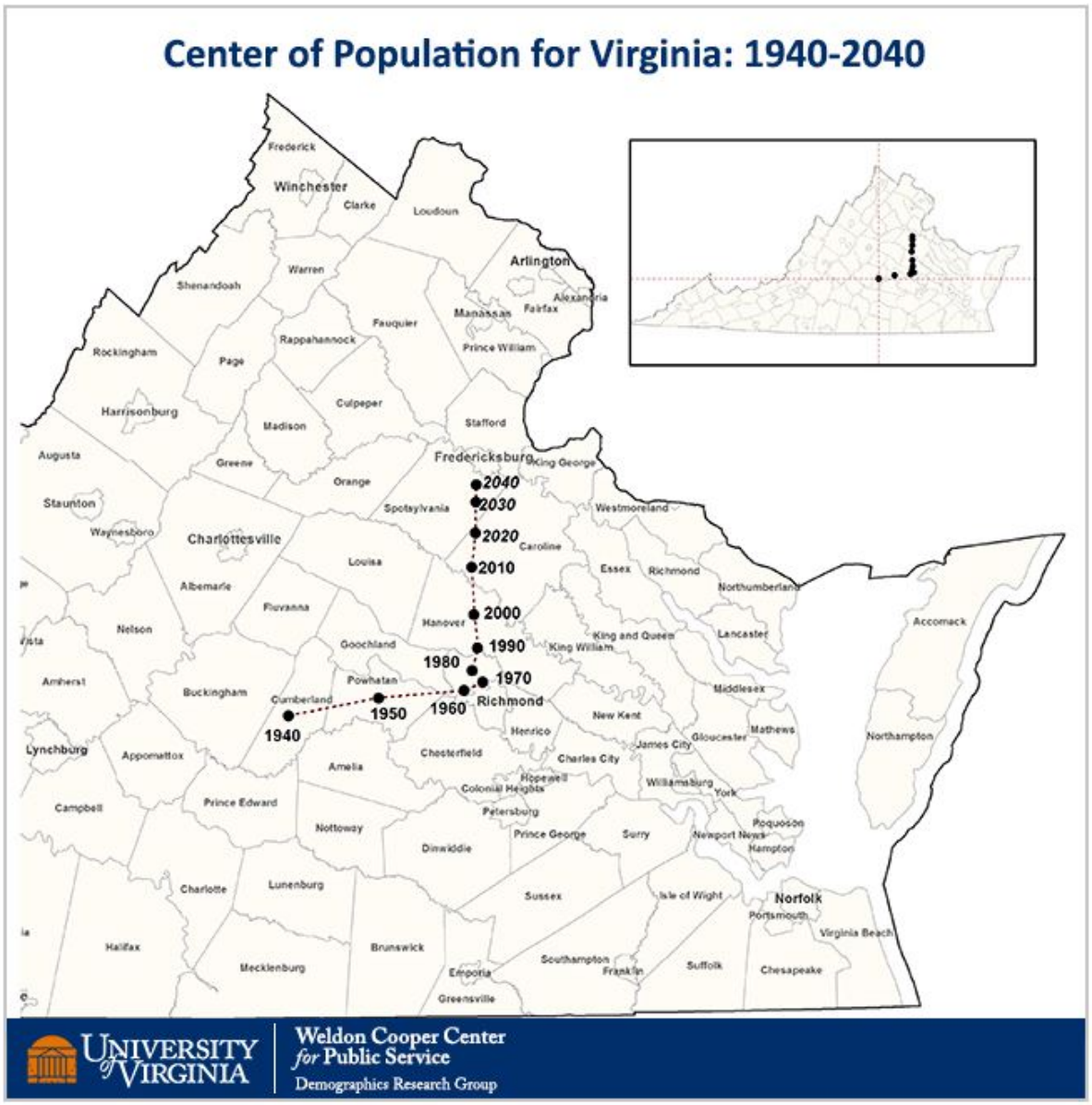
Source: US Census Population Estimates (all figures as of July 1)

Graphic 3: Annual Growth Rate (2011-2020)



Source: Calculations based on US Census Population Estimates (all figures as of July 1)

Exhibit 1: Center of Population for Virginia: 1940-2040



Source: University of Virginia Weldon Cooper Center for Public Service, Demographics Research Group.

The center of population for Virginia is based on the distribution of population throughout the Commonwealth. It is not based on the geographical center of Virginia. Large population centers such as those in Northern Virginia and Hampton Roads act to "pull" the population center away from areas where population is more dispersed and more rural. Higher growth areas with large populations have geographically shifted Virginia's Center of population since 1940 to the north and east. A study by the Weldon Cooper Center for Public Service has mapped the Center of Population for Virginia since 1940. Throughout the Planning period of 2020-2040 (above map), Virginia's population center will be located near the Spotsylvania and Caroline County lines in 2020, and within Spotsylvania County's Primary Development Boundary in 2030 and 2040.

Fiscal Climate

Ensuring fiscal sustainability is key to assuring successful, sustainable implementation and maintenance of portions of this Plan, particularly related to administration of programs and provision of level of service and capital facilities investments now and in the future.

The Code of Virginia requires that all general-purpose local governments publish a complete set of financial statements presented in conformity with accounting principles generally accepted in the United States of America (GAAP) and audited in accordance with governmental auditing standards generally accepted in the United States of America. Annual updates of the Comprehensive Annual Financial Report (CAFR) of the County of Spotsylvania, Virginia is made available for review online **HERE**.

Considering development within the County, the County has aspired to achieve a 70/30 mix of residential to commercial/industrial development (based on assessed value). There is interest in assuring fiscal stability and ability to fund public services for citizens of the community. Additionally, ensuring a mix of land uses helps diversify the local economy and may help "buffer" slowdowns that may impact one industry type or land use more than others. For instance, the retail sales climate has seen significant shifts over the last decade as online sales trends and home deliveries increase. Such trends have led and may continue to lead to commercial floor area vacancies and challenges to identify other potential users. The County aspires to avoid simply being a "bedroom community" for the Washington, DC and Northern Virginia areas where employment opportunities have been plentiful for local citizens. Current commuter trends have strained local roadways, especially during peak times (morning and afternoon rush). In order to achieve level of service goals for things like transportation, parks and recreation, schools, it is critical that revenue sources that can offset costs be identified. Having a vibrant commercial/industrial base helps offset some of these challenges.

The 70/30 mix is aspirational and is not expected to be wholly static due to economic development slowdowns and surges that can and do happen over time. Based on historical data (See Table 1 below) the County should seek gradual improvement overtime to help better realize the policy objective. Since 1995, Spotsylvania County's residential to commercial/industrial mix (based on assessed value) has generally remained around 80/20.

Table 1: Land Use Diversification Mix (Based on Assessed Value)

Year	Percentage Residential Contribution (Based on Assessed Value)	Percentage Commercial/Industrial (Based on Assessed Value)
1995	83.32%	16.68%
2000	81.93%	18.07%
2005	84.75%	15.25%
2010	77.30%	22.70%
2015	80.36%	19.64%
2020	82.28%	17.72%
Source: Commissioner of Revenue, Assessment		

Guiding Principles and Policies:

A. Spotsylvania County is a "business friendly" community and local job creation is a priority.

1. Encourage business investment in the County and promote the relocation of federal and state agencies to the County, providing more opportunities for Spotsylvania County residents to work in the County.
2. Support the installation of broadband internet, telecommunications infrastructure, microwave towers, fiber optics, and similar communications systems that meet an identified need for communications support for businesses throughout the County.
3. Encourage the rezoning of land to industrial/office uses in areas designated for Employment Center uses and the revitalization of older, underperforming commercial, office, and industrial developments.
4. Encourage innovative land uses such as renewable energy generation, data processing centers, and other industries leveraging technology in fields such as information technology, medicine, logistics, etc.
5. Promote gateway signage and landscaping to encourage visitation, business, and tourism and consider establishing an I-95 overlay that sets a development standard that promotes Spotsylvania County as an attractive, orderly, and business friendly location.
6. Review and modify the Subdivision Ordinance, Zoning Ordinance, and Design Standards Manual to ensure they implement the Comprehensive Plan and to streamline development review and approval procedures.

B. Spotsylvania County is fiscally sustainable.

1. Achieve a 70/30 mix of residential to commercial/industrial development (based on assessed value), and the annual growth of the industrial and commercial tax base at a rate greater than 2%.
   a. The County should identify priorities to achieve this goal through incentives, infrastructure improvements and extensions, etc.
   b. Consider proactively rezoning certain areas to promote business development.
   c. Diversify the non-residential tax base by encouraging a wide variety of businesses to locate in the County.
2. Development projects seeking increased residential density and/or non-residential intensity should address impacts that are specifically attributable to the proposed development (i.e. natural resources, historic resources, fiscal impacts, land use transitions, etc.).
   a. Each development proposal should include sufficient information to fully evaluate its impacts.
3. Any development project seeking increased residential density compared to existing zoning and by-right potential or non-residential intensity should address the project's impacts on the County's public infrastructure consistent with the levels of service standards in this Plan and as allowed in the Code of Virginia.

a. A rezoning proposal that is expected to result in demands in excess of current capacity or that would diminish level of service standards below the County's standard for any public facility should mitigate its impacts to the extent allowed in the Code of Virginia.

   Mitigation for projects may take the form of voluntary reasonable proffers that seek to address an impact that is specifically attributable to the proposed new development. Such proffers may include, but not be limited to:

   1. Cash contributions toward capital improvements,
   2. Land dedication for public facility needs,
   3. Public facility improvements constructed by the applicant, or
   4. Other onsite or offsite proffers that the applicant deems reasonable and appropriate.
   5. Phasing of proffered improvements or other proffered mitigations.

b. Development should be phased with the provision of public facilities to maintain acceptable levels of service as identified in the Public Facilities Chapter of the Spotsylvania County Comprehensive Plan. This can be achieved by proffering: 1. Cash or in kind improvements to advance the provision of the public facility 2. Proffer phasing.
c. The County should support onsite transportation alternatives such as pedestrian and bicycle facilities that connect to neighboring properties.
d. Support the expansion of transit systems to link employment centers with residential areas and transportation nodes.
e. "Access management" in the form of systematic control of the location, spacing, design, and operation of entrances, median openings, traffic signals and interchanges should be utilized for arterial and major collector roads in order to minimize the vehicular traffic impacts of new development.
f. Active adult communities, with their diminished impact on County services, should be supported.

4. Preserve significant natural, historic, and cultural resources of the County to ensure the continued allure of the County as a tourism destination.
   a. Seek cultural resource surveys, documentation of cemeteries, surveys of potential threatened or endangered species as part of the development review process where appropriate.
5. Diversify and enhance the tourism opportunities in the County.

C. Spotsylvania County is a family friendly community.

1. The County should support a diverse housing inventory, providing a mix of units that can accommodate housing needs for all stages of life. This would involve a range of housing from affordable units for young families just entering the housing market such as condominiums, townhouses, and small single family homes to larger homes, manufactured homes, and active adult and assisted care facilities.

a. Considering manufactured homes as a possible source of affordable housing, consistent with the Code of Virginia Sect. 15.2-2223.5, strategies support:
    i. preservation of existing manufactured housing communities;
    ii. creation of new manufactured home communities;
    iii. creation of new manufactured home subdivisions.
2. The County should support mixed use communities with varied housing types, civic buildings, shops, and active and passive recreation opportunities.
3. Plan for and provide public facilities that meet the needs of the community as it grows.
4. Ensure that Spotsylvania County continues to provide excellent educational and recreational, and cultural opportunities.

D. Agriculture and silviculture are valued components of Spotsylvania County's economy.

1. Promote the expansion of Farmers Market(s).
2. Continue the Land Use Taxation Program.
3. Make greater utilization of Agricultural/Forestal Districts by way of: nutrient management planning; Total Maximum Daily Load (TMDL); urban Best Management Practices (BMP) programs; and other practices coordinated through the local Soil and Water Conservation District.
4. Identify and protect productive agricultural and silvicultural lands.
5. Do not extend public infrastructure (such as water and sewer) into productive agricultural and silvicultural lands beyond the limits of the Primary Development Boundary.
6. Review and amend the Zoning Ordinance to allow landowners to preserve farm and forested areas while providing by-right lot yields.
7. Encourage complementary land uses such as agritourism, agribusiness, and renewable energy generation in agricultural and rural areas.

E. Spotsylvania County values its environmental resources.

1. Protect environmental quality by promoting a comprehensive approach to air and water quality management. Examples of approaches to accomplish this could include but are not limited to: green space and tree preservation, stream restoration, and low impact development (LID).
2. The County should support integration of required onsite drainage and stormwater features as an amenity or landscape feature that is incorporated into the overall design of the site.

MAJOR INITIATIVES ACTION PLAN

The Comprehensive Plan contains many strategies. The Action Plan is not intended to repeat strategies identified in the Plan, but rather to identify those major projects that are required to ensure implementation of the Plan.

Task	Lead Department	Assisting Departments
Continue to monitor economic (industry and construction activity), demographic, socio-economic, and housing trends locally to assess service and facility needs	Planning/Economic Development	Those with LOS
Continue to review the Zoning Ordinance and Design Standards Manual and recommend amendments to the Planning Commission that implement the Comprehensive Plan, including amendments that will streamline processes and improves outcomes	Planning	County Attorney, Zoning, and Economic Development
Continue to review the Subdivision Ordinance and recommend amendments to the Planning Commission that implement the Comprehensive Plan, including amendments that will streamline processes and improves outcomes	Planning	County Attorney
Update the Water and Sewer Master Plan	Utilities	Planning
Ensure annual update to the Capital Improvements Plan is consistent with the Comprehensive Plan	Planning	
Continue to update the annual financial report to monitors the 70/30 residential to non-residential tax rate goal, population estimates, approved projects, and demographic shifts	Planning	Commissioner of Revenue
Develop and implement a financial plan for multi-modal transportation that identifies all existing and new funding mechanisms, including private funding initiatives and public/private partnerships	Planning/Transportation	Finance
Provide an annual report to the Board of Supervisors on current Level of Service	Planning	Those with LOS
Develop periodic reports comparing built projects to the assumptions used during the application process (i.e. traffic impacts, school age children, assessment values, etc.)	Planning	
Develop Special Area Plans for areas where unique development opportunities exist in the County	Planning	Economic Development
Continue to work with partners on regional planning issues such as hazard mitigation, transportation, environmental, land use.	Planning	Based on subject matter

Chapter 2

LAND USE

INTRODUCTION

The purpose of the Land Use Chapter (Chapter) is to encourage the appropriate use of land, water, and other resources within the County, consistent with the interests of the citizens of Spotsylvania County. This Chapter is a guide for future land use decisions within the County following these general objectives:

- Plan for the orderly development of the County
- Promote a diverse and vibrant economic base
- Maximize the use of existing infrastructure and public facilities to ensure the most efficient operation of facilities and the provision of services
- Accommodate projected residential growth in a manner that is fiscally responsible
- Strive for safe and affordable housing for people of all ages
- Ensure land use policies recognize and accommodate anticipated population increases
- Encourage a community service sector and a commercial base that meets the needs of the citizens and businesses in Spotsylvania County
- Preserve and protect significant historic and environmental resources, rural farm, forest, and agricultural uses and character
- Reduce proximity conflicts between differing land uses related to height, physical massing, scale and density
- Enhance proximity and accessibility between places where people live, work, recreate, and shop

The Chapter describes land use categories and policies that provide a framework to guide physical development and land use changes in the County. The Future Land Use Map (FLUM) (SEE MAP) depicts development patterns that are intended to promote, preserve, and protect the health, safety, and general welfare of the citizens. The FLUM is not intended to be parcel specific, but rather provides a flexible guide for the County's desired future development patterns.

Land use categories as mapped are not intended to be parcel specific but they do give guidance into the envisioned land use focus intended for geographic areas. Adjacent land uses need to be considered when multiple land uses exist or are adjacent to one another. As a general "rule of thumb" concerning parcels from an interpretation standpoint land use flexibility is most pronounced when a project area has multiple land use categories (multiple options for land use support) or is adjacent to a different land use designation (complementary or transitional support along a land use edge). Adjacency of differing land uses suggests transitional uses and often involves site design considerations considering size, scale, height, screening, buffering. Significant land use separators such as major roads, environmental features (extensive wetlands, steep slopes, etc.) do generally establish clear lines of separation.

Land use categories on the FLUM are considered when rezoning and special use permit applications are being considered and to give context to appropriate design of by right development. Land use categories do not change a parcel's zoning classification, nor do they impact continuation of existing legal land uses or other uses permitted by existing zoning (by-right). New development that is in accordance with the Future Land Use Map should ensure appropriate siting and transitions to existing development (impacts of land use differences such

as height, physical massing, scale and density) that may differ from the identified land use on the FLUM in order to minimize negative impacts on existing development. Additionally, it should be noted that different densities and intensities of development may be appropriate within each of the land use categories depending on the location of the property. Each application should be evaluated within the context of its surrounding existing and proposed development, as well as the timing of the infrastructure necessary to support the development.

Land use decisions should be consistent with the FLUM. The FLUM may be amended pursuant to the Code of Virginia §15.2-2.2229.

ECONOMIC DEVELOPMENT AND TOURISM

Economic Development and Tourism are integrally linked to development and lend valuable land use insights to the County. The following summary of economic conditions in Spotsylvania have been prepared by the Spotsylvania County Economic Development, and Tourism Departments:

After the longest expansion in U.S. history, the global pandemic caused by COVID-19 is causing many businesses to close and furlough or reduce payrolls. Retail, travel, and hospitality sectors are being hit the hardest. The predicted outlook is the economic impact will be sharp and short—not sustained according to a leading economist, Chmura Economics.

As restrictions associated with COVID-19 ease and the economic recovery starts, Spotsylvania County will continue to remain strong and attractive to new and existing businesses, as Economic Development anticipates needs of businesses during the recovery. As economic development shifts focus from crisis response to economic recovery, competition between locations will resume and quickly ramp up.

One measurement used to rank the County's future success is through the Vulnerability Index, modeled by Chmura Economics. The Vulnerability Index is a measurement of the negative impact that the coronavirus crisis can have on employment based upon a region's mix of industries. As of April 2020, the County has a vulnerability Index of 119.81. The average Vulnerability Index score is 100, representing the average job loss expected in the United States. Higher scores indicate the degree to which job losses may be greater—an index of 200, for example the rate of job loss can be twice as large as the national average. Conversely, an index of 50 would mean a possible job loss of half the national average. The County remains in a better than average position to regain its previous economy based on the diversity of our industry. The market's demand will continue to promote the County's targeted industry sectors especially warehouse/distribution, manufacturing facilities and data centers. Source: Chmura Economics

The County continues to be a prime location to do business because, of its geographical location along Interstate 95, close to military installations and academic institutions, and within an easy reach of Northern Virginia, D.C., and Richmond, but with a much lower cost-of-living. Due to the County's lower taxes, quality education and strategic location, the County has become a leader in job creation in the Commonwealth. The County's pro-business, low regulatory environment has succeeded in the attraction of commercial and industrial industries that

have enhanced job creation, investment and quality of life for our citizens.

Business Retention, Attraction and Expansion

On a continuing basis, the Spotsylvania Economic Development serves as a liaison between the federal and state government and local businesses, providing information and technical assistance in a variety of areas including funding, government contracting and specialized workforce training. The Department maintains an active membership and/or dialogue with numerous regional organizations including the Virginia Economic Development Partnership, the Virginia Employment Commission, the Virginia Tourism Corporation, Virginia Career Works, the Fredericksburg Regional Alliance, the Chamber of Commerce, the Greater Fredericksburg Regional Tourism Partnerships, the International Economic Development Council and others. The Spotsylvania Economic Development Department also maintains relationships with local military bases and numerous institutions of higher learning that are in regional proximity to the County.

Many local businesses in the County continue to support the Commonwealth's significant commitment to hiring veterans and creating employment opportunities making Virginia the most veteran-friendly state in the nation in which to work.

Balanced economic growth is necessary to offset the costly service demands of low-density residential growth. As the County's commercial and industrial base expands, market opportunities will improve for business service firms and related office development. The County can help stimulate office construction by reserving or allocating well-sited parcels of land near the area's major arterials and established centers of employment. These sites will enhance a well-balanced economic development program. The County's Target Industry Sector Employers are outlined below in Table 1:

Table 1: Target Industry Sector Employers

Manufacturing	Distribution/Warehouse	Defense Contractors	Healthcare
idX Corporation	LIDL Distribution	HDT Global	Veterans Administration Outpatient Clinics
UnaDyn	CVS Distribution	PAE	Spotsylvania Regional Medical Center
Fortress Doors	Print Mail Communications	EOIR Technologies	Mary Washington Healthcare
TEX-AMM	Trivetts Furniture Distribution	Patriot3	
Kaeser Compressors	Bingham & Taylor	RPI	
Simmons			
Trussway			
Mid-Atlantic Vinyl Products			
Next Day Cabinets			

Source: Spotsylvania County Economic Development

Economic Development Programs Established to Assist Businesses

Targeted Industries Program - designed to expedite the review and approval of site and building plans involving targeted businesses.

Economic Development Incentives Program - Program used to attract new business, support in the expansion of existing businesses and retain industry. Continued collaboration with State officials ensures the County is using all available resources to maintain and grow the business community.

Economic Development Zones – The County has geography based economic development zones intended to benefit specific industries within their geographic confines, they include: Technology Zone, Tourism Zone, HUBZones, and Opportunity Zones. Because of their ties to geography and land use these zones have been considered in the update of the Future Land Use Chapter within the Comprehensive Plan and as such have been further described in that Chapter.

Virginia Business Ready Sites Program – VBRSP is a discretionary program to promote development and characterization of sites (containing a minimum of 100 contiguous, developable acres) to enhance the Commonwealth's infrastructure and promote the Commonwealth's competitive business environment. The program's goal is to identify, assess, and improve the readiness of potential industrial sites. The Business Ready Sites are also a consideration of the Future Land Use Chapter in the Comprehensive Plan and they are further detailed in that Chapter as they have been identified by location/geography and envisioned use.

Data Center Tax Rate - Data Centers are a targeted industry in the County. The County along with neighboring localities use the same valuation method and depreciation schedule to enhance the ease of doing business. The business-friendly tax rate is $1.25 / $100 of assessed value on computer equipment and peripherals. The uniform rate accompanies readied sites with adequate water, affordable and reliable power, and a fast-track development review process, along with a high-tech, well-educated workforce.

Employment and Job Creation

The County's target market sectors consisting of distribution/manufacturing, professional services, information technology/defense contractors, data centers and destination tourism venues continue to remain strong and out-perform other areas of the state due to our strategic location and versatile workforce. High-tech service, distribution centers and data center clusters have been identified as the top industry clusters to target due to the changes the pandemic has presented. There will be increased need for businesses to enable workers to work from home. The pandemic will change how we do business and deliver goods and services to their customers. A historical look at the County's Industry Employment Sectors, employment and earnings is below:

Table 2: County Industry Employment Sectors 10-Year History and 5-Year Forecast							
	2009-2019				2020-2025		
	Current		10-Year History		5-Year Forecast		
Industry	Empl	Avg Ann Wages	Empl Change	Ann %	Total Demand	Empl Growth	Ann % Growth
Retail Trade	7,178	$30,164	212	0.3%	4,957	128	0.4%
Health Care and Social Assistance	4,998	$41,550	2,178	5.9%	3,109	623	2.4%
Educational Services	4,717	$44,756	594	1.4%	2,341	134	0.6%
Accommodation and Food Services	4,263	$17,108	1,201	3.4%	3,878	316	1.4%
Construction	2,992	$46,736	-40	-0.1%	1,723	209	1.4%
Professional, Scientific, and Technical Services	2,539	$73,178	803	3.9%	1,311	190	1.5%
Other Services (except Public Administration)	2,335	$29,340	518	2.5%	1,436	84	0.7%
Administrative and Support and Waste Management and Remediation Services	1,786	$32,675	651	4.6%	1,157	101	1.1%
Transportation and Warehousing	1,769	$51,355	-7	0.0%	1,068	102	1.1%
Wholesale Trade	1,267	$54,295	486	5.0%	686	17	0.3%
Public Administration	1,153	$55,498	229	2.2%	575	39	0.7%
Manufacturing	1,079	$46,738	-152	-1.3%	556	-4	-0.1%
Arts, Entertainment, and Recreation	961	$16,757	308	3.9%	763	67	1.3%
Real Estate and Rental and Leasing	694	$42,030	-3	0.0%	393	35	1.0%
Information	588	$45,287	170	3.5%	339	46	1.5%
Finance and Insurance	573	$59,729	48	0.9%	291	20	0.7%
Management of Companies and Enterprises	459	$72,332	159	4.4%	232	21	0.9%
Agriculture, Forestry, Fishing and Hunting	192	$14,718	-31	-1.5%	106	2	0.2%
Unclassified	120	$32,261	120	n/a	76	7	1.1%
Utilities	119	$55,678	33	3.2%	61	6	1.1%
Mining, Quarrying, and Oil and Gas Extraction	43	$48,847	17	5.3%	24	2	0.7%
Total - All Industries	**39,825**	**$40,218**	**7,493**	**2.1%**	**24,393**	**2,166**	**1.1%**
Source: Jobs EQ 2019, Chmura Economics, Industry Sectors for Spotsylvania County							

Industrial and Commercial Industry Sectors

Demand for industrial space, warehouse and distribution, is steady as vacancy rates continue to trend downward year-over-year. Continued positive absorption is expected. This trend is a positive indicator for the County since the industrial market is often a leading indicator. The same trend for overall office vacancy rates but with a slower absorption due to positive employment numbers in the region and leading to continued growth in the remaining sectors.

Absorption of space for new industrial construction has been led by Lidl USA Regional Distribution Center in the distribution/warehouse submarket and manufacturing sector additions include idX Corporation and UnaDyn and available existing space continues to be strengthened by healthcare companies and the government contracting industry. As of 2020, the County's total industrial inventory is 6.9 million square feet compared to 6.0 million square feet in 2009, an increase of 15%.

Manufacturing

The County's manufacturing base is well-positioned. The County still has an inventory of available industrial zoned land to meet large and small manufacturing company needs. However, historic trends bear watching going forward.

The Spotsylvania County Planning Department has noted that the County inventory of industrial acreage has been declining over time. In the long term this trend may result in an inadequate inventory of readily available, properly zoned sites for industrial/manufacturing.

An analysis of the County's industrial acreage (last updated in 2018) found total industrial acreage within the County has been in a downward trend from 6,400 acres in 2013 to 5,732 total acres in 2018. Lost industrial acreage is attributed to rezoning activity. Based on the methodology employed, of the total industrial acres staff found 1,398 total acres considered unconstrained and undeveloped (Industrial 1 and Industrial 2 combined). The remaining acreage was either already developed or constrained under permanent protection (under conservation easement), or had environmental factors such as presence of wetlands, steep slopes, resource protection areas. The remaining unconstrained, undeveloped acres were scattered into distinct industrial core areas of the County. Larger industrial sites of ten (10) or more acres are generally in short supply County-wide. Planning staff notes since November 2018 via the Albrite Rezoning, approved July 9, 2019, approximately 6 acres of Industrial Zoned property was added back into the County inventory. Looking back over the past ten years, rezoning applications where new Industrial zoned acreage was proposed is rare in comparison to the volume of acreage proposed to be rezoned away. In all, approximately 13 new industrially zoned acres have been approved during that time. Industrial acreage loss has significantly outweighed acreage gained.

Per Economic Development there is a long-standing population of manufacturing companies in the County with a skilled and talented labor pool. Manufacturers remain exempt from Business License taxes enhancing the environment to do business in addition to the proximity to major Interstates, rail and Virginia ports. The County is strategically located to world-wide transportation and logistical hubs while offering a low cost of doing business, a talented work force and sustainable operations.

Retail Sector

Retail is the largest sector in the County. The County had 6.7 million square feet of shopping center space with 6.3 million square feet occupied and the five-year net absorption rate is 94% as of 2019.

Retail Outlook

Spotsylvania County is home to several large successful retail establishments such as Wal-Mart, Lowes, Home Depot, Michael's, Ross, At Home, BJ's wholesale and many more. Spotsylvania is also home to Spotsylvania Towne Center. Spotsylvania Towne Center houses many top name retail establishments like Macy's, Belk, Dick's, JC Penny, and Costco. Through the pandemic Spotsylvania Towne Center has maintained a high tenant occupancy rate making them one of the most successful malls in the Country. Retail establishments large and small throughout Spotsylvania have made adjustments such as offering curbside pickup to continue retail operation during the coronavirus related close the Governor had in place. The retail market within Spotsylvania continues to be successful even during unprecedented times. In order to ensure a future where businesses not only survive, but thrive, it is critical to anticipate what a post-pandemic world will look like and adjust accordingly.

The Planning Department notes that the retail economy especially can and has also been influenced by macro-level factors such as large scale corporate bankruptcies or scale backs, economic downturns, and competition of "brick and mortar" traditional outlets with the emergence of online based retailing with corresponding shifts in buyer behavior. Nationally within the past few years major retailers have announced bankruptcies often times including store closures. Between 2017 and 2020 national retailers such as JC Penney, Neiman Marcus, J.Crew, Pier 1, Forever 21, Kmart, Payless Shoe Source (announced closure of all 2,100 stores nationwide following bankruptcy filing), Gymboree and Sears have announced bankruptcy and/or location closures. In Spotsylvania County the Sears store that served as an anchor tenant at Spotsylvania Towne Centre since 1980 was recently shuttered and subsequently demolished. The Kmart store located on Route 3 closed in 2017. These factors and trends warrant further watch. Going forward, promotion of a diversification of uses that complement one another, enhance ease of access, critical mass and activity, and identification of additional tenants or uses that may successfully occupy spaces traditionally occupied by brick and mortar retailers will have merit.

Regional Data

The extended labor market area has added more jobs than any other region of the Commonwealth since 2016. According to a recent study by the Virginia Economic Development Partnership, the number of new jobs in the Region grew 1.39 percent and was one of six regions that exceeded Virginia's overall job growth rate of .76 percent, including Northern Virginia and Richmond.

In 2013, approximately 37% of the extended labor market workforce commuted outside the area. This has increased to 42% in early 2019.

In 2015 the Fredericksburg Regional Alliance at the University of Mary Washington (FRA), the University of Mary Washington (UMW), and the Fredericksburg Regional Chamber of Commerce commissioned a study to provide estimates about commuters and related demographics. This study was completed in January 2016 and was based on 2011-2013 data provided by the American Community Survey (ACS) – an ongoing set of research conducted by the United States Census Bureau. In summary of the findings, the competitiveness of the extended labor market

workforce has dramatically improved since 2013. Those who live in the County and extended labor market and work outside the region have attained a higher level of education than those who live and work within the region. This shows the dramatic increase in the overall education of the regional workforce. The study concluded that the average employee who lived and worked in the region in 2017 was more educated than the average employee that commuted outside the region in 2013 closer aligning the workforce skills needed to attract industry from outside the area.

Telecommuting

According to the American Community Survey in 2018 based on a 5-year estimate there were 4.7% or 3,047 citizens in the County working from home.

The effects of the pandemic both during and post recovery could completely reshape traditional office demand and transform what types of service sectors locate around office complexes. According to Costar, less than half of workers can work from home. Telecommuting may become Virginia's biggest demographic trend in the 2020s based on current and future trends addressing the COVID 19 pandemic.

Agriculture and Forestry

Historically, agriculture and forestry have been important components of the Spotsylvania County economy. Spotsylvania was a major producer of many agricultural products, but much of its early notoriety was due to its abundance of raw materials, such as iron ore, gold, lead and zinc. The County was named after colonial Lt. Gov. Alexander Spotswood (1676-1740), who, among other things, was responsible for establishing iron furnaces and foundries in the area. The county seal, with an image of three trees, reflects the importance of forestry to the local economy. A more detailed description of the local agriculture and forestall industry and production can be found in the Natural Resources Chapter subject of Food and Fiber production.

Although the relative economic importance of agricultural and forestal activities has declined as the commercial and industrial base has grown, they are still highly valued as providers of local employment and goods, as well as for providing natural resource protection and scenic amenities in the County. The economic, environmental and aesthetic role of farm and forest resources makes them protection and promotion important to the Spotsylvania community. In addition to land use controls, one of the best ways to preserve these resources is to promote activities to enhance the economic viability of the agricultural and forestry industries.

An important part of the County's economic development strategy should be the promotion of the agricultural and forestal industries. This would include efforts to attract businesses able to utilize local products for the production of finished goods. Furthermore, the economic development department could help to promote the purchase of local agricultural and forestal products through wholesale or retail markets.

Tourism

Per Spotsylvania County Tourism, for 2019 visitors to the Battlefields (912,999) are 60% of visits to the area. The same percentage of the local tourism market visited Battlefields in 1993 as reported in the 2002 Comprehensive Plan. Battlefield tourism remains a significant attraction to area tourism. Visitors to Agritourism sites that include wineries, breweries and the distillery account for (70,839) as of 2019.

Table 3: Tourism (Visitation)

Tourism: Total County Visitation					
	2015	**2016**	**2017**	**2018**	**2019**
Grapes and Grains*	40,622	91,610	63,327	93,869	70,839
Museums **	11,656	12,894	12,125	18,757	18,877
Battlefield (NPS), State Parks ^	822,830	1,518,052	1,585,695	1,580,141	1,150,426
Total Visitation	**875,108**	**1,622,556**	**1,661,147**	**1,692,767**	**1,240,142**
*Grapes and Grains= Spotsylvania Agritourism, Wineries, Breweries, etc.					
**Museums include Shannon Airport, John J Wright, Rappahannock Railroad Museum, Spotsylvania Museum, Salem Church, Elwood, Spotsylvania Visitors Center					
^Include Fredericksburg Regional National Park Service System of Parks and Lake Anna State Park.					
Source: Spotsylvania County Tourism, 2020					

Agritourism

In Virginia, agritourism is defined as any activity carried out on a farm or ranch that allows members of the general public, for recreational, entertainment, or educational purposes, to view or enjoy rural activities, including farming, wineries, ranching, historical, cultural, harvest-your-own activities, or natural activities and attractions. For most people, agricultural tourism refers to a visit to a working farm or any agricultural, horticultural, or agribusiness operation in order to enjoy, be educated, or become actively involved in the activities of the farm or operation – getting a true farm experience. Agritourism has become a huge economic industry in the state of Virginia, 2019 reports show agritourism being a 3-billion-dollar industry in Virginia. Spotsylvania is home to several wineries, breweries, farmers markets, and other agricultural experiences. This is an industry that continues to grow, Spotsylvania economic development encourages and promotes agritourism and will continue to help these businesses grow and flourish in Spotsylvania. Agritourism uses as part of agricultural operations are supported by the Code of Virginia in Sect. 15.2-2288.6 and complementary to that agritourism as defined is included within the definition of the use Agriculture per the Spotsylvania County Zoning ordinance.

ECONOMIC DEVELOPMENT ZONES AND BUSINESS READY SITES

This Chapter highlights and promotes Economic Development Zones and sites located in various parts of the County. Economic diversification and local job creation are a priority for Spotsylvania County. Within Spotsylvania County, Economic Development Zones include: Tourism Zone, Technology Zone, Opportunity Zones, and HUB Zones. Economic Development Zones Maps have been included at the end of this Chapter for reference. The Zones have been summarized below, as follows:

Tourism Zones (See Map)

Tourism Zones are established in Chapter 24, Article II of the Spotsylvania County Code. Spotsylvania County has designated four areas as Tourism Zones. These are located at Lake Anna, Spotsylvania Courthouse, State Route 2 Corridor, and Thornburg. The Tourism Zone Program serves both new and existing qualified businesses, including lodging, dining, retail, meeting and sports facilities, outdoor recreation areas, theme parks and event venues. The Tourism Zone program provides incentives such as tax rebates on Business, Professional and Occupational License (BPOL) and Machinery and Tools Tax (M/T). The qualified business is also placed in the County's Targeted Industry Program, initiating the Fast Track Development Review Process. Tourism zones are intended to stimulate business attraction, growth, and increase employment opportunities. Uses that complement the intent of the tourism zones while meeting the intent of the corresponding land use category should be encouraged.

Technology Zones (See Map)

Technology Zones are established in Chapter 24, Article I of the Spotsylvania County Code. Spotsylvania County has designated two areas of the County as Technology Zones. These are in the Lake Anna area in proximity to the Route 208 corridor, and much of the County's Primary Development Boundary. The Technology Zone program serves both new and existing businesses whose primary purpose is the research, development, or manufacture and/or design of technology products, processes, or related services. The Technology Zone program provides incentives such as tax rebates on Business, Professional and Occupational License (BPOL) and Machinery and Tools Tax (M/T). The qualified business is also placed in the County's Targeted Industry Program, initiating the Fast Track Development Review Process. Technology Zones are intended to stimulate business attraction, growth, and increase employment opportunities. Uses that complement the intent of the technology zones while meeting the intent of the corresponding land use category should be encouraged.

Opportunity Zones (See Map)

The Opportunity Zone program is administered through the Virginia Department of Housing and Urban Development (HUD). This program was included in the Federal Tax Cuts and Jobs Act of 2017, which introduced the Investing in Opportunity Act that established Opportunity Zones and Opportunity Funds. Opportunity Zones are determined by census tracts that have been designated as "low-income" as defined by the US internal Revenue Code Section 45D (e). Opportunity Zones are intended to revitalize economically distressed communities by utilizing

private investments. Investors who invest in Opportunity Zones through Opportunity Funds will qualify for capital gains tax incentives. The Opportunity Zone is depicted in the Spotsylvania County Opportunity Zones Map. Uses that complement the intent of the opportunity zones while meeting the intent of the corresponding land use category should be encouraged.

HUBZones (See Map)

The HUBZone (Historically Underutilized Business Zones) program was created as part of the Small Business Reauthorization Act of 1997 and is administered through the United States Small Business Administration (SBA). The primary goal of the program is to create incentives for the United States federal government to do contracting with businesses by providing those businesses with preferential access to federal procurement opportunities. It is intended to benefit small companies that operate and employ people within HUBZones. In all, there are four (4) Types of HubZone Designations, including Qualified Census Tract; Qualified Nonmetropolitan County; Qualified Indian Reservation; Qualified Base Closure Area. Spotsylvania County has two distinct HUBZone areas whose geographic limits are based on Qualified Census Tracts. The County HUBZones are depicted in the Spotsylvania County HUBZones Map. Per the SBA, for Qualified Census Tracts, a census tract must either: demonstrate a poverty rate of at least 25 percent; or 50 percent or more of its householders must have incomes below 60 percent of the area median household income. Uses that complement the intent of the HUBZones while meeting the intent of the corresponding land use category should be encouraged.

Virginia Business Ready Sites (VBRSP)

The Virginia Economic Development Partnership (VEDP), VBRSP is a discretionary program to promote development and characterization of sites (containing a minimum of 100 contiguous, developable acres) to enhance the Commonwealth's infrastructure and promote the Commonwealth's competitive business environment. The program's goal is to identify, assess, and improve the readiness of potential industrial sites.

VBRSP was developed by a team of state, regional, and local stakeholders including VEDP, DEQ, railroad representatives, utility representatives, civil engineers, and other government, business, and industry representatives. Grants are considered on a competitive basis and made at the discretion of a committee of VBRSP Working Group members.

The VBRSP has two components:

- Site Characterization to assess and designate a site's current level of development
- Site Development to further develop a pool of potential sites across the Commonwealth

In an effort to develop a pool of viable sites, Site Characterization and Site Development grants are available to assist with the costs associated with the initial assessment and the development required to increase a site's currently designated Tier Level to the next Tier Level.

- **Tier 1** – Raw land with interested seller
- **Tier 2** – Site controlled and marketed for development

- **Tier 3** – Zoned industrial/commercial, due diligence complete
- **Tier 4** – Certified as "infrastructure ready"
- **Tier 5** – "Shovel Ready" – permits in place

Requirements:

- Minimum of 100 contiguous acres
- Dollar-for-dollar match by applicant/grant recipient
- Applicant - political subdivisions of the Commonwealth of Virginia, including counties, cities, towns, industrial/economic development authorities

Priorities:

- **Viability** - the development required to prepare and position the site at a higher Tier Level can be implemented practically and successfully within a reasonable period of time.
- **Alignment** – the site is aligned with the local or regional economic development strategy or strategic plan.
- **Economic Impact** – the development of the site has a public purpose and would have a significant economic impact on the community and facilitate further increased prospect traffic and economic growth.
- **Commitment** – the scope of work required to increase a site's currently designated Tier Level to the next Tier Level (Scope of Work) is complete, the necessary financing for the implementation of the Scope of Work is available and documented or will be within a reasonable period of time, the required dollar-for-dollar match of the Site Development Grant requested is identified, and an estimated timeframe for implementation of the Scope of Work has been established.
- **Leveraged Resources** – the use of existing infrastructure, workforce and other community assets, grants and funding, or other resources used to support the site.

In Spotsylvania County numerous sites have been identified for the Business Ready Sites Program. The sites are considered potential "landing" locations for economic development prospects in the future. Of the sites, four (4) have been assigned a business ready site tier. Presently the highest tier site in the County is Tier 2. Three (3) sites have the Tier 2 designation, including: Webster 140 Site along Jefferson Davis Hwy; Gilman Tract East, near Hickory Ridge Road and Jefferson Davis Hwy; Gilman Tract West, located near N. Roxbury Mills Drive and Jefferson Davis Hwy. The remaining Tier qualified site is designated as Tier 1, the Orrock Farm-Spotsylvania, located near Orrock Road at Mallard Road. The County's tier qualified sites meet the minimum acreage threshold as required (minimum 100 acres). The remaining sites are in the process of being evaluated per the Spotsylvania Department of Economic Development. Spotsylvania County's identified VEPD Business Ready sites are summarized in Table 4 that follows:

Table 4: Spotsylvania County Sites in the VEDP Business Ready Sites Program (as of June 2020)							
Name	**Address**	**Tax Map Reference**	**Business Ready Sites Program Tier**	**Park Type**	**Total Acreage**	**Distance to nearest Interstate (miles)**	**Distance to nearest Port (minutes)**
Gilman Tract East	Hickory Ridge Road & Jefferson Davis Highway	63-A-141	2	-	666	2	53
Crutchfield Tract	Hickory Ridge Road	62-A-90	-	-	372	4.9	53
Ni Village	Jefferson Davis Hwy	49B-1-1A 49-A-82 49-A-81	-	-	333	3.9	51
Gilman Tract West	N Roxbury Mills Drive and Jefferson Davis Highway	63-A-110	2	-	314	3	54
Coleman Family Farm	6222 Smith Station Road	48-A-84	-	-	250	4	59
Webster 200 Site	Route 606	63-A-36	-	-	200	2	52
South Garden/ Broaddus Farm	Mudd Tavern Road	64-A-8	-	-	180	1	52
Gutierrez Site	South Roxbury Mill Road	63-5--C	-	-	174	2	53
Orrock Farm-Spotsylvania	Orrock Road at Mallard Road	76-A-61	1	-	147	1	52
Webster 140 Site	Jefferson Davis Highway	76-A-56 76-A-58C 76-A-58	2	-	140	2	52
Fulks Farm	1601 Belvedere Drive	38-A-26D 38-A-26	-	-	140	7.9	62
Thornburg Towne Center	5122 Mudd Tavern Road	63-A-42 63-A-41 63-A-43C 63-A-40 63-A-44	-	-	100	0.5	47
9040 Jefferson Davis Hwy	9040 Jefferson Davis Hwy	49-A-115	-	-	95	3	57
Thornburg Business Center	5630 Morris Road	63-A-37 63-A-32 63-A-33 63-12—E 63-12—D 63-12—C 63-A-27	-	-	95	2	52
6976 Courthouse Road	6976 Courthouse Road	60-A-5	-	-	70	8	59
Aggregate Rail Site	10201 Benchmark Road	37-A-17B	-	-	69	5	60
515 Lansdowne Road	515 Lansdowne Road	24-12-7	-	-	60	4	62
Jim Morris Road Business Park	Jim Morris Road	38-1-5 38-1-6 38-1-8 38-1-9	-	-	43	6.5	63
Back 40 Site	11032 Tidewater Trail	25-1-2	-	-	40	6	65

Table 4: Spotsylvania County Sites in the VEDP Business Ready Sites Program (as of June 2020)							
Spotsylvania Pkwy at Whitehall Drive	Spotsylvania Pkwy at Whitehall Drive	35-13-5B 35-13-5D 35-13-10A	-	-	38	2.4	56
7020 Harrison Road	7020 Harrison Road	22-8--C	-	-	37	4	66
10813 Rollingwood Drive	10813 Rollingwood Drive	23-A-113	-	-	33	2	61
5008 Mudd Tavern Road	5008 Mudd Tavern Road	63-A-53 63-A-52 63-A-45A 63-A-45B 63-A-50 63-A-54	-	-	32	0	51
5199 Commonwealth Drive	5199 Commonwealth Drive	35-A-91	-	-	32	2.6	55
Thornburg Miller Tract	5901 Mallard Rd	76-1-5 76-1-9	-	Industrial	32	1	52
95 Commerce	Davenport Road and Cosner Drive	36-23-B 36-23-A 36-23-P 36-23-E 36-A-43W	-	-	29	3.6	58
Route 1 and Hood Drive	Route 1 and Hood Drive	24-A-40 35-A-112 23A-2-36	-	-	24	1	54
Tidewater Trail Industrial Lot 4	Haul Road	38-1-4	-	-	24	6.8	64
7501 Lake Anna Pkwy	7501 Lake Anna Pkwy	60-A-3	-	-	20.5	7.9	57
Tidewater Trail Industrial Lot 10	Billy Days Road and Tidewater Trail	38-1-10	-	-	13	7	64
Deep Run Property	Tidewater Trail and Bowman Drive	25-A-8EE	-	-	12	3.7	61
Tidewater Trail Industrial Lot 3	Haul Road	38-1-3	-	-	8	7	63
21 Joseph Mills Drive	21 Joseph Mills Drive	25-A-8X	-	-	6	4.6	63
11615 Shannon Drive	11615 Shannon Drive	24-12-8B	-	-	6	4.5	60
8601 Jefferson Davis Hwy	8601 Jefferson Davis Hwy	49-A-95	-	-	5	3.7	53
11224 New Albany Drive	11224 New Albany Drive	24-20-17	-	-	5	3.9	59
11907 Cherry Road	11907 Cherry Road	22-A-153K	-	-	4	3.3	61
Tidewater Trail Industrial Lot 1	Haul Road	38-1-1	-	-	3.5	6.7	62
46 Joseph Mills Drive	46 Joseph Mills Drive	25-A-8FF	-	-	3	4.3	61
10801, 10805 Courthouse Road	10801, 10805 Courthouse Road	23A-2-21R	-	-	2	1.4	55
5927 Plank Road	5927 Plank Road	12B-A-3	-	-	2	4.4	62

Given the competitive nature of business attraction and retention, it is important to have business ready sites available with available acreage, proper zoning, and infrastructure in place. Efforts should be made to identify and increase the number of Tier designated sites within the County. Proactive efforts to improve the Tier designation to result in Tier 4 or Tier 5 (business ready) designations will improve site attractiveness for development and marketing efforts for prospective investments. Having Tier designated sites, especially higher tier designated sites, within the County makes them more attractive to economic development prospects and site selectors. High Tier sites correspond to reduced cost, time, risk associated with developing a site and establishing business operations. The land use map considers Spotsylvania County's business ready sites and seeks to complement efforts to improve Tier designations. The land use map seeks to avoid assigning a land use category that would inhibit the ability to rezone (if necessary) to business ready friendly zoning designation.

LAND USE MAP GUIDANCE

The Primary Development Boundary (See Map)

A major aim of any comprehensive planning process is ensuring that growth happens in a manner that can be supported efficiently and cost-effectively with community facilities and public services. One of the most effective tools for directing the timing and location of new development is the establishment of a primary development boundary to define the area within which public water and sewer utilities will be provided. The Primary Development Boundary (PDB) is shown on the Primary Development Boundary Map and the Future Land Use Map. Land within the boundary is intended to develop with higher residential densities and more intensive non-residential uses than outside of the boundary. By maintaining a PDB, the County encourages the most efficient use of the land while preserving the rural character and agricultural and forestal viability of those portions of the County outside the boundary. This boundary is not permanent and may be adjusted when conditions warrant through the amendment process, in accordance with the policies outlined below.

Primary Development Boundary Policies:

1. Development proposed outside of the Primary Development Boundary seeking extension of or connection to public sewer and/or water should submit an application for a 2232 Review by the Planning Commission pursuant to the Code of Virginia, Section 15.2-2232. Exceptions to this are outlined in a and b below. Additional 2232 guidance and exceptions are outlined in the Public Facilities Chapter Introduction, specifically under Relation to the Capital Improvement Plan. Those projects not eligible for a 2232 exception or deemed not 2232 compliant should submit a Comprehensive Plan amendment application seeking a change to the Primary Development Boundary.
    a. For public sewer services, exceptions include instances pursuant to Spotsylvania County Utility Ordinance (Spotsylvania County Code Section 22-282) and upon satisfaction of the Director of Utilities that a development will not require a County maintained sewer pump station.
    b. Individual connections of public water and/or sewer outside of the designated Primary Development Boundary when existing Utility

infrastructure is in place to make said connection feasible, as determined by County Utilities.

2. The ability to extend service pursuant to the above-mentioned Utility Ordinance is not sufficient justification to support a rezoning of the property served or of any land through which the utility lines may extend.
3. Expansions may be approved where the County has determined the change is consistent with the Comprehensive Plan.

The area of land encompassed within the County's Primary Development Boundary (PDB) is approximately 73 square miles (approximately 18% of the County land area). As part of this Comprehensive Plan update, the PDB was expanded slightly, adding approximately 444 additional acres, resulting in corresponding land use designations of commercial or employment center. The areas included in the expansion in the New Post Area, Five Mile Fork, and just north of Summit Crossing Road have topographic characteristics favorable for inclusion within the PDB and have been vetted by County Utilities. Per the Planning Department's Future Development analysis spreadsheet last updated January 1, 2021, there is an inventory of 12,049 approved and yet unbuilt residential units including single family detached (3,496), attached (2,314), multi-family (5,095), age restricted (1,144). The vast majority of these future units are located within the PDB. There are significant areas intended for commercial, employment center, and mixed-use development that remain undeveloped at this time. Roughly 1/3rd of the PDB land area remains in undeveloped or underdeveloped status.

Primary Development Boundary "Difficult-to-Serve" Areas

In review of the County Primary Development Boundary (PDB), areas within the PDB have been identified and classified as "difficult to serve" as depicted in the PDB Map and Future Land Use Map. These "difficult-to-serve" areas are specific to difficulties associated with provision of public water and sewer services within the PDB. From a County Utilities standpoint, these areas pose additional challenges related to infrastructure, especially in the near term, and especially related to provision of public sewer. Per County Utilities, "difficult-to-serve" areas within the PDB may not be readily developable for higher intensity uses requiring public water and sewer services. These are areas within the PDB that would require significant infrastructure improvements or capital expenditures in order to provide service. Environmental, topographic, proximity to existing infrastructure, capacity of nearby existing infrastructure challenges all factor into the designation. Development of these areas for higher intensity projects may be inhibited or delayed by lack of readily available public utility services (water and sewer). The cost to extend infrastructure or make necessary upgrades may also not make financial sense for smaller projects. These are cost-benefit considerations for potential site developers in those areas.

Population and Density Estimates Inside and Outside of the Primary Development Boundary (PDB)

The following population and density estimates (Table 5) are based on Geographical Information Systems (GIS) data enrichment tools by ESRI. These tools provide a data apportionment methodology to provide a wide array of demographic, economic, business variables among others. The tool allows for user defined queries of certain geographic areas to provide estimates

from known datasets such as census blocks that may not perfectly fit within the parameters of the user defined search area. The Fawn Lake neighborhood has been calculated separately as a Primary Development Boundary-like development served by public water and sewer and yet outside of the designated Boundary. Fawn Lake would otherwise skew population and density figures for the remainder of areas outside of the Primary Development Boundary that are well and septic system supported.

Table 5: Population and Density Estimates

All values approximate - Sourced from ESRI's Data Enrichment Program						
	2010	2010 Density	2010 Pop %	2020	2020 Density	2020 Pop %
PDB	82,657	1,144.7/sq mi	67.5%	94,869	1,313.8/sq mi	67.9%
Non-PDB & Non-Fawn Lake	38,144	112.5/sq mi	31.1%	42,267	124.7/sq mi	30.3%
Fawn Lake	1,722	562.7/sq mi	1.4%	2,497	815.9/sq mi	1.8%
Totals	**122,523**	**295.4/sq mi**		**139,633**	**336.8/sq mi**	

Future Land Use Map (See Map) and Land Use Categories

Land use categories are described in this section along with policies associated with each land use. The land use categories as shown on the Future Land Use Map depict the long-range recommendations for the general development of Spotsylvania County as is required by the Code of Virginia §15.2-2.2223.

Land Use Policies Applicable to All Land Uses:

1. Rezoning proposals should address public facilities impacts that are specifically attributable to the development.
2. There is an identified need, especially proximate to Fort A. P. Hill, to minimize light pollution.
3. Wherever possible, existing trees and tree buffers should be preserved rather than replacing mature vegetation with new plantings.
4. Provide Fort A.P. Hill an opportunity to comment on rezoning proposals within the Fort A.P. Hill Approach Fan (Map in Appendix A). There is an identified concern with residential development within the Approach Fan which may be impacted by noise associated with Fort A.P. Hill.
5. The County is supportive of the Fort AP Hill Joint Land Use Study recommendations. The study is incorporated by reference into the Comprehensive Plan (See Appendix A for additional information).
6. Encourage consideration of disabled and elderly citizens in the design and implementation of both new development and redevelopment.
7. There is an identified need for the provision of fiber optic cable and other technological infrastructure throughout the Primary Development Boundary, and to the extent feasible, the County as a whole.
8. Redevelopment and investment in existing developed areas should be encouraged provided that the development does not adversely impact adjoining properties, especially adjoining residential properties.
    a. Where higher density or differing land uses are proposed with the support of the future land use map, projects should consider and mitigate impacts of their

physical transitions (building height, scale, project density, uses and massing along the project periphery adjacent to existing adjoining development) through means such as screening, buffering, setbacks, project design that includes complementary uses, complementary development character along the project border. Once inland from the project periphery, proposals can then gradually "step up" intensity away from the adjoining development pattern.

b. Encourage projects to submit design details such as project visualizations/renderings or 3D modeling.

9. Public and private utility projects to establish telecommunications towers, power substations, regulator facilities, should be sited and designed to minimize detrimental impacts to neighboring properties, uses, and roadways. Examples include setbacks and vegetative buffers to reduce size and scale conflicts with nearby uses, especially residential uses; employing stealth technology; replacement of existing infrastructure with smaller, less impactful new technologies; and the use of flush mount or low-profile telecommunications antennas, if practical.
10. Solar energy facilities, as defined by the Spotsylvania County Zoning Ordinance should be sited and designed to minimize detrimental impacts to neighboring properties, uses, and roadways, considerate of the following parameters.
    a. To preserve a diversified rural and agricultural economy and maintenance of historically rural character, the total acreage outside of the Primary Development Boundary devoted to solar energy facilities should be limited to no more than three percent (3%).
    b. To minimize the need for new Cross-County transmission lines, Solar energy facilities should be located within one thousand (1,000) feet of high voltage electric power transmission corridors as depicted within the Comprehensive Plan.
    c. To maintain rural character, forestry and agriculture as primary uses outside of the Primary Development Area, there is a preference for separation of solar energy facilities of at least two (2) miles from another approved or constructed facility to reduce the physical and land use impacts related to the frequency and scale of such uses in rural areas.
    d. To reduce visual impacts, solar energy facilities are best located on sites with pre-established and/or preserved vegetative and/or forested buffers of enough depth or density to effectively screen the facility as determined by viewshed analysis along public roadways, nearby or adjacent residential properties, significant cultural or historic resources.
    e. To protect the County's ecological cores, prime agricultural soils and forestry potential, solar energy facilities should avoid designated open space, agriculture and forestry areas per the future land use map.
    f. Solar energy facilities of no more than 1,800 acres (total project area) are preferred over larger facilities.
    g. Explore opportunities for non-traditional installation methods such as earth screws or earth anchors that may reduce construction noise, expedite installation or removal (if need be).
    h. Notwithstanding the above guidance, any solar energy facility approved prior to adoption of this Comprehensive Plan shall be considered to be consistent with the Comprehensive Plan in respect to location, character, and extent.

Restrictions recommended herein shall not apply to the extent that any solar energy facility approved by Special Use Permit should ever be reconsidered.

11. Encourage the use of underground storage tanks/cisterns for new proposed development not presently nor proposed to receive future County water service.
12. Encourage the installation of back-up generators or generator-ready hookups for quick-connections at critical infrastructure locations such as all public safety facilities, schools (public and private), complementary uses critical to civic resiliency including but not limited to retail fuel stations, grocery and convenience stores, care facilities (adult and child), and transportation depots.
13. Discourage building footprints within dam break inundation areas.
14. Encourage land use proposals complementary to the Economic Development Zones provided impacts are properly mitigated. Economic Development Zone maps have been included within this Chapter for reference.
15. Protect viewsheds and the natural, historic, and scenic integrity of the County's scenic byways, scenic roads, and Civil War Trails.
16. Enhance access for transportation alternatives such as FRED. Examples include provision of bicycle and pedestrian safe accommodations to access transportation alternatives, improving pick-up and transfer sites considering all-weather conditions, project design meant to ease access and promote the ability to utilize alternatives.
17. The preservation of land via conservation easements are generally supported, especially for purposes of historic preservation, environmental protection, farm and forest preservation.
    a. When land conservation is proposed, carefully consider infrastructure needs of the community and seek to physically accommodate planned public infrastructure improvements meant for community benefit such as future public utility and road right-of-way needs.
18. Refer to the Table of Zoning Districts Complementary to Land Use Designations Inside, and Outside of the Primary Development Boundary to identify appropriate zoning districts associated with the land use category.

Agricultural and Forestal Land Use Category

Agricultural and Forestal- This land use category represents areas of active agricultural and forestal land within the County, existing agricultural and forestal character, and high to outstanding physical and locational value for agricultural, forestal suitability as exhibited in the Virginia Department of Conservation and Recreation's Natural Heritage Data Explorer Land Use Suitability models. The models are described in Appendix D, Natural Resources. This land use category is primarily intended for cultivation of crops and livestock purposes, as well as forestry operations, open space, agritourism and other agribusiness, and by-right as zoned rural residential uses. Preservation of existing rural and agricultural friendly zoning designations is encouraged and proposals that would increase residential density above by-right potential or are inconsistent with envisioned primary and secondary uses, especially those that result in significant loss of acreage of agriculture, forestry or silviculture are discouraged.

The Comprehensive Plan recognizes the importance of complementary uses in Agricultural and Forestal areas, considerate of provision of service for populations in the area and agricultural

and forestal supply chains. Subordinate or secondary uses generally supported within the Agricultural and Forestal category include: Agriculture and forestry products processing and distribution (i.e. greenhouses, sawmills, feed mills,); Provision of rural, agricultural, forestry goods, services, equipment (i.e. convenience store, garden center, child care center, medical care facility, fuel dispensing facility; farm equipment and supplies establishment); Civic, social, fraternal activities; places of worship; public facilities for provision of service to the community; provision of rural infrastructure and services such as telecommunications infrastructure, broadband, natural gas, electricity (not including power generation plants as a primary use); agritourism and historic tourism (i.e. agritourism uses, camp or recreation ground, bed and breakfast); accessory uses.

Agricultural and Forestal lands are well suited for protection from development pressures through enrollment in Agricultural/Forestal Districts or other programs with similar goals. These areas are also well suited for land protection and preservation efforts (e.g. conservation easements). The County supports a "right to farm" policy which limits the circumstances in which farming practices and operations can be considered nuisances to surrounding development. This land use designation is located outside of the limits of the Primary Development Boundary and therefore outside of the public water and sewer service area.

Agricultural and Forestal Land Use Policies:

1. Foster the preservation of agricultural and forestal land to protect the County's finite inventory of prime agricultural soils and areas of notable agriculture and forestry conservation value.
2. Discourage rezonings or special use permits for land uses incompatible with agricultural, silvicultural, or forestal use of the land, or that would have an adverse effect on the continued viability of these uses (e.g. significant loss of prime agricultural soils).
3. When residential development is considered within the Agricultural and Forestal land use, particular care should be paid to the viewsheds along rural roads and buffering to active agricultural lands.
4. The County should encourage the development of tourism and agri-tourism related services. These uses should be compatible with the existing development and may include bed and breakfast type inns, farmers' markets, and resorts.
5. Agribusiness in any form should be encouraged so long as it preserves the rural character of this portion of the County.
6. Road improvements (including road safety and intersection improvements) should consider the movement of agricultural freight and machinery, trailered boats and other equipment, rural and tourist populations.
7. The Agricultural and Forestal land use designation is appropriate for conservation easements intended to protect agriculture, forestry, environmentally sensitive areas, and significant historic resources.
8. Applicants should demonstrate adequate well and septic capacity considerate of surrounding uses.

Residential Land Use Categories

There are three distinct residential land use categories. The categories differ by envisioned housing types and densities of residential development. The densities that are provided are

recommendations considerate of existing development and envisioned development patterns and intensity going forward. The appropriate density for each proposal needs to be evaluated in the context of the surrounding community, including the availability or provision of needed infrastructure.

Rural Residential – This category is located outside of the limits of the Primary Development Boundary. In general, Rural Residential development has a recommended maximum density of one unit per two acres, including large lot residential, cluster development, farms, and forestland. These properties are served by private wells and septic systems. The preservation of land through conservation easements or preservation methods defined by the County Code may also be appropriate within this land use. Though Agricultural and Forestal land uses are still very much supported in this category, this land use category is more accommodating of Rural Residential rezoning activity than its Agricultural and Forestal counterpart. Rural Residential areas contain fewer areas of notable agricultural or forestal value as exhibited in the Virginia Department of Conservation and Recreation's Natural Heritage Data Explorer Land Use Suitability models. The models are described in Appendix D, Natural Resources. The Rural Residential category exists in areas of existing rural residential character and is concentrated primarily around the periphery of the Primary Development Boundary where employment opportunities and an abundance of goods and services can be accessed in shorter distances through transportation routes compared to more distant Agricultural and Forestal areas. The land use category also exists in proximity to Lake Anna.

Rural residents (including disadvantaged populations in rural areas as noted in the Transportation Chapter) need access to convenient goods and services. Therefore, neighborhood commercial rezonings should be considered in the rural areas provided that adequate infrastructure is in place or can be added by the applicant to accommodate the use. Transportation infrastructure, such as adequate site distance, signage, and road improvements, must be provided by the applicant to assure safe and convenient access. Site design and architectural elevations should be considered to ensure that the design and appearance of the commercial use is compatible with the architecture and character of the area.

This land use category is located outside of the limits of the Primary Development Boundary and therefore outside of the public water and sewer service area. Applicants should demonstrate adequate well and septic capacity considerate of surrounding uses.

Low Density Residential– This category is reserved for single family attached and detached residences typical in a suburban area. The overall density can be as high as four units per acre, but lower densities are also appropriate. This land use is appropriate within the Primary Development Boundary.

High Density Residential – This urban scale residential category typically includes single family attached and multifamily housing at densities of twelve to sixteen units per acre. Typical uses may include duplexes, villas, cluster housing, town homes, residential condominiums, and apartments. Public water and sewer must be available for this type of development to occur, and, therefore, this land use is appropriate within the Primary Development Boundary.

With few exceptions, as depicted in the Future Land Use Map the High-Density Residential land use category represents existing residential projects of a similar size and character to the designation. These tend to be standalone, automobile access-oriented projects in a suburban setting surrounded by other uses within existing developed areas. Such projects and are not well fit into a larger mixed-use plan of development. Undeveloped sites with the land use designation tend to be nearby or adjacent to developed high density sites, supporting potential expansion areas for similar development. Considering land use aspirations, high density residential development is otherwise supported as part of mixed-use development under the mixed-use land use category where a mix of complementary uses of varying densities; walkable live, work, play, shop areas, are promoted and enhanced accessibility and transportation alternatives are available.

Residential Land Use Policies:

1. Residential subdivisions should provide interparcel connections to adjoining undeveloped properties and connect to developments at existing interparcel access points, where possible, to help improve the connectivity of the transportation network and more efficient distribution of traffic.
2. Residential uses within the Primary Development Boundary should provide inter- and intra-development pedestrian paths to link adjoining subdivisions and form a cohesive residential area and alternative transportation and recreational opportunities.
3. Residential infill development should maintain the neighborhood character (massing, bulk, height, density) established by the existing adjacent subdivisions in relation to the adjacent subdivision edge only.
4. For residential development outside of the Primary Development Boundary particular care should be paid to preserving the character of the viewsheds along rural roads and buffering to existing agricultural properties, especially when mapped historic and scenic corridors are present.
5. The County should encourage the development of agribusiness and tourist related services within the Rural Residential areas. These uses should be compatible with the existing development and include bed and breakfast type inns, farmers' markets, campgrounds and resorts.
6. Individual driveways onto the primary rural roads should be discouraged and consolidated wherever possible.
7. Promote the provision of a diverse housing mix by encouraging a range of housing sizes and types that meet the needs of citizens at all income levels throughout all stages of life.
8. Promote the construction of market rate affordable housing units rather than units that are subsidized for the initial sale to ensure that housing remains affordable over time. Depending on the land use designation, examples may include and are not limited to condominiums, townhouses, and small single family homes to larger homes, manufactured homes, and active adult and assisted care facilities.
    a. Affordable housing are those units priced at or below the affordable price range based on the County’s methodology for calculating affordability as provided in the Affordability Calculation Table located in the Housing section of this Chapter. This calculation should be updated at least annually.

b. Encourage residential development projects that integrate a range of complementary residential housing designs and price points (including affordable units).
c. Considering manufactured homes as a possible source of affordable housing, consistent with the Code of Virginia Sect. 15.2-2223.5, strategies support:
    i. preservation of existing manufactured housing communities;
    ii. creation of new manufactured home communities;
    iii. creation of new manufactured home subdivisions.

9. Rural Residential land use is appropriate for conservation easements intended to protect agriculture, forestry, environmentally sensitive areas, and significant historic resources.
10. Outside of the Primary Development Boundary, applicants should demonstrate adequate well and septic capacity considerate of surrounding uses.

Mixed Land Use Categories

Mixed Land Use areas should serve as a place for Spotsylvania residents to live, work, shop, and play by providing for a variety of land uses in a compact, walkable community with a dense development pattern. The Mixed Land Use category encompasses a variety of uses, including traditional neighborhoods; higher density residential; non-traditional residential (garage apartments as well as residential units situated over commercial uses); commercial uses (retail and office); light industrial; educational facilities; "cottage" and "artisanal" industries; live-work projects; two or more uses; recreation facilities, and compatible public and other civic facilities. The intensity of the development within the mixed-use category will vary depending upon location, surrounding uses and the availability of mass transit. Larger scale mixed use developments may be proposed under this category or developers may propose smaller projects that that are or will be integrated into a larger mixed-use area. This should be accomplished by utilizing the principles described throughout this category description, with particular attention paid to physical transitions between developments in size, scale, massing, setback, screening and buffering, street layout, building location on the lot, general aesthetic of the development, parking design and location, and pedestrian accessibility.

Alternative modes of transportation are desired within mixed use areas to encourage pedestrian access and discourage automobile reliance. Tracts of land should be developed to provide continuity among the various land uses and to create a compact and walkable living environment and workplace. Transitional uses and/or project design considerations are required to protect lower intensity and density uses from more intense/dense development. Building heights, location specific densities such as along the project edge should be "stepped down" adjacent to lower intensity and density uses, if applicable. Road, street, and pedestrian corridors should be established in a grid pattern and connect wherever possible to adjoining developments. Mixed use developments will often include both on and off-street parking, sidewalks, bike lanes, benches, pedestrian scale lighting, tree lined streets that soften the hardscape and provide shade for pedestrians, fountains and other civic embellishments that assist in fostering a sense of community, and uniqueness of place.

There are three tiers of the mixed land use category. They are described as follows:

Mixed Use Light- Mixed Use Light is the lowest intensity mixed-use category. This land use category envisions a mix of single-family detached and attached residential development at densities of 4 to 8 units/acre. Except for the development of commercial corridors as described below, most of the land within this land use designation is envisioned to be a mix of residential uses.

The land use designation also supports development of mixed-use commercial corridors of a neighborhood or regional scale along roads with a VDOT functional classification of Major Collector or higher.

In "greenfield" development (presently undeveloped or underdeveloped areas), this land use category is generally located as a transitional land use to promote a gradual, more harmonious increase in density and intensity between low-density residential areas and more intensive mixed-use, employment center, or commercial areas.

For infill development, residential development of a similar size and scale to the existing development patterns is preferred. Development of affordable dwellings and creative infill such as residential "doubles" constructed to appear as single-family homes are appropriate in this land use designation. Affordable single family attached, single family detached, manufactured homes are additional examples. This land use designation has been geographically located to generally preserve the development patterns established in infill areas and discourage land use or intensity changes that would significantly alter the existing community.

Mixed Use General- This land use category envisions a broad mix of commercial, office, residential (single-family attached, multi-family) development in a horizontal mixed use pattern (various uses located within a walkable distance of one another), or in the "traditional neighborhood development" form with various uses "stacked" upon one another in multi-story buildings. Residential densities in these areas are envisioned to exceed 8 units/acre. However, urban or semi-urban densities of 16 units/acre or more and resulting building scale are appropriate and encouraged in this land use area. The land use designation is centrally located as core areas of mixed-use nodes and away from nearby low-density development. Urban or semi-urban densities and building scale are appropriate in this land use area.

Mixed Use Commercial Heavy. This land use category envisions a commercial and office "heavy" mixed use district. This category promotes development of commercial (such as retail, office, service, lodging, food establishments, entertainment, "cottage" or "artisanal" industries) at a semi-urban or urban scale. Residential development within these areas is intended as a secondary or subordinate use (in total land area and square footage devoted) within the land use area. The land use designation encourages mixes of residential typologies for housing diversification. Residential development here is intended to help diversify the land use mix and provide the ability for residents to be located nearer to employment opportunities and commercial goods and services and inversely for businesses and employers to benefit from a geographically close customer base or "employee pool". Like the Mixed-Use General designation, residential densities, except for the Lake Anna Mixed Use Commercial Heavy designation, are intended to exceed 8 units/acre. Urban or semi-urban densities of 16 units/acre or more and resulting building scale are appropriate and encouraged in this land use area.

At Lake Anna, the Mixed Use Commercial Heavy designation is located outside the limits of the Primary Development Boundary and lacks public water and sewer services. The Lake Anna area in proximity to the Route 208 corridor is envisioned to develop as a "village center" and mixed-use area. Economic Development Overlay Zones exist within this area that further promote commercial, technology, tourism related businesses in the area. The Lake Anna mixed use category includes the Technology Zone, Tourism Zone, and a portion of the HUB Zone. The primary focus of the Lake Anna mixed use area therefore is commercial. Residential development in this area is intended as a secondary or subordinate use (in total land area and square footage devoted). Due to its location outside of the County's Primary Development Boundary Envisioned residential densities and complementary zoning designations are not the same as those within the Primary Development Boundary (see Table of Zoning Districts Complementary to Land Use Designations Outside of the Primary Development Boundary).

Mixed Land Use Policies:

1. Special attention should be given to provision of design guidelines, architectural features and community amenities to enhance placemaking.
2. Appropriate transitions in size, scale, height, massing of building, project density and peripheral density (considering adjoining development, if applicable) and/or setbacks and buffering should be provided from mixed land use developments to adjoining existing developments that exhibit a distinctly different development character.
3. Vehicular and pedestrian connections should be made to adjoining developments at appropriate locations, including at existing interparcel access points.
4. A grid pattern of connected streets is appropriate. Cul-de-sacs are discouraged and only employed in rare instances (e.g. site limitations due to significant environmental or topographic constraints).
5. The County should support public open space and pedestrian accommodations integrated throughout the development.
6. Mixed-Use developments should be designed so that multiple vehicle trips can be combined into one stop by providing several destinations within easy walking distance. This can be encouraged by closely monitoring the provision of parking and ensuring that there is not an excess supply that encourages additional auto trips.
7. Mixed-Use development at Lake Anna should provide local shopping and professional services as well as tourist related uses such as hotels, inns and restaurants.
8. Parking should be located to the rear and sides of buildings preferably at the fringe of development or within structured parking, with the building facades clearly visible from the street.
9. The County should support a diverse housing mix with a range of housing sizes and types that meet the needs of citizens throughout all stages of life and income levels.
10. Promote the construction of market rate affordable housing units rather than units that are subsidized for the initial sale to ensure that housing remains affordable over time. Depending on the mixed-use tier, examples may include and are not limited to condominiums, townhouses, and small single family homes to larger homes, manufactured homes, and active adult and assisted care facilities.
    a. Affordable housing are those units priced at or below the affordable price range based on the County's methodology for calculating affordability as provided in the Affordability Calculation Table located in the Housing Section of this Chapter. This calculation should be updated at least annually.

b. Encourage mixed-use development projects that integrate a range of complementary residential housing designs and price points (including affordable units).
c. Considering manufactured homes as a possible source of affordable housing, consistent with the Code of Virginia Sect. 15.2-2223.5, strategies support:
    i. preservation of existing manufactured housing communities;
    ii. creation of new manufactured home communities;
    iii. creation of new manufactured home subdivisions.

11. Quality open spaces should be integrated into developments and may include passive and active areas, pavilions, walking paths, gardens, forested areas, and lakes, pocket parks, among other features.
12. Commercial and Office development within the Mixed-Use Light tier should primarily be oriented and/or along roads with a VDOT functional classification of Major Collector or higher.
13. Residential development within the Mixed Use Commercial Heavy Tier should be a secondary or subordinate use (in total land area and square footage devoted) compared to the balance of the full extent of the land use area within which the project is a part.
14. To enhance site accessibility and reduce internal road network conflict, secure an additional point of ingress/egress to/from the Bowman Center/Sylvania Plant Industrial Center/ Spotsylvania Industrial Park Mixed Use Commercial Heavy area.

Commercial Land Use Category

Commercial- The commercial land use area consists of a variety of retail and office uses, examples of which include, but are not limited to: medical facilities, shopping centers, restaurants, hotels, automobile service and sales facilities, personal service establishments, office parks, entertainment facilities, and similar uses. The majority of the existing commercial developments within the County are located along Jefferson Davis Highway (U.S. Route 1), Plank Road (U.S. Route 3), and Southpoint Parkway. Connectivity to and accessibility from nearby residential development should be encouraged.

<u>Commercial Land Use Policies:</u>

1. Street patterns for new development should follow an interconnected network to reduce congestion and provide routing alternatives for local traffic.
2. New development should provide interparcel connections to adjoining properties, where appropriate, and should connect to existing interparcel access points.
3. Sidewalks and paths between commercial and office buildings and through parking lots should be provided to ensure safe pedestrian routes and, when possible, connect to FRED bus routes.
4. The County should encourage development patterns that redirect traffic patterns to alleviate congestion. Direct access to existing roads by individual uses or lots should be discouraged.
5. Development should proceed sequentially along and back from the major thoroughfares. Development should not isolate an existing land use or undeveloped parcel.
6. Encourage the retention and expansion of existing business operations, as well as the attraction of new businesses and investment.

7. Encourage non-retail commercial operations.

Employment Center Land Use Categories

The Employment Center land use areas are envisioned to be the primary location for new office and industrial development within the County, with a focus on larger scale office complexes, computing and technology-based uses such as data centers, industrial uses industrial parks, office parks, entertainment and tourism attractions and complementary uses, where applicable. Where the Employment Center Land Use Category overlaps the County's Economic Development Zones, the land use category seeks to achieve a complementary vision. Efforts to increase residential densities in these areas are discouraged.

Industrial development within the County is desired in the interests of growing local employment, promoting investment within the community, and maintaining a balanced economic base. Depending on the Employment Center land use category, light and heavy industrial uses are suited for the land use designation. Given the nature of these uses, careful consideration of their location and transition to adjoining properties is important.

Spotsylvania County recognizes the importance of logistics and distribution-based businesses. They are integral to the economy and provision of goods. Supply chains are far reaching. Growth of online sales has vastly increased access to goods from coast to coast and internationally. Access to these resources require extensive supply chains from manufacturer to warehouse to distribution (road, rail, air, water, pipeline, fiber) to final end user. The County recognizes the importance of Interstate 95, US Route 17, and the RF&P Rail Corridor for far reaching logistics systems connections.

Truck terminals, warehousing and distribution facilities can be considered either light or heavy industrial. Such industrial uses must be considered within the context of their size, scale, transportation systems, service area impacts to determine whether they complement light industrial neighbors or heavy industrial ones.

Except for the Thornburg area where Economic Development Zones advocate for tourism related commercial attractions and complementary uses. As a general "rule of thumb" limited commercial development is considered appropriate within the designated Employment Center areas. Commercial development such as retail sales establishments or retail plazas are intended to be secondary or subordinate to the intended employment center uses. The County's targeted commercial centers with 'big box' retailers and others have been identified separately on the Future Land Use Map as the red 'Commercial' category. Provision for commercial development also exists within the County's mapped mixed-use areas.

Employment Center Light- The employment center light category is primarily envisioned for light industrial parks, data centers and office parks. Light industrial uses are usually more consumer-oriented than business-oriented and are involved in manufacturing activities that use moderate amounts of partially processed materials to produce items of relatively high value per unit. Examples include but are not limited to the manufacturing of: clothes, shoes, furniture, consumer electronics and home appliances. Processing, assembly or disassembly operations could also fall into this category. Warehousing and distribution may be appropriate in this land

use category. High Technology businesses, data centers and "clean" industry are appropriate in this land use. Typically, these uses cause little pollution or risk of nuisance. Operations are typically kept internal to the building footprint with limited outdoor operation of machinery or equipment beyond freight-based delivery or distribution.

Employment Center Heavy- Employment Center Heavy uses tend to be larger in scale and may have pollution impacts (noise, odor, etc.) on the surrounding area. Such uses may have emissions or a large degree of outdoor machinery of equipment use as part of normal operations. While these impacts should be minimized, there is the recognition that not all negative effects can be completely mitigated. The location of heavy industrial uses should be encouraged to help ensure appropriate transitions that minimize impacts on neighboring properties. Examples of heavy industrial uses include, but are not limited to: mining operations; refineries, power plants with emissions; scrap recycling operations, rail yards, and the fabrication and assembly of large items where the size and scale of facilities and operations are otherwise significantly "out of character" with the surroundings.

Employment Center Land Use Policies:

1. Encourage development of new and existing industrial parks and mitigate conflicts with nearby residential areas.
2. Street patterns for new development should follow an interconnected network to reduce congestion and provide routing alternatives for local traffic.
3. Truck dependent businesses should be located where they have access to major thoroughfare(s) and do not have to rely on local roads.
    a. To reduce the extent of impacts on roadways, large Interstate dependent distribution facilities are best suited within three (3) travel miles on sufficiently accommodating roadways to the nearest Interchange of chief access.
4. New development should provide interparcel connections to adjoining properties where appropriate.
5. Sidewalks and paths between commercial, office, and industrial buildings and through parking lots should be provided to ensure safe pedestrian routes and, when possible, connect to bus routes.
6. Encourage development patterns that redirect traffic patterns to alleviate congestion.
    a. Direct access to existing roads by individual uses or lots should be discouraged
    b. Discourage strip commercial and 'big box' development and promote office and industrial centers in a campus like setting that are linked by pedestrian/bicycle paths, where appropriate, and access roads.
7. Commercial development should be secondary or subordinate (in total land area and square footage devoted) to the intended uses associated with the employment center land use designations.
8. Development should proceed sequentially along and back from the major thoroughfares.
9. Promote the following components of campus style office development over traditional strip commercial development:
    a. Minimal entrances and conflict points
    b. Landscaped median strip with few stoplights and crossovers allowing for free-flowing traffic
    c. Berms, landscaping and trails or sidewalks along major transportation routes

   d. Pedestrian networks along internal roadways and between complexes
   e. Maximized interparcel connections
   f. Mixed uses provide on-site services
   g. Minimize the visibility of parking lots from the major transportation routes
10. Encourage job creation that provides sufficient income for employees to be able to afford housing within the County.
11. Encourage the retention and expansion of existing business operations as well as the attraction of new businesses and investment.
12. Encourage a diversification of uses within the Employment Center category to include light industry, heavy industry and office uses.
13. Continue economic development site selection and attraction efforts to identify candidate sites, seek tier designation, and improve tier designated sites for the VEDP Business Ready Sites Program.

Open Space Land Use Category

Open Space- The open space land use category is not intended for development other than for passive recreation purposes such as recreational trails, wildlife management areas, natural or historic preservation and interpretation. The land use is intended to preserve and protect historic and natural resources throughout the County and recognizes the inherent value in open space, resource protection, character and viewshed protection. The open space land use category includes park and recreation facilities owned and operated by the County for passive recreation, State and Federal Government parks, as well as those areas deemed worthy of preservation and conservation, such as buffers along major roadways to preserve the rural character in the proximity of the County's historic resources. Roadway buffers especially consider the County's two designated scenic byways and scenic roads. Common open spaces in private developments are also included as they serve to provide passive recreation, permanent screening and buffering, natural resource preservation and protection. Lands in existing conservation easement are included in the open space designation. As part of this Comprehensive Plan update, the open space land use category has been expanded to include mapped wetlands and resource protection areas. The intent of the addition is solely based on proactively considering presence of resources and avoiding introducing negative impacts to them. Acknowledgement of such resources under the open space category also "paints a clearer picture" for areas identified for potential development prospects that may be environmentally constrained and as a result developable acreage reduced or inhibited.

Open Space Land Use Policies

1. Viewsheds from County roads should be preserved.
2. Development in these areas should be generally discouraged, however, if it is to occur, it should occur in such a way to best blend into the existing landscape.
3. The open space land use areas are appropriate for conservation easements intended to protect open space, agricultural and forestal lands, environmentally sensitive areas, significant historic resources.

Institutional Land Uses

Institutional- For the purpose of the future land use element, Institutional land uses include the governmental facilities necessary for the provision of public services, and large public service uses such as airports. Such uses are common throughout the County and are intended to serve geographically dispersed populations within and outside of the Primary Development Boundary. Such uses commonly appear in the County Zoning ordinance as by-right or special uses across rural, suburban, and urban-scale zoning districts. As such, institutional land uses have application county-wide, both inside and outside of the Primary Development Boundary and across all land use categories. Such uses should mitigate their impacts on public facilities such as the local transportation system and carefully consider impacts to assure impact reduction (size, scale, massing) on the physical surroundings and existing development through site design. Institutional Land Use areas in the future land use map reflect existing institutional uses within the County. Refer to the Public Facilities Chapter for insights into areas identified for establishment of additional County managed facilities.

Historic or Scenic Corridors

The Future Land Use Map acknowledges designated historic or scenic corridors within the County. These designations are not intended to change the underlying land use designation but to emphasize the importance of sensitive site and building design. These corridors have been designated recognizing their inventory of significant historic, cultural, scenic resources, and character. Additionally, there are several important high visibility "gateway" or "first impressions" corridors of importance. Stewardship of recognized historic or scenic resources and continued vigilance to avoid diminishing the value of the corridor designations is up to citizens, landowners, developers, and the County as a whole. Historic and scenic corridor designations within Spotsylvania County include Scenic Byways and Roads, and the Civil War Trail. Outside of the Primary Development Boundary, efforts to preserve and protect the scenic value of these corridors are supported. Examples include establishment of conservation easement, enhanced buffering or setbacks, designating open space areas along corridors, architectural design sensitivity to the nearby rural and/or historic vernacular. Within the Primary Development Boundary where development is intended, enhanced site and architectural design is encouraged. Many of these corridors within the Primary Development Boundary already are subject to enhanced design standards associated with the Highway Corridor Overlay District (HCOD). Similar standards are encouraged to be applied along corridors where the HCOD does not exist. The County encourages architectural renderings, design simulations, viewshed analysis' when development is proposed along designated historic or scenic corridors as identified on the Future Land Use Map.

Spotsylvania County's Scenic Byways and Roads, and the Civil War Trail through Spotsylvania County have been described in greater detail below:

Scenic Byways and Roads- The State Scenic Highway and Virginia Byway Act (1966) created the Virginia Byway program. Per the Virginia Department of Conservation and Recreation (DCR), the state scenic byway program is managed by Virginia Department of Transportation (VDOT) in partnership with the DCR. Natural, cultural, historical, recreational and archeological amenities

of the commonwealth's scenic roads are recognized through the program, as are unique and varied cultural and features of Virginia's geographic regions.

VDOT's designation process involves municipalities, citizens and the state who cooperatively determine if a road section of at least ten (10) miles warrants designation for its aesthetic, cultural, historical, natural or recreational significance.

Spotsylvania County has two Virginia scenic byways, they include River Road and Guinea Station Road. In order to maintain the integrity of the County's scenic roads, its incumbent upon the County to establish goals aimed at their protection. Fortunately, both corridors are located outside of the Primary Development Boundary and are not expected to or envisioned to experience transformative character changes via development pressures. However, such corridors have been subject to occasional business, utility or telecommunications infrastructure, and residential rezoning proposals that warrant establishing some basic scenic byway protective guidelines. Consideration of the scenic byway designation is often raised as a concern during the public hearing process by citizens interested in maintaining corridor integrity.

VDOT also identifies two transportation corridors within Spotsylvania County as Scenic Roads. Both Scenic Byways and Scenic Roads can be found on VDOT's 2017 Scenic Roads Map. Per VDOT, the scenic roads designation is a historic one, based in Virginia's 1965 Statewide Comprehensive Outdoor Recreation Plan. Scenic Roads in Spotsylvania County include Plank Road (Route 3), extending from the City of Fredericksburg line to Orange County, and Courthouse Road (Route 208), from Interstate 95 to Brock Road. Staff notes that portions of these roads within urbanized areas within the Primary Development Boundary are located within the County Highway Corridor Overlay District, intended to provide enhanced design standards for new development. Otherwise, cognizant of historic resources and interest in maintaining rural character and viewsheds along those corridors, the County has applied open space land use designations. For instance, Courthouse Rd between Smith Station Road and the Spotsylvania Courthouse Battlefield serves as historic rural "gateway" to Spotsylvania Courthouse mixed use area. Rural viewshed protection, enhanced setbacks, buffering, forest preservation, farmland protection, conservation easements, rural context sensitive design are all critical elements to maintaining corridor integrity in these areas.

Civil War Trails Lee vs. Grant Driving Route

Civil War Trails® connects visitors with the great campaigns and lesser-known sites of the Civil War. Stops along the Trail and interpretive signs complemented by map guides, guide visitors as they follow in the footsteps of the generals, soldiers, citizens, and the enslaved who found themselves in the midst of this great struggle.

The approach of Civil War Trails is to interpret—not commemorate or memorialize—the events, people, and places of the most pivotal time in our nation's history.

In Spotsylvania County, the Lee vs. Grant Civil War Trails Driving Route includes: Hill Ewell Drive; a portion of Orange Plank Road extending from Hill Ewell Drive to Brock Road; Brock Road from Orange Plank Road to Courthouse Road in the Spotsylvania Courthouse Area; Courthouse Road to Massaponax Church Road; Massaponax Church Road from Courthouse Road to Jefferson

Davis Hwy (Route 1); Jefferson Davis Hwy (Route 1) from Massaponax Church Road to Guinea Station Road; Guinea Station Road extending to the Caroline County line. Significant Civil War sites associated with the 1864 campaign have been highlighted along this route. Within Spotsylvania County, sites include: Todd's Tavern; Spotsylvania Battlefield; Spotsylvania Courthouse Historic District; Harris Farm; Zion Methodist Church; Massaponax Church; and Plantations on Guinea Station Road.

As outlined in the Historic Resources Chapter the protection and interpretation of significant historic resources is valued in the community. Historic locations and events associated with them help shape the history and character of the County and are a major contributor to local and regional tourism, with associated economic benefits. Like the County's Scenic Byways referenced above, along the Civil War Trails Route efforts should be made to ensure historic resource preservation and protection, including maintaining the aesthetic quality of the corridor, rural and historic viewshed preservation and protection, enhanced setbacks and/or buffering, consideration of the historic architectural vernacular of the area when new development is proposed.

UTILITY, TELECOMMUNICATIONS, AND INTERNET INFRASTRUCTURE

As part of the Comprehensive Plan scope and purpose, the Code of Virginia §15.2-2223.C.8 suggests localities map the designation of corridors or routes for electric transmission lines of 150 kilovolts or more. A map showing the County's existing inventory of such transmission line corridors can be found at the end of this Chapter.

Utilities and telecommunications infrastructure and service reliability is critical in the modern day with application in many areas including personal use, business, public safety, and education. Provision of both publicly and privately administered utility infrastructure to serve the citizens, businesses, public servants (including first responders) of Spotsylvania County requires a geographically expansive network of utility infrastructure that includes all land use designations both inside and outside of the Primary Development Boundary. Provision of public water and sewer (within the Primary Development Area) requires infrastructure such as underground pipes, water treatment facilities, water towers, pump stations, while provision of cellular services by telecommunications providers requires a network of telecommunications towers spread across the County in both rural and developed areas to maintain consistent reliable services. Natural gas and electric providers distribute services by pipe, conduit, or overhead power lines and may require substations, gas regulator facilities. Considering the nature of utilities and telecommunications infrastructure, proposals for these types of facilities should be measured based on their merits and ability to mitigate impacts.

Broad availability of high-speed internet services throughout the County has become increasingly critical in recent years for residents and businesses as the world has become ever more linked to the web for e-commerce, communication, e-learning, news and information sharing. Spotsylvania County recognizes numerous benefits of expanding and enhancing access to high speed internet, including support of: jobs; job growth; education; real estate marketability; telework (a type of transportation demand management (TDM) strategy); economic development; entrepreneurship; tourism; health care; communication/entertainment; public safety and emergency services; other uses and other

future uses. The County notes progress in provision of high-speed internet with an additional 12,000 homes provided with cabled broadband service since 2011. However, large rural areas of the County remain unserved by high speed broadband. The County continues to look for creative means (including opportunity for emerging technologies) to help expand broadband services.

Specific to provision of high-speed internet for unserved or underserved populations, especially in rural areas, the County Information Services Department in conjunction with the County Cable and Telecommunications Commission has identified several action items, as follows:

- Continued efforts of the Cable Commission and staff to expand broadband capabilities throughout entire County

- Establish a working timeline for short- and long-term goals
  - Establish broadband subcommittee (immediate)
  - Wireless Services on certain rural County towers (short term –4-8 months)
  - Franchise Agreement renewals (6-12 months)
  - Support for Rappahannock Electric Coop, should their grant application be awarded (long term –no ETA until more information from REC is available)

- Establish a dedicated webpage for broadband initiatives

The County will need to advocate for its citizens for broadband capability, by

- Continued work with franchise service providers
- Continued work with cell tower placement and co-location
- Continued work with grants
- Continued work on wireless and wired solutions
- Explore all available technologies
- Discussion of need for broadband consultant and fulltime broadband staff
- Formation of broadband subcommittee
- Broadband plan approval by the Board of Supervisors

HOUSING

Spotsylvania County Residential Land Use Policies set out to *promote the provision of a diverse housing mix by encouraging a range of housing sizes and types that meet the needs of citizens at all income levels throughout all stages of life*, and *promote the construction of market rate affordable housing units rather than units that are subsidized for the initial sale to ensure that housing remains affordable over time.* A summary of the County housing inventory and a calculation to determine an approximate value of affordability within the County is in Table 6 below. Housing priced below the reported amount would be considered affordable within the County based on the methodology employed.

Table 6: Housing Inventory

Spotsylvania County Total Housing Inventory By Housing Type Since 2010											
Year	2020*	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Single Family - Detached	41151	40711	40142	39585	39203	38883	37615	37938	37685	37476	37141
Single Family - Attached	4604	4357	4238	4120	4064	4007	4030	2775	2743	2730	2730
Multi-Family (Apt Units)	5106	4505	4234	3748	3194	3002	2910	3396	3136	3136	3136
Total	50861	**49573**	**48614**	**47453**	**46461**	**45892**	**44555**	**44109**	**43564**	**43342**	**43007**
MH - Personal Property	1506	1495	1402	1418	1482	1496	1497	1482	1510	1537	1523
					Note from Pat Quinn: Criteria changed for 2014.						
					2020 Figures as of January, 2020						

The Commissioner of Revenue's Office of Real Estate Assessment tracks the County housing inventory by housing type over time. The County's total housing inventory by housing type since 2010 is provided in the table above as reference. Based on the Office of Real Estate Assessment's data, the County's multi-family housing inventory is 5,106 units as of January 2020. This data is updated annually. Considering the County housing stock as a whole where there are 41,151 single family detached units and, 4,604 single family attached units. Multi-family units (5,106) account for 10% of the County's total housing inventory. Single family detached units are by far the most prevalent type of housing in the County at nearly 81%.

If we consider the County's population generation rate estimates by housing type, nearly 87% of the County population resides in single family detached homes. 7% of the County population resides in single family attached units and approximately 5% reside in multi-family housing. Presently the County estimates 3.04 persons per single family detached unit, 2.41 persons per single family attached unit, and 1.49 persons per multi-family unit.

Current County student generation rates suggest the single-family detached housing inventory accounts for approximately 84% of the total student enrollment. Approximately 10% of the student enrollment lives in single family attached units. For multi-family units, nearly 2% of the student body lives in market rate units and 4% reside in tax credit units.

The housing inventory also separately counts mobile home units, noting an inventory of 1,506 such units. Based on the information provided, the County mobile home inventory has remained relatively unchanged. Since 2010 the County has seen a slight decrease in total units from 1,523 (in 2010) to 1,506 (in 2020). There are six residential manufactured home "mobile home" parks

within the County ranging from a high of 209 units down to just 4. The total number of mobile home units within the six parks is 853. Of the total, the remaining units are located outside of mobile home parks.

Residential Building Activity

Table 7: Residential Building Activity (2011-2020)

Spotsylvania County Dwelling Units										
Month	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
January	16	22	28	30	31	54	48	61	71	51
February	22	30	27	41	26	45	40	47	30	65
March	17	21	49	32	29	33	45	68	79	120
April	18	19	40	40	30	31	58	49	51	66
May	18	10	51	45	35	62	75	52	69	59
June	29	22	47	36	46	52	79	56	64	73
July	31	43	27	55	61	52	80	61	79	78
August	18	54	44	42	29	41	58	71	51	85
September	22	29	28	33	27	51	65	67	53	97
October	26	38	37	35	41	50	70	75	52	80
November	16	23	34	24	29	44	47	43	61	58
December	19	30	31	44	40	49	50	36	52	68
Total for Year	**252**	**341**	**443**	**457**	**424**	**564**	**715**	**686**	**712**	**900**
(Total includes SF, TH, APT, SW, DW)										

Source: Spotsylvania County Building Office

Residential building permit data shows an increasing rate of new units since 2011 as the housing market slowly rebounded from the 2008 Housing Crisis that negatively impacted the region. Comparing 2020 data (last full year available) to 2011 data, new residential unit activity is nearly 3.6 times higher with 900 units reported in 2020, versus 252 in 2011. Table 7 above shows the overall increase in residential building activity since 2011.

Occupancy rates for apartments:

CoStar is the largest purveyor of real estate market data and market research in the Country. A report was run in late January 2020 and notes/identifies/accounts for 4,871 multi-family units (nearly on par with the County Office of Real Estate Assessments total multi-family housing inventory described below. Of the units tracked by CoStar, the report notes an additional 527 units under construction with an anticipated 12-month absorption rate of 419 units or nearly 80% of the new units. Market vacancy was at 7.6%. When looking at rental vacancy rates it is good to consider established built out projects that have had time to "lease up" separately from newly opened projects that are still in lease up phase where the market is still absorbing or "filling" the new units. For instance, at the time the report was run, existing well established projects such as Kilburn Crossing (2005, 2017 reno.), Breezewood Apartments (1989), Brittany Commons (1998), Silver Collection at Cosners Corner (2016) had vacancy rates of 6.36%, 5%, 4.02%, and 7.66% respectively. Inversely these projects have occupancy rates of 93.64%, 95%, 95.88%, and 92.34% respectively. Abberly at Southpoint (2016) is a fairly recent addition to the multi-family market but is now established with a vacancy rate reported at 5.71% of 280 units. This results in an occupancy rate of 94.29%. Brand new projects including Keswick I Apartments

(2019), The Allure at Jefferson (2019) ran much higher vacancy rates at 24.17% and 27.33% respectively. These projects are still in “lease up”.

A 2017 Study of the Regional Multi-Family Housing Market by the Fredericksburg Area Association of Realtors found Spotsylvania’s Multi-Family (Apartment Complex Rentals) Vacancy Rate to be 6%. The study was based on information gained from a survey of property managers of apartment complexes with 40 or more units. This threshold therefore accounts for nearly all apartment complexes within Spotsylvania County. The addition of new multi-family projects in lease up periods do influence the vacancy rates over time so some variability is expected over months, years. Additional factors can also influence variability in vacancy rates over time not associated with lack of demand within the market. Variables including but not limited to socio-economic trends and population shifts, seasonal based moving trends (May to September), property management and maintenance factors, increases in rental choice (moving from one project to another), locational factors such as convenience, public safety, proximity to transit and employment, renters shifting to home buyers, out of market relocations, lifestyle and life cycle change, all lead to potential variability within project vacancy rates without suggesting the market as a whole lacks demand.

What percentage of the Multi-Family units are tax credit financed projects:

The Virginia Housing Development Authority (VHDA) publishes a list of tax credit properties statewide searchable by locality. Based on July 7, 2020 data, the VHDA reports County-wide there are 2,411 Tax Credit Units amongst 21 Tax Credit (TC) projects. The tax credit project inventory is in Table 8 that follows:

Table 8: Current Tax Credit Properties- Spotsylvania County (As of July 7, 2020)						
Property Name	**Street Address**	**Jurisdiction**	**Tax Credit Units**	**Total Units**	**Target Type**	**Building Type**
Courthouse Green	8132 Pool Drive	Spotsylvania County	40	40	General	Acquisition/Rehab
Enoch George Manor	10231 Brittany Commons Boulevard	Spotsylvania County	60	60	Elderly	New Construction
Greens of Salem Run	5600 Salem Run Boulevard	Spotsylvania County	200	200	General	New Construction
Heights at Jackson Village	5.3 acres at Old Telegraph Road	Spotsylvania County	187	187	Elderly	New Construction
Keswick	8800 Block of Lake Anna Parkway	Spotsylvania County	120	120	General	New Construction
Keswick II	0 Robert E Lee Dr	Spotsylvania County	116	116	General	New Construction
Keswick Senior	8900 Block of Lake Anna Parkway	Spotsylvania County	100	100	Elderly	New Construction
Kings Crest	11500 Kings Crest Court	Spotsylvania County	99	100	Elderly	New Construction
Meadows at Salem Run II	5711 Castlebridge Road	Spotsylvania County	80	80	Elderly	New Construction
Meadows I	5711 Castlebridge Road	Spotsylvania County	100	100	Elderly	New Construction
New Post	1801 Nottingham Drive	Spotsylvania County	102	102	General	New Construction
Orchard Ridge at Jackson Village	9401 Jefferson Davis Highway	Spotsylvania County	169	169	General	New Construction
Orchard Ridge at Jackson Village II	9401 Jefferson Davis Highway	Spotsylvania County	76	76	General	New Construction
Overlook Terrace	4710 Overview Drive	Spotsylvania County	72	72	General	New Construction

Table 8 Continued: Current Tax Credit Properties- Spotsylvania County (As of JULY 7, 2020)						
Palmers Creek	8934 Jefferson Davis Highway	Spotsylvania County	200	200	General	New Construction
Pines	8835 Crismond Lane	Spotsylvania County	46	46	General	Acquisition/Rehab
Salem Fields	7100 Alpha Court	Spotsylvania County	139	139	General	New Construction
Salem Run I	5715 Castlebridge Road	Spotsylvania County	160	160	General	New Construction
Salem Run II	5715 Castle Bridge Road	Spotsylvania County	108	108	General	New Construction
Timber Ridge	3500 Golden Field Lane	Spotsylvania County	147	147	General	New Construction
Windover Villas	8001 Cherry Tree Drive	Spotsylvania County	90	90	General	New Construction
Source: Virginia Housing (VDHA) Current Tax Credit Properties List as of 07/07/2020.						

Based on the County's current multi-family inventory count of 5,106 units, using VDHA data we have found nearly 47% (47.2%) are tax credit. Of the 2,411 total Tax Credit units, 626, or nearly 26% of all tax credit projects, are age-restricted (non-student generating). Considering school age children and student generation, a recent survey of newer Spotsylvania County tax credit projects compared to market rate ones has found that tax credit project student generation rates exceed market rate student generation. For schools, student generation rates are as follows (see Table 9):

Table 9: Multi-Family Housing Student Generation Rates (2019)		
	Market Rate	**Tax Credit**
Elementary School	0.073	0.291
Middle School	0.047	0.134
High School	0.051	0.139

Multi-family market rate projects tend to generate the fewest children of the three distinct housing types the County tracks (Single family detached, single family attached, multi-family). However, multi-family tax credit projects have student generation rates more akin to single family detached and single family attached units.

Multi-Family demographics:

In 2017, the Fredericksburg Area Association of Realtors (FAAR) commissioned two studies focused on the local housing market. Staff met with representatives of FAAR in late January 2020 to discuss the local housing market, including multi-housing market. FAAR does not believe

the three years that has gone by since release of the 2017 study is enough time to have resulted in a significant change in findings. So FAAR indicated that no update is warranted at this time. Findings of FAAR's 2017 Profile of Demographic, Economic and Housing Market Conditions specific to Spotsylvania County and FAAR's 2017 Multi-Unit Housing Study that focuses on the region and includes locality specific analysis are insightful. As of the 2017 multi-family study conclusions, staff notes the study found:

> *Most of the variables suggest a strong demand for multi-unit housing in the region. Given the robust economic outlook for the region and low vacancy rate, demand may soon overtake supply. Improving transportation options between Fredericksburg (area) and Northern Virginia, specifically I-95 Express Lanes Fredericksburg Extension and the North and South Rappahannock River Crossing Projects, may increase demand for multi-unit housing even more.*

Looking at the Spotsylvania County Housing Study Profile of Demographic, Economic and Housing Market Conditions for multi-family housing conclusions:

> *The shift towards more multifamily housing and more rental housing reflects a younger workforce and stronger growth in industry sectors that pay relatively lower wages. Younger households and households with lower incomes tend to prefer both rental housing and multifamily housing.*

And

> *On the rental side, there will be substantial need for housing affordable to renters earning below $50,000. Based on these estimates of future housing needs in Spotsylvania County, about 57.7 percent of future renters will earn below this level and will need rents at or below $1,250 to be affordable. It is expected that 29.7 percent of new renter households in the County will be able to afford rents between $1,250 and $1,749. In Spotsylvania County, it expected that demand for higher-end rental units will be relatively low, with the suggestion that 7.2 percent of new renter demand will be for units with rents between $1,750 and $2,249 per month and 5.4 percent of units with rents of $2,250 per month or higher.*

The results on housing demands referenced above tied to economic struggle and lower incomes are additionally supported by the United Way of Virginia's Asset Limited, Income Constrained, Employed (ALICE) Study of Financial Hardship, dated Spring, 2017 that found 41% of households below the ALICE threshold and 6% below the poverty threshold. The Study provides additional details into methodology and findings. From the study, primary factors contributing to affordable housing demands, demands for multi-family units include: *low wage jobs dominate the local economy; the basic cost of living outpaces wages, economic conditions worsened for ALICE households from 2007 to 2015, public and private assistance helps, but doesn't provide financial stability.*

The Approved Development Analysis

Per the Planning Department's Future Development analysis spreadsheet (as updated through January 1, 2021), there is an inventory of 12,049 approved and yet unbuilt residential units

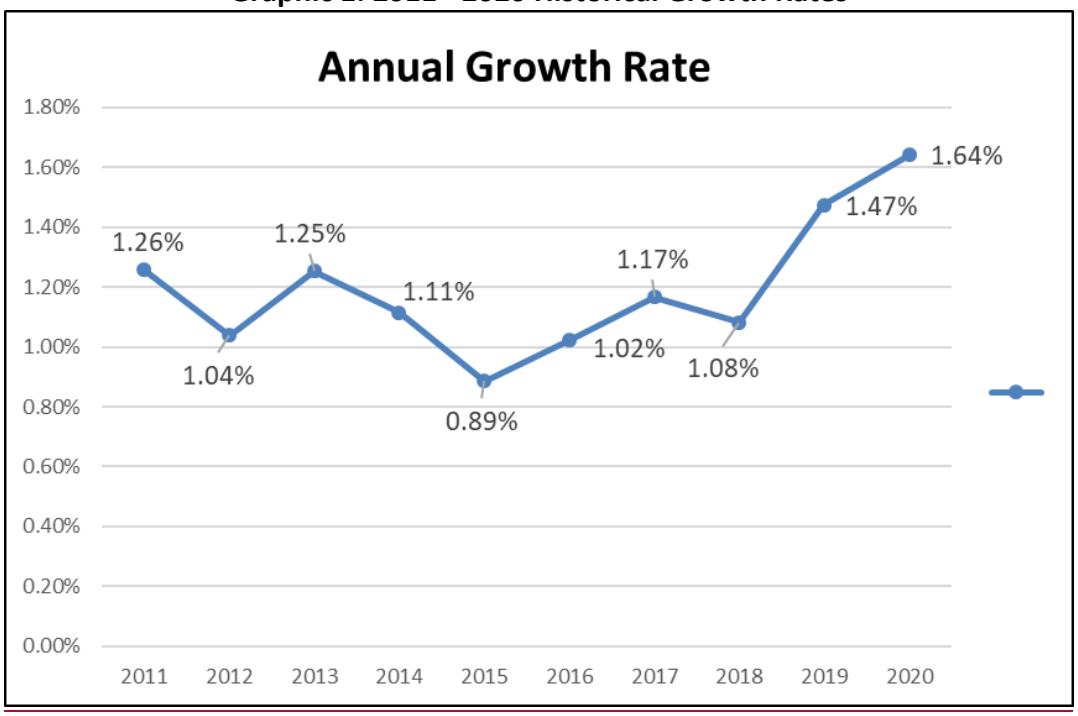
including single family detached (3,496), attached (2,314), multi-family (5,095), age restricted (1,144). The vast majority of these future units are located within the Primary Development Boundary where higher intensity development is intended. Considering multi-family units, the approved yet unbuilt multi-family inventory would nearly double the current inventory of multi-family inventory in the County. Considering the CoStar reported market absorption of 419 units over 12 months, the multi-family inventory would be absorbed over the course of 12 ½ years. Staff acknowledges it is hard to predict exactly when and how many units will come available in the market at any given time. Variables over time have influence on the rate of construction as well as market absorption. As we have seen, some projects that are approved quickly advance to site plan and construction while others sit idle for numerous years. The 12 ½ year scenario above assumes that all approved yet unbuilt multi-family units (5,095) would be constructed perfectly aligned with current market absorption rates.

Considering Spotsylvania County's known residential development "pipeline" projects inventoried above, FAAR's 2017 Profile of Demographic, Economic and Housing Market Conditions specific to Spotsylvania County between the year 2017 and 2032 found:

> *Given the expected characteristics and incomes of net new working households in Spotsylvania County over the next 15 years, it is expected that 74.8 percent (10,800) housing units) will need to be single-family detached or attached homes to meet demand. The remaining 25.2 percent (3,645 housing units) are forecasted to be multifamily. This reflects a shift from current development patterns in Spotsylvania County where 86.7 percent of homes in the County are single-family detached of attached homes and only 8.2 percent are multifamily units. (Five percent of the existing units in Spotsylvania County are mobile homes.)*

Staff notes even with an abundance of approved units of varying types, the County growth rate has remained low over the last decade (See Graphic 1). Staff has included as reference the County's growth rate between 2011 and 2020 (most recent available). The County growth rate has stayed below 2% during this period. Growth rates are based on annual population estimates provided by the US Census Bureau between the decennial census.

Graphic 1: 2011 - 2020 Historical Growth Rates



Source: Calculations based on US Census Population Estimates (all figures as of July 1)

Housing Ratio (Housing Units and Jobs)

Per the April 2020 update of the Virginia Employment Commission's Community Profile for Spotsylvania County there were 36,079 jobs located in Spotsylvania County. This equates to a County jobs: housing ratio of 1: 1.42 (50,861 units (incl. SFD, SFA, MF)/36,079 in County jobs = 1.41), Including the County's Mobile Home inventory of 1,506 units, the jobs to housing ratio is 1.45. Typically, employment to housing ratios between 0.7 and 1.5 are considered beneficial for reducing vehicle travel according to the Environmental Protection Agency (EPA). However, the County's total labor force as a whole is 67,953 as of March 2020, reflective of an imbalance between total labor force size and employment availability within the County. As noted in the Transportation Chapter, the County has a large commuter population that works outside of the County limits, primarily within the Washington DC and Northern Virginia areas. Of the jobs located within the County, many are in historically low wage industries such as retail trade, accommodation and food service. Approximately 30% of County employment is in those fields. New hires by industry have been most significant in those sectors. Based on a 2nd Quarter, 2019 report by the US Census Bureau's Local Employment Dynamics Program, of the 6,310 new hires within the County, over approximately 42% of new hiring was in those fields. This creates a wage to housing affordability divide where low wage workers come from or seek housing opportunities outside of the County where housing costs are less expensive and commute in to work. A large percentage of the County population who can afford local housing prices tend to make their earnings outside of the County to do so where higher pay jobs exist in larger numbers (DC and Northern Virginia) while many of the prevalent lower wage jobs locally lead to a search, often times outside of the County for affordable housing. Based on 2016 data, FAAR reported the average price for a single-family detached home in the County was $287,183 and on an upward trend. FAAR's 2017 Profile of Demographic, Economic and Housing Market Conditions forecasted that a third of new homeowners will need housing priced below $200,000

by 2032. Half will be able to afford housing priced between $200,000 and $399,999. The remaining population could afford above that price point.

In the rental market, the FAAR study forecasted that nearly 58% of units would need to be priced less than $1,250 per month between 2017 and 2032. These forecasts were based on jobs and income trends in the population forecasted through 2032.

Income and Affordability

Affordable housing is often defined as percent of income devoted to housing costs. The typical percentage used by the US Department of Housing and Urban Development (HUD), housing professionals, and the financial community is 30% of gross income. Affordability can be considered for both owner-occupied and renter-occupied dwellings.

The County has employed a methodology to determine what is affordable" for Spotsylvania County, looking at determining a specific price point based on the methodology below. The methodology was vetted by housing and mortgage professionals and provides good "ballpark" figures.

Accounting for household income, Spotsylvania County has based the calculation of local affordability, or "what is the affordable housing price point" to 30% of gross income of those households earning 75% or less of the County's Median Household Income (gross income). This gives a better "net" income number or "cash on hand" from which families pay their bills. Calculations based solely on gross earnings tend to inflate affordability expectations inconsiderate to the fact that the difference between gross and net income are committed funds (committed funds such as taxes before take home pay). Not all household and family situations are the same. Factors such as family size, number of household earners, insurance, caregiver costs, disability and/or healthcare costs can all influence affordability factors. The Housing Affordability Calculation has been established to set a "rule of thumb" based point of reference for the establishment of affordable housing within the County, or in instances where provision of affordable units has been expressed through development proposals. Its good to note that the County's median household income is based on US Census data representing the full range of households. Median Household income may include more than one earner within the household.

Monitoring the affordable price range should be done on a dynamic basis using the housing affordability methodology outlined in the 2020 Housing Affordability Calculation Tables below (Tables 10-11). The methodology accounts for household income, interest rate, down payment, interest and escrow, allowable debt loads, down payment (assuming 5%), 30-year mortgage. Using most recently updated data and the methodology outlined above, an affordable house costs less than $281,457, or rent of less than $1,237 per month for a household unit. These findings are comparable to FAAR's affordability results in their 2017 study.

Table 10: Affordability Calculation

2020 Housing Affordability Calculation		
Assumption: 2020 Spotsylvania County Median Household Income*		$81,434
A.	**Gross Annual Household Income:**	$81,434
B.	(A x 75%)	$61,076
C.	**Gross Monthly Income:**	
	(B/12 months)	$5,090
D.	**Total Debt permitted by lenders:**	
	(.36 x C)	$1,832
E.	**Monthly Allowable Housing Expense:**	
	E=$'s available for Principle and Interest (PI)= (C x 30%)	$1,527
F.	**Monthly Interest and Taxes Escrowed:**	
	(E x .19)= $'s available for Taxes and Insurance (TI)	$290
G.	**Monthly Mortgage Amount:**	
	(E - F)=$'s available for PI	$1,237
H.	**Estimated Housing Mortgage:**	
	PV((Mortage Interest Rate**/12),30-Yr. Term (mos.),G)*-1	$267,384
Affordable Price Range:		
	(H / .95) 95% consumer mortgage w/5% down	**$281,457**

* Most recently available figure from 2013-2017 American Community Survey 5-Year Estimates

** HSH Associates provides historical interest rate data for 30-year mortagages utilized here. 3.74% based on December, 2019 data.

The County analysis went further to determine housing affordability based on a single income earner within the County. Based on US Census 2017 estimates, the median household income for a 1-person household within the County was $46,231. US Census acknowledges a margin of error of +/- $10,521. If we inflate the estimate to the top of the margin of error (adding $10,521), to $56,752, housing affordability is still markedly reduced compared to the County median household income of $81,434. Using the same methodology as used for county-wide median household income, an affordable house for a single income earner making $56,752 would be priced at or below $196,056 (assuming 5% down). Affordability decreases further to home prices at or below $159,786 if we explore the $46,231 average for a 1-person household reported by the US Census estimates.

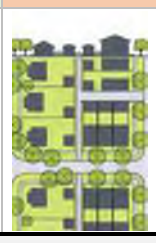
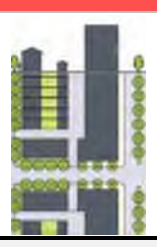
Table 11: Affordability Calculation for 1-Person household

2020 Housing Affordability Calculation		
Assumption: 2020 Spotsylvania County Median Household Income (1-Person Household)*		$56,725
A.	**Gross Annual Household Income:**	$56,725
B.	(A x 75%)	$42,544
C.	**Gross Monthly Income:**	
	(B/12 months)	$3,545
D.	**Total Debt permitted by lenders:**	
	(.36 x C)	$1,276
E.	**Monthly Allowable Housing Expense:**	
	E=$'s available for Principle and Interest (PI)= (C x 30%)	$1,064
F.	**Monthly Interest and Taxes Escrowed:**	
	(E x .19)= $'s available for Taxes and Insurance (TI)	$202
G.	**Monthly Mortgage Amount:**	
	(E - F)=$'s available for PI	$862
H.	**Estimated Housing Mortgage:**	
	PV((Mortage Interest Rate**/12),30-Yr. Term (mos.),G)*-1	$186,253
Affordable Price Range:		
	(H / .95) 95% consumer mortgage w/5% down	**$196,056**
* Most recently available figure from 2013-2017 American Community Survey 5-Year Estimates		
December, 2019 data.		

Housing Affordability calculations as reported for 2020 above should be updated at least annually. This is a dynamic calculation subject to market related changes over time.

Inside of PDB

ZONING DISTRICTS COMPLEMENTARY TO LAND USE DESIGNATIONS WITHIN THE PRIMARY DEVELOPMENT BOUNDARY

ZONING DISTRICTS	LAND USE DESIGNATIONS (INCREASING DEVELOPMENT INTENSITY)								
	OPEN SPACE	LOW DENSITY RESIDENTIAL	MIXED USE LIGHT	EMPLOYMENT CENTER LIGHT	EMPLOYMENT CENTER HEAVY	HIGH DENSITY RESIDENTIAL	COMMERCIAL	MIXED USE GENERAL	MIXED USE COMMERCIAL HEAVY
									
RESIDENTIAL (R)	OPEN SPACE (SEE DESCRIPTION BELOW)								
R-1		C	-	-	-	-	-	-	-
R-2		C	-	-	-	-	-	-	-
R-3		C	-	-	-	-	-	-	-
R-8		-	C	-	-	-	-	-	-
R-12		-	-	-	-	C	-	C	S
R-MHP		C	C	-	-	-	-	-	-
PLANNED DEVELOPMENT HOUSING (PDH)									
PDH-1		C	-	-	-	-	-	-	-
PDH-2		C	-	-	-	-	-	-	-
PDH-3		C	-	-	-	-	-	-	-
PDH-4		C	C	-	-	-	-	-	-
PDH-5		-	C	-	-	-	-	-	-
PDH-8		-	C	-	-	-	-	-	-
PDH-12		-	-	-	-	C	-	C	S
PDH-16		-	-	-	-	C	-	C	S
OFFICES (O)									
O-1		-	C	C	C	-	C	C	C
O-2		-	-	C	C	-	C	C	C
COMMERCIAL (C)									
C-1		-	C	C	C	-	C	C	C
C-2		-	C	C	C	-	C	C	C
C-3		-	-	-	C	-	C	C	C
INDUSTRIAL (I)									
I-1		-	-	C	C	-	S	-	-
I-2		-	-	-	C	-	-	-	-
PLANNED DEVELOPMENT COMMERCIAL (PDC)		-	-	C	-	-	C	C	C
VILLAGE (V)		-	-	-	-	-	-	C	-
MIXED USE (MU)									
MU-1		-	C	-	-	-	-	-	-
MU-2		-	C	-	-	-	-	-	-
MU-3		-	-	-	-	-	-	C	-
MU-4		-	-	-	-	-	-	C	C
MU-5		-	-	-	-	-	-	C	C

C=Complementary Zoning District

S= Secondary/ Subordinate Zoning District(s) meant to complement the intended Primary Users of the Land Use Designation. Secondary/ Subordinate Zoning Districts are NOT intended to become the primary users of the land use area.

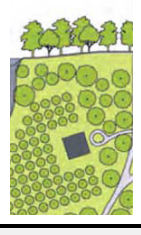
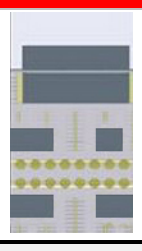
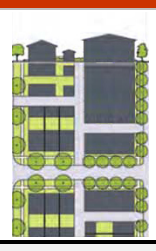
OPEN SPACE= Intended for open space preservation and protection, conservation easements, historic and natural resource preservation and protection, parks, wildlife management areas, common areas, passive recreation. The Open Space land use has application across zoning districts.

INSTITUTIONAL LAND USE

Institutional land uses include the governmental facilities necessary for the provision of public services, and large public service uses such as airports or hospitals. Such uses are common throughout the County and are intended to serve geographically dispersed populations within and outside of the Primary Development Boundary. Such uses commonly appear in the County Zoning ordinance as by-right or special uses across rural, suburban, and urban-scale zoning districts. As such, institutional land uses have application county-wide, both inside and outside of the Primary Development District across all land use categories. Such uses should mitigate their impacts on public facilities such as the local transportation system and carefully consider impacts to assure impact reduction (size, scale, massing) on the physical surroundings and existing development through site design. Institutional Land Uses that appear within the future land use map reflect existing institutional uses within the County.

Outside of PDB

ZONING DISTRICTS COMPLEMENTARY TO LAND USE DESIGNATIONS OUTSIDE OF THE PRIMARY DEVELOPMENT BOUNDARY

ZONING DISTRICTS	LAND USE DESIGNATIONS INCREASING DEVELOPMENT INTENSITY →				
	OPEN SPACE	AGRICULTURAL AND FORESTAL	RURAL	COMMERCIAL	MIXED USE COMMERCIAL HEAVY
					
AGRICULTURAL (A)	OPEN SPACE (SEE DESCRIPTION BELOW)				
A-2		C	-	-	-
A-3		C	-	-	-
RESORT (R)					
R-A		C*	C*	-	-
R-R		-	C*	-	C*
R-C		S*	S*	C*	C*
RURAL (RU)		C	C	-	-
COMMERCIAL (C)					
C-1		S	S	C	C
C-2		S	S	C	C
PLANNED RURAL RESIDENTIAL (PRR)					
PRR-1		C	C	-	-
PRR-2		-	C	-	-
PRR-3		-	C	-	-
PRR-4		-	C	-	-

C=Complementary Zoning District
S= Secondary/ Subordinate Zoning District for uses meant to serve rural populations or complement agricultural or forestal uses.
***=Zoning Districts intended to be employed in the Lake Anna area only.
OPEN SPACE= Intended for open space preservation and protection, conservation easements, historic and natural resource preservation and protection, parks, wildlife management areas, common areas, passive recreation. The Open Space land use has application across zoning districts.

INSTITUTIONAL LAND USE

Institutional land uses include the governmental facilities necessary for the provision of public services, and large public service uses such as airports or hospitals. Such uses are common throughout the County and are intended to serve geographically dispersed populations within and outside of the Primary Development Boundary. Such uses commonly appear in the County Zoning ordinance as by-right or special uses across rural, suburban, and urban-scale zoning districts. As such, institutional land uses have application county-wide, both inside and outside of the Primary Development District across all land use categories. Such uses should mitigate their impacts on public facilities such as the local transportation system and carefully consider impacts to assure impact reduction (size, scale, massing) on the physical surroundings and existing development through site design. Institutional Land Uses that appear within the future land use map reflect existing institutional uses within the County.

DRAFT

Spotsylvania County Tourism Zones

DRAFT NORTH

Legend

- Tourism Zone
- Primary Development Boundary

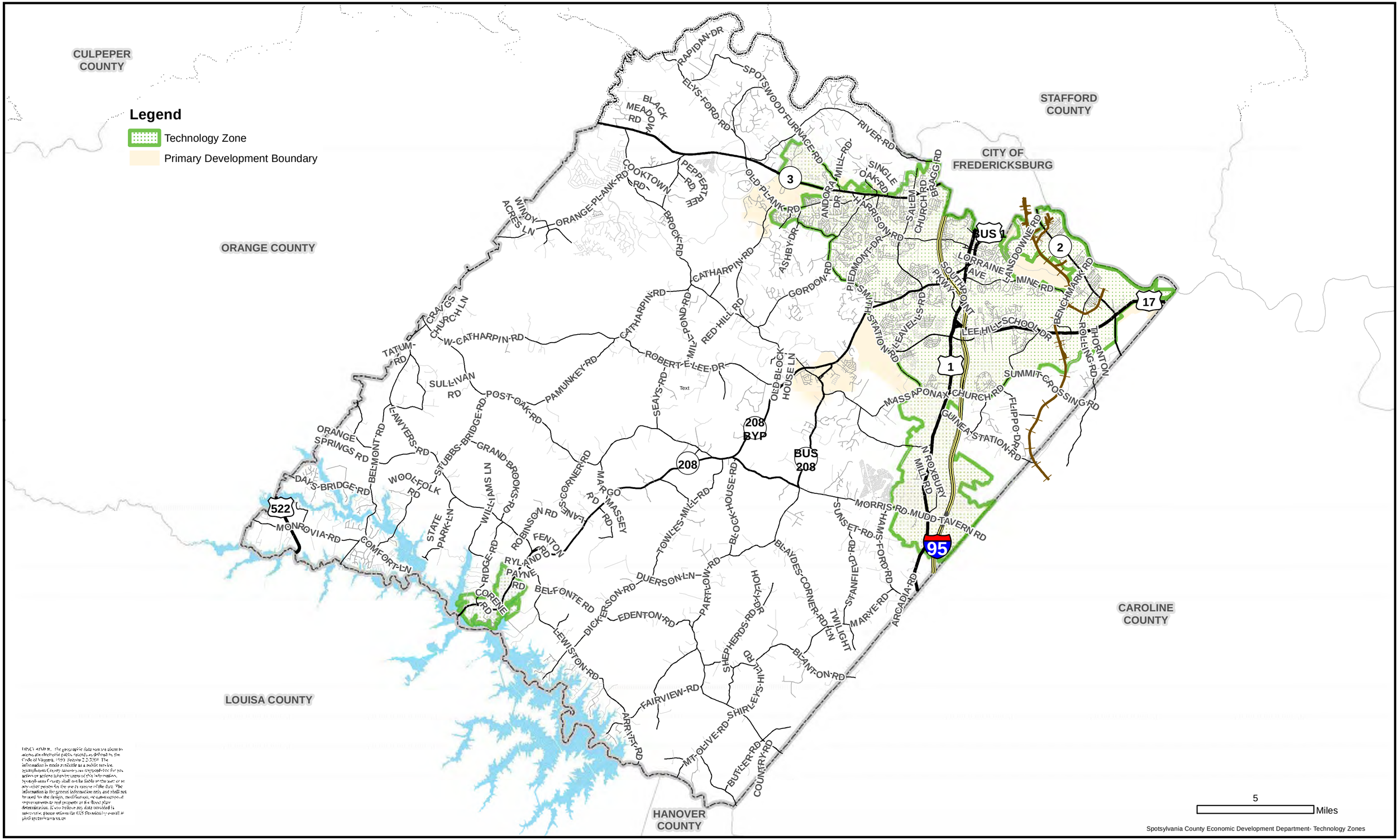
CULPEPER COUNTY
ORANGE COUNTY
STAFFORD COUNTY
CITY OF FREDERICKSBURG
LOUISA COUNTY
HANOVER COUNTY
CAROLINE COUNTY

RAPIDAN DR
SPOTSWOOD FURNACE RD
ELYS FORD RD
U S FORD RD
RIVER RD
BLACK MEADOW RD
COOKTOWN RD
PEPPER RD
HERNDON RD
HERBROCK RD
ORANGE PLANK RD
WINDY ACRES LN
PARKER LN
MILL RD
SINGLE OAK RD
BRAGG RD
OLD PLANK RD
CHANCELLOR RD
CATHARPIN RD
STEWART RD
GORDON RD
PIEDMONT DR
SMITH STATION RD
HARRISON RD
BUS 1
SOUTHPOINT PKWY
RHOADS DR
LEAVELLS RD
LANSDOWNE RD
MINE RD
CHATHAM RD
MORRIS RD
ROLLING RD
THORNTON RD
17
LEE HILL SCHOOL DR
1
JUDICIAL CENTER LN
HOUSE LN
OLD BLOCK RD
RED HILL RD
W CATHARPIN RD
ROBERT E LEE DR
POST OAK RD
LAWYERS RD
PAMUNKEY RD
SUNNYBROOKE FARM RD
SEAYS RD
208
208 BYP
BUS 208
OLD COURTHOUSE RD
MARGO RD
MASSEY RD
TOWLES MILL RD
BLOCKHOUSE RD
MASSAPONAX CHURCH RD
SUMMIT CROSSING RD
GUINEA STATION RD
HICKORY RIDGE RD
N ROXBURY MILL RD
MUDD TAVERN RD
95
MORRIS RD
SUNSET RD
HAMS FORD RD
STANFIELD RD
MARYE RD
ARCADIA RD
BLANTON RD
BLAYDES CORNER RD
HOLLY DR
TWILIGHT LN
FRENCH ACORS RD
SHEPHERDS RD
PARTLOW RD
EDENTON RD
DICKERSON RD
BELFONTE RD
LEWISTON RD
WALLERS RD
FAIRVIEW RD
SHIRLEYS HILL RD
SWIFT RD
ARRAT RD
TRIBBLE RD
MT OLIVE RD
LOG CABIN RD
BUTLER RD
COUNTRY RD
522
MONROVIA RD
COMFORT INN RD
STATE PARK LN
DAILS BRIDGE RD
BELMONT RD
WOOLFOLK RD
JONES POWELL RD
STUBBS BRIDGE RD
GRAND BROOKS RD
WILLIAMS LN
ROBINSON RD
FENTON RD
RYLAND RD
PAYNE RD
RIDGE RD
CORENTH RD
SHIRLEY RD

DRAFT

Spotsylvania County Technology Zones

DRAFT NORTH



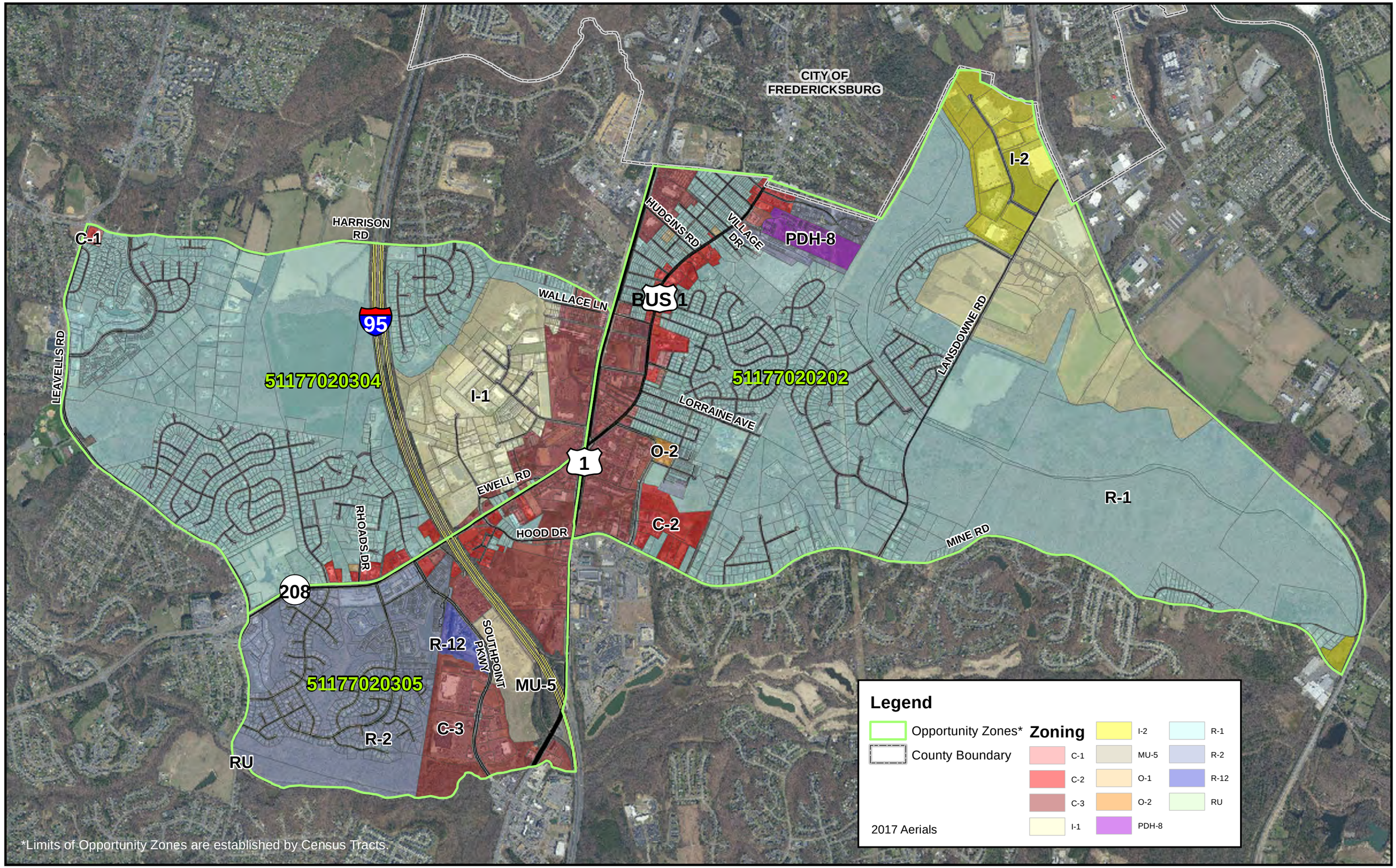
DISCLAIMER: The geographic data you are about to access are electronic public records as defined in the Code of Virginia, 1950 Section 2.2-3704. The information is made available as a public service. Spotsylvania County assumes no responsibility for any actions or actions taken by users of this information. Spotsylvania County shall not be liable in the event of any other claims for the use or misuse of the data. The information is for general information only, and shall not be used for the design, modification, or construction of improvements to real property or for a flood plain determination. If you believe any data provided is inaccurate, please inform the GIS Division by email at gis@spotsylvania.va.us

DRAFT

Spotsylvania County Opportunity Zones*

0 0.25 0.5 1 Miles

NORTH



*Limits of Opportunity Zones are established by Census Tracts.

DRAFT

Spotsylvania County Historically Underutilized Business Zones (HUBZones)

NORTH

HUBZones data from the US Small Business Administration

Legend

- Historically Underutilized Business Zone
- Primary Development Boundary

CULPEPER COUNTY
STAFFORD COUNTY
ORANGE COUNTY
CITY OF FREDERICKSBURG
CAROLINE COUNTY
LOUISA COUNTY
HANOVER COUNTY

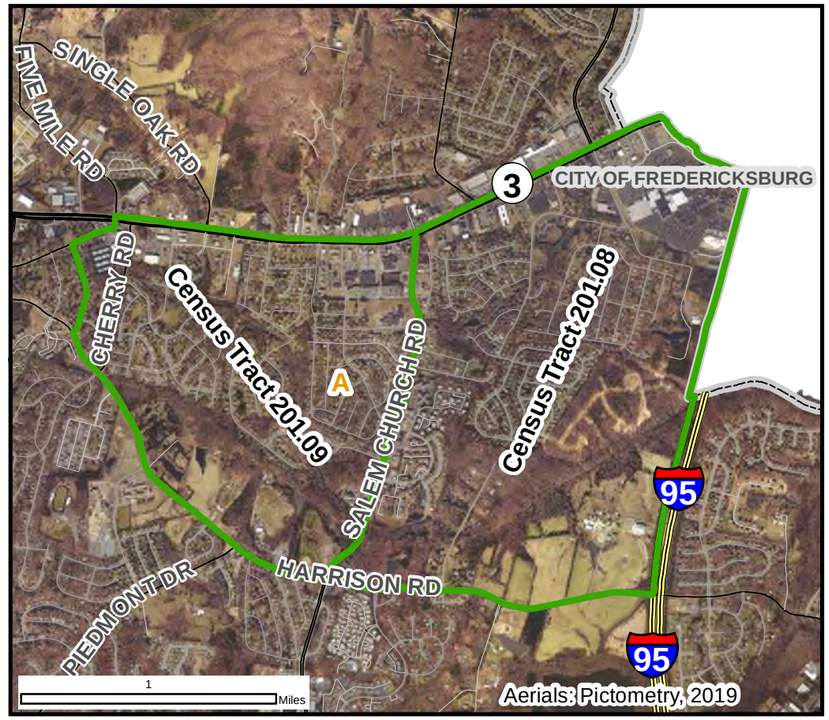
RAPIDAN DR, SPOTSWOOD FURNACE RD, ELYS FORD RD, BLACK MEADOW RD, RIVER RD, MILL RD, FIVE MILE RD, BRAGG RD, ORANGE PLANK RD, OLD PLANK RD, HERNDON RD, WINDY ACRES LN, PARKER LN, BROCK RD, HARRISON RD, ASHBY DR, CATHARPIN RD, STEWART RD, GORDON RD, FOSTER RD, SOUTHPOINT PKWY, MINE RD, BENCHMARK RD, EAGLE DR, ROLLING RD, THORNTON RD, SPOTSYLVANIA PKWY, W CATHARPIN RD, TATUM RD, CRAIGS CHURCH LN, LAWYERS RD, SULLIVAN RD, RED HILL RD, OLD BLOCK HOUSE LN, PAMUNKEY RD, ROBERT E LEE DR, SEAYS RD, POST OAK RD, HICKORY RIDGE RD, MASSAPONAX CHURCH RD, FLIPPO DR, MACEDONIA RD, ORANGE SPRINGS RD, BELMONT RD, DAYS BRIDGE RD, GRAND BROOKS RD, WILLIAMS LN, S CORNER RD, MARGO MASSEY RD, BLACK ROCK DR, TOWLES MILL RD, MORRIS RD, HAMS FORD RD, MUDD TAVERN RD, STUBBS BRIDGE RD, STATE PARK LN, RIDGE RD, RYLAND PAYNE RD, BEL FONTE RD, DUERSONVILLE RD, BLAYDES CORNER RD, STANSFIELD RD, ARCADIA RD, CORE NE RD, DICKERSON RD, EDENTON RD, LEWISTON RD, SHEPHERDS RD, MARYE RD, AGORS RD, FRENCH RD, FAIRVIEW RD, SHIRLEYS HILL RD, ARRIATT RD, MT OLIVE RD, BUTLER RD

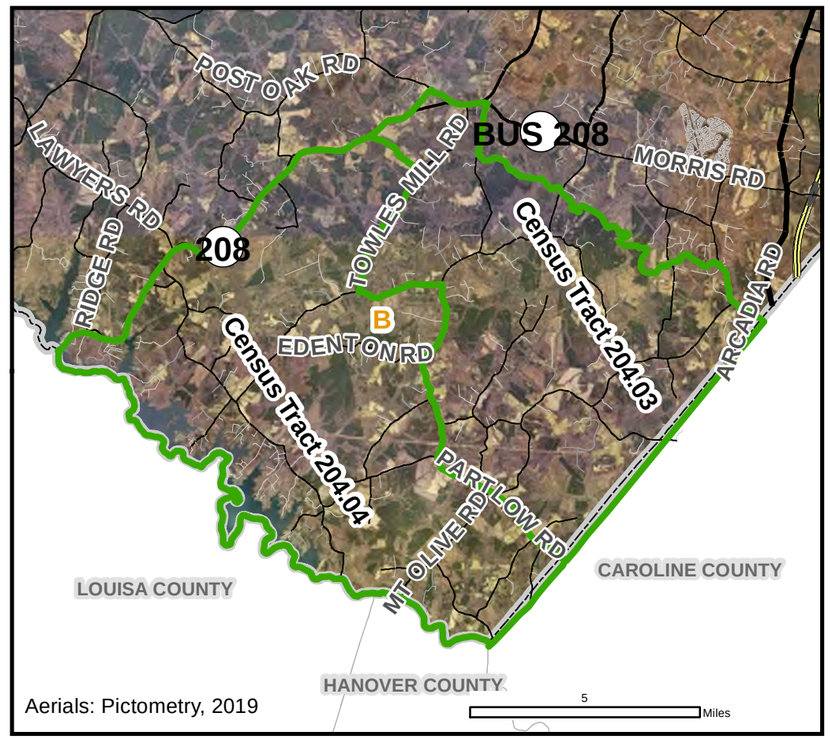
522, 208, 208 BYP BUS, 208, BUS 1, 1, 2, 3, 17, 95

A, B

5 Miles

DISCLAIMER: The geographic data you are about to access are electronic public records as defined by the Code of Virginia, 1950, Section 2.2-3704. The information is made available as a public service. Spotsylvania County assumes no responsibility for any errors or omissions found in the data. The information is for general information only and shall not be used for the design, bid process, or construction of land-ownership or real property or for flood plain determinations. If you believe any data provided is inaccurate, please inform the GIS Division so steps can be taken to correct it.





Spotsylvania County Department of Economic Development & Tourism- HUBZones

DRAFT

Primary Development Boundary

DRAFT

Primary Development Boundary Total Area:

Approximately 72.9 sq. miles.

Difficult to Serve Areas within Primary Development Boundary:

Approximately 8.5 sq. miles.

CITY OF FREDERICKSBURG

CAROLINE COUNTY

Legend

VRE Station (Rail)

Primary Development Boundary

Comprehensive Plan

Primary Development Boundary (PDB)

Difficult to Serve (within PDB)

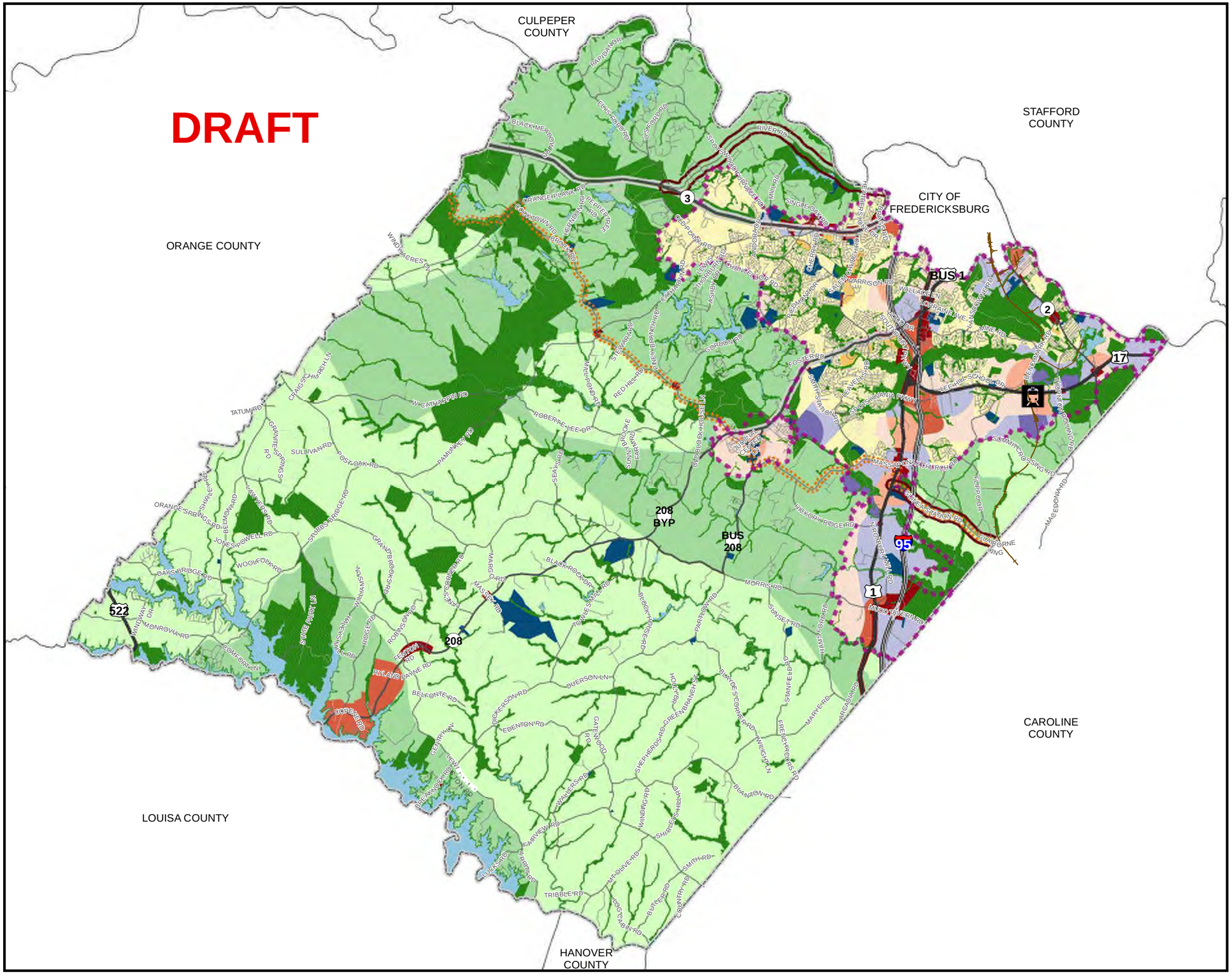
County Boundary

5 Miles

DRAFT

SPOTSYLVANIA COUNTY FUTURE LAND USE MAP

NORTH



Legend

- VRE Station (Rail)
- Rail Corridor
- Primary Development Boundary

Land Use Description

- Scenic Byway
- Scenic Road
- Civil War Trail
- Agricultural and Forestral
- Commercial
- Employment Center Heavy
- Employment Center Light
- High Density Residential
- Institutional
- Low Density Residential
- Mixed Use Commercial Heavy
- Mixed Use General
- Mixed Use Light
- Open Space
- Rural
- Water

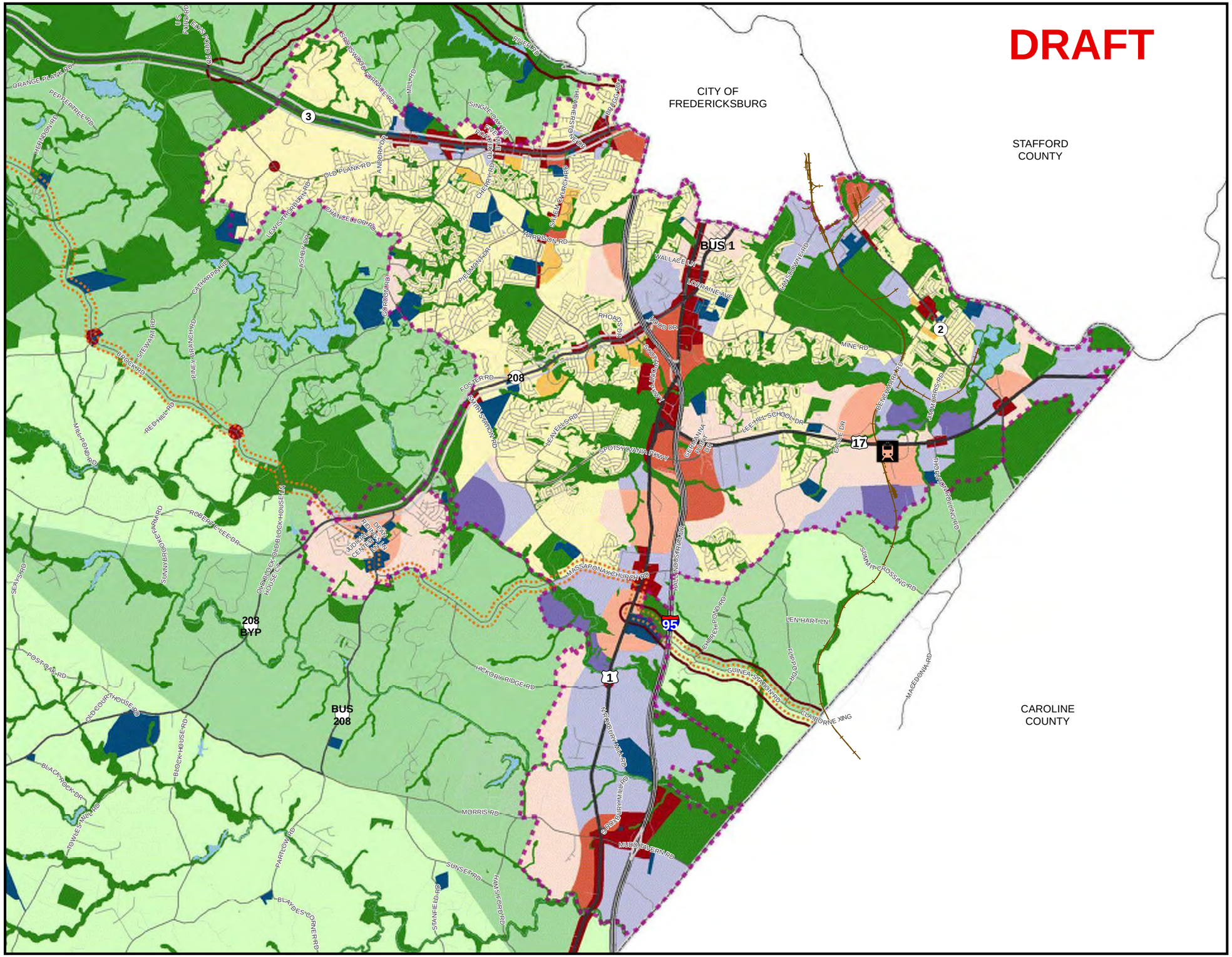
0 2.5 5 10 Miles

Map Approved: _____

DRAFT

SPOTSYLVANIA COUNTY FUTURE LAND USE MAP- PRIMARY DEVELOPMENT AREA

NORTH



Legend

- VRE Station (Rail)
- Rail Corridor
- Primary Development Boundary

Land Use Description

- Scenic Byway
- Scenic Road
- Civil War Trail
- Agricultural and Forestral
- Commercial
- Employment Center Heavy
- Employment Center Light
- High Density Residential
- Institutional
- Low Density Residential
- Mixed Use Commercial Heavy
- Mixed Use General
- Mixed Use Light
- Open Space
- Rural
- Water

0 1.25 2.5 5 Miles

Map Approved: _____

DRAFT

Spotsylvania County Electric Transmission Corridors (150 kV and higher)

Legend

- Transmission Line
- County Boundary

0 1.25 2.5 5 Miles

Map Approved: _____

CULPEPER COUNTY
ORANGE COUNTY
STAFFORD COUNTY
CITY OF FREDERICKSBURG
CAROLINE COUNTY
LOUISA COUNTY
HANOVER COUNTY

RAPIDAN DR
SPOTSWOOD FURNACE RD
ELYS FORD RD
U S FORD RD
BLACK MEADOW RD
RIVER RD
MILL RD
HEATHERSTONE DR
SINGLE OAK RD
HARRISON RD
SALEM CHURCH RD
ANDORA DR
OLD PLANK RD
CHANCELLOR RD
ASHBY DR
CATHARPIN RD
WINDY ACRES LN
ORANGE PLANK RD
COOKTOWN RD
HERNDON RD
PIEDMONT DR
SMITH STATION RD
GORDON RD
STEWART RD
PINEY BRANCH RD
BROCK RD
RED HILL RD
MILL POND RD
FOSTER RD
HUDGINS RD
LORRAINE AVE
HOOD DR
RHOADS DR
LEAVELLS RD
SPOTSYLVANIA PKWY
LANSDOWNE RD
MINE RD
LEE HILL SCHOOL DR
BENCHMARK RD
JIM MORRIS RD
BARTLETT LN
THORNTON ROLLING RD
SUMMIT CROSSING RD
MASSAPONAX CHURCH RD
FLIPPO DR
LEN HART LN
CLAIBORNE YNG
GUINEA STATION RD
HICKORY RIDGE RD
MORRIS RD
S ROXBURY MILL RD
MUDD TAVERN RD
SUNSET RD
HAMS FORD RD
ARCADIA RD
STAMPFIELD RD
BLAYDES CORNER RD
TWILIGHT LN
FRENCH ACORRS RD
MARYE RD
GATEWOOD RD
SHEPHERDS RD
GREENBRANCH ST
EDENTON RD
DICKERSON RD
DUERSON LN
BELFONTE RD
CORE NE RD
GENTRY LN
LEWISTON RD
WALLERS RD
BLANTON RD
WINDING RD
SHIRLEYS HILL RD
FAIRVIEW RD
BREAKNOCK RD
SWIFT RD
LUCKS RD
ARTLT RD
TRIBBLE RD
MT OLIVE RD
SMITH RD
BUTLER RD
COUNTRY RD
LOG CABIN RD
BLACK ROCK DR
TOWLES MILL RD
BLOCK HOUSE RD
MARGO RD
LAVES CORNER RD
MASSEY RD
ROBINSON RD
HALEYS MILL RD
RIDGE RD
LAWYERS RD
WILLIAMS LN
ROBERT E LEE DR
SEAYS RD
SUNNYBROOKE FARM RD
OLD BLOCK HOUSE LN
JUDICIAL CENTER LN
PAMUNKEY RD
POST OAK RD
SULLIVAN RD
GRAVEL SPRING RD
W CATHARPIN RD
CRAIGS CHURCH LN
TATUM RD
ORANGE SPRINGS RD
BELMONT RD
JONES POWELL RD
WOOLFOLK RD
STUBBS BRIDGE RD
TAYLOR HWY
ZACHARY
MONROVIA RD
COMFORT LN

208 BYP
BUS 208
208
1
2
3
17
95

Chapter 3

TRANSPORTATION & THOROUGHFARE PLAN

INTRODUCTION

The Transportation Plan

The purposes of this Transportation Plan (Plan) are to identify Spotsylvania County's future transportation needs, serve as a resource for the County's citizens and the development community, and provide a base for the development and implementation of local, regional and statewide transportation plans. It is the intent of this Plan to provide a comprehensive examination of the existing transportation network and appurtenant facilities. This Plan seeks to maintain an efficient transportation system utilizing available and expected resources. The overarching goal of this Plan is to maintain functional and effective transportation systems that keep pace with growth in the future. This Plan provides guidance for shaping the future of transportation in Spotsylvania County.

The Thoroughfare Plan

The recommendations for improvements to the road network in Spotsylvania County as set forth in this Plan consist of several new facilities and the need for improvements to existing facilities. The Plan has a horizon year of 2040. With traffic volumes consistently on the increase locally, the improvement and maintenance of the existing network is of utmost importance, while new facilities will be needed in order to provide capacity for future traffic volumes and increase connectivity. New roads can have a positive impact on existing roads stressed by traffic volumes without adequate capacity by providing a "pressure relief" to better distribute traffic and provide alternative routes for traffic movement. For identified new "concept roads" it is important to note that depicted alignments are conceptual in nature and that no engineering to determine the optimal location has taken place.

Improvements to existing roads are meant to address level of service deficiencies resulting from increasing traffic volumes conflicting with existing road capacity. These tend to result in necessity for addition of new lanes through road widening and intersection improvement projects. Additionally, where capacity isn't being addressed in the form of road widening projects, safety improvements have been targeted along a number of roads, especially outside of the Primary Development Boundary (intended for rural, agricultural and forestal uses and character) in instances where roads would benefit from realignment, more generous travel lane widths and shoulder improvements. As populations grow county-wide it is important to recognize the importance of improved roadways even if capacity isn't necessarily being expanded. Many of these rural roads are also traversed with truck traffic from local timbering operations, agricultural machinery, and towed boat traffic in the area of Lake Anna.

Road corridor based transportation alternatives are addressed as part of the Thoroughfare Plan planned widening and improvement projects as a means to reduce road based demands by including provision of bicycle and pedestrian friendly transportation routes. The Trailways Master

Plan located in Chapter 3A serves as a master plan for bicycle and pedestrian based transportation alternatives. The Trailways Master Plan also directly corresponds to provision of recreational trails considering parks and recreation level of service standards as established in Chapter 4.

The recommended improvements including new concept roads, roadway, interchange and intersection improvements are shown on The Thoroughfare Plan Map with a description of each improvement listed in The Thoroughfare Plan - Project List. Both appear within this Chapter.

Thoroughfare Plan Project Prioritization

Complementary to this Comprehensive Plan update, within the last two years the County Thoroughfare Plan projects have been input into a prioritization scoring list that consider multiple factors as described below.

The prioritization method was developed by Kimley-Horn and Associates for FAMPO initially in 2008 to score projects in the FAMPO Long Range Transportation Plan, the methodology is based the collective experience of other Metropolitan Planning Organizations and localities.

Projects are ranked based on six (6) categories. The categories are;

- Congestion
- Safety
- Environmental Impacts
- Public Support
- Implementation
- Smart Growth

Points are assigned to each of the categories to obtain a total score. The score is weighted with the primary emphasis on two categories; Congestion and Safety. These two categories make up 60% of the total number of points a project can achieve. A perfect score is 100 points.

Congestion scoring is based on the Spotsylvania County Travel Forecasting Model which determines Level of Service based on the following Volume/Capacity Relationship (See Table 1 below). The lower the volume/capacity that is achieved with the improvement, the greater the number of points assigned.

Table 1: Level of Service Volume/Capacity Relationship

Facility Type	A	B	C	D	E	F
Freeway Ramp	< 0.26	0.27-0.42	0.43-0.63	0.64-0.79	0.80-1.00	> 1.00
Multi-lane Arterials	< 0.28	0.29-0.47	0.48-0.66	0.67-0.79	0.80-1.00	> 1.00
2-lane Arterials	< 0.05	0.06-0.17	0.18-0.32	0.33-0.48	0.49-0.91	> 0.92
Collectors, Local Roads						

Safety is scored and based on a projects ability to mitigate geometric deficiencies such as horizontal and vertical alignment, inadequate width or shoulders, or sharp curves and on its crash rate.

The remaining points are assigned to the project based on environmental impacts; whether it impacts wetlands, historical or archaeological sites or the neighborhood community in general, Public/community support; whether the project has local, regional or national support, funding; whether dollars have been assigned to the project or some plans are available; and Smart Growth; whether the project provides intermodal access and promotes sustainable growth. These four factors make up the other 40% of the projects score.

A complete summary of FAMPO's Highway Project Prioritization Methodology can be found **HERE**.

In Spotsylvania County, the prioritization schedule has been broken into two unique project lists identifying top tier prioritization for road projects within the Primary Development Boundary, and identification of top tier projects outside of the Primary Development Boundary. Considerate of the County's large rural areas and rural populations the two tier prioritization system is aimed at drawing a distinction between rural needs and more urbanized area needs. Considered together, often times rural road needs appear subordinate to road needs within more urbanized areas within the Primary Development Boundary resulting in identified rural roads projects appearing continuously throughout numerous Thoroughfare Plan update cycles without any implementation. The prioritization methodology intends to better highlight top tier rural roads needs instead of "burying" them amongst the high priority needs within urbanized areas where traffic volumes, levels of service and population density drive warrant for such improvements. As opposed to the Primary Development Boundary where road improvements tend to have multiple focuses including safety and maintaining level of service standards due to capacity issues, the rural roads projects in many cases are not aimed at capacity enhancements but tend to be more focused on safety related improvements such as wider travel lanes (more leeway for large vehicles), added shoulders, straightening curves, better sight distances. For instance, identified road improvements and intersection improvements along Lawyers Road near Lake Anna have been chiefly aimed at addressing safety issues in that area.

Transportation project scoring and prioritization helps focus implementation and fundraising efforts to address projects of most need and then moving on to next need projects. For reference only, a copy of the prioritization tables as of September, 2019 have been included in the Appendices, specifically Appendix B. It is good to note that these tables are not intended to remain static within the planning period and are subject to potential change. The tables are working documents to be used outside of the Comprehensive Plan. Amendments to the prioritization tables such as acknowledgement of acquired funding that results in scoring amendments are not intended to require a Comprehensive Plan amendment. As noted above, they have been placed as a reference resource only within this Plan. The prioritization tables include details concerning funding status as well (through September, 2019).

CODE OF VIRGINIA REQUIREMENTS

The Code of Virginia requires the study of transportation needs and their incorporation in comprehensive plans. Section 15.2.2223 requires coordination of plan amendments that will substantially affect transportation on state controlled highways with the Virginia Department of Transportation. Following staff review and update and work sessions held with the County Transportation Committee and Planning Commission, the draft Transportation Plan was routed to the VDOT Fredericksburg District Office for review in September, 2019. Following the initial VDOT review and County submittal of revisions on December 20, 2019, the VDOT-Fredericksburg District finalized their review with no additional comments, on March 25, 2020.

Section 15.2-2223 stipulates that the Plan shall designate the "general or approximate location, character, and extent of each feature, including any road improvement and any transportation improvement". It requires that each locality develop a transportation plan that "designates a system of transportation infrastructure needs and recommendations that include the destination of new and expanded transportation facilities and that support the planned development of the territory covered by the plan." The transportation resources may include roadways, pedestrian and bicycle facilities, railways, bridges, waterways, airports, and public transportation. The code requires that maps of improvements and costs accompany the plan, and that the plan be consistent with the Commonwealth's Statewide Transportation Plan and the Six-Year Improvement Program. Section 15.2-2224 requires the study and documentation of road and other transportation improvements and their cost. Section 15.2-2232 requires that corridors of statewide significance are shown in the plan. The section also states that the plan shall control the general or approximate location of transportation facilities and that no street or connection to an existing street shall be constructed, established, or authorized unless it is shown on the plan or has been approved by the Planning Commission as being substantially in accord with the adopted Comprehensive Plan.

RELATIONSHIP TO STATE AND REGIONAL PLANS

The results of the 1990 Census of Population led to the designation of the greater Fredericksburg area as an Urbanized Area by the Census Bureau. With this status came the federal requirements for a 3-C (continuing, comprehensive, and cooperative) transportation planning process and the establishment of the Fredericksburg Area Metropolitan Planning Organization (FAMPO). In order to receive federal funding for eligible projects the local governments of Spotsylvania, Stafford and the City of Fredericksburg must work together as the MPO to carry out transportation planning activities. The MPO is part of the George Washington Region (GW Region), including Spotsylvania, Stafford, King George, and Caroline County and the City of Fredericksburg. The Commonwealth of Virginia and the Federal Government play significant roles in determining whether or not the region's transportation network is adequate to meet current or future conditions and funding of identified needs based on those conditions.

There are a number of transportation plans for Spotsylvania County, the FAMPO region, and the Commonwealth of Virginia. The various plans are: VTrans2040: An Update to Virginia's Multimodal Long-Range Transportation Policy Plan, 2035 Virginia Surface Transportation Plan, Virginia Statewide Rail Plan, the FAMPO 2045 Long Range Transportation Plan (LRTP), FAMPO Transportation Improvement Program (TIP), the Six-Year Improvement Program (SYIP) for Interstates and Primaries (SYIP), and the Secondary Six-Year Plan. Each of these plans is a subset of this Transportation Plan. As each of these plans are revised, the Spotsylvania County Thoroughfare Plan (located within the Transportation Element of the Comprehensive Plan) will serve as the Plan from which projects are prioritized, selected and moved to the funding stage of development.

The VTrans2040 plan and Six-Year plans are available for review **HERE**. While not all of the transportation projects identified within the Six-Year Improvement Program are individually noted in this Comprehensive Plan, the Plan is consistent with those projects on the SYIP, available **HERE**. The FAMPO plans referenced above are available for review **HERE**.

Specific transportation improvement plans and studies are identified below. These plans have been incorporated by reference as an integral part of the Transportation Plan.

Corridor Studies and Project Implementation

VDOT and FAMPO maintain active online resources for tracking local and regional transportation projects and studies, and their details. Fredericksburg regional projects, searchable by status and locality through the VDOT website can be found **HERE.** The FAMPO link to major projects summaries can be found **HERE.** FAMPO Transportation Study information is **HERE.** The Spotsylvania County Transportation webpage includes links to various Transportation Programs, Studies and Documents as well as a link to the VDOT Statewide Road Projects Map, **HERE.** These resources show efforts underway to improve the local transportation system.

Lafayette Boulevard Corridor Study

An initial study was completed in October, 2009 by FAMPO, the corridor study focused on major highway improvements to the Lafayette Boulevard (U.S. Route 1 Business) corridor between U.S. Route 1 in Spotsylvania and Sophia Street in Fredericksburg. It documents existing conditions, provides recommendations, and identifies a plan for implementing corridor improvements consistent with the Thoroughfare Plan and Pedestrian accommodations. In early 2019, FAMPO initiated the Lafayette Boulevard Multimodal Study to look at lower cost highway and transit improvements and bicycle/pedestrian improvements for the same Lafayette Boulevard corridor area covered in the initial. Results for the transit and bicycle/pedestrian component of this study effort are expected by January, 2020 and the highway component for the study is expected by Spring, 2020.

I-95 Jackson Gateway Access Study

In December, 2008 the Fredericksburg Area Metropolitan Planning Organization (FAMPO) established a technical study work group composed of representatives from the Federal Highway Administration (FHWA), VDOT, Spotsylvania County, FAMPO, and Kimley-Horn with the goal to improve traffic safety and operations on the Interstate 95 mainline, interstate ramps, and intersecting arterial roadways such as US 1 and US 17. The group evaluated fourteen possible alternatives that were separated into three categories: a single interchange, a new interchange, and a split interchange. From these, a preferred alternative was selected and an Interchange Modification Report (IMR) was developed. The preferred alternative was selected because it was compatible with the Spotsylvania County Comprehensive Plan, demonstrated the highest capacity and lowest amount of congestion, had less impact on existing and future businesses, and was estimated at the lowest construction cost.

I-95 Exit 126 Interchange Modification Report (IMR) and Planning Study

In 2014, Kimley-Horn prepared an Interchange Modification Report (IMR) for the I-95 Exit 126 interchange in partnership with FAMPO, Spotsylvania County, VDOT, and the Federal Highway Administration (FHWA). The study included key information concerning traffic growth assumptions and future trip generation from four new large developments; Southpoint Landing, Heritage Woods, Jackson Village, and Alexander's Crossing. Three alternatives were developed.

These included; alternative 1 (deceleration lanes and new off-ramp lanes on I-95 and dual left-turn lanes at the off-ramp and US 1), alternative 2 (a new one-lane I-95 southbound off ramp referred to as the J-Ramp) and alternative 3 (which include all of alternative 1 and dual free-flow right turn lanes at the off-ramp and US 1, and an additional southbound through lane on US 1).

US 1 Corridor Study

As of September, 2019, VDOT has been working with consultants to develop a framework for the US 1 Corridor Study within Spotsylvania County. With a 2030 design year assumption, the goals of the Study include: access management improvements (consolidation of access points, traffic movement restrictions); safety; traffic operations (intersection operational improvements); incident management (I-95 relief valve). Study deliverables are expected in 2020 and are intended to outline improvements that may eventually be incorporated into the Spotsylvania County Comprehensive Plan's Transportation Element. The geographic focus of the study is the US 1 Corridor extending from Commonwealth Drive to the Caroline County line. This is an area of the County that has been chiefly been identified for mixed use and employment center development. Part of the study area extending along Route 1 from Massaponax to Thornburg is known as the "Jackson Gateway". "Jackson Gateway", this area of the Route 1 Corridor has been envisioned as an "economic driver" for the County in the future. This Study is well timed in that the full potential of the Jackson Gateway area has not yet been realized. Many areas remain undeveloped or underdeveloped along the corridor presently. This study proactively plans for the necessary improvements along the corridor that will ultimately complement business attraction and retention to the area going forward. County Planning staff expects that any recommended projects resulting from the Study would be incorporated into the Comprehensive Plan as a Transportation Element Specific Comprehensive Plan amendment within the coming years, or as part of the next five-year update cycle.

Route 3 Arterial Management Plan

The Route 3 Arterial Management Plan dated April 11, 2016 consists of an approximate 9.6 mile corridor section of Route 3 from Gordon Road (626) to Route 20. The study details access management standards for development along Route 3, signalization, cross-over closings, and cross-over improvements to enhance safety and traffic flow. The improvements would be triggered by development along the corridor. This Plan is used as a reference document when reviewing applications for development along the corridor.

Route 606 Corridor Study

The Route 606 Corridor Study dated March 27, 2015 consists of an approximate 0.75 mile corridor section of Route 606 from the I-95 interchange to approximately 800' west of Route 1. Key areas of concern include the southbound I-95 ramp, intersections with Route 1 and Dan Bell Lane, and commercial entrances. The study includes access management standards to ensure traffic flows

safely and efficiently between I-95 and Route 1 and includes a roundabout and divided roadway plan.

Massaponax Corridor Study

In August, 2006 the Board of Supervisors authorized the hiring of the firm of Michael Baker, Inc. to perform a Corridor Study which included the area of Jefferson Davis Highway (Route 1) and Interstate 95 with the Harrison Road intersection as the northern limit of the study and the Morris/Mudd Tavern Road intersection as the southern limit. The study area also included Mills Drive (Route 17).

The study evaluated existing and future conditions at intersections within the study area and developed alternatives to address needed improvements within the corridor. These included details on traffic signal spacing, locations of limited access routes, limits, and typical road sections for four, six, and eight lane sections of Route 1 to accommodate build out of the proposed land use plan.

In addition to these tasks, the study also evaluated improvements to both the 126 Interchange in Massaponax and the 118 interchange in Thornburg. The study investigated the feasibility of a new interchange (Jackson Gateway Interchange) between the two existing interchanges taking into consideration the planned hospital (at the time) and at the same time minimizing impacts to wetlands and existing development. Many of the recommendations resulting from the Massaponax Corridor Study have progressed over time to result in substantive projects pursued for implementation. The Study envisioned a number of improvements that were included in the County Thoroughfare Plan and have since progressed, including:

- Spotsylvania Exit 126 Interchange reconstruction concept design
- A new connector road linking Route 1 to Route 17
- Thornburg Exit 118 Interchange replacement
- New connector road linking Spotsylvania Avenue to Germanna Point Drive

It is good to acknowledge that some of the design and alignment details have changed over time as land use and development changes have occurred since the Study's release. Factors such as engineering, cost, land use and development change, design alternatives, project support all impact the ultimate "real world" project that results. The Study still merits mention as a fundamental guiding source of recommended transportation improvements for the Interstate 95 and Route 1 corridor from which planned, implemented, and for future implementation projects have their roots.

The Massaponax Corridor Study is dated September, 2007.

Route 1 & 208 Corridor Study

The corridor study dated December, 2018 was a comprehensive evaluation of Route 1 & 208 to account for the growth in the area and improve the mobility and safety of all road users. The study focused on Routes 1 and 208 within the context of the broader land corridor bounded by two limited access roadways, I-95 (to the east), and Route 17 (to the south). A total of nine (9) intersections were evaluated: Route. 17 and Germanna Point Drive; Spotsylvania Avenue and Market Street; Route 1 and Market Street; Spotsylvania Avenue and Mine Road; Route 1 and Mine Rd/Hood Drive; Route 208 and Hood Drive; Route 208 and Southpoint Parkway/Rollingwood Drive; Route 1 and Courthouse Road/Lafayette Boulevard; and Lafayette Boulevard and Falcon Drive/Mall Drive. The study included the evaluation of a possible roadway connection between Germanna Point Drive and Spotsylvania Avenue. It assessed the potential for reducing congestion on Route 1, and provided conceptual plans, cost estimates, and environmental assessments. The study was funded in part through the Virginia Department of Transportation (VDOT) Revenue Sharing Program.

Route 2 & 17 Corridor Study

The corridor study dated December, 2018 was a comprehensive evaluation of Business Route 2 & 17 from the Caroline County Line to the City of Fredericksburg. It examined opportunities for accommodating future growth, addressing current traffic congestion and mobility, and potential opportunities to improve safety. It provided opportunities to maximize alternate modes of transportation and provide more efficient routes for local circulation. The study also addressed the feasibility of connecting two Industrial Parks within the City of Fredericksburg and the County. The focus of the study was on the Route 2 & 17 roadway within the context of the broader land corridor bounded by the Rappahannock River (to the east) and the CSX railroad (to the west). The study included an evaluation of the six (6) signalized intersection on Route 2/17, Benchmark Road and the intersection of Lansdowne Road and Shannon Park. The study was funded in part through the Virginia Department of Transportation (VDOT) Revenue Sharing Program.

VDOT STARS Study: I-95 Northbound at Exit 126

The purpose of this study is to identify improvements at the Route 1 and Interstate 95 interchange that will mitigate existing congestion and safety issues. The study was prepared by Kimley-Horn and delivered in final form in July, 2018.

The goals of the STARS (Strategically Targeted and Affordable Roadway Solutions) Program are to develop comprehensive, innovative transportation improvements to relieve congestion bottlenecks and create projects that improve critical traffic and safety challenges to be programmed in the VDOT Six-Year Improvement Program.

The report documents the existing and future conditions, the alternatives analyzed, and the preferred alternative, the planning level cost estimate, and preliminary conceptual design.

This project was conducted in two phases: 1) design concept development to specifically determine if a second northbound Route 1 left-turn lane could be constructed under the I-95

bridge at the northbound I-95 signalized intersection, and 2) traffic analysis to document the future year no-build and build results within the study area, primarily focusing on the Rt. 1 at I-95 ramp signalized intersection.

VDOT STARS Study: Route 1 Corridor Study from Mine Road to Market Street

This section of roadway is heavily congested and contains the greatest number of crashes along Jefferson Davis Highway (US Route 1). It experiences an annual average growth rate of 2%. The approximately 0.9- mile study corridor is comprised of two (2) signalized intersections and one non-signalized intersection. As a Corridor of Statewide Significance (CoSS) and part of the National Highway System (NHS) this corridor plays an important role in incident management along the 1-95 corridor. The purpose of the study is to identify operational and safety improvements along the corridor.

Under the supported Alternative 2 scenario, results of the study would result in intersection improvements at the intersection of Route 1 and Mine Road, "Connector Road" (Part of Market Street Extended) and Hood Drive intersection, and a new intersection of a proposed "Connector Road" extending from Hood Drive to the Route 1 intersection.

VDOT Interstate 95 Corridor Improvement Plan Study

In 2019, VDOT conducted a study of potential I-95 improvements for the approximately 180 miles stretch of I-95 in Virginia. This study primarily focused on mainline improvements and interchange safety improvements that benefit I-95 mainline traffic operations and multimodal improvements, e.g., transit, vanpools, commuter parking, and TDM. The study did not consider new interchanges or modifications to existing interchanges which do not benefit I-95 mainline traffic operations. The study results will be used to prioritize I-81 Bill interstate funding that will become available for the I-95 corridor by late 2020. Spotsylvania's stretch of I-95 is included in the State's I-81 Bill I-95 segment from the Prince William County line to the North Carolina line. Starting in FY-21, it is estimated that at least $40 million/annually will be available. In Spotsylvania, widening I-95 from 6 to 8 lanes between Exit 130 to Exit 126 has been identified by the study as a recommended improvement. New Commuter bus service from Massaponax to Northern Virginia/DC and new commuter parking at Exit 118 were also listed as recommended improvements.

AIR QUALITY ASSESSMENT

Transportation conformity is a way to ensure that Federal funding and approval goes to those transportation activities that are consistent with air quality goals.

Conformity applies to transportation plans, transportation improvement programs (TIPs), and projects funded or approved by the Federal Highway Administration (FHWA) or the Federal Transit Administration (FTA) in areas that do not meet or previously have not met air quality standards for ozone, carbon monoxide, particulate matter, or nitrogen dioxide.

These areas are known as “nonattainment areas” or “maintenance areas,” respectively. Regulations governing transportation conformity are found in Title 40 of the Code of Federal Regulations (40 CFR Parts 51 and 93).

In August, 2018, VDOT released a final air quality conformity analysis for the Fredericksburg Area Metropolitan Planning Organization financially constrained fiscal year 2018-2021 Transportation improvement Program and 2045 Long Range Transportation Plan. The conformity analysis was conducted for compliance with the federal transportation conformity rule (40 CFR Parts 51 and 93) and the corresponding state conformity regulation (9 VAC 5-151). The conformity assessment includes Spotsylvania County as part of the Fredericksburg region. Results of the analysis found a recommendation for a finding of conformity with all applicable requirements of the conformity rule.

Per the Virginia Department of Environmental Quality (DEQ) Section 174 of the Clean Air Act requires that areas of the Commonwealth that do not comply with ozone or fine particulate matter ($PM_{2.5}$) national ambient air quality standards (NAAQS) form lead planning organizations (LPOs). LPO members are elected officials from the localities in the nonattainment area and representatives of the Virginia Department of Transportation (VDOT), the Virginia Department of Rail and Public Transport (VDRPT), and the metropolitan planning organizations within the nonattainment area. Other people, such as private citizens and representatives of industry, military installations, and environmental groups, may also participate in the LPOs in an advisory capacity.

The purpose of the LPO in a nonattainment area is to assist in carrying out planning requirements for that area. Planning activities can include examining baseline emissions levels to determine necessary control strategies, examining transportation needs for future growth, and if necessary, creating plans for EPA review and approval to bring the area into attainment with the air quality standards. The extent of the planning requirements depends on the classification of the nonattainment area and the severity of the air pollution problem. The George Washington Air Quality Committee (GWAQC) has been established within the GW Region, including Spotsylvania County. For air quality, emissions modeling is required to be vetted in consultation with the LPO. Per FAMPO, Involvement of the VDEQ staff representative for that Committee in the local inter-agency consultation process for conformity is considered to fulfill that requirement.

The final report for the area can be found through the FAMPO website **HERE**.

Improving traffic flows and reducing traffic delays (less time on the road) through improvements to the transportation system and expanded mobility options via transportation alternatives all contribute to efforts to reduce vehicle emissions and improve air quality. Technological advancements through alternative energy sources to reduce emissions or expanded fuel efficiency also play an integral role.

TRANSPORTATION ALTERNATIVES

The principal modes of transportation within Spotsylvania County include vehicular, rail, transit, bicycle, and pedestrian. The vehicle-oriented roadway system is the most extensive transportation facility in the County by a wide margin and is directly affected by local land use decisions. The Thoroughfare Plan lists roadway improvements needed to maintain the system at acceptable levels of service. The focus of this section is on multi-modal transportation alternatives and concepts that lessen demand or increase capacity/safety of the roadway system at a relatively low cost. Provision of transportation alternatives are also critical to social equity and consideration of disadvantaged populations. Accessibility for Disadvantaged populations follows this Transportation Alternatives portion of the Transportation Plan.

In addition to addressing capacity improvements and transportation alternatives to achieve improved levels of service on County roads, AM and PM Peak hour traffic impacts are amplified locally due to significant out-commuting in the AM of County residents to employment located outside of the County, and return trips home during the PM. The US Census Bureau, 2016 American Community Survey found that nearly 62% (61.9%) of Spotsylvania County residents have employment outside their County of residence. Reduction in the prevalence of out-commuting in the County with increased employment availability within the County across a number of industries is beneficial. Reduced commute times and road miles travelled during AM and PM Peak hours would be beneficial to County residents, promote spending within the community as opposed to out of County during working hours (gasoline sales, lunches, etc.) and result in reduced burdens on local transportation infrastructure.

In 2019, the Fredericksburg Regional Alliance released an updated the Fredericksburg Region Commuter Workforce Study. The study was prepared by the University of Mary Washington Center for Business Research for the Fredericksburg Regional Alliance, George Washington Regional Commission and GO Virginia. 2019 Estimates found an estimated 83,117 people commuted outside the region in the first quarter of 2019. Of that regional total, 40,808 persons originated in Spotsylvania County. Far fewer persons commuted to Spotsylvania County from outside of the region (18,273), or commuted within the region to Spotsylvania County (22,145). The study estimates Spotsylvania County has a net loss of population who commute outside of the region on a daily working day basis of -22,535 persons. The top commuting destinations for Spotsylvania residents commuting outside of the Fredericksburg Region are most heavily directed toward northern Virginia and Washington DC. Smaller populations commute to the west and south (toward Richmond). As a whole, regionally approximately 216,848 people regularly commuted to (17.5%), outside of the region (38.3%), or within the Fredericksburg Region (44.2%). These commuting patterns put a strain on local roadways especially noticeable during peak commute times. Simply, regionally there are many vehicles on the roads all focused on commuting at similar times.

2018 estimates of commuter travel modes found overwhelmingly that commuters tend to use their own vehicles and drive alone (car, truck, or van). In Spotsylvania County, 52,379 persons drove alone to their place of employment. This was followed secondly by carpooling (8,605), public transportation (1,676), walking (426), other means (777), and lastly home based workers (2,967). As a means to reduce traffic loads on local roads, efforts to promote and expand transportation alternatives such as carpools, public transportation, walking or bicycling, and expanded locally based employment opportunities, will all help reduce local traffic burdens. Transportation efficiencies improvements including expanded use of Transportation Alternatives also reduce collective vehicle emissions with resulting improvements to air quality (smog reduction) with corresponding environmental and health benefits.

Transportation Demand Management

Transportation Demand Management (TDM) is a congestion relief strategy. The idea of TDM is to move as many people as possible through the use of techniques that minimize peak demands on the transportation system. These include alternative modes of transportation, flexible work schedules, and mixed-used development where proximity to live, work, play opportunities reduce necessity for lengthy on road travel. Those modes consist of high-occupancy-vehicle (HOV) lanes on the interstate system, ridesharing, park and ride lots, van pools, public and private transit, telecommuting, and provisions for walking and bicycling.

Investments in TDM are particularly stressed as regional needs within VTRANS 2040 where additional mode choice options and capacity and operational enhancements are necessary to reduce local traffic burdens. These TDM needs have been identified for improvements to roadways for vehicular travel, passenger rail, freight rail, bicycle and pedestrian connectivity and other transportation alternatives. Improving local transportation will not be achieved solely via continuous capacity enhancements on local roadways.

Transportation System Management

Transportation System Management (TSM) is the terminology given to represent minor improvements to the transportation system that enhance performance. TSM improvements typically consists of minor intersection and road improvements that afford a safer and more efficient road network. TSM improvements include, but are not limited to, implementation of turn lanes, acceleration/deceleration lanes, traffic signals, signal timing, intersection lighting, pavement marking, signage, horizontal/vertical grade improvements, drainage improvements, median installations, intersection realignments, roundabouts, intelligent transportation systems (ITS), and access management.

As the County continues to grow and develop, emphasis needs to be placed on identifying and implementing TSM projects that can be addressed through federal, state, and local funding. As developments occur within the County they too should address not only major transportation

improvements necessary to mitigate their impact, but also address any TSM improvements that will enhance the safety and operation of the road network directly impacted by the development.

Rail

Virginia's rail network is a valuable asset for the Commonwealth of Virginia. It provides an efficient means of moving freight and passengers both within and through the Commonwealth. By diverting freight and passenger traffic from road to rail, Virginia's rail network relieves congestion, saves lives, improves air quality, helps grow the economy, and complements the Virginia highway network while reducing capital and maintenance expenditures.

The Virginia Department of Rail and Public Transit (DRPT) compiles rail inventory, capacity, economic impacts data, and statewide rail planning as part of the Virginia Statewide Rail Plan. The Plan was last updated in 2017 and provides many additional resources considering the state of rail and rail planning in Virginia **HERE**.

Information concerning passenger and freight rail services in Spotsylvania County has been presented below. Additionally, the Spotsylvania County based Rappahannock Rail Museum has been included in this local rail profile in the interest of tourism, historic resource interpretation, and education.

Rail: Passenger Service

Commuter rail service to Northern Virginia and Washington, D.C. is provided by Virginia Rail Express (VRE), a semi-public agency. VRE is the tenth largest commuter rail agency in the U.S. and is a transportation partnership of Northern Virginia Transportation Commission and the Potomac & Rappahannock Transportation Commissions. Off Crossroads Parkway, south of U.S. Route 17 the VRE began passenger service to a new passenger rail station opened on November 16, 2015. Prior to the 2015 station opening in Spotsylvania County, the City of Fredericksburg downtown passenger rail station was the chief means of access to VRE service locally for Spotsylvania residents. The Spotsylvania station has 1,500 parking spaces for rail and commuter use, a small restroom, and a 700-foot platform with canopy. Presently the station serves VRE ridership exclusively. Since 2015, VRE boardings at the Spotsylvania Station have increased based on boarding survey data collected since station inception. Ridership has increased 17% since the Spotsylvania station opening in 2015. An October 3, 2018 survey of passenger boardings found a total of 789 passengers riding the rail from the Spotsylvania station generally between the hours of 5am and 7:30am distributed amongst eight VRE train arrivals at the station platform. The subsequent October, 2019 survey found a slight increase, up to 801 daily riders from the Spotsylvania Station.

The Spotsylvania Station is the southernmost station on the VRE system. The system serves points north, including the City of Fredericksburg, northern Virginia and Washington DC. Destinations served and the 2019 VRE schedule can be found in Table 2 below. This has been included for reference only and is subject to potentially change through the planning period.

Table 2: VRE Service Schedule

VRE Service Fredericksburg Line

← →

Train Number	Spotsylvania	Fredericksburg	Leeland Road	Brooke	Quantico	Rippon	Woodbridge	Lorton	Franconia / Springfield	Alexandria	Crystal City	L'Enfant	Union Station
300	4:54 a.m.	5:05 a.m.	5:12 a.m.	5:18 a.m.			5:40 a.m.			6:07 a.m.	6:16 a.m.	6:24 a.m.	6:32 a.m.
302 S	5:04 a.m.	5:15 a.m.	5:22 a.m.	5:28 a.m.	5:40 a.m.	5:49 a.m.	5:56 a.m.	6:03 a.m.	6:11 a.m.	6:23 a.m.	6:32 a.m.	6:40 a.m.	6:48 a.m.
304	5:20 a.m.	5:31 a.m.	5:38 a.m.	5:44 a.m.	5:56 a.m.	6:05 a.m.	6:12 a.m.	6:19 a.m.	6:27 a.m.	6:39 a.m.	6:48 a.m.	6:56 a.m.	7:04 a.m.
306 S	5:34 a.m.	5:45 a.m.	5:52 a.m.	5:58 a.m.	6:10 a.m.	6:19 a.m.	6:26 a.m.	6:33 a.m.	6:41 a.m.	6:53 a.m.	7:02 a.m.	7:10 a.m.	7:18 a.m.
308	6:00 a.m.	6:11 a.m.	6:18 a.m.	6:24 a.m.	6:36 a.m.	6:45 a.m.	6:52 a.m.	6:59 a.m.	7:07 a.m.	7:19 a.m.	7:28 a.m.	7:36 a.m.	7:44 a.m.
310 SB	6:20 a.m.	6:31 a.m.	6:38 a.m.	6:44 a.m.	6:56 a.m.	7:05 a.m.	7:12 a.m.	7:19 a.m.	7:27 a.m.	7:39 a.m.	7:48 a.m.	7:56 a.m.	8:04 a.m.
312 B	7:05 a.m.	7:16 a.m.	7:23 a.m.	7:29 a.m.	7:41 a.m.	7:50 a.m.	7:57 a.m.	8:04 a.m.	8:12 a.m.	8:24 a.m.	8:33 a.m.	8:41 a.m.	8:49 a.m.
314 SB	7:33 a.m.	7:44 a.m.	7:51 a.m.	7:57 a.m.	8:09 a.m.	8:18 a.m.	8:25 a.m.	8:32 a.m.	8:40 a.m.	8:52 a.m.	9:01 a.m.	9:09 a.m.	9:17 a.m.

S Special schedules for holidays and snow days.

Recognizing the potential draw of a new passenger rail station in Spotsylvania County along with historic trends of a large resident population commuting north for employment opportunities in northern Virginia and Washington, DC, the County identified the rail station area as well suited for higher density, higher intensity development with a mixed land use designation. This land use designation in the Crossroads area first appeared in the 2008 Comprehensive Plan and has been maintained in the spirit of creating a transit oriented development for easy access for VRE commuter trains. The area has nearby Fire/Rescue services with the recently opened Station 11 along Crossroads Parkway. Higher density residential and mixed use developments have been approved via rezoning in proximity to the Rail Station, consistent with the land use designations in the area including Crossroads Station (Rezoning R11-0004 incl. commercial and apartment development); Wheatland Townhomes (Rezoning R14-0007 incl. 105 SFA Units). Eventually, as the area grows and accessibility from the station is enhanced, the County may well benefit from a more two-way service that would bring travelers to the County for work opportunities and travel/ tourism opportunities.

Image 2: VRE Passenger Service Train at the Crossroads VRE Station

VRE also operates a maintenance and storage yard within Spotsylvania County off Crossroads Parkway just south of the VRE Station. The Spotsylvania maintenance yard for the VRE line is located just south of the Commuter rail station. The facility was recently expanded to include a new storage track and a 33,000 square foot addition to the Service and Inspection building. See Image 3 below.

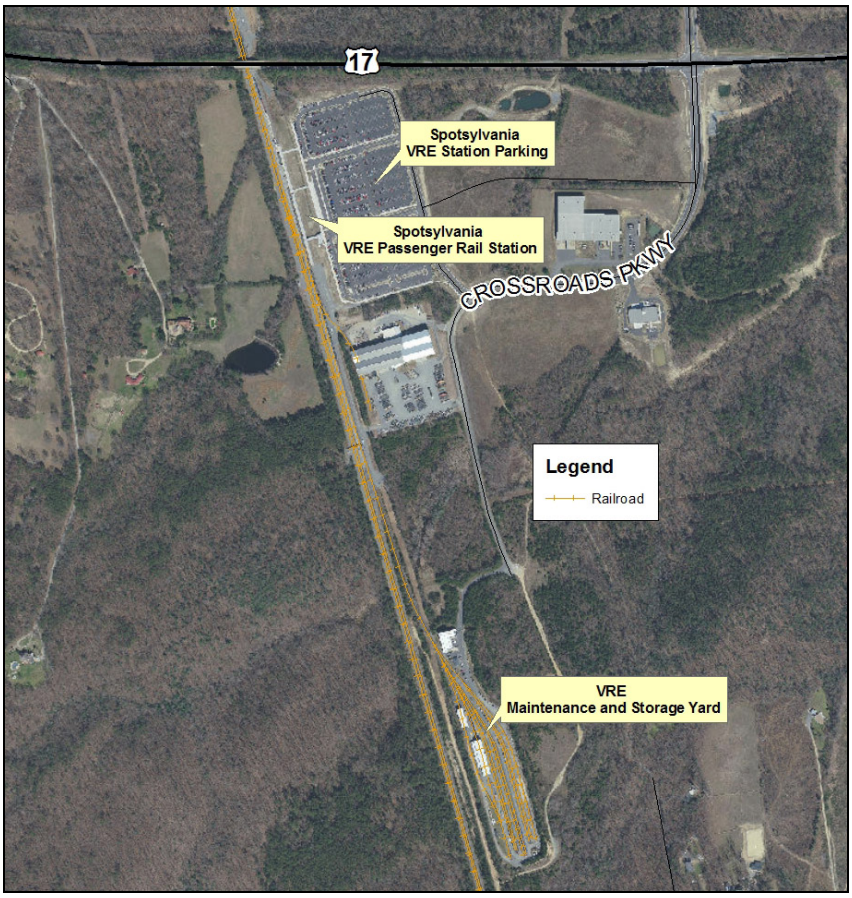


Image 3: Spotsylvania County VRE Operations

AMTRAK service traverses the County and provides additional rail passenger transportation options for passengers within the region with access up and down the east coast and through the entire national AMTRAK system. Within the region, AMTRAK service is available exclusively through Fredericksburg's downtown passenger rail station. VRE and AMTRAK share tracks owned and operated by freight rail carrier CSX Transportation, one of two Class I freight railroads in Virginia.

To address corridor congestion resulting from shared freight and passenger rail services, VRE, CSX and the Virginia Department of Rail and Public Transportation (DRPT) constructed a third track between Crossroads Parkway and Mine Road in Spotsylvania County to more efficiently accommodate passenger and freight rail traffic in the rail corridor, known as the Richmond, Fredericksburg and Potomac Rail (RF&P) Corridor within the region. VRE's long range plan includes completing triple tracking of the CSX main line between Spotsylvania and Alexandria and expanding service with additional peak and mid-day service.

RF&P Rail Corridor enhancements including addition of additional capacity via construction of a third track through the County complements efforts to further enhance passenger rail services along the east coast by adding High Speed Rail as part of the Washington, DC to Richmond

Southeast High Speed Rail project (known as DC2RVA) whose project partners include the Virginia Department of Rail and Public Transit, U.S. Department of Transportation, Federal Railroad Administration. According to the DC2RVA team, increased congestion and demands on the rail corridor are linked to population growth, freight growth, Interstate 95 congestion driving additional rail demand, air travel congestion, limited existing capacity in the corridor infrastructure, opportunity to expand and enhance TDM alternatives, and air quality benefits.

According to the project partners leading the high speed rail initiatives, across the Country, the U.S. Department of Transportation has designated 10 high speed rail corridors in addition to the Northeast Corridor. The Washington, D.C. to Richmond project is the critical link connecting two high speed rail corridors on the East Coast, which are:

- **Washington, D.C. – Richmond, VA – Charlotte, NC**: In 1992 the U.S. Department of Transportation designated the Southeast High Speed Rail Corridor connecting Charlotte, NC, Richmond, VA, and Washington, D.C. This corridor designation has been extended south to Northern FL through subsequent actions of the Department.

- **Boston – New York – Washington, DC:** The Northeast Corridor is the only high speed rail service at present in the U.S. It is also the busiest passenger rail line in the U.S. by ridership and service frequency. Amtrak operates a 150 mph train service known as "Acela" in this corridor.

The Purpose of the DC2RVA project is to increase the capacity between Washington, D.C. and Richmond to deliver higher speed passenger rail, improve conventional speed passenger rail, expand commuter rail, and accommodate growth of freight rail service in an efficient and reliable multimodal rail corridor. This Project will enable passenger rail to be a competitive transportation choice for intercity travelers between Washington, D.C. and Richmond and beyond. The Project extends 123 miles along an existing rail corridor owned by CSX Transportation from the Long Bridge in Arlington, VA, to Centralia, VA in Chesterfield County, south of Richmond. DRPT has recommended specific rail infrastructure improvements and service upgrades to deliver higher speed passenger rail, improve conventional speed passenger service, expand commuter rail, and accommodate growth of freight rail service in the corridor. These recommendations are subject to review and approval by the Federal Railroad Administration (FRA) and the Commonwealth Transportation Board (CTB).

In May, 2019, the US Department of Transportation, Federal Railroad Administration and the Virginia Department of Rail and Public Transportation issued the Tier II Final Environmental Impact Statement and Final Section 4(f) Evaluation concerning the DC2RVA project. For Spotsylvania County, recommendations result in expanded capacity along the existing RF&P Corridor. Third track rail capacity expansion improvements are already in place in Spotsylvania County between the County line with the City of Fredericksburg to the Crossroads VRE station in Spotsylvania County. Plans would extend the third rail south beyond the Spotsylvania Crossroads VRE station. Capacity improvements would result in no changes to the Spotsylvania Crossroads VRE station.

The Washington to Richmond segment will provide the critical link between the Northeast Corridor and the rest of the Southeast High Speed Rail Corridor. Spotsylvania County and its

citizens have been involved in review and comment concerning service and alternatives throughout the Environmental Impact Statement process. For more information regarding the DC to Richmond Southeast High Speed Rail project, visit the project website **HERE**.

Prospects for passenger rail service were greatly expanded in December, 2019 with the announcement of Virginia's acquisition of 350 miles of rail right-of-way, 225 miles of track and intended construction of a new Long Bridge over the Potomac River, adding capacity to the current Long Bridge that operates at 98% capacity during peak hours. The new Long Bridge will include dedicated tracks for passenger rail service. Presently passenger rail is shared and subordinate to freight rail along the corridor. Additional rail capacity will be added in northern Virginia. Announced changes to the rail corridor within the next ten (10) years include doubling Amtrak train service through Virginia, hourly Amtrak service between Richmond and Washington D.C., and expanding VRE service by 75% along the I-95 corridor with added weekend service (including the VRE's Fredericksburg Line). Service frequency along VRE's Fredericksburg Line (including the Spotsylvania VRE Station) is expected to increase from eight to thirteen round trips on weekdays by 2030. Weekend VRE service is initially projected to include a minimum of two northbound trains originating at the Spotsylvania station with two return trips in the afternoon or evening. The capacity and service enhancements have been projected to remove 5 million cars and 1 million trucks from Virginia highways annually. These improvements are expected to greatly enhance both interstate and intrastate passenger rail service and should further boost Spotsylvania's Crossroads VRE area mixed use node (per the future land use map).

Rail: Freight Service

Freight rail offers a number of benefits to the transportation system including but not limited to: fuel efficiency and emissions versus truck traffic; ability to move large quantities of goods from ports and distribution hubs to market; avoided truck trips along road corridors resulting in reduced traffic volumes and wear and tear upon roadways.

Spotsylvania County's RF&P Rail Corridor is part of a significant freight and passenger rail route along the east coast of the United States. The corridor has been experiencing increasing demands and rail traffic volumes. As noted prior, the rail corridor serves a dual use for passenger train and freight rail transportation. According to the Virginia DRPT, demand for freight movement through and within the corridor is growing as economic activity and population increase. Ongoing expansion of Virginia's deep water ports, rail-dependent industries, and intermodal facilities further increases the need for efficient shipment of freight. According to the Virginia DRPT's 2017 Virginia Statewide Rail Plan, the mining and extraction industry sector has been the leading source of freight tonnage in the Virginia freight rail system however the sector is not projected to grow through 2040. Agriculture and manufactured goods however are expected to nearly double their tonnage in all freight movements through 2040.

Table 3: 2017 DRPT Virginia Railway Plan RF&P Corridor Summary

Subdivision:	RF&P Subdivision
Owner	CSX
Operator	CSX
Line Heritage	Richmond, Fredericksburg & Potomac Railroad (RF&P)
Subdivision Route / Mileage	Washington, District of Columbia-Greendale (Richmond), Virginia; 109 miles
FRA Track Class	Class 4
Track Configuration	2-4 main tracks
Maximum Authorized Speed Freight	40-60 mph freight
Maximum Authorized Speed Passenger	70 mph passenger
Wayside Signals	Centralized Traffic Control (CTC) and Automatic Train Control (ATC)
Method of Operation	Centralized Traffic Control (CTC) and Automatic Train Control (ATC)
Maximum Allowable Gross Weight	286,000 lbs.
Clearances	Cleared for trailers (TOFC), double-stacks (COFC), and autorack railcars (20' 2" Above Top of Rail)
Current Traffic Density (2015) in Million Gross Tons	116 MGT
Average Number of Trains per Day	47.1
Train Types	• Intermodal, general manifest, and bulk freight trains • Amtrak long-distance and intercity passenger trains • Virginia Railway Express commuter trains
Industrial Leads	Dahlgren Branch: Dahlgren Junction-Sealston, Virginia; approximately 10 miles; 286,000 lbs. maximum allowable gross weight
FRA Excepted Track	N/A

The extent of freight rail service and rail side accessibility within Spotsylvania County is limited as Spotsylvania County does not have an extensive network of rail traversing the County. CSX is the only freight rail operator in the County operating along a single rail corridor in the northeastern corner of the County. The rail corridor within the County extending from the City of Fredericksburg line to the Caroline County line is approximately 9 miles in length of which approximately 5.7 miles are located within the County's designated Primary Development Boundary. Within the Primary Development Boundary staff notes large stretches of the rail corridor have already been developed, are bordered by protected Civil War Battlefield lands by the National Park Service (Fredericksburg Battlefield) and Civil War Preservation Trust (Slaughter Pen Farm), or limited by significant natural resources including wetlands, steep slopes, resource protection areas. From a land use perspective, the areas within the Primary Development Boundary are where higher intensity uses including industry and distribution centers are envisioned. Some of these industrial and distribution prospects may require or benefit from rail service as part of their site selection process as a necessary element of their manufacturing and distribution chain. The Spotsylvania

Department of Economic Development has confirmed that rail served sites are not often sought locally by economic development prospects but they do occur on occasion and represent very real opportunities for economic development and local employment benefits as well as tax revenue generation and positive spin off economic activity within the community. Considering the prospect of freight rail and economic development prospects, the mapped Exhibit 1 below was created to identify all parcels of 50 or more acres located within 1/4th and 1/2 mile of the rail corridor or rail spurs not already built out or protected via conservation easement or preservation ownership. The analysis shows the land inventory in relation to the 2013 adopted Primary Development Boundary.

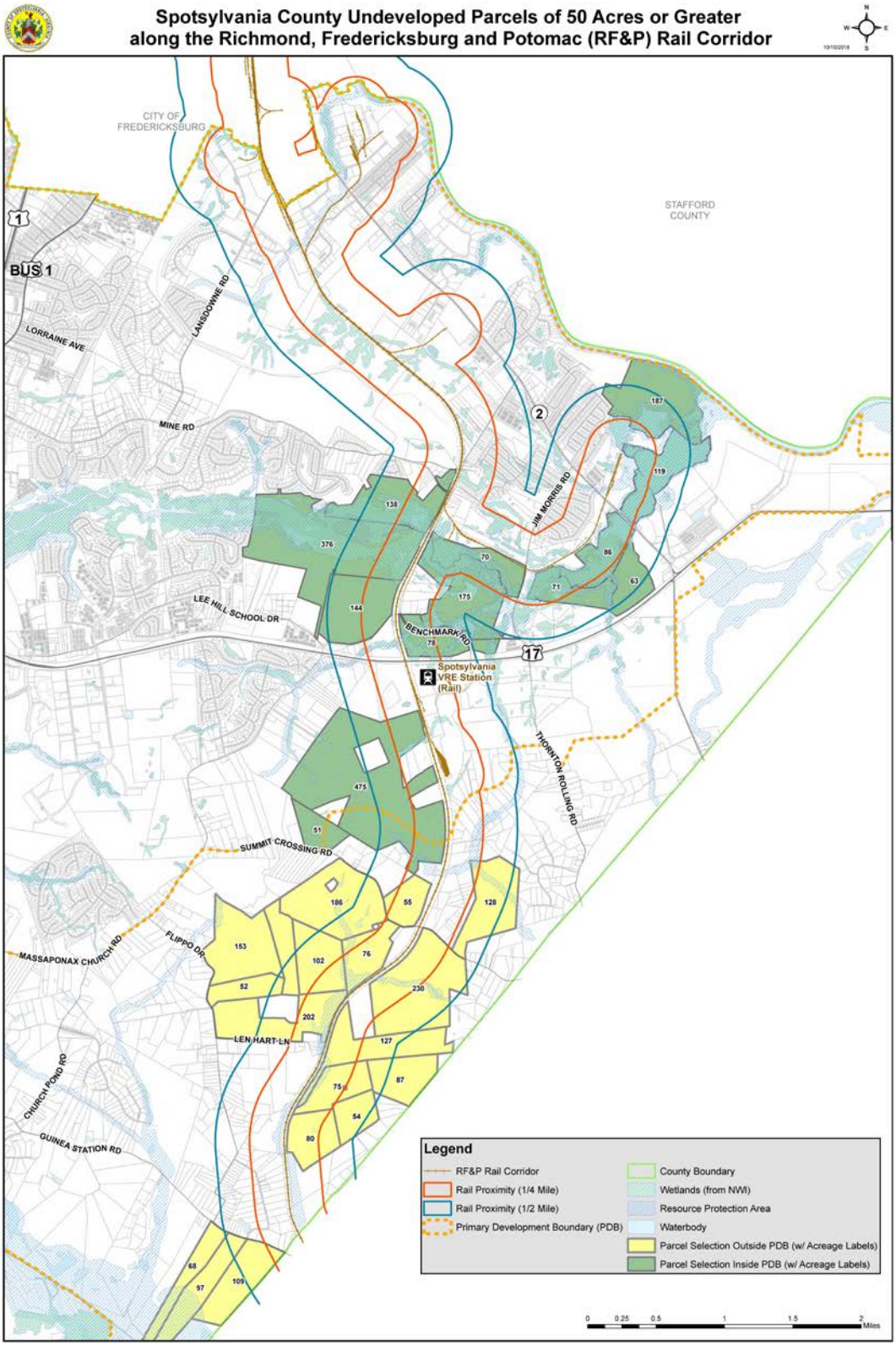


Exhibit 1: Large Parcels in Proximity to Rail Corridor

Presently four rail spurs provide feeder rail into the mainline rail corridor within the County, including: (1) Bowman Center Spur serving industrial center users and the Rappahannock Railroad Museum; (2) Shannon Drive, serving industrial property; (3) Urban Systems Development Property (former General Motors Plant), including idX Virginia plant; (4) Ruffins Pond spur serving Culpeper Wood Preservers. Within the planning period, two of the four rail spurs may to scale back in usage or cease to exist as viable rail spurs due to development impacts or land use trend changes in immediate proximity to the spurs. Tentative plans for development of the "back 40 acres" behind the idX Virginia plant would shorten the rail spur and shifts in land use around the Bowman Center appear to be reducing rail viability there. Such reductions further limit the inventory of sites available for rail ready service.

Rail: History, Education and Interpretation

The Rappahannock Rail Museum (RRM) is located at 11700 Main Street in the Bowman Center off Routes 2/17. The RRM provides railroad-related education to the public, including information about railroad lines and related events in the region, as well as the preservation of historical railroad equipment in the greater Spotsylvania and Fredericksburg areas. The Spotsylvania County Department of Economic Development and Tourism confirms this is a popular tourism destination for the County. Visitors are welcome to tour the museum Saturdays from 9 a.m. to noon. From Mid-March through October (and other Saturdays weather permitting), visitors are welcomed aboard the maintenance of way train ("little yellow train") for short rail excursions to not only learn, but experience how rail workers in the mid 1900's commuter to work sites. All train rides are subject to crew availability, weather, commercial rail activity and other factors beyond RRM's control. The RRM is supported solely through donations and volunteers.

Following a two-year effort, in September, 2018 the museum celebrated an expansion that includes model train exhibits in the HO, O. and N scale layouts as well as exhibit of additional memorabilia from local collections.

Additional information about the RRM can be found **HERE**, or contact the Spotsylvania County Economic Development & Tourism office at (540) 507-7205.

Motor Freight

VTRANS 2040 conducted an analysis of regional freight accessibility. Per VTRANS and as logic would say, in addition to railways, US Route 1/I-95 corridor is the major corridor for freight movement throughout the region. Accessibility of freight origins to these roadways is dependent primarily on the proximity of the origin to highway access ramps. Most activity centers in the region are within an eight-minute drive from a major arterial ramp. VTRANS 2040 notes that an average of 98% of the dollar value of all goods that are moved through the region move by truck. Only 1% of the total dollar value of goods are moved by rail through the region. Such a high dependence on road based freight transport further contributes to the regional traffic burden.

VTRANS acknowledges need for capacity and operational improvements of the local rail corridor to enhance rail reliability that could reduce dependence on road based, motor freight options.

The location of warehouses and distribution centers is another important factor in the level of freight accessibility for the region. As VTRANS 2040 observes, most warehouses and distribution centers in the Fredericksburg Region are clustered around the I-95/US Route 1 corridor in and around the City of Fredericksburg. Most areas adjacent to the I-95/US Route 1 corridor are within a 22-minute drive to warehouses and distribution centers. From a land use and operational efficiency standpoint, nearness to major freight corridors for complementary warehousing and distribution uses is an important land use planning consideration. The closer they are to their chief transportation routes into and out of the region helps speed their efficiency and marketability of sites while lowering the extent of freight impacts on roadways inland, away from these corridors. The Future Land Use Chapter is established to help guide land use recommendations and can play an important role defining areas "best suited" for freight based operations.

Freight Planning- Generally

The FAMPO 2045 Long Range Transportation Plan has identified a number of Regional Freight Movement Needs. Needs were identified within FAMPO's designated regional freight network. Within Spotsylvania County, the following improvements identified in Table 4 below have been identified in the 2045 LRTP for Freight:

Table 4: Regional Freight Movement Improvements Needs for Spotsylvania County

Jurisdiction	Project Name	Termini	Description
Fredericksburg/ Spotsylvania	Shannon Drive Extension	From the end of Shannon Drive to the end of Belman Rd	2-lane extension
Spotsylvania	Lansdowne Road and Shannon Drive Intersection Improvements	0.25 miles from intersection in each direction	TBD in Rte. 2/U.S. 17 Bus. Study (Spotsylvania)
Spotsylvania	U.S. 1 and Hood Drive /Mine Road Intersection Improvements	0.25 miles from intersection along Hood Drive and U.S. 1	TBD in Rte. 208/U.S. 1 Study (Spotsylvania)
Spotsylvania	U.S. 1 and I-95 NB Entrance Ramp Intersection Improvements	.25 miles south along U.S. 1 from intersection, .75 miles down NB I-95 entrance ramp	TBD in VDOT STARS Study
Fredericksburg	Route 2 and Beulah-Salisbury Drive Intersection Improvements	0.25 miles from intersection along Beulah-Salisbury	Right turn lane from Beulah-Salisbury Dr to Dixon St
Spotsylvania	Route 2 and Lansdowne Road Intersection Improvements	0.25 miles from intersection in each direction	TBD in Rte. 2/U.S. 17 Bus. Study (Spotsylvania)
Spotsylvania	Route 2 and Joseph Mills Drive Intersection Improvements	0.25 miles from intersection in each direction	TBD in Rte. 2/U.S. 17 Bus. Study (Spotsylvania)
Spotsylvania	Route 2 and Benchmark Road Intersection Improvements	0.25 miles from intersection in each direction	TBD in Rte. 2/U.S. 17 Bus. Study (Spotsylvania)
Spotsylvania	Route 2 and Jim Morris Road Intersection Improvements	0.25 miles from intersection in each direction	TBD in Rte. 2/U.S. 17 Bus. Study (Spotsylvania)
Spotsylvania	Route 2 and U.S. 17 Intersection Improvements	0.25 miles from intersection in each direction	TBD in Rte. 2/U.S. 17 Bus. Study (Spotsylvania)
Spotsylvania	Route 2 Widening	From .1 miles north of Beulah-Salisbury Drive to U.S. 17	Widen to 4 lanes divided with bike/ped accommodations

Aviation

There are two airports in the George Washington Region that provide general aviation service. First, Shannon Airport is significant to the local transportation system as it serves as a gateway for VIPs and business men and women working in the area. Shannon Airport is located in Spotsylvania County, on Tidewater Trail (Route 2). Shannon Airport is classified as a Non-Reliever General Aviation- Community airport as per the Virginia Department of Aviation. The classification is described as serving the needs of businesses and recreational users but often serve a more limited market area than the regional airports. They provide services such as aircraft rentals, flight instruction and AvGas fuel. In 2016, there were 93 aircraft based at the Shannon Airport. Statewide of the 49 non-reliever general aviation airports, the Shannon Airport had the third highest number of based aircraft (93), behind only Culpeper Regional (127) and Winchester Regional (105).

Based on the Virginia Department of Aviation's 2018 report entitled "Virginia Airport System Economic Impact Study" Spotsylvania County based Shannon Airport is responsible for the

creation of approximately 69 jobs which represent approximately 2.5 Million dollars in wages and approximately $6.8 million in total economic activity. The Shannon Airport has not been identified by the Federal Aviation Administration (FAA) as a National Plan of Integrated Airport Systems (NPIAS) airport as of their 2016 designations. As a result, the airport has not been forecasted by the FAA for future activity (total volume of operations). NPIAS designation provides eligibility for airports to receive federal funding for airport infrastructure development and improvements. More information regarding the FAA NPIAS can be found **HERE**.

The FAMPO 2045 LRTP notes there are no plans to expand the airport because the adjacent geography prevents it. There is a highway located to the north (Tidewater trail) and a railroad directly to the south (RF&P). Staff notes the airport is bounded on the east by the 200-acre Slaughter Pen Farm, under battlefield protection easement by the Civil War Trust. An existing, developing industrial park is to the west. Improvements to the airport going forward are expected to be for onsite facilities improvements and operational efficiencies. The airport does intend on improving facilities and expanding in place however by maximizing site efficiency. In order to further improve airport operations and attract more users to the site, in 2020 airport officials have identified a number of offsite transportation projects that warrant consideration within the planning period. The elevation of Tidewater Trail in relation to the nearby airport runway terminus has been identified as problematic. Recommendations include seeking to lower the elevation of the road by 4' to 5' to ensure passing vehicular and truck traffic remain below the airport runway grade. At present, truck traffic especially interferes with the runway horizon there. Additionally, accessibility to the airport via Shannon Airport Circle is not ideal. Lacking a more substantial means of access, the current configuration also inhibits wayfinding to the airport. The airport lacks right turn lane and a left turn lane from Tidewater Trail. The current access road is narrow and carries traffic not only to and from the airport but also from nearby businesses including the United Way, Wawa, Zentech. Airport officials have envisioned that a new access road may be viable, extending between Shannon Park Drive and the airport, providing the potential for a new and improved point of access for all the aforementioned businesses. The existing point of access would either be closed or limited to a right-in, right-out format only, benefitting traffic along the Tidewater Trail corridor by reducing conflict points and enhancing safety along the corridor as a result. This Plan recommends continued exploration of this alternative access route.

Secondly, the Stafford Regional Airport is located in Stafford County off of exit 136 and Centreport Parkway. The Stafford Regional Airport is classified as a General Aviation- Reliever airport. Such airports are described as general aviation airports located in metropolitan areas that serve to reduce congestion at nearby commercial service airports by providing comparable landside and airside facilities to general aviation operators. As of 2016, there were 68 aircraft based at Stafford Regional Airport.

Statewide the 2018 study notes an overall decrease in the number of certificated active airmen; down 43,000 (-7%), and aircraft; down approximately 13,000 (-6%) from 2010 to 2015 utilizing general aviation airports. However, during the same period increases have been noted for active wing turboprop (350 or 4%), active wing turbojet (1,950 or 17%) and active rotorcraft (700 or 11%).
The complete Virginia Department of Aviation's 2018 Virginia Airport System Economic Impact Study can be located online **HERE**.

There is no commercial service classified airports within the GW Region. Outside of the GW Region, there are major commercial airports that provide both air freight and passenger services to the larger area for both domestic and international passengers. Two are located in the Washington, D.C. area, including Washington Reagan National Airport- approximately 64 miles to the northeast, and Washington Dulles International Airport- approximately 80 miles to the northwest. 60 miles to the southeast is the Richmond International Airport. Per VTRANS 2040, the Fredericksburg Region is located within a one-hour drive to three freight airports, Richmond International, Reagan National, and Dulles International.

To the southwest, the Charlottesville Albemarle Commercial Service Airport- approximately 60 miles, has seen growth in popularity, with a 51% increase in passenger enplanements between 2010 and 2016 as per the Virginia Department of Aviation's 2018 study. An increase in larger aircraft landings is a contributing factor.

More distant, the Baltimore-Washington International (BWI) Airport- approximately 100 miles to the northeast, is also accessible within the greater region via Interstate 95 or Route 301 as primary routes as well as Amtrak passenger rail service from the Fredericksburg passenger rail station to the BWI station with shuttle service to the terminal.

Airport Protection Overlay District

Consistent with requirements of the Code of Virginia Sect. 15.2-2294, the Spotsylvania County Zoning ordinance has an established Airport Protection Overlay District considerate of its one County based airport, the Shannon Airport. As per County Zoning Code Sect. 23-7.7.1, the Airport Protection Overlay District is established to provide for the safe use of Shannon Airport by creating additional regulation of the use of land surrounding the airport, in addition to existing zoning districts, which will protect over flying aircraft from conflicts with land uses, objects, and natural foliage on the ground; and, to protect the safety of air navigation around the airport by limiting the height of structures and foliage under the four (4) approach paths to the airport and generally within nine thousand (9,000) feet of the runway surfaces. Anything above the established height limitations could obstruct aircraft using the airport, create a safety hazard to airport operations, and unnecessarily endanger people, property and land use activities in the vicinity of the airport. Standard zoning height limitations and land use regulations alone are insufficient to provide the required protection for air navigation, according to Federal specifications.

Aviation: History, Education and Interpretation

Like Rail discussed in the previous section, Aviation is highlighted local attraction with focus on aviation history, education and interpretation for residents and tourists at the Shannon Air Museum. The museum is located on the grounds of the Shannon Airport and was founded in the

1970s. Throughout the year the museum displays their rare collection of vintage aircraft, numerous aviation related exhibits and hosts a variety of aviation related events and festivals.

Additional information about the Shannon Air Museum can be found at their website **HERE**.

Commuter Bus Services

FREDericksburg Regional Transit (FRED) provides local linkages to area commuter lots and VRE passenger rail services at the Fredericksburg VRE and Amtrak station. Within Spotsylvania County, Route VS1/VS2, connects two park and ride lots along Plank Road (including Gordon Road commuter lot and Salem Church Crossing commuter lot) with VRE service from downtown Fredericksburg. Per the FY2018 - FY2027 Fredericksburg Regional Transit Development Plan, activity is dispersed fairly evenly between the two lots. Overall activity is higher in the afternoon and evening. This route serves six trains in the morning and seven trains in the afternoon and evening. The first run leaves Gordon Road Commuter lot at 4:35 a.m. and the last run of the day returns to Gordon Road at 8:45 p.m. The route is timed to meet VRE trains and runs Monday through Friday. Reporting 2015 figures, the Regional Transit Plan noted 37,677 total one-way passenger trips utilizing Route VS1/VS2.

Per the Regional Transit Development Plan, additional VRE feeder service has been targeted to include the Spotsylvania VRE Station. Plans would provide feeder service from the planned park and ride lot near Cosner's Corner along the Route 1 corridor with stops in close proximity to residential core areas en route to the station. Annual ridership is estimated to be 32,000 in FRED's target year of 2021 for the VRE feeder service rollout to Spotsylvania. Spotsylvania County transportation staff has also included additional VRE feeder service with the County Smart Scale round 4 projects that would provide additional VRE feeder service from the Route 208 commuter lot off Houser Dr. to the Fredericksburg Train Station that will meet all VRE trains in the morning and afternoon in the future.

Additionally, the Martz Group Virginia provides service from the various park and ride lots in Spotsylvania County to destinations in the greater Washington, D.C. Metro area, as well as Richmond.

The Martz commuter buses stop at the following locations within the FRED service area:

- Route 17 and Falls Run Drive commuter lot, located at 633 Warrenton Road (Stafford County)
- Route 3/Salem Church Road commuter lot, located at 4250 Plank Road (Spotsylvania County)
- Route 208 Park and Ride, located at 10800 Hood Drive (Spotsylvania County)
- Route 610 North Lot – North Commuter lot, located on Staffordboro Boulevard in Stafford.

I-395/95 Commuter Choice Program

In 2019, the Commonwealth of Virginia initiated the I-395/95 commuter choice program with the Northern Virginia Transportation Commission serving as the administrator. This program provides dedicated funding from the I-395 Express Lane project for Transit and TDM improvements for the I-395/95 corridor from the Washington, DC line to Exit 126 in Spotsylvania. See Exhibit 2 for eligible localities in Virginia. Projects must provide some benefit to I-395 Express lane users in order to be eligible for program funding. Eligible types of projects include:

1. New or enhanced local bus service
2. New or enhanced commuter bus service
3. Park and ride lot(s) and access
4. Roadway improvements (Corridor management & ITS)
5. Transportation System Management (TSM)/Transportation Demand Management (TDM)
6. Vanpooling/Carpooling

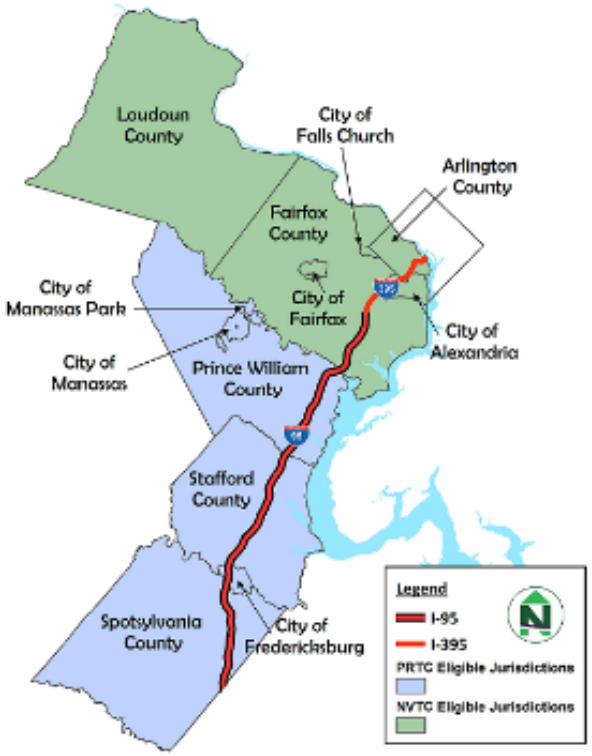


Exhibit 2: Eligible Jurisdictions

The amount of funding available was $15 million per year for the first year in FY-20 with a modest escalation of this amount expected on an annual basis in the future. The first round of projects

was approved by the Commonwealth Transportation Board in October, 2019. The application period for the second round of projects will begin in Fall, 2020. Potential eligible projects in Spotsylvania County in the future include new express bus service from the Rte 3 Corridor or Massaponax to Northern Virginia/DC, local feeder bus to AMTRAK/VRE, new or enhanced commuter lots, and I-95/Rte 1 corridor management, ITS, TSM, or TDM improvements.

Park and Ride Lots

There are four (4) Virginia Department of Transportation (VDOT) operated park and ride lots in Spotsylvania County and one (1) additional expected within the planning period. One is located on the south side of Route 3 at Salem Church Road (Route 639), which has approximately 670 parking spaces. This is a lighted park and ride lot that includes transit service, and bicycle racks. A second lot is located at the corner of Route 3 and Gordon Road (Route 627). The lot was expanded from 600 spaces to 1,061 spaces in 2015. In addition to the additional parking spaces, the $7.2 million improvement project added: A dedicated High Occupancy Vehicle (slugging) pickup and drop off area; bus lane and bus parking bay; second entrance to the lot accessible from Harrison Road; pedestrian sidewalk connecting the lot with surrounding commercial development. The third park and ride lot in Spotsylvania County is located on Houser Drive off Route 208, which has 823 spaces. This is a lighted park and ride lot that includes transit service access. The fourth is a new 1,500 space lot opened in 2015 with the opening of the new Spotsylvania VRE Passenger Rail station just south of Route 17 off Crossroads Parkway. This is a lighted park and ride lot that includes passenger rail station access, bathroom facility, transit service, and bicycle racks.

Following the results of a 2005 Commuter Lot study combined with County growth and demands upon the existing park and ride lots, the County set a transportation objective in the 2008 Comprehensive Plan seeking the development of a new lot in the Massaponax area. A 2010 screening of potential locations resulted in a favorable recommendation of a location that had been identified as a viable alternative site in the 2005 study at Route 1 and Commonwealth Drive. The project has progressed since that time to site evaluation, engineering, design, and the project has been fully funded via VDOT Smart Scale with a projected opening in 2021. The lot will have approximately 700 parking spaces. Amenities will include parking lot lighting, bus and ridesharing loading areas, bicycle racks, and Route 1 frontage shared use path for future connectivity to adjoining developments and the Spotsylvania Parkway Trail system. This site is located in the midst of residential, commercial, industrial uses, and large mixed use areas with approved projects including Jackson Village, Heritage Woods, Alexanders Crossing.

On October 3, 2018 a commuter lot utilization survey was conducted for all four of the existing commuter lots within the County. Results of that survey are below:

Table 5: Existing Commuter Lot Inventory

Commuter Lot	# Spaces	# Used	Utilization
Route 3 - Old Salem Church	672	371	55%
Route 3 - Gordon	1052	388	37%
Courthouse/Houser	805	406	50%
VRE Spotsylvania Station	1486	711	48%

Though lot utilization varies from day to day it appears there is not presently a warrant in the foreseeable future for additional capacity beyond what's expected within the next couple years with a new Commonwealth Drive lot at Route 1. Beyond the current inventory of commuter lots and looking to potential new geographic areas to serve as noted prior in reference to the VDOT Interstate 95 Corridor Improvement Plan Study, a new commuter lot is being considered at exit 118 (Thornburg). This lot would be expected to serve a future market currently well removed from the existing inventory of commuter lots in the County.

There are a variety of factors that could change commuter lot utilization over time. One influencing factor is geographical convenience and shifts in commuter behavior. The opening of the Spotsylvania VRE station and commuter lot expanded ease of access for VRE ridership within the County and added commuter parking capacity to an area of the County that had not had a nearby commuter lot previously. With expected population growth forecasted to continue there is value in continued monitoring of commuter lot usage trends to assure adequate capacity based on demand is provided.

Vanpooling

A vanpool is a group of commuters who have joined together to ride to and from work. The Potomac and Rappahannock Transportation Committee established the "Vanpool Alliance" in October of 2013 organizing 207 vans. In 2019, the Vanpool Alliance identifies numerous regional benefits associated with higher occupancy commuting options. With a focus on vanpools, regional benefits include reduced traffic congestion, lower commuting costs (allowing several users to split costs by vanpool as opposed to driving alone costs of gasoline, maintenance, insurance, tolls, etc.), improved air quality (higher occupancy vehicles equates to fewer cars on the road and less total emissions), quality of life, and business benefits.

As of Fall, 2018 the Vanpool Alliance has 665 vans and 56 vendors operating in the region. 49% of the Vanpool Alliance fleet originate from Spotsylvania County. The region receives 5307 federal funds based on transit vehicle-miles, passenger miles and other factors. Multiple agencies have established ridesharing services in the region including Department of Rail & Public Transportation (DRPT) and GWRideConnect which assists commuters who are seeking vanpools. The region's vanpool program is one of the most successful of its type in the United States. Per feedback received in October, 2018, GWRideConnect supports the largest vanpool fleet in the State (350 vanpools supported with an average 4,200 daily users). Of the 350 reported, 107 vanpools

originate from Spotsylvania County. More information regarding GWRideConnect can be found **HERE**.

Ridesharing

GWRideConnect is the Transportation Demand Management (TDM) Agency operated by the George Washington Regional Commission (GWRC) that serves the residents of the region. GWRideConnect promotes ridesharing and TDM techniques to assist citizens seeking transportation options to their workplaces and other destinations. It is the goal of the program to promote, plan and establish transportation alternatives to the single occupant vehicle, improving air quality, reducing congestion and improving the quality of life for the citizens.

GWRideConnect is the recognized source for TDM and transportation information and assistance in the George Washington Region. The program offers a free ride matching program in addition to a wide variety of transportation options and solutions connecting citizens to available carpools, vanpools, commuter buses, slug lines, Fredericksburg Regional Transit and the Virginia Railway Express.

GWRideConnect Program Services Includes 11 Work components:

- Ride matching
- GWRideConnect Website
- Follow Up and Database surveys
- Vanpool Formation
- Advantage
- Carpool Formation
- Transit Options Promotion and Support
- Advertising and Promotion
- Commuter Lots
- Employer/Realtor/New Resident Outreach
- TDM, Bike and Pedestrian Promotion

High Occupancy Toll (HOT) Lanes

High occupancy toll roads were built between exit 152 in Prince William County and exit 143 in Stafford County in 2014, with a revised and extended merge area just south of the Garrisonville Road exit opening in 2018. New toll roads are in the process of being built along the Interstate 95 corridor from the exit 143 area of north Stafford County down to Route 17 in south Stafford County to increase capacity to I-95. A new I-95 Interchange just north of the Welcome Center in Fredericksburg is in the planning stage as well. This will result in additional capacity being added to the Rappahannock River Crossing. These improvements are regionally significant and expected to benefit commuter populations within the larger area including Spotsylvania County.

In 2009, the George Washington Toll Road Authority was established which encompasses the City of Fredericksburg and the Counties of Spotsylvania and Stafford for the purposes of alleviating

highway congestion, promoting highway safety, expanding highway construction, increasing the utility and benefits and extending the services of public highways, including bridges, tunnels and other highway facilities, both free and toll, and otherwise contributing to the welfare of the Commonwealth and the George Washington Region. The Authority is governed by a ten-member board of directors. Three members are appointed from each of the original participating localities from among their elected officials, and one member is a designee of the Commissioner of the Virginia Department of Transportation.

Local Bus Service

FREDericksburg Regional Transit (FRED) provides local transit services to the County through a partnership in which the County funds a portion of the service after federal and state grant funding has been applied to funding the service planned for the County. FREDericksburg Regional Transit (FRED) operates bus routes in Spotsylvania County providing weekday services, except holidays. Routing and scheduling is coordinated by FRED and subject to change potentially as demand warrants or as new stop locations are identified. Within Spotsylvania County, FRED recently completed (January 2020) a major investment with the construction of the Lee's Hill Transfer Center (Pictured in Image 4 Below).

Image 4: New Lee's Hill Transfer Station

This new transfer center accommodates 5 buses safely in staggered bus stalls to safely load/ unload passengers, a 20'x10' shelter with a bench, trash receptacle, bike rack, and solar lighting inside to illuminate the shelter to provide additional safety. This new transfer station allows routes in the City of Fredericksburg (F2 and F3) and Spotsylvania (S1, S4, and S5) to meet every hour to allow passengers to transfer to other buses to reach destinations in other locations in the region.

Per the Fredericksburg Regional Transit Development Plan (2018-2027), the need for a transfer center at the Lee's Hill bus transfer stop was identified by FRED as new development occurred in the Market Street/ Spotsylvania Avenue area. As part of the development agreement, the developer agreed to provide a strip of land adjacent to the parking area of the Rappahannock Goodwill Industries building to be used as a bus transfer location. The Site Plan (ST18-0053) for this transfer location was approved January 9, 2019. In addition to significant improvements at the Lee's Hill transfer site, FRED has identified need for infrastructure improvements at bus stop locations throughout the system, focusing especially on high volume boarding locations. Considerate of waiting time, inclement weather, personal physical limitations, FRED has identified need for additional shelters and benches at stop sites. Such improvements help the rider experience. These are viable infrastructure improvements that enhance accessibility to local fixed route bus service for all users including disadvantaged populations.

Expansion of service to include weekend transit is also being considered. Within Spotsylvania County, Routes S1 and S5 have been identified as candidate routes for weekend services. Feeder service is also being explored from park and ride lot(s) in the Cosner's Corner area to the Spotsylvania VRE Station. This multi-modal initiative expands accessibility and is positive. For more information regarding FRED local bus service including routes, fares, schedules, and other related news within FRED's Spotsylvania County and the Fredericksburg regional network can be found at FRED's website **HERE**. FRED tracks route ridership for all its fixed routes. Ridership figures for FRED routes in Spotsylvania County (as provided by FRED) have been provided below in Table 6:

Table 6: FRED Ridership

Spotsylvania County Ridership 2014-2018						
	Route	2014	2015	2016	2017	2018
	VS1	21,687	19,449	9,812	10,003	8,405
	VS2	16,008	13,275	8,164	7,623	6,262
	S1	21,064	20,189	18,317	15,794	12,606
	S1B	15,233	14,291	12,884	11,196	9,025
	S4	15,448	14,682	13,992	12,339	10,908
	S5	25,862	23,636	20,598	18,997	17,154
	Total	115,302	105,522	83,767	75,952	64,360

Route Description	
VS1/VS2	Morning and afternoon/evening service between the Gordon Road commuter lot and downtown VRE station
S1/S1B	Spotsylvania Towne Centre to Lee's Hill Center @ Spotsylvania Avenue
S4	Lee's Hill Center to Courthouse Village
S5	Lee's Hill Center to Germanna CC via Cosner's Corner shops & Spotsylvania Hospital

As exhibited in the table above, ridership within the County has been on a downward trend since 2014. All routes within the County have seen ridership declines of varying degrees since 2014. There are a number of possible reasons for declines in ridership. FRED acknowledges national trends in ridership declines, noting the most frequent cited reasons for declines are:

- Increased automobile ownership spurred by a strong economy and low interest rates
- Moderate gas prices
- Increased tele-commuting and flex-time
- The rise of transportation network companies like Uber and Lyft
- Changes in travel patterns
- Service reliability issues
- Service reductions
- Fare increases

Addressing the last three issues (reliability, service, fares) from FRED's perspective, they would not seem to apply. Since FRED has been able to accurately track on-time performance, reliability numbers have remained steady or improved. FRED has not reduced service (except for the termination of service in Caroline County). Per FRED, "As a rule we provide hourly service; the most often registered suggestion from our customers is for more frequent service and longer hours and additional days. And we have held fares level at $1.25 per boarding for the last three years and at $1.00 per boarding the four previous years; our fares are comparable to those of other transit agencies."

Regarding changes in travel patterns, FRED ridership in the County drastically declined after the opening of the Spotsylvania VRE station. Some customers who had used FRED VRE Express service to travel to the Fredericksburg station are now driving to the Spotsylvania station where there is plenty of close-by parking.

It is hard to point to any one of the other four reasons as the primary factor affecting ridership declines within the FRED system. They all contribute to some extent.

The Fredericksburg Regional Transit Development Plan notes "the trend over the past few years is downward, even as the population has grown. There may be ways to re-deploy the current resources so that ridership improves." Per FRED, there is no magic formula and no single criterion applied to determine warrant new or expanded service. FRED uses the Transit Development Plan to identify emerging demographic and development trends that suggest where new or expanded services might be warranted and where to invest in facilities or other amenities. Additionally, FRED meets regularly with County Transportation and Planning staff to better understand where developments will be taking place and how transit can be incorporated into plans, Transportation proffers, etc. Similarly, FRED meets with developers to discuss how service might be incorporated into their plans. Information is shared with the Public Transit Advisory Board (PTAB), which includes representatives of the Planning departments of our partner jurisdictions and has a committee that focuses on how we might better serve traditionally underserved communities (we are aware of the VTRANS work in this regard). Every year FRED polls the PTAB for recommendations on where we might consider adjusting our services in the coming year.

FRED does not plan or undertake service adjustments or investments in a vacuum. Because of the way they are financed with a mix of Federal, State and local funds, the County and other partner jurisdictions must serve as the impetus for any new or expanded service. FRED cannot attract Federal and State funding (which covers roughly 60 percent of FRED's operating expenses and nearly 90 percent of capital expenses) unless local jurisdictions agree to provide matching funds. This requirement means that FRED can only implement services that the County desires and is willing to provide the local match for.

Teleworking/Telecommuting Centers

Teleworking, also known as telecommuting, means using information technology and telecommunications to replace work-related travel and therefore reduce peak hour commute time traffic volumes that ultimately impact transportation levels of service. With teleworking, employees work at home or at a local telework center one or more days per week. Communication to office staff or clients is accomplished by phone, fax, e-mail, internet, teleconferencing, and/or videoconferencing. Telework is usually implemented by business and government agencies to improve services, reduce costs, reduce vehicle travel, or to help achieve other objectives.

Telework!VA is an organization that provides information on establishing and expanding telework programs for Virginia businesses. The program goal is to provide more opportunity for participation in teleworking. This program is administered by the Commonwealth of Virginia

Department of Rail and Public Transportation (DPRT). More information about Telework!VA can be found on their website **HERE**.

Intelligent Transportation Systems (ITS)

The highway transportation system in Spotsylvania County involves three major elements: 1) vehicles, 2) roadway and 3) the driver. The major visual technique for relaying driver information are signals, static signs, changeable message signs, pavement makings, and driver information systems. Currently, there are a limited number of changeable message signs (CMS) along I-95 and which are becoming increasingly important in improving safety and operation of this corridor. In addition to the CMS signs there are a number of portable signs to relay information to motorists. Motorists are increasingly using GPS navigational software like Waze, Here We Go, Google Maps, MapQuest, Sygic, and NavIT. There are a number of stationary advance presence detection along the interstate used to collect information used by the I-95 Traffic Control Center located in Arlington, Virginia.

Trailways Master Plan- Bicycle and Pedestrian System

The Spotsylvania County Trailways Master Plan was initially adopted by the Spotsylvania County Board of Supervisors on February 22, 2011 as a standalone transportation alternatives and parks and recreation amenities plan. The Trailways Plan was developed with careful attention paid to community input and existing trailways plans at the national, state, regional, and local levels. The plan proposes an integrated system of off road greenway trails as well as roadway based improvements to serve multiple non-motorized transportation users including bicycle, pedestrian, equestrian, and others with a focus on creating safer transportation conditions while expanding recreational opportunities for citizens and tourists to enjoy Spotsylvania County's numerous historic, cultural, scenic, recreational, and commercial/ service attractions located throughout the County.

The Trailways Plan was developed acknowledging that full build-out of the trailways system with all amenities will not take place immediately. This is a flexible, living plan and will be subject to future developments and economic conditions, as the community evolves. Levels of interest, available funding, and community support factors may fluctuate over time and so may the rate at which implementation is feasible.

In the interest of assuring the Trailways Master Plan does not become outdated or inconsiderate of opportunities that may arise from changes elsewhere within other elements of the Comprehensive Plan, in 2019, the critical elements of the plan were reviewed, updated, and incorporated into the Comprehensive Plan in Chapter 3A. Abandonment of the standalone plan in favor of inclusion as a Comprehensive Plan Sub-Chapter better positions it for continued monitor, pursuit, and review and update consistent with the 5 year review and update cycle. Otherwise staff has found there tends to be little impetus to update standalone plans that may become outdated or proactively amended to reflect new opportunities or routing alternatives. The revised and updated Trailways Plan addresses sidewalks, and recreational/commuter trails intended to

create an interconnected network of trails cognizant of provision for transportation alternatives as well as established Parks and Recreation Level of Service Standards and trail deficits expected to grow to 159 miles by the year 2040 based on projected population growth.

ACCESSIBILITY FOR DISADVANTAGED POPULATIONS

For the purpose of the Comprehensive Plan, disadvantaged populations are inclusive of low income, elderly and disabled populations. These are populations that may have challenges due to income based and/or physical or health related limitations that inhibit access to critical services and conveniences within the community including but not limited to: medical care facilities, pharmacies, supermarkets, personal services, social services, financial institutions, employment opportunities, social networking events, places of worship or cultural institutions. Land use and transportation systems planning that promote enhanced accessibility and mobility for disadvantaged populations are complementary to Comprehensive Plan affordable housing goals, and the goals considerate of elderly and disabled populations within the County expressed elsewhere within the Plan. Efforts to enhance accessibility for disadvantaged populations is a critical element of social equity within the Plan.

Accessibility Challenges Today

With the assistance of the Spotsylvania County Department of Social Services, Healthy Generations Area Agency on Aging (HGAAA) (formerly known as the Rappahannock Area Agency on Aging) was contacted to provide "real world" perspective on the current state of accessibility for disadvantaged populations in Spotsylvania County and the greater region. HGAAA is one of more than 600 Area Agencies on Aging in the United States. HGAAA provides both direct and contracted services in the George Washington Planning District (PD16) including the City of Fredericksburg and Counties of Caroline, King George, Spotsylvania, and Stafford, Virginia. The mission of the staff, Board of Directors, and Advisory Council of HGAAA is to enhance the quality of life for all older citizens. HGAAA provides home and community based services to support the continued independence, safety, and health and wellness of our senior population.

It's good to note that the County's 65 and over population grew nearly 35% (34.6%) between 2010 and 2018 based on 2010 US Census figures and 2018 American Community Survey estimates. This age group represented the most significant absolute change in population within the County, adding 20,814 persons between 2010 and 2018. Population growth within the County was followed by those aged 45-64 with 11,724 additional persons, representing a 9.4% growth rate for that age bracket since 2010. These population growth trends locally represent a trend of rising demand for senior services, including accessibility. Need for accessibility is amplified when considering the United Way ALICE (Asset Limited, Income Constrained, Employed) report (released in Spring, 2017) that found 57% of seniors within the County (as of 2015 data) fell below the ALICE

threshold and where therefore financially challenged to afford basic goods and services, including transportation.

Per HGAAA, funding for their Mobility Options Program comes through a Federal Transit Administration (FTA) Section 5310 grant, Enhanced Mobility for Seniors and Persons with Disabilities. The grant is applied for through the Virginia Department of Rail and Public Transportation each year in coordination with Rappahannock Area Community Services Board. This grant funds three initiatives, including: replacement of rolling stock (vehicles), Mobility Management, and through operations funding it supports the Mobility Options Program, specifically door-to-door transportation service. Mobility services have been expanding over the last few years to accommodate, 7 part-time drivers and 1 full-time driver which equate to nearly 7,000 door-to-door trips within the Planning District in FY18. Transportation is provided to seniors over the age of 60 and persons with disabilities to a myriad of destinations including non-emergency medical appointments (non-Medicaid recipients), essential shopping trips, personal trip to the bank, post office, hair salon, Social Security Office, etc. However, services offered do not begin to meet the demand, in Spotsylvania County in particular. Additionally, funding for the Mobility Options Program from DRPT for FY2020 has been reduced almost 50%. This has resulted in a reduction of staff drivers available to provide these trips, and subsequently a reduction in the number of trips that can be provided. Reduced funding resulting in negative impacts to service inevitably results in degraded accessibility for elderly and disabled populations within the County, especially those who have little to no other options.

When assistance cannot be provided by HGAAA, the Mobility Options Program includes provision of an updated inventory of available transportation options in the area. Per the July, 2019 Transportation Resource Guide, the following Mobility options have been identified with service in the region (See Table 7):

Table 7: Transportation Resources

GW REGION TRANSPORTATION RESOURCES
NON-PROFITS/ GOVERNMENT AGENCIES
American Cancer Society Road to Recovery Program
AMTRAK
Bay Transit (Northern Neck)
Disabled American Veterans (DAV)
FREDericksburg Regional Transit (FRED)
George Washington Regional Commission GWRideConnect
Virginia Railway Express (VRE)
Virginia Department of Medical Assistance Services (DMAS)
PRIVATE FOR-PROFIT VENDORS
Advanced Life Support Transportation (ALS)
Angel Rides Inc.
ATK Transportation
Bright Day Transit Services
EL Divine Home Healthcare
JDS Transportation
LifeCare Medical Transport
MVP Transports
VIP Medical Transportation
Wisdom Ride
TAXI CABS
Aero Cab
CCS Taxi
Global Cab Inc.
Virginia Hilldrup Taxi Services
Yellow Cab of Fredericksburg
TRANSPORTATION NETWORK COMPANIES
LYFT
UBER
Source: July, 2019 Healthy Generations Transportation Resource Guide

HGAAA operates an additional transportation program that is available to Agency Senior Café Participants. This service provides rides for those participants to get to and from congregate meal sites two/three times per week and is supported through Older Americans Act funds received through the Department of Aging and Rehabilitative Services.

For accessibility, FRED usage is encouraged but often it is not a viable option for many in the community. Vehicles are often difficult to board for individuals with walkers, canes, limited mobility, and service animals. Limited service hours, routes, and limited deviations also create

barriers. In addition, a lack of supporting infrastructure in the form of sidewalks, curb-cuts, crosswalks, and bus shelters make accessing FRED even more difficult for the disabled and aging populations within the region as a whole.

There are unmet needs for access within Spotsylvania County per HGAAA. There are inadequate resources in place to effectively address demand. Within the Primary Development Boundary, many persons in need appear to be in close proximity to FRED Transit routes but cannot utilize the bus due to a multitude of reasons, not the least of which is convenience and physical limitations. Currently 344 Spotsylvania County residents are listed in the HGAAA client database. The client database continues to grow. HGAAA been able to assist approximately 29% of those residents, however Spotsylvania County residents' trips make the largest portion of ridership at 49%. From HGAAA's experience, families are unable to meet the needs of aging relatives, and family members with disabilities because they work. Transportation intensive requests, e.g. physical therapy, cardio therapy, speech therapy, dialysis, cancer treatments, employment opportunities, education opportunities are unable to be accommodated through their program. In these cases, callers are referred to the inventory (table above). The lack of a comprehensive resource to address transportation needs of elderly and disabled populations and resulting findings show the fractured nature of services, lack of adequate resources to meet demand, and struggle to secure reliable transportation for such populations. Per HGAAA, while the inventory is a great tool, it lacks cost effective options other than the Mobility Options Program. There simply aren't any to be had.

Need exists throughout the County but is focused in more suburban areas due to population density. HGAAA continues to look for funding opportunities and public/ private partnership in the hopes of expanding the program to be able to meet more needs. The next grant cycle for Section 5310 funding will begin in the fall after the release of DRPT's regional Coordinated Human Services Mobility Plan updates. DRPT is aware of the needs of small urban and rural areas across Virginia but is struggling with insufficient federal funding to meet the needs in these areas with no allowance of transferring unused funds from large urban areas. The requests have been larger than the funds available for both Section 5310 replacement vehicles and operating funds. DRPT has also been contacted by programs in some areas without Mobility Managers about the availability of funds for these new programs. Because of the lack of funding, DRPT has made changes to the guidance and reduced funding to only direct program expenses that support the funded project. They further encourage sub-recipients to look for external funding partners.

Regarding services being delivered to one's door, Meals-on-Wheels does deliver locally but only within a four-mile radius from Mary Washington Hospital. HGAAA offers a home-delivered meal program to area residents 60 and older that are completely homebound. Individuals interested in the service will go through an assessment process as funding for this program is also limited. Currently the Agency is delivering to 18 Spotsylvania residents who meet the criteria. There is emerging technology based platforms such as Amazon and DoorDash for the order and fast delivery of various goods. Instacart offers online order based same day delivery of groceries and goods partnered with a number of grocery stores and retail vendors in the region. Elderly and disabled populations have historically been found to be unable to utilize technology to access such platforms, or generally have a mistrust of 'online purchases'. This discovery is in part due to

exploring Uber and Lyft as transportation options for target populations. As the presence of these Transportation Network Companies grows in the Fredericksburg Region it would be helpful to find a way to work with these organizations to facilitate more transportation access for our aging and disabled populations. Currently HGAAA is working on a funding application for the Mary Washington and Stafford Hospital Community Benefit Fund to expand the Mobility Options Program.

Rural Access

Transportation access in rural areas especially (outside of the County Primary Development Boundary) can be a challenging and/or costly endeavor due to lack of available transportation alternatives and/or necessity of vehicle ownership, if physically and financially feasible. Rural areas typically lack an abundance of nearby employment and services whereby requiring greater travel distances to reach them. These areas may lack the critical density necessary to support certain fixed transportation services such as a public bus route. Though population density is lower in the Berkeley and Livingston Districts, as a percentage of their populations, they have higher percentages of persons aged 65 and older, disabled, and low income per regional American Community Survey data presented recently by the George Washington Regional Commission in 2019. These areas also lack proximity to fixed-route transit services such as FRED Bus. In August, 2019 as part of the development of the Virginia Transportation Plan update (VTRANS) the Office of Intermodal Planning and Investment (OIPI) presented regional analysis' results identifying disadvantaged populations beyond ¼ mile access to fixed-route transit service. Fixed route transit service to these areas was acknowledged as not viable however, not having the density thresholds to support fixed route service.

If vehicle ownership is an option, lengthier travel distances to jobs, goods and services result in greater vehicle "wear and tear" and fuel expenditures, associated vehicle upkeep costs that "cut into" a limited budget. County-wide based on 2015 data reported in the statewide 2017 ALICE Study of Financial Hardship report by the United Way show at total 47% of all households can be classified as households in poverty or within the ALICE threshold. ALICE households are households that earn more than the Federal Poverty Level, but less than the basic cost of living for the state. Per the report, "ALICE households are working households; they hold jobs, pay taxes, and provide services that are vital to the Virginia economy, in a variety of positions such as retail salespeople, laborers and movers, customer service representatives, and office workers." "ALICE households vary in size and makeup; there is no typical configuration. In fact, contrary to some stereotypes, the composition of ALICE households mirrors that of the general population. There are young and old ALICE households, those with children and those with a family member who has a disability". As such the ALICE population in many ways reflects the disadvantaged populations being considered for transportation accessibility. These represent households under financial stress who have seen costs to afford basic necessities increase without adequate income gains from low wage jobs during the study years of 2007-2015 as reported in the study. Transportation costs are considered one element of basic necessity and while those costs have remained relatively unchanged as reported, significant cost increases in housing, child care, food, health

care, tax burdens on low wage earnings, etc. have further strained resources for families. These costs often leave little to no room for basic necessities, “rainy day fund” savings or non-essential; discretionary consumer spending.

VTRANS 2040 recognizes accessibility challenges within Spotsylvania County, especially outside of the Primary Development Boundary. Accessibility to employment (number of jobs within 45 minutes) via auto, transit, and pedestrian means are not ideal. In these areas, proximity to major roads results in accessibility improvements as they provide more direct line access to major activity centers.

Outside of the Primary Development Boundary, the land use element considers provision of “neighborhood commercial” in rural and agricultural areas. Agricultural, tourism, and forestry based businesses are also complementary in such areas. The goal is not to promote proliferation of urban sprawl into the countryside but to provide goods and services (and nearby employment opportunities) in close proximity to the rural populations meant to be served. This alone helps reduce the transportation and accessibility burden on disadvantaged populations within the County. As a benefit to the transportation network, the effect is also a reduction in total vehicle miles travelled and cross-county traffic volumes. Such land use provisions within the Comprehensive Plan are complementary to provision of access for disadvantaged populations. Private sector investment has historically been the driving force behind provision of rural goods and services within the County. Such development proposals in rural areas that are aimed at providing a direct goods and services benefit to rural populations should be considered to provide a transportation and access benefit to disadvantaged populations.

Availability of affordable housing in many areas simply does not go “hand in hand” with where the jobs are located. Low income workers are often faced with commuting long distances between locations where housing may be more affordable and where employment exists. This adds traffic burdens on local roads and increases transportation related costs for disadvantaged populations. Planning for and supporting provision of affordable housing near employment rich areas, in mixed use higher density areas, near multi-modal opportunities helps proactively reduce accessibility burdens.

Urban and Suburban Access

Within the Primary Development Boundary, transportation accessibility is best achieved when multimodal transportation options are available nearby. Due to higher densities and a variety of uses, these areas tend to me much more viable for fixed route transit services such as FRED Bus. Mixed Use walkable areas with multi-model transportation options that place goods and services and employment opportunities within close proximity to affordable housing and/or housing designed for the needs of disabled or elderly populations are best suited to provision of accessibility for disadvantaged populations. Throughout the Primary Development Boundary efforts should be made to enhance the system of sidewalks and trails, close gaps within existing systems, and provide safe road crossing locations. When considering how FRED passengers access

the bus system for instance, per the Fredericksburg Regional Transit Development Plan, "walking is by far the method most used (72%), followed by driving alone (7%) and using another bus (6%)." Vehicle ownership based one-dimensional transportation systems are not favorable. Rather, multi-modal opportunities should be supported including the preservation and expansion of transportation alternatives in the community. Transportation alternatives have been identified as beneficial to reducing traffic volume burdens on roads but they are also crucial tools for enhancing access for disadvantaged populations within the County. FRED ridership survey results noted in the Fredericksburg Regional Transit Development Plan found that the majority of respondents worked full time (46%), followed by 21% with part-time employment. FRED bus service does consider enhanced accessibility for disabled and limited mobility persons through its route deviation service. Per the Fredericksburg Regional Transit Development Plan, FRED's route deviation service is designed to allow for vehicles to travel off of regular service fixed routes (up to ¾ mile, no more than three minutes, and safe to traverse) to pick up or discharge a passenger who may find it difficult to access designated bus stops. Passengers who need to use this service are instructed to register with FRED by completing a deviated stop request form. Once approved, riders who need an off-route pick-up or drop-off are instructed to call FRED 24 hours in advance. There is no requirement for users of FRED's route deviation service to provide any evidence of a disability or limited mobility. Each of FRED's revenue vehicles is equipped with wheelchair lifts to accommodate people with disabilities.

The County is currently exploring potential opportunities to extend FRED service. Areas being considered include the Rte 208 corridor to the Spotsylvania Courthouse Village Area, the Rte 1 corridor to Massaponax and Thornburg, the Rte 2/17 corridor from the City to the Bowman Center area, and the Lafayette Boulevard corridor from the City to the Rte 208 PNR lot. These areas have all seen development interest in the last few years and has been identified as core areas for mixed use and employment center type development. Both land use designations prime the area as a good location for providing service to disadvantaged populations. With transportation infrastructure upgrades such as extension of the FRED bus system and bike/ped network, mixed land use designations promoting a walkable mix of uses, and employment opportunities nearby, these areas can provide the type of environment where low income populations can seek nearby employment opportunities and look to increase earning potential.

In August, 2019 as part of the development of the Virginia Transportation Plan update (VTRANS) the OIPI presented regional analysis' results identifying disadvantaged populations beyond ¼ mile access to fixed-route transit service. Within the Primary Development Boundary, disadvantaged populations where fixed route service was identified as potentially viable included the Tidewater Trail (Route 2) corridor extending from the City of Fredericksburg to the New Post mixed use area. FRED Bus Service Route F4 extends as far as the River Club Shopping Center with connections into the City of Fredericksburg including downtown Fredericksburg, Fredericksburg Train Station, and Mary Washington Hospital. Future service extension towards Route 2 and 17 are worthy of exploration as development continues down the corridor.

TRANSPORTATION ANALYSIS TOOL

Transportation Impact Analysis

Traffic Impact Analysis is a study used to estimate impacts of growth and how the transportation network would function once a proposed land use change or development takes place. Depending upon the impacts the analysis can involve VDOT, Spotsylvania County or other government agencies. If the impact is substantial and generates 5,000 new trips per day, equals the existing traffic on a residential road or is within 3,000 feet of connection to a major VDOT highway then VDOT requires a 527 TIA and takes the lead role in scoping the parameters of the study. Spotsylvania County has established additional requirements which are as follows;

- A trip generation threshold is crossed
- A development is proposed within a critical corridor
- A rezoning or land use request is inconsistent with the comprehensive plan
- A development has regional significance
- Or the County Traffic Engineer determines that the development warrants a study

The Table below includes Land Use Size Thresholds for Spotsylvania County and the impact analysis, site issues, or other analysis that is required or appropriate for a TIA.

Table 8: Requirements for Various Types of Traffic Impact Studies

TASK	TRIP THRESHOLD	
	County Traffic Impact Study	527 Impact Traffic Study
Trip Generation	100 Peak Hour or 750 + Daily	400 Peak Hour or 5,000 + Daily
Pre-application or scoping meeting	✓	✓
Impact Analysis Requirement		
Existing conditions analysis LOS at site	✓	✓
Sight distance evaluation	✓	✓
Opposing driveway locations	✓	✓
Existing conditions at nearby intersections	✓	✓
Study area & future road summary	✓	✓
Comparison of trip generation uses	*	
Trip generation for specific uses.	✓	✓
Trip distribution analysis.	✓	✓
Background traffic growth.	✓	✓
Future conditions analysis (LOS) at nearby intersections	✓	✓
Design Year Analysis (6 years beyond Build)		✓
Mitigation identification.	✓	✓
Site Issues		
Evaluate number, location, and spacing of access points	✓	✓
Evaluate access design, queuing, etc…	✓	✓
Evaluate site circulation	*	✓
Other Analysis		
Accident history.	*	*
Gap analysis at unsignalized intersections	*	*
TDM/TSM mitigation measures.	*	✓
Evaluate impacts on travel model	*	

Key

✓ = required

* = may be appropriate on a case by case basis

Travel Demand Forecast Model

Travel demand forecasting models are the major means for the development of a long-range transportation plan. The model is designed to calculate the number of trips, connect their origins and destinations, and identify the roadways or transit routes most likely to be used in completing a trip. Models are used to determine where future transportation problems are likely to occur by identifying congested roads. Once identified the model can test the ability of the highway network or transit system to address those problems.

In 2006, Spotsylvania County developed its first travel demand forecasting model in order to update the County's Thoroughfare Plan and quantitatively evaluate Future Land Use projections. The Spotsylvania Travel Demand Forecasting Model covers the entire Fredericksburg Area Metropolitan Planning Organization (FAMPO) region: the Counties of Caroline, King George, Spotsylvania, and Stafford, and the City of Fredericksburg. The Spotsylvania model was developed based on the FAMPO Travel Demand Forecasting Model.

In 2018, the model was updated with a base year of 2015 to take advantage of the new travel surveys and other information. The update included changes to the road network, population, dwelling units, employment, and household data. The travel demand forecasting model contains a set of mathematical relationships that estimate the total number of trips made by residents and employees in the County on a typical weekday. The model estimates the patterns of origins and destinations between and within all parts of the County and the Fredericksburg metropolitan area. It estimates the proportion of trips that travel by auto and applies auto occupancy factors. The final step is to determine the roads used by each trip on its way from its origin to its destination. This is calculated assuming that each driver attempts to find the quickest path, taking into account expected congestion. The summation of those trips over all the roadway segments produces the total daily traffic volume.

The Spotsylvania County Travel Demand Forecasting Model consists of 1,659 Traffic Analysis Zones (TAZ's). The zone boundaries are based on Census geography, property lines, natural topography, roads, and other features. The TAZ's are points where traffic enters and exits the real roadway system. The number and size of these zones are extremely important in determining the model's accuracy and what roads can be modeled. The County desired a high level of accuracy and wanted the model to represent roads down to the Collector Road level, including many of the Local roads. This allows the County to also use the model to evaluate large mixed use developments as well as long range transportation plans.

The model also estimates 2040 land use at the TAZ level and the 2040 highway network reflects the current Comprehensive Plan. The model is used to evaluate land use changes proposed through the Comprehensive Plan process as well as through rezoning and special use applications. The model can also be used to evaluate future road improvement scenarios.

FUNCTIONAL CLASSIFICATIONS

The roadway functional classification system is a network of roadways grouped into classes each defined according to its purpose with respect to transportation. The system is based on guidelines by the Federal Highway Administration (FHWA). The basic purpose of a given road can be defined as a function of mobility and access. For instance, a high level facility such as an interstate or major arterial are typically characterized as having greater travel speeds as well as greater traffic volumes. On these roadways, the main travel purpose is mobility. Low level facilities such as collector or local roads on the other hand, generally tend to carry fewer vehicles traveling at lower speeds. The main function of these roadways is more related to access. The classification for roads in the County is important because in order to be eligible for Federal funding a roadway must be classified as a collector road or higher.

There are six (6) functional classifications for roads: Freeways/Interstates, Principal Arterials, Minor Arterials, Major Collectors, Minor Collectors and Local Roads. The transportation network in Spotsylvania County is organized by these classifications and matches those used by the Travel Demand Forecast Model. Spotsylvania County follows the latest adopted VDOT Functional Classifications. A map depicting VDOT's 2014 Functional Classifications can be found within this Chapter. VDOT is the official source for such classifications and any future amendments to them that may occur within the Planning Period. The latest VDOT Functional Classifications apply and can be found online **HERE**.

The definition, in part, of each roadway classification is as follows:

Freeways/Interstates are multi-lane highways with limited access at grade-separated interchanges. They are designed to carry high traffic volumes at high speeds linking one state to another for interstate travel and commerce. Typical right of way widths range from 250 feet to 400 feet.

Principal Arterials are highways designed to carry high speed/high volume traffic. Access is generally controlled through at-grade signalized crossings and grade-separated crossings at major intersections. These facilities are most often limited-access roadways intended to carry inter-county traffic and typically link cities and towns. Typical right of way widths range from 110 feet to 200 feet.

Minor Arterials are highways designed to carry high volume traffic at moderate speeds with general access through at-grade crossings and grade-separations at major/high volume intersections. These facilities are controlled-access roadways intended to carry mostly intra-county traffic while still linking cities and towns. Typical right-of-way widths range from 90 feet to 200 feet.

Major Collectors are highways designed to carry moderate speed/moderate volume traffic. These roads serve as major links between arterial roads and tend to serve more local traffic. The typical right-of-way width range is from 90 feet to 120 feet on major collectors.

Minor Collectors are highways designed to carry moderate speed, relatively low volume traffic. Minor collectors are more local serving and connect local streets with other collectors, as well as arterials. Typical right-of-way widths range from 60 feet to 90 feet.

Local Roads include those roads that provide access within residential and commercial areas. These roads are local serving in nature and connect residential and commercial areas with collector roads. In rural areas local roads convey traffic to the collector roads and are in many cases farm-to-market roads that do not meet modern design standards. Typical right-of-way widths for local roads range from 50 feet to 100 feet.

In each of the classifications described above the right-of-way widths will tend to vary to make allowances for bikeways, pedestrian facilities, bus stops, etc. as well as actual design speed.

CORRIDORS OF STATEWIDE SIGNIFICANCE

Corridors of Statewide Significance (CoSS) are multimodal connections to the Commonwealth's major activity centers. They are critical to the movement of people and goods between regions of Virginia and through the state. The CoSS were originally developed under VTrans2025 and validated during the VTrans2035 Update process. The Commonwealth Transportation Board (CTB) is charged with developing criteria for prioritizing the CoSS and conducting studies of the corridors. Corridors identified as CoSS demonstrate all of the following characteristics:

- Multiple modes and/or an extended freight corridor,
- Connection among regions, states and/or major activity centers,
- High volume of travel, and
- Unique statewide function and/or fulfillment of statewide goal

The purpose of identifying and designation CoSS is "to provide a multimodal vision for the corridors to guide localities in their land use and transportation plans. Without guidance, local decisions could degrade a corridor's ability to move people and goods, causing bottlenecks and problems that are costly to fix, and undermine economic and quality of life goals. As Virginia continues to grow, it must take steps now to ensure the right balance of development, transportation capacity, and natural resources. The real value of the CoSS is the identification of strategies within each corridor as the first step in ensuring these corridors are invested in and protected for the future benefit of the entire Commonwealth". There are three tiers of CoSS: National Corridors, Commerce and Mobility Corridors, and Statewide Corridors. These systems are defined by the dynamics of total population, travel patterns, and intermodal and economic potential of the corridor within and outside of Virginia.

Two CoSS traverse Spotsylvania County:

1. *Coastal Corridor (Route 17), Corridor A,* locally includes U. S, Route 17 as it passes through the County, is designated as a Commerce and Mobility Corridor. In whole includes Route 17, Local Transit Services, Port of Virginia (indirect access), Port of Richmond, Rappahannock River, Norfolk Southern Heartland Corridor, Norfolk Southern Coal Corridor, CSX National Gateway Corridor, CSX Coal Corridor, Amtrak, 12 airports, including 2 commercial airports (Newport News-Williamsburg Airport and Norfolk International Airport), Greyhound bus stations, Fredericksburg area VRE (Passenger Rail) accessibility.

   Spotsylvania County includes portions of the Coastal Corridor Segment A2 and A3.

Key Functions:

- Major I-95 alternative to shore destinations and through traffic
- Freight corridor
- Tourism access to Northern Neck and Middle Peninsula

Summary of VTRANS 2040 Needs- A2 Segment (Spotsylvania County):

- Safety issues at interchange of US 17/US 1/I-95
- Reliability issue at US 17 and I-95 south of Fredericksburg
- Congestion issue on US 17 between US 1 and I-95 south of Fredericksburg

Summary of VTRANS 2040 Needs- A3 Segment (Spotsylvania County):

- Congestion issue on US 17/US 1 between US 17 and I-95 south of Fredericksburg
- Slow speeds and safety concerns at interchange of I-95/US 17 and US 3
- Congestion issue on US 17/I-95 between VA Route 3 and US 17/US 17 Business west of Fredericksburg
- Reliability issue on I-95 from US 17 south of Fredericksburg to VA Route 3

Findings of the VTRANS 2040 CoSS assessment of the Coastal Corridor can be found **HERE**.

2. *Washington to North Carolina Corridor (I-95)*, Corridor K, Major corridor components include I-95. I-395, I-495, I-85, I-195, I-295, Routes 1 and 301, WMATA Blue and Yellow Lines, Local Transit Services, Virginia Railway Express, Ports of Alexandria and Richmond, James River, CSX National Gateway Corridor, Park-and-Ride, Amtrak, Dulles International Airport, Ronald Reagan Washington National Airport, Richmond International Airport, other general aviation facilities, Greyhound bus.

   Spotsylvania County is within Segment K3 of the Washington to North Carolina Corridor.

   Key Functions:

   - Commuter Corridor in Northern Virginia and Richmond Areas
   - Through Traffic (“Main Street” of East Coast)
   - Freight Corridor (trucks, CSX Rail Lines)
   - Military Access (Pentagon, Quantico, Ft. Belvoir, Ft. AP Hill, Ft. Lee, etc.)
   - Multimodal Corridor (VRE, Amtrak, Express Bus, HOV/HOT Lanes)
   - Link to Maryland, Washington, D.C., and Capital Beltway from Points South

   Summary of VTRANS 2040 Needs- A2 Segment (Spotsylvania County):

   - High-growth commercial area near VA 3 forecast to be congested by 2025
   - Limited availability/connections to transit modes at park-and-ride lots
   - I-95 at Exit 118- Planned growth in the area may exacerbate congestion issues
   - Reliability issue on I-95 between Exit 126 (US 1/US 17) and Rappahannock River
   - Reliability issue at US 1 and Harrison Road

- Congestion issue on US 1/US 17 at junction with I-95 south of Fredericksburg
- Congestion issue at US 1 and Harrison Road in Fredericksburg
- Congestion issue at US 1 and Massaponax Church Road south of Fredericksburg

Findings of the VTRANS 2040 CoSS assessment of the Washington to North Carolina Corridor can be found **HERE**.

A summary of Six Year Improvement Program projects within CoSS in Spotsylvania County are summarized in Table 9 below. The projects are also included in the Spotsylvania County Thoroughfare Plan.

Table 9: CoSS Projects

Corridors of Statewide Significance (CoSS) Projects in the Six Year Improvement Program			
State Project #	**Description**	**Route**	**VDOT UPC**
0620-088-182	Harrison Road East (Rte 620 & Rte 1 Intersection Improvements)	1/620	51845
0606-088-622	Route 606 bridge replacement over I-95 and roadway improvements	I-95/606	100829
0606-088-653	Reconstruction of Mudd Tavern Road (complements Route 606 I-95 Bridge replacement)	I-95/606	105463
0606-088-654	Reconstruction of Mudd Tavern Road (complements Route 606 I-95 Bridge replacement)	I-95/606	105464

TRAFFIC SAFETY

As noted in the FAMPO 2045 LRTP, "the dramatic rise in population has strained transportation infrastructure pushing the Region's roadway system to capacity. Traffic congestion and safety issues on the interstate, primary, and portions of the secondary road system throughout the urbanized area are plentiful and growing worse and are beginning to impact even the rural localities more and more each year…When demand for a given transportation facility outstrips available capacity for that facility, congestion occurs. It can affect all modes of travel, including highway passenger and freight vehicles, freight rail, commuter rail, metro rail, bus, air traffic and airport ground traffic, ports and waterways."

Growth over time has outpaced the ability to improve roadways to the extent necessary to significantly improve local levels of service and road safety. Based on data presented in the FAMPO 2045 LRTP sourced from the Virginia Department of Motor Vehicles (DMV), between 2012 and 2016, Spotsylvania averaged approximately 12 highway fatalities per year. During the same time, the County's average number of annual crashes based on Virginia DMV data was nearly 2,100. Identification and implementation of improvement projects and for problematic intersections and road segments experiencing elevated crash activities is critical to improving design and capacity based factors that may be associated with crash activity. Additionally, continued pursuit of alternative modes of transportation and efforts to expand their use helps

reduce roadway congestion, improves levels of service, reduces frequency of vehicle conflict, and reduces the volumes of vehicles that may otherwise be at risk of crash on local roads.

HURRICANE EVACUATION

Though infrequent, the region is susceptible to the threat of Hurricane activity and its resulting impacts on personal property, health and welfare, and the transportation system. Within Spotsylvania County the Virginia Department of Emergency Management has identified the Route 17 corridor from the Caroline County line to Interstate 95 as part of the Peninsula Evacuation Route. This evacuation route extends to the coastal Virginia areas including major population centers at Hampton Roads, Newport News, Norfolk, and Virginia Beach. Impacts of evacuation events can be far reaching and strain the transportation system. Aside from pure traffic volume based slowdowns, emergency related power outages can cause significant deficits in demands at critical facilities including but not limited to: public safety buildings; facilities or businesses providing or selling food, water, fuel, lodging; emergency medical care facilities. Lack of operational facilities due to power failure further compound the impact of emergencies and evacuation, including impacts to the transportation system. With the support of the 2017 George Washington Regional Commission Regional Hazard Mitigation Plan, this plan seeks to improve travel conditions associated with designated Hurricane Evacuation Routes and Corridors of Statewide Significance within the County.

TRANSPORTATION GOALS AND STRATEGIES

An overarching goal with specific goals and strategies has been developed to provide direction and rationale for decision making related to transportation in Spotsylvania County. *The overarching goal is to develop a sustainable transportation network that supports the County's Comprehensive Plan and achieves a level of service that promotes safe and efficient operation and movement of people and goods.* The goals and strategies form the foundation for the planning and development of Spotsylvania County's transportation system.

Goal 1: Maintain acceptable Levels of Service on public roads.

Strategies:

1. Achieve no less than a "D" Peak Hour Level of Service on 90% of County secondary roads within the Primary Development Boundary as shown in the Thoroughfare Plan. In the Primary Settlement District, levels of service are lower to encourage development and redevelopment to densities and intensities that maximize use of the existing infrastructure.
2. Achieve no less than a "D" Peak Hour Level of Service on the VDOT Primary Street System.
3. Achieve no less than a "C" Peak Hour Level of Service on 90% of County secondary roads outside of the Primary Development Boundary as shown on the Thoroughfare Plan. Levels of Service standards have been set higher in the rural area to ensure the rural character of the area is not degraded by development.
4. Continue efforts to pave those unpaved roads in the VDOT Secondary System.
5. The County should monitor secondary road links and intersection Levels of Service through a Traffic Count Program to supplement VDOT's existing Traffic Count Program.
6. Utilize the Travel Demand Forecast Model to project future Thoroughfare Plan needs.
7. Preserve and enhance capacity by improving access management, reducing signals, or signal phases, and implementing innovative intersection configurations.

Goal 2: Ensure that new development does not degrade Levels of Service and mitigates its impact on the transportation network.

Strategies:

1. Protect the transportation network from future congestion by:
    a) encouraging joint-use access points for multiple developments,
    b) ensuring connections within and between developments that offer alternative routing for traffic, but does not encourage cut-through traffic, and
    c) encouraging alternative land development and site design techniques such as mixed use and planned unit developments that provide residential, employment, and recreational opportunities connected by a network of internal streets.
2. Require the submission of Traffic Impact Analysis (TIA) in compliance with VDOT's 527 Process or for projects that meet the County TIA threshold which is 750 vehicles per day (VPD), 100 AM Peak hour trips, or 100 PM Peak hour trips. Additionally, to ensure accuracy all TIAs will employ the latest available version of the ITE Trip Generation Manual

to calculate trip generation and the peak hour of the generator rates should be used for AM and PM Peak hour trip generation calculation if data is available.

3. Development proposals, especially for non-destination convenience based uses should include estimates of pass-by trips (traffic already on the road) associated with their use as not all traffic generation can be attributed to adding additional vehicle trips to the roads.
4. Only roadway facilities that are fully funded and programmed for implementation within the first 3 years of VDOT's Six Year Program or the County's CIP should be considered built and eligible for inclusion in a traffic analysis.
5. Large scale and mixed use developments should consider incorporating Transportation Demand Management (TDM) measures that reduce single occupancy vehicle trips.
6. The County should support alternative onsite transportation alternatives and recreational options such as transit, pedestrian and bicycle facilities that are able to, or will, connect to neighboring properties.
7. Discourage road sections allowing only single lane access in any direction without adequate travelway or shoulder width to allow other vehicles to pass in case of disabled vehicle, crash, stopped or pulled over vehicle. A single lane access constrained by a divided median is one example.

Goal 3: Promote alternative modes of transportation and multi-modal facilities to more effectively address demands on the transportation network.

Strategies:

1. Promote Transportation Demand Management measures, such as the rideshare program, which relieve congestion on major transportation routes and promote more efficient use of alternative transportation systems.
2. Promote design and construction of appropriate bicycle and pedestrian facilities meant to enhance safety and avoid conflicts with motorized vehicles.
3. Promote the design and construction of transportation facilities that consider the needs of persons with disabilities as well as the needs of an aging population.
4. Coordinate with a regional transit service to provide timely and efficient bus routes that meet the needs of local transit users.
5. Promote public transit access and enhancement with supporting infrastructure improvements in the form of nearby sidewalk/trail network, curb-cuts, crosswalks, and bus shelters at stop locations.
6. Plan for and support provision of affordable housing near employment rich areas, in mixed use high density areas, near multi-modal opportunities to proactively reduce accessibility burdens.
7. Recognize the accessibility benefits of provision of rural commercial and/or employment opportunities outside of the Primary Development Boundary to rural populations, especially to rural disadvantaged populations.
8. Explore opportunities to expand regional transit services to serve the Thornburg and New Post Areas.
9. Support capacity enhancements and efficiency improvements along the RF&P Rail corridor for freight and passenger transport.

10. Support protection, enhancement, expansion of rail spurs and sidings within the County along the RF&P corridor for the potential growth of freight service and rail reliant industries and their associated employment and economic activity benefits.

11. Support protection, enhancement, expansion of rail spurs and sidings within the County along the RF&P corridor for development complementary to passenger rail service such as transit oriented developments.

12. As a County within the GW Region, Spotsylvania County recognizes the importance of freight systems impacts on the local economy and traffic. The County will support and provide assistance implementing critical improvements efforts associated with the Regional Freight Plan.

13. Road improvement designs intended for the Tidewater Trail corridor should consider Shannon Airport guidance that supports lowering the road elevation by 4' to 5' in proximity to the nearby airport runway terminus.

14. As part of the upcoming update to the George Washington Regional Bicycle and Pedestrian Plan, work with the FAMPO Bicycle and Pedestrian Advisory Committee (BPAC) to develop a regional strategy and identify local policies for e-bikes and scooters. Policy recommendations may warrant inclusion in future iterations of the Comprehensive Plan.

Goal 4: Plan transportation facilities that are environmentally and aesthetically compatible with the character of the County and minimize adverse effects upon historic and environmental resources.

Strategies

1. Minimize negative physical impacts to existing residents and businesses in the planning and design of new transportation facilities.
2. Promote Context Sensitive Design (CSD) in the development of new and expanded roadway improvements. CSD involves developing a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic, and environmental resources, while maintaining safety and mobility.

Goal 5: Plan future transportation facilities that are cost-effective and can be implemented in a timely fashion.

Strategy:

1. Develop and implement a financial plan to achieve the County's transportation system objectives. The Plan should identify all new and existing funding mechanisms, such as Revenue Sharing, to include private funding initiatives and public/private partnerships.

Goal 6: Prioritize transportation projects for consistent implementation and clear direction for development patterns.

Strategies:

1. Develop and implement a working prioritized list of future road projects to achieve the County's transportation system priorities and objectives.
2. The list should identify all proposed improvement projects, new connection points, lane improvement, turn lane/intersection improvements, traffic circles/roundabouts, interchange alternatives, etc. to be coordinated through the regional transportation network including FRED, FAMPO, VRE and surrounding localities for consistent development.
3. The list shall be a working document reviewed and approved by the Transportation Committee and the Spotsylvania County Board of Supervisors.
4. Any inclusions, exclusions and alterations in the priorities approved on the list will require Spotsylvania County Board of Supervisors approval.

Goal 7: Protect the function of Corridors of Statewide Significance and Hurricane Evacuation Routes from unnecessary gridlock created by vehicle abandonment, stranding, excessively long queues and backups, food and water shortages due to power failure at critical facilities.

1. Promote installation of onsite secondary power sources, generator ready hookups or backup generators at critical facilities including but not limited to: public safety buildings; facilities or businesses providing or selling food, water, fuel, lodging; emergency medical care facilities.

DRAFT

THOROUGHFARE PLAN (ROAD IMPROVEMENT PLAN)

SPOTSYLVANIA COUNTY, VA

NEW ROADS AND ROAD EXTENSIONS*

Project	From	To	VDOT Functional Classification	CoSS	2020 # of Lanes	2040 # of Lanes	Ultimate ROW	Description of Improvement	2020 Length	2040 Length	2020 ADT	2040 ADT	2020 LOS	2040 LOS	Source of Cost Estimate	Total Cost (2040)^
Route 606 Service Road-North	Dan Bell Lane	S Roxbury Mill Rd	N/A	N	0	2	60/variable	New 2-lane roadway	0.00	0.50	0	10,800	unk.	C	UPC 105464 & 111456	$8,000,000
Route 606 Service Road-South	Thornburg Plaza II	.1 mile West of north leg of Route 606 Roundabout	N/A	N	0	2	60/variable	New 2-lane roadway	0.00	0.60	0	9,300	unk.	C	VDOT PCES	$8,000,000
Guinea Station Road Extension (607) (ALTERNATIVE A)	Massaponax Church Rd (608)	Jefferson Davis Hwy (1)	N/A	N	0	2	60/variable	New facility: two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped. (ALTERNATIVE A ALIGNMENT)	0.00	1.15	0	6,700	unk.	C	VDOT PCES	$9,715,440
Guinea Station Road Extension & Realignment (607) (ALTERNATIVE B)	Massaponax Church Rd (608)	Jefferson Davis Hwy (1) and Realigned Guinea Station Road	N/A	N	0	2	60/variable	New facility: two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped. (ALTERNATIVE B ALIGNMENT)	0.00	2.00	0	6,700	unk.	C	VDOT PCES	$16,896,000
Massaponax Church Rd Extension (608)	Lake Anna Parkway (208)	Courthouse Rd (208)	N/A	N	0	2	60/variable	New Facility: two 12 foot lanes with 6-foot shoulders, sidewalks. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.00	1.52	0	2,700	unk.	B	VDOT PCES	$12,467,000
Chancellor Road Extension (674)	Old Plank Rd (610)	Plank Rd (3)	N/A	N	0	2	60/variable	New 4-lane divided typical section: Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.00	0.90	0	6,000	unk.	B	VDOT PCES	$5,211,500
Rollingwood Dr Extended (711)	Harrison Rd (620)	Rollingwood Dr (711)	N/A	N	0	4	75'-80'	New 4 lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.00	1.50	0	24,000	unk.	E	VDOT PCES	$14,650,300
Germanna Point Dr Extension (1029)	Cotter Rd	Spotsylvania Ave	N/A	N	0	4	75'-80'	New facility: four 12-foot lanes with 2-foot shoulders, 2-2' barriers, 1-10' multiuse trail. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.00	0.91	0	10,300	unk.	C	VDOT PCES	$33,100,000
Houser Dr. Extension (1248)	Houser Dr	Industrial Dr	N/A	N	0	2	60/variable	Expand Industrial Park Accessibility with 2-lane connector road.	0.00	0.20	0	4,000	unk.	B	VDOT PCES	$1,921,600
Market St Extension (1489)	Jefferson Davis Hwy (1)	VA Site Southern Entrance, onward to Hood Drive (636)	N/A	N	0	2	60/variable	Construct new facility connecting VA Site Southern Entrance and Route 1 at Market Street, continuing onward to Hood Drive. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.00	0.50	0	5,700	unk.	B	VDOT PCES	$10,847,500
Chancellor Road Spur	Gordon Rd (627)	Chancellor Rd (674)	N/A	N	0	4	75'-80'	Construct 4-lane divided facility connecting Gordon Rd with Chancellor Rd	0.00	0.50	0	15,000	unk.	B	VDOT PCES	$10,745,000
Lansdowne Road Extension	Tidewater Trail (2/17)	Main Street	N/A	N	0	2	60/variable	Extension of Lansdowne Rd to Main Street with a 10ft Share Use Path. Improvement to include a connection to Russo Drive	0.00	0.24	0	6,500	unk.	B	VDOT PCES	$3,000,000
Airport/Industrial Access Road	Shannon Park Dr	Shannon Airport Cir.	N/A	N	0	2	60/variable	Improve access to Shannon Airport and nearby business to reduce volume at Tidewater Trl at Shannon Airport Circle entrance.	0.00	0.13	0	1,000	unk.	A	VDOT PCES	$2,425,000
Spotsylvania Pkwy Extension	Smith Station Rd	Gordon Rd (627)	N/A	N	0	4	75'-80'	Extension of Spotsylvania Pkwy west to Gordon Rd. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.00	3.50	0	10,000	unk.	C	VDOT PCES	$75,215,000

* *New Concept Facilities (incl. new roads and extensions) as depicted on the corresponding Thoroughfare Plan Map are presented as conceptual alignments only. Further design and study necessary to determine accurate route.*

INTERSTATE PROJECTS

Project	From	To	VDOT Functional Classification	CoSS	2020 # of Lanes	2040 # of Lanes	Ultimate ROW	Description of Improvement	2020 Length	2040 Length	2020 ADT	2040 ADT	2020 LOS	2040 LOS	Source of Cost Estimate	Total Cost (2040)^
Super Ramp Construction	I-95 SB Off-ramp	Mills Dr. (US-17)	Interstate	Y	0	2	60	New SB ramp to provide direct connection between I-95 SB off-ramp and US 17	0	1.25	N/A	20,200	N/A	E	VDOT PCES	$90,580,000
Bridge over I-95	0.1 mile west of I-95	0.1 mile East of I-95	N/A	N	0	2	60	Bridge between Jackson Village and Alexander's Crossing developments. 4-lanes with bike/ped accomodations.	0	0.20	N/A	32,365	N/A	E	VDOT PCES	$14,946,000
I-95 Exit 126 Off-Ramp Improvements	I-95 SB Off-Ramp	Southpoint Parkway (711)	Ramp & Principal Arterial	Y	1	2	N/A	Widen I-95 SB Off-Ramp adding an additional left turn on US 1, and lane from the ramp to Southpoint Parkway. Include a sidewalk and retaining wall.	N/A	N/A	11,200	11,500	E	B	VDOT Smart Scale	$15,295,000
I-95 Exit 126 NB On-Ramp Improvements	US Route 1	I-95 NB On-Ramp	Ramp & Principal Arterial	Y	1	2	N/A	Widen I-95 NB On-Ramp and add an additional right turn on US 1	N/A	N/A	10,530	15,200	E	C	VDOT Smart Scale	$22,000,000
I-95 Exit 126 SB On-Ramp Improvements	US Route 1	I-95 SB On-Ramp	Ramp & Principal Arterial	Y	1	2	N/A	Widen I-95 SB On-Ramp and add an additional left turn from US 1 SB	N/A	N/A	9,000	12,000	E	C	County/State	$15,000,000
I-95 SB Widening	1.3 miles south of Exit 130	Exit 126	Interstate	Y	3	4	TBA	Widen I-95 SB from 3-lanes to 4-lanes	2.8	2.8	71,000	106,000	C	D	VDOT PCES	$41,000,000
Harrison Road Interchange	I-95	Harrison Road (620)	Interstate	Y	0	2	TBA	New I-95 Interchange at Harrison Rd.	0	Unk.	N/A	62,700	N/A	D	VDOT PCES	$97,000,000
I-95 Corridor ITS Improvements	1.3 miles north of Exit 130	1.3 miles south of Exit 118	Interstate	Y	0	0	TBA	Interchange and variable message signage improvements.CCTV cameras and fiber optic deployment for improved monitoring.	N/A	N/A	N/A	N/A	unk.	unk.	VDOT PCES	$10,000,000
I-95 Exit 126 NB On-ramp and CD Road	Route 17	I-95 NB	Interstate	Y	0	2	TBD	Major intersection improvements and addition on NB ramp from US-17.	0	1.12	N/A	15,000	N/A	C	Kimley-Horn	$54,270,000
I-95 NB Widening	Exit 126	Exit 130	Interstate	Y	3	4	TBD	Additional I-95 NB General Purpose Lane between Exit 126 and Exit 130.	4.30	4.30	74,000	102,400	D	C	VDOT PCES	$54,000,000

ROAD WIDENINGS AND OTHER EXISTING ROAD CORRIDOR IMPROVEMENTS

Project	From	To	VDOT Functional Classification	CoSS	2020 # of Lanes	2040 # of Lanes	Ultimate ROW	Description of Improvement	2020 Length	2040 Length	2020 ADT	2040 ADT	2020 LOS	2040 LOS	Source of Cost Estimate	Total Cost (2040)^
Jefferson Davis Hwy (1)	Spotsylvania Co/ Caroline Co. Line	Massaponax Church Rd (608)	Principal Arterial	Y	4	6	150/variable	Widen to a 6-lane typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	6.80	6.80	14,000	38,300	B	C	VDOT PCES	$107,803,400
Jefferson Davis Hwy (1)	Massaponax Church Rd (608)	Spotsylvania Pkwy (628)	Principal Arterial	Y	4	6	150/variable	Widen to a 6-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.35	1.95	27,000	44,500	B	D	VDOT PCES	$52,608,300
Jefferson Davis Hwy (1)	Spotsylvania Pkwy (628)	Harrison Rd (620)	Principal Arterial	Y	4	8	175/variable	Widen to a 8-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.87	3.06	55,000	65,000	E	E	VDOT PCES	$65,573,760
Jefferson Davis Hwy (1)	Harrison Rd (620)	Spotsylvania Co/ Fredericksburg City Line	Principal Arterial	Y	4	6	150/variable	Widen to 6-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.70	0.70	30,000	60,000	C	F	VDOT PCES	$24,831,700
Lafayette Blvd (1 Business)	Spotsylvania Co/ Fredericksburg City Line	Jefferson Davis Hwy (1)	Minor Arterial	N	2	4	75'-80'	Widen to 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.51	1.51	22,000	28,500	F	D	VDOT PCES	$42,261,540
Tidewater Trail (2/17)	Joseph Mills Drive	River Meadows	Minor Arterial	N	2	3	75'-80'	Widen to a 3-lane divided section. With 2-lanes southbound and 1-lane northbound and improve intersections. at Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.54	0.54	24,000	36,000	F	D	VDOT Revenue Sharing	$19,100,000
Tidewater Trail (2/17)	River Meadows	Mills Drive (17)	Minor Arterial	N	2	4	65'-75'	Widen to a 4-lane typical section and improve intersections. Refer tp Trailways Master Plan (Chapter 3A) for Bike/Ped.	4.00	4.00	5,600	8,000	C	B	VDOT PCES	$70,113,000
Sandy Lane Dr (2)	Mills Dr (17)	Spotsylvania Co./ Caroline Co. Line	Minor Arterial	N	2	4	75'-80'	Widen from 2 to 4-lane. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.54	0.54	24,000	36,000	F	D	VDOT PCES	$11,062,300
Plank Road (3)	Harrison Crossing Access Road	Andora Dr (626) / Corter Ave (760)	Principal Arterial	N	6	8	150/variable	Widen to a 8-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.65	0.65	32,500	57,800	C	E	ARRA	$62,800,000
Plank Road (3)	Andora Dr (626) / Corter Ave (760)	Orange Co. Line	Principal Arterial	N	4	6	150/variable	Widen to a 6-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	8.79	8.79	32,000	54,200	C	E	VDOT PCES	$14,839,300
Mills Dr (17) Overpass Replacement	Mills Dr (17) Merge	Germanna Pt./Hospital Blvd.	Principal Arterial	Y	2	4	150/variable	Widen to a 4 lane divided typical section with pedestrian accomodations.Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.64	0.64	20,000	30,000	E	C	UPC 107140	$20,000,000
Mills Dr (17)	Germanna Pt./Hospital Blvd.	Spotsylvania Co/Caroline Co. Line	Principal Arterial	Y	2	4	150/variable	Widen to a 4 lane divided typical section, possibly tapering to a 3 lane section east of Tidewater Trail. Refer to Trailways Master Plan (Chapter 3A) for	6.4	6.4	14,000	24,000	C	C	VDOT PCES	$116,417,200
Lake Anna Parkway (208)	Gentry Drive (8301 Lake Anna Pkwy.)	Post Oak/Morris Road (606)	Minor Arterial	N	2	4	125/variable	Widen to a 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.96	1.96	11,500	19,200	C	C	VDOT PCES	$38,354,350
Courthouse Rd (208)	Jefferson Davis Hwy (1)	Smith Station (628)	Minor Arterial	N	4	6	150/variable	Widen to a 6-lane divided. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.72	3.72	39,000	56,750	E	E	VDOT PCES	$86,733,000

DRAFT

THOROUGHFARE PLAN (ROAD IMPROVEMENT PLAN)

SPOTSYLVANIA COUNTY, VA

ROAD WIDENINGS AND OTHER EXISTING ROAD CORRIDOR IMPROVEMENTS

Project	From	To	VDOT Functional Classification	CoSS	2020 # of Lanes	2040 # of Lanes	Ultimate ROW	Description of Improvement	2020 Length	2040 Length	2020 ADT	2040 ADT	2020 LOS	2040 LOS	Source of Cost Estimate	Total Cost (2040)^
Courthouse Rd (208)	Smith Station (628)	Brock Road (613)	Minor Arterial	N	4	6	150/variable	Widen to a 6-lane divided. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.12	3.12	30,000	42,500	C	B	VDOT PCES	$66,262,300
Courthouse Rd (208)	Lake Anna Parkway (208)	Massaponax Church Rd (608)	Minor, Major Collector (Segments)	N	2	2	60/variable	Widen to two 12-foot lanes with sidewalks.	1.20	1.20	4,700	12,000	C	E	VDOT PCES	$13,315,200
Courthouse Rd (208)	Lake Anna Parkway (208)	Morris Rd (606)	Minor Arterial	N	2	3	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.60	2.60	9,200	5,400	B	A	VDOT PCES	$28,849,600
Courthouse Rd (208)	Post Oak/Morris Rd (606)	Lake Anna/ Louisa County Line	Minor Arterial	N	2	4	60/variable	Widen from 2 to 4-lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	12.00	12.00	10,000	17,500	B	B	VDOT PCES	$100,474,000
Lawyers Road (601)	Courthouse Rd (208)	Stubbs Bridge Road (612)	Major Collector	N	2	2	60/variable	Widen to two 12-foot lanes with 6-foot shoulders.	4.30	4.30	1,970	7,700	A	C	VDOT PCES	$18,042,000
Lewiston Rd (601)	Fairview Rd (622)	Courthouse Rd (208)	Minor Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for	6.88	6.88	1,800	3,200	A	A	VDOT PCES	$28,856,500
Arcadia Rd (603)	Jefferson Davis Hwy (1)	Spotsylvania/Caroline Co. Line	Major, Minor Collector (Segments)	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.38	1.38	3,800	2,700	B	B	VDOT PCES	$7,192,000
Marye Road (605)	Partlow Rd (738)	Arcadia Rd (603)	Major Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	8.40	8.40	2,500	2,000	A	A	VDOT PCES	$43,776,700
Mudd Tavern Rd Bridge over I-95 (606)	Bridge with taper to west	Bridge with taper to east	Minor Arterial	Y	2	4	72'	New bridge with 4-12' lanes, 4' median. 2' shoulders, sidewalk & 10' trail.	0.34	0.34	7,700	14,000	C	C	UPC 100829	$7,820,000
Mudd Tavern Rd (606)	Jefferson Davis Hwy (1)	East of I-95 Mudd Tavern Bridge.	Minor Arterial	N	2	4	75'-80'	Widen to 4-lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.51	0.51	12,600	16,000	C	B	UPC 105456	$21,250,000
Morris Rd (606)	Jefferson Davis Hwy (1)	Courthouse Rd (208)	Minor Arterial	N	2	4	60/variable	Widen from 2 to 4-lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.50	3.50	10,000	12,000	C	B	VDOT PCES	$45,056,000
Post Oak Rd (606)	Lake Anna Parkway (208)	West Catharpin Rd (608)	Major Collector	N	2	2	60/variable	Reconstruct select portions to improve horizontal and vertical alignments. Improve various intersections. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	11.62	11.62	1,700	2,700	A	A	VDOT PCES	$24,921,000
Robert E. Lee Dr (608)	Catharpin Rd (612)	Lake Anna Parkway (208)	Major Collector	N	2	2	60/variable	Widen to two 12-foot lanes with 6-foot shoulders. Reconstruct the intersection at Route 612. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	6.08	6.08	2,500	2,300	A	A	VDOT PCES	$36,475,400
Massaponax Church Rd (608)	Courthouse Rd (208)	Smith Station Rd (628)	Major Collector	N	2	4	75'-80'	Widen to a 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.97	3.97	3,350	19,000	B	D	VDOT PCES	$27,945,300
Massaponax Church Rd (608)	Smith Station Rd (628)	Jefferson Davis Hwy (1)	Major Collector	N	2	4	75'-80'	Widen to a 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.98	0.98	1,500	12,200	A	C	VDOT PCES	$15,292,000
Massaponax Church Rd (608)	Jefferson Davis Hwy (1)	Mills Dr (17)	Major Collector	N	2	4	60/variable	Widen to two 12-foot lanes. Realign portion just east of Route 632. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	4.52	4.52	1,200	5,700	A	B	VDOT PCES	$70,529,300
W Catharpin Rd (608)	Spotsylvania Co/Orange Co Line	Robert E. Lee (608)	Minor Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	7.09	7.09	2,000	3,100	B	B	VDOT PCES	$34,212,600
Thornton Rolling Rd (609)	Mills Dr (17)	Spotsylvania/Caroline Co. Line	Minor Collector	N	2	2	60/variable	Widen to two 12-lanes with 2-foot shoulders, Shared Use Path (East Coast Greenway). Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.90	1.90	3,000	4,500	B	B	VDOT PCES	$9,902,000
Old Plank Rd (610)	Gordon Rd (627)	Plank Road (3)	Major Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.50	0.50	6,000	7,100	B	C	VDOT PCES	$2,605,800
Old Plank Rd (610)	Catharpin Rd (612)	Gordon Rd (627)	Major Collector	N	2	4	75'-80'	Widen to 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.06	3.06	12,700	14,700	C	B	VDOT PCES	$48,727,680
Old Plank Rd (610)	Plank Road (3)	Catharpin Rd (612)	Major Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.80	1.80	5,400	14,000	B	C	VDOT PCES	$14,753,400
Elys Ford Rd.(610)	Plank Rd (3)	Spotsylvania Co./ Culpeper Co. Line	Major Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.84	3.84	3,500	4,600	A	B	VDOT PCES	$19,110,800
Catharpin Rd (612)	W. Catharpin Rd (608)	Piney Branch Rd (624)	Major Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	5.24	5.24	2,500	4,800	A	B	VDOT PCES	$26,078,300
Catharpin Rd (612)	Piney Branch Rd (624)	Old Plank Rd (610)	Major Collector	N	2	3	75/variable	Widen to a 3-lane typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.28	2.28	5,500	8,000	B	C	VDOT PCES	$17,305,200
Monrovia Rd & Stubbs Bridge Rd (612)	Spotsylvania Co/Orange Co Line	Post Oak Rd (606)	Major Collector	N	2	2	60/variable	Improve horizontal and verticle alignments. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	11.38	11.38	600	4,000	A	B	VDOT PCES	$32,000,000
Pamunkey Rd (612)	Post Oak Rd (606)	West Catharpin Rd (608)	Minor Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	4.10	4.10	1,000	3,800	A	B	VDOT PCES	$2,931,800
Brock Road (613)	Courthouse Rd (208)	Gordon Rd (627)	Major Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	12.00	12.00	5,700	10,400	B	D	VDOT PCES	$64,190,860
River Road (618)	Bragg Rd (639)	Motts Run Reservoir/ Park	Minor Collector	N	2	2	60/variable	Shoulder Improvements. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.20	2.20	4,600	8,000	B	C	VDOT PCES	$1,652,000
Harrison Rd (620)	Jefferson Davis Hwy (1)	Lafayette Blvd (1 Business)	Minor Arterial	N	2	2	60/variable	Widen to a 2-12' Lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.17	0.17	5,700	11,200	B	C	VDOT PCES	$8,200,000
Harrison Rd (620)	Old Plank Rd (610)	Gordon Rd (627)	Minor Arterial	N	2	4	75'-80'	Widen to a 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.50	0.50	13,000	23,800	C	C	UPC 107141	$11,200,000
Harrison Rd (620)	Salem Church Rd (639)	Jefferson Davis Hwy (1)	Minor Arterial	N	2	4	75'-80'	Widen to a 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.44	2.44	16,200	48,000	D	E	VDOT PCES	$36,647,700
Orange Plank Rd. (621)	Plank Rd (3)	Spotsylvania Co./ Orange Co. Line	Major Collector	N	2	2	60/variable	Shoulder Improvements. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	7.00	7.00	3,500	11,300	A	C	VDOT PCES	$5,674,800
Fairview Rd (622)	Lewiston Rd (601)	Partlow Rd (738)	Minor Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.81	2.81	3,200	4,200	A	B	VDOT PCES	$10,809,500
Gordon Rd (627)	Spotsylvania Pkwy Extended (New Road)	Harrison Rd (620)	Major Collector	N	2	4	75'-80'	Widen to 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.10	3.10	16,700	20,700	E	C	VDOT PCES	$39,759,000
Gordon Rd (627)	Brock Rd (613)	Spotsylvania Pkwy Extended (New Road)	Major Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.00	3.00	9,100	10,500	C	D	VDOT PCES	$17,617,400
Smith Station Rd (628)	Massaponax Church Rd (608)	Gordon Rd (627)	Major Collector	N	2	4	75'-80'	Widen to a 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	5.95	5.95	9,200	21,800	B	C	VDOT PCES	$44,117,600
N,S Roxbury Mill Rd (632)	Replacement Bridge (North Approach)	Replacement Bridge (South Approach)	Minor Collector	N	0	2	60/variable	Demolish existing closed bridge structure and construct a new 2-lane bridge with 10 foot shared use path.	0.00	0.05	0	1,209	N/A	A	VDOT PCES	$2,737,000
Church Pond Rd (633)	Massaponax Church Rd (608)	Guinea Station Rd (607)	Local	N	2	2	60/variable	Shoulder Improvements. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.40	1.40	850	1,500	A	A	VDOT PCES	$1,135,000
Lee Hill School Dr (635)	Germanna Point Dr	Eagle Dr (736)	Minor Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.35	2.35	5,300	6,000	B	B	VDOT PCES	$11,761,600
Hood Rd (636)	Courthouse Rd (208)	Jefferson Davis Hwy (1)	Major Collector	N	2	4	75'-80'	Widen to a 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.44	0.44	12,500	18,500	D	C	VDOT PCES	$12,972,000
Mine Rd (636)	Spotsylvania Avenue	Meadow View Drive	Major Collector	N	2	4	60'-75'	Widen to a 4-lane undivided section with multiuse trail and sidewalk. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.32	0.32	17,100	20,000	E	C	VDOT PCES	$16,000,000
Mine Rd (636)	Meadow View Drive	Lansdowne Rd (638)	Major Collector	N	2	4	60'-75'	Widen to a 4-lane undivided section with multiuse trail and sidewalk. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.14	1.14	11,800	15,100	C	D	VDOT PCES	$18,972,000
Mine Rd (636)	Lansdowne Rd (638)	Benchmark Rd (608)	Major Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.30	2.30	6,500	9,700	B	C	VDOT PCES	$13,527,000
Lansdowne Rd (638)	Mine Rd (636)	Spotsylvania Co/ Fredericksburg City Line	Major Collector	N	2	4	75'-80'	Widen to a 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.93	1.93	9,100	10,200	C	C	VDOT PCES	$28,845,700

DRAFT

THOROUGHFARE PLAN (ROAD IMPROVEMENT PLAN)

SPOTSYLVANIA COUNTY, VA

ROAD WIDENINGS AND OTHER EXISTING ROAD CORRIDOR IMPROVEMENTS

Project	From	To	VDOT Functional Classification	CoSS	2020 # of Lanes	2040 # of Lanes	Ultimate ROW	Description of Improvement	2020 Length	2040 Length	2020 ADT	2040 ADT	2020 LOS	2040 LOS	Source of Cost Estimate	Total Cost (2040)^
Leavells Rd (639)	Courthouse Rd (208)	Smith Station Rd (628)	Major Collector	N	2	4	75'-80'	Widen to a 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.51	2.51	10,500	12,800	C	C	VDOT PCES	$43,866,400
Jones Powell Rd (653)	Belmont Rd (652)	Lawyers Rd (601)	Local	N	2	2	60/variable	Widen to two 11-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.65	1.65	800	4,350	A	B	VDOT PCES	$5,125,600
Piedmont Dr (673)	Smith Station Rd (628)	Harrison Rd (620)	Major Collector	N	2	2	60/variable	Improve horizontal and vertical alignment and improve side street connections with appropriate turn	2.24	2.24	6,800	8,500	B	B	VDOT PCES	$10,543,000
Chancellor Road (674)	Old Plank Rd (610)	Gordon Rd (627)	Minor Collector	N	2	4	75'-80'	Widen to a 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.00	2.00	4,100	8,800	B	B	VDOT PCES	$33,758,000
Partlow Rd (738)	Spotsylvania Co/Caroline Co Line	Courthouse Rd (208)	Major Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	12.56	12.56	3,800	6,100	A	C	VDOT PCES	$39,000,000

INTERSECTION IMPROVEMENT PLAN

Project	Description of Improvement	2020 Length	2040 Length	2020 PM Peak	2040 PM Peak	2020 LOS	2040 LOS	Source of Cost Estimate	Total Cost (2040)^
Courthouse Road (208) & Smith Station Road (628)	The purpose of this project is to increase intersection capacity, reduce delay, and improve traffic flow at the intersection of Courthouse Road and Smith Station Road. Additional turn lanes will be added from the north and southbound directions on Smith Station Road along with through lanes from the east and wesbound direction on Courthouse Road.	N/A	400'	3,500	4,900	E	D	VDOT PCES	$4,872,600
Courthouse Rd (208) & Hood (636)/Houser Drive (1248)	Project will separate the northbound through movement on Hood Drive by providing two left turn lanes, a through lane, and right turn lane.	N/A	N/A	3,700	4,300	E	C	UPC 110987	$6,301,000
Courthouse Rd (208) Turning Lane improvements: Rte 711 (Southpoint Pkwy) to Hood Drive	Construct a 475 ft right turn lane for Rte 711 to Rte 208. Lengthen WB left turn lanes at Rte 711. Restriping of turn lanes at Stoney Creek Drive/Wawa. Construct 240 ft of missing curb lane at Woodland Dr. Provide a 3ed WB lane by reconstructing the I-95 overpass median to be a travel lane with a four ft raised median and restriping turn lanes at Hood Drive/Houser Rd intersection	N/A	N/A	TBD	TBD	TBD	TBD	STATEWIDE PLANNING LEVEL COST ESTIMATES	$7,365,000
Courthouse Rd (208) & Breckenridge Drive (2325)/Brittney Commons (1612)	Extend the eastbound and westbound left turn lanes in both directions on Courthouse Road for approximately 200'.	400'	400'	2,550	3,000	B	t	FAMPO estimate	$952,322
Courthouse Rd (208) Operational and Transit Improvements	Results from VDOT Study include (1) Lengthen WB Route 208 Left Turn Lane for Southpoint Pkwy by approx. 110 ft using grass median to west of I-95/Rte 208 Bridge; (2) Southpoint Pkwy Intersection Improvements; (3) Stoney Creek Drive/Wawa Intersection Imrpovements; (4) WB Rhoades Dr to Woodland Dr to replace about 240 feet of missing curblane that ends at Woodland Dr.	0.60	0.60	4,200	5,880	D	E	VDOT STUDY	$10,000,000 (VDOT Study) & $580,000 Total Transit Cost (Not included in VDOT Cost Estimate)
Harrison Road (620) & Lafayette Boulevard (Business 1)	Extend the existing right turn lane on Lafayette Boulevard 300' from Harrison Road to Lee Street.	300'	300'	3,300	3,900	E	D	VDOT PCES	$835,000
Hudgins Road (661) & Lafayette Blvd (Business 1)	Widen Hudgins Rd to 24 ft between Tignor Lane and Rte 1. The intersection improvement for Hudgins at Rte 1 would upgrade the existing signalized intersection to provide a left and right turn lane from Hudgins to Rte 1. The project would also provide bicycle/pedestrian accomodations along Hudgins Rd from Lafayette Blvd to the West side of Rte 1.	N/A	1,100	TBD	TBD	A	TBD	STATEWIDE PLANNING LEVEL COST ESTIMATES	$3,507,000
Hudgins Road (661) & Jefferson Davis Hwy (1)	Widen Hudgins Rd to 24 ft between Lafayette Blvd and Tignor Lane. Provide a new roundabout or signalized intersection for Lafayette Blvd at Hudgins Rd with bicycle/pedestrian accomodations.	N/A	500'	TBD	TBD	A	TBD	STATEWIDE PLANNING LEVEL COST ESTIMATES	$6,575,000
Spotsylvania Ave @ Market Street	Add a Right turn lane from SB Spotsylvania Ave to Market St and lengthen westbound turn lanes on Rte 208 to 600 feet.	N/A	100'	TBD	TBD	TBD	TBD	STATEWIDE PLANNING LEVEL COST ESTIMATES	$460,000
Business 208 and Massaponax Church Rd	Realign intersection of Massaponax Church Rd with Business 208 to a "T" intersection with a roundabout or conventional intersecton and provide bicycle/pedestrian accommodations.	N/A	100'	TBD	TBD	TBD	TBD	STATEWIDE PLANNING LEVEL COST ESTIMATES	$3,520,000
Andora Dr. & Old Plank Rd Roundabout	Convert existing 4-way stop controlled intersection to a free flow roundabout.	N/A	N/A	1,720	2,100	D	A	VDOT PCES	$2,500,000
Chancellor Rd & Old Plank Rd Roundabout	Convert a 2-way stop controlled intersection to a free flow roundabout to address safety issues.	N/A	N/A	1,450	1,730	D	A	SDI	$1,971,000
Market Street Extension & Hood Drive	Construct new intersection or roundabout at a new intersection resulting from the construction of Market Street Extension that would intersect Hood Drive.	N/A	2170'	N/A	1,400	N/A	C	VDOT PCES	$9,315,350
Lawyers Road & Lake Anna State Park Entrance	Project will add additional right and left turn lanes into the Lake Anna State Park and entrance improvements	N/A	N/A	N/A	N/A	N/A	N/A	VDOT PCES	$985,400
Harrison Road (620) & Salem Church Road/Leavells Road (639)	Extend northbound & southbound left turn lanes & southbound right turn lane. Add a new eastbound & westbound right turn lane, westbound right turn lane, westbound thru lane & esatbound right turn lane.	N/A	N/A	1,400	7,500	E	D	VDOT PCES	$6,100,000
Jefferson Davis Hwy. & Couthouse Road/Lafayette Blvd.	Extend northbound, southbound, eastbound & westbound left turn lanes. Add new eastbound & westbound right turn lanes. Add a second eastbound left turn lane, and convert eastbound & westbound thru/right lanes to exclusive thru lanes.	N/A	N/A	4,050	7,400	D	E	VDOT PCES	$11,200,000
Lawyers Road (601) & Stubbs Bridge Road (612)	Construct new intersection or roundabout at this intersection to address turning movements and crashes.	N/A	N/A	1910	6,027	C	C	VDOT PCES	$2,600,000
Jefferson Davis Hwy. (1) & VA Health Care Center Entrance	Construct a new signal with turn lanes into and out of the VA Health Care Center with pedestrian accomodations.	N/A	N/A	unk.	unk.	unk.	unk.	County	$3,500,000
Jefferson Davis Hwy. (1) & Market Street (1489)	Create an additional WB left turn lane on Market Street and a triple left turn from WB Market Street to SB US Rte 1. The project also includes sidewalk improvements in the intersection area.	N/A	N/A	3,720	4,851	D	C	WS	TBD
Spotsylvania Mall Drive Roundabout	Construct a new roundabout at intersection of Towne Centre Blvd and Bragg Rd	N/A	N/A	N/A	unk.	unk.	unk.	VDOT PCES	$3,300,000
Tidewater Trail (2) & Benchmark Road (608)	Add a Left turn lane for the WB Approach and also add a Left turn lane for the EB Approach and change right turn lane to be shared with through lane for NB approach.	N/A	N/A	2,383	3,108	B	C	VDOT PCES	$4,500,000
Nw Quadrant -Hood Drive (636) & US Rte 1 (P)	Construct a new connector road from Hood Drive to US Rte 1 and add two signals on Hood Drive & US 1 with special 1/2 timing.	NA	NA	NA	10,000	NA	C	WS	$25,000,000

DRAFT

THOROUGHFARE PLAN (ROAD IMPROVEMENT PLAN)

SPOTSYLVANIA COUNTY, VA

THOROUGHFARE PLAN (STUDIES)

Study	Description
Intermediate I-95 Study Area Projects (from North of of Exit 130 (MP 130.7) to North of Exit 118 (MP 119.7))	Studies to include feasibility of collector-distributor (CD) lanes in both directions between Exit 130 and new access points (Harrison Road (620) & Courthouse Road (208)) and include NB CD lanes between Route 3 and US 17 (NB Rappahannock River Crossing project). Potential new interchange to be considered south of Exit 126 along with improvements to existing interchanges at Exit 118 and Exit 126. Additional Exist 126 improvements may include the "J" Ramp, Super Ramp, Alternative 3 (Improvements to US 1 and Southpoint Parkway), Exit 126 to US 1 ramp & signal improvements and/or other recommendations from the KH IMR and companion Planning Study.
Route 3 Arterial Management Plan (Michael Baker International/VDOT)	The Route 3 Arterial Management Plan consists of an approximate 9.6 mile corridor section of Route 3 from Gordon Road (626) to Route 20. The corridor includes 1/4 mile on either side of the Route 3 centerline and includes a total of fifteen intersections.
Route 606 Corridor STAR's Study (VDOT)	The Route 606 Corridor Management Plan consists of an approximate 0.75 mile corridor section of Route 606 from the I-95 Exit 118 interchange to approximately 800' west of Route 1. Key areas of concern include SB I-95 Ramps and Route 606, Route 1 & Route 606, Dan Bell Lane & Route 606, and access management for commercial entrances.
Route 1 (from Interstate 95 to Commonwealth Drive) and Route 208 (from Route 1 to Leavells Road) Corridor Study.	The US 1 and Route 208 Corridor Study will evaluate needs and improvements to US 1 and Route 208 which would be needed if improvements are made to I-95 Exit 126 and assess the impacts of these traffic related improvements on the community.
Route 2/Route 17 Business (US Route 17 to VA-3 Blue and Gray Parkway) Corridor Study	The Route 2/Route 17 Business Corridor Study will evaluate needs and improvements to Route 2/Route 17 Business from the City of Fredericksburg Line to US 17 and assess what impacts these traffic related improvements would have on the community.
Massaponax Corridor Study (Michael Baker International)	The study was initiated by the County to identify projected deficiencies on US 1, US 17 and Route 606 and to provide concepts for roadway improvements and access management to address anticipated future traffic growth. The Corridor Study was designed as a tool to advance projects in VDOT's Six-Year Construction Plan.
I-95 Exit 126 IMR and Planning Study (Kimley-Horn)	The I-95 Exit 126 IMR and Planning Study included SB I-95, NB I-95, US 1, US 17, Route 208, and Southpoint Parkway. The study included four new large developments; Southpoint Landing, Heritage Woods, Jackson Village, and Alexander Crossing. The study focuses on 2020 conditions and identified 2040 improvements and screened alternatives for existing ramp upgrades, J-ramp option and ramp upgrades, and US 1 left and right turn upgrades.

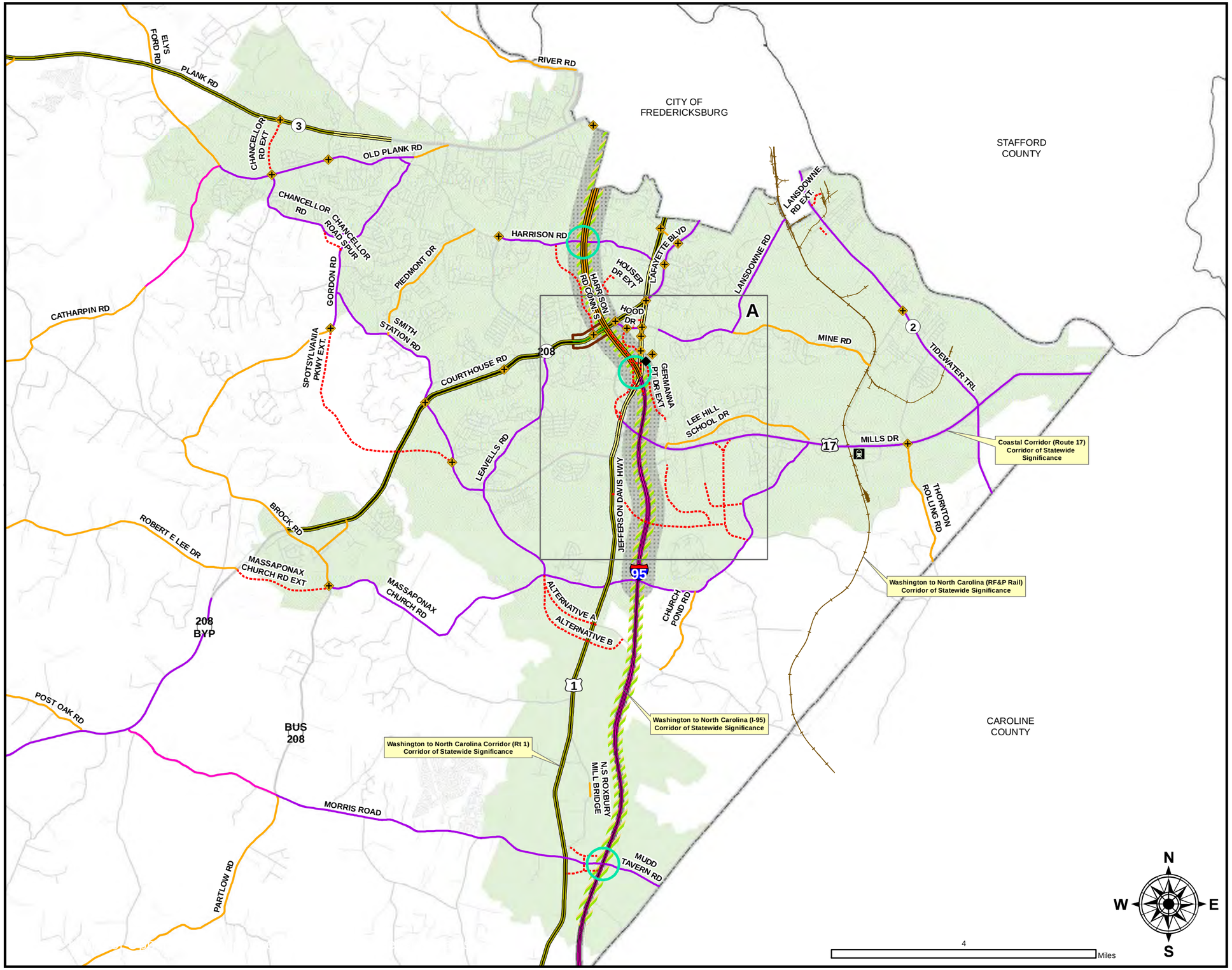
LEGEND [^]- COST PER MILE (UNLESS OTHERWISE NOTED) - SOURCE DOCUMENT IS VDOT PLANNING COST ESTIMATES - JANUARY, 2015 (SEE TRANSPORTATION APPENDIX) - AVERAGES FOR SPOTSYLVANIA REGION, PROVIDING HIGH (WORST CASE) AS OPPOSED TO LOW ESTIMATE. 3% INFLATION PER YEAR ASSUMED

VSTP = Virginia Surface Transportation Plan
CoSS = Corridor of Statewide Significance
FAMPO = Fredericksburg Area Metropolitan Planning Organization
Kimley Horn (KH) = Exit 126 Interchange Modification Report / Planning Study
PCES = VDOT Planning Cost Estimates (January, 2015)
VDOT = Virginia Department of Transportation

DRAFT

SPOTSYLVANIA COUNTY THOROUGHFARE PLAN- PRIMARY DEVELOPMENT BOUNDARY

Map Approved: DRAFT

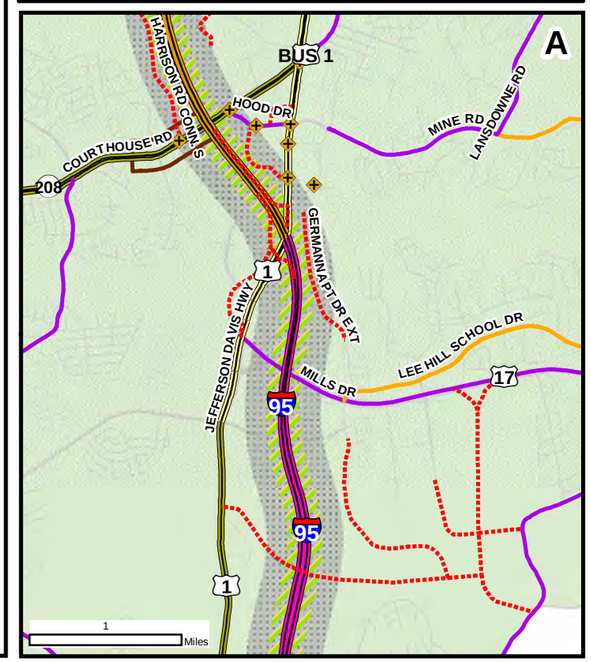


Legend

- VRE Station (Rail)
- Intersection Projects
- Interchange Projects
- 2-Lane Improvement
- 3-Lane Improvement
- 4-Lane Improvement (Divided)
- 6-Lane Improvement (Divided)
- 8-Lane Improvement (Divided)
- Interstate Lane Additions
- Interstate 95
- New Concept Facility*
- Rail Corridor
- Rt 208 Operational Improvements
- I95 Corridor ITS
- I95 Interchange Study Area**
- Primary Development Boundary

* New Concept Facilities are depicted as conceptual alignments only. Futher design and study necessary to determine accurate route.

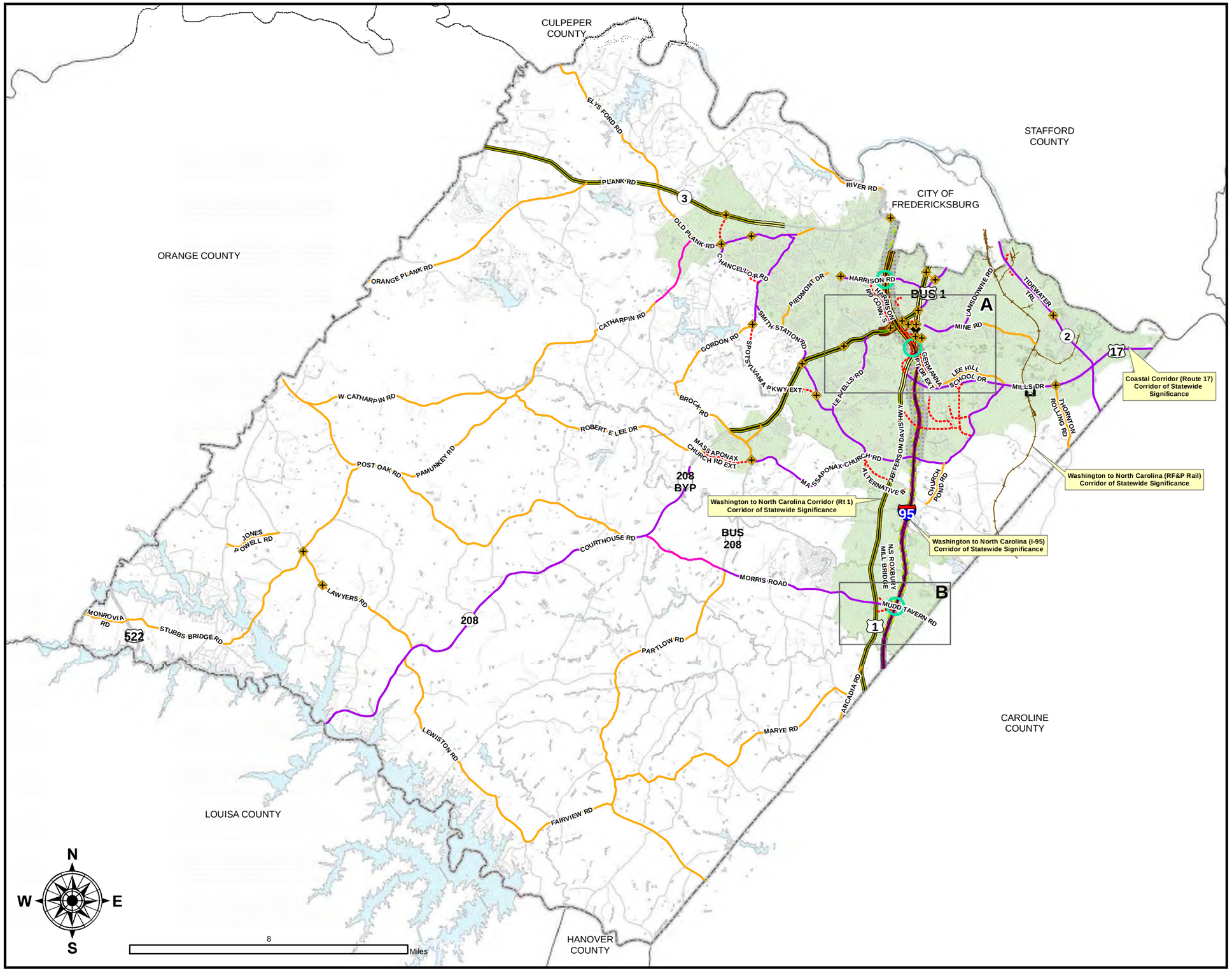
** I95 Interchange Studies to include feasibility of Collector-distributor (CD) Lanes in both directions between Exit 130 and new access points (Harrison Road (620) & Courthouse Road (208) and include North Bound CD lanes between Route 3 and US 17 (NB) Rappahannock River Crossing project). A potential new interchange south of Exit 126 and additional Exit 126 improvements including to the Interstate Ramp. Alternative 3 (Improvements to US 1 and Southpoint Parkway), Exit 126 to US 1 ramp and signal improvements or other recommendations from the KH Interchange Modification Report and companion Planning Study.



DRAFT

SPOTSYLVANIA COUNTY THOROUGHFARE PLAN

Map Approved: DRAFT

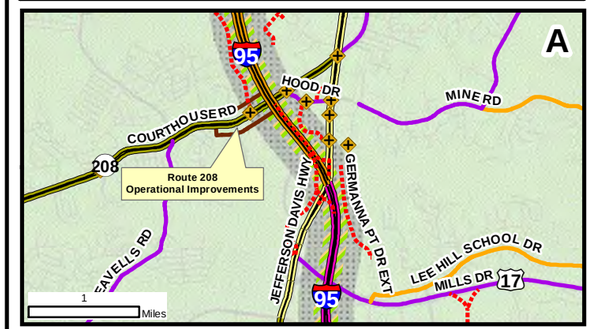


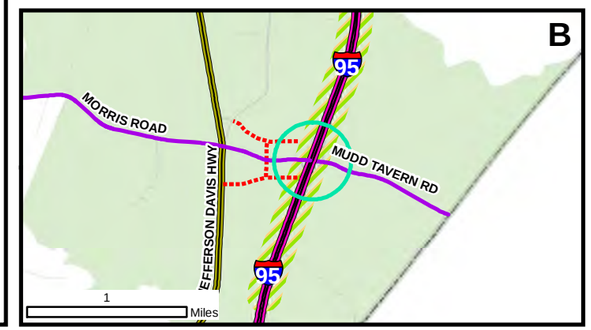
Legend

- VRE Station (Rail)
- Intersection Projects
- Interchange Projects
- 2-Lane Improvement
- 3-Lane Improvement
- 4-Lane Improvement (Divided)
- 6-Lane Improvement (Divided)
- 8-Lane Improvement (Divided)
- Interstate Lane Additions
- Interstate 95
- New Concept Facility*
- Rail Corridor
- Rt 208 Operational Improvements
- I95 Corridor ITS
- I95 Interchange Study Area**
- Primary Development Boundary

* New Concept Facilities are depicted as conceptual alignments only. Futher design and study necessary to determine accurate route.

** I95 Interchange Studies to include feasibility of Collector-distributor (CD) Lanes in both directions between Exit 130 and new access points (Harrison Road (620) & Courthouse Road (208) and include North Bound CD lanes between Route 3 and US 17 (NB) Rappahannock River Crossing project). A potential new interchange south of Exit 126 and additional Exit 126 improvements including to the Interstate Ramp. Alternative 3 (Improvements to US 1 and Southpoint Parkway), Exit 126 to US 1 ramp and signal improvements or other recommendations from the KH Interchange Modification Report and companion Planning Study.





DRAFT

Spotsylvania County VDOT Functional Classifications (2014)

Legend

Functional Classifications (2014*)

- Interstate
- Other Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Rail Corridor
- Primary Development Boundary

*This map portrays county-wide functional classifications as established by VDOT in 2014. Please refer to VDOT as source for official determination and/or potential functional classifications updates that may occur in the future.

0 1.25 2.5 5 Miles

Map Approved: _____

ORANGE COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

CAROLINE COUNTY

LOUISA COUNTY

Coastal Corridor (Route 17) Corridor of Statewide Significance

Washington to North Carolina (RF&P Rail) Corridor of Statewide Significance

Washington to North Carolina Corridor (Rt 1) Corridor of Statewide Significance

Washington to North Carolina (I-95) Corridor of Statewide Significance

ELYS FORD RD
SPOTSWOOD FURNACE RD
RIVER RD
BRAGG RD
ORANGE PLANK RD
HERNDON RD
OLD PLANK RD
HARRISON RD
CATHARPIN RD
PINEY BRANCH RD
GORDON RD
LAFAYETTE BLVD
HANSBOROUGH RD
TIDEWATER TRL
MINE RD
BENCHMARK RD
BROCK RD
MILL POND RD
W CATHARPIN RD
ROBERT E LEE DR
LEE HILL SCHOOL DR
MILLS DR
LEAVELLS RD
SMITH STATION RD
SPOTSYLVANIA PKWY
MASSAPONAX CHURCH RD
PAMUNKEY RD
SEAYS RD
208 BYP
BUS 208
HICKORY RIDGE RD
GUINEA STATION RD
FLIPPO DR
JEFFERSON DAVIS HWY
LAKE ANNA PKWY
POST OAK RD
BELMONT RD
LAWYERS RD
STUBBS BRIDGE RD
GRAND BROOKS RD
LANES CORNER RD
COURTHOUSE RD
TOWLES MILL RD
BLOCK HOUSE RD
MORRIS RD
SUNSET RD
HANKS FORD RD
STANFIELD RD
BLAYDES CORNER RD
MARYE RD
DAYS BRIDGE RD
ZACHARY TAYLOR HWY
MONROVIA RD
EDENTON RD
LEWISTON RD
DICKERSON RD
WALLERS RD
FAIRVIEW RD
PARTLOW RD
ARRITT RD
MT OLIVE RD
LOG CABIN RD
BLANTON RD
208
522
3
17
2
95
1

N
W E
S

Chapter 3A

TRAILWAYS MASTER PLAN

TRAILWAYS MASTER PLAN

Introduction

The purpose of the Trailways Master Plan (Plan) is to provide a framework around which a comprehensive system of bicycle, pedestrian, and equestrian friendly improvements can be implemented throughout the County for user safety, provision of non-motorized transportation alternatives, and recreational value. This Plan is expected to positively contribute to transportation systems (as transportation alternatives) and provision of parks and recreation amenities considerate of levels of service as established in the Public Facilities Chapter of the Comprehensive Plan. The Plan also is intended to complement existing and future land uses, economic development and tourism related goals. For the purpose of this Plan, such improvements will be collectively referred to as "trailways".

The Plan includes transportation systems improvements paired with planned road improvement projects as outlined in the Thoroughfare Plan including provision of sidewalks, shared use or multi-use paths, paved shoulders. The Plan also includes interconnected off road corridor greenway trails (varying surface types) considerate of intended user groups, location, connectivity, existing and future land uses, and potential vehicular traffic conflicts and volumes. In a number of instances, planned greenway trails and road corridor based improvements such as planned shared use paths, complement one another and have a shared alignment.

This Plan addresses trailways on public land, public rights-of-way, and private land where the trails are open to the public. This Plan identifies a number of goals, objectives, and implementation strategies that Spotsylvania County can use in the development of an integrated system of trailways. An integrated system would link the existing trailway segments within the County into a larger common network of trailways that access residential areas, state, county, and national parks, forests and wildlife management areas, significant viewsheds, entertainment, water related resources, cultural and historic resources, schools, retail outlets, commercial services, mixed-use areas, employment centers, and transportation nodes. On a larger scale they can be incorporated into a regional system of trailways, effectively allowing for inter- and intra-jurisdictional infrastructure, regional tourism, and promoting regional alternative transportation possibilities.

The Plan has been developed acknowledging that full build-out of the trailways system with all amenities will not take place immediately. This will be a flexible, living plan and will be subject to future developments and economic conditions, as the community evolves. Levels of interest, available funding, and community support factors may fluctuate over time; so may the rate at which implementation of the plan is feasible.

Plan History

As noted in Chapter 3, the Spotsylvania County Trailways Master Plan was initially adopted by the Spotsylvania County Board of Supervisors on February 22, 2011 as a standalone document. The Plan was developed initially with direction from the 2008 Comprehensive Plan, 2009 Parks and Open Space Master Plan, numerous community meetings, community survey, collaboration with

the Spotsylvania Greenways Initiative (SGI), work sessions and public hearing process. In 2011 the Virginia Chapter of the American Planning Association bestowed the 2011 Outstanding Plan Award- Plan Element upon the Plan.

In the interest of assuring the Plan does not become outdated or inconsiderate of opportunities that may arise from changes elsewhere within other elements of the Comprehensive Plan, the critical elements of the Plan were reviewed, updated, and incorporated into the Comprehensive Plan in Chapter 3A, here. Abandonment of the standalone Plan in favor of inclusion as a Comprehensive Plan element better positions it for continued monitor, pursuit, and review and update consistent with the 5-year review and update cycle. Otherwise staff has found there tends to be little impetus to update standalone plans that may become outdated or proactively amended to reflect new opportunities or routing alternatives.

Amendments between the 2011 Plan and this iteration result in an update that more harmoniously links planned greenway trails to road based improvements, reduces potential plan recommendations; potential routes that conflict with existing developments or past community input. Road based implementation has been found to be more favorable and feasible in many instances. Bicycle and pedestrian improvements also lend added support in the awarding of transportation dollars for road improvement projects. Bike/Ped improvements add strength to transportation project applications for funding such as Virginia's Smart Scale applications. Plans also lend support and basis for VDOT Project Scoping, Highway Safety Improvement Program (HSIP) Projects, County guidance on transportation projects managed by others, etc.

This update respects and upholds the many months of work and input that went into the development of the 2011 Trailways Master Plan and allows the planning process and implementation efforts to continue on without a radical shift or abandonment on prior plans and progress. This update is not intended to "reinvent the wheel". This update will play an integral role in administration of the County Design Standards Manual, specifically Article 5 where issues have been identified in the past related to required frontage improvements. This update will also better inform and influence bike/ped related recommendations for rezoning and special use permit applications.

The Code of Virginia requires the study of transportation needs and their incorporation in comprehensive plans. Section 15.2.2223 requires coordination of plan amendments that will substantially affect transportation on state controlled highways with the Virginia Department of Transportation. Following staff review and update and work sessions held with the County Transportation Committee and Planning Commission, the draft Transportation Plan was routed to the VDOT Fredericksburg District Office for review in September, 2019. Following the initial VDOT review and County submittal of revisions on December 20, 2019, the VDOT-Fredericksburg District finalized their review with no additional comments, on March 25, 2020.

Existing Plans

The Trailways Master Plan is Spotsylvania County specific however has been developed to "fit" within the scope of larger regional, state or national scale trail routes that involve Spotsylvania

County. This Plan was created in consideration of other existing plans to ensure that it is consistent and harmonious with those other important planning efforts. The result is a Plan that is intended to complement larger regional, state, and nationally significant trail systems. Specifically, as follows:

Nationally Significant

U.S. Bicycle Route 1

U.S. Bicycle Route 1 was designated by the American Association of State Highway and Transportation Officials (AASHTO) in 1982. The route runs the length of the United States eastern seaboard from Maine to Florida. It is one of the two original U.S. Bicycle Routes. The Bicycle Route also coincides with the Atlantic Coast Trail, an Adventure Cycling Association trail. In Spotsylvania County, the Bicycle Route is designated along Lee Drive, Benchmark Rd, Mills Dr, Massaponax Church Rd, Church pond Rd, Guinea Station Rd. VDOT road signage identifying the Bicycle Route designation was added along the corridor within the past five years.

The American Association of State Highway and Transportation Officials (AASHTO) recognize the segments in North Carolina and Virginia as being the only "official" segments of U.S. Bicycle Route 1.

U.S. Bicycle Route 76

It is important to recognize that the second of the original U.S. Bicycle Routes, U.S. Bicycle Route 76, passes just to the south of Spotsylvania County in Louisa County. The Bicycle Route is an east-west corridor accessing Virginia, Kentucky, and Illinois. With proper mapping and advertisement, proximity of the Bicycle Route to Spotsylvania County potentially could bring additional users into the County, resulting in an additional tourism benefit.

The U.S. Bicycle Route 76 coincides with the TransAmerica Trail, an Adventure Cycling Association trail.

East Coast Greenway (ECG)

Primary users: A multi-use path serving bicycle (road or mountain), pedestrian.

Approximate Distance: 13 Miles

Intended final surface: Asphalt shared use path

The East Coast Greenway (ECG) is a developing trail system, spanning nearly 3,000 miles as it winds its way between the State of Maine's northern boundary with Canada and Key West, Florida, linking all the major cities of the eastern seaboard. The ECG long term vision and plans include a 100% firm-surface road separated trail extending all 3,000 miles. At

present, thirty-two (32) percent of the planned greenway is now located on safe, vehicle traffic-free paths. This figure is up from 25% as reported in the 2011 Trailways Master Plan. A portion of the ECG alignment is planned to pass through Spotsylvania County. The East Coast Greenway Alliance (ECGA) is the non-profit organization spearheading the development of the ECG. Implementation of the greenway is largely accomplished at the local and regional level resulting from recognized community benefits expected to come with inclusion along the planned route. As per the ECG, "The ECG is being built by linking together locally owned and managed trails into a continuous route." Concerning why communities "buy-in" to implementation efforts, "Multi-use trails like the East Coast Greenway are an integral part of local transportation systems. They provide free recreational opportunities for all ages, encourage healthier lifestyles, and bolster local economic development."

The Virginia Department of Conservation and Recreation recognizes the importance of the ECG within the Commonwealth of Virginia and has specifically targeted development of the East Coast Greenway as part of the 2018 Virginia Outdoors Plan.

Within Spotsylvania County, implementation of the ECG has been limited. A commercial pad site located at the corner of Tidewater Trail and Bowman Drive was approved for development via site plan review in December, 2018. The project includes development of a standalone restaurant with a trail frontage improvement along Tidewater Trail. In August, 2018, 0.25 miles of right-of-way intended for future trail construction was secured along Thornton Rolling Road as part of project conditions associated with Board of Supervisors approval of a special use permit application there. This will complement efforts to establish an East Coast Greenway Auxilliary Trail. Otherwise, large scale enhancements associated with ECG conversion from road based to roadside trail are most likely to occur via additional new development and/or road widening projects as targeted by the Thoroughfare Plan including along Tidewater Trail, Mills Dr (Rt 17).

On March 5, 2020 the East Coast Greenway Alliance approved a planned route shift in the region impacting the City of Fredericksburg, Spotsylvania County, and Caroline County. This revision resulted from concerns raised amongst regional partners about the viability of the prior route specifically as it related to Lee Drive (NPS)- Connection pointe between the City of Fredericksburg and Spotsylvania County and Thornton Rolling Road, as connection to Caroline County. In Spotsylvania County, the route shift included realignment of the planned route away from Lee Drive (NPS) and to Tidewater Trail (a previously identified alignment alternative) and complement to the County's Planned Deep Run Trail. This approval followed a Statewide meeting of the East Coast Greenway Alliance held in the City of Fredericksburg on February 5, 2020. At the February 5, 2020 meeting of the Virginia East Coast Greenway (ECG) Committee in Fredericksburg, a group of local planners presented a set of proposed changes for the ECG route through the City of Fredericksburg, Spotsylvania County, and Caroline County. The proposed changes were discussed by the committee members present. Committee members who were not present at the meeting were given until February 21, 2020 to make comments on the proposed route changes.

These changes were proposed for a number of reasons:
• To better align with bike/pedestrian infrastructure plans in localities' Comprehensive Plans and prospects for road improvements (Caroline County connection)
• To route along roads with planned road widening projects and/or planned multi-use trails
• To increase the likelihood of funding and project prioritization for local multi-use trail construction projects
• To route the ECG outside of the Fredericksburg & Spotsylvania National Military Park, where user conflict between motor vehicles and bicyclists has been identified by the National Park Service as an issue along Lee Dr.

No opposition to the proposed route changes were voiced by committee members since the distribution of the presentation. A memorandum issued to Spotsylvania County on March 5, 2020 provided an official notice of changes to the ECG Route in the region. The East Coast Greenway Alliance's online mapping platform (map.greenway.org) will reflect the new route by March 31, 2020, and all future hardcopy maps produced by the Alliance will show the new route.

Virginia Significant

2018 Virginia Outdoors Plan (Va. Dept. of Conservation and Recreation)

The Virginia Outdoors Plan is the State's official document regarding land conservation, outdoor recreation and open space planning. It assists all levels of the public and private sectors to meet needs pertaining to those issues. The plan provides guidance for the protection of lands through actions of the Virginia Land Conservation Foundation (VLCF), and the plan is required in order for Virginia to take part in the federal Land and Water Conservation Fund (LWCF) program. Within Spotsylvania County, a VLCF award was granted to the County in 2011 that resulted in securing a recreational trail easement along a roughly 2-mile segment of the Virginia Central Railway Trail between Brock Road and Jackson Trail East. This easement greatly enhances the opportunity to eventually construct a significant historic portion of the planned VCR Trail. Within Spotsylvania County, both the East Coast Greenway (ECG) and Virginia Central Railway Trail have been identified as featured projects for continued implementation. The 2018 Virginia Outdoors Plan can be found **HERE**.

Virginia Birding and Wildlife Trail (Va. Dept. of Game and Inland Fisheries)

Within Virginia's 43,000 square miles of diverse natural habitat, there are 400 species of birds, 250 species of fish, 150 species of terrestrial and marine animals, 150 species of amphibians and reptiles, and a wide variety of aquatic and terrestrial invertebrates. The *Virginia Birding and Wildlife Trail* program is the first statewide program of its kind in the United States. In Virginia, three phases of the trail link wildlife viewing sites throughout the state. An estimated 1,041 visitors are using each VBWT site annually according to the *2008 Assessment of the Virginia Birding and Wildlife Trail* prepared for the Virginia Department of Game and Inland Fisheries. The study looked at the economic contribution

of the VBWT to a local economy, resulting in a statewide economic impact of $8,638,895 annually.

Spotsylvania County is part of the Piedmont Trail system of the Virginia Birding and Wildlife Trail. In all, the Piedmont area offers 13 loops including expansive grasslands, forested tracts, pineland savannahs, several large reservoirs, and an abundance of rich history and culture. Of the 13 loops within the Piedmont system, four (4) are located within Spotsylvania County; they include: Loriella Park, Ni Reservoir Recreation Area, Spotsylvania Courthouse Battlefield, and Chancellorsville Battlefield. Motts Reservoir Recreation Area, located within Spotsylvania County, but owned by the City of Fredericksburg, is also within the loop system.

Regionally Significant

2045 George Washington Region Bicycle and Pedestrian Plan

Through the Fredericksburg Area Metropolitan Planning Organization (FAMPO), the GWRC has completed and adopted a regional bicycle and pedestrian plan. The most recent iteration of the Plan recommends bicycle and pedestrian improvements within the region through 2045. This plan is part of the Constrained Long Range Plan (CLRP) and serves as a tool to direct resources toward defined, prioritized, cost-effective bicycle and pedestrian improvements. The project area encompasses the entire GWRC region including the City of Fredericksburg, Stafford County, Spotsylvania County, Caroline County, and King George County. Within a regional context, Spotsylvania County specific bicycle and pedestrian needs recommendations are primarily targeted to existing public roadways with recommendations for sidewalks and shared use paths in developed or developing areas, and shoulder improvements in more rural areas primarily located outside of the Primary Development Area of the County. The regional plan also includes the Virginia Central Railway Trail and recommends improvements to accommodate the East Coast Greenway. Recommendations from the regional bicycle and pedestrian plan have been synthesized with identified road improvement projects from the County Thoroughfare Plan, and planned greenway system resulting from the County's 2011 Trailways Master Plan. The result is an updated and refined Trailways Master Plan map for the County (located in Chapter 3A of the Comprehensive Plan). The 2045 George Washington Region Bicycle and Pedestrian Plan can be found **HERE**.

An update to the regional plan is expected to kick-off in 2021 with the Regional Bicycle and Pedestrian Advisory Committee.

County Significant

Spotsylvania County Comprehensive Plan

The Spotsylvania County Comprehensive Plan is a guide designed to encourage the most appropriate use of land, water and resources within the County consistent with the interests of the citizens. The Comprehensive Plan sets forth goals, objectives, policies and

implementation techniques that will guide the development activity within the County and promote, preserve and protect the health, safety, and general welfare of its citizens. Specifically, the Plan provides data and analysis on land use, transportation systems, housing, resource protection, public facilities and utilities. As of 2020, the Comprehensive Plan is the host location for the County Trailways Plan.

Recommendations and levels of service standards established within the Comprehensive Plan; those in the land use, transportation, and parks and recreation public facilities section, establish the warrant for a Trailways Master Plan.

Thoroughfare Plan

An element of the Comprehensive Plan, the Thoroughfare Plan identifies improvements to the road network in Spotsylvania County. Though the Thoroughfare Plan includes plans for new roadways, physical improvements to existing roadway facilities is the primary focus of the plan by volume. Improvements within the plan advocate for expanded lane widths or the addition of new lanes. Planned road improvement projects include include a bicycle and pedestrian-friendly element, whether it is the installation of shoulders, shared use paths, and/or construction of roadside sidewalks. Provision for bicycle and pedestrian accommodations are critical to ensuring improvements meet VDOT acceptance standards. Achievement of trailway implementation goals paired with Thoroughfare Plan road improvement projects results in dual benefits. Integration of roadway based projects with planned greenway trails greatly assist implementation efforts.

Enabling Legislation

To successfully implement this plan, the Spotsylvania County Planning Department requested that the County Attorney's Office identify statutes and ordinances that enable the County to plan for and pursue land acquisition or easements in order to construct and maintain trailway facilities for public use. Their research identified a number of sources of law which can provide guidance planning and implementing trailways within the County. The principal legislation granting authority for this plan is indicated below:

Virginia Open Space Land Act; Va. Code Ann. §§ 10.1-1700 – 10.1-1705:

The Virginia Open Space Land Act enables public landholding bodies to acquire land or easements for the preservation of open space and to obtain and utilize funds to develop and maintain facilities on land acquired. This land shall conform to the official comprehensive plan for the area in which the property is located. No land designated as open-space under the authority of this Act can be converted from that status unless the conversion or diversion is determined by the public body to be essential to development and growth of the region and in accordance with the region's official comprehensive plan and there is other substituted real property of equal or greater value.

Planning, Subdivision of Land and Zoning; Va. Code Ann. § 15.2-2200:

This section of the Virginia Code "encourages" local governments to improve the public health, safety, convenience and welfare of its citizens and to plan for the future development of communities to the end that transportation systems be carefully planned; that new community centers be developed with adequate highway utility, health, educational, and recreational facilities; that the needs of agriculture, industry and business be recognized in future growth; that residential areas be provided with healthy surrounding for family life; that agricultural and forestal land be preserved; and that the growth of the community be consonant with the efficient and economical use of public funds.

Comprehensive Plan to be Prepared and Adopted; Scope and Purpose: Va. Code Ann. § 15.2-2223:

This statute outlines the proper method by which a comprehensive plan is to be prepared and adopted. Every local Planning Commission is to prepare and recommend a comprehensive plan for the physical development of the territory within its jurisdiction and every governing body shall adopt a Comprehensive Plan. In preparation for the comprehensive plan, the commission shall make careful and comprehensive studies of the existing conditions and trends of growth within the locality. In conjunction with the comprehensive plan, "each locality shall develop a transportation plan that designates a system of transportation infrastructure needs and recommendations that may include the designation of new and expanded transportation facilities and that support the planned development of the territory covered by the plan and shall include, as appropriate, but not be limited to, roadways, *bicycle accommodations*, *pedestrian accommodations*, railways, bridges, waterways, airports, ports, and public transportation facilities" (emphasis added).

Legal Status of Plan; Va. Code Ann. § 15.2-2232

This section is critical to the development of a Capital Improvements Plan (CIP) and the identification of specific projects therein. This section establishes that capital projects such as a new park, public building, "feature" must be shown within the adopted comprehensive plan to exhibit substantial accordance with the local comprehensive plan. There are transportation goals, road improvement standards necessary to result in VDOT street acceptance, and parks and recreation related levels of service standards that may necessitate § 15.2-2232 considerations as the County seeks to implement plans or meet levels of service standards concerning trailways projects.

Parks, Recreation Facilities, Playgrounds, etc.; Va. Code Ann. § 15.2-1806(B):

This section of the Virginia Code established that a locality may establish, conduct, and regulate a system of hiking, biking, and horseback riding trails. Towards that end, a locality may set apart any land or buildings owned or leased by it for that purpose and can obtain licenses or permits for such use on land or buildings the locality does not own.

Streets, Sidewalks, and Public Rights-of-way Generally; Va. Code Ann. § 15.2-2001:

This statute sets out the authority of localities to maintain and update streets, sidewalks and public rights-of-way. This includes the authorization that "localities may make, improve and repair sidewalks upon all public rights-of-way and may convert sidewalks to bicycle paths."

Planned Facilities

Planned facilities include upgrades to existing and/or planned roadway right-of-ways and off-road greenway corridors. As noted above, the Plan reflects a synthesis of a number of national, state, and local plans concerning trailway improvements. The following outlines the planned improvements that when complete will result in a comprehensive network of non-motorized transportation system improvements throughout the County.

The trailways map included here in Chapter 3A may not represent all roads where bike/ped improvements may ultimately result. There may be instances throughout the County where existing roads not targeted for thoroughfare plan or regional bicycle and pedestrian plan road improvement or a greenway corridor will still warrant bicycle or pedestrian accommodation as part of required frontage improvements associated with development of land. Article 5 of the Spotsylvania County Design Standards Manual establishes bicycle and pedestrian requirements to be considered as part of site design and development. Additionally, there may be instances where sidewalk gaps, etc. exist along existing roads without larger scale improvements planned. The plan does not intend to dismiss the importance of these improvements to enhance connectivity, bicycle or pedestrian safety, and enhanced accessibility and walkability within the community. The attached map is intended to serve as a guide for implementation of bicycle and pedestrian infrastructure tied to major roadway right-of-way improvement projects and establishment of major greenway corridors that traverse the County.

Roadway Right-of-Way Improvements

Roadway right-of-way bicycle and pedestrian-friendly improvements that have been identified in this plan include the installation of new sidewalks, parallel to road multi-use (or shared use) paths, shoulder improvements, shared road signage improvements, or a combination. Such improvements are intended to promote bicycle and pedestrian activity and connectivity throughout the County and to make existing bicycle and pedestrian activity safer than current conditions for all users. The roadway based improvements identified in this plan include all voting districts of the County and offer residents and outside tourists the ability to travel more safely, resulting in better roadway conditions for bicycles and pedestrians and motor vehicles alike. Recommended improvements tied to roadways are primarily based in Thoroughfare Plan improvement projects as well as the George Washington Region Bicycle and Pedestrian Plan. Improvements also consider the East Coast Greenway and US 1 Bike Route. Opportunities for planned road improvement based bicycle and pedestrian improvements to help implement continuation of greenway corridors have been identified within the plan.

Greenway Improvements

Greenways serve a variety of functions including recreation, transportation, wildlife habitat, water quality protection, flood hazard mitigation, aquifer recharge, erosion prevention, property value enhancement and scenic beauty. Greenway Trails are located in areas of open space, usually linear, that connect and protect various natural, recreational, and historic or cultural resources via features such as streams, ridges, utility easements, or abandoned roads or railroads. Greenways can also serve to connect residential areas with employment, entertainment, commercial retail and services and also act as potential evacuation routes if need be. In the environment, greenways connect natural habitat areas, allowing for the movement of species and promoting healthy ecosystems. Greenway Trails can be publicly or privately owned but for the purposes of this plan would be open for public use and enjoyment. Depending on the identified classification of the trail, greenway trails may accommodate such things as hiking, biking, jogging, roller blade, or equestrian uses or a combination of them. Winter uses for the corridors might also include snowshoeing or cross-country skiing.

Depending on the intended user, environmental conditions and funding, greenway trails may be surfaced with soil, sand, clay, stone dust, woodchip or asphalt materials.

Due to existing land use and development constraints in a number of areas, planned greenway trails such as the Virginia Central Railway Trail include a combination of greenway trail sections (away from road) and sections along the road in the form of a multi-use path. Considerate of past development encroachments upon sections of the corridor and expressed citizen input and concerns, the plan recognizes instances where bypass routes are more favorable paired with planned road widening projects nearby. For the Virginia Central Trail, bypass alternatives were identified as part of the Virginia Central Railway Trail Design Guidelines (October, 2012) prepared for the Fredericksburg Area Metropolitan Organization (FAMPO) and Spotsylvania County by Kimley-Horn and Associates, Inc.

Trailways Master Plan Map (See Map(s))

Based on Geographical Information Systems calculations, in all approximately 100 miles of greenway trails have been identified. This calculated number represents the sum of approximate concept level corridor lengths only and does not consider ancillary spurs from trail heads, from subdivisions, from park facilities, cost based deviations, land acquisition or easement availability and variability, design and construction deviations as may be necessary. The calculated value also avoids assuming the inventory of trail spurs that may be developed to access overlooks and other points of access or interest. Ancillary spurs meant to access the main trail corridors or provide access to points of interest are expected to be identified and planned for during the implementation phase of this plan as particular trailway corridors are studied and engineered for construction. In total therefore it is expected that the greenway plan presented here represents over 100 miles of new trail facilities, significantly decreasing the current and future trailway level of service deficit as outlined in the Parks and Recreation Public Facilities Element found in Chapter 4.

The inventory of planned greenways was developed with extensive community input and consideration of trails deficit as outlined in the adopted Parks and Recreation Public Facilities Section of the Comprehensive Plan. See the Spotsylvania County Trailways master plan map for a complete view of the planned greenway system. Please note that this map plans for the general location of planned greenway corridors only and does not specify any one particular alignment or exact location, except where greenways run contiguous to road corridor based improvements (resulting from road widening projects, etc.). Descriptions of the county-wide greenway bicycle, pedestrian, and equestrian friendly improvements identified within this plan can be found below.

The Spotsylvania Battlefields Loop

The Virginia Central Rail Trail, along with the Ni River Corridor Trail, has been envisioned to be part of a Spotsylvania Battlefields Loop trail system accessed by the East Coast Greenway. The northern portion of the "loop" would feed off of the Virginia Central Railway Trail whose connection to the East Coast Greenway occurs within the City of Fredericksburg. The northern connection will ultimately provide access to both the Fredericksburg Battlefield and Chancellorsville Battlefield to the west prior to connecting with the proposed Ni River Corridor Trail that will run back to the southeast. The Ni River Trail would then provide opportunity for access to the Spotsylvania Courthouse Battlefield before exiting the County into Caroline County en route to the Stonewall Jackson Shrine there. This would be the south end connection to the East Coast Greenway, finishing the "Battlefield Loop". For users who choose to continue west on the Virginia Central Trail they will be able to access the Wilderness Battlefield and Orange County.

A spur off of the East Coast Greenway, the trail loop is envisioned to promote eco and historic tourism throughout the County, taking advantage of the many historic, recreational, and natural resources that it would access.

Potomac, Fredericksburg & Piedmont Railroad (Virginia Central Railway (VCR)) Trail, VCR Auxiliary Trail

Primary users: A multi-use path serving bicycle (road or mountain), pedestrian, and inline skating, with equestrian friendly facilities sharing a western portion the corridor running parallel to the bicycle/ pedestrian friendly trail.

Approximate Distance: Virginia Central Railway Trail: 17.1 Miles (w/ 2.1 miles existing and approximately 2 additional miles in recreational trail easement); VCR Auxiliary Trail: 2 miles

Intended final surface: Mix of asphalt sections and stone dust sections. As part of the Spotsylvania Battlefield Loop system, eventually upgrade to all asphalt or solid pervious from City of Fredericksburg line to intersection with the Ni River Trail. For multi-use pathway with equestrian users to the west as noted in the Trailways Master Plan Map. West of the Ni River Trail intersection, packed soil alongside a stone dust, asphalt, or solid pervious trail may be used. The VCR Auxiliary Trail is intended as an asphalt shared use path and considered the most viable short term option to cross Interstate 95 paired with the planned widening of Harrison Road.

Historical Importance

The Potomac, Fredericksburg, & Piedmont Railroad (PF&P RR) operated 38 miles of three (3) foot gauge railroad between Fredericksburg (with a connection to the Richmond, Fredericksburg, & Potomac Railroad) and Orange County (with a connection to the Orange & Alexandria Railroad). Its predecessor was the standard gauge Fredericksburg and Gordonsville Railroad that was started shortly after the Civil War and built 17 miles of line from Fredericksburg to Parker. The line failed and was sold under foreclosure to become the Fredericksburg, Orange, & Charlottesville Railroad which also failed in 1874. The line was converted to narrow gauge and completed from Parker to Orange in 1878 as the PF&P RR.

Image 1: Developed portion of the VCR Trail between Salem Church Road and Gordon Road in use.

The PF&P RR operated as narrow gauge until after World War I, was sold under foreclosure in 1925 and reorganized as the Orange & Fredericksburg Railroad. In 1926 the line was standard-gauged and the name changed to the Virginia Central Railway (VCR), the second railroad to use that name. In 1930 the Virginia Central Railway projected eastward from Fredericksburg and along the south bank of the Rappahannock River to its mouth near the Chesapeake Bay where a port was to be developed. Construction of the line was never started. In 1938 the entire line was abandoned except for a two-mile segment in Fredericksburg that lasted as late as 1983.

Today the rail lines have been removed but much of the existing rail bed exists throughout Spotsylvania County. In the years following the VCR's abandonment, pieces of the corridor were gradually "carved up" and ended up in public and private ownership. A number of linear sections of the corridor still exist, owned by local Home Owners Associations, private property owners, and some still under public control. The County recognized the benefit of utilizing the VCR corridor for the development of a linear greenway trail in the 2002 Comprehensive Plan. The County has been able to successfully develop a portion of the corridor as a greenway trail connecting Salem Church Road to Gordon Road that is in use today. A Virginia Land Conservation Fund application was made and award was granted to the County in 2011 that resulted in securing a recreational trail easement along a roughly 2-mile segment of the Virginia Central Railway Trail between Brock Road and Jackson Trail East. This easement greatly enhances the opportunity to eventually construct a significant historic portion of the planned VCR Trail. The Fredericksburg Area Metropolitan Planning Organization (FAMPO), in collaboration with Spotsylvania County secured Congestion Mitigation and Air Quality funds to study the design and alignment of the VCR Trail in 2012. Roadway crossing and frontage improvements associated with VDOT and private development projects are expected to enhance the VCR Trail within the planning period, extending it eastward from its current termination point at Salem Church Road.

Though the ultimate goal would be to continue development of the trail along the historic alignment of the VCR, in instances where existing development and/or the grant of easement for use as a trailway along segments of the historic alignment of the VCR Corridor becomes

problematic, alternate alignments, or bypasses are recognized in order to ensure continued progress in the development of this important regional trailway. For instance, at present, eastward extension of the VCR Trail paired with planned Harrison Road widening and Interstate 95 bridge replacement projects appears to be the most viable and cost effective means to cross Interstate 95 with fewest property impacts in the short term, resulting in identification of the VCR Auxiliary Trail as a viable means to bridge Interstate 95 and close the gap between the Spotsylvania County and City of Fredericksburg portions of the greenway trail. The Trailways Master Plan Map has not removed the opportunity to pursue development of the historic rail bed alignment leading up to the base of the Interstate north of Harrison Road. There remains potential to pursue easements and construction along the historic railbed in the area of Interstate 95 but this appears to be a long term option requiring prioritization and a commitment of funds specifically oriented at recreational trail development and a new bicycle/ pedestrian bridge or tunnel through the Interstate 95 right-of-way. The Spotsylvania County Board of Supervisors supported maintaining the historic rail alignment within plans on July 9, 2019 as part of a policy discussion associated with the Hazel Run Bridge Crossing and Virginia Central Trail segment east of Interstate 95.

Plans for the VCR Trail are recognized in the 2045 George Washington Region Bicycle and Pedestrian Plan and the 2018 Virginia Outdoors Plan by the Virginia Department of Conservation and Recreation.

Ni River Trail

Primary users: Bicycle (road or mountain), pedestrian, eventually inline skating. Equestrian use running parallel to the bicycle/ pedestrian friendly trail between the PONI Connector and Todd's Tavern Connector.

Approximate Distance: 11 Miles

Intended final surface: Mix of asphalt sections and stone dust sections. Eventually upgrade to all asphalt or solid pervious. Adjacent to the trail for bicycle and pedestrian users, a parallel packed soil alignment is appropriate for equestrian use between the PONI Connector and Todd's Tavern Connector.

Development of the Ni River Trail acts as the second leg; the southern leg, of the Spotsylvania Battlefields Loop extending to the southeast along the river from the Virginia Central Rail Trail to the Caroline County line where it passes the Stonewall Jackson Shrine. The Ni River Trail is the southern connector to the East Coast Greenway. The connection occurs in Caroline County.

Along the Ni River between the Virginia Central Railroad Trail and Caroline County line exist a number of attractions for users, they include but are not limited to: Chancellorsville Battlefield, Ni Reservoir Recreation Area, Spotsylvania Courthouse Battlefield, Patriot Park. The corridor is also within relatively close proximity to the Historic Courthouse District and Thornburg area.

Image 2: A "blank slate"- natural beauty along the Ni River.

Unlike the Virginia Central Railway Trail that benefits from a relatively intact railbed corridor, the Ni River corridor offers more of a “blank slate” and will require the development of a greenway trail through terrain that, in many cases has been untouched by development. The corridor offers much in terms of natural beauty. Mostly forested or agricultural with larger lot parcels along it, the development intensity along the Ni River corridor is generally less than along the VCR.

The establishment of this greenway corridor trail will be based on the successful attainment of trailway easements along the corridor and implementation of road corridor based improvements in a number of areas. The actual alignment of the trailway along the corridor is expected to occur naturally as easements are negotiated and granted. Here too, the County Utilities Department is considering the acquisition of easements for extension of public utilities along portions of the Ni River. This presents an opportunity to combine the utility and trail projects, with a cost savings, to extend the County’s Ni River Trail Project.

Since the trail initially appeared in the 2011 Trailways Master Plan, the Spotsylvania Greenways Initiative (SGI) has secured an easement and constructed a natural surface Phase 1 segment of the Ni River Trail extending from Route 1 and towards Massaponax Church Road and Patriot Park. Remaining easements and additional funds will be required to secure the complete connection to Patriot Park and upgrade the trail infrastructure.

A portion of the Ni River Trail was also secured with the approval of Fortune’s Landing residential community at the corner of Piney Branch and Catharpin Rd. Fortune’s Landing was approved through rezoning in 2013. As part of that project the applicant has constructed a multi-use path along the Piney Branch Rd frontage and granted right-of-way for future trail extension along the Catharpin Rd frontage. Development of a trail connection between the Fortune’s Landing special use park and trail, and a future park site known as the “Hilldrup Tract” is supported by the Parks and Recreation section of the Comprehensive Plan public facilities element.

Deep Run Spur

> ***"The attack on Hill's left was repulsed by the artillery on that part of the line, against which the enemy directed a hot fire from twenty-four guns. One brigade advanced up Deep Run, sheltered by its banks from our batteries, but was charged and put to flight by the Sixteenth North Carolina, of Pender's brigade, assisted by the Fifty-fourth and Fifty-seventh North Carolina, of Law's brigade, Hood's division"***
>
> -- Robert E. Lee, General
> December 1862

Primary Users: bicycle (road or mountain), pedestrian, inline skating

Approximate Distance: 0.5 to 1 Mile

Intended final surface: Asphalt or solid pervious.

Image 3: Deep Run Trailhead area viewing the Rappahannock River

The convergence of Deep Run and the Rappahannock River in Spotsylvania County just behind the Bowman Center off Route 17, Tidewater Trail played an important part in the December, 1862 Battle of Fredericksburg. Deep Run was the site of the southernmost point of the crossing of the Rappahannock River by Union Troops during the battle who constructed two pontoon bridges there. As a significant part of the battle, to local history and one also containing both State and National Significance, the historic importance of the Deep Run area has been left relatively untapped and appears forgotten. Deep Run was the Union path into the Battle at Slaughter Pen Farm.

The Deep Run Spur offers the ability to expand upon the region's civil war heritage and tourism and to expand interpretive displays associated with the local civil war battles. Development of a greenway trail within close proximity to Deep Run offers a number of exciting opportunities including the establishment of a trailhead or special use park on existing County property fronting the river. The trail would increase access opportunities to waterfront areas as advocated by the Comprehensive Plan.

Image 4: Existing unused crushed stone access road between the Bowman Center and Rappahannock River at Deep Run.

Intended to start at a trailhead at the Rappahannock River, the Deep Run Spur, when ultimately completed, would generally follow Deep Run before climbing terrain and coming to the recently designated National Register of Historic Places Sylvania Plant and navigating the Mixed Use area there. The trail would then run along Tidewater Trail in conjunction with the planned East Coast Greenway Route.

Massaponax Creek Trail

Primary Users: Bicycle (Mountain, Road appropriate in sections), pedestrian, inline skating (appropriate in sections).

Approximate Distance: 13.5 Miles

Intended final surface: Variable natural and stone dust trailway with asphalt segments

Image 5: Existing trailway network along Massaponax Creek off Courthouse Road.

Image 6: Installation of new sewer line along the Massaponax Corridor establishing a linear route and opportunities to pursue trailway development.

The Massaponax Creek Trail is meant to connect the East Coast Greenway and Spotsylvania Avenue Connector Trail in the Lee Hill area to the Virginia Central Rail Trail, extending existing trailway infrastructure in place alongside the Creek associated with the Estates at Breckenridge where an asphalt trailway and public parking area exist off Courthouse Road, and Loriella Park. The trail corridor has a number of points of interest, they include: Virginia Central Rail Trail and the larger Spotsylvania Battlefields Loop system; Loriella Park; Germanna Community College via Spotsylvania Avenue Connector, the East Coast Greenway.

The Spotsylvania County Utilities Department has already secured a trailway easement along with the installation of a new sewer line between Route 673, Piedmont Drive and Route 208, Courthouse Road (see Figure 13). Prior sewer line installation projects along Massaponax Creek, southeast of Route 208, Courthouse Road only have underground utility easements in place and trailway easements would need to be pursued in order to establish the trail linkage to the Spotsylvania Avenue Connector Trail in the Lee Hill area.

A number of roadway crossings will have to be considered while developing this trailway corridor to ensure safety of users. The trailway itself is expected to be of varying surface considering location and existing environmental features. Development of much of the trail is expected to occur within the RPA along Massaponax Creek though a section extending from the East Coast Greenway to the Spotsylvania Avenue Connector would be paved. Future users will find the corridor to be generally natural and forested with commercial and residential development interspersed along the route. Located within the heart of the Primary Settlement District, the corridor will have the ability to serve many nearby housing developments within a five-minute walk or approximately ¼ mile pedestrian shed or walkable catchment area.

East Coast Greenway Auxiliary Trail

Primary Users: Bicycle and Pedestrian

Approximate Distance: 0.5 to 1 Mile

Intended final surface: Asphalt or solid pervious

The East Coast Greenway Auxiliary Trail is meant to provide a direct connection between the East Coast Greenway and the Spotsylvania County VRE station and mixed-use area utilizing Crossroads Parkway and a new overland connector to Thornton Rolling Rd within the Primary Development Boundary.

Spotsylvania Avenue Connector

Primary Users: Bicycle (Road or Mountain), pedestrian, inline skating

Approximate Distance: 1 Mile

Intended final surface: Asphalt or solid pervious

Born from the Massaponax Corridor Study that is referenced in the Transportation Element; Chapter 3, and identified within the County Thoroughfare Plan, the Spotsylvania Avenue Connector Trail is will connect the commercial, lodging, employment center uses centered on Spotsylvania Avenue, and Germanna Community College and surrounding residential developments in the Lee Hill area off Germanna Drive. This connector trail would intersect one proposed to follow Massaponax Creek from the Lee Hill area, extending northward to connect with the Virginia Central Rail Trail. It is expected to be developed as part of the Spotsylvania Avenue/ Germanna Pt Drive Connector Road.

Image 7: Existing asphalt surface Lee Hill Office Complex Trail system

The area between the termination point of the existing Spotsylvania Avenue and Germanna College is undeveloped and forested with wetlands present, offering qualities consistent with a natural greenway trail. Existing trail infrastructure behind the Lee Hill Office Buildings along the edge of stormwater management ponds there should be explored to be tied into the Spotsylvania Avenue Connector Trail. The ponds are active with wildlife for nature interest with geese and a number turtle's witnessed upon visiting the site.

The trailway is in close proximity to a number of Fredericksburg Regional Transit stops and transfer points including routes F2, F3, S1, S4 and S5.

Po River Trail (incl. Norton Prong)

Primary Users: Bicycle (mountain), pedestrian. Equestrian uses running parallel to the bicycle/ pedestrian friendly trail between PONI Connector and Todd's Tavern Spur.

Approximate Distance: 20 Miles

Intended final surface: Clear cut packed/ stabilized soil pathway

The 2008 Spotsylvania Comprehensive Plan initially advocated for the development of walking/ biking trails along the Po River in the Jackson Gateway, Rural, and Agricultural/ Forestal development districts.

The Po River trail is planned to be bookended by two trail head facilities. The easternmost trail head of the Po River Trail for the purpose of this plan is identified as Jackson Gateway South, located in a mixed-use or employment center area as defined by the future land use map. To the west, the Todd's Tavern Spur trail head has been identified. The Po River Trail is intended to be developed as a multi-use greenway trail, serving bicycle, pedestrian, and equestrian users.

Image 8: Example of a side by side bike and pedestrian-friendly and equestrian greenway trail at Lake Anna State Park. This is similar to that proposed along the Po River.

The Po River Trail is planned to connect with the Lake Anna State Park Connector Trail via the Todd's Tavern Spur. The equestrian character of this and other greenways within rural portions of the County are intended to complement and enhance the rural agricultural and forestal land uses outside of the Primary Development Boundary, consistent with land use descriptions.

The Po River and Lake Anna Connector system of trails are integrated into other planned greenways within Spotsylvania County with access to the PONI Connector, the Virginia Central Rail Trail and Ni River Trail. Additional access can be gained through bicycle and pedestrian-friendly roadway improvements as outlined in this plan. In addition to potential horse friendly trail facilities along the western reaches of the Virginia Central Corridor, the PONI Connector, Lake Anna State Park Connector, and portion of the Ni River Trail, the Po River Trail is planned to greatly increase the equestrian trail miles within Spotsylvania County and make Spotsylvania County a horse enthusiast destination for trail riding, and spin-off economic benefits associated with tourism.

Currently there exists no preferred alignment along the Po River though frequent bridge crossings are discouraged due to additional costs. The actual alignment of the greenway trail along the corridor is expected to occur naturally as development occurs, public land acquisition, road improvement projects are implemented, easements are negotiated and granted.

PONI Connector Trail

Primary Users: Bicycle (mountain), pedestrian, equestrian running parallel to the bicycle/ pedestrian friendly trail

Approximate Distance: 3 Miles

Intended final surface: Stone dust with parallel packed/ stabilized soils for equestrian users

The PONI Connector Trail is envisioned to connect the Po River Trail and Ni River Trail by use of an existing overhead utility easement corridor.

The planned connector also will result in the creation of a secondary trail loop, one that is unique to and totally contained within Spotsylvania County. The secondary loop would result in a trail network that utilizes sections of the Ni River Trail, Virginia Central Rail Trail, Lake Anna State Park Connector Trail, Todd's Tavern Spur and the Po River Trail.

The PONI Connector might be thought of as the "Pony" Connector Trail as it connects identified equestrian sections along the multi-use Ni River Trail to the multi-use, equestrian-oriented Po River Trail.

Lake Anna State Park Connector Trail (LASP), Todd's Tavern Spur and Connector

Intended Users: Equestrian running parallel to the bicycle (mountain)/ pedestrian friendly trail

Approximate Distance: LASP: 9 Miles; Todd's Tavern Spur: 6.3 Miles; Todd's Tavern Connector: 1.5 Miles

Intended final surface: Natural Surface packed/ stabilized soils or stone dust.

Image 9: Example from Lake Anna State Park of an equestrian trail.

The Lake Anna State Park Connector Trail has been envisioned to create a link between existing equestrian trails already in place at Lake Anna State Park and an equestrian oriented loop through western and central Spotsylvania County outside of the Primary Development Boundary. The equestrian network would effectively make Lake Anna State Park the southern-most trail head location for equestrian users. When approached during development of the Plan, the State Park expressed interest in the development of such a trail system.

Though subject to deviation, the Connector Trail is envisioned to utilize an existing transmission line easement corridor stretching northward from a trail head, existing trailways and equestrian facilities located at Lake Anna State Park, to intersect with the Po River Trail and the Virginia Central Rail Trail further to the north. A multi-use spur trail and connector, also utilizing existing utility

easements, would access the Todd's Tavern Area, creating a second trail head location for equestrian, bicycle, and pedestrians to access the Po River Trailway and Lake Anna State Park Equestrian Connector Trail.

Significant recreational trail easements are expected to be granted resulting from conditions associated with the April, 2019 approval of a large solar energy facility in western Spotsylvania County. Once secured, the site will include easements for the convergence points of the Todd's Tavern Spur, Po River Trail, Lake Anna State Park Connector, and a small portion of the Virginia Central Railway Trail along the old rail bed. Lengthy easements for segments of the Lake Anna State Park Connector and Todd's Tavern Spur are also expected.

Trail Heads

For the purpose of this plan a trail head can be considered a centralized location along the trail network where users can meet up embarking on a trail ride, or after the ride is complete. Though access, amenities and parking areas are intended to be scattered throughout the greater system of trailways throughout the County, at trail heads you may find enhanced trail amenities above and beyond those you may find along points in between. Trail heads should include and are not limited to public access points to the trail system, parking areas, enhanced signage and availability for bicycle parking, or equestrian hitching posts where appropriate, public restroom facilities. The general location for a number of trail heads have been recommended throughout the trailway system and appear in the Trailways Master Plan map.

If future, more detailed studies recognize the need for additional or modified locations for trail heads, this plan should be considered advisory. As land is acquired and specific trailway implementation issues are addressed, this portion of the plan will need to be flexible in order to execute the goals and objectives listed previously in the document.

Major Trail Heads

A major trail head location can be thought of as a site where parking, access, and basic conveniences are provided and complemented by higher population densities and commercial/ retail activities. These are also excellent locations to establish links between bicycle and pedestrian facilities and mass transit options including FRED Bus and potential VRE services. Most major trail heads are planned to be located within designated mixed-use areas or employment center locations as identified in the Comprehensive Plan Future Land Use Element. These are areas in the County intended for higher density development with a mix of uses where people can "live, work, shop, and play". Alternative modes of transportation are also desired within the mixed-use areas to encourage pedestrian access and discourage automobile reliance. Accommodating higher density housing, mixed-use areas serving also as trailhead locations can provide the trail system large supply of trailway facility users. As a local point of activity, trail heads provide nodes of interest for residents and tourists who may also use the trailhead areas to frequent nearby entertainment, recreation, commercial retail or services, restaurants, hotels, places of employment resulting in a mutual benefit between the trailway user and private industry. They are also intended to be great locations from which to organize and implement

special trailway system based events such as organized bike rides, volunteer day events, educational events or promotions.

Minor Trail Heads

Minor trail head locations are planned to provide the same level of basic services to trailway users but due to geographic location, future land use potential and existing development patterns and population densities, access to a variety of nearby commercial/ retail establishments will be far less likely. These locations will be much more rural in character.

In all, thirteen (13) locations have been identified throughout the County. A fourteenth (14^{th}) location, already existing at Lake Anna State Park, has also been identified as a complement for bicycle, pedestrian, and equestrian users. Under control by the Virginia Department of Conservation and Recreation (DCR), the trail head at Lake Anna State Park has been recognized as a contributing piece of the overall planned network and is referenced only.

General trail head locations are symbolized in the Trailways Master Plan Map. Descriptions are in Table 1 below:

Table 1: Trail Heads

Name	General Location	Voting District	Interest
Elys Ford Rd	Elys Ford Rd/ Rappahannock River/ Hunting Run Reservoir	Chancellor	public boat ramps, fishing, Rappahannock river access, Hunting Run Reservoir access, scenic/ natural/ historic
Courthouse District	Spotsylvania Courthouse Mixed Use Area, Spotsylvania Courthouse Historic District	Berkeley/ Livingston District	Spotsylvania Historic District, County government center, Spotsylvania Courthouse Battlefield, Spotsylvania Courthouse Village and mixed-use area
Lane Anna Area	Route 208, Courthouse Road at Lake Anna	Livingston District	Lake Anna, Lake Anna marina's, Lake Anna State Park and Connector Trail, mixed-use area
Jackson Gateway North	Massaponax Church Rd., Jefferson Davis Hwy., Ni River	Berkeley District	Ni River, Patriot Park, mixed-use area, employment center, Ni River Trail
Jackson Gateway South	Po River, Morris Rd., Thornburg	Berkeley District	Thornburg, mixed-use Area, employment center, Po River, Po River Trail
Bowman Center	Rappahannock River, Deep Run, Bowman Center, Tidewater Trail	Lee Hill District	Potential site for public boat ramp/ water-side park, fishing, Rappahannock River access, scenic/ natural, Civil War historic interpretation, East Coast Greenway, Deep Run Spur, industrial heritage, mixed-use area, employment center
New Post	Mills Dr., Tidewater Trail, Benchmark Rd., Jim Morris Rd., Massaponax Church Rd.	Lee Hill District	VRE station, mixed-use area, employment center, East Coast Greenway, Massaponax Creek Trail
Virginia Central East	Harrison Rd., Salem Church Rd., Virginia Central Railway Trail	Salem/ Battlefield District	Virginia Central Railway Trail, VCR Auxiliary Trail, mixed-use area, Harrison Rd Park
Virginia Central West	Orange Plank Rd.	Livingston/ Chancellor District	Virginia Central Railway Trail, Wilderness Battlefield, LASP Connector
Spotsylvania Medical Center	Jefferson Davis Hwy., Spotsylvania Pkwy., Mills Drive	Lee Hill/ Berkeley District	Spotsylvania Regional Medical Center, employment center, mixed-use area, Massaponax Creek Trail, Spotsylvania Avenue Connector
Lake Anna State Park	Lake Anna State Park	Livingston District	Lake Anna State Park, Lake Anna, LASP Connector
Ni Reservoir North End	Ni Reservoir & Park, Catharpin Rd.	Livingston/ Chancellor District	Virginia Central Railway Trail, Ni River Trail, Jackson Trail East, Chancellorsville Battlefield, Ni Reservoir & Park
Todd's Tavern	Todd's Tavern, Brock Rd., Catharpin Rd., Po River	Livingston District	Todd's Tavern Spur, Todd's Tavern Connector, Po River Trail (incl. Norton Prong), Po River, LASP Connector

Greenway System Design Guidelines

The following greenway system design standards have been provided with the assistance of a Million Mile Greenway (MMG) Community Technical Grant. The grant award provided technical services and design assistance by Photoscience Geospatial Solutions to the Spotsylvania Greenway Initiative (SGI) and Spotsylvania County, resulting in recommended system-wide trailway design standards specific to intended users. These standards should be considered when looking to construct portions of planned trailways or trail head facilities.

With consideration of the intended user(s) and type of trailway to be constructed, trail bases and surfaces should be constructed consistent with the *Design Standards Manual (Article 5- Streets, Parking, and Driveways)*.

Trail Design Guidelines & Sections

Trailhead Design

Restrooms:
Located at each trailhead, these ADA accessible restrooms will provide necessary amenities for trail users. The use of sustainable building practices will ensure a low cost of maintenance and operation.

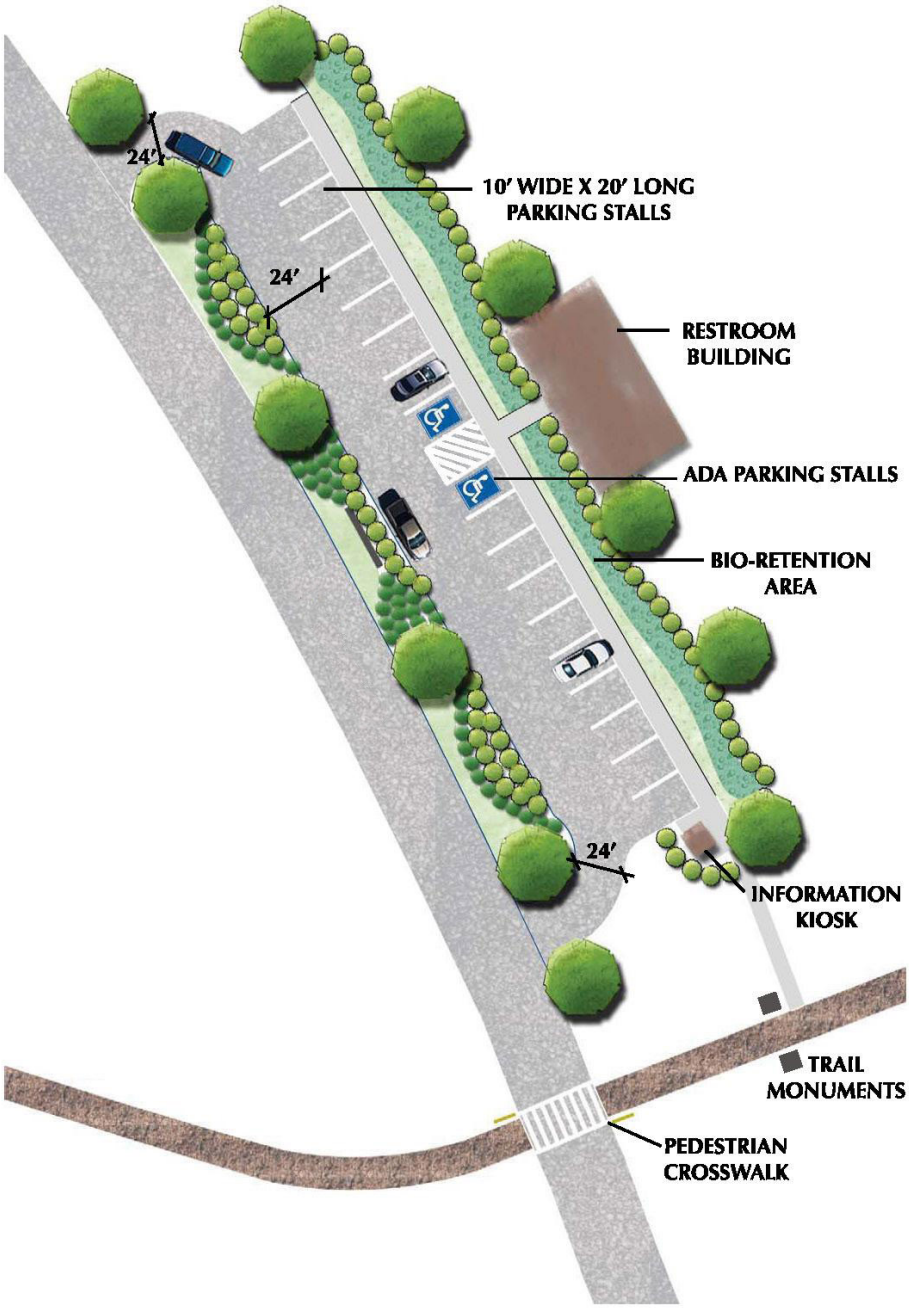
Porous Paving Parking Lot:
Proposed parking lots will be constructed using porous pavement surfaces to help preserve the water quality.

Pedestrian Crosswalks:
High visibility pedestrian crosswalks will be used at all street crossings. Flashing warning signals are proposed to maximize safety for trail users.

Bioretention Areas:
Adjacent to each parking lot and restroom building, bioretention areas will provide a first filter flush of stormwater runoff from paved impervious surfaces.In addition to the use of pervious surface parking lots, the bioretention areas will preserve the water quality of stream corridors.

Trail-Head Signage and Information Kiosks:
Appropriate user-friendly signage should be used throughout the length of the trail and especially near each trailhead. Covered wooden kiosks displaying trail information and recent news, as well as granite or wooden signs showing trail direction will help maximize the trail experience.

Trailhead Layout



Equestrian trails will complement the rural character of Spotsylvania County and add yet another layer of recreational enjoyment.

Equestrian Trails

Typical Features and Materials

Typical Features

Trail Width:	Single track, equestrian only = 4' to 5'
	Double track, equestrian only = 6' to 8'
	Shared use path, single tread = 10' to 12'
Trail Clearance:	10' minimum overhead ceiling, 12' preferred
Trail Surface:	Crushed Stone, Wood Mulch, Compacted Earth
Trail Grades:	Varies Depending on Level (see hiking trails)
Trail Signage:	Follow United States Forest Service Standards

Design Principle

Construction of equestrian trails with hiking and multiuse is encouraged wherever there is adequate width for coexistence of these facilities. Hiking trails are particularly compatible with such use and are capable of sharing the same tread with equestrian traffic, granting they have proper sight distance and ample passing room for all users. Multiuse trails, however, as designed primarily for pedestrians and bicyclists, are generally preferred to have more considerable width and a lower traffic volume to be compatible as a horseback route. Wherever width allows in the greenway corridor, it is highly recommended that these uses be separated into multiple treads, thereby keeping conflicts minimal. Trail signage should be provided to make all users aware of proper yielding to other traffic.

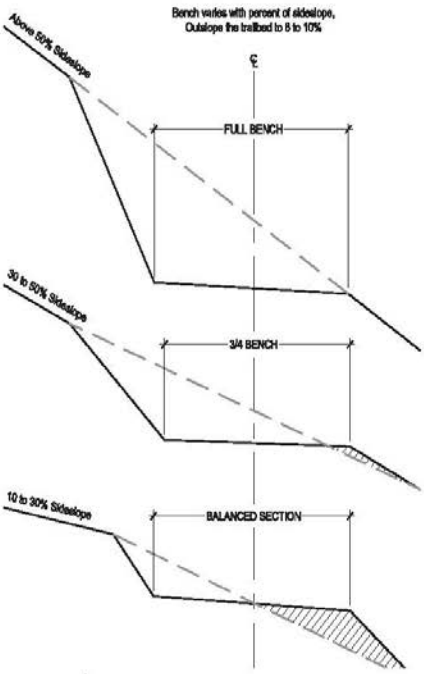
Typical Section

Scenic Hiking Trails

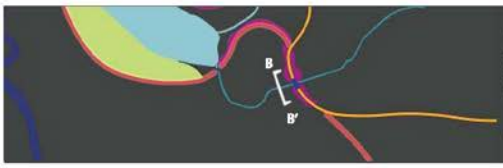
Typical Features and Materials

Typical Features

Trail Width:	Strenuous = 18" to 30"
	Moderate = 24" to 36"
	Accessible = 36" to 60"
Trail Surface:	Materials - Crushed Stone, Wood Mulch
Trail Edges:	Stacked Stone or Heavy Wood Timber
Trail Grades:	Varies Depending on Level (see hiking trails)
Trail Signage:	Follow National Park Service Standards



Typical Section



Stream corridors are desirable locations for trails and greenways; however, ecologically compatible trail standards should be utilized to ensure minimal impacts to the natural hydrologic process.

Stream Corridor Trails

Typical Features and Materials

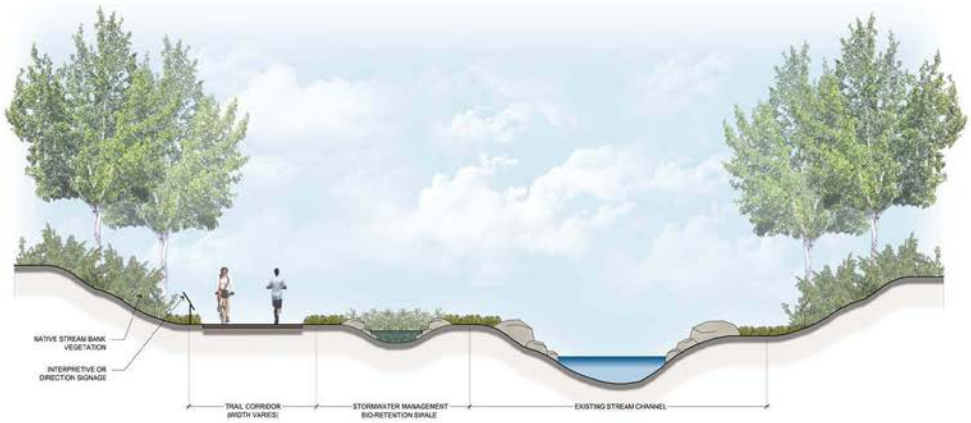
Typical Features

Trail Width:	Varies Depending on Level (see hiking trails)
Trail Surface:	Materials - Crushed Stone, Wood Mulch
Trail Edges:	Stacked Stone or Heavy Wood Timber
Trail Grades:	Varies Depending on Level (see hiking trails)
Trail Signage:	Follow National Park Service Standards

Design Principle

Trails following stream corridors shall be designed in a way that both complements and are compatible with the natural ecological environment and system. Trail and trail components including steps, bridges, rails, signs, furnishings, etc. shall be constructed of natural materials such as wood, stone, and mulch. Concrete, steel, and other more industrial materials shall be used in very limited capacity, and only when natural materials are not suitable. Special design features such as bio-retention swales and other BMP's shall be used to mitigate negative impacts to stream hydrology and water quality when appropriate. Plant materials shall also be native and appropriate for the given micro-climate and pre-existing plant communities. Trails should be respectful of stream buffers / setbacks and local variance requirements.

Typical Section



Overlook areas can be used to emphasize natural vistas, and improve the trail experience.

Overlook Areas

Typical Features and Materials

Design Principle

Overlook areas should be sited to capitalize on specific natural vistas. When no special vista is present, the design should be scaled back to a simple seating or rest area along the trail. In general, overlook areas should be constructed of local materials that blend with or complement the natural environment.

Overlook areas can be elevated observation decks above grade, or flat areas retained by stone or wood walls. Interpretive signs may also be incorporated into the vista, but should be sited away from the natural view.

All applicable building codes should be followed to determine appropriate rail design and height. An appropriate deck or landing area should be provided to match the expected level of use. Overlook areas directly adjacent to multiuse trails or within close proximity to the trailhead will have relatively more users at any given point, and should be designed accordingly with larger observation areas. In contrast, overlook areas accessible only by hiking trails and in remote areas can be designed with a smaller footprint.

Typical Section / Elev.

Multiuse trail systems can improve bicycle and pedestrian mobility throughout Spotsylvania County.

Multiuse Trails

Typical Features and Materials

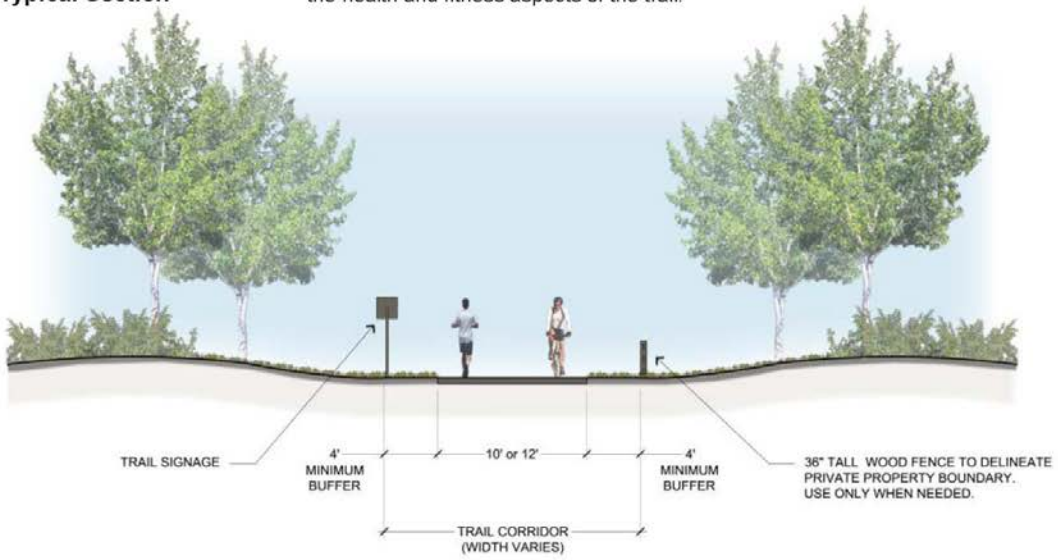
Typical Features

Trail Width:	10' to 12'
Trail Surface:	Crushed Stone, Concrete, or Asphalt
Trail Location:	Easements Along Private Property Lines, Transmission Line Corridors, Through Existing Parks, Through Conservation Areas.
Trail Grades:	5% Overall Maximum
Trail Signage:	Follow Local or VDOT Standards

Typical Section

Design Principle

The simultaneous creation of trails and greenways allows pedestrian and bicycle corridors to be located in park like settings. Because of their popularity, multiuse greenway trails should be designed to accommodate many different user groups. Large trail widths allow for pedestrians and bicycles to interact safely while hard surface and gentle slopes provide a greater range of accessibility. In many cases, multiuse trails are striped to delineate travel lanes and/or user lanes that separate pedestrians from bicycles. Traffic control and directional signs can also increase the safety and functional aspects. Crossing signs, signals, and pavement markings shall be used when trails interact with roadways and other vehicular facilities such as parking lots. Map kiosks combined with exercise stations can also complement the health and fitness aspects of the trail.



Bicycle and Pedestrian System Goals and Objectives

The following goals and associated objectives are intended to build on the strengths of Spotsylvania County and to ensure that the planned system of trailways is developed to the maximum benefit of its users. They are designed to help achieve the County's vision for an integrated network of trailways as identified in the Spotsylvania County Comprehensive Plan.

Goal 1: Improve and expand the existing public-access non-vehicular trails network to create a comprehensive system of interconnected recreational and/ or commuter trails and sidewalks throughout the County.

a. Develop infrastructure in accordance with the Trailways Master Plan.

b. Develop bicycle and pedestrian friendly corridors that offer complementary amenities such as trash receptacles, interpretive or educational signage or displays, bike racks, lighting (where appropriate), benches and seating areas, parking areas, and water fountains.

c. Establish partnerships with State and National partners to promote access to existing state and national parks trailways by incorporating them into the County trailways network.

d. Where appropriate, utilize abandoned roadway beds to establish additional trailway linkages and implement the plan.

e. Ensure that the FRED bus system and VRE station in Spotsylvania County are integrated into the bicycle and pedestrian system, promoting bicycle and pedestrian access to mass transit.

Goal 2: Improve, expand, and construct roadway-based pedestrian and bike facilities.

a. Coordinate with adjoining jurisdictions to ensure the construction of bike and pedestrian improvements along roadways can effectively fit within a regional framework; that improvements will be consistent at the County boundary and can connect into the larger, regional system consistent with the FAMPO Bicycle/ Pedestrian plan as well as other local government plans.

b. Extend bicycle and pedestrian-friendly road improvements and/or trailways to public access points identified along the Rappahannock River and Lake Anna.

c. Develop sidewalk facilities along roadways consistent with Article 5, Streets, parking and Driveways, of the Spotsylvania County Design Standards Manual.

i. Ensure consistency between the Trailways Master Plan and Article 5, Streets, Parking and Driveways, of the Spotsylvania Design Standards Manual.

d. Avoid conflicts between automobiles, pedestrians, and bicycles by identifying and constructing appropriate pedestrian and bicycle facilities.

Goal 3: Develop and promote trail facilities for multiple user-groups, types, and recreational users.

a. For equestrian trails, provide hitching rails and trailer parking accommodations at trail heads.

b. Identify trailway corridors ideal for winter sport uses like snowshoeing or cross-country skiing.

c. Provide handicap-accessible facilities wherever possible, throughout the trails system.

d. For recreational trails, develop a classification system that considers intended users and expected level of difficulty and disclose the information with trail signage throughout the system.

e. Seek technical input and support from local, state, national walking-running, bicycling, equestrian groups during the design and construction phases of trailway implementation and post construction maintenance in order to result in more user friendly trails with feedback from avid user groups.

Goal 4: Review proposed development proposals and land-use projects for compliance with existing and planned trailways and sidewalk improvements.

a. Review all federal, state, regional, and county transportation projects to ensure they include appropriate lateral crossings in the funding, design, and construction of bridges and road projects, as well as bicycle and pedestrian signage, crossing signals and crosswalks that facilitate easy pedestrian and bike access across highways, streams, and railroads.

b. Make land-use decisions that stimulate private sector development and public transportation improvements that are consistent with the County's desired trailways network.

Goal 5: Develop a comprehensive inventory to track the location of trails, sidewalks, bicycle and pedestrian friendly road crossings, bicycle pedestrian right-of-way and easements.

a. Formally name planned public greenway and trail corridors.

b. Trailways and bike & pedestrian improvements and easements should be mapped in an appropriate trailways database or GIS based map.

c. Track plats for easements and infrastructure plans to ensure both easement acquisitions for trails and the construction of trailway segments, and the trail surface has been inventoried.

d. Prepare a current comprehensive inventory of existing trails by type. The inventory will include trails within public parks and open space, paved multi-use trails alongside highways, natural surface trails, and other paths open to the public for non- motorized travel. State and National Park trails will also be inventoried.

e. Report expanded trailway inventory information to the East Coast Greenway, Virginia Department of Conservation and Recreation and George Washington Regional Commission as part of the East Coast Greenway, Virginia Outdoors Plan and George Washington Region Bicycle and Pedestrian Plan update process to ensure consistent and up to date trails information.

Goal 6: Efficiently Implement the Plan.

a. Conduct detailed trailway corridor studies for all proposed off-road trails that address:
   - Recommended crossings of streams or other environmentally sensitive areas.
   - Recommended crossings of public roadways.
   - Recommended public points of access to the trailway, including locating ideal locations for public parking.
   - Identification of possible alternative alignments of the trailway to minimize impacts on existing developed areas.
   - Trailway amenities specific to intended user groups.

b. Seek trailway easements and/or construction along identified bike/pedestrian improvement corridors through rezoning and special use permit commitments.

c. Negotiate trailway easements with private landowners along greenway corridors identified in this plan. In general, the ultimate alignment of the greenway will result from successfully achieved grant of easements over private lands and use of existing public lands.

d. Establish and maintain volunteer Memorandum of Understanding (MOU) agreements between Spotsylvania County and volunteer organizations who seek to help construct, beautify, or maintain the trail system.

e. Ensure adequate right-of-way is dedicated and trailways are developed in conjunction with roadway improvement projects along designated trailway corridors.

f. Pursue easements for all identified bicycle & pedestrian improvements identified in this plan regardless of the implementation schedule.

g. Obtain joint utility and trailway easements when County sewer and waterline installation projects are consistent with identified trailway alignments.

h. Pursue grant opportunities to enhance pedestrian facilities for County-owned properties.

i. Pursue funding, including survey and engineering design, easement acquisition and construction, for projects that provide trail linkages to the battlefield parks and other historic sites.

j. Greenway trails intended for both bicycle and pedestrian users may be developed initially using a natural or stone dust surface to lower the initial cost to construct and complete the establishment of planned trailways. Where appropriate, as outlined in this plan, such surfaces over time can be upgraded to higher quality materials.

Goal 7: Establish safe trailways.

a. Seek to develop a public-private partnership between local law enforcement and citizenry in order to assure that trailway corridors are patrolled for the safety of users.

b. Bike and Pedestrian underpasses should be illuminated for the safety of users.

c. Where appropriate, illuminate public parking access points and trailheads.

d. Establish hours of operation along all public greenway trails for safety of users.

e. Provide trailway signage that advocates for users to walk or ride with a partner and disclose trailway hours of operation and other rules/warnings.

f. Provide trailway mileage markers for users to identify their location in case of emergency.

g. Where appropriate, consider developing a “blue light security telephone” network along isolated segments of greenway trails to notify emergency services of safety and security incidents should they occur.

h. Promote the use of the trailways in the County, therefore providing more “eyes along the trailway”.

i. Regularly inspect and maintain trailway corridors so they do not appear forgotten or abandoned. Ensure that the trails are clean, free of litter and debris.

j. Maintain long sight-lines and avoid routing trails through dense brush to minimize potential low-visibility situations.

k. Prohibit motorized vehicle use of the trailways with the exception of safety patrol, emergency or trailway maintenance vehicles, and personal assistive mobility devices for disabled persons. Disabled vehicles, emergency or maintenance vehicles, personal assistive mobility devices for disabled persons along roadway shoulders are also an exception.

l. Provide proper trail surface maintenance to ensure a safely navigable trailway and ensure no uneven trail surfaces, avoiding falls and/or equipment damage.

m. Install directional signs—spaced uniformly—so that a trailway can be navigated with ease from one end to the other.

n. Provide trailway crossing signage along public roadways where bicycle, pedestrian, or equestrian crossings exist to raise vehicle driver awareness and provide road crossing warnings along trailways at least five hundred feet prior to intersection with roadway for trailway user awareness. Changes in texture of the surface near a roadway crossing should be used where possible.

o. Review (and modify as appropriate) regulations related to trail usage and safety.

Goal 8: Provide regular maintenance of the trailways system.

a. Maintain trails so that they are passable, allowing intended trail user groups to be unimpeded by debris, fallen trees or limbs, or trail surface degradation over time or due to specific weather events.

b. As appropriate, institute limitations on use due to uncontrollable weather events.

c. Maintain the “adopt a trail” program to promote litter free trailways and promote pride in the County trailways system.

d. Reduce the potential maintenance burden by advocating for litter free trailways through outreach and education and trailside regulation signage.

e. Develop and maintain standard operating procedures, outlining the frequency of inspection and maintenance of trails and affiliated facilities throughout the County.

f. Ensure County trailway surfaces, bridge crossings, and public access parking areas are regularly monitored to ensure proper maintenance and safety for users and equipment.

g. Regularly inspect and maintain pedestrian amenities along the trail including but not limited to: trash receptacles, interpretive or educational signage or display, lighting where appropriate, benches/ seating areas, water fountains, exercise stations, trailway identification signage and mile markers.

h. Enact a leave no trace policy for equestrian trails.

Goal 9: Develop and implement an education and outreach program that promotes trail usage and educates users on the benefits of trails and the resources located along them.

a. Inform and educate the public as to the available trailways in Spotsylvania County.

b. Develop interpretive signage along the greenway corridors that portray significant historic events, sites, buildings, monuments, technology, unique natural features or natural processes for educational purposes.

c. Develop historical interpretive signage along the Virginia Central Trail to document the "Screamerville" area, and history of the Civil War in the area and the Virginia Central Railroad.

d. Develop a trail-side signage program for nearby commercial establishments to advertise their location in proximity to the trailway, offering convenience, lodging or dining opportunities to promote access to local businesses by trail users.

e. Explore the feasibility of introducing a Bike Smart Virginia program in local schools to promote bicycle ridership, basic bicycle ridership, basic bicycle safety, road rules, and basic mechanics of the bicycle.

f. Develop a trails inventory mapping feature publicly accessible via Spotsylvania County internet GIS.

g. With partners, develop a County-wide or region-wide trailways map available for public distribution.

h. Promote County trailways through grassroots citizen and organization driven volunteer efforts to maintain and beautify the trail corridors.

i. Utilize volunteer efforts from local gardening organizations and citizens to develop linear flower gardens along segments of greenway corridors.

j. Consider organizing or participating in annual National Trails Day events.

k. Promote organized events centered on use of the County Trailway system.

l. Develop or partner in the development of a local or regional trail system website that can advertise the local trail network, intended user groups, identify points of interest and promote special events.

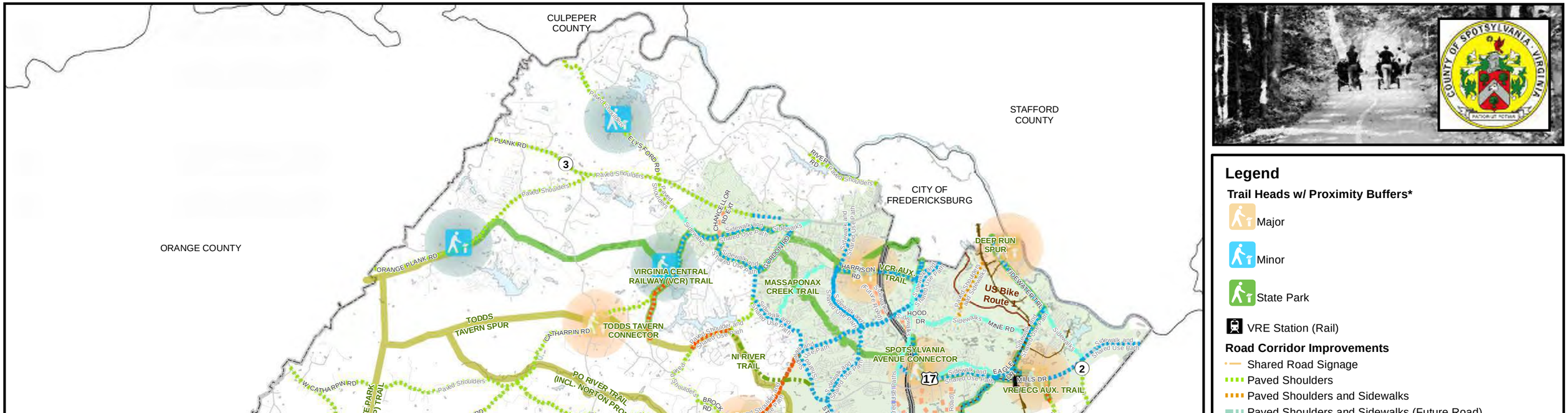
m. Promote the trail system through Spotsylvania County Tourism and other tourism venues.

Goal #10: Review and update the Trailways Master Plan consistent with the Comprehensive Plan update cycle.

a. Track plan implementation successes since last update and amend plans as necessary to accommodate new or improved implementation opportunities.

DRAFT

SPOTSYLVANIA COUNTY TRAILWAYS MASTER PLAN



Legend

Trail Heads w/ Proximity Buffers*

- Major
- Minor
- State Park
- VRE Station (Rail)

Road Corridor Improvements

- Shared Road Signage
- Paved Shoulders
- Paved Shoulders and Sidewalks
- Paved Shoulders and Sidewalks (Future Road)
- Paved Shoulder and Shared Use Path
- Paved Shoulder and Shared Use Path (Future Road)
- Shared Use Paths
- Sidewalks
- Sidewalks (Future Road)
- Sidewalk and Shared Use Path
- Sidewalk and Shared Use Path (Future Road)
- US Route 76 Bike Trail
- US Route 1 Bike Trail
- Rail Corridor

Greenways and Primary Users

- Bicycle/ Pedestrian
- Equestrian, Bicycle/ Pedestrian
- County Boundary
- Primary Development Boundary
- Parks

* Trail head locations are depicted with proximity buffers. Proximity buffers are intended to show the general area where depicted trail heads should be located in relation to the trail system. The trail head locations identified here are not intended to be parcel specific or suggestive of any specific location at this time. Further planning will be necessary to determine where such features are best located.

0 1.25 2.5 5 Miles

Map Approved: DRAFT

DRAFT

SPOTSYLVANIA COUNTY ROAD BASED BICYCLE AND PEDESTRIAN IMPROVEMENTS PLAN

CULPEPER COUNTY
STAFFORD COUNTY
CITY OF FREDERICKSBURG
ORANGE COUNTY
CAROLINE COUNTY
LOUISA COUNTY
HANOVER COUNTY
PLANK RD
ORANGE PLANK RD
CATHARPIN RD
W CATHARPIN RD
PAMUNKEY RD
ROBERT E LEE DR
POST OAK RD
COURTHOUSE RD
LAWYERS RD
MONROVIA RD
STUBBS BRIDGE RD
LEWISTON RD
DICKERSON RD
DJERSON LN
FAIRVIEW RD
PARTLOW RD
MARYE RD
MORRIS ROAD
JEFFERSON DAVIS HWY
HARRISON RD
GORDON RD
CHANCELLOR RD
RIVER RD
BROCK RD
SMITH STATION RD
MINE RD
MILLS DR
EAGLE DR
TIDEWATER TRL
MASSAPONAX CHURCH RD
US Bike Route 1
US Bike Route 76
208 BYP
BUS 208
208
3
17
95
1
522
Paved Shoulders
Shared Road Signage
Sidewalks
Shared Use Paths
Sidewalk and Shared Use Path
Paved Shoulders and Sidewalks
Paved Shoulder and Shared Use Path
Future Road

N
W
E
S

Legend

- VRE Station (Rail)

Road Corridor Improvements

- Shared Road Signage
- Paved Shoulders
- Paved Shoulders and Sidewalks
- Paved Shoulders and Sidewalks (Future Road)
- Paved Shoulder and Shared Use Path
- Paved Shoulder and Shared Use Path (Future Road)
- Shared Use Paths
- Sidewalks
- Sidewalks (Future Road)
- Sidewalk and Shared Use Path
- Sidewalk and Shared Use Path (Future Road)
- US Route 76 Bike Trail
- US Route 1 Bike Trail
- Rail Corridor
- Parks
- Primary Development Boundary

The Road Based Bicycle and Pedestrian Improvements Plan focused on implementation of sidewalks and shared use paths along major thoroughfares throughout the Primary Development Boundary and within the Lake Anna Mixed Use area along Route 208. Remaining areas outside of the Primary Development Boundary include bicycle and pedestrian friendly improvements in the form of shoulder improvements or shared road signage. In addition to enhancing ability to use the corridors for bicycle and pedestrian uses, the improvements are meant to enhance safety by reducing potential conflicts with vehicles. In rural areas, shoulder imporvements also provide greater "room for error" for vehicular traffic and are more accomodating to large vehicles and agricultural machinery.

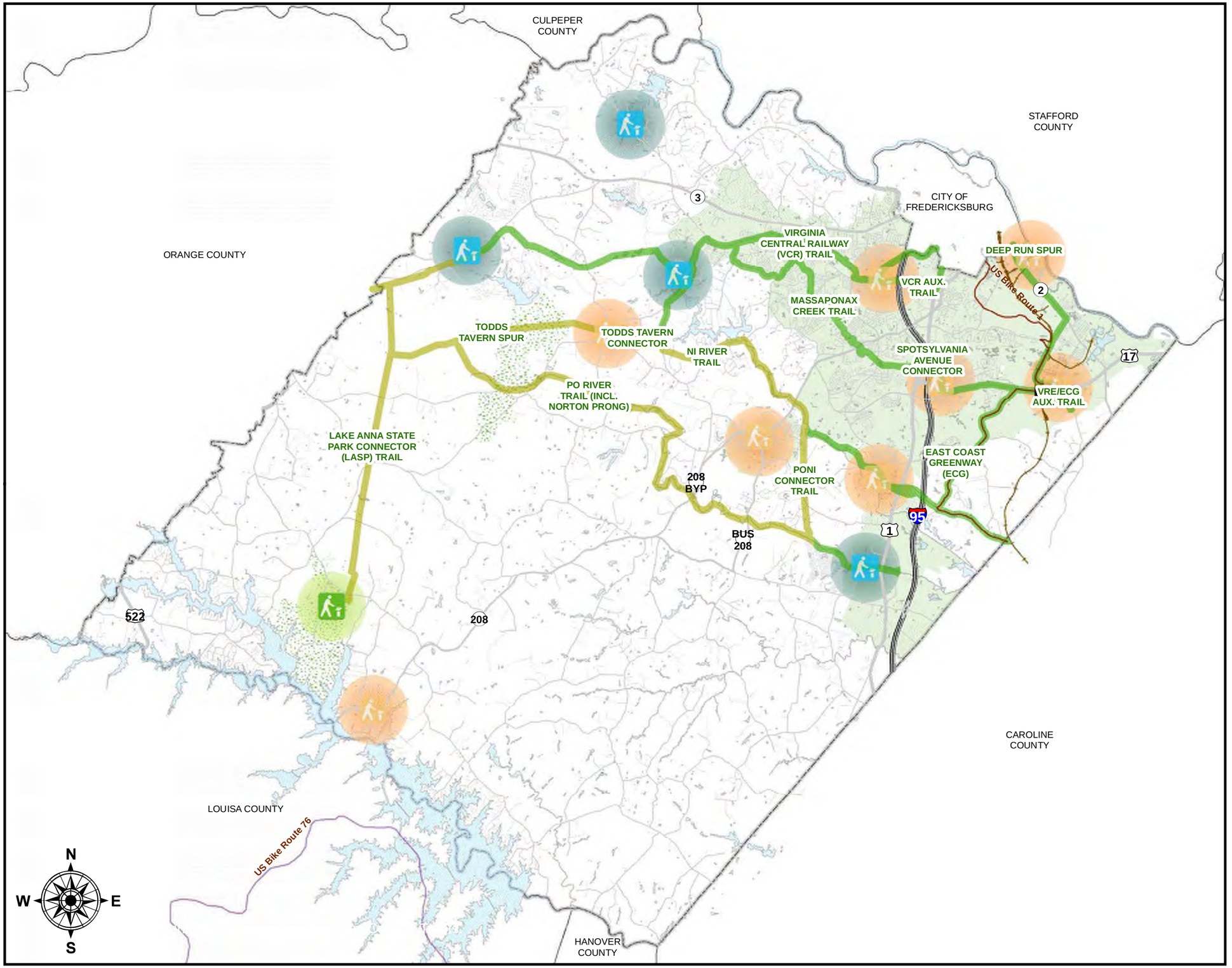
A number of identified road based improvements are expected to be implemented via frontage improvements associated with development or planned road widening projects (See Thoroughfare Plan). A number of planned road based imporvements complement efforts to implement the County Greenways Plan. Those road based improvements have been reflected cognizant of the greenways plan.

0 1.25 2.5 5 Miles

Map Approved: DRAFT

DRAFT

SPOTSYLVANIA COUNTY GREENWAYS PLAN



Legend

Trail Heads w/ Proximity Buffers*

- Major
- Minor
- State Park
- VRE Station (Rail)
- US Route 76 Bike Trail
- US Route 1 Bike Trail

Greenways and Primary Users

- Bicycle/ Pedestrian
- Equestrian, Bicycle/ Pedestrian
- Rail Corridor
- Parks
- Primary Development Boundary

The system of planned Greenway Trails provides a network of long distance off the road shared use paths for a variety of user groups as identified. Greenway Trails are primarily intended to serve as recreational trails but do enhance opportunity for expanding accessibility to goods and services, employment opportunities, access to multi-modal hubs. The greenway system is interconnected with regional scale and national scale systems including the Virginia Central Rail Trail and East Coast Greenway.

There are a number of opportunities for implementing greenway trail development as part of planned road widening projects in the form of parallel to road shared use paths. Those imporvements have been reflected in the road based bicycle and pedestrian imporvement plan and complement greenway implementation goals.

* Trail head locations are depicted with proximity buffers. Proximity buffers are intended to show the general area where depicted trail heads should be located in relation to the trail system. The trail head locations identified here are not intended to be parcel specific or suggestive of any specific location at this time. Further planning will be necessary to determine where such features are best located.

0 1.25 2.5 5 Miles

Map Approved: DRAFT

Chapter 4

PUBLIC FACILITIES PLAN

INTRODUCTION

The projected population growth of Spotsylvania County will require additional public facilities. A larger population translates to more school students as well as more health services, social services, recreation facilities, utilities and solid waste, general government services and increased demands on emergency services and law enforcement. The purpose of the Public Facilities Plan is to assess the current and future public service and facility needs and provide a plan for addressing these needs in an efficient and cost-effective manner. The County's public facilities must be carefully coordinated with land use and transportation plans to integrate the provision of services with anticipated population and economic growth, revenues, and available funding.

Current and future needs should be addressed through existing facilities whenever possible. Where this is not possible, new facilities may be warranted. By identifying criteria for the development of public schools, water or sewer lines, fire and rescue stations, and other facilities, the County can encourage development in appropriate areas and discourage development in inappropriate areas. Appropriate here is meant to be consistent with adopted policies in the Comprehensive Plan. It must be recognized that areas of the County are different and levels of service within these areas will vary. Coordination of County land use, transportation and public facilities development is the key to providing equitable, efficient, and cost-effective government services for current and future County residents and to support the business community.

The Public Facilities Plan recommends the general timing and location of future County facilities based on desired service levels. It is designed to function as a needs assessment supporting the establishment of specific project priorities through the annual Capital Improvement Program (CIP). A comprehensive approach integrates facility needs, siting criteria, and design issues with adopted land use plans and other planning concerns. The Plan will guide the acquisition of public facility sites through the rezoning process and advance purchase or optioning. The Public Facilities Plan does not address funding availability, debt capacity, or other financial concerns; nor does it address facility components, equipment, building design, and numerous other factors best left to the expertise of the operating departments. In addition, the location recommendations are general and should not be interpreted as site specific.

This plan is one element of the Spotsylvania County Comprehensive Plan. As with all components of the Comprehensive Plan, it is intended to function as guide for decision-makers; flexibility is required when fundamental conditions change, or analysis based on new data reaches differing conclusions. The Comprehensive Plan and each of its components should be reviewed and, if necessary, updated periodically based on new data and analysis.

Relationship to the Comprehensive Plan and County Growth Management Strategy

The adoption of the Public Facilities Plan as part of the County's Comprehensive Plan provides an important implementation tool for the County's overall growth management strategy. Articulated through the recommendations of the Comprehensive Plan, this strategy encourages sustainable and orderly growth in designated areas of the County while supporting the overall desires and aspirations of the community.

A key aspect of the growth management strategy involves the appropriate timing and location of future land development.

Relationship to the Capital Improvements Plan

The County's annual Capital Improvement Plan (CIP) addresses short-term facility planning. The CIP proposes a specific schedule for acquisition, development, enhancement or replacement of public facilities over a five (5) year period. It shows the arrangement of selected projects in priority order and establishes cost estimates and anticipated funding sources. Capital Projects identified within the CIP must have support within the Comprehensive Plan. Considerate of the Code of Virginia *§* 15.2-2232 that links Capital projects additions to the Comprehensive Plan. From *§* 15.2-2232:

> *…unless a feature is already shown on the adopted master plan or part thereof or is deemed so under subsection D, no street or connection to an existing street, park or other public area, public building or public structure, public utility facility or public service corporation facility other than a railroad facility or an underground natural gas or underground electric distribution facility of a public utility as defined in subdivision (b) of § 56-265.1 within its certificated service territory, whether publicly or privately owned, shall be constructed, established or authorized, unless and until the general location or approximate location, character, and extent thereof has been submitted to and approved by the commission as being substantially in accord with the adopted comprehensive plan or part thereof.*

At least annually with the budget and CIP adoption process, any new public facility not shown in the Comprehensive Plan shall be reviewed by the Planning Commission to determine whether the facility is substantially in accord with the Plan. In general, a public facility, public utility facility, or public service corporation facility, use or area may be determined to be a current feature of the Comprehensive Plan when it is either specifically identified on the Comprehensive Plan map or described in and supported by the Plan text. Exceptions include:

- Railroad facilities;
- Paving, repair, reconstruction, improvement, drainage, or similar work to an existing public street or public area unless such work involves a change in location or extent of a street or public area;
- Normal service extension of public utilities or public service corporations;

- Any public area, facility, or use which is identified within, but not the entire subject of, a subdivision or site plan provided, that the governing body has by ordinance or resolution defined standards governing the construction, establishment, or authorization of such public area, facility, or use; and
- Facilities approved through acceptance of a proffer made as part of a rezoning.

The following will be considered shown in the Comprehensive Plan:

- Additions to existing public buildings that increase the floor area by less than fifty (5) percent;
- Water and sewer facilities shown in the Water and Sewer Master Plan;
- Water and sewer line extensions and pump stations within the Primary Development Boundary; and
- Water and sewer extensions and pump stations outside of the Primary Development Boundary that serve public facilities shown in the Comprehensive Plan or deemed substantially in accord with the Comprehensive Plan.
- Emergency extensions of public water and sewer to serve users with failing well or septic systems with no alternatives as determined by the County Utilities
- Water and sewer line extensions to serve public facilities otherwise identified and supported in the Comprehensive Plan or Water and Sewer Master Plan.

Facilities of public utilities and public service corporations, such as wireless telecommunications and solar energy facility uses, are also subject to the 2232 Review Process pursuant to the State Code.

OVERVIEW OF THE PUBLIC FACILITIES PLAN

The Public Facilities Plan is organized into eight (8) sections: 1) Public Schools; 2) Parks and Recreation; 3) Fire and Rescue Services; 4) Libraries; 5) Solid Waste Management; 6) Water and Sewer Facilities; 7) Sheriff's Department; 8) General Government.

In preparing the Public Facilities Plan, each of the above categories has been addressed in terms of existing conditions, evaluation criteria, future expectations and future plans. In this way the Plan will provide a baseline for future planning, evaluating existing development policies and creating new policies where appropriate.

General Evaluation Criteria

An evaluation of existing public facilities and a determination of needs for future facilities involves several related criteria. These criteria cannot be static or absolute because particular needs and existing conditions vary greatly throughout the County.

Location

Location must be considered in relation to various elements of the Comprehensive Plan, such as existing and future population distribution, zoning, major transportation arteries, topography, and utilities. A centralized location is appropriate for facilities that provide services to intermittent visitors where a time and distance factor is not critical or where the services are highly specialized. Decentralized locations are desirable for facilities that serve day-to-day needs of citizens and where a time and distance factor become more important.

Accessibility

The site should be accessible to major transportation routes providing the best possible access to the greatest number of citizens expected to use the facility.

Proximity to Related and Supporting Facilities

There are advantages to the grouping of related or complementary facilities within one complex or area. Convenience to the public is thereby enhanced, operational economics are achieved, and less land is required to provide shared facilities such as parking. Some facilities are also more effective when located adjacent to a business district or shopping center, thereby assuring the greatest convenience to the largest number of people.

Condition and Obsolescence Assessment

In order to determine how to address a facility need, the present state of repair for the particular facility needs to be determined. Existing building space arrangements and special mechanical equipment requirements to meet the function needs of the facility must be considered. The operational efficiency of the facility and its possible adaptation to change or enlargement are factors that must be reviewed to determine the relative obsolescence of the building plan. Poor condition and high levels of obsolescence may indicate a need for replacement.

Site Adequacy

The site for each building should be adequate to provide for: (a) the space needs of the building and any probable future additions, (b) parking space for vehicles of both visitors and employees, (c) convenient and safe accessibility, and (d) bicycle and pedestrian friendly improvements consistent with the County Design Standards Manual.

Supportive of Adopted Planning Policies

The proposed project should support adopted County policies and plans. Without reference to an overall framework for development of the County, projects can be inconsistent and

counterproductive. If a project appears justified, even though it is not consistent with adopted policies, then a change in policy should be proposed and reviewed through the planning process.

Public Facilities Maps

Public facilities which form an integral part of the County's land use pattern are shown on the Public Facilities Plan Maps located in this Chapter; these include public facilities specific maps for schools, parks and recreation facilities, fire and rescue, solid waste and various other buildings, structures and sites needed to provide public services. Only existing and identified future locations (general) are indicated on the map. The criteria established in this Plan shall form the basis for determining future needs and appropriate sites. The locations of existing and future water and sewer systems are identified within the Water and Sewer Master Plan.

KEY GOALS OF PUBLIC FACILITIES PLAN

The principal goals of the Comprehensive Plan regarding the provision of public facilities and utilities are:

1. Provide community facilities/services to serve existing and new development in an efficient and cost-efficient manner;
2. Provide emergency services and law enforcement to protect citizens and allow them to enjoy a safe and secure environment;
3. Provide a system of high-quality educational opportunities that meet the future educational needs of all citizens;
4. Serve the recreational needs of the community through a comprehensive system of recreational facilities and programs;
5. Provide safe and adequate facilities and educational programs for the removal, disposal, and reduction of solid waste; and
6. Provide a sufficient supply of high-quality drinking water and a distribution system to serve the domestic, recreational, industrial, commercial, and fire protection needs of the community at the most economical price possible.

KEY POLICIES OF THE PUBLIC FACILITIES PLAN

The Public Facilities Plan should serve as the foundation for future decisions concerning the location and expansion of public facilities. In making these decisions, the following policies should be considered:

1. Locate new facilities to provide convenient service to the greatest number of residents.
2. Construct or expand facilities in accord with established criteria and level of service standards.

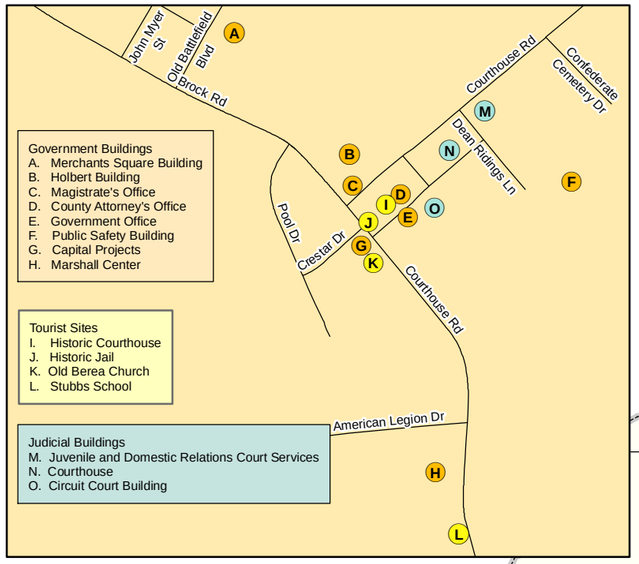
3. Help guide future growth by coordinating the location of public facilities with recommendations in the Comprehensive Plan.
4. Use the plan as a general guide for the County's Capital Improvements Plan.
5. Ensure equitable distribution of public facilities between established and newly developing areas of Spotsylvania County. Consider existing facility maintenance or replacement needs in already developed areas of the county.
6. Mitigate the impact of public facilities on adjacent planned and existing land uses.
7. Acquire sites for future public facilities as soon as possible, ideally obtaining property for facilities many years before there is a need to build.
8. Use the recommendations of the plan, where feasible, to develop multiple use locations (i.e., joint park/school sites).
9. Use the recommendations of this plan to determine whether proposed public facilities are substantially in accord with the Comprehensive Plan, as required by state law.
10. Continue to monitor economic (industry and construction activity), demographic, socio-economic, and housing trends locally to assess service and facility needs.

DRAFT

Spotsylvania County Government Facilities

DRAFT

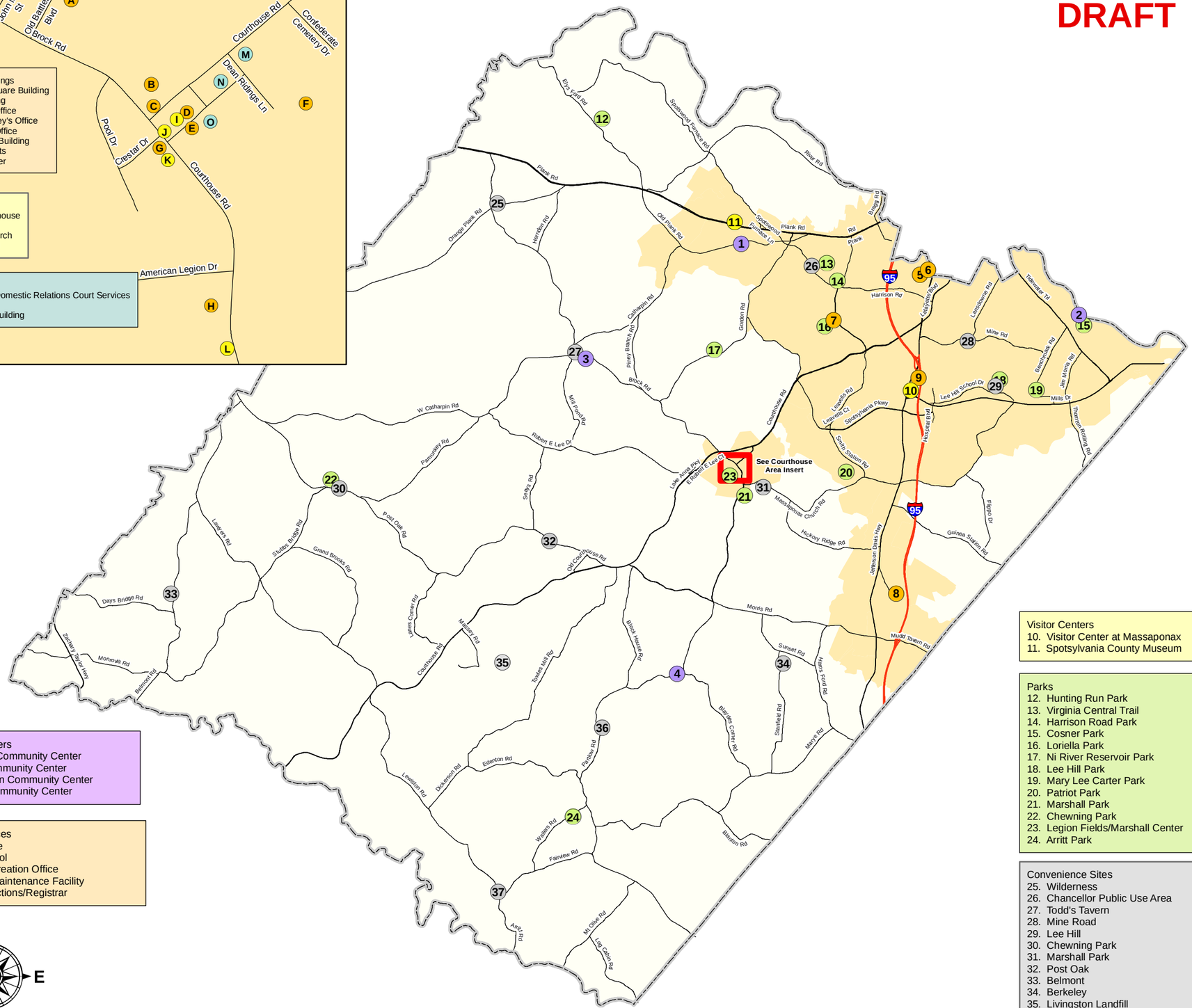
Courthouse Area Insert



Government Buildings
- A. Merchants Square Building
- B. Holbert Building
- C. Magistrate's Office
- D. County Attorney's Office
- E. Government Office
- F. Public Safety Building
- G. Capital Projects
- H. Marshall Center

Tourist Sites
- I. Historic Courthouse
- J. Historic Jail
- K. Old Berea Church
- L. Stubbs School

Judicial Buildings
- M. Juvenile and Domestic Relations Court Services
- N. Courthouse
- O. Circuit Court Building



Community Centers
1. Chancellor Community Center
2. Lee Hill Community Center
3. Todds Tavern Community Center
4. Berkeley Community Center

Government Offices
5. Utilities Office
6. Animal Control
7. Parks & Recreation Office
8. Joint Fleet Maintenance Facility
9. Office of Elections/Registrar

Visitor Centers
10. Visitor Center at Massaponax
11. Spotsylvania County Museum

Parks
12. Hunting Run Park
13. Virginia Central Trail
14. Harrison Road Park
15. Cosner Park
16. Loriella Park
17. Ni River Reservoir Park
18. Lee Hill Park
19. Mary Lee Carter Park
20. Patriot Park
21. Marshall Park
22. Chewning Park
23. Legion Fields/Marshall Center
24. Arritt Park

Convenience Sites
25. Wilderness
26. Chancellor Public Use Area
27. Todd's Tavern
28. Mine Road
29. Lee Hill
30. Chewning Park
31. Marshall Park
32. Post Oak
33. Belmont
34. Berkeley
35. Livingston Landfill
36. Cole Hill
37. The Barn

N W E S

Legend

Public Facilities

- Community Center
- Government Office
- Judicial Building
- Tourist Site/Visitor Center
- Parks
- Convenience Sites
- Primary Development Boundary

0 1.25 2.5 5 Miles

Map Approved: _____

Chapter 4A

PUBLIC FACILITIES PLAN- SCHOOLS

PUBLIC SCHOOLS

Introduction

The vision of Spotsylvania County Public Schools is to inspire and empower each student to develop essential skills and access multiple pathways in pursuit of their dreams. Each day, every child yearns to come to school, excited about learning. This vision supports the division's mission that "Together, We Prepare our Students for their Future" and is guided by the school board adopted Strategic Plan: Engage 2025.

The Spotsylvania County Public School Division offers a comprehensive educational program for grades pre-Kindergarden-12, which includes career and technical education, programs for gifted students, special education, visual and performing arts, and alternative education. In addition to career and technical courses offered at each middle and high school, students may take career-based courses at the Spotsylvania Career and Technical Center located adjacent to Courtland High School. Spotsylvania County Public Schools also offers additional programs such as Title I, Virginia Preschool Initiative (VPI), and Head Start. The Title I and Head Start programs receive federal funds while VPI is supported through state allocations. Title I funds provide financial assistance to elementary schools with high percentages of children from low-income families to help ensure that all children meet challenging state academic standards.

The Spotsylvania County Public School (SCPS) Division consists of Twenty-Nine (29) state accredited schools: seventeen (17) elementary schools, seven (7) middle schools, and five (5) high schools. SCPS also has two learning centers: Spotsylvania County Career and Technical Center and John J. Wright Educational and Cultural Center. John J. Wright Educational and Cultural Center serves as a facility for several alternative education programs, including the Quest program (non-traditional secondary), Courthouse Academy (SWD emotional disabled), Gateway Academy (SWD autism), preschool special needs, and preschool programs.

The Center for Family and Pre-School Services facility serves as a registration site for VPI and the Head Start pre-school services. It also houses the Parent Resource Center, Child Find, and English language intake services. In addition, there is a Maintenance Warehouse Complex with a print shop that serves both the School Division and the County, and a Fleet Maintenance Facility that provides joint services with the County.

Impact of the COVID-19 Pandemic on the 2020-2021 School Year:

As of October 1, 2020 there were 9,894 elementary and pre-k students, 5,526 middle school students, and 7,667 high school students, for a total of 23,087 students enrolled in the school system. These numbers represent a decrease in enrollment of 848 students from the preceding school year on the same date. The 2019 enrollment the year prior actually represented an increase in enrollment from 2018. The elementary school enrollment accounted for 696 of the

decrease, with high school enrollments actually increasing slightly by a total of 29 students. Staff believes the overall decrease in enrollment can be directly attributed to the COVID-19 pandemic, which has been a statewide trend. This is because some parents chose to enroll students in home school programs or private schools due to perceived health concerns, even with the school division offering parents a 100 percent virtual learning option for their children. It should be noted that although overall student enrollment decreasing, several schools actually showed slight enrollment increases. The most notable of these schools was Spotsylvania Middle School, which was already overcapacity in the 2019-2020 school year.

Typically, the five-year Capital Improvement Plan (CIP) is reviewed and modified annually by school staff, providing a list by year of capital maintenance, technology and transportation needs. The CIP also provides current year enrollment data as well as enrollment forecasts for the following four years.

Because of the impact COVID-19 has had on student enrollment during the current school year and because school division staff believes that many students who opted out of public school enrollment will return once the pandemic has run its course, 2020-2021 enrollment numbers could not serve as a reliable baseline from which to forecast future student enrollment. Consequently, enrollment projections were not included in the latest 2022-2026 Capital Improvement Plan (CIP).

The third-party demographic study, conducted in 2019 providing enrollment forecasts for the following 10 years continues to help guide future school facilities planning. However, 2020-2021 school year enrollment figures should be considered aberrations, based on the effects of the COVID-19 pandemic. School staff plans to again contract with a third-party firm to update enrollment forecasts post pandemic for the upcoming 2021-2022 school year. This step was originally included in previous planning knowing that the 2021 census data would be a critical source for future growth/enrollment projections.

Another impact of the pandemic was that school staff modified its previous five year CIP (2021-2025) at the request of the County to reflect the needs of the 2021 (current school year) school year only. This was done as a precaution to address potential revenue uncertainties caused by COVID-19 when it first impacted the region. School staff has since returned to the five-year format in devising CIP 2022-2026.

Prior to the Impact of Covid-19:

At the start of the 2019-2020 school year, 10,592 elementary and pre-k students, 5,705 middle school students, and 7,638 high school students, for a total of 23,935 students, were enrolled in the school system. Overall, the total County student population had not changed significantly. Comparing the 2019-2020 school year total population to that reported in 2012-2013 (prior Comprehensive Plan update), student enrollment grew less than 1% (0.89%). Upon adoption of the County 2013 Comprehensive Plan based on the 2012-2013 school year, student enrollment was 23,725. The recent increase in students can be attributed to modest growth in the middle and high school populations where 5,402 middle school students and 7,506 high school students

were reported in the 2012-2013 school year. Elementary School enrollment was down from the 10,817 students reported in 2012-2013.

In 2019, the Spotsylvania County Schools commissioned a demographic study utilizing CropperGIS and McKibben Demographics to look at the current and future student body. Based on a trends analysis the study found total district enrollment is forecasted to increase by 500 students, or 2.1%, between 2019-20 and 2024-25. A decline in student enrollment is expected to occur by the 2026-27 school year. Total enrollment will decrease by 112 students, or-0.5%, from 2024-25 to 2029-30. The detailed analysis did take into consideration the approved and unbuilt units in the County. A January 2020 update to the County's Future Development Analysis found an approved and unbuilt housing inventory of 12,756 units representing an estimated 27,088 additional residents (based on generation rates of persons per unit type). The most recent update from January 2021 notes an approved and unbuilt supply of 12,049 units, down somewhat from the prior year. These updated figures estimate 25,295 additional residents. The report notes that even if the district continues to have a significant amount of annual new housing unit construction over the next 10 years, the rate, magnitude and price of existing home sales will become the increasingly dominant factor affecting the amount of population and enrollment change. Additional factors included in the analysis included birth and death rates, IRS migration reports, Census reports (including age/sex population counts), fertility patterns, distribution of the population by age and sex, rate, and type of existing housing unit sales, change in household size, etc. Factors such as declining fertility rates (below replacement level), increasing median age within the district from 36.3 in 2010 to 41.8 in 2030, and out-migration of the 18 to 24 age cohort contribute to downward trending enrollment findings.

The Spotsylvania Public Schools Division was able to provide analysis of historic enrollment and future enrollment projections through the 2024-2025 school year. Table 1 below shows historic school enrollment starting in the 2009-2010 school year with projections out to the 2023-2025 school year. System-wide, short term student body growth is expected to remain low.

Table 1: Spotsylvania County Enrollment

SPOTSYLVANIA COUNTY PUBLIC SCHOOLS *Historical and Projected Enrollment 2021-2025*																
Based on Actual Enrollment for October 1, 2019																
GRADE	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25
	Historical	Historical	Historical	Historical	Historical	Historical	Historical	Historical	Historical	Historical	Actual	(Projected)	(Projected)	(Projected)	(Projected)	(Projected)
PRE-SCHOOL*	301	331	324	331	327	356	360	400	401	432	462	462	462	462	462	462
K	1752	1686	1673	1705	1714	1588	1565	1586	1567	1545	1623	1615	1631	1631	1630	1626
1	1739	1750	1755	1696	1760	1774	1612	1579	1664	1599	1614	1685	1677	1679	1678	1677
2	1792	1726	1766	1772	1680	1798	1776	1602	1652	1721	1641	1654	1720	1712	1714	1713
3	1731	1781	1725	1774	1782	1713	1801	1792	1646	1698	1758	1683	1684	1751	1742	1745
4	1846	1754	1792	1745	1820	1791	1716	1771	1854	1688	1747	1799	1713	1713	1782	1773
5	1746	1824	1768	1794	1778	1842	1812	1760	1836	1866	1747	1793	1834	1746	1746	1817
Sub-Total	**10907**	**10852**	**10803**	**10817**	**10861**	**10862**	**10642**	**10490**	**10620**	**10549**	**10592**	**10691**	**10721**	**10694**	**10754**	**10813**
Increase		**-55**	**-49**	**14**	**44**	**1**	**-220**	**-152**	**130**	**-71**	**43**	**99**	**30**	**-27**	**60**	**59**
Percent		**-0.50%**	**-0.45%**	**0.13%**	**0.41%**	**0.01%**	**-2.03%**	**-1.43%**	**1.24%**	**-0.67%**	**0.41%**	**0.93%**	**0.28%**	**-0.25%**	**0.56%**	**0.55%**
6	1842	1748	1811	1777	1801	1787	1785	1850	1788	1841	1924	1789	1827	1875	1770	1779
7	1803	1844	1756	1870	1829	1813	1814	1828	1885	1806	1937	1969	1830	1870	1918	1809
8	1818	1809	1879	1755	1901	1836	1867	1858	1865	1899	1844	1977	2010	1868	1909	1958
Sub-Total	**5463**	**5401**	**5446**	**5402**	**5531**	**5436**	**5466**	**5536**	**5538**	**5546**	**5705**	**5735**	**5667**	**5613**	**5597**	**5546**
Increase		**-62**	**45**	**-44**	**129**	**-95**	**30**	**70**	**2**	**8**	**159**	**30**	**-68**	**-54**	**-16**	**-51**
Percent		**-1.13%**	**0.83%**	**-0.81%**	**2.39%**	**-1.72%**	**0.55%**	**1.28%**	**0.04%**	**0.14%**	**2.87%**	**0.53%**	**-1.19%**	**-0.95%**	**-0.29%**	**-0.91%**
9	2212	2025	2012	2070	1976	2087	2017	2014	2043	2025	2118	2031	2171	2210	2052	2096
10	1904	1990	1864	1861	1892	1835	1928	1928	1910	1874	1947	2018	1931	2064	2101	1953
11	1820	1750	1864	1721	1732	1828	1773	1824	1839	1820	1775	1861	1928	1844	1971	2005
12	1886	1820	1783	1854	1781	1769	1852	1800	1864	1860	1798	1831	1915	1982	1898	2022
Ungraded/TT/PG	24	30	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-Total	**7846**	**7615**	**7526**	**7506**	**7381**	**7519**	**7570**	**7566**	**7656**	**7579**	**7638**	**7741**	**7945**	**8100**	**8022**	**8076**
Increase		**-231**	**-89**	**-20**	**-125**	**138**	**51**	**-4**	**90**	**-77**	**59**	**103**	**204**	**155**	**-78**	**54**
Percent		**-2.94%**	**-1.17%**	**-0.27%**	**-1.67%**	**1.87%**	**0.68%**	**-0.05%**	**1.19%**	**-1.01%**	**0.78%**	**1.35%**	**2.64%**	**1.95%**	**-0.96%**	**0.67%**
TOTAL	**24216**	**23868**	**23775**	**23725**	**23773**	**23817**	**23678**	**23592**	**23814**	**23674**	**23935**	**24167**	**24333**	**24407**	**24373**	**24435**
INCREASE		**-348**	**-93**	**-50**	**48**	**44**	**-139**	**-86**	**222**	**-140**	**261**	**232**	**166**	**74**	**-34**	**62**
PERCENT		**-1.44%**	**-0.39%**	**-0.21%**	**0.20%**	**0.19%**	**-0.58%**	**-0.36%**	**0.94%**	**-0.59%**	**1.10%**	**0.97%**	**0.69%**	**0.30%**	**-0.14%**	**0.25%**
* Includes Head Start, Early Childhood Special Education & Pre-Kindergarten																

Current Student Generation Rates

In analyzing County growth trends, it is important to consider student generation rates that are expected to coincide with increased residential development and population growth. To do so, the County tracks student generation rates based on housing types including single family detached, single family attached, and multi-family units. Student generation rates differ based on housing type and can be further influenced by additional factors such as bedroom counts, lifecycle stage of resident, state of the economy, etc. Student generation directly relates to the potential capital facility's needs (new schools, school expansion, etc.) when the existing inventory of schools near their level of service based "built for" student capacity.

Table 2 below identifies the latest calculation of student generation rates. A variety of factors associated with the economy, demographics and housing may change student generation rates over time. At minimum these rates should be recalculated in conjunction with the Comprehensive Plan 5-year update cycle for accuracy sake in consideration of projecting impacts of additional students resulting from residential growth.

Table 2: Population and Student Generation Rates

Population and Student Generation Rates as of January, 2020				
Population Generation Rates	**Single Family Detached**	**Single Family Attached**	**Multi-Family (MF)**	
Persons Per Unit	3.04	2.41	1.49	
Students Per Unit			**Market Rate (MF)**	**Tax Credit (MF)**
Elementary	0.2577	0.3072	0.073	0.291
Middle	0.1307	0.1286	0.047	0.134
High	0.1832	0.1453	0.051	0.139

Level of Service Standards

For the purpose of the Public Facilities Plan, school capacity is the key Level of Service indicator. The Plan for school system expansion is based on the County School Board school design capacity as follows:

- Elementary Schools: 930-950 students
- Middle Schools: 940-1,200 students
- High Schools: 1,900-2,100 students

Not all existing schools were constructed under the current level of service standard and may have building capacity that differs from the current design capacity identified above for future schools.

School enrollments considering building capacity in existing schools have been previously reported by the Spotsylvania County Public Schools in the collection of tables below (See Table 3) based on figures provided in the pre-pandemic demographic study. The tables show that the majority of schools have remaining capacity and are expected to continue to have remaining capacity through the 2024-2025 school year. Capacity issues do exist at specific schools however, at the Middle School level, specifically Battlefield, Chancellor, Spotsylvania and High School level, specifically Massaponax High School.

School staff had previously partnered with Moseley Architects to conduct Planning the Plan Studies I and II. Planning the Plan Study I analyzed each school's current instructional capacity and provided suggestions about how to maximize existing school spaces.

Planning the Plan Study II reviewed school capacities, projected student enrollment, and analyzed feeder patterns. This information served to identify areas from which to initiate the high school redistricting effort, relieving immediate overcapacity issues at Massaponax High School and targeting the renovation and expansion of Courtland High School.

Table 3: Schools Built Capacity Considering Historic and Projected Future Enrollment

Elementary Schools- Northern Region															
School Year	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Battlefield Elementary	678	648	639	644	658	645	618	649	655	675	696	705	700	705	710
Building Capacity	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833
Harrison Rd. Elementary	812	851	856	822	818	806	793	792	783	812	836	845	856	874	895
Building Capacity	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936
Salem Elementary	642	645	660	635	690	666	629	646	645	612	604	604	609	609	604
Building Capacity	815	815	815	815	815	815	815	815	815	815	815	815	815	815	815
School Enrollment (Total)	2132	2144	2155	2101	2166	2117	2040	2087	2083	2099	2136	2154	2165	2188	2209
Building Capacity (Total)	2584	2584	2584	2584	2584	2584	2584	2584	2584	2584	2584	2584	2584	2584	2584
Seats Available	452	440	429	483	418	467	544	497	501	485	448	430	419	396	375

Elementary Schools- Eastern Region															
SCHOOL YEAR	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Cedar Forest	765	732	716	771	757	727	746	749	740	725	723	734	724	721	727
Building Capacity	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936
Lee Hill Elementary	554	670	692	702	691	648	652	669	662	653	684	707	713	743	746
Building Capacity	807	807	807	807	807	807	807	807	807	807	807	807	807	807	807
Parkside Elementary	955	691	694	728	755	765	773	865	867	857	874	863	868	838	846
Building Capacity	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936
Spotswood Elementary	410	537	564	537	556	528	512	551	568	553	545	538	537	548	560
Building Capacity	641	641	641	641	641	641	641	641	641	641	641	641	641	641	641
School Enrollment (Total)	2684	2630	2666	2738	2759	2668	2683	2834	2837	2788	2826	2842	2842	2850	2879
Building Capacity (Total)	3320	3320	3320	3320	3320	3320	3320	3320	3320	3320	3320	3320	3320	3320	3320
Seats Available	636	690	654	582	561	652	637	486	483	532	494	478	478	470	441

Elementary Schools- Southern Region															
SCHOOL YEAR	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Berkeley Elementary	351	325	319	306	281	255	268	294	*295*	267	279	280	279	274	269
Building Capacity	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353
Livingston Elementary	460	444	451	444	421	433	420	406	408	393	397	386	386	379	376
Building Capacity	504	504	504	504	504	504	504	504	504	504	504	504	504	504	504
Riverview Elementary	614	623	653	712	717	696	685	619	624	664	682	707	717	735	747
Building Capacity	907	907	907	907	907	907	907	907	907	907	907	907	907	907	907
School Enrollment (Total)	1425	1392	1423	1462	1419	1384	1373	1319	1327	1324	1358	1373	1382	1388	1392
Building Capacity (Total)	1764	1764	1764	1764	1764	1764	1764	1764	1764	1764	1764	1764	1764	1764	1764
Seats Available	339	372	341	302	345	380	391	445	437	440	406	391	382	376	372

Elementary Schools- Western Region

SCHOOL YEAR	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Brock Road Elementary	764	769	729	753	720	693	656	658	665	681	677	668	654	655	668
Building Capacity	907	907	907	907	907	907	907	907	907	907	907	907	907	907	907
Chancellor Elementary	360	363	374	387	401	418	424	441	463	459	460	465	455	463	467
Building Capacity	455	455	455	455	455	455	455	455	455	455	455	455	455	455	907
Wilderness Elementary	752	757	763	763	761	736	746	719	678	699	701	678	671	671	677
Building Capacity	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936
School Enrollment (Total)	1876	1889	1866	1903	1882	1847	1826	1818	1806	1839	1838	1811	1780	1789	1812
Building Capacity (Total)	2298	2298	2298	2298	2298	2298	2298	2298	2298	2298	2298	2298	2298	2298	2298
Seats Available	422	409	432	395	416	451	472	480	492	459	460	487	518	509	486

Elementary Schools- Central Region

School Year	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Courthouse Road Elem.	881	870	854	829	832	828	813	809	812	812	814	820	821	821	826
Building Capacity	907	907	907	907	907	907	907	907	907	907	907	907	907	907	907
Courtland Elementary	608	577	586	564	539	563	527	535	535	556	555	560	563	589	576
Building Capacity	789	789	789	789	789	789	789	789	789	789	789	789	789	789	789
Robert E. Lee Elementary	478	507	516	502	506	519	515	540	508	512	501	494	473	457	447
Building Capacity	585	585	585	586	586	586	586	586	586	586	586	586	586	586	586
Smith Station Elementary	768	794	751	762	759	716	713	678	642	662	663	667	668	672	672
Building Capacity	986	986	986	986	986	986	986	986	986	986	986	986	986	986	986
School Enrollment (Total)	2735	2748	2707	2657	2636	2626	2568	2562	2497	2542	2533	2541	2525	2539	2521
Building Capacity (Total)	3267	3267	3267	3268	3268	3268	3268	3268	3268	3268	3268	3268	3268	3268	3268
Seats Available	532	519	560	611	632	642	700	706	771	726	735	727	743	729	747

Middle Schools

School Year	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Battlefield Middle	800	808	791	798	792	817	802	834	837	859	876	883	887	875	858
Building Capacity	807	807	807	807	807	807	807	807	807	807	807	807	807	807	807
Chancellor Middle	814	844	819	858	813	825	849	861	835	866	870	876	869	863	854
Building Capacity	857	857	857	857	857	857	857	857	857	857	857	857	857	857	857
Freedom Middle	862	858	857	883	844	824	780	769	815	823	809	752	739	727	717
Building Capacity	948	948	948	948	948	948	948	948	948	948	948	948	948	948	948
Ni River Middle	719	683	687	715	749	745	764	723	707	723	728	744	740	726	679
Building Capacity	774	774	774	774	774	774	774	774	774	774	774	774	774	774	774
Post Oak Middle	739	753	752	781	765	747	726	727	688	748	722	711	680	703	697
Building Capacity	948	948	948	948	948	948	948	948	948	948	948	948	948	948	948
Spotsylvania Middle	821	828	806	805	780	800	876	909	934	940	996	998	994	996	1008
Building Capacity	907	907	907	907	907	907	907	907	907	907	907	907	907	907	907
Thornburg Middle	646	672	690	691	693	708	739	715	730	746	734	703	704	707	733
Building Capacity	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790
School Enrollment (Total)	5401	5446	5402	5531	5436	5466	5536	5538	5546	5705	5735	5667	5613	5597	5546
Building Capacity (Total)	6031	6031	6031	6031	6031	6031	6031	6031	6031	6031	6031	6031	6031	6031	6031
Seats Available	630	585	629	500	595	565	495	493	485	326	296	364	418	434	485

High Schools															
School Year	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
QUEST (formerly GATES)	60	48	33	31	25	33	23	21	36	41	41	41	41	41	41
Building Capacity	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
Chancellor High	1355	1380	1380	1342	1330	1304	1299	1268	1288	1317	1347	1417	1433	1402	1404
Building Capacity	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427
Courtland High	1220	1192	1219	1190	1176	1173	1146	1179	1176	1413	1434	1471	1471	1427	1466
Building Capacity	1265	1265	1265	1265	1265	1265	1265	1265	1265	1565	1565	1565	1565	1565	1565
Massaponax High	1908	1870	1858	1829	1925	1964	2022	2027	2017	1745	1793	1858	1962	2003	1998
Building Capacity	1830	1830	1830	1830	1830	1830	1830	1830	1830	1830	1830	1830	1830	1830	1830
Riverbend High	1941	1923	1913	1866	1942	1933	1919	1981	1919	1918	1922	1937	1930	1923	1939
Building Capacity	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995
Spotsylvania High	1131	1113	1103	1123	1121	1163	1157	1180	1143	1204	1204	1221	1263	1226	1228
Building Capacity	1611	1611	1611	1611	1611	1611	1611	1611	1611	1611	1611	1611	1611	1611	1611
School Enrollment (Total)	7615	7526	7506	7381	7519	7570	7566	7656	7579	7638	7741	7945	8100	8022	8076
Building Capacity (Total)	8218	8218	8218	8218	8218	8218	8218	8218	8218	8518	8518	8518	8518	8518	8518
Seats Available	603	692	712	837	699	648	652	562	639	880	777	573	418	496	442
										Courtland Reno. Increased Cap.				1565	

Facility Design and Location Criteria

The following criteria should be used in determining appropriate sites and design for additional school facilities.

- Provide new facilities to adequately and equitably serve all areas of the County.
- Schedule school construction to relieve overcrowding and plan for new growth before it occurs.
- Provide up-to-date learning facilities including advances in technology and related instructional software.
- Continue to coordinate school site planning and development with the Parks and Recreation Department in order to maximize community recreational facilities.
- Obtain optimal locations and minimize costs through advance acquisition of suitable sites.
- Provide locations for new schools that minimize travel distance for current as well as future students.
- Elementary, Middle and High Schools site design should minimize impacts of the recreational areas on adjacent residences. Sports facilities and their parking areas should be buffered from nearby homes.
- Pursue acquisition of school sites in projected growth areas of the county.
- School construction should follow the guidelines of the Virginia Department of Education, as outlined within *"Guidelines for School Facilities in Virginia's Public Schools"*.
- School sizes should be based on not only the design capacity, i.e. the number of students, but also on the program capacity as programs such as Special Education and Career and Technical Education course have mandated federal caps that may not utilize square footage or pupil/teacher ratios.

Recommendations

The following are recommendations for the provision of adequate school facilities.

- Continue to analyze existing educational environments to examine whether they can be re-purposed to support research based best instructional practices.
- Continue to examine the feasibility of renovating and/or constructing additions to existing school facilities before constructing new school facilities for cost efficiency purposes. The school division's CIP 2022-2026 includes a full renovation and expansion of Spotsylvania Middle School due to current and anticipated student growth generated by new residential developments in the school's attendance zone.

The CIP also identifies renovation of Chancellor High and Middle School's mechanical, electrical and plumbing systems, and repurposing existing spaces for new programs at Spotsylvania High School and the Career and Technical Center.

In addition, modular units have been added at Spotsylvania Elementary School (formerly known as Robert E Lee Elementary), Parkside Elementary School, and Massaponax High School to accommodate expected future student enrollment generated by approved residential developments in those schools' attendance zones. Ten modular units were added to Spotsylvania Middle School prior to the 2019-2020 school year to handle current student growth generated by new housing developments in the school's attendance zone as well as to accommodate future student growth during the school's anticipated renovation and expansion.

- Construct new schools/facilities to expand the best educational opportunities for students and prevent overcrowded classroom sizes, unsafe and long bus trips, etc.
    - Construct additional classroom capacity at Thornburg Middle School.
- Maintain levels of service by staying consistent with state standards for classroom size by education level and full utilization of school facilities based on building capacity
- Reduce bus travel distances for students going to and from school in a safe manner when possible.
- Reduce land costs for new schools through advance acquisition.
- Consider realignment of Attendance Zones to best utilize existing facilities to accommodate student population before constructing new school facilities. For example, the afore-mentioned high school redistricting effort was initiated prior to the 2019-2020 school year to successfully alleviate student capacity issues at Massaponax High School. This effort was greatly assisted by the renovation and expansion (by approximately 300 students) of Courtland High School, which was then able to take additional students from other high schools in the division to alleviate potential future overcrowding.
- Consider expanding or enhancing specialized educational programs and their necessary capital facilities considering potential student demand, market demand for skills (future employment opportunities), and costs to implement. Examples include but are not limited to newly formed or expanded Career and Technical programs.
- All applications for a rezoning and/or special use permit for residential dwelling units should contain the following information:

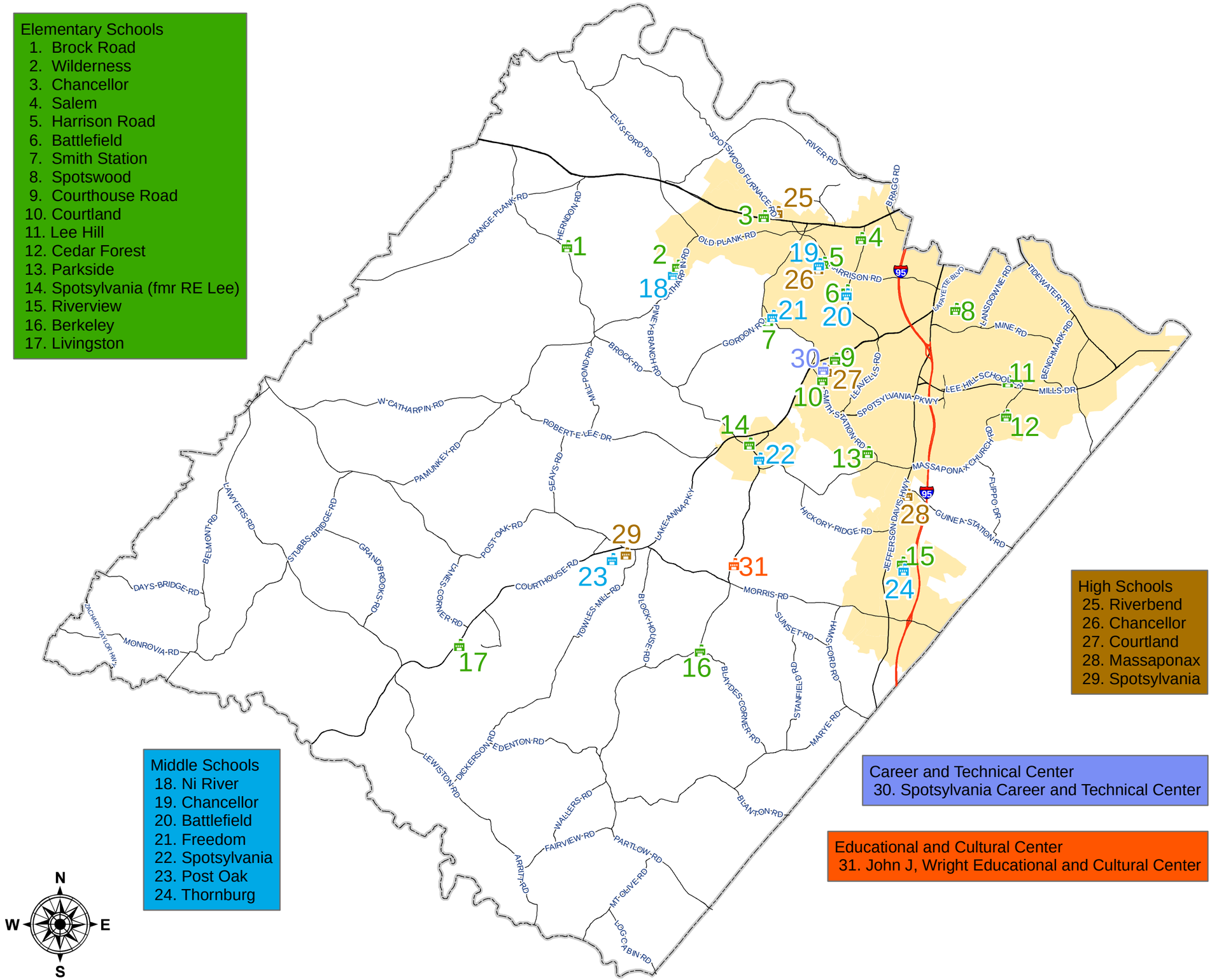
    - Number and type(s) of dwelling unit(s) proposed
    - Anticipated occupancy date for proposed dwelling units
    - Anticipated number of children per household type (student generation rate)

Future School Bond Referendum

The school division's remaining bond authority to complete capital projects will run only through Fiscal Year 2022. In order to fully fund the projects in CIP 2022-2026, a new school bond referendum will be necessary. This referendum is scheduled for November 2021.

DRAFT

Elementary Schools
1. Brock Road
2. Wilderness
3. Chancellor
4. Salem
5. Harrison Road
6. Battlefield
7. Smith Station
8. Spotswood
9. Courthouse Road
10. Courtland
11. Lee Hill
12. Cedar Forest
13. Parkside
14. Spotsylvania (fmr RE Lee)
15. Riverview
16. Berkeley
17. Livingston



High Schools
25. Riverbend
26. Chancellor
27. Courtland
28. Massaponax
29. Spotsylvania

Middle Schools
18. Ni River
19. Chancellor
20. Battlefield
21. Freedom
22. Spotsylvania
23. Post Oak
24. Thornburg

Career and Technical Center
30. Spotsylvania Career and Technical Center

Educational and Cultural Center
31. John J, Wright Educational and Cultural Center

N W E S

Spotsylvania County Public Schools

Legend

School Type

- Career & Technical Center
- Educational &Cultural Ctr
- Elementary School
- High School
- Middle School
- Primary Development Boundary

0 1.25 2.5 5 Miles

Map Approved: _____

Chapter 4B

PUBLIC FACILITIES PLAN
FIRE, RESCUE, AND EMERGENCY MANAGEMENT

FIRE, RESCUE, AND EMERGENCY SERVICES

Introduction

Fire protection and emergency medical service are indispensable services that are essential to the safety and quality of life of every County resident. The overall goal is to ensure adequate fire protection, response, and emergency medical services for the county's residents, businesses, and tourists.

Fire and rescue services are provided to Spotsylvania County residents and visitors through the Department of Fire, Rescue and Emergency Management (FREM), a system comprised of both volunteer and career personnel. Within the Department, along with career personnel who staff County operated Fire and Rescue Stations, there are three volunteer organizations (rescue squads and fire companies) providing services to the County. They include the Spotsylvania Volunteer Fire Department, Chancellor Volunteer Fire and Rescue Department and Spotsylvania Volunteer Rescue Squad. The County provides personnel at all 11 County Fire and Rescue Stations seven days per week, 24 hours per day.

Services provided by the department are divided into five distinct categories as follows:

1 Fire - Fire suppression, first responder program, public fire education, and company inspection programs.

2 Rescue - Emergency medical treatment, transport, and public education.

3 Emergency Management/Support Services - Plans for natural or man-made disasters, processes Safety Data Sheets (SDS), responds to hazardous materials spills, investigates environmental issues (illegal dumps, spills, etc.), coordinates search and rescue efforts, provides in-house vehicle repair and maintenance for fire and EMS vehicles, and provide logistical support for the department.

Spotsylvania County is classified as a risk locality being located within the 10 Mile Emergency Protection Zone (EPZ) for the North Anna Nuclear Power Plant. Spotsylvania County has a Radiological Emergency Response Plan in accordance with the provisions of Nuclear Regulatory Commission (NRC) 10CFR 50.47, 10CFR-50 Appendix E, NUREG-0654 and FEMA REP Manual. Our staff conducts yearly training and exercise to validate the Radiological Emergency Response Plan. Spotsylvania conducts a FEMA/DHS evaluated exercises every two years where we are graded on areas such as evacuations, mass care, public notification, and radiological monitoring and decontamination. Results of the FEMA/DHS graded exercises are reported to the Nuclear Regulatory Commission and available to the public.

4 Fire and EMS Administration - Provides administrative support for the entire department, develops departmental budgets, establishes departmental policy and procedures, and administers the Revenue Recovery Program for Spotsylvania County. Administration also processes fire inspections, fire investigations, fire and EMS reports, and departmental related permits.

5 Fire Prevention – Performs plan review (site plan, building plan, and subdivision plat), conducts new construction and existing occupancy inspections to ensure compliance with applicable codes and standards, conducts investigations of fires, issues related permits (blasting, fireworks, burning, etc.)

Existing Facilities

Currently, there are 11 Fire and Rescue Stations spread throughout the County. These facilities are joint facilities providing fire and rescue services from each of them. The specific stations are listed in the table below. Plans are being developed for a replacement facility to replace the existing Fire and Rescue Station 3, and a new Fire and Rescue Station #12 in the vicinity of Jefferson Davis Hwy. and Massaponax Church Rd. The existing facilities map shows the locations of current and known future stations.

The County maintains an automatic aid agreement with the City of Fredericksburg, Orange, Louisa, Hanover, Stafford, King George, and Caroline Counties. There is an existing mutual aid agreement with Culpeper County that is in the update process presently. At this time there is no specific timeline on when the agreement will be finalized, however, Culpeper's mutual aid agreement is expected to convert to an automatic aid agreement within the planning period. Aid agreements within the region have improved over time and are expected to continue to be enhanced as noted above, within the planning period. Prior to this Comprehensive Plan update, the County had acknowledged several mutual aid agreements with adjacent localities. Mutual aid agreements assured regional cooperation and mutual FREM assistance across County or City boundaries when help was requested. Automatic aid agreements as opposed to mutual aid agreements result in more proactive, efficient and effective responses in case of emergencies, resulting in enhanced response times with a greater supply of FREM resources to stabilize the situation. With automatic aid, cooperating localities need not wait for a call for assistance from a nearby locality and therefore can dispatch vital resources more quickly.

FREM also seeks to reduce demand for fire and rescue services through a proactive fire prevention and safety education program. The program includes numerous public education activities as well as a fire safety inspection program.

The primary indicator of level of service in regard to fire protection is response time. The target response times are 6 minutes for suburban and 8 minutes for rural in 90% of responses, with an overall average of 7 minutes in 90% of responses countywide. The ability to meet this is

predominately dependent on two factors, the proximity of the response location to a station, and the availability of equipment and personnel at the station. During the next Comprehensive Plan amendment cycle these levels of service standards will be retired and replaced by a new methodology which measures "Unit Hour Utilization" and "Assembled Fire Fighting Force." The Unit Hour Utilization will measure the Utilization, or load/demand in a period of time, relative to the Unit Hour supply. The Assembled Fire Fighting Force, according to NFPA 1710/1720 measures the response time from dispatch to the point where the necessary equipment and teams (not just a first responder) are onsite to effectively resolve an incident. These more advanced measurement techniques will become available over the next few years due to capital improvements made by the County in FREM and Information Technology.

As of 2019, approximately 67% of the land area of the County is within a five-mile-driving distance of a fire station. This is a standard commonly used by the Insurance Services Organization (ISO), a group funded by the insurance industry to establish insurance rates on a national level. As of April 1, 2021, Spotsylvania's ISO Public Protection Classification Rating is a 2/10; areas within 5 road miles of a fire and rescue station are categorized with the rating of a 2, while those outside the 5 road miles are categorized with a rating of 10.

Road distance-based service areas have been mapped with the assistance of FireView Software administered by the Spotsylvania County GIS office. In past iterations of the Comprehensive Plan, response distances had been mapped based on an equal 5-mile radius buffered around fire stations (appearing as circles). Though the distances were reflective of standards they did not factor in the road-based routes necessary for fire and rescue apparatus to travel from station to the location of an emergency. With improvement of technology available, the County has enhanced its portrayal of response times, depicting "real world" distances considerate of the road network and routing.

Many variables can affect response time and the generation of fire/rescue calls by a given population. Among them are geography, road networks, age and density of population, traffic volumes, inclement weather, and age and quality of the building stock. The analysis of the department focuses on future population projections and call loading within a fire/rescue district or response zones. A threshold of 2,500 total calls per year is used as the benchmark indicator of full capacity at any single fire/rescue station, staffed with one fire apparatus and one ambulance. Under 2021 conditions, per Spotsylvania County FREM the number of units staffed in each station is still 1 Fire apparatus and 1 Ambulance. It is the intention of FREM leadership to continue to utilize volunteer agencies whenever possible to supplement career staffing, which has resulted in several instances where County FREM has been able to staff more than the minimum number of units in each station, but the regularity of this occurrence is not yet frequent enough to expand the benchmark indicators.

As of August 2019, the County has been providing 24/7 minimum staffing through career personnel, with added capacity provided through volunteer participation. However, the volunteer staffing has not been consistent. This has resulted in a continuation of maintaining the minimal staffing of 1 Fire apparatus and 1 Ambulance in each station. Therefore, service area

call thresholds are based on 2,500 total calls per year for any and all fire/rescue service areas throughout the County. County FREM staff have provided Incident Counts for fiscal year 2019 and 2020 considering call volume versus capacity (See Table 1 below). Fire and Rescue Station #4 and 6 are well over capacity based on service thresholds.

Table 1: Station Capacity vs. Volume

Fire & Rescue Station	Capacity	July 1, 2018-June 30, 2019			July 1, 2019-June 30, 2020		
		Annual Call Volume* (July 1, 2018 - June 30, 2019)	Volume vs Capacity	% Residential Calls	Annual Call Volume* (July 1, 2019 - June 30, 2020)	Volume vs Capacity	% Residential Calls
1	2500	1935	565	63%	1995	505	70%
2	2500	838	1662	65%	759	1741	68%
3	2500	558	1942	74%	587	1913	73%
4	2500	4298	-1798	46%	4246	-1746	42%
5	2500	1309	1191	66%	1322	1178	70%
6	2500	3935	-1435	60%	3857	-1357	62%
7	2500	876	1624	68%	909	1591	72%
8	2500	1118	1382	45%	1090	1410	46%
9	2500	518	1982	79%	540	1960	77%
10	2500	1360	1140	85%	1378	1122	85%
11	2500	1803	697	65%	1830	670	69%
Total	**27500**	**18548**	8952	**60%**	**18513**	**8987**	**62%**

*call volume does not include mutual aid to surrounding jurisdictions

Distance and call volume-based level of service gaps have helped drive recommended short- and long-term fire and rescue station additions recommendations as depicted in the FREM 5-Mile Response Map. In the short term, Fire and Rescue Station #12 is expected to go into service in the Massaponax area. Construction of Station #12 is expected to occur in 2023-2024. Longer term target additions for Fire and Rescue stations include the Elys Ford area in northwest Spotsylvania County, Shady Grove, and Post Oak.

Level of Service Standards

Level of Service is evaluated through multiple means. The primary measure of service is response time but response time is driven by several factors. The primary factors are station location, equipment availability, and staffing levels and availability.

There are three LOS standards for fire and rescue:

1. Respond to 90% of all fire and emergency medical service incidents within 6 minutes of being dispatched when the incident is located in the suburban districts of the County. These districts include areas covered by Stations 1, 4, 5, 6, 10, and 11. The planned Station 12's district will also be included in this list of districts.

2. Respond to 90% of all fire and emergency medical service incidents within 8 minutes of being dispatched when the incident is located rural districts of the County. These districts include areas covered by Stations 2, 3, 7, 8, and 9.
3. Achieve a 7-minute average countywide response time for 90% of the county's incidents.

Location Criteria

The following criteria should be used in determining appropriate sites for additional stations in order to provide a consistent level of service across the County.

- Locate stations at points with quick access to a major arterial road. If possible, sites should be located near two major arterials that offer both east/west and north/south travel.
- Locate new fire/rescue stations near mixed-use centers where possible, based on key site planning considerations such as access, safety, and response time.
- Response times will also be considered in evaluating and selecting appropriate sites. This will ensure that the targeted response goals are being met.

Design Criteria

The following design criteria should be considered when developing a new site for emergency response stations.

- Co-locate fire and rescue facilities for maximum efficiency. Consider co-locating with other public facilities as well.
- Acquire sites of at least 3 acres in the urban area since there is the availability of county water and sewer lines and 5 acres in the rural area in order to accommodate drainfields in order to provide for co-location of public facilities and future expansion.

Recommendations

The following are recommendations for the provision of adequate Fire and Rescue facilities.

General

- Coordinate with lead/ support agencies and Implement regional and Spotsylvania County specific mitigation action strategies associated with the current iteration of the George Washington Regional Commission Regional Hazard Mitigation Plan.
- Work with local and regional stakeholders to update the Regional Hazard Mitigation Plan consistent with the required review and update five (5) year cycle as established in the Federal Disaster Mitigation Act of 2000, administered by the Federal Emergency Management Agency (FEMA).
- Explore development of a County Wildland Fire Mitigation Plan in partnership with the Virginia Department of Forestry.

Short Term

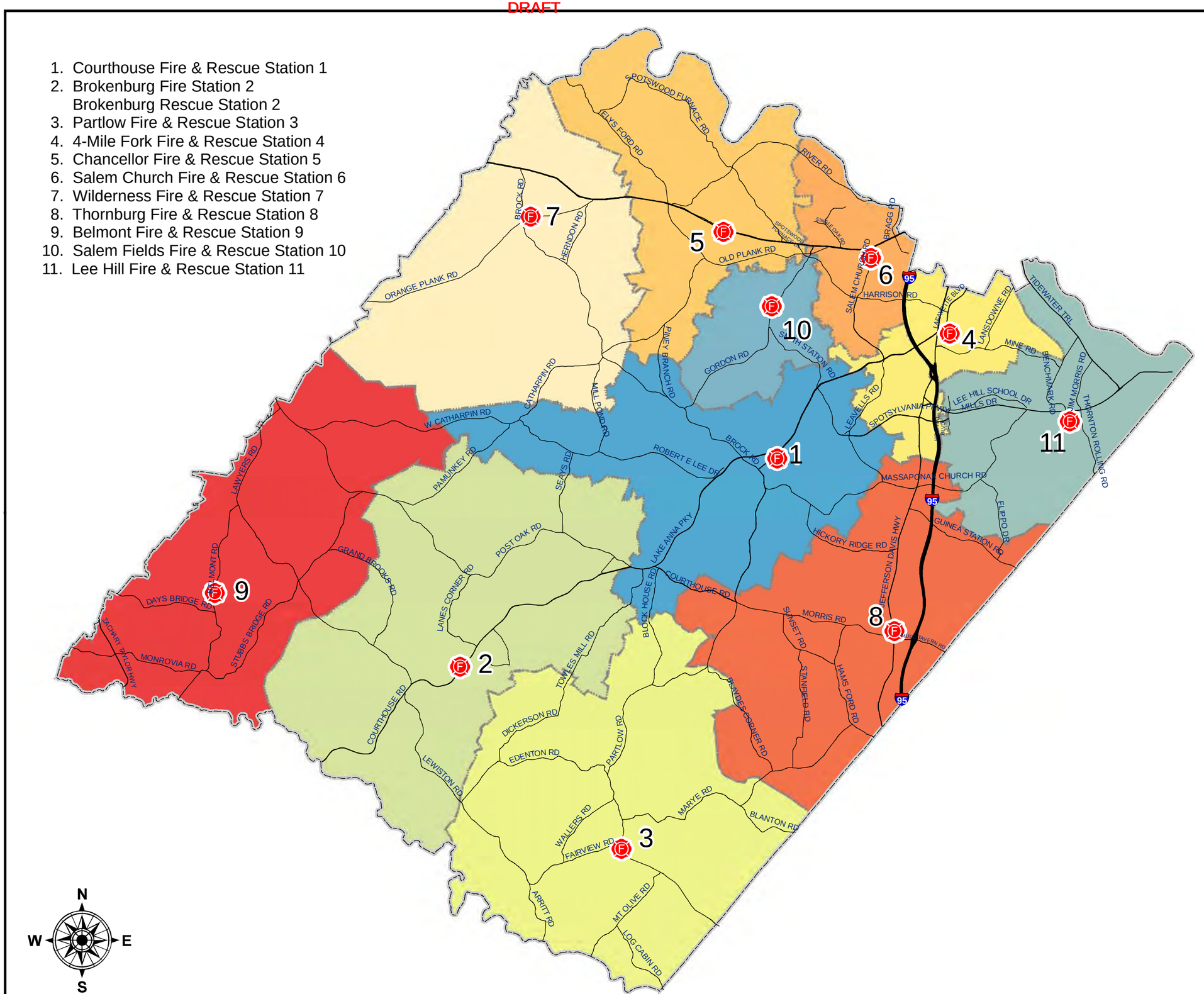
- Integrate technologies and adopt procedures necessary to measure performance using the Unit Hour Utilization and Assembled Fire Fighting Force metrics.
- Study Fire and Rescue calls and responses, as well as Unit Hour Utilization to determine whether LOS needs dictate the construction of additional stations in some areas, and/or staffing additional fire apparatus and ambulances in existing facilities.
- Build replacement Fire and Rescue Station 3 in the Partlow area.
- Secure land for and build Fire and Rescue Station 12 in the Jefferson Davis Hwy. / Massaponax Church Rd. area.
- Build the Classroom and Logistics Facility at the Rappahannock Regional Training Center to facilitate improved system-wide training abilities and meet logistical storage needs.
- Implement traffic management strategies and technology, such as traffic signal preemption devices to facilitate improved response times.
- Continue efforts to update the aid agreement with Culpeper County, resulting in conversion from a mutual aid agreement to an automatic aid agreement.

Long Term

- Acquire land for fire/rescue joint use sites in order to relieve the burden on existing fire/rescue facilities. Considering level of service standards, new locations are in Shady Grove, Post Oak, and northwestern Spotsylvania County (north of Route 3).

DRAFT

1. Courthouse Fire & Rescue Station 1
2. Brokenburg Fire Station 2
   Brokenburg Rescue Station 2
3. Partlow Fire & Rescue Station 3
4. 4-Mile Fork Fire & Rescue Station 4
5. Chancellor Fire & Rescue Station 5
6. Salem Church Fire & Rescue Station 6
7. Wilderness Fire & Rescue Station 7
8. Thornburg Fire & Rescue Station 8
9. Belmont Fire & Rescue Station 9
10. Salem Fields Fire & Rescue Station 10
11. Lee Hill Fire & Rescue Station 11



N
W E
S

Spotsylvania County Fire/Rescue Stations First Response Zones

Legend

FREM Stations with First Response Zones

Existing Fire/Rescue Station^

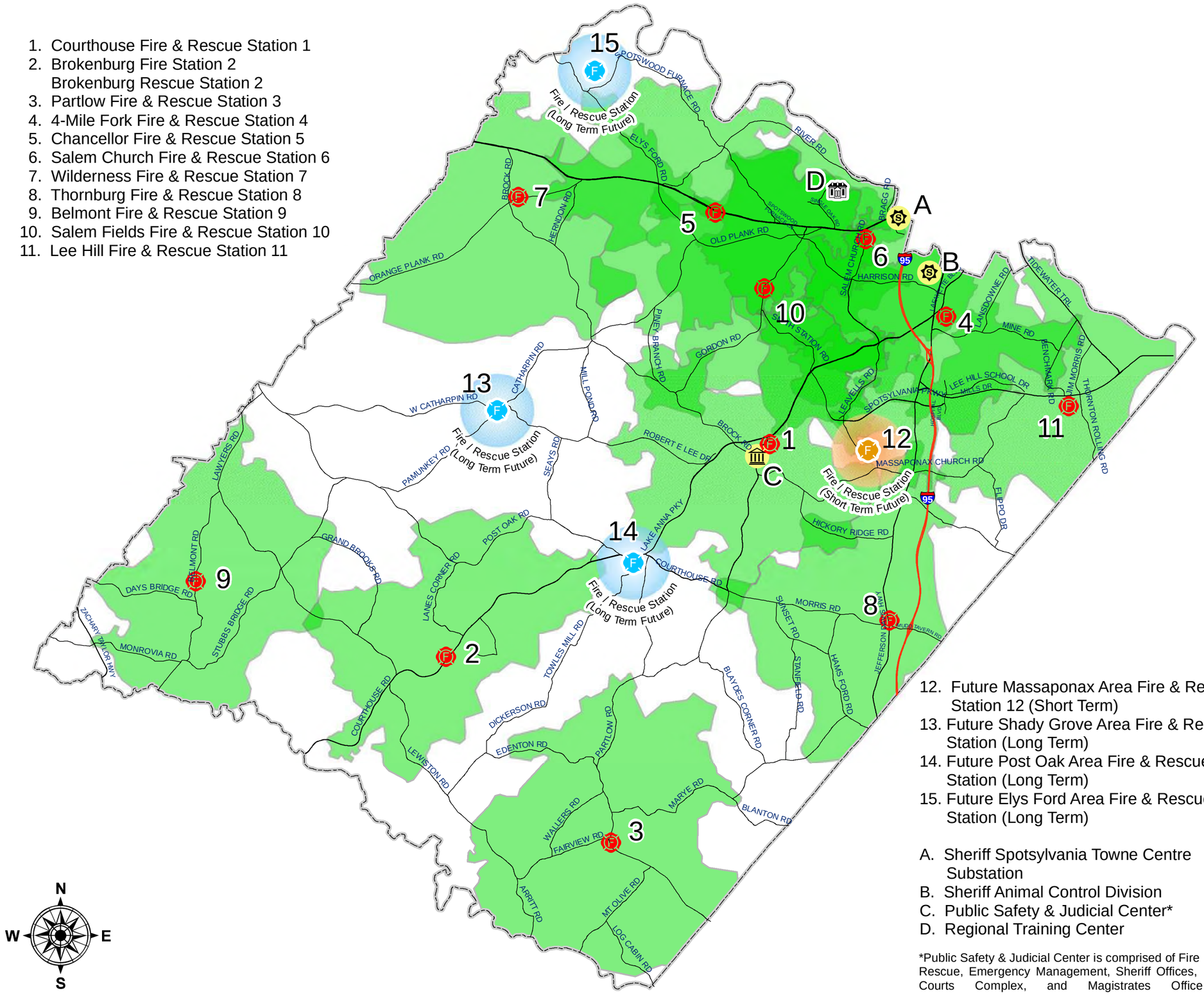
^Symbology includes corresponding First Response Zones for each of the existing fire/rescue stations. The entire County has First Response Zone coverage.

0 1.25 2.5 5 Miles

Map Approved: _____

DRAFT

1. Courthouse Fire & Rescue Station 1
2. Brokenburg Fire Station 2
   Brokenburg Rescue Station 2
3. Partlow Fire & Rescue Station 3
4. 4-Mile Fork Fire & Rescue Station 4
5. Chancellor Fire & Rescue Station 5
6. Salem Church Fire & Rescue Station 6
7. Wilderness Fire & Rescue Station 7
8. Thornburg Fire & Rescue Station 8
9. Belmont Fire & Rescue Station 9
10. Salem Fields Fire & Rescue Station 10
11. Lee Hill Fire & Rescue Station 11



12. Future Massaponax Area Fire & Rescue Station 12 (Short Term)
13. Future Shady Grove Area Fire & Rescue Station (Long Term)
14. Future Post Oak Area Fire & Rescue Station (Long Term)
15. Future Elys Ford Area Fire & Rescue Station (Long Term)

A. Sheriff Spotsylvania Towne Centre Substation
B. Sheriff Animal Control Division
C. Public Safety & Judicial Center*
D. Regional Training Center

*Public Safety & Judicial Center is comprised of Fire Rescue, Emergency Management, Sheriff Offices, Courts Complex, and Magistrates Office

Spotsylvania County Public Safety 5-Mile Response Map

Legend

Public Safety Buildings

- Fire / Rescue Station
- Fire / Rescue Station (Long Term Future)^
- Fire / Rescue Station (Short Term Future)^
- Sheriff Substation
- Safety & Judicial Center
- Training Center

Distance (Miles)

- 5-Mile Response Distance

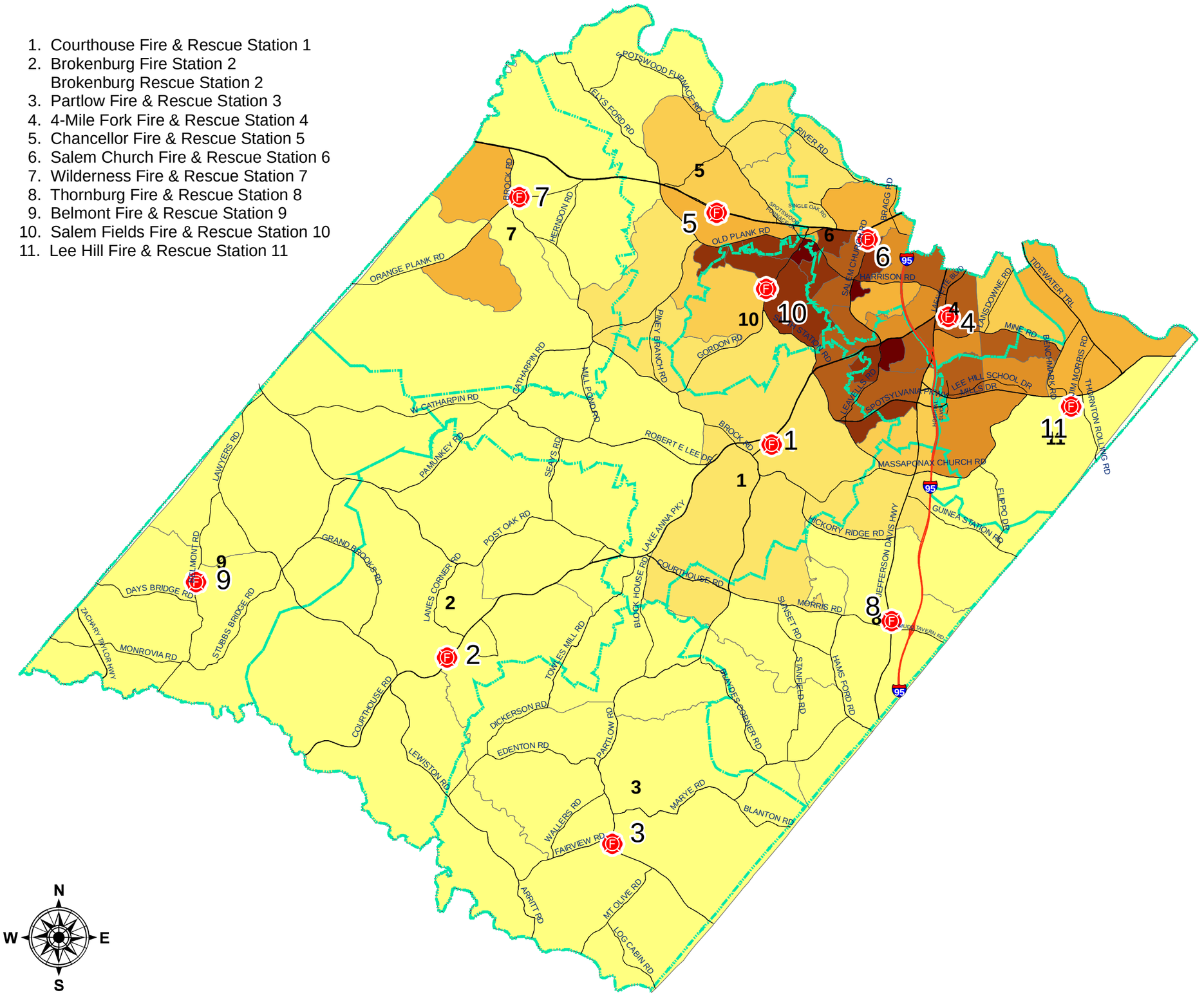
^Symbology includes proximity/ area buffers. Locations symbolized for new stations are not intended to suggest a specific location at this time but rather represent a general area where a new station has been recommended.

0 1.25 2.5 5 Miles

Map Approved: _____

DRAFT

1. Courthouse Fire & Rescue Station 1
2. Brokenburg Fire Station 2
   Brokenburg Rescue Station 2
3. Partlow Fire & Rescue Station 3
4. 4-Mile Fork Fire & Rescue Station 4
5. Chancellor Fire & Rescue Station 5
6. Salem Church Fire & Rescue Station 6
7. Wilderness Fire & Rescue Station 7
8. Thornburg Fire & Rescue Station 8
9. Belmont Fire & Rescue Station 9
10. Salem Fields Fire & Rescue Station 10
11. Lee Hill Fire & Rescue Station 11



N
W E
S

2019 Estimated Block Group Population Density Relative To Existing Fire/Rescue First Response Zones

Legend

FREM Stations with First Response Zones

Existing Fire/Rescue Station^

2019 US Census Block Group Estimated Density (Persons per BG Acre)*

- 0.01 - 0.27
- 0.28 - 0.49
- 0.50 - 0.77
- 0.78 - 1.73
- 1.74 - 2.51
- 2.52 - 4.10
- 4.11 - 6.34
- 6.35 - 9.37

^Symbology includes corresponding First Response Zones for each of the existing fire/rescue stations.
*The Block Groups are provided by the US Census Bureau and supplemented with ESRI Total Population Estimates for 2019. Analysis conducted prior to County Boundary change with Orange County.

0 1.25 2.5 5 Miles

Map Approved: _____

Chapter 4C

PUBLIC FACILITIES PLAN- SHERIFF

SHERIFF

Introduction

The Sheriff is a constitutional officer of the Commonwealth of Virginia and is elected by the voters of Spotsylvania County. The Sheriff provides law enforcement services to the citizens of the County, including the enforcement of all State and County criminal codes; serves civil and criminal papers; provides for the enforcement of all State and County animal codes and supervisors the operations of the County's animal shelter; and protects and maintains the security of the courts operating in the County.

There are five divisions within the Sheriff's Office that together, serve all law enforcement functions described above: Patrol Operations Division, Criminal Investigations Division, Courts Security/Civil Process Division, Administrative Services Division, and Animal Control Division. Some of the specialty functions within these divisions are the Street Crimes Unit, Crime Prevention Unit, Emergency Response Team, Bicycle Team, Canine Unit, Hostage Negotiation Team, Dive Team, Ground Search and Rescue Team, and Traffic Services Unit.

Emergency Communications is also part of the Sheriff's Office. The Emergency Communications division is a 24/7 operation that serves as the 911 answering point for calls for service and the dispatching of public safety services.

On December 3, 2011, a 58,000 square foot Public Safety Building located at 9119 Dean Ridings Lane was dedicated. The Sheriff's Office, 911 Dispatch Center, and the administrative offices of Fire, Rescue, and Emergency Management are located in the Public Safety Building. The building includes a forensics lab, bay for inspecting vehicles involved in crimes, a physical fitness facility, and an outdoor kennel for police and fire dogs.

Per FY 2022-'26 CIP project objectives, *since the building* (public safety) *was completed in 2011, public safety staffing and programs have expanded to the point of needing additional space, particularly for the Sheriff's office*. The County Finance office confirmed that the amount of added Sheriff's Office staffing since 2011 (FY 2012) is nearly 70 positions. Not all of those positions are based in the Public Safety Building. For example, nearly 20 Courts deputies have been added and those "reside" in the courts buildings. 14 School Resource Officers have been added and those "reside" in the Schools. Per communication with the County Sheriff's office the Public Safety Building has seen staffing increases since 2011 and expects there will be additional staffing needs with growth in the County. Per feedback from the Sheriff's office the Criminal Investigation Division and Administrative Services are already space constrained and additional square footage will also provide opportunity to expand the Emergency Operations Center (EOC) to benefit both the Sheriff's office and FREM. In addition to need for additional space for staffing there is a critical need for additional storage space at the facility that is now insufficient. Presently a two story addition is envisioned. As part of the project review and design process the County may like to consider a below grade addition that would add additional square footage and additional opportunity for growth and space planning. A sub-grade basement addition could add an additional 4,000 sq ft.

The public safety expansion is estimated to address current space needs as well as needs ten (10) to fifteen (15) years into the future.

The Sheriff's Office maintains one substation, located in the Spotsylvania Towne Centre, and the Animal Shelter, located at 450 TV Drive.

Level of Service Standards

1. Maintain a 1 : 1,500 ratio of Deputies per capita.

Facility Location and Design Criteria

The following criteria should be used in determining appropriate sites and design for additional or expanded Sheriff and Animal Control facilities.

- Provide new facilities to adequately and efficiently serve all areas of the county.
- Provide animal shelter facilities consistent with 2-VAC 5-110 Rules and Regulations Pertaining to a Pound or Enclosure to be Maintained by each County or City (http://www.vdacs.virginia.gov/animals/regulations.shtml)

Recommendations

The following are recommendations for the provision of adequate Sheriff and Animal Control facilities.

Short Term

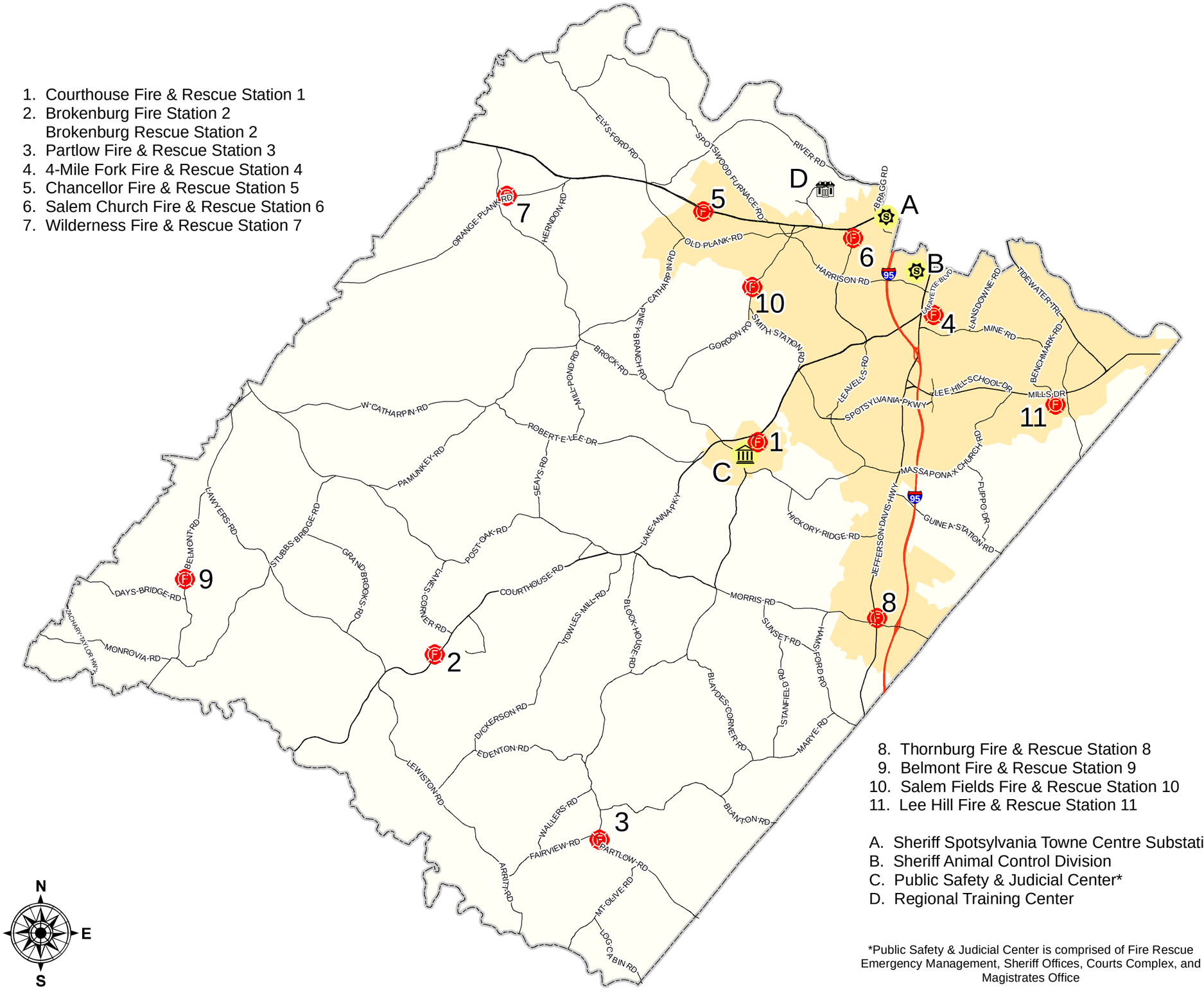
- Expand Animal Shelter or partner with non-profit animal shelter(s) to provide the service.
- Expand the public safety building to meet existing space needs and those within the planning period.

Long Term

- Substation in Livingston District co-located with other public facilities.

DRAFT

1. Courthouse Fire & Rescue Station 1
2. Brokenburg Fire Station 2
   Brokenburg Rescue Station 2
3. Partlow Fire & Rescue Station 3
4. 4-Mile Fork Fire & Rescue Station 4
5. Chancellor Fire & Rescue Station 5
6. Salem Church Fire & Rescue Station 6
7. Wilderness Fire & Rescue Station 7



8. Thornburg Fire & Rescue Station 8
9. Belmont Fire & Rescue Station 9
10. Salem Fields Fire & Rescue Station 10
11. Lee Hill Fire & Rescue Station 11

A. Sheriff Spotsylvania Towne Centre Substation
B. Sheriff Animal Control Division
C. Public Safety & Judicial Center*
D. Regional Training Center

*Public Safety & Judicial Center is comprised of Fire Rescue Emergency Management, Sheriff Offices, Courts Complex, and Magistrates Office

N
W E
S

Spotsylvania County Public Safety Existing Facilities

Legend

Public Safety Buildings

- Fire / Rescue Station
- Sheriff Substation
- Public Safety & Judicial Center
- Training Center
- Primary Development Boundary

0 1.25 2.5 5 Miles

Map Approved: _____

Chapter 4D

PUBLIC FACILITIES PLAN
SOLID WASTE COLLECTION & DISPOSAL

SOLID WASTE COLLECTION & DISPOSAL

Introduction

The Spotsylvania County Department of Public Works prepares a Solid Waste Management Plan every five years in accordance with the Virginia State Code. The Plan is an integral part of provision for solid waste services for Spotsylvania County and is incorporated as part of the Comprehensive Plan by reference. At the present time, the 2020 Solid Waste Management Plan is in effect. The next update is due in 2025. For planning purposes, the Comprehensive Plan incorporates by reference the latest version of the Solid Waste Management Plan. The Plan is based on a twenty (20) year planning period and deals with all aspects of solid waste management from operation of the landfill to the development of convenience sites to litter control efforts to the development of recycling and other educational programs. The objectives of this plan are to protect the health, safety and the welfare of the citizens of Spotsylvania by providing for and planning for the present and future solid waste disposal needs for the County. It is the intent of the County to provide these services as efficiently and economically as possible. The plan minimizes the amount of solid waste disposed of in the County's landfill by providing an integrated plan of recycling and education. This will serve to maximize the life span of the existing landfill and promote the effective and efficient use of limited natural resources. The information contained in this section is derived from that plan.

Existing Facilities

Spotsylvania County operates one landfill facility in the southern part of the County. Known as the Livingston Landfill, it is located north of State Route 602 and east of State Route 208 approximately 3 miles southeast of Brokenburg. The entire site covers approximately 538 acres, with 250 acres ultimately proposed for disposal of municipal solid waste. Future unknown variables, regulatory changes, efficiency improvements, increased recycling rates, population and waste generation changes over time all influence landfill lifecycle going forward beyond 2023. Though estimates vary, all agree additional phases will add over fifty (50) additional years to the landfill's estimated facility life beyond the Phase I closure.

Currently 85 acres are permitted for use as a landfill under the authority of the Virginia Department of Environmental Quality. This is designated as Phase 1 (cells 1 through 6). As per the 2020 Solid Waste Management Plan the estimated date of closure of Phase I is 2023. Of the 85 acres permitted as Phase 1, 55 acres will be actual disposal area with the remainder to be used for roads, drainage area, and buffers. The facility is designed with a capacity of 5.4 million cubic yards. This total includes 310,000 cubic yards of final cover (cap, cushion, and topsoil), 220,000 cubic yards of liner and drainage layers, 968,000 cubic yards of daily and intermediate cover and 3.87 million cubic yards of waste. The current waste stream five-year average (2015-2020) is 136,000 tons annually or 373 tons per day. This updated figure is up from 40,000 tons annually that had been reported as part of the 2013 Comprehensive Plan. As per the 2015 Spotsylvania County Solid Waste Management Plan in 2012/ 2013 a substantial increase was

observed due to an increase of commercial volume accepted at the Livingston Landfill. The County sourced commercial volume was previously leaving the County for private sector landfills in adjoining regions. Increased competitiveness due to more favorable tipping fees has been attributed to the shift of commercial haulers selecting the Livingston landfill over out of County sites. Commercial haulers/ users are defined as those customers delivering brush/leaves/landscape debris by means of mechanical dumping (dump trucks, box trucks, dump trailers) and vehicles clearly associated with a related commercial business (trucks with advertisements, trailers with multiple mowers, multiple site visits within 24 hours, etc). Solid Waste growth can also be attributed to an increase in economic activity and the landfill capturing the majority of any waste leaving the County. Solid Waste growth can also be attributed to an increase in economic activity and the landfill capturing the majority of any waste leaving the County.

Increased annual volumes inevitably impact the speed at which the landfill grows in relation to its ultimate capacity. However, increases in commercial tipping overall are viewed as beneficial in financial support of operations and offsetting costs associated with provision of Solid Waste Services. These increases also represent the County taking a larger share of solid waste management for solid waste generated within the County borders as opposed to its waste being exported out of the County.

The Solid Waste Division is actively looking at ways to add efficiencies and build additional capacity into existing operations including the Livingston Landfill whereby extending the viable life of such facilities while maintaining or improving upon levels of service. One example being considered during this planning period is the concept of landfill mining meant to increase the capacity and revitalize previously closed landfill cells.

Spotsylvania County maintains a comprehensive solid waste disposal program that includes the disposal of household, commercial, and industrial waste. The household component of the stream comprises approximately 90% of the waste that is placed in the landfill. The remainder consists of construction demolition and debris, and commercial and industrial waste (10%).

The Solid Waste Division, with the assistance of third-party consultants, is evaluating the landfill's existing gas extraction system and planning for potential opportunities to expand that system. The primary objective of the evaluation is to define best management practices for the future, and ensure that our existing system is operating, maintained, and monitored at an optimum level.

Currently, residents of the County are provided with 13 convenience sites located at various locations throughout the County. The sites have designated areas for household waste and recycling. Table 1 identifies the individual convenience sites.

Table 1
Spotsylvania County Convenience Sites

Convenience Site	Location
The Barn	2805 Lewiston Road
Belmont	7102 Belmont Road
Berkeley Public Use Area	6013 Stanfield Road
Chancellor Public Use Area	5917 Harrison Road
Chewning Park	13001 Post Oak Rd
Cole Hill Creek	5029 Partlow Road
Lee Hill	9904 Lee Hill Park Road
Livingston Landfill	6241 Massey Road
Marshall Park	7114 Massaponax Church Road
Mine Road	4010 Mine Road
Post Oak	10020 Post Oak Road
Todds Tavern	10653 Brock Road
Wilderness	10501 Orange Plank Road

More information regarding County convenience sites including: contact information; location; hours of operation; recycling items accepted can be found **HERE**.

Virginia mandates a recycling rate of 25%. In the most recent three years the County has achieved a recycling rate at a range of 28-36%. Single stream recycling containers are available at each convenience site. Single stream recycling includes mixed paper, plastics, cardboard, aluminum, and glass. In addition to single stream containers, the County also offers opportunities to recycle metal, used motor oil, antifreeze, batteries, appliances, latex paint, and brush and yard waste.

The County offers household hazard waste collection twice a year for residential disposal of chemicals, toxic wastes, or hazardous liquid materials. This collection effort is accomplished through third party contract services.

In accordance with the Biosolids Management Plan, Spotsylvania County adopted the composting process as the choice method to stabilize its biosolids. In 2001, the County committed to composting their biosolids, which also requires some materials from the mulching program. The composting facility is located at the Livingston Landfill and was expanded in 2010. The County composts 100% of biosolids produced and maintains 100% diversion of all wood waste out of the landfill. Tree trimmings, logs and brush are collected and periodically ground to provide the bulking agent required for the composting program. In 2003, the compost was registered with the United States Compost Seal of Testing Assurance Program. This program certifies through rigorous testing that the product not only achieves class A criteria according to the US EPA Part 503 regulations, but that it meets growing standards of quality for attributes such as particle size, stability, and soluble salt content to name a few. In that same year, the product was registered as a fertilizer with the Virginia Department of Agriculture. The compost

was later trademarked as Livingston's Blend and marketed/distributed with information regarding proper applications. The County was awarded the 2012 Gold Winner Solid Waste Association of North America Composting Division. Details of the award and Spotsylvania's composting operations can be found **HERE**.

Future Expectations

The County Code specifies that only waste that is both discarded and collected within the County limits may be disposed of at the County's Livingston landfill. This helps regulate the inflow of material and also helps plan for future landfill growth, as we can review trends of incoming material compared with population growth and development specific to Spotsylvania County. However, the County Code does not require commercial haulers doing business within the County to dispose of their collected waste at Livingston landfill, rather the Code specifies Livingston's tipping fees for commercial disposal. The dynamic of these two codes have balanced the waste steam at Livingston in years past.

Continued growth in the County whether it is commercial, industrial or residential will put additional pressure on the existing landfill and the convenience sites. The sequence of development for the Livingston Landfill currently includes five phases. The County has active permits for Phase I and has applied to the Department of Environmental Quality for permits to develop Phase II. Provided the waste stream grows at a similar rate as the population projections, phases I & II have the capacity to provide sanitary landfill services to the County until approximately 2047. Phases III, IV, and V are conceptual phases that identify potential landfill development on approximately 196 acres of County property. Estimated landfill capacity is subject to change with changes in County policy and code.

The Phase II development was initiated in 2018 with a landfill expansion conceptual evaluation. Many considerations were reviewed as part of the conceptual evaluation including: the property's wetlands and environmental setback requirements, the geographic location of existing landfill cells and opportunities to improve existing conditions while maximizing future capacity, expansion sequencing, cell development costs, cell volumes and cell life, and cost efficiency. As the design of phase II developed, project elements such as roads and disposal cells were modified to minimize direct impacts to wetlands and streams. Project elements were also designed to meet all Virginia Department of Environmental Quality siting criteria. The phase II lateral expansion of the landfill facility encompasses approximately 37 acres and consists of four waste disposal cells. The expansion provides for approximately 5,370,000 cubic yards of landfill capacity (not including liner and cap), which is equivalent to 3,423,000 tons of waste. Assuming a consistent and constant waste stream, the phase II expansion will provide approximately 24 years of life expectancy.

Environmental stewardship is a long-term strategic goal of the County. As part of the phase II development, the County intends to mine a portion of a disposal cell that stopped accepting waste in 1993. A portion of the closed cell, referred to as permit #99, does not have a geosynthetic membrane liner. The County intends to mine the unprotected buried waste area so

that a membrane liner may be installed and tied into the existing liners of adjacent cells. As a result of this solid waste management strategy, all buried waste at the Livingston property will be protected by a double geosynthetic membrane lining system which will provide long term protection of the groundwater system, minimizing environmental impacts and needs of long term corrective action planning.

Location Criteria

The existing Livingston landfill property has the acreage to provide sanitary landfill capacity throughout the 21st century and thus will not need replacement or relocation during this Comprehensive Plan horizon. Convenience sites should be located according to the following criteria.

- A 5-mile radius level of service standard should be maintained. This means that a convenience site's population should be within 5 miles of the site. Current geographical spacing of the County's convenience sites complements the 5-mile service area goals with coverage for the majority of County land and residents presently. Small service area gaps outside of the 5-mile service area exist in the northwest corner of the County near Spotswood Furnace Road; at Lake Anna near the Route 208 corridor and bridge crossing; Smith Road. Overall, these are not major population centers, and, in all instances, the additional mileage is less than 1 mile.
- Convenience sites should not be located on arterial or major collector roads.
- Preference should be given for joint use sites such as with fire/rescue station, parks, and other public facilities.
- The entrance to a convenience site should be readily accessible to the large vehicles required to service them.
- Adjoining land use (current and future) should be considered.
- Individual site use trends and traffic counts should be evaluated when determining new or expanded sites.

Design Criteria

- Convenience sites should be a minimum of two acres in area in order to accommodate parking, stacking and staging areas as well as the waste collection facilities. The sites should be of adequate size to expand if necessary.
- Sites should be located in areas that will allow for adequate screening of the facilities from adjacent land uses. Mitigation measures for the site's impact on adjacent properties should be addressed in the design of the site.
- Site should be planned to accommodate expansion, including site area, entrance design, road improvements, etc.

Recommendations

The following are recommendations for solid waste planning:

Short term

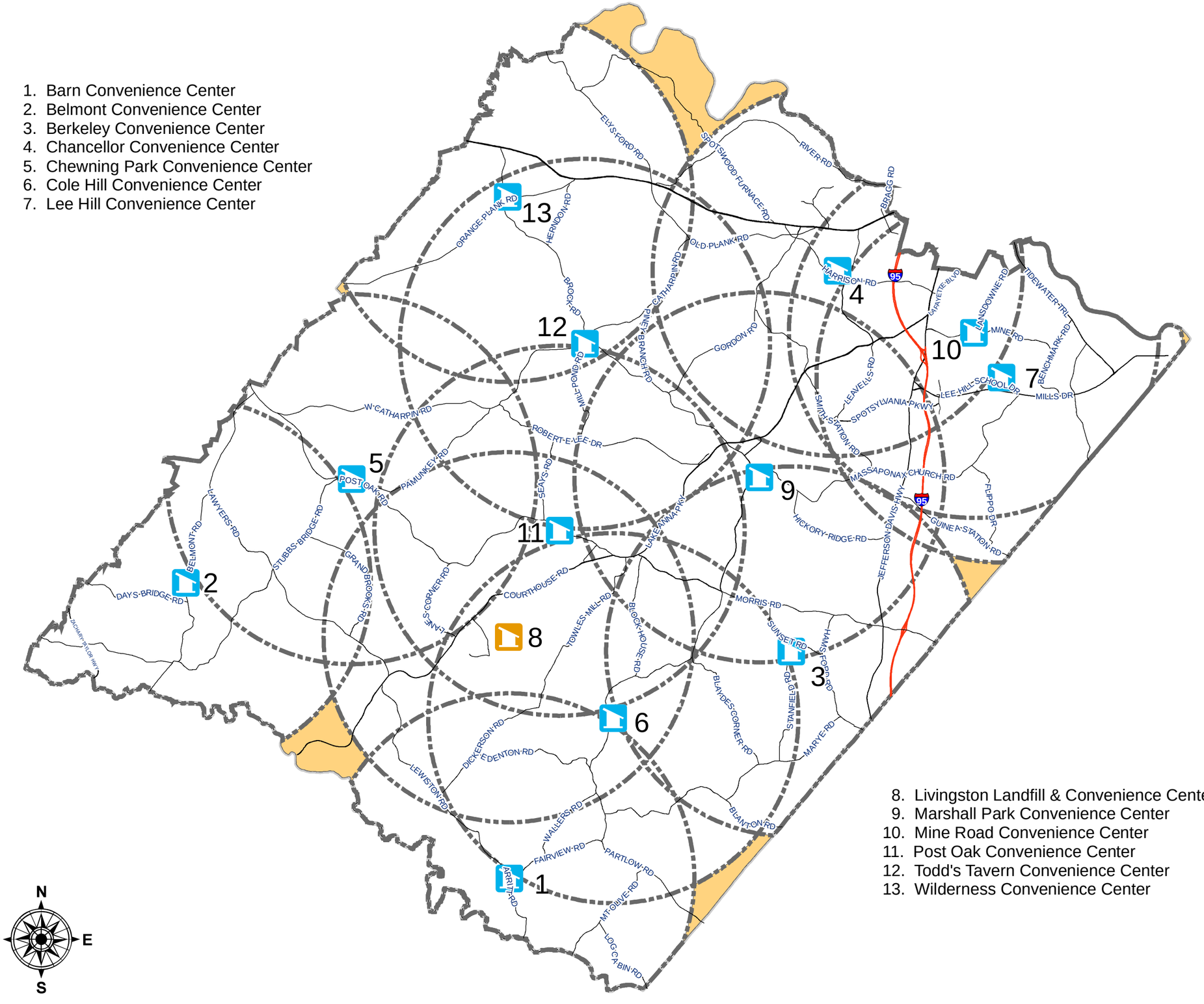
- Implement a County decal program that will enable solid waste staff to effectively identify residents of Spotsylvania County using convenience sites for residential use.
- Adopt a policy that restricts commercial disposal to a select number of disposal sites.
- Update tipping fees and disposal of select items with current market rates.
- Evaluate strategies to make brush and yard waste recycling operations sustainable, in cooperation with the County's composting facility.
- Continue to implement goals of the latest Solid Waste Management Plan that is incorporated by reference within the Comprehensive Plan.
- Consider one site to include the County's Public Works Center for collection, fleet, recycle processing, material transfer, and mulching.
- Continuously review and reference the Solid Waste Management Plan consistent with the Code of Virginia.
- Update applicable Chapters of the Comprehensive Plan upon completion of updates to the Solid Waste Management Plan update considering any future needs, opportunities, or recommendations that apply.

Long term

- Monitor recycling industry trends and markets on an international and national level.
- Update educational recycling programs as the industry grows and changes and continue to build partnerships with commercial recycling businesses.
- Continue developing sustainable solutions for bio solids, yard waste and brush recycling.
- Evaluate the benefits of managing the solid waste division as an enterprise fund.
- Evaluate the benefits of purchasing additional properties adjacent to the County's existing property. Additional property with sanitary landfill potential and value may provide long term solid waste management benefits to the County.

DRAFT

1. Barn Convenience Center
2. Belmont Convenience Center
3. Berkeley Convenience Center
4. Chancellor Convenience Center
5. Chewning Park Convenience Center
6. Cole Hill Convenience Center
7. Lee Hill Convenience Center



8. Livingston Landfill & Convenience Center
9. Marshall Park Convenience Center
10. Mine Road Convenience Center
11. Post Oak Convenience Center
12. Todd's Tavern Convenience Center
13. Wilderness Convenience Center

N
W E
S

Spotsylvania County Solid Waste 5-Mile Service Areas

Legend

Solid Waste Collection Centers

Items Accepted

- Household Trash Only
- Household, Commercial, Constr., Demo.
- 5 Mile Service Areas
- Located Beyond 5-Mile Service Area

0 1.25 2.5 5 Miles

Map Approved: _____

Chapter 4E

PUBLIC FACILITIES PLAN- WATER AND SEWER

WATER AND SEWER FACILITIES

Introduction

The latest approved version of the County Water and Sewer Master Plan is incorporated by reference into the Comprehensive Plan. It identifies short and long range improvements required to meet development guidelines as established by the Comprehensive Plan. As the County grows additional demand will be placed on water/sewer existing infrastructure and County water resources. It is an axiom of planning that development follows water and sewer lines, as well as roads. When these facilities are upgraded in response to growth pressures, their improvement can stimulate further development. That development will increase demands on schools, recreation programs, emergency services, and other services in a continuing cycle of growth, demand, service provision, and more growth. Ensuring that the provision of community facilities and public services is phased with demand is a major aim of any Comprehensive Planning process.

One of the most effective tools for directing the timing and location of growth is the establishment of a Primary Development Boundary to define the area within which public utilities will be provided. Utility services will not be provided by the County outside of the Primary Development Boundary, where development is discouraged. Per the Future Land Use Element of the Comprehensive Plan, areas located outside of the County Primary Development Boundary are overwhelmingly designated for rural residential and agriculture and forestal land uses. With lack of public water and sewer availability in these areas, water and sewer availability comes via private well and septic systems serving individual lots. Private utility services particularly for residential uses meant to serve collections of residences outside of the Primary Development Boundary are discouraged. The threat of systems failures (such as mass drainfields), insufficient funding, management, or maintenance poses risk for service supported residents reliant on such services and the County utilities department who may have few options but to take over management and maintenance functions in areas not intended for County utility service. By establishing a Primary Development Boundary, the County will encourage more efficient use of the land while preserving the rural character of those portions of the County outside the boundary. The Primary Development Boundary is depicted in the Primary Development Boundary Map, embedded within the Public Facilities Water and Sewer Facilities, and in the Future Land Use Map, located in Chapter 2. This boundary is not permanent and can be adjusted through the Comprehensive Plan amendment process when conditions warrant.

Existing Water Service

The Spotsylvania County water system, serves more than 32,000 customers with drinking water in the County and provides bulk finished water to the City of Fredericksburg. The distribution system consists of multiple pressure zones that are supplied by seven storage tanks, two water treatment facilities and three reservoirs.

The Spotsylvania County water system consists of the following principal features:

Ni Reservoir

The Ni Reservoir, the raw water supply to the adjacent Ni Water Treatment Plant, was constructed in 1974 and the reservoir has a volume of 1.4 billion gallons with a surface area of approximately 420 acres.

Ni Water Treatment Plant

The Ni WTP was constructed in 1974 expanded to its current peak capacity of 6.0 mgd.

Motts Run Reservoir

The Motts Run Reservoir was built in 1969 and is owned by the City of Fredericksburg, but is jointly operated by the City of Fredericksburg and Spotsylvania County. The total reservoir volume, prior to modifications, is 1.3 billion gallons with a surface area of 160 acres.

Motts Run Water Treatment Plant and Intake on the Rappahannock River

The Motts Run WTP serves Spotsylvania County and the City of Fredericksburg. The Motts Run water treatment facility and Rappahannock River raw water pumping station were completed in the spring of 2000. The plant currently has a firm capacity of approximately 12.5 mdg and a limited summer peak capacity of 15 mgd. The plant is expandable to 24 mgd.

Hunting Run Side-Stream Storage Reservoir and Intake on the Rapidan River

The Hunting Run water supply dam and side-stream reservoir was completed in November of 2002. The reservoir volume is 209 billion gallons and the surface area is approximately 420 acres. Water is released into the Rapidan River to supplement the Rappahannock River during periods of low flow to allow continued river intake for the Motts Run WTP.

Existing Sewer Service

Spotsylvania County sewerage system consists of the following principal features:

Massaponax Wastewater Treatment Plant

The Massaponax WWTP was constructed in 1975 and has been expanded to 9.4-mgd (million gallons per day) capacity. The plant is a state of the art biological nutrient removal facility. The wastewater treatment plant serves the Massaponax Creek drainage basin and includes the pump-over from the American Central sewage collection system and a small part of the upper Hazel Run drainage basin which is also pumped into the Massaponax Creek basin. Facilities are in place to enable sewage from the Deep Run drainage basin to be pumped to the Massaponax Creek drainage basin. Deep Run wastewater may also be treated at the FMC WWTP. Construction has been completed for the Courthouse Area Sewage Pumping Station that conveys sewage from the Courthouse Area to the Massaponax Creek interceptor.

FMC Wastewater Treatment Plant

The original FMC industrial WWTP began operation in 1967 and purchased by the County in 1980 and upgraded to 4-mgd capacity. Sewage from the City of Fredericksburg is treated at this plant.

Thornburg Wastewater Treatment Plant

The Thornburg WWTP was constructed in 1972 and has been expanded to a 345,000-gpd capacity.

Sewers and Interceptors

The sewer system is broken into collection sewers and four major interceptors. The interceptors are defined by the drainage basins that they serve: Massaponax Creek, Hazel Run, Deep Run, and Long Branch (which is a part of the Hazel Run drainage basin).

All Spotsylvania County sewers and interceptors have been mapped on the County GIS system.

GOALS, POLICIES, AND STRATEGIES

Goal: Within the Primary Development Boundary, provide a sufficient supply of high quality drinking water and a distribution system to serve the domestic, recreational, industrial, commercial, and fire protection needs of the community at the most economical price possible.

Policy: Supplement the existing supply of potable water and fire flow for Spotsylvania County citizens.

Strategies

1. Utilize the Water and Sewer Master Plan to develop a comprehensive approach for the development of new and/or additional water sources.
2. Utilize the Water and Sewer Master Plan to develop a Capital Improvement Program so as to phase water supply and fire flow improvements for designated County growth areas in a timely and cost effective manner.
    a. A project to construct a 1 MG elevated water storage tank and all attendant facilities and structures serving the tank including, but not limited to, utilities and roads, near Massaponax High School, and, if technically possible, to be located on Massaponax High School's property as that location is ideal to provide the best water service in the most cost efficient manner and will have the least impact on surrounding properties and/or environmental and/or historic resources of significance. This tank will provide additional storage volume to the County's distribution system, increase available fire flow rates to the Route 1 corridor and Thornburg areas, and help to support the anticipated water demand from future development in the Thornburg area. The tank may also allow for the colocation of telecommunications facilities to further support

the communication and broadband needs of County citizens. Construction for this project is planned to start in calendar year 2022.

3. Continue to promote a Water Conservation Program throughout the County and protect the County's surface and groundwater supplies for the benefit of all.
4. Provide for a cost sharing program with developers to fund water improvements.

Goal: Provide for the adequacy of all new and existing sewage treatment that meets the needs of the community in an environmentally safe manner and only in targeted growth areas of the County.

Policy: Locate new or upgraded sewer facilities consistent with the Water and Sewer Master Plan to support orderly and efficient development.

Strategies

1. Update and utilize the Water and Sewer Master Plan to provide a phased, prioritized program for the extension of the County sewer system to identified development districts.
2. Utilize the Water and Sewer Master Plan to develop a Capital Improvement Program to phase sewer treatment improvements for designated County growth areas in a timely and cost effective manner.
3. Continue to provide for a cost sharing program with developers to fund sewer improvements.
4. Eliminate and consolidate individual pump stations through the provision of regional pump stations or gravity sewer extensions.

Goal: Support capacity and efficiency enhancements to continue to provide quality service within a growing community.

Policy: Invest infrastructure enhancements in areas intended for growth, and strategically locate new facilities to the betterment of operations and customer service.

Strategies

1. Focus infrastructure expansion and enhancements to the Primary Development Boundary.
2. Discourage and avoid potential cost, maintenance, and management risks associated with private utility systems intended to serve collections of residential users with mass drainfields, etc. located outside of the Primary Development Boundary.
3. Seek to co-locate the County Utilities and Public Works group to a recently acquired parcel located along Gordon Road (TM 21-A-84,) through construction of a modern new facility with adequate facilities to meet the needs to service a growing customer base.
    a. Explore opportunities to co-locate additional public facilities onsite, including a potential park site on remaining acreage.

Chapter 4F

PUBLIC FACILITIES PLAN
LIBRARY FACILITIES

LIBRARY FACILITIES

Introduction

The Central Rappahannock Regional Library (CRRL) is a regional public library system serving the City of Fredericksburg and the Counties of Spotsylvania, Stafford, and Westmoreland. It is governed by a seven-member Board of Trustees appointed by the participating jurisdictions. The regional library was established in 1969 by the Commonwealth of Virginia as a model system to demonstrate the value of regional resource sharing between cooperating jurisdictions.

The CRRL system consists of a Library Administration Center and nine (9) branches as well as an Access Services location, IdeaSpace in downtown Fredericksburg, and a joint-use facility at Germanna Community College's Barbara J. Fried Center in Stafford County, all connected by daily courier service. The library offers an extensive regional collection of physical and electronic materials as well as wide-ranging databases. The Fredericksburg branch in downtown Fredericksburg houses special collections including Virginiana (historical and family research) and a Law Library. Access Services, adjacent to the Library Administration Center on Lafayette Boulevard, offers a Talking Book Library, free reading materials, and devices for the visually impaired or has language processing issues provided through a federally supported program. IdeaSpace, located on Princess Anne Street, is a stand-alone makerspace offering state-of-the-art technologies such as a soundbooth for audio/video recording, 3D printers, and drawing tablets. Library on the Go, CRRL's outreach program, provides library services to communities and facilities with limited access to library branches. Library on the Go includes two (2) satellite centers in rural locations in Spotsylvania County with internet access and wireless printing, mobile Grow a Reader outreach to area preschools, Head Start programs, and Lobby Stop service to local assisted living and senior apartments. All administrative functions of CRRL are centralized at the Library Administration Center including collection services, accounting, human resources, graphics, and network services.

Existing Facilities

Three (3) CRRL branches are located in Spotsylvania County. The Salem Church branch, on Salem Church Road, was first opened in 1994; the facility was expanded and renovated in 2009. The C. Melvin Snow branch in the Spotsylvania County courthouse area opened in 1998, and the County's most recent library facility, the Spotsylvania Towne Centre branch, opened in August 2018. The County also has two (2) satellite locations, one (1) each in the Livingston and Berkeley districts that operate on a limited schedule.

Table 1 below lists the existing permanent library facilities directly serving Spotsylvania County and their capacities in terms of overall floor space together with the current total of materials at each branch, as well as the system holdings available to Spotsylvania residents.

Table 1
Spotsylvania County Library Resources

Branch	Gross Sq. Ft. of Floor Space	Total Books / Materials
Salem Church Branch	25,000	95,523
Snow Branch (Spotsylvania Courthouse)	5,000	31,473
Spotsylvania Towne Centre Branch	2,100	6,049
Spotsylvania Physical Collection Subtotal	**32,100**	**133,045**
Fredericksburg Branch* (Central)	12,300	30,994
Regional Physical Collection Subtotal	**44,400**	**164,039**
Digital Collection**		38,394
Regional Collection (Physical and Electronic)	**44,400 (.3 sq ft/capita)**	**202,433**

*The Fredericksburg Branch facility, used jointly by residents in the City of Fredericksburg, Stafford, and Spotsylvania Counties is 36,900 sq. ft. For purposes of space analysis, 12,300 sq. ft. is attributed to the total square footage of each jurisdiction.

**The Digital Collection, used jointly by residents in the City of Fredericksburg, Stafford, and Spotsylvania Counties consists of 115,183 materials. For purposes of collection analysis, one-third of that collection or 38,394 materials are attributed to Total Books and Materials.

Standards

Spotsylvania County residents benefit from participation in a regional library system and as such, can access the collections and databases, resources, staff expertise, and technologies of a much larger library. CRRL has been recognized nationally as a Star Library by the Library Journal Index of Public Library Service for ten (10) years based on physical materials circulation, electronic materials circulation, branch visits, program attendance, and public computer use.

Planning for Library Excellence: Standards for Virginia Public Libraries (PFLE) are the recommended standards for public libraries approved and adopted by the Library of Virginia Board. PFLE, updated in 2019, has established the following service ratings: essential, enhanced and exemplary, accompanied by a corresponding star rating for ease of use and advocacy.

E = "Essential" services meeting the basic needs and expectations of a public library, including circulation, internet access, and basic reference assistance, as mandated in the Code of Virginia. ★
EE = "Enhanced" services, providing a robust array of services beyond basic needs and

expectations, such as community programming for all ages, a responsive digital environment, and specific research assistance. ★★
EEE = "Exemplary" services with advanced features in service provision on all fronts. ★★★

PFLE 2019 service ratings are simultaneously cumulative, progressive and aspirational. For example, to attain an E ★ rating, a library will meet ALL criteria but may surpass some E ★ requirements. Wherever possible, the measures are progressive and aspirational, as a library system purposefully and strategically sets its sights on the next rating, as community need and funding dictates. CRRL strives and plans for a minimum EE rating in the core adopted standards listed below; CRRL currently meets the rating for Collections. The EE ★★ rating requirements are included below.

Level of Service Standards

Collections

High-quality collections are carefully built over time. A successful collection supports the services the library provides and helps the library meet its defined goals. Collection development also takes into account other library and information resources in the community, the region, and the state. Weeding outdated, unused, and inaccurate materials is part of the collection development process.

A successful collection embodies the principle of free access to ideas on all sides of an issue, including potentially controversial topics. The size and format mix of a successful collection is unique to each community, considering factors such as broadband access, population and square mileage served, facility square footage, annual budget, circulation, etc. Those responsible for collections should develop a strategy to determine their own community needs.

CRRL's Collections Level: EE ★★
★★ 1: The library complies with all standards of Level E.
★★ 2: The library provides digital resources to supplement those made available by the Library of Virginia, as meets the needs of its communities.
★★ 3: The library has a preservation policy, if it holds special collections, including local history.
★★ 4: At least every three years, the library evaluates its collection to determine strengths and weaknesses, allocating resources to address the identified weaknesses.

Facilities - Size and Location

A public library building should offer the community a compelling invitation to enter. The building design should be adaptable to changing use patterns. The building should accommodate public use, support staff efficiency, and encourage economy. It must comply with the latest regulations of the Americans with Disabilities Act and all local and state requirements for public buildings. Please note that the square footages indicated are TOTAL square footages for the population and may be spread among branches. For example, a four-branch library system might determine their square footage based on voting district populations or other municipality divisions to determine

appropriate square footage for an individual branch. As a general guideline, libraries should strive to meet the below recommendation but library size should be determined by a space/needs analysis for that community.

CRRL currently offers Spotsylvania County residents .3 square feet per capita of physical facility space; the minimum threshold to meet EE★★ is .7 square feet per capita.

Service Level	Population Served (Spotsylvania County)	Total Gross Square Feet per Capita
EE★★	100,001 - 500,000	.7 SF

CRRL's Facilities Level: E ★
Goal Facilities Level: EE ★★

★★ 1: The library complies with all standards of level E.

★★ 2: The building promotes energy efficiency, usage of natural daylight, waste reduction, and improvement of air quality.

★★ 3: When possible, newly constructed and renovated library facilities are to be "green" or sustainable facilities, constructed with ecologically sound materials.

★★ 4: Library facilities are located:

- in urban areas, no more than 15 minutes' driving time from residents as an average of multiple travel time studies from a) the edges of the service area to the nearest available library and b) between available libraries.
- in rural areas, no more than 20 minutes' driving time from residents.
- where possible, on a public transportation route.

Recommendations and Future Needs

Although use of electronic materials has increased, there remains a strong need for fixed library facilities. CRRL customers continue to demand physical materials, quality age-level programming, public computers, and group meeting spaces therefore the standards adopted by the Library of Virginia Board and CRRL Board of Trustees remain applicable. Residential expansion in the Massaponax area has created a need for a fourth County branch as residents in that area must travel to the Spotsylvania Courthouse, downtown Fredericksburg, or Route 3 for library services. Those three (3) locations are all 8-10 miles from Massaponax with a drive of 15 - 20 minutes.

Presently, residents of the Livingston and Berkeley District can access library services including computers with wireless internet, wireless printing, and homework help from satellite locations in those communities one evening a week. However, small library branches similar to the Snow branch should be considered in future planning so those residents will have access to the full range of library services.

Chapter 4G

PUBLIC FACILITIES PLAN- PARKS AND RECREATION

PARKS AND RECREATION FACILITIES

Introduction

The Parks and Recreation Facilities Plan (The Plan) combines leisure and recreational objectives with the suitable locations necessary to provide a broad-based recreation and open space programs. Parks and recreation facilities provide visual relief from concrete and pavement, make surroundings more habitable, and preserve and protect natural and historical resources. These facilities provide varying recreational opportunities for people of all ages, income levels, ethnic groups and physical abilities. As Spotsylvania County continues to grow, the significance of parks and recreation planning, including land acquisition and development increases. This Chapter provides detailed standards, criteria and policies for provision of recreation facilities.

The County's Department of Parks and Recreation (The Department) is responsible for maintaining all County operated parks and community centers. The Parks and Recreation Department is responsible for youth and adult sports and facilities within the County. The Department is responsible for planning, implementing, and evaluating sports programs. This includes volunteer coach recruitment and background checks; contracting and scheduling officials; facility scheduling; maintenance, requisitioning, inventory, and distribution of equipment for each sport; supervision of sport activities; advertisement of program offering; certification of youth coaches; scheduling regular season play and tournaments; and scheduling field use for private groups. A summary of Fiscal Year 2018 Field/ Gym Rentals through the Department has been provided for reference below (See Table 1):

Table 1: Fiscal Year '18 Spotsylvania Parks and Recreation Field and Gym Reservation through the Department*

Sport	Games	Practices	TOTAL
Football	31	95	126
Basketball	65	217	282
Soccer	344	274	618
Baseball/ Softball	1,630	2,365	3,995
Total	2,070	2,951	**5,021**
*FY '18 rental activities include school fields and gyms.			

This data can be updated to track Parks and Recreation field/gym rentals activities over time. Due to the Covid outbreak there was a significant downturn in activities during months that are typically of heaviest use for sports facilities. Covid significantly impacted fiscal year 2020 resulting in a-typical results during that time. As of now the impacts of Covid are not expected

to be suggestive of a long term trend. Continued monitor of field activities going forward will help establish clearer trend lines for demand.

Due to the popularity of organized sports teams, the Department has identified a need for additional playing and practice fields. Future park development in the County will be aimed at meeting these, and other identified level of service-based needs.

The Department is responsible for training, directing, and supervising approximately 175 full-time, part-time, and seasonal employees and over 2,794 volunteers. The parks maintenance staff manages and maintains parks, recreational areas and facilities to assure safe, healthy, and attractive passive and active leisure activities. The staff also prepares school and other athletic fields for recreation and sports programs.

The Department continues to strengthen its cooperative relationship with the school system in the design, development, use, and maintenance of school recreational facilities. This relationship is critical in the overall delivery of parks and recreation facilities County-wide and includes recreational land of 92 acres at elementary schools, approximately 57 acres at middle schools and 31 acres at the high school level. Elementary and middle schools make up the majority of the school recreation space consistently available for after school community use. High school use is limited dependent upon the time of year and amenity. 8 acres are also available at John J. Wright Educational and Cultural Center.

For more information about the County Parks and Recreation Department including facilities, activities, and programs, the Department publishes an annual report that can be found **HERE**.

Existing Facilities

In order to achieve the long range goals of the Department, it is necessary to review the inventory of current parklands and facilities to determine acceptable level of service standards and to then establish a strategic plan for the identification of new facilities as the County grows.

In 2020, 535.5 acres of accessible County parkland is operated by the Department. The County also owns a future District Park size 65-acre site known as the Hilldrup Tract that is not presently developed or accessible as a usable park. Within the planning period, staff expects additional public access parks acreage to be made accessible at Keswick Park (36 Acres Community Park site and amenities) and the Fortunes Landing fifteen (15) acre Special Use Park fronting the Ni Reservoir. These new park acres, when activated, will add an additional 131 acres to the inventory for a total parkland inventory of 651.5 acres.

Additionally, it is estimated that there are approximately 188 acres of School Board shared use recreational space that is programmed by the Department for community use at elementary, middle, and high school sites. This figure also includes the John J Wright Educational and Cultural Center.

The Department also operates the County's community centers. These centers, in addition to the available spaces within the County libraries, offer a valuable resource to the County population in the provision of events and meeting space. It is important that provision of these spaces continue to serve the variety of needs of County residents.

As a complement to County Parks managed facilities, Spotsylvania County is fortunate to have the Fredericksburg and Spotsylvania National Battlefield Parks encompassing 5,800 acres within the County to serve some of the passive recreation needs. Lake Anna, a 13,000-acre man-made lake, is one of Spotsylvania's most valuable recreational resources. Water skiing, boating and swimming attracts thousands of visitors to its shores. Anglers can take advantage of the more than 33 species of fish found in its stocked waters. Lake Anna State Park with its 2,810 acres is a focal point of Lake Anna. More than 9,900 acres of the County's current land uses are public parklands. The State and Federal parks, however, are not controlled by the County and their missions and offerings are not identical to those of the County's and, therefore, cannot provide some of the recreational opportunities sought by residents.

Activation Type

Parks may have distinctly different intended uses and character. Park activation for different user groups tends to be identified as either for passive recreation (passive parks) or active recreation (active parks). Some parks may have a combination of both active and passive offerings. The character of active and passive parks is summarized below:

Passive Parks

A passive park is an outdoor area, or portion of an outdoor area that is used for passive recreational activities, such as pedestrian activities, hiking, and jogging, or serves as an historical, cultural, ecological, or archeological attraction for exploration, education, interpretation. A passive park does not include organized competitive activities, except events for uses allowable within a passive park. Generally, a passive park is maintained in a natural state, except for minimal clearing for paths, trails, sitting area, walkways or auxiliary structures. In urban settings, passive parks may have more hardscape (walking paths, sitting walls, etc.), open lawn, and landscaped areas that may be used for informal group activities. Examples of passive park features may include: trails or walkways for hiking, walking, horseback riding, bicycling; informal areas used for concerts, areas for photography, nature studies, educational studies, or fishing; ecological areas and nature interpretive programs; nature centers; ornamental gardens or landscapes; historical markers, public arts installations or civic monuments; scenic overlooks; and picnic areas that may include but are not limited to shelters, grilling areas , and restrooms.

Active Parks

An active park refers to any outdoor area that includes the following facilities or facility types: athletic fields; sports complexes, buildings or structures for recreational activities; concessions; community gardens; courses or courts; ball fields; children's play area, dog play area, swimming area, or a bike path. Active parks may allow for uses such as organized team sports; or serve as a cultural, historical or archeological attraction that is open to the public.

Classification

There are six main classifications of parks located within the County, including District Parks, Community Parks, Special Use Parks (incl. Trails/ Linear Parks), County Schools shared use recreational space, Neighborhood Parks, and Other Parks (ex. State & National Parks). These classifications have been described and inventoried below (Table 2):

Table 2: Existing Public Park & Recreation Areas

Park	Classification	Active	Passive	Total Acres
Hilldrup (Tract)* - *presently undeveloped*	District Park	-	-	65*
Loriella Park	District Park	61	147	208
Patriot Park	District Park	40	91	131
Keswick Park*	Community Park	-	-	36*
Arritt Park	Community Park	14	12.5	26.5
Chewning Park	Community Park	7.5	2.5	10
Cosner Park	Community Park	9	2	11
Harrison Road Park	Community Park	10	12	22
Lee Hill Park	Community Park	6.5	13.5	20
Legion Fields/Marshall Center	Community Park	22	2	24
Marshall Park	Community Park	14	11	25
Mary Lee Carter Park	Community Park	4.0	0.5	4.5
Hunting Run Recreation Area	Special Use Park	20	0	20
Ni River Recreation Area	Special Use Park	1	4	5
Belmont Park	Special Use Park	0	23	23
Fortunes Landing*	Special Use Park	-	-	15*
Virginia Central Trail	Trails/ Linear Parks	2	3.5	5.5
TOTAL COUNTY PARK ACREAGE		217.5	324.5	535.5*

*Keswick, Fortune's Landing and Hilldrup not included in Total Acres calculation. Keswick and Fortune's Landing Parks are expected within the planning period but have not yet been completed or open for public access as of Comprehensive Plan adoption. The Hilldrup Tract is the site of a future but not yet open public park site. When developed and accessible, Total Acres will be 651.5.

District Parks

District Parks are large parks usually greater than fifty acres in size. They contain the most extensive facilities of the County parks system. These types of parks tend to be the most popular of County Parks and Recreation managed parks due to their size, location, and ability to attract organized recreational activities such as league sports, and abundance of recreational facilities. District Parks are generally located in urbanized areas and offer a variety of facilities such as: swimming pools, amphitheaters and recreation centers. District Parks serve a larger area of the County and offer facilities that people are willing to travel further to use. The service area for a District Park is usually within a twenty-minute drive or about six to twelve miles, depending on the urbanization of the area. District Parks should be located near major collector roads in order to provide greater access to them. The park should also be accessible by pedestrians and bicycles. Spotsylvania County currently has three District Parks, they are identified in the table above. However, only two of these parks are developed (Patriot and Loriella). The Hilldrup tract is sixty-five (65) acres in size and currently undeveloped.

Community Parks

Community Parks are recreational areas containing four to fifty acres that provide a wide range of activities (varying based on size). Community Parks generally include: tennis courts, playgrounds, baseball/softball fields, multi-purpose fields, basketball and picnic areas. The service area for community parks is a ten-minute drive or approximately two to six miles, depending upon where the park is located and the degree of urbanization. There are eight Community Parks currently located within Spotsylvania County. A ninth is expected within the planning period with the future opening of the 36-acre Keswick Park. Due to location, limited size and recreational amenities offered, the smaller Community Parks may not and have tended not to attract as much interest among County residents as the larger Community and District Parks.

Special Use Parks

Special Use Parks have a county-wide service area and provide unique activities such as boating & fishing areas, dog parks, water parks, skateboard parks, golf courses, linear trail systems, community centers, and other facilities that are usually not found in other County parks. There are three Special Use Parks within the County with a fourth expected within the planning period at Fortune's Landing. Belmont is currently an undeveloped Special Use/ Community Park. Both Hunting Run Recreation Area and Ni River Recreational Area offer boat rentals, boat ramps, and fishing areas. The County is lacking in many of the more niche facilities that can be offered through Special Use Parks and these underserved needs should be taken into account when planning for development. The Motts Run Reservoir would also be considered a Special Use Park; however, operated by the City of Fredericksburg, the facility has not been included in calculations.

Image 1: Hunting Run Recreational Area

The County also manages a roughly 2-mile-long section of the Virginia Central Trail at present, classified as Trails/ Linear Park. Trails/ Linear Park areas are specialized areas within the County that are established to protect and preserve natural areas and cultural corridors, linking Spotsylvania County residents with recreational areas. By utilizing natural areas, abandoned railroad right-of-ways, along utility easements, and greenways along waterways, the Parks Department could provide low cost trails that provide both recreation and non-motorized transportation. Linear Parks can be any length, and include picnic areas, historic areas, and trails.

Image 2: Virginia Central Trail

County Schools Shared Use Recreational Space

County Schools Shared Use Recreational Space provide additional recreational areas within Spotsylvania County and are jointly operated and maintained by the School System and Parks and Recreation Department. Such Shared Use Recreational Spaces are similar to Community Parks in the activities they provide such as: tennis courts, gymnasiums, athletic fields, playgrounds, and basketball courts. The service area is two to six miles or a ten-minute driving area. While the Spotsylvania County School Board's primary mission is providing the education of children, an inherent part of the education system is physical fitness. The School Board provides gymnasiums, playgrounds, multi-purpose fields, tennis courts, and basketball courts located on school grounds. Also designating schools as Community Use Parks, allows for additional passive and active recreational area for County residents. The County Schools Shared Use Recreational Space range in size as shown in Table 3 below.

Table 3: Existing County Schools Shared Use Recreational Space

Elementary Schools	Total Acreage	Active Acreage
Battlefield Elementary School	60	3.5
Berkeley Elementary School	17	4
Brock Road Elementary School	24.3	6.3
Cedar Forest Elementary School	55	7
Chancellor Elementary School	12	4.1
Courthouse Road Elementary School	30	3
Courtland Elementary School	(*)	7.5
Harrison Road Elementary School	(*)	3
Lee Hill Elementary School	21.4	4
Livingston Elementary School	15.1	4.1
Parkside Elementary School	26.8	7.8
Riverview Elementary School	29.8	7
Robert E. Lee Elementary School	14.1	4.1
Salem Elementary School	19.5	4.5
Smith Station Elementary School	24.9	10.9
Spotswood Elementary School	19.2	4.2
Wilderness Elementary School	104	7
TOTAL:	**473.1**	**92**

Middle Schools	Total Acreage	Active Acreage
Battlefield Middle School	(*)	3.5
Chancellor Middle School	(*)	8
Freedom Middle School	76.7	10
Ni River Middle School	(*)	10
Post Oak Middle School	(*)	4
Thornburg Middle School	(*)	8.5
Spotsylvania Middle School	34	12.5
TOTAL:	**110.7**	**56.5**

High Schools	Total Acreage	Active Acreage
Chancellor High School	94.1	5
Courtland High School	100	7
Massaponax High School	105.4	8
Riverbend High School	90.3	5
Spotsylvania High School	250	6
TOTAL:	**639.8**	**31**

Other	Total Acreage	Active Acreage
John J. Wright Educational and Cultural Center	19.6	8
TOTAL:	**19.6**	**8**

Note the (*) above represents schools that share land (total acreage). Active acreage has been separated out by school within the larger "complex" when multiple schools are on a single campus.

Non-County Operated Parks

Summaries for Parks within Spotsylvania County including Neighborhood Parks and Other Public and Private Parks described below are not owned by the County and are not operated by the Department of Parks and Recreation. These areas provide varying levels of recreational opportunities and access to County citizens are considered contributing and complementary to County-wide Parks and Recreation goals.

In 2008-2009 during the development of the 2009 Parks and Open Space Element within the 2008 Comprehensive Plan (Parks and Open Space Element added via Comprehensive Plan Amendment) a concept was presented that would have reduced the satisfactory County level of service (LOS) standard for park acres and facilities to 75% of standard; a 25% reduction cognizant of non-County owned Parks and Recreation type facilities. When the subject was discussed at the Parks and Recreation Commission on October 16, 2008, the Parks and Recreation Commission had supported the reduced standard.

The 75% of standard concept was ultimately not supported by the Board of Supervisors and a 100% of standard including County schools shared use recreational spaces (open to public use) was adopted at public hearing on March 10, 2009. There were a number of reasons why the LOS discount was not supported including: (1) not all outside facilities could be considered open to all County residents (limited to paying members or residents of a specific community or HOA); (2) purpose and management of outside facilities may have focus that deviates from that of a public park; (3) standard was adopted as a County Parks and Recreation services standard and should not be discounted by outside resources. Further discount essentially diminishes the quality and quantity of County Parks and/or their facilities.

Since 2009, the 100% LOS standard including the schools shared use recreational spaces was subsequently reviewed with the Comprehensive Plan Public Facilities Advisory Groups and carried forward with the adoption of the 2013 Comprehensive Plan and it remains today in the current iteration of the Comprehensive Plan.

As a result, the Parks described below are acknowledged and valued but historically have not been included within Parks and Recreation acreage or facilities inventories used to calculate County LOS standard surpluses or deficits to determine whether additional facilities are warranted.

Neighborhood Parks

The County historically has not developed nor maintained any Neighborhood Parks as many such parks exist through neighborhood homeowner's associations in subdivisions that offer such amenities. Neighborhoods associated with Lee's Hill, Summerfield, and Fawn Lake are some

examples. The County acknowledges that homeowner's association recreational amenities such as tennis courts, pools, gyms, tot lots, and golf courses provide valuable resources to County citizens within the developments in which they reside and can meet the recreational needs of some in the community. However, such Parks are not widely accessible for public access and such facilities can be limited in their offerings depending on the development scale and resources. Being privately managed, the County historically has not tracked and has no management role with Neighborhood Parks and their recreational facilities.

Other Public and Private Parks

National Parks:

Spotsylvania County has four significant American Civil War Battlefield Parks as well as the standalone Salem Church historic battlefield site (part of the Battle of Chancellorsville) managed by the National Park Service encompassing over 6,200 acres within the County to meet some of its passive recreational needs. With easements the total land area expands to over 7,200 acres. The four national battlefields represent not only a segment of cultural resources, but substantial passive recreational land and open space area, within the County. A current inventory of the National Park Service managed land area within Spotsylvania County and their interpretive trails has been compiled in Table 4 below:

Table 4: National Parks Inventory

National Military Parks	Total Acreage Owned	Passive Acreage Owned	Total Acreage (With Easements)	Interpretive Trails (Miles)
Chancellorsville Battlefield	1,840.3	1,840.3	2,712.4	6.8
Fredericksburg Battlefield	1,230.4	1,230.4	1,341.3	5.6
Spotsylvania Battlefield	1,327.8	1,327.8	1,394.9	5.9
Wilderness Battlefield	1,810.1	1,810.1	1,846.6	3.9
Salem Church	3.2	3.2	3.2	-
TOTAL:	6,211.8	6,211.8	7,298.4	22.2

Additional Public Access Protected Civil War Battlefield Lands:

Additional Civil War battlefield lands have been preserved by the Civil War Trust as well as the Central Virginia Battlefields Trust. The Civil War Trust manages an additional 415.91 acres of preserved, publicly accessible lands traversed by 5.52 miles of interpretive trails (3.64 miles at Chancellorsville and 1.88 miles at Slaughter Pen Farm (part of the Fredericksburg Battlefield) off Tidewater Trail in the northeast of the County.

As of 2020, the Central Virginia Battlefields Trust has 461 acres in ownership with an additional 8.63 acres in easement. Easement acreage is not readily open for public access except by organized tour or with granted permission of landowners. Harris Farm (1.74 acres) and Pelham's

Corner (4.5 acres) are always open to the public and include interpretive wayside exhibits, monument at Harris Farm, and a cannon at the Pelham's site. The Central Virginia Battlefields Trust stress that the remaining acreage is not generally open to the public except for special tours operated by the CVBT, NPS, or others with permission. CVBT manages no interpretive trails.

State Parks:

Lake Anna is a 13,000-acre manmade lake and is a valuable recreational resource. Fishing, camping, water skiing, boating, and swimming in Lake Anna and 2,810-acre Lake Anna State Park attracts thousands of visitors to the area. Anglers can take advantage of the more than 33 species of fish found in its stocked waters. An inventory of Lake Anna State Park amenities has been compiled in Table 5 below. This information is provided in the Virginia Department of Conservation and Recreation 2017 inventory of outdoor recreation facilities. Lake Anna State Park also offers Cabin and Campground rentals.

Table 5: State Parks Inventory

State Parks	Total Acreage	Active Acreage	Lake Fishing Acres	Beach Acres	Boat Accesses	Hiking Trail (Miles)	Horse Trail (Miles)
Lake Anna State Park	2,810	60	13,000	2	3	15	5

Privately Operated Recreational Facilities:

There are a number of privately operated recreational facilities within Spotsylvania County. The County acknowledges their presence and services offered to members of the community. A variety of private gyms and fitness centers are available for membership-based health and fitness offering opportunities including but not limited to: weightlifting; running/ track; weight loss and/or cardio training; yoga; indoor pools, organized instructor led exercise, etc. One such facility, the Rappahannock Area YMCA is located adjacent to the County's Patriot Park. The Virginia Youth Soccer Association and Fredericksburg Football Club (FFC) (formerly known as Fredericksburg Area Soccer Association (FASA)) operate a large outdoor soccer complex in the New Post Area of the County, hosting large tournaments. The Fredericksburg Field House offers indoor turf fields for organized sports. An 18-hole golf course, tennis, pool, fitness/ gym is offered at the Fredericksburg Country Club for members. A private disc golf course is offered at The Blockhouse Disc Golf and Country Club off Block House Road. Private camping is offered at the KOA Campground off Guinea Station Road, and the Indian Acres Club of Thornburg off Morris Road.

Meeting Spaces at Community Centers and Public Libraries

The following facilities (Table 6) are owned and operated by the County or are maintained in part by the County through mutual agreement. Information is provided for planning purposes. Utilization data is included in the Parks & Recreation annual report (Accessible Online **HERE**).

Meeting spaces are used for a variety of functions ranging from parties and celebrations to strategic planning meetings for members of the local business community. In recognizing the variety of users of the space, it is important to recognize the different needs that they may have for the space. The most important identified needs are the availability of kitchen facilities for the celebratory type uses of the facilities, and the provision of internet access for the business-related uses of the spaces.

Table 6: Existing Meeting Spaces at Community Centers and Public Libraries

Facility	Internet Access	Kitchen	Meeting Space Size (sf)	Total Acreage	Active Acreage
Berkeley Community Center	Yes	Yes	1,560	5	2
Chancellor Community Center	No	Yes	1,230	1	1
Cosner Park/Lee Hill Community Center*	Yes	Yes	2,080	-	-
Todds Tavern Community Center	No	Yes	928	2	2
Marshall Center Auditorium	No	No	5,000	N/A	N/A
Marshall Center Activity Room A**	No	No	1,080	N/A	N/A
Marshall Center Activity Room B**	No	No	1,080	N/A	N/A
Marshall Center Activity Room C**	No	No	1,080	N/A	N/A
Marshall Center Activity Room D**	No	No	936	N/A	N/A
Salem Church Library	Yes	2/6 rooms have access	1,932	N/A	N/A
Senior Center at Marshall Center- Main Lounge**	Yes	Yes	3,819	4	3
Snow Library	Yes	No	1,147	N/A	N/A
Library at Spotsylvania Towne Center	Yes	No	N/A	N/A	N/A
TOTAL COUNTY MEETING SPACE	-	-	21,872	12	8

*Cosner Park/ Lee Hill Community Center acreage reported separately as part of Cosner Park total acreage in Existing Parks and Recreation Areas Table.
** Marshall Center meeting spaces can accommodate multiple user groups simultaneously. However, kitchen space is limited to the Senior Center- Main Lounge.

County Parks Facilities Inventory

The Spotsylvania County Parks Facilities Inventory quantifies the number of facilities located County-wide. The facility inventory is a useful tool to review not only existing facilities available but those needed in the future considering LOS Standards based on population. Currently, there are no County operated public golf courses, indoor pools or recreational centers, roller skating rink, skateboard park, dog parks, racquetball courts, equestrian trails, or volleyball courts. These are more specialized or niche facilities that should be considered based on demand when opening a new park facility or adding to existing parks as funding is available. The Inventory sheets on the following pages (Exhibit 1) summarize Parks facilities available at County Parks and Community Centers.

Exhibit 1: Facilities Inventory

Parks and Recreation Facilities (9-24-18) Revised 1-8-21

Arritt Park

- 1- Small Multi-Purpose Field
- 2- Small Diamonds
- 1 Picnic Shelter (10 Tables)
- Pond
- Playground
- Restrooms
- Picnic Area (4 random tables)

Berkeley Community Center

- Meeting Room
- Kitchen
- Restrooms

Chancellor Community Center

- Meeting Room
- Kitchen
- Restrooms
- Tennis/ Pickle Ball Court

Chewning Park

- 2- Small Diamonds
- Picnic Area (1 random table)
- 1 Picnic Shelter (6 Tables)
- Playground
- Restrooms

Cosner Park

- 2- Small Diamonds
- 2-Basketball Outdoor Courts
- 1- Large Multi-Purpose Field
- Playground
- 2-Lighted Tennis/ Pickle Ball Courts
- Picnic Area (1 random table)

Harrison Road Park

- 1 Large Diamond
- 2- Small Multi-Purpose Field
- Playground
- Picnic Area (1 random table)
- Trail 2.1 Miles (see Virginia Central Trail)

Virginia Central Trail

- Trails 1.2 & .9 Miles

Hunting Run Recreation Area (March-October)

- Boat Rental/ Check –In Station
- Boat Launch Area w/ dock
- Fishing
- Fishing Pier
- Restrooms
- Picnic Area (9 random tables)

Lee Hill Community Center

- Meeting Room
- Restrooms
- Adjoining Picnic Shelter (11 Tables)

Lee Hill Park

- 2- Small Diamonds -1-Lighted

Legion Complex

- Track
- 2- Multi-Purpose Fields, 1 Lighted
- 1-Small Diamond Lighted
- 1-Large Diamond Lighted
- Restrooms

Loriella Park

- 2- Small Diamonds, 1 Lighted
- Pond
- 1 Large Diamond Lighted
- Trail 2.9 miles
- 4- Multi-Purpose Field, 1 Lighted
- Playground
- Outdoor Swimming Pool/ Bath House /Concession Stand (May- Sept.)
- 4-Lighted Tennis Courts
- Multi-Purp./ Basketball Court
- Disc Golf Course 18 Holes
- 2-Picnic Shelters (9/9 Tables)
- 3- Restrooms
- Open Play Area
- Picnic Area (5 random tables)

Marshall Center / Auditorium

- 5 Meeting Rooms
- Kitchen
- Restrooms
- Gymnasium
- Auditorium

Marshall Park

- 2- Small Diamonds, 1 Lighted
- 2- Basketball Outdoor Courts Lighted
- 1- Small Multi-Purpose Field – Lighted (Fall only)
- Playground
- Restrooms
- Picnic Area (2 random tables)
- Open Play Area

Mary Lee Carter Park

- Multi-Purpose Field
- Trail .2 Miles
- Playground
- Picnic Area (1 random table)

Ni River Recreation Area (March-October)

- Picnic Area (3 random tables)
- Picnic Shelter (12 tables)
- Restrooms
- Boat Rental/ Check –In Station
- Boat Launch Area
- Fishing

Patriot Park

- 2- Small Diamonds, Lighted
- 4- Large Diamonds, 2 Lighted
- 2-Basketball Courts
- Trail 3.1 Miles,
- 6-Multi-Purpose Fields, 2 Lighted
- Amphitheater
- 3-Restrooms
- Picnic Area (6 random tables)
- Playground

Todd's Tavern Community Center

- Meeting Room
- Kitchen
- Restrooms

Spotsylvania County School Facilities-

Elementary Schools

Battlefield Elementary -

- 2 Small Multipurpose Fields
- Playground
- Outdoor Basketball
- Gym

Berkeley Elementary-

- Playground
- Outdoor Basketball
- Gym

Brock Road Elementary -

- 1 Small Multipurpose Field
- Playground
- Outdoor Basketball
- Gym

Cedar Forest Elementary -

- 1 Large Multipurpose Field
- Playground
- Outdoor Basketball
- Gym

Chancellor Elementary

- 1 Large Multipurpose Field
- 2 Playgrounds
- Gym
- Outdoor Basketball

Courthouse Road Elementary -

- 1 Large Multipurpose Field
- Playground
- Outdoor Basketball
- Gym

Courtland Elementary -

- 1 Small Multipurpose Field
- 1 Large Multipurpose Field
- Playground
- Outdoor Basketball
- Gym

Harrison Road Elementary

- 1 Large Multipurpose Field
- Playground
- Gym

Parkside Elementary -

- 1 Large Multipurpose Field
- Playground
- Outdoor Basketball
- Gym

Robert E. Lee Elementary

- 1 Large Multipurpose Field
- Playground
- Outdoor Basketball

Riverview Elementary -

- 1 Large Multipurpose Field
- Playground
- Gym

Salem Elementary -

- 2 Small Multipurpose Fields
- Playground
- Gym

Smith Station Elementary -

- 1 Small Multipurpose Field
- Playground
- 1 Large Multipurpose Field
- Outdoor Basketball
- Gym

Spotswood Elementary-

- Playground
- Gym

Lee Hill Elementary -

- 1 Small Multipurpose Field
- Playground
- Gym

Livingston Elementary-

- Playground
- Gym

Wilderness Elementary -

- 1 Small Multipurpose Field
- Playground
- Outdoor Basketball
- Gym

Middle Schools

Battlefield Middle -

- 1 Small Diamond
- 1 Large Multipurpose Field
- 1 Track
- Gym

Chancellor Middle -

- 1 Small Diamond
- 2 Large Multipurpose Fields
- Gym

Freedom Middle -

- 1 Small Diamond
- 1 Large Diamond
- 3 Large Multipurpose Fields
- 1 Track
- Gym

Ni River Middle -

- 2 Small Diamonds
- 2 Large Multipurpose Fields
- 1 Track
- Gym

Post Oak Middle -

- 1 Small Diamond
- 1 Large Multipurpose Field
- Gym

Spotsylvania Middle -

- 2 Small Diamonds
- 1 Large Diamond
- 2 Small Multipurpose Field
- 1 Large Multipurpose Field
- Gym

Thornburg Middle -

- 1 Small Diamond
- 2 Small Multipurpose Fields
- 1 Large Multipurpose Field
- 1 Track
- Gym

John J Wright Educational & Cultural Center -

- 1 Small Diamond
- 1 Large Multipurpose Field
- Playground
- Gym

High Schools

Chancellor High -

- 1 Small Diamond
- 1 Large Diamond -Lighted
- 3 Large Multipurpose Fields -1 Lighted
- Track- Lighted
- 6 Tennis Courts

Courtland High -

- 1 Small Diamond -Lighted
- 1 Large Diamond - Lighted
- 3 Large Multipurpose Fields -1 Lighted
- Track- Lighted
- 6 Tennis Courts
- 2 Outdoor Basketball Courts

Massaponax High -

- 2 Small Diamonds – 1 Lighted
- 2 Large Diamonds – 1 Lighted
- 4 Large Multipurpose Fields -1 Lighted
- Track- Lighted
- 6 Tennis Courts

Riverbend High -

- 2 Small Diamonds – 1 Lighted
- 2 Large Diamonds– 1 Lighted
- 4 Large Multipurpose Fields -1 Lighted
- Track- Lighted
- 6 Tennis Courts

Spotsylvania High -

- 2 Small Diamonds – 1 Lighted
- 2 Large Diamonds – 1 Lighted
- 3 Large Multipurpose Fields -1 Artificial Turf Lighted, 1 Lighted
- Track- Lighted
- 6 Tennis Courts

County Parks Facilities Maintenance

Park amenities vary in age and condition. The Spotsylvania County Parks and Recreation Department recently updated a comprehensive list of parks facilities, documenting their age, condition, and estimated replacement timeline. These types of facility maintenance inventories ensure amenities are inspected and kept in good repair and/or replaced if need be. Continued tracking of Parks Facilities to monitor age and condition is warranted into the future in the interest of protecting public investments and ensuring operability.

Level of Service Standards for Parks & Recreation Acreage, Facilities, Community Centers and Public Meeting Spaces (Including Public Libraries).

New development presents demands for County-wide parks and meeting space facilities. Staff notes as of January 1, 2021 the County Approved Development Analysis noted 12,049 approved/enabled residential units that had yet to be constructed from prior rezoning approvals and subdivision activities. There are additional "pipeline" projects actively being considered or under review that could add to this number in time. Additional units are enabled in the form of by-right undeveloped lots scattered throughout the County that may or may not have additional division potential enabled by County Code as well. Considering this, it is important that the County provide both current and future residents adequate recreation services that meet current and future demand according to established LOS. The future demand for parks, open space, and recreation facilities must be measured, and means must be identified for maintaining

the established County-wide level of service for these important services after new development occurs.

Standards

Parkland Acres Per 1,000 Population: Utilizing an acres per 1,000 population standard for Parks helps to ensure that as the County maintains a consistent LOS objective for parkland growth to serve a growing population.

Table 7: Land Needs Standards

Spotsylvania County Comprehensive Land Needs, 100% Standards With Schools									
Year				2020	2020	2030	2030	2040	2040
Population				138,449	138,449	159,641	159,641	181,549	181,549
Park Type		**Standard (ac/1000)**	Existing Acreage	Required Acreage	(-) Deficit/ Surplus	Required Acreage	(-) Deficit/ Surplus	Required Acreage	(-) Deficit/ Surplus
Community	Total*	**3**	179	415	-236	479	-300	545	-366
Community	Active	**1.5**	87	208	-121	239	-152	272	-185
District	Total^	**7**	404	969	-565	1117	-713	1271	-867
District	Active	**3.5**	101	485	-384	559	-458	635	-534
Special Use**	Total	**1.8**	68.5	249	-181	287	-219	327	-258
Special Use	Active	**0**	23	0	23.0	0	23.0	0	23.0
School	Total	**0**	1243	0	1243	0	1243	0	1243.2
School	Active	**0**	187.5	0	188	0	188	0	187.5
Community Ctr	Total	**0**	12	0	12	0	12	0	12.0
Community Ctr	Active	**0**	8	0	8	0	8	0	8.0
Total w/o Water	**Total**	**11.8**	**1907**	**1634**	**261**	**1884**	**11**	**2142**	**-248**
	Active	**5**	**406.5**	**692**	**-294**	**798**	**-400**	**908**	**-509**
Recreational Water	Total	6.2	841	858	-17	990	-149	1126	-285
Total w/ Water	**Total**	**18**	**2748**	**2492**	**256**	**2874**	**-126**	**3268**	**-520**
Note: Population projections sourced from Weldon Cooper Center for Public Service. 2020 Population from US Census Estimates (as of July 2020)									
*Community Parks total acreage includes future Keswick Park acreage expected within planning period.									
^ District Parks total acreage includes Hilldrup tract (presently undeveloped).									
** Special Use Parks total acreage includes Fortune's Landing Park acreage expected within the planning period. Special Use acreage inventory also includes Virginia Central Trail Linear Park acreage.									

Table 7 above shows the parkland needs for all of Spotsylvania County based on 100% County parkland needs LOS standards based on park type or classification. The table acknowledges public access recreational acreage associated with schools as well. Schools related park acreage is not available for general public usage during school hours so they are not as readily available for use as other County parks. Though schools lands are not classified as a specific park classification or type, they do offer a variety of facilities beneficial especially to organized league sports. Recognizing this, the County adopted a 100% LOS standard that factors in schools acreage.

Currently there are 143 acres of Community Parks within Spotsylvania County. This total acreage is expected to increase to 179 acres with the addition of Keswick Park (36 acres) within the planning period. As of 2020, when comparing existing park land to the standard, a deficit of -236 acres existed. Without additional acreage the deficit will continually grow through 2040. District Parks currently total 404 acres. Again when compared with the standard it resulted in a deficit of -565 acres as of 2020. By 2040, without additional District Park Land, the deficit will grow to -867 acres considering population growth. The Special Use Parks comprise 68.5 total acres, resulting in a deficit of -181 acres in 2020, increasing to -258 acres by 2040.

Dismissing particular standards for the various classifications of parks and looking at park related acreage as a whole, if we add the schools and community centers acreage that are complementary to parks and recreation function, as a whole the County fares well in terms of total acres though 2030. Between 2030 and 2040 however a deficit is expected to occur. Active Park acres are where the County is actively running a deficit compared to standard. This deficit is expected to grow over time unless additional active acres are added. Additional park acres in active status are warranted during the planning period. Between 2020 and 2040 the deficit in active park acres is expected to grow from -294 acres to -509 acres if no action is taken. It is good to note that some additional park acres in active status are expected to "come online" with the development of Keswick Park and opportunities at the District Park size Hilldrup Tract in particular.

The County has also established a standard for recreational water acreage that acknowledges recreational opportunities associated with water such as fishing and paddling. Considering recreational water acreage, recreational land needs acreage deficits are removed altogether through 2020 due to acreage associated with recreational water contributing to exceeding standard. However, if no new parkland or recreational water acreage is added between 2020 and 2030, deficits are expected to appear and grow as population increases. The recreational water 841 acres reported in the table above represents County managed reservoirs at Ni Reservoir (411 Acres) and Hunting Run Reservoir (430 Acre). Additional resources exist within the community that are worthy of mention including, but not limited to: Motts Run Reservoir (City of Fredericksburg); Rappahannock and Rapidan Rivers; Lake Anna.

Community Centers standard 1 per 15,000 population: Utilizing a Community Center per 15,000 population standard ensures that adequate public meeting space will remain available as the County population continues to grow.

Table 8: Community Centers Needs

Spotsylvania County Comprehensive Community Centers Needs									
Year				**2020**	**2020**	**2030**	**2030**	**2040**	**2040**
Population				**138,449**	**138,449**	**159,641**	**159,641**	**181,549**	**181,549**
		Standard	Existing	Required	(-) Deficit/	Required	(-) Deficit/	Required	(-) Deficit/
		(1/15,000)	Comm Ctr.*	Comm Ctr.	Surplus	Sq. Ft.	Surplus	Sq. Ft.	Surplus
Community Ctr	**Total**	**15,000**	**5**	**9**	**-4**	**11**	**-6**	**12**	**-7**
Note: 2020 Population from US Census Estimates (as of July 2020). Population projections sourced from Weldon Cooper Center for Public Service									
*Community Centers inventory includes: Marshall Center; Berkeley; Chancellor; Lee Hill; Todds Tavern.									

Presently Spotsylvania County manages 5 community centers. The inventory is expressed in Table 8 above. The County experienced a reduction of two community centers since the last Comprehensive Plan update including the Harrison Road Community Center and Lick Run Community Center. Through the year 2020 based on County standard, a deficit of 4 community centers presently exists. Without additional community centers added to the inventory this deficit is expected to grow to 7 by the year 2040 based on projected population growth. Considering County standards, the Comprehensive Plan is supportive of adding community center(s) to result in deficit reductions and maintain level of service.

The average recommended size for a community center ranges from 3,000 to 3,500 square feet (including meeting spaces, kitchen, bathrooms, etc.) The Spotsylvania Department of Parks and Recreation has identified the Lee Hill Community Center as an example of Community Center design and amenities most in demand at this time. In order to maximize their usefulness and demand, new community centers should consider the Lee Hill Center as a model. A schematic of that center is below for reference (Exhibit 2):

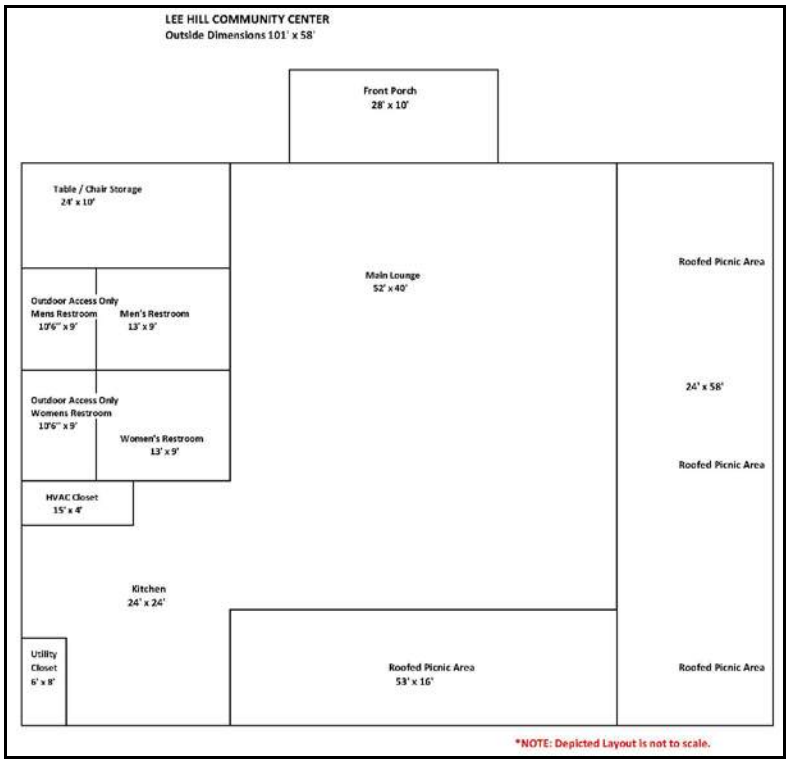


Exhibit 2: Community Center Model

Public Meeting Spaces at Community Centers and Public Libraries standard 200 Square Feet Per 1,000 Population: Utilizing a square foot per 1,000 population standard for publicly available meeting space ensures that adequate public meeting space will remain available as the County population continues to grow. This is a County standard initially adopted as part of the 2013 Comprehensive Plan.

Table 9: Community Meeting Space Needs

Spotsylvania County Comprehensive Public Meeting Space Needs at Community Centers and Public Libraries									
Year				**2020**	**2020**	**2030**	**2030**	**2040**	**2040**
Population				**138,449**	**138,449**	**159,641**	**159,641**	**181,549**	**181,549**
		Standard	Existing	Required	(-) Deficit/	Required	(-) Deficit/	Required	(-) Deficit/
		(sqft/1000)	Sq. Ft.*	Sq. Ft.	Surplus	Sq. Ft.	Surplus	Sq. Ft.	Surplus
Community	**Total**	**200**	**21,872**	**27690**	**-5818**	**31928**	**-10056**	**36310**	**-14438**
Note: 2020 Population from US Census Estimates (as of July 2020). Population projections sourced from Weldon Cooper Center for Public Service									
*Existing Square Footage of Public Meeting Spaces include Spotsylvania County Community Centers and Libraries within County limits.									

Spotsylvania County presently has a public meeting space inventory of 21,872 sq.ft., accounting for the County's current inventory of public access meeting spaces within Community Centers as well as meeting spaces within Public Libraries in the County. The County has a set LOS standard for community meeting spaces of 200 sq ft per 1,000 residents. Considering a 2020 estimated County population of 138,449, in order to meet County LOS the County has warrant for 27,690

sq.ft. of public meeting space, resulting in a deficit of -5,818 sq.ft. As shown in the table above (Table 9), this deficit will grow as population grows if no additional meeting space is added to the inventory. In the short term, much of the identified deficit may be tied to the recent community center losses. The Harrison Road Community Center had offered an additional 1,748 sq. ft. of public meeting space. That Center was closed to accommodate needed Transportation systems improvements associated with a Route 1 (Jefferson Davis Hwy.) and Harrison Road intersection improvement project. The Lick Run Community Center's closure in November 2018 is the result of the displacement and subsequent relocation of the Spotsylvania County Museum. The Lick Run Community Center resulted in a loss of 1,274 square feet of meeting space. Considering the lost meeting space and Spotsylvania County standard, there is warrant for additional meeting spaces whether they be at a new or expanded community center or in the public libraries. No new meeting space inventory was added with the recent opening of the Library at Spotsylvania Towne Center.

Parks Facility Standards: Perhaps more important than the raw parkland acreage needs are standards for recreation facilities to activate the sites for recreational use that have been formulated to plan for recreation needs and serve as a basis for capital planning. Many of these recreational facilities are necessary to create Active Park acres that presently run a LOS deficit expected to grow over time. Pursuit of additional recreational amenities to meet LOS standards complements efforts to reduce active park acres deficits. The goal is to maintain a consistent LOS for the County population consistent with projected growth over time.

The following table shows the recommended County facility standards and their corresponding surpluses or deficits over time considering population estimates and projections. Many were derived from national and state standards and adopted as the County standard in 2009. Considerations for pickleball popularity has resulted in a new standard added as part of this update.

Due to the wide array of potential recreational facilities it is impractical to establish a set LOS standard for all the potential options available, especially "big ticket", specialized or niche facilities. Other more niche amenities have also been accommodated for consideration based on their uniqueness and fit within the community and their projected demand. Demand based parks and recreation planning has become more popular in recent times. For instance, the Virginia Department of Conservation and Recreation (DCR) now bases many of its recommendations within the Statewide Virginia Outdoors Plan on survey research to gauge demands for new parks facilities.

Table 10: Amenities Standards

County Parks Amenities Requirements 100% Standards with Schools								
AMENITY	SPOTSYLVANIA STANDARD		Year 2020	Year 2020	Year 2030	Year 2030	Year 2040	Year 2040
	per residents	Existing	Required	Population	Required	Population	Required	Population
		Facilties	Facilities	**138,449**	Facilities	**159,641**	Facilities	**181,549**
				(-)Deficit/		(-)Deficit/		(-)Deficit/
				Surplus		Surplus		Surplus
Baseball/ Softball Field	3,000	50	46	4	53	-3	61	-11
Baseball Lighted Regulation	15,000	9	9	0	11	-2	12	-3
Baseball Lighted Little League	30,000	10	5	5	5	5	6	4
Basketball Court	5,000	45	28	17	32	13	36	9
Basketball Indoor	5,000	25	28	-3	32	-7	36	-11
Basketball Outdoor	10,000	20	14	6	16	4	18	2
Bike/Fitness Trails (miles)	1,000	22.1	138	-116	160	-138	182	-159
Indoor Recreation Center/ with Pool	50,000	0	3	-3	3	-3	4	-4
Playgrounds	5,000	27	28	-1	32	-5	36	-9
Swimming Pool	20,000	1	7	-6	8	-7	9	-8
Tennis	2,000	46	69	-23	80	-34	91	-45
Tennis Lighted Courts	10,000	6	14	-8	16	-10	18	-12
Multipurpose Fields (Football, Field Hockey, Lacrosse & Soccer Fields)	2,000	73	69	4	80	-7	91	-18
Pickleball Courts	15,000	5	9	-4	11	-6	12	-7
Other (Specialized or niche amenities)	Case by Case considering uniqueness and demand							
Note: 2020 Population from US Census Estimates (as of July 2020). Population projections sources from Weldon Cooper Center for Public Service.								

Over the planning period considering the County's adopted LOS standards for parks and recreation, many amenities will see growing deficits as population increases. Within the short term, recreational bike fitness trails and tennis courts comprise the most notable deficits compared to County standard. It is good to note that tennis courts can and have served dual purposes as Pickleball Courts, requiring Pickleball striping so the facility can serve dual purposes.

Bicycle and fitness trails include shared use paths such as the Virginia Central Trail that extends from Salem Church Road to Gordon Road presently. School running tracks also qualify and are included within the County's existing inventory identified in the table above. Leavells Road extending from Harrison Road to Hilltop Plaza Way has an expanded sidewalk to accommodate a wider array of users. This path serves several residential developments along the Leavells Road corridor and provides access to Loriella Park. Bicycle and fitness trails also include nature and historical interpretive trails that may be utilized by a host of users for walking, mountain biking,

cross country running, equestrian usage, etc. Staff has acknowledged the presence of other trails through the County including the Ni River Trail by the Spotsylvania Greenways Initiative (presently a nature trail envisioned to be part of the planned Ni River Trail system), historic interpretive trails associated with National Park Service, Civil War Trust, and Central Virginia Battlefields Trust lands, as well as recreational trails at Lake Anna State Park. Lake Anna State Park also includes an equestrian trail system. These trails overwhelmingly provide opportunity for passive recreation in the form of natural surface walking paths limiting potential usage to certain activities. For users that can benefit from interest in natural walking paths, these trails help buffer and/or reduce the lack of availability for such user groups.

Recognizing the need to establish a Comprehensive Trailways Master Plan to address citizen interest and formulate a plan to reduce LOS deficits, Spotsylvania County adopted a Trailways Master Plan in 2011 that included plans for both roadside and off-road greenway trails. In 2011 the Virginia Chapter of the American Planning Association bestowed the 2011 Outstanding Plan Award-Plan Element upon the Spotsylvania County Trailways Master Plan. The Plan had historically been a standalone document incorporated by reference within the Comprehensive Plan. As a Plan element in the interest of assuring such a plan does not become outdated or inconsiderate of opportunities that may arise from changes elsewhere within other elements of the Comprehensive Plan, staff shifted crucial plan elements into this Comprehensive Plan recognizing its applicability to both Transportation planning (road based) and Parks and Recreation. The Trailways Plan is now located within the Comprehensive Plan and updated accordingly on the same schedule.

Recommendations

The following general, short and long-term recommendations focus on the current and future needs for provision of public parks within Spotsylvania County.

Specific capital projects recommendations are based in the warrants established by County LOS standards and efforts to meet such standards. Decisions concerning adoption of the County Capital Improvement Plan (CIP) are guided by the Comprehensive Plan. As per the Code of Virginia, localities must be able to exhibit Comprehensive Plan support for public projects, including new Parks and Recreation facilities. CIP projects must be supported by the Comprehensive Plan by State Code. The Code of Virginia Sect. 15.2-2232 required that improvements be shown in the Comprehensive Plan, specifically identifying the "location, character and extent of each feature shown on the plan." Sect. 15.2-2232 establishes:

> … unless a feature is already shown on the adopted master plan or part thereof or is deemed so under subsection D, no street or connection to an existing street, park or other public area, public building or public structure, public utility facility or public service corporation facility other than a railroad facility or an underground natural gas or underground electric distribution facility of a public utility as defined in subdivision (b) of § 56-265.1 within its certificated service territory, whether publicly or privately owned, shall be constructed, established or authorized, unless and until the general location or approximate location, character, and extent thereof has been submitted to

and approved by the commission as being substantially in accord with the adopted comprehensive plan or part thereof.

The purpose of the Public Facilities Element in the Comprehensive Plan (including Parks and Recreation) is to establish County LOS standards and identify specific capacity building projects that help justify CIP inclusion as well as calculation of proffers concerning residential rezoning applications. In the case of Parks and Recreation related proffers they are based solely on necessary capacity expansion projects (based in LOS) identified within the County CIP. Proffer values are determined considering population increases above the by-right potential of a project area resulting from a residential rezoning, and their proportionate per unit, per person share of the cost of the new facility.

The following are general recommendations for the provision of local public park areas. The general location of proposed public park areas should be based on land acquisition needs, service area needs and the population served.

General

1. Spotsylvania County will have sufficient park facilities to meet County Park Standards as well as current and future demand. Provide community, district, and special use parks that meet a 100% level of service standard, including schools.

    a. Encourage all new schools and community centers to include provisions for public recreational acres, and amenities. Co-location of future schools, community centers, and parks will benefit Spotsylvania County by adding more recreational opportunities and avoiding duplication of recreational facilities.

        - Formally adopt a school/park and recreation policy that would include the following:
            - Provide for specific facility standards and designs for all community type use facilities at new school sites.
            - Provide for the Park & Recreation Department's operational & maintenance agreements.
            - Provide for an agreed upon short and long-range plan for the improvement and expansion of community use facilities, where feasible, at existing school sites including use of available school lands.
            - Strive for a County provision to meet the Level of Service Standards for Multi-Purpose Fields and Baseball/Softball Diamonds as these are specifically needed for programmed Parks & Recreation activities.

b. Protect, maintain, and enhance current parks and open space areas in Spotsylvania County and acquire additional parkland and facilities within the County, consistent with adopted level of service standards.

- The acquisition of park lands and development of park amenities should occur based on population estimates.

c. Provide an annual CIP submission of needed facilities based on adopted standards and replacement schedules.

d. Optimize existing parks that are not built out by improving or adding new facilities to enhance efficiencies or reduce known LOS deficits within the planning period.

- An emphasis should be placed on the current utilization of the parks with installation of artificial lighting to enhance and extend the availability of current athletic fields.

2. Preserve natural areas, parks, open space area, archaeological and architectural sites and cultural resources in Spotsylvania County.

a. Encourage protection of, access and interpretation of significant cultural or historical resources within new or existing park land.

b. Maintain and update a database and/ or mapping project that includes an inventory of all parks, open spaces, nature preserves, onsite historic and cultural sites, park amenities, trail systems.

3. Preserve and expand upon the existing recreational trails network within the County by implementing the Spotsylvania Trailways Master Plan (found in the Transportation Element of the Comprehensive Plan) consisting of off-road greenway trails and roadside based trail corridors.

a. Encourage construction of bicycle lanes and/or paths complementary to recreational trailways plan implementation efforts in conjunction with road widening projects, where appropriate.

4. Consider adding additional specialized or niche recreational amenities that do not warrant a specific level of service standard based on their uniqueness and fit within the community as well as projected demand.

5. Consider additional public/private partnerships or any other joint opportunities in the delivery of park and recreation service delivery like the YMCA/School Board/ County partnership at the Patriot Park District Park.

6. Continue to support the development of privately managed and maintained neighborhood parks and private recreational amenities that will ultimately serve County residents within their particular developments.

Short Term

1. Seek to replace the Harrison Road and Lick Run Community Centers at new locations similarly located to their former ones (approximately within a mile) considerate of nearby populations historically served by those centers respectively, and geo-spacing/facility separation to reduce service area overlap.

2. Seek to locate a new Community Center in the Partlow Area.

Long Term

1. Explore acquisition and/or development of an indoor aquatic recreation center.

2. Develop master plans for the Hilldrup and Belmont Properties.

3. Explore the acquisition of land in the Lee Hill/Massaponax area for a new district park.

4. Continue to implement the County Trailways Plan through various means including Parks and Recreation projects, Transportation Projects, Private Development frontage and amenity improvements, etc. A number of candidate projects have been suggested to expand the trailways network and help address the sizable level of service deficits for such facilities. These candidate projects have been identified due to their location in proximity to heavily populated areas, historic and cultural resources attractions and tourism, and physical location in relation to existing trail systems with the aim of closing "gaps" or extending trails with existing usage. Candidate projects are as follows:

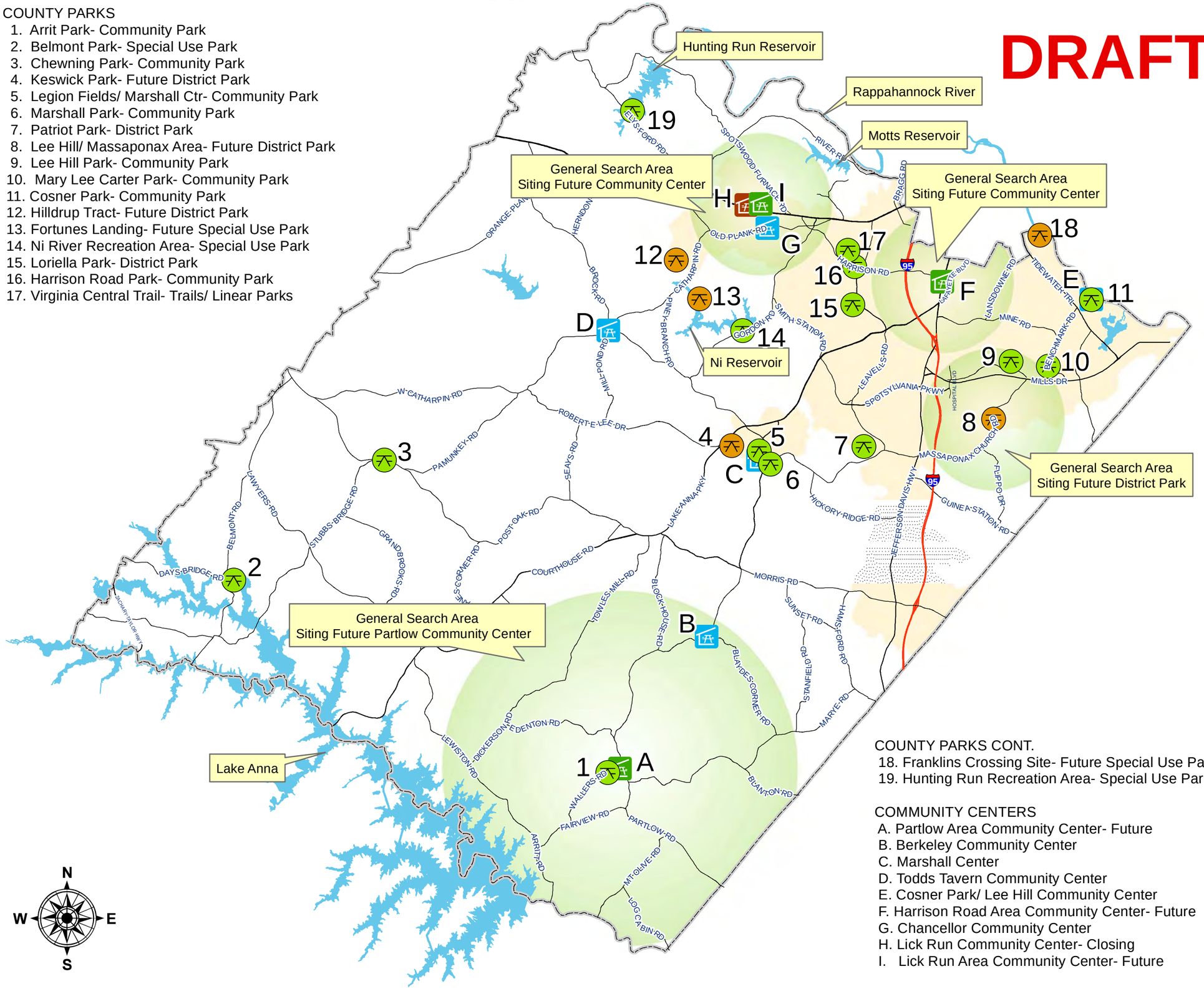
- Ni River Greenway Trail northward through the Hilldrup Tract District Park generally along the Ni River Corridor to include nearby County owned historic lands associated with Catherine's Meadow. (Approximately 1 Mile)
- Deep Run Trailhead (including portion of trail), riverside park, river access, and historic interpretation site at the County owned Franklin's Crossing site. (Approximately ½ Mile)
- Ni River Greenway Trail gap between its current terminus and Patriot Park (between Route 1 and Patriot Park). (Approximately ½ Mile)
- Complete implementation of the Phase I Massaponax Creek Greenway Trail, including necessary bridge crossings, between the Courthouse Road public

parking area, Loriella Park, and planned Mussel Farm site. (Approximately 1 ¼ Miles)

- Pursue construction of the Virginia Central Greenway Trail and trailhead along the Whitehall/Lakeside Virginia Land Conservation Fund easement extending between Brock Road and Jackson Trail East. (Approximately 2 Miles)
- Ni River Trail to establish a roadside based bicycle and pedestrian friendly connection between the Hilldrup Tract (Future District Park) and future public park at Fortune's Landing fronting the Ni Reservoir.
- Eastward expansion of the Virginia Central Trail by seeking roadside based bicycle and pedestrian improvements between Salem Church Road and the City of Fredericksburg via the Route 1 corridor and Harrison Road widening and Interstate 95 bridge replacement projects.
- Westward expansion of the Virginia Central Trail through Gordon Road, Harrison Road, and Old Plank Road improvement projects.
- Seek roadside bicycle and pedestrian friendly improvements along Tidewater Trail and Benchmark Road to help implement the Deep Run Trail and East Coast Greenway in Spotsylvania County from the Bowman Center to County VRE Station.

DRAFT

COUNTY PARKS
1. Arrit Park- Community Park
2. Belmont Park- Special Use Park
3. Chewning Park- Community Park
4. Keswick Park- Future District Park
5. Legion Fields/ Marshall Ctr- Community Park
6. Marshall Park- Community Park
7. Patriot Park- District Park
8. Lee Hill/ Massaponax Area- Future District Park
9. Lee Hill Park- Community Park
10. Mary Lee Carter Park- Community Park
11. Cosner Park- Community Park
12. Hilldrup Tract- Future District Park
13. Fortunes Landing- Future Special Use Park
14. Ni River Recreation Area- Special Use Park
15. Loriella Park- District Park
16. Harrison Road Park- Community Park
17. Virginia Central Trail- Trails/ Linear Parks



COUNTY PARKS CONT.
18. Franklins Crossing Site- Future Special Use Park
19. Hunting Run Recreation Area- Special Use Park

COMMUNITY CENTERS
A. Partlow Area Community Center- Future
B. Berkeley Community Center
C. Marshall Center
D. Todds Tavern Community Center
E. Cosner Park/ Lee Hill Community Center
F. Harrison Road Area Community Center- Future
G. Chancellor Community Center
H. Lick Run Community Center- Closing
I. Lick Run Area Community Center- Future

Spotsylvania County Parks and Recreation Facilities and Needs

Legend

County Parks
- Future Park
- Park

Community Centers
- Community Center Closing
- Community Center
- Future Community Center*

General Siting Buffer (Future Projects)

Primary Development Boundary

0 1.25 2.5 5 Miles

Map Approved: _____

Chapter 4H

PUBLIC FACILITIES PLAN- GENERAL GOVERNMENT

GENERAL GOVERNMENT

Introduction

The General Government portion of the Public Facilities Chapter seeks to identify capital facility needs for County government operations not associated with operational needs of the Sheriffs, FREM, Solid Waste, Water and Sewer, Parks and Recreation, Schools that have each been addressed elsewhere within this Chapter. For the purpose of this Chapter, General Government includes but is not limited to governmental services including but not limited to: County Administration, Treasurer, Commissioner of Revenue, County Attorney, Voter Registrar, Cooperative Extension, Community Development, Division of Social Services, Courts, Human Resources, Finance, Information and Computer Services, Public Works and Facilities Management.

Per Spotsylvania County Public Works, the County has two separate documents that are used for general guidance for planning. It is good to note that these guiding documents have resulted in several projects, implemented and complementary to their recommendations. Not all recommendations have been pursued. Due to passage of time and population trends changes since the adoption of these two guiding documents there is an identified need to review and update space needs study and ultimate recommendations going forward. For instance, population projections based on historic growth rates leading up to the early 2000's resulted in much more robust population expectations for the year 2020, 2025. A March 2005 update concerning the Spotsylvania County Government Center Campus Master Plan projected a County population in 2020 of approximately 200,000, and between 230,000 to 250,000 or more by 2025. The latter 2000's has seen a slowing of population growth that is less than 2% annually. Since the Campus Master Plan, population growth has not kept pace with the population projections assumed in 2005. As noted elsewhere in the Comprehensive Plan, US Census 2020 population estimates report a County population of 138,449. A brief overview of the County's existing guiding documents for general government space needs is below:

2013 General Government and Judicial Center Space Needs

Prepared by Peck, Peck, & Associates, this document looks at various services in the County and establishes an anticipated space need based on Departmental director input. The space needs study itself was constrained and not allowed to look at construction of a new building.

2001 Facility Space Needs Analysis

Prepared by Moseley, Harris, and McClintock: This document developed the Courthouse Master Plan (by Moseley Architects) and noted the need for additional buildings. Several of the projects listed in this plan have been or are being implemented including: a new public safety building (completed), new Circuit Court (completed), General District Courthouse expansion (under construction as of this update), and a New Government Building (remains unbuilt at this time). The Courthouse Master Plan addresses County government functions located in the Spotsylvania Courthouse Area, Spotsylvania County's governmental hub.

Capital Projects Recommendations

In terms of identifying the need for new spaces the County typically considers individual space needs assessments by Department as the need arises and in recent years has not performed a comprehensive space needs update. For specific metrics that guide County space needs recommendations there are two groups where space needs are driven primarily by ratio of personnel and workload. One of those is the courts which we use the judge to case load ratio to determine the number of judges needed and by extension the number of courtrooms needed. This is done by looking at current average case load per Judge in Virginia and comparing to case loading seen in Spotsylvania. This however is not a set number per code and is a discretion of the courts. The other is Social Services which has required turnaround times for case loading which impacts personnel and therefore space needs. The determination of personnel to achieve the case load requirements are subjective and not quantified and are at the discretion of the Director of Social Services.

Recommendations

The following recommendations for the provision of general government facilities going forward have been compiled with the assistance of Spotsylvania County Public Works. Capital Project recommendations for general government identified below have their basis in the aforementioned studies and continued monitor of existing conditions considering departmental feedback and personnel to workload ratios as described above. These projects remain as projects targeted for implementation to address relatively short-term needs.

Capital Projects Needs

(1) 50,000-60,000 sq.ft. new build in the Spotsylvania Courthouse area for the Department of Social Services and VA Department of Health offices.
(2) Construction of a joint use complex along Gordon Road, specifically Tax Map# 21-A-84 for Spotsylvania County Utilities and Public Works. Also see Parks and Recreation and Water and Sewer Elements of Public Facilities Chapter concerning this site.

Future Planning Needs

(1) Review and update the County's space needs assessment and recommendations for future long-term capital project needs.

Chapter 5

HISTORIC RESOURCES PLAN

INTRODUCTION

Spotsylvania County has a proud tradition of Historic Preservation. This element continues that proud tradition while ensuring that the property rights of Spotsylvania County landowners are not violated by the goals, objectives or implementation strategies of this element. The County aspires to achieve these goals and objectives, however, it is important to emphasize that they are voluntary in nature.

HISTORY

The same accidents of geography that brought war, destruction, and eternal fame to Spotsylvania County between 1861 and 1865 are now combining to alter the County's landscape in a much more permanent way than the Civil War ever could. Those changes are coming at such a rapid pace that immediate action is critical.

Early Virginia historic transportation corridors in Spotsylvania County tended to follow water courses east and west providing routes for the products of agriculture and industry to find their way to market. With the establishment of cities and towns along the Fall Line, north-south travel along roads and later rails gained greater importance. These factors, combined with Spotsylvania County's position midway between Washington, D.C. and Richmond, destined the County to be the prime battleground of the Civil War, as peacetime avenues of commerce became avenues of invasion.

Today, proximity to Washington, D.C. and Richmond and 20th century innovations in both highway and rail travel along the traditional north-south corridor have transformed much of Spotsylvania County into a sprawling bedroom community favoring the homogenized corporate and residential architecture of suburban America. In the last 20-30 years, much of that change has been so dramatic that former residents can scarcely recognize the landscape of their youth. These changes are most notable in growth areas of the County, especially within the Primary Development Boundary.

As the County enters the 300th anniversary of its founding within the Planning period (2021), the purpose of this Preservation Plan is to grapple with the difficult issue of how to accommodate growth and still preserve the character-defining nature of the County that makes it such a desirable place to live and which draws visitors from across the Country, if not from around the world. Key to the plan is to identify those resources and characteristics that make the County unique; but, more than that, the plan suggests actions that should be taken by government, the business community, and individuals to preserve a special heritage and sense of place before they are lost forever.

Within Spotsylvania County, the Spotsylvania Museum and Spotsylvania County Tourism are chiefly involved in the promotion and enhancement of historic resources throughout the County with a focus that includes and goes well beyond the Civil War history for which the County is highly known. As outlined within the Historic Resources Appendices (Appendix C), Spotsylvania County history, settlement, culture cannot be defined solely within the four-year period associated with the American Civil War. The various time periods exhibited within the Appendix

provide an abundance of opportunities to "tell the story" and preserve parts of Spotsylvania County's history. There are public, private, and non-profit opportunities to enhance historic resources preservation and interpretation within the County. A number of Historic Resources Policies and Strategies identified within this Plan are aimed at realizing such opportunities.

National Park Service

Federally, the National Park Service directly owns or has easements upon nearly 7,300 acres within Spotsylvania County. The acreage is regionally managed as part of the Fredericksburg and Spotsylvania National Military Park that includes preserved Civil War battlefields associated with the Battles of Fredericksburg, Chancellorsville, Wilderness, and Spotsylvania Courthouse. More information regarding the Fredericksburg and Spotsylvania National Military Park can be found **HERE**.

Virginia Department of Historic Resources

The Virginia Department of Historic Resources (DHR) is the State Historic Preservation Office. DHR fosters, encourages, and supports the stewardship and use of Virginia's significant architectural, archaeological, and historic resources as valuable assets for the economic, educational, social, and cultural benefit of citizens and communities. DHR offers a wide array of resources devoted to the research and documentation, preservation, and interpretation of resources throughout Virginia, including Spotsylvania County. A link to Virginia DHR can be found **HERE**.

Greater Fredericksburg Tourism Partnership

The Greater Fredericksburg Tourism Partnership is a regional tourism collaboration promoting regional tourism attractions (including historic sites) and complementary accommodations (food, lodging), within the Fredericksburg Region that includes the City of Fredericksburg, Spotsylvania County, Stafford County. Together with the Commonwealth of Virginia, the Greater Fredericksburg Tourism Partnership operate a regional tourism website that can be found **HERE**.

Spotsylvania County Museum

The County Museum's mission is to support Spotsylvania County citizens, Spotsylvania County leadership and the American public by moving toward a "world-class museum" dedicated to the collection, accountability, preservation and interpretation of Spotsylvania County's cultural and natural history, enhancing community cohesion and economic development through education and programs for the County's citizens and the American public, with a special emphasis on the Civil War. The "bricks and mortar" museum archives County historic resources, offers historical exhibits, virtual online exhibits, resources for genealogy, and a gift shop. A link to the Spotsylvania County Museum can be found **HERE**.

Spotsylvania County Tourism

Spotsylvania County Tourism promotes County tourism attractions including a variety of historic and cultural attractions, recreation, entertainment, events, and complementary

accommodations for food and lodging. Historic Tours of the County presently linked on the Tourism website include: Courthouse Historic District Web Tour, Trolley Winery Tours and a Bit of History, African American Heritage Tours, John Cummings- Battlefield Guide Service, and Scott Walker- Hallowed Ground Tours.

Additional resources within the County of historic interest include, but are not limited to: African American Heritage Trail, John J. Wright Museum and Cultural Center, Rappahannock Railroad Museum, Shannon Air Museum, Spotsylvania County Visitor Center. More information regarding Historic and Cultural Resources promoted by the Tourism office can be found **HERE**.

THE CODE OF VIRGINIA - ENABLING LEGISLATION

The Virginia Constitution and the Code of Virginia grant authority to Virginia jurisdictions to protect their historic resources. Section 15.2-2224 of the Code of Virginia requires that certain surveys and studies be made in preparation of the Comprehensive Plan. Related to historic resources, the County can either survey and study historic areas or list historic areas identified and surveyed by the Department of Historic Resources in the Comprehensive Plan. Spotsylvania County has surveyed and studied historic resources and the documentation of that study is found in Appendix C.

Enabling legislation exists in the Code of Virginia to allow jurisdictions such as Spotsylvania to adopt a historic overlay district, which the County has in Chapter 23, Zoning, Code of the County of Spotsylvania. Spotsylvania County's Historic Overlay District Ordinance and Comprehensive Plan are the foundation for the County's historic preservation program. In partnership with the Fredericksburg and Spotsylvania National Military Park, Spotsylvania County should promote and protect the four Civil War battlefield parks in the County. Voluntary measures, including protection and advocacy efforts by private and non-profit groups, are an essential part of the County's preservation program. Additionally, the County should set an example for the community in its stewardship of its historic buildings.

HISTORIC RESOURCES POLICIES AND STRATEGIES

This Plan contains goals, policies and strategies that aim to preserve the County's many resources and its successful implementation ultimately rests in the hands of the community. Historic and Cultural Preservation should be undertaken on behalf of the citizens of the County. The stakeholders in this endeavor – property owners, land developers, local government, preservation groups, and interested citizens – must have viable and creative tools to be good stewards of their historic and cultural resources. The adoption and implementation of this Plan provides the tools and focuses efforts to ensure the future of our historic and cultural resources.

GOAL: Spotsylvania County is known for the beauty of its agricultural and rural environment and for its wealth of historic and cultural resources. Spotsylvania recognizes that these assets are essential components of its identity, with an economic value worthy of protection. Spotsylvania County seeks to preserve and promote these resources through the following policies and strategies.

Policy 1: Encourage and promote the voluntary protection and preservation of scenic, historic, cultural, architectural, and archaeological resources.

Strategies:

1. Support the voluntary designation of National and State, historic register sites.
2. Support the preservation of resources with local, state, or national significance.
3. Promote the continuance and expansion of the Agricultural/Forestal District program to promote agricultural land preservation and protection of the rural farm and forest character of the county.
4. Promote and protect agriculture, forestry, and open space as the primary use of land in rural areas to promote the scenic character and economy of this area of the County.

Policy 2: The County should support projects that consider and mitigate the impact of development projects on historic and cultural resources during the rezoning, special use, and capital project planning processes.

Strategies:

1. Development applications and staff reports should identify historic and cultural resources in proximity to proposed rezoning, special use, or capital project, and evaluate the impacts of the project on the resources in question.
2. Consider appropriate architectural treatment, transitions, and/or buffering between development projects and National or State historic register sites to prevent or minimize degradation of the historic property.
3. The County should support efforts to preserve important scenic and historic lands through easements or dedicated open space.
4. The County should support efforts that propose to protect scenic viewsheds, scenic byways, and rural character outside of the Primary Development Boundary.
5. The County should support efforts that propose to preserve or rehabilitate historic structures within the design of new development projects.

Policy 3: Integrate historic and cultural preservation goals with economic development, tourism, capital facility, and public safety goals.

Strategies:

1. Develop procedures involving maintenance and care for County owned cultural and historic resources.
2. Work with the National Park Service to solve critical road and public safety issues facing the community within or in close proximity to battlefield parks to ensure that necessary improvements can occur while minimizing impact to the battlefield park.
3. Foster a strong and complementary relationship between tourism promotion and historic preservation efforts, including the promotion and awareness of the County's historic resources through the economic development efforts associated with the tourism industry.

Policy 4: Enhance public understanding and appreciation of the unique nature of Spotsylvania County's history, culture and character.

Strategies:

1. Maintain a GIS-based inventory of historic, archaeological, and cemetery resources.
2. Consider expanding scenic byway designations within the County to emphasize the importance of viewshed and character sensitive design of development proposals along such corridors.
3. Work with the National Park Service to enhance the Civil War visitor experience to both the battlefield parks and County in general.
4. Develop additional heritage tourism trails to promote new historic tourism ventures that capitalize on Spotsylvania history, including such topics as mill sites, gold mines, churches, etc.
5. Collaboration with the University of Mary Washington that will enable students to put their knowledge to use while acquiring hands-on experience and, at the same time, helping the County implement strategies of the Historic Preservation Plan.
6. Collaborate with local non-profit preservation organizations to hold historic preservation workshops and other historic awareness activities.
7. Continue to support living history related events including but not limited to the County's 300-year anniversary, Civil War reenactments.
8. Where appropriate, support projects that incorporate historic markers and/or signage documenting historic figures, groups, events, or architecture of local, state, or national significance associated with the project area.

Chapter 6

NATURAL RESOURCES PLAN

INTRODUCTION

Spotsylvania County's natural resources play a significant role in defining its character and environmental health and also play a role in its economic activities, helping support local tourism and employment. The County's rich heritage and character have been an important aspect of the high quality of life as well as a source of pride for residents.

As presented in this Chapter, the Plan contains policies and strategies that aim to promote the consideration of, and protection of the County's sensitive natural resources. The primary themes of these strategies address resource identification and protection, education and public awareness, and expanded economic opportunities as a means to build value into the preservation of County resources. Implementation of natural resource policies and strategies should be undertaken on behalf of the citizens of the County. The stakeholders in this endeavor – property owners, land developers, local government, preservation groups and special interest groups, and interested citizens – must have viable and creative tools to be good stewards of their natural resources. The adoption and implementation of this Plan helps guide efforts to ensure a future for our natural resources.

THE CODE OF VIRGINIA - ENABLING LEGISLATION

This element along with its corresponding appendices (Appendix D) have been compiled to comply with the Code of Virginia Sec. 15.2-2224, Surveys and studies to be made in preparation of plan; implementation of plan, Sec. 15.2-2223.2, Comprehensive plan to include coastal resource management guidance, and 9VAC25-830-170, Comprehensive Plans, per the Chesapeake Bay Preservation Area Designation and Management Regulations. Additionally, the information is an educational resource for the community, offering valuable insights into environmental resources. It is also a critical resource for land use planning within Spotsylvania County.

Natural Resources survey and study materials can be found within the Natural Resources Appendix D. Due to their nature providing background, inventory, or reference information as opposed to providing guidance or offering land use direction, such information has been located in Appendix D of this Comprehensive Plan. Natural Resource topics covered include, but are not limited to: (1) Soils and Groundwater, (2) Water Reservoirs and Dam Break Inundation Zones, (3) Wetlands, Watersheds, and Streams, (4) Identification of Protection Policies, (5) Vegetation and Wildlife, (6) Forestry, (7) Production of Food and Fiber, (8) Land Conservation.

NATURAL RESOURCES POLICIES AND IMPLEMENTATION STRATEGIES

Policy 1: Balance the protection of environmental resources and natural wildlife habitats with development.

Strategies:

1. The County should support the mitigation of impacts upon unique and/or endangered resources including rare species (See Natural Resources Appendix D, Table 9) and their habitats as part of the development review process.
2. Catalog open space and greenways in GIS in order to promote systematic linkages and connections where feasible to establish wildlife corridors.
3. Encourage land development practices, which minimize impervious cover to promote groundwater recharge, and/or tree preservation.
4. Encourage the use of the voluntary tree preservation credit described in the Design Standards Manual that is available as a tool to reduce clear cutting and protect existing trees on a development site.
5. Encourage recycling.
6. Enhance litter control efforts including enforcement and cleanup along County roadways.
7. Reduce long term energy costs for County buildings through energy audits and energy efficiency improvements to achieve greater savings.
8. Support the maintenance and growth of the local forestry industry, local food and fiber production (agriculture), and mining.
9. Promote multiple uses of forested land where appropriate such as outdoor recreation, wildlife habitats, watershed protection, and timber harvesting.
10. Locate land uses where their tolerance is compatible with existing or proposed noise levels and/ or reduce impacts though vegetative buffering or building design.
11. Protect designated open space, agricultural and forestal land use areas for their intended uses. Support new approaches to enable landowners to generate revenue from these land uses.
12. Promote conservation and/or planting of forests (reforestation) within three-hundred (300) feet of perennial streams, lakes and reservoirs.
13. Support efforts to manage or reduce invasive plant species in favor of native, non-invasive varieties.

Policy 2: Protect the County's potable water resources.

Strategies:

1. Review all applications for extraction of mineral resources to prevent irreversible impacts to the environment, impacts to existing development and to ensure reclamation (assuring re-use potential and/ or non-contamination) for future development.

2. Consider exhausted or closed quarry sites as possible recreational lakes and/ or water reservoirs.
3. Seek groundwater hydrology studies for development proposals increasing density or intensity of development reliant on well water.

Policy 3: Seek to create public/ private partnerships to promote and protect natural resources while integrating natural resource goals with community and economic development, tourism and, public safety goals.

Strategies:

1. Promote public and private cooperation in the preservation of environmentally sensitive areas for public open space, park, and recreation activities having minimal impact on the site.
2. Identify and make available a list of resources, including existing programs and potential funding sources that community members may like to pursue to improve environmental conditions.
3. Support development of a County Wildland Fire Mitigation Plan in partnership with the Virginia Department of Forestry.
4. Consider guidance of the latest Regional Hazard Mitigation Plan, hereby incorporated by reference.

Policy 4: Investigate the feasibility of providing additional public access points for boating (incl. canoe, kayak), fishing along the Rappahannock River and Lake Anna. The access points should be developed only after soil stability has been determined and an appropriate method has been designed to minimize erosion and its subsequent sedimentation impact.

Strategies:

1. Consider selling County land along navigable waterways or, where feasible, working with private developers and/ or regional or state agencies to speed up and promote private development with public water access.

Policy 5: Promote Natural Resource Protection through Education.

Strategies:

1. Include education areas in parks for observing and learning about the natural and physical environments, including ecology, wildlife, plants, geology, hydrology, and landforms.
2. Continue to pursue development of a fresh water mussel farm along the Massaponax Creek Corridor.

Policy 6: Consider Virginia Institute of Marine Science Guidance.

The following coastal resource guidance, provided by the Virginia Institute of Marine Science (VIMS) applies to the tidal extent of the Rappahannock River. The County is working to create its own shoreline

and eco environment document to address the non-tidal tributaries, streams, creeks and rivers. County environmental staff is currently working with Caroline County on researching non-tidal tributaries, creeks, streams and river shoreline restoration and preservation that will address our common watersheds and will be easily adaptable for the entire County.

1. Refer to the guidance presented in the locality's Comprehensive Coastal Resource Management Plan (CCRMP) prepared by VIMS to guide regulation and policy decisions regarding shoreline erosion control.
2. Utilize VIMS Decision Trees for onsite review and subsequent selection of appropriate erosion control/shoreline best management practices: http://ccrm.vims.edu/decisiontree/index.html.
3. Utilize VIMS' CCRMP Shoreline Best Management Practices for management recommendation for all tidal shorelines in the jurisdiction.
4. Consider a policy where the above Shoreline Best Management Practices become the recommended adaptation strategy for erosion control, and where a departure from these recommendations by an applicant wishing to alter the shoreline must be justified at a hearing of the board(s).
5. Encourage staff training on decision making tools developed by the Center for Coastal Resources Management at VIMS.
6. Follow the development of the state-wide General Permit being developed by VMRC. Ensure that local policies are consistent with the provisions of the permit.
7. Evaluate and consider a locality-wide permit to expedite shoreline applications that request actions consistent with the VIMS recommendation.
8. Seek public outreach opportunities to educate citizens and stakeholders on new shoreline management strategies including Living Shorelines.
9. Follow the development of integrated shoreline guidance under development by VMRC.
10. Evaluate and consider a locality-wide regulatory structure that encourages a more integrated approach to shoreline management.
11. Consider preserving available open spaces adjacent to marsh lands to allow for inland retreat of the marshes under rising sea level.
12. Evaluate and consider cost share opportunities for construction of living shorelines.

DRAFT

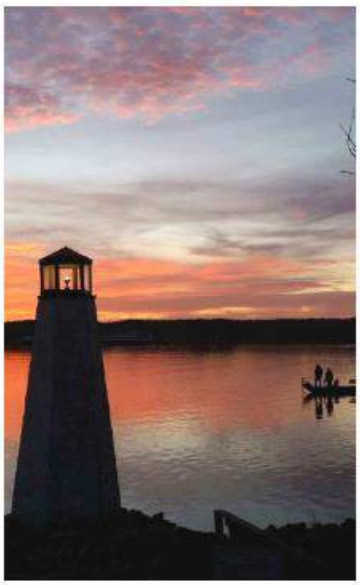
SPOTSYLVANIA COUNTY

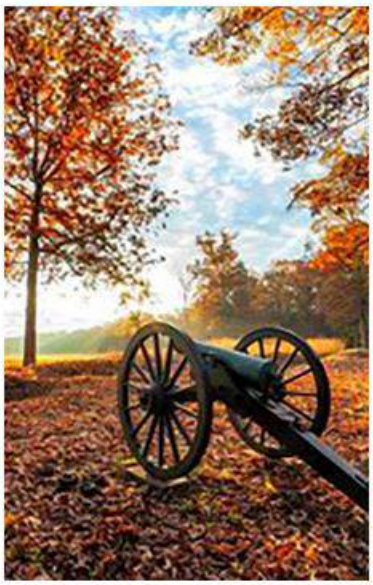
VIRGINIA

Comprehensive Plan

Adopted by the Spotsylvania County Board of Supervisors

DRAFT - [Insert approval date here]

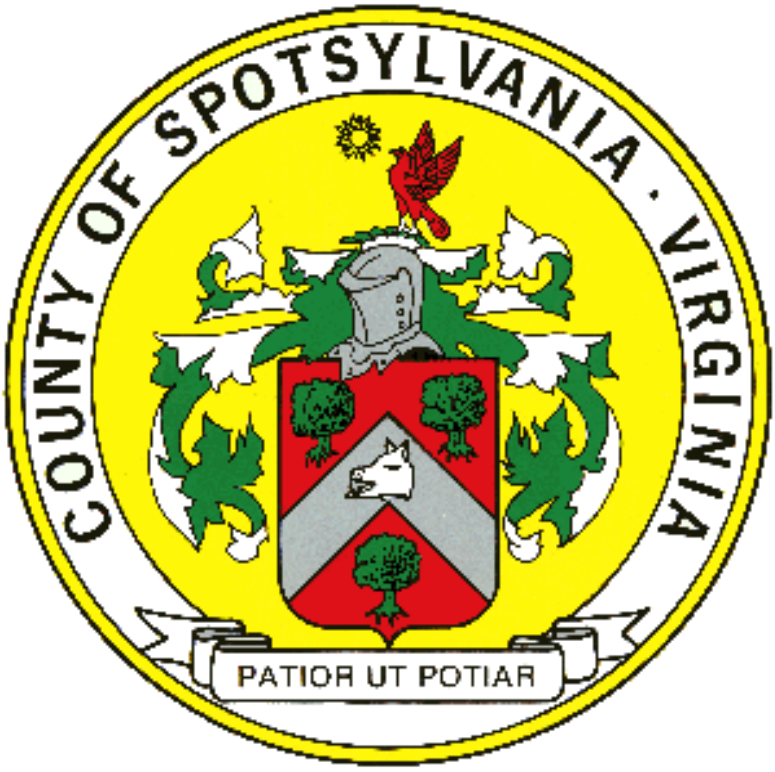




Cover Page design/layout by Meggie Roche, Spotsylvania County Economic Development

Cover Page Photos

- Lighthouse image – Chris McCotter
- Mall image – Cafaro Company
- Battlefield image – National Park Service
- Merchant Square image – Sue Henderson
- Historic Courthouse image – Michelle McGinnis



SPOTSYLVANIA COUNTY COMPREHENSIVE PLAN

Adopted by the Spotsylvania County Board of Supervisors ~~November 14, 2013~~ DRAFT

~~Updated:~~

~~June 14, 2016~~

~~August 9, 2016~~

~~May 22, 2018~~

~~July 28, 2020~~

ACKNOWLEDGEMENTS

Thank you to the many people who contributed to development of this Comprehensive Plan.

~~The~~ Current Spotsylvania County Board of Supervisors

~~Ann L. Heidig~~
~~Emmitt B. Marshall~~
Timothy J. McLaughlin
~~Benjamin T. Pitts~~
Barry K. Jett
Kevin Marshall
Chris Yakabouski
David Ross
Gary F. Skinner
~~Paul D. Trampe~~
Dr. Deborah H. Frazier

Former Spotsylvania County Board of Supervisors Members

Greg Benton
Paul D. Trampe

Current Spotsylvania County Planning Commission

Mary Lee Carter
~~John F. Gustafson~~
~~Cristine Lynch~~
~~Scott Mellott~~
C.Travis Bullock
Jennifer Maddox
Gerald Childress
~~Richard H. Sorrell~~
~~Robert Stuber~~
Richard Thompson
Dr. Raymond Bell
Jacob Lane

Former Spotsylvania County Planning Commission Members

Gregg A. Newhouse
Mike Medina
Howard Smith

~~The Citizen Advisory Groups~~

~~Land Use~~

~~Scott Cook~~
~~M.R. Fulks~~
~~Aviv Goldsmith~~
~~Suzanne Ircink~~
~~Daniel Mahon~~
~~Eric Martin~~
~~Lynn Smith~~

~~**Public Facilities**~~

~~Mike Cotter~~	~~Garrett Garner~~	~~Horace McCaskill~~
~~Chris Folger~~	~~George Giddens~~	~~William Nightingale~~

~~**Transportation**~~

~~James Beard~~	~~M.R. Fulks~~	~~Mike Shiflett~~	~~Mark Vigil~~
~~Rupert Farley~~	~~Greg Newhouse~~	~~Dale Swanson~~	

~~**Historic & Natural Resources**~~

~~Mike Blake~~	~~Claude Dunn~~	~~Larry Plating~~	~~George Tryfiates~~
~~John Burge~~	~~Donna Pienkowski~~	~~Bonita Tompkins~~	

~~**C. Douglas Barnes**~~**Ed Petrovitch, County Administrator, and County Staff**

Spotsylvania County Comprehensive Plan

Adopted ~~November 14, 2013~~ DRAFT

TABLE OF CONTENTS

Chapter 1 **Introduction and Vision**

Chapter 2 **Land Use**

Table- Zoning Districts Complementary to Land Use Designations within the Primary Development Boundary

Table- Zoning Districts Complementary to Land Use Designations outside of the Primary Development Boundary

Tourism Zone Map

Technology Zone Map

Opportunity Zone Map

HUBZones Map

Primary Development Boundary Map

Future Land Use Map (County-wide)

Future Land Use Map – Primary Development Boundary Zoom

Electric Transmission Map

Chapter 3 **Transportation & Thoroughfare Plan**

Thoroughfare Plan ~~List~~Table

Thoroughfare Plan Map (Primary Development Boundary)

Thoroughfare Plan Map (County-wide)

Functional Classifications Map

Chapter 3A **Trailways Master Plan**

	Trailways Master Plan Map
	Road Based Bicycle and Pedestrian Improvements Map
	Greenways Plan Map
Chapter 4	Public Facilities Plan
	Government Facilities Map
Chapter 4A	Schools
	Schools Map
Chapter 4B	Fire, Rescue, Emergency Management (FREM)
	First Response Zones Map
	5-Mile Response Map
	Population Density to Service Areas Map
Chapter 4C	Sheriff
	Public Safety Existing Facilities Map (Incl FREM)
Chapter 4D	Solid Waste
	5-Mile Service Areas Map
Chapter 4E	Water and Sewer
Chapter 4F	Libraries
Chapter 4G	Parks and Recreation
	Parks and Recreation Facilities and Needs Map
Chapter 4H	General Government
Chapter 5	Historic Resources
Chapter 6	Natural Resources
Appendix A	Land Use – Fort A.P. Hill Approach Fan Map and Joint Land Use Study (JLUS)

Appendix B Transportation Priorities Exhibit

Appendix C Historic Resources

Appendix D Natural Resources

Geology and Mineral Resources Map

Steep Slopes Map

Hydric Soils Map

Erodibility (K Factor Whole Soil) Map

Septic Suitability Map

Depth to Water Table Map

Soil Drainage Map

Agricultural Suitability Map

Agricultural Soils Map

Forest Conservation Value Map

Ecological Cores Map

Note: The Comprehensive Plan contains numerous hyperlinks to electronic mapping resources, referenced plans, studies, other resources intended for informational resources. These links are meant as helpful resources and come from a variety of host sites maintained by others. They are intended to be updated administratively if links become broken. To report any broken links found please send an email to planning@spotsylvania.va.us.

Chapter 1

INTRODUCTION AND VISION

INTRODUCTION

The Spotsylvania County Comprehensive Plan presents a long range land use vision for the County. The Comprehensive Plan sets forth principles, goals, policies, and implementation techniques that will guide the development activity within the County and promote, preserve, and protect the health, safety, and general welfare of its citizens. Specifically, the Plan provides data and analysis on land use, transportation, housing, natural and historic resources, and public facilities and utilities. The purpose of this document is not to regulate, but rather guide land use, transportation, and infrastructure decisions. This guidance seeks to ensure continued economic and community vitality while ensuring necessary policies and infrastructure are in place to provide for the continuation of quality services to Spotsylvania's residents and businesses.

The majority of the Comprehensive Plan's policies focus on the next 20 years and provide guidance for development decisions. These policies can be amended as new information is available, or to address a change in circumstances, without straying from the basic vision and goals of the Plan. Therefore, the Comprehensive Plan is not a static document and should be changed if deemed appropriate. Changes to the document can be achieved through a Comprehensive Plan Amendment. The process entails public hearings before the Planning Commission and Board of Supervisors.

The County has established a Comprehensive Plan Vision Statement to guide the overall direction of the Comprehensive Plan, Comprehensive Plan updates, its Action Items, Goals, Objectives and Strategies. The Vision Statement is as follows:

Vision Statement

"Spotsylvania families will enjoy a community that remembers and respects its place in our nation's history and builds on the principles of our founding fathers to provide freedom and prosperity through limited government, respect for property rights, low taxes and pro-business policies for the 21st Century."

Legal Basis for the Plan

The County's Planning Commission is responsible for preparing the elements of the Comprehensive Plan under the Virginia Code, Section 15.2-2223 which states in the pertinent parts:

> "The local Planning Commission shall prepare and recommend a comprehensive plan for the physical development of the territory within its jurisdiction and every governing body shall adopt a comprehensive plan for the territory under its jurisdiction." The Code states that the purpose of the comprehensive plan is to achieve "a coordinated, adjusted and harmonious development of the territory which will, in accordance with present and probable future needs and resources, best promote the health, safety, morals, order, convenience, prosperity and general welfare of the inhabitants, including the elderly and persons with disabilities."

The Comprehensive Plan establishes goals, objectives, policies and implementation techniques that will provide the tools to help the decision makers guide the County's future development.

Section 15.2-2223 further states:

> "The Comprehensive Plan shall be general in nature, in that it shall designate the general or approximate location, character and extent of each feature, including any road improvement and any transportation improvements and shall indicate where existing lands or facilities are proposed to be extended, widened, removed, relocated, vacated, narrowed, abandoned or changed in use as the case may be. As part of the Comprehensive Plan, each locality shall develop a transportation plan that designates a system of transportation infrastructure needs and recommendations that may include the designation of new and expanded transportation facilities that support the planned development of the territory covered by the plan and shall include, as appropriate, but not limited to roadways, bicycle accommodations, pedestrian accommodations, railways, bridges, waterways, airports, ports, and public transportation facilities."

Section 15.2-2224 states in part that, "The Comprehensive Plan shall recommend methods of implementation and shall include a current map of the area covered by the Comprehensive Plan."

Amendment Process

Under Section 15.2-2229 the County Board of Supervisors may consider amendments to the Comprehensive Plan. The Comprehensive Plan is the document by which the County will evaluate rezoning and special use applications, public facility locations, and capital improvements for consistency with its development policies. If an application is determined to be inconsistent with the Comprehensive Plan, an amendment to the Comprehensive Plan may be considered. The application will be reviewed by the Planning Commission for consistency with the elements contained within the Plan.

The applicant should demonstrate that any change in land use designation or density/intensity:

- would benefit the public health, safety and welfare;
- is consistent with the Goals, Objectives, and Policies of the Comprehensive Plan and appropriate Development Districts (i.e., Primary Settlement);
- will not be detrimental to uses of property in the immediate vicinity of the subject property;
- has merit and value for the community as a whole; and
- will result in benefits (fiscal, aesthetic, employment, etc.) that will outweigh any significant impact of the change.

Growth Rates and Projections

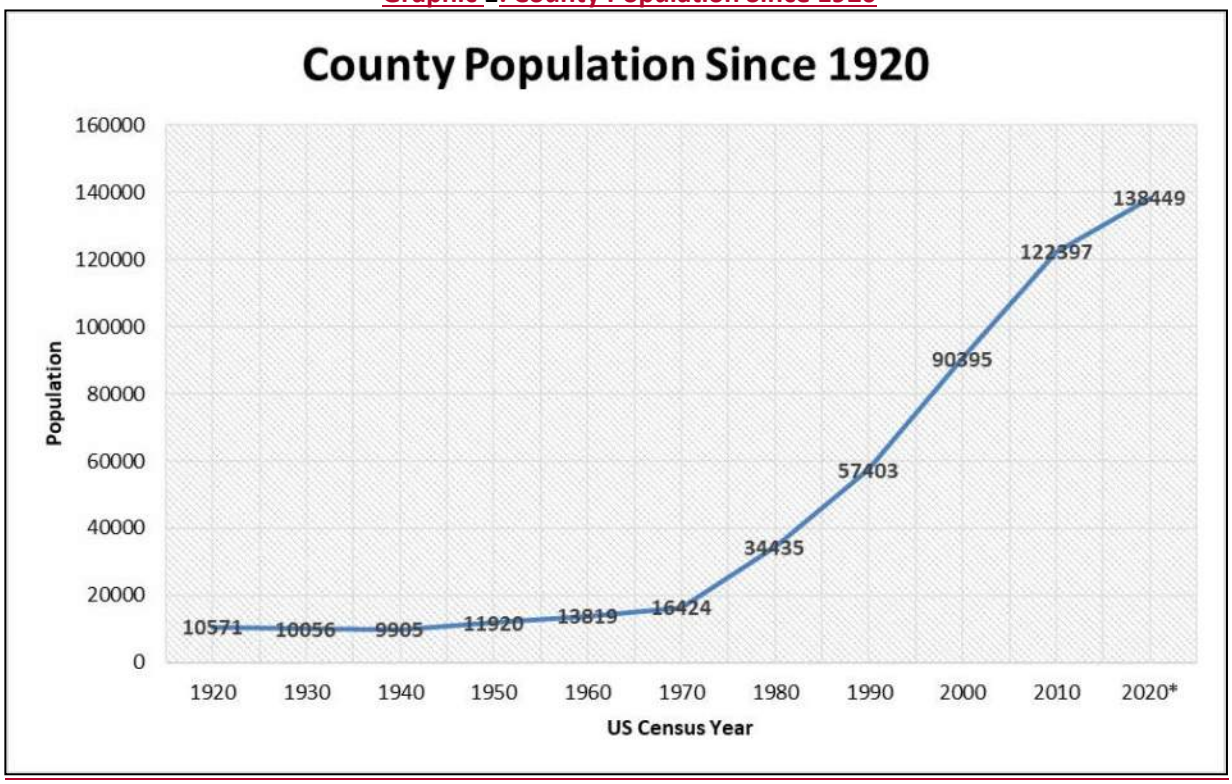
In 1990, the U. S. Census Bureau indicated that the County population totaled 57,403. By 2000, the population had increased to 90,395. This represented a 57.5 percent increase since 1990 or an average annual growth rate of 4.6 percent. The Census Bureau reported the County population to be 122,397 in 2010, a 35.4 percent increase since 2000, making Spotsylvania County one of the fastest growing counties in the nation. US Census ~~P~~population estimates as of ~~July 1, 2012~~2020 are ~~125,684,~~138,449. This population figure represents a population increase of approximately 13.1% since 2010. This growth

is principally due to the County's location along Interstate 95 midway between Washington, D.C. and Richmond as well as the high quality of life available. ~~Weldon Cooper's population projections suggest that the County will add 101,520 residents or an 83 percent increase between 2010 and 2030. This projection assumes an average growth rate of approximately 3 percent per year, similar to a historic rate of approximately 3 percent between 2000 and 2010.~~ Continued growth is expected within Spotsylvania County and surrounding localities in the region. For Spotsylvania County, based on Weldon Cooper estimates, the population is expected to be 159,641 in 2030, and 181,549 by 2040 (the end of the Planning period).

Population and Growth Rate

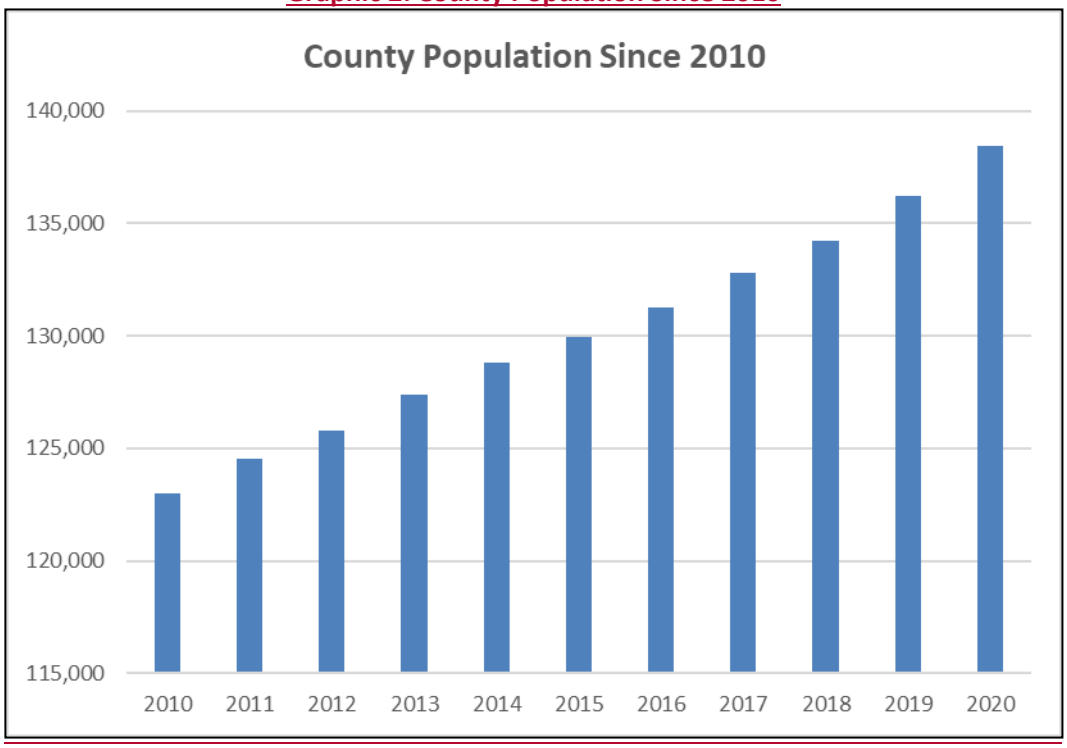
Below you will find historic and recent population tables for Spotsylvania County. Annual growth rate tracking since 2011 will also be found below:

Graphic 1: County Population Since 1920



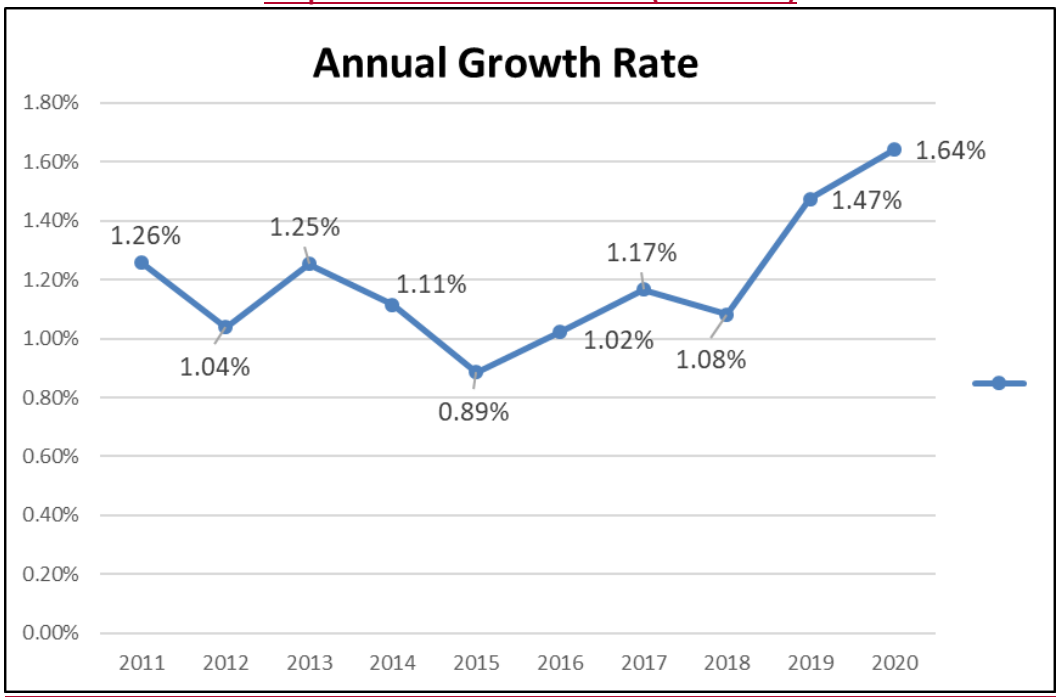
Source: US Census most recently available population estimate (2020*). All other figures based on historic decennial US Census'.

Graphic 2: County Population Since 2010



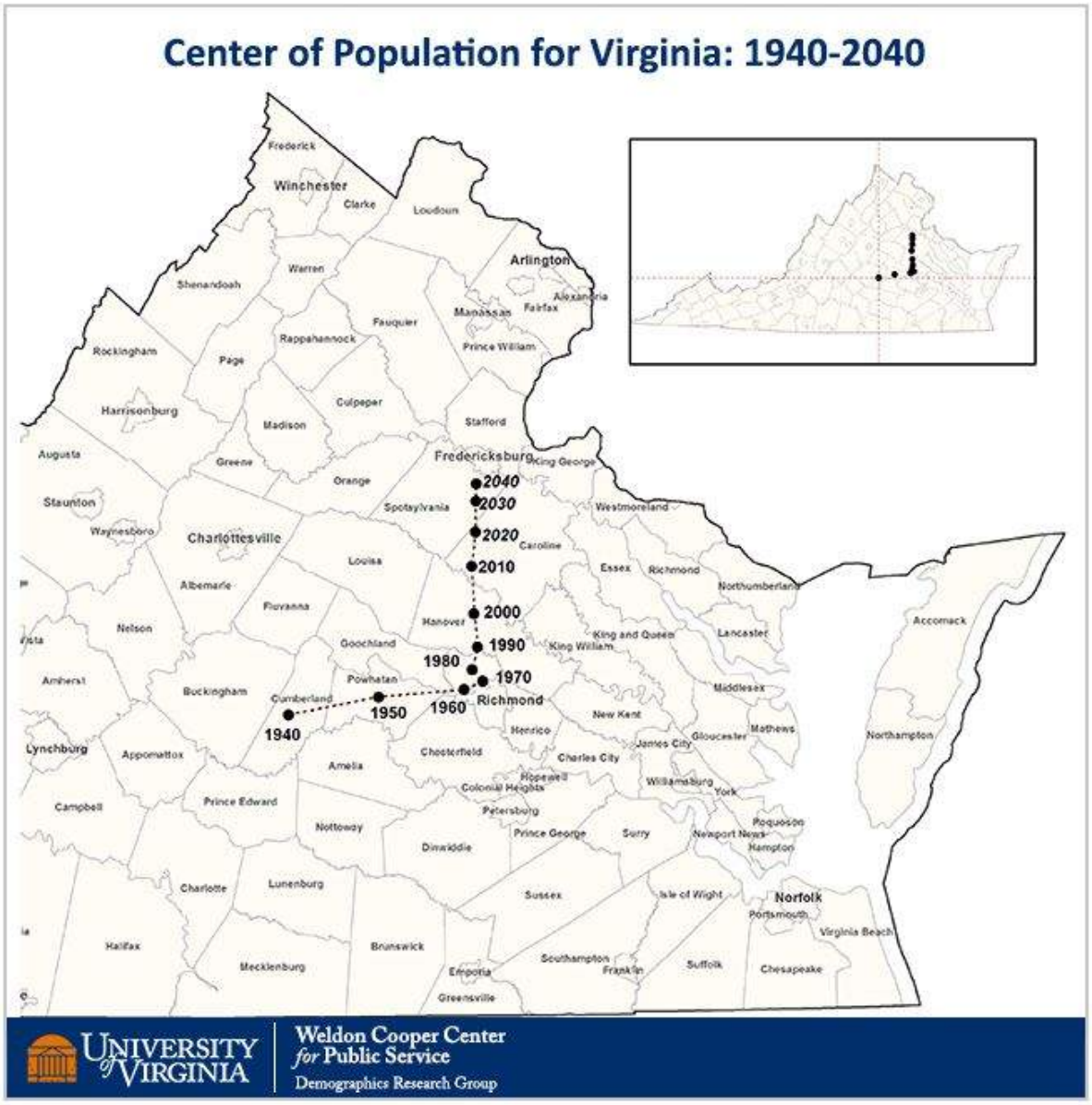
Source: US Census Population Estimates (all figures as of July 1)

Graphic 3: Annual Growth Rate (2011-2020)



Source: Calculations based on US Census Population Estimates (all figures as of July 1)

Exhibit 1: Center of Population for Virginia: 1940-2040



Source: University of Virginia Weldon Cooper Center for Public Service, Demographics Research Group.

The center of population for Virginia is based on the distribution of population throughout the Commonwealth. It is not based on the geographical center of Virginia. Large population centers such as those in Northern Virginia and Hampton Roads act to "pull" the population center away from areas where population is more dispersed and more rural. Higher growth areas with large populations have geographically shifted Virginia's Center of population since 1940 to the north and east. A study by the Weldon Cooper Center for Public Service has mapped the Center of Population for Virginia since 1940. Throughout the Planning period of 2020-2040 (above map), Virginia's population center will be located near the Spotsylvania and Caroline County lines in 2020, and within Spotsylvania County's Primary Development Boundary in 2030 and 2040.

Fiscal Climate

Ensuring fiscal sustainability is key to assuring successful, sustainable implementation and maintenance of portions of this Plan, particularly related to administration of programs and provision of level of service and capital facilities investments now and in the future.

The Code of Virginia requires that all general-purpose local governments publish a complete set of financial statements presented in conformity with accounting principles generally accepted in the United States of America (GAAP) and audited in accordance with governmental auditing standards generally accepted in the United States of America. Annual updates of the Comprehensive Annual Financial Report (CAFR) of the County of Spotsylvania, Virginia is made available for review online **HERE**.

Considering development within the County, the County has aspired to achieve a 70/30 mix of residential to commercial/industrial development (based on assessed value). There is interest in assuring fiscal stability and ability to fund public services for citizens of the community. Additionally, ensuring a mix of land uses helps diversify the local economy and may help "buffer" slowdowns that may impact one industry type or land use more than others. For instance, the retail sales climate has seen significant shifts over the last decade as online sales trends and home deliveries increase. Such trends have led and may continue to lead to commercial floor area vacancies and challenges to identify other potential users. The County aspires to avoid simply being a "bedroom community" for the Washington, DC and Northern Virginia areas where employment opportunities have been plentiful for local citizens. Current commuter trends have strained local roadways, especially during peak times (morning and afternoon rush). In order to achieve level of service goals for things like transportation, parks and recreation, schools, it is critical that revenue sources that can offset costs be identified. Having a vibrant commercial/industrial base helps offset some of these challenges.

The 70/30 mix is aspirational and is not expected to be wholly static due to economic development slowdowns and surges that can and do happen over time. Based on historical data (See Table 1 below) the County should seek gradual improvement overtime to help better realize the policy objective. Since 1995, Spotsylvania County's residential to commercial/industrial mix (based on assessed value) has generally remained around 80/20.

Table 1: Land Use Diversification Mix (Based on Assessed Value)

Year	Percentage Residential Contribution (Based on Assessed Value)	Percentage Commercial/Industrial (Based on Assessed Value)
1995	83.32%	16.68%
2000	81.93%	18.07%
2005	84.75%	15.25%
2010	77.30%	22.70%
2015	80.36%	19.64%
2020	82.28%	17.72%
Source: Commissioner of Revenue, Assessment		

~~**Vision Statement**~~

~~***"Spotsylvania families will enjoy a community that remembers and respects its place in our nation's history and builds on the principles of our founding fathers to provide freedom and prosperity through limited government, respect for property rights, low taxes and pro-business policies for the 21st Century."***~~

Guiding Principles and Policies:

A. Spotsylvania County is a "business friendly" community and local job creation is a priority.

1. Encourage business investment in the County and promote the relocation of federal and state agencies to the County, providing more opportunities for Spotsylvania County residents to work in the County.
2. Support the installation of broadband internet, telecommunications infrastructure, microwave towers, fiber optics, and similar communications systems that meet an identified need for communications support for businesses throughout the County.
3. Encourage the rezoning of land to industrial/office uses in areas designated for Employment Center uses and the revitalization of older, underperforming commercial, office, and industrial developments.
4. Encourage innovative land uses such as renewable energy generation, data processing centers, and other industries leveraging technology in fields such as information technology, medicine, logistics, etc.
5. Promote gateway signage and landscaping to encourage visitation, business, and tourism and consider establishing an I-95 overlay that sets a development standard that promotes Spotsylvania County as an attractive, orderly, and business friendly location.
6. Review and modify the Subdivision Ordinance, Zoning Ordinance, and Design Standards Manual to ensure they implement the Comprehensive Plan and to streamline development review and approval procedures.

B. Spotsylvania County is fiscally sustainable.

1. Achieve a 70/30 mix of residential to commercial/industrial development (based on assessed value), and the annual growth of the industrial and commercial tax base at a rate greater than 2%.
   a. The County should identify priorities to achieve this goal through incentives, infrastructure improvements and extensions, etc.
   b. Consider proactively rezoning certain areas to promote business development.
   c. Diversify the non-residential tax base by encouraging a wide variety of businesses to locate in the County.
2. Development projects seeking increased residential density and/or non-residential intensity should address impacts that are specifically attributable to the proposed

development (i.e. natural resources, historic resources, fiscal impacts, land use transitions, etc.).

a. Each development proposal should include sufficient information to fully evaluate its impacts.

~~b. Active adult communities, with their diminished impact on County services, should be supported.~~

3. ~~Development~~ Any development project~~s~~ seeking increased residential density compared to existing zoning and by-right potential ~~and/~~or non-residential intensity should address ~~its~~ the project's impacts on the County's public infrastructure ~~of the county~~ consistent with the levels of service standards in this Plan and as allowed in the Code of Virginia.

a. A rezoning proposal that is expected to result in demands in excess of current capacity or that would diminish level of service standards below the County's standard for any public facility should mitigate its impacts to the extent allowed in the Code of Virginia.

Mitigation for projects may take the form of voluntary reasonable proffers that seek to address an impact that is specifically attributable to the proposed new development. Such proffers may include, but not be limited to:

1. Cash contributions toward capital improvements,
2. Land dedication for public facility needs,
3. Public facility improvements constructed by the applicant, or
4. Other onsite or offsite proffers that the applicant deems reasonable and appropriate,
5. Phasing of proffered improvements or other proffered mitigations.

b. Development should be phased with the provision of public facilities to maintain acceptable levels of service as identified in the Public Facilities Chapter of the Spotsylvania County Comprehensive Plan. This can be achieved by proffering: 1. Cash or in kind improvements to advance the provision of the public facility 2. Proffer phasing.

c. ~~a.~~ The County should support ~~alternative~~ onsite transportation alternatives ~~and recreational options~~ such as ~~transit,~~ pedestrian and bicycle facilities that ~~are able to, or will,~~ connect ~~to~~ neighboring properties.

d. ~~b.~~ Support the expansion of transit systems to link employment centers with residential areas and transportation nodes.

e. ~~c.~~ "Access management" in the form of systematic control of the location, spacing, design, and operation of entrances, median openings, traffic signals and interchanges should be utilized for arterial and major collector roads in order to minimize the vehicular traffic impacts of new development.

~~e.~~f. Active adult communities, with their diminished impact on County services, should be supported.

4. Preserve significant natural, historic, and cultural resources of the County to ensure the continued allure of the County as a tourism destination.

~~f.~~a. Seek cultural resource surveys, documentation of cemeteries, surveys of potential threatened or endangered species as part of the development review process where appropriate.

~~3.~~5. Diversify and enhance the tourism opportunities in the County.

C. Spotsylvania County is a family friendly community.

1. The County should support a diverse housing inventory, providing a mix of units that can accommodate housing needs for all stages of life. This would involve a range of housing from affordable units for young families just entering the housing market ~~in the form of~~such as condominiums, townhouses, and small single family homes to larger homes, manufactured homes, and active adult and assisted care facilities.
   a. Considering manufactured homes as a possible source of affordable housing, consistent with the Code of Virginia Sect. 15.2-2223.5, strategies support:
      i. preservation of existing manufactured housing communities;
      ii. creation of new manufactured home communities;
      ~~1.~~iii. creation of new manufactured home subdivisions.
2. The County should support mixed use communities with varied housing types, civic buildings, shops, and active and passive recreation opportunities.
3. Plan for and provide public facilities that meet the needs of the community as it grows.
4. Ensure that Spotsylvania County continues to provide excellent educational and recreational, and cultural opportunities.

D. Agriculture and silviculture are valued components of Spotsylvania County's economy.

1. Promote the expansion of Farmers Market(s).
2. Continue the Land Use Taxation Program.
3. Make greater utilization of Agricultural/Forestal Districts by way of: nutrient management planning; Total Maximum Daily Load (TMDL); urban Best Management Practices (BMP) programs; and other practices coordinated through the local Soil and Water Conservation District.
4. Identify and protect productive agricultural and silvicultural lands.
5. Do not extend public infrastructure (such as water and sewer) into productive agricultural and silvicultural lands beyond the limits of the Primary Development Boundary. ~~except in those instances where those areas are designated for future commercial/industrial/office development.~~
6. Review and amend the Zoning Ordinance to allow landowners to preserve farm and forested areas while providing by-right lot yields.
7. Encourage complementary land uses such as agritourism, agribusiness, and renewable energy generation in agricultural and rural areas.

E. Spotsylvania County values its environmental resources.

1. Protect environmental quality by promoting a comprehensive approach to air and water quality management. Examples of approaches to accomplish this could include but are not limited to: green space and tree preservation, stream restoration, and low impact development (LID).
2. The County should support integration of required onsite drainage and stormwater features as an amenity or landscape feature that is incorporated into the overall design of the site.

MAJOR INITIATIVES ACTION PLAN

The Comprehensive Plan contains many strategies. The Action Plan is not intended to repeat ~~each strategy~~ strategies identified in the Plan, but rather to identify those major projects that are required to ensure implementation of the Plan.

Task	Lead Department	Assisting Departments
Continue to monitor economic (industry and construction activity), demographic, socio-economic, and housing trends locally to assess service and facility needs	Planning/Economic Development	Those with LOS
Continue to ~~R~~review the Zoning Ordinance and Design Standards Manual and recommend amendments to the Planning Commission that implement the Comprehensive Plan, including amendments that will streamline processes and improve outcomes	Planning	County Attorney, Zoning, and Economic Development
Continue to ~~R~~review the Subdivision Ordinance and recommend amendments to the Planning Commission that implement the Comprehensive Plan, including amendments that will streamline processes and improves outcomes	Planning	County Attorney
Update the Water and Sewer Master Plan	Utilities	Planning
Ensure annual update to the Capital Improvements Plan is consistent with the Comprehensive Plan	Planning	
~~Develop~~ Continue to update the ~~an~~ annual financial report ~~that~~ to monitors the 70/30 residential to non-residential tax rate goal, population estimates, approved projects, and demographic shifts	Planning	Commissioner of Revenue
Develop and implement a financial plan for multi-modal transportation that identifies all existing and new funding mechanisms, including private funding initiatives and public/private partnerships	Planning/Transportation	Finance
Provide an annual report to the Board of Supervisors on current Level of Service	Planning	Those with LOS
Develop periodic reports comparing built projects to the assumptions used during the application process	Planning	

(i.e. traffic impacts, school age children, assessment values, etc.)		
Develop Special Area Plans for areas where unique development opportunities exist in the County	Planning	Economic Development
Continue to work with partners on regional planning issues such as hazard mitigation, transportation, environmental.	Planning	Based on subject matter

Chapter 2

LAND USE

INTRODUCTION

The purpose of the Land Use ~~chapter~~ Chapter (Chapter) is to encourage the appropriate use of land, water, and other resources within the County, consistent with the interests of the citizens of Spotsylvania County. ~~The Land Use~~This ~~c~~Chapter is a guide for future land use decisions within the County following these general objectives:

- Plan for the orderly development of the County
- Promote a diverse and vibrant economic base
- Maximize the use of existing infrastructure and public facilities to ensure the most efficient operation of facilities and the provision of services
- Accommodate projected residential growth in a manner that is fiscally responsible
- Strive for safe and affordable housing for people of all ages
- Ensure land use policies recognize and accommodate anticipated population increases
- Encourage a community service sector and a commercial base that meets the needs of the citizens and businesses in Spotsylvania County
- Preserve and protect significant historic and environmental resources, rural farm, forest, and agricultural uses and character
- Reduce proximity conflicts between differing land uses related to height, physical massing, scale and density
- Enhance proximity and accessibility between places where people live, work, recreate, and shop

The ~~element~~ Chapter describes land use categories and policies that provide a framework to guide physical development and land use changes in the County. The Future Land Use Map (FLUM) (SEE MAP ~~1~~) depicts ~~future land~~ development patterns that are intended to promote, preserve, and protect the health, safety, and general welfare of the citizens. The FLUM ~~Map~~ is not intended to be parcel specific, but rather provides a flexible guide for the County's desired future development patterns.

Land use categories as mapped are not intended to be parcel specific but they do give guidance into the envisioned land use focus intended for geographic areas. Adjacent land uses need to be considered when multiple land uses exist or are adjacent to one another. As a general "rule of thumb" concerning parcels from an interpretation standpoint land use flexibility is most pronounced when a project area has multiple land use categories (multiple options for land use support) or is adjacent to a different land use designation (complementary or transitional support along a land use edge). Adjacency of differing land uses suggests transitional uses and often involves site design considerations considering size, scale, height, screening, buffering. Significant land use separators such as major roads, environmental features (extensive wetlands, steep slopes, etc.) do generally establish clear lines of separation.

Land use ~~designations~~ categories on the ~~Future Land Use Map~~ FLUM are considered when rezoning and special use permit applications are being considered and to give context to appropriate design of by right development. Land use categories do not change a parcel's zoning classification, nor do they impact continuation of existing legal land uses or other uses permitted by existing zoning (by-right). ~~Indeed, new~~New development that is in accordance with the Future Land Use Map should ensure appropriate siting and transitions to existing

development (impacts of land use differences such as height, physical massing, scale and density) that may differ from the identified land use on the ~~Map~~ FLUM in order to minimize negative impacts on existing development. Additionally, it should be noted that different densities and intensities of development ~~are~~ may be appropriate within each of the land use categories depending on the location of the property. Each application should be evaluated within the context of its surrounding existing and proposed development, as well as the timing of the infrastructure necessary to support the development.

Land use decisions should be consistent with the ~~Future Land Use Map~~FLUM. The ~~Future Land Use Map~~ FLUM may be amended pursuant to the Code of Virginia §15.2-2.2229.

ECONOMIC DEVELOPMENT AND TOURISM

Economic Development and Tourism are integrally linked to development and lend valuable land use insights to the County. The following summary of economic conditions in Spotsylvania have been prepared by the Spotsylvania County Economic Development, and Tourism Departments:

After the longest expansion in U.S. history, the global pandemic caused by COVID-19 is causing many businesses to close and furlough or reduce payrolls. Retail, travel, and hospitality sectors are being hit the hardest. The predicted outlook is the economic impact will be sharp and short—not sustained according to a leading economist, Chmura Economics.

As restrictions associated with COVID-19 ease and the economic recovery starts, Spotsylvania County will continue to remain strong and attractive to new and existing businesses, as Economic Development anticipates needs of businesses during the recovery. As economic development shifts focus from crisis response to economic recovery, competition between locations will resume and quickly ramp up.

One measurement used to rank the County's future success is through the Vulnerability Index, modeled by Chmura Economics. The Vulnerability Index is a measurement of the negative impact that the coronavirus crisis can have on employment based upon a region's mix of industries. As of April 2020, the County has a vulnerability Index of 119.81. The average Vulnerability Index score is 100, representing the average job loss expected in the United States. Higher scores indicate the degree to which job losses may be greater—an index of 200, for example the rate of job loss can be twice as large as the national average. Conversely, an index of 50 would mean a possible job loss of half the national average. The County remains in a better than average position to regain its previous economy based on the diversity of our industry. The market's demand will continue to promote the County's targeted industry sectors especially warehouse/distribution, manufacturing facilities and data centers. Source: Chmura Economics

The County continues to be a prime location to do business because, of its geographical location along Interstate 95, close to military installations and academic institutions, and within an easy reach of Northern Virginia, D.C., and Richmond, but with a much lower cost-of-living. Due to the County's lower taxes, quality education and strategic location, the County has become a leader in job creation in the Commonwealth. The County's pro-business, low regulatory environment has succeeded in the attraction of commercial and industrial industries that

have enhanced job creation, investment and quality of life for our citizens.

Business Retention, Attraction and Expansion

On a continuing basis, the Spotsylvania Economic Development serves as a liaison between the federal and state government and local businesses, providing information and technical assistance in a variety of areas including funding, government contracting and specialized workforce training. The Department maintains an active membership and/or dialogue with numerous regional organizations including the Virginia Economic Development Partnership, the Virginia Employment Commission, the Virginia Tourism Corporation, Virginia Career Works, the Fredericksburg Regional Alliance, the Chamber of Commerce, the Greater Fredericksburg Regional Tourism Partnerships, the International Economic Development Council and others. The Spotsylvania Economic Development Department also maintains relationships with local military bases and numerous institutions of higher learning that are in regional proximity to the County.

Many local businesses in the County continue to support the Commonwealth's significant commitment to hiring veterans and creating employment opportunities making Virginia the most veteran-friendly state in the nation in which to work.

Balanced economic growth is necessary to offset the costly service demands of low-density residential growth. As the County's commercial and industrial base expands, market opportunities will improve for business service firms and related office development. The County can help stimulate office construction by reserving or allocating well-sited parcels of land near the area's major arterials and established centers of employment. These sites will enhance a well-balanced economic development program. The County's Target Industry Sector Employers are outlined below in Table 1:

Table 1: Target Industry Sector Employers

Manufacturing	Distribution/Warehouse	Defense Contractors	Healthcare
idX Corporation	LIDL Distribution	HDT Global	Veterans Administration Outpatient Clinics
UnaDyn	CVS Distribution	PAE	Spotsylvania Regional Medical Center
Fortress Doors	Print Mail Communications	EOIR Technologies	Mary Washington Healthcare
TEX-AMM	Trivetts Furniture Distribution	Patriot3	
Kaeser Compressors	Bingham & Taylor	RPI	
Simmons			
Trussway			
Mid-Atlantic Vinyl Products			
Next Day Cabinets			

Source: Spotsylvania County Economic Development

Economic Development Programs Established to Assist Businesses

Targeted Industries Program - designed to expedite the review and approval of site and building plans involving targeted businesses.

Economic Development Incentives Program - Program used to attract new business, support in the expansion of existing businesses and retain industry. Continued collaboration with State officials ensures the County is using all available resources to maintain and grow the business community.

Economic Development Zones – The County has geography based economic development zones intended to benefit specific industries within their geographic confines, they include: Technology Zone, Tourism Zone, HUBZones, and Opportunity Zones. Because of their ties to geography and land use these zones have been considered in the update of the Future Land Use Chapter within the Comprehensive Plan and as such have been further described in that Chapter.

Virginia Business Ready Sites Program – VBRSP is a discretionary program to promote development and characterization of sites (containing a minimum of 100 contiguous, developable acres) to enhance the Commonwealth's infrastructure and promote the Commonwealth's competitive business environment. The program's goal is to identify, assess, and improve the readiness of potential industrial sites. The Business Ready Sites are also a consideration of the Future Land Use Chapter in the Comprehensive Plan and they are further detailed in that Chapter as they have been identified by location/geography and envisioned use.

Data Center Tax Rate - Data Centers are a targeted industry in the County. The County along with neighboring localities use the same valuation method and depreciation schedule to enhance the ease of doing business. The business-friendly tax rate is $1.25 / $100 of assessed value on computer equipment and peripherals. The uniform rate accompanies readied sites with adequate water, affordable and reliable power, and a fast-track development review process, along with a high-tech, well-educated workforce.

Employment and Job Creation

The County's target market sectors consisting of distribution/manufacturing, professional services, information technology/defense contractors, data centers and destination tourism venues continue to remain strong and out-perform other areas of the state due to our strategic location and versatile workforce. High-tech service, distribution centers and data center clusters have been identified as the top industry clusters to target due to the changes the pandemic has presented. There will be increased need for businesses to enable workers to work from home. The pandemic will change how we do business and deliver goods and services to their customers. A historical look at the County's Industry Employment Sectors, employment and earnings is below:

Table 2: County Industry Employment Sectors 10-Year History and 5-Year Forecast							
	2009-2019				2020-2025		
	Current		10-Year History		5-Year Forecast		
Industry	Empl	Avg Ann Wages	Empl Change	Ann %	Total Demand	Empl Growth	Ann % Growth
Retail Trade	7,178	$30,164	212	0.3%	4,957	128	0.4%
Health Care and Social Assistance	4,998	$41,550	2,178	5.9%	3,109	623	2.4%
Educational Services	4,717	$44,756	594	1.4%	2,341	134	0.6%
Accommodation and Food Services	4,263	$17,108	1,201	3.4%	3,878	316	1.4%
Construction	2,992	$46,736	-40	-0.1%	1,723	209	1.4%
Professional, Scientific, and Technical Services	2,539	$73,178	803	3.9%	1,311	190	1.5%
Other Services (except Public Administration)	2,335	$29,340	518	2.5%	1,436	84	0.7%
Administrative and Support and Waste Management and Remediation Services	1,786	$32,675	651	4.6%	1,157	101	1.1%
Transportation and Warehousing	1,769	$51,355	-7	0.0%	1,068	102	1.1%
Wholesale Trade	1,267	$54,295	486	5.0%	686	17	0.3%
Public Administration	1,153	$55,498	229	2.2%	575	39	0.7%
Manufacturing	1,079	$46,738	-152	-1.3%	556	-4	-0.1%
Arts, Entertainment, and Recreation	961	$16,757	308	3.9%	763	67	1.3%
Real Estate and Rental and Leasing	694	$42,030	-3	0.0%	393	35	1.0%
Information	588	$45,287	170	3.5%	339	46	1.5%
Finance and Insurance	573	$59,729	48	0.9%	291	20	0.7%
Management of Companies and Enterprises	459	$72,332	159	4.4%	232	21	0.9%
Agriculture, Forestry, Fishing and Hunting	192	$14,718	-31	-1.5%	106	2	0.2%
Unclassified	120	$32,261	120	n/a	76	7	1.1%
Utilities	119	$55,678	33	3.2%	61	6	1.1%
Mining, Quarrying, and Oil and Gas Extraction	43	$48,847	17	5.3%	24	2	0.7%
Total - All Industries	**39,825**	**$40,218**	**7,493**	**2.1%**	**24,393**	**2,166**	**1.1%**
Source: Jobs EQ 2019, Chmura Economics, Industry Sectors for Spotsylvania County							

Industrial and Commercial Industry Sectors

Demand for industrial space, warehouse and distribution, is steady as vacancy rates continue to trend downward year-over-year. Continued positive absorption is expected. This trend is a positive indicator for the County since the industrial market is often a leading indicator. The same trend for overall office vacancy rates but with a slower absorption due to positive

employment numbers in the region and leading to continued growth in the remaining sectors. Absorption of space for new industrial construction has been led by Lidl USA Regional Distribution Center in the distribution/warehouse submarket and manufacturing sector additions include idX Corporation and UnaDyn and available existing space continues to be strengthened by healthcare companies and the government contracting industry. As of 2020, the County's total industrial inventory is 6.9 million square feet compared to 6.0 million square feet in 2009, an increase of 15%.

Manufacturing

The County's manufacturing base is well-positioned. The County still has an inventory of available industrial zoned land to meet large and small manufacturing company needs. However, historic trends bear watching going forward.

The Spotsylvania County Planning Department has noted that the County inventory of industrial acreage has been declining over time. In the long term this trend may result in an inadequate inventory of readily available, properly zoned sites for industrial/manufacturing.

An analysis of the County's industrial acreage (last updated in 2018) found total industrial acreage within the County has been in a downward trend from 6,400 acres in 2013 to 5,732 total acres in 2018. Lost industrial acreage is attributed to rezoning activity. Based on the methodology employed, of the total industrial acres staff found 1,398 total acres considered unconstrained and undeveloped (Industrial 1 and Industrial 2 combined). The remaining acreage was either already developed or constrained under permanent protection (under conservation easement), or had environmental factors such as presence of wetlands, steep slopes, resource protection areas. The remaining unconstrained, undeveloped acres were scattered into distinct industrial core areas of the County. Larger industrial sites of ten (10) or more acres are generally in short supply County-wide. Planning staff notes since November 2018 via the Albrite Rezoning, approved July 9, 2019, approximately 6 acres of Industrial Zoned property was added back into the County inventory. Looking back over the past ten years, rezoning applications where new Industrial zoned acreage was proposed is rare in comparison to the volume of acreage proposed to be rezoned away. In all, approximately 13 new industrially zoned acres have been approved during that time. Industrial acreage loss has significantly outweighed acreage gained.

Per Economic Development there is a long-standing population of manufacturing companies in the County with a skilled and talented labor pool. Manufacturers remain exempt from Business License taxes enhancing the environment to do business in addition to the proximity to major Interstates, rail and Virginia ports. The County is strategically located to world-wide transportation and logistical hubs while offering a low cost of doing business, a talented work force and sustainable operations.

Retail Sector

Retail is the largest sector in the County. The County had 6.7 million square feet of shopping center space with 6.3 million square feet occupied and the five-year net absorption rate is 94% as of 2019.

Retail Outlook

Spotsylvania County is home to several large successful retail establishments such as Wal-Mart, Lowes, Home Depot, Michael's, Ross, At Home, BJ's wholesale and many more. Spotsylvania is also home to Spotsylvania Towne Center. Spotsylvania Towne Center houses many top name retail establishments like Macy's, Belk, Dick's, JC Penny, and Costco. Through the pandemic Spotsylvania Towne Center has maintained a high tenant occupancy rate making them one of the most successful malls in the Country. Retail establishments large and small throughout Spotsylvania have made adjustments such as offering curbside pickup to continue retail operation during the coronavirus related close the Governor had in place. The retail market within Spotsylvania continues to be successful even during unprecedented times. In order to ensure a future where businesses not only survive, but thrive, it is critical to anticipate what a post-pandemic world will look like and adjust accordingly.

The Planning Department notes that the retail economy especially can and has also been influenced by macro-level factors such as large scale corporate bankruptcies or scale backs, economic downturns, and competition of "brick and mortar" traditional outlets with the emergence of online based retailing with corresponding shifts in buyer behavior. Nationally within the past few years major retailers have announced bankruptcies often times including store closures. Between 2017 and 2020 national retailers such as JC Penney, Neiman Marcus, J.Crew, Pier 1, Forever 21, Kmart, Payless Shoe Source (announced closure of all 2,100 stores nationwide following bankruptcy filing), Gymboree and Sears have announced bankruptcy and/or location closures. In Spotsylvania County the Sears store that served as an anchor tenant at Spotsylvania Towne Centre since 1980 was recently shuttered and subsequently demolished. The Kmart store located on Route 3 closed in 2017. These factors and trends warrant further watch. Going forward, promotion of a diversification of uses that complement one another, enhance ease of access, critical mass and activity, and identification of additional tenants or uses that may successfully occupy spaces traditionally occupied by brick and mortar retailers will have merit.

Regional Data

The extended labor market area has added more jobs than any other region of the Commonwealth since 2016. According to a recent study by the Virginia Economic Development Partnership, the number of new jobs in the Region grew 1.39 percent and was one of six regions that exceeded Virginia's overall job growth rate of .76 percent, including Northern Virginia and Richmond.

In 2013, approximately 37% of the extended labor market workforce commuted outside the area. This has increased to 42% in early 2019.

In 2015 the Fredericksburg Regional Alliance at the University of Mary Washington (FRA), the University of Mary Washington (UMW), and the Fredericksburg Regional Chamber of Commerce commissioned a study to provide estimates about commuters and related demographics. This study was completed in January 2016 and was based on 2011-2013 data provided by the American Community Survey (ACS) – an ongoing set of research conducted by the United States Census Bureau. In summary of the findings, the competitiveness of the extended labor market workforce has dramatically improved since 2013. Those who live in the County and extended

labor market and work outside the region have attained a higher level of education than those who live and work within the region. This shows the dramatic increase in the overall education of the regional workforce. The study concluded that the average employee who lived and worked in the region in 2017 was more educated than the average employee that commuted outside the region in 2013 closer aligning the workforce skills needed to attract industry from outside the area.

Telecommuting

According to the American Community Survey in 2018 based on a 5-year estimate there were 4.7% or 3,047 citizens in the County working from home.

The effects of the pandemic both during and post recovery could completely reshape traditional office demand and transform what types of service sectors locate around office complexes. According to Costar, less than half of workers can work from home. Telecommuting may become Virginia's biggest demographic trend in the 2020s based on current and future trends addressing the COVID 19 pandemic.

Agriculture and Forestry

Historically, agriculture and forestry have been important components of the Spotsylvania County economy. Spotsylvania was a major producer of many agricultural products, but much of its early notoriety was due to its abundance of raw materials, such as iron ore, gold, lead and zinc. The County was named after colonial Lt. Gov. Alexander Spotswood (1676-1740), who, among other things, was responsible for establishing iron furnaces and foundries in the area. The county seal, with an image of three trees, reflects the importance of forestry to the local economy. A more detailed description of the local agriculture and forestall industry and production can be found in the Natural Resources Chapter subject of Food and Fiber production.

Although the relative economic importance of agricultural and forestal activities has declined as the commercial and industrial base has grown, they are still highly valued as providers of local employment and goods, as well as for providing natural resource protection and scenic amenities in the County. The economic, environmental and aesthetic role of farm and forest resources makes them protection and promotion important to the Spotsylvania community. In addition to land use controls, one of the best ways to preserve these resources is to promote activities to enhance the economic viability of the agricultural and forestry industries.

An important part of the County's economic development strategy should be the promotion of the agricultural and forestal industries. This would include efforts to attract businesses able to utilize local products for the production of finished goods. Furthermore, the economic development department could help to promote the purchase of local agricultural and forestal products through wholesale or retail markets.

Tourism

Per Spotsylvania County Tourism, for 2019 visitors to the Battlefields (912,999) are 60% of visits to the area. The same percentage of the local tourism market visited Battlefields in 1993 as reported in the 2002 Comprehensive Plan. Battlefield tourism remains a significant attraction to area tourism. Visitors to Agritourism sites that include wineries, breweries and the distillery account for (70,839) as of 2019.

Table 3: Tourism (Visitation)

Tourism: Total County Visitation					
	2015	**2016**	**2017**	**2018**	**2019**
Grapes and Grains*	40,622	91,610	63,327	93,869	70,839
Museums **	11,656	12,894	12,125	18,757	18,877
Battlefield (NPS), State Parks ^	822,830	1,518,052	1,585,695	1,580,141	1,150,426
Total Visitation	**875,108**	**1,622,556**	**1,661,147**	**1,692,767**	**1,240,142**
*Grapes and Grains= Spotsylvania Agritourism, Wineries, Breweries, etc.					
**Museums include Shannon Airport, John J Wright, Rappahannock Railroad Museum, Spotsylvania Museum, Salem Church, Elwood, Spotsylvania Visitors Center					
^Include Fredericksburg Regional National Park Service System of Parks and Lake Anna State Park.					
Source: Spotsylvania County Tourism, 2020					

Agritourism

In Virginia, agritourism is defined as any activity carried out on a farm or ranch that allows members of the general public, for recreational, entertainment, or educational purposes, to view or enjoy rural activities, including farming, wineries, ranching, historical, cultural, harvest-your-own activities, or natural activities and attractions. For most people, agricultural tourism refers to a visit to a working farm or any agricultural, horticultural, or agribusiness operation in order to enjoy, be educated, or become actively involved in the activities of the farm or operation – getting a true farm experience. Agritourism has become a huge economic industry in the state of Virginia, 2019 reports show agritourism being a 3-billion-dollar industry in Virginia. Spotsylvania is home to several wineries, breweries, farmers markets, and other agricultural experiences. This is an industry that continues to grow, Spotsylvania economic development encourages and promotes agritourism and will continue to help these businesses grow and flourish in Spotsylvania. Agritourism uses as part of agricultural operations are supported by the Code of Virginia in Sect. 15.2-2288.6 and complementary to that agritourism as defined is included within the definition of the use Agriculture per the Spotsylvania County Zoning ordinance.

ECONOMIC DEVELOPMENT ZONES AND BUSINESS READY SITES

This Chapter highlights and promotes Economic Development Zones and sites located in various parts of the County. Economic diversification and local job creation are a priority for Spotsylvania County. Within Spotsylvania County, Economic Development Zones include: Tourism Zone, Technology Zone, Opportunity Zones, and HUB Zones. Economic Development Zones Maps have been included at the end of this Chapter for reference. The Zones have been summarized below, as follows:

Tourism Zones (See Map)

Tourism Zones are established in Chapter 24, Article II of the Spotsylvania County Code. Spotsylvania County has designated four areas as Tourism Zones. These are located at Lake Anna, Spotsylvania Courthouse, State Route 2 Corridor, and Thornburg. The Tourism Zone Program serves both new and existing qualified businesses, including lodging, dining, retail, meeting and sports facilities, outdoor recreation areas, theme parks and event venues. The Tourism Zone program provides incentives such as tax rebates on Business, Professional and Occupational License (BPOL) and Machinery and Tools Tax (M/T). The qualified business is also placed in the County's Targeted Industry Program, initiating the Fast Track Development Review Process. Tourism zones are intended to stimulate business attraction, growth, and increase employment opportunities. Uses that complement the intent of the tourism zones while meeting the intent of the corresponding land use category should be encouraged.

Technology Zones (See Map)

Technology Zones are established in Chapter 24, Article I of the Spotsylvania County Code. Spotsylvania County has designated two areas of the County as Technology Zones. These are in the Lake Anna area in proximity to the Route 208 corridor, and much of the County's Primary Development Boundary. The Technology Zone program serves both new and existing businesses whose primary purpose is the research, development, or manufacture and/or design of technology products, processes, or related services. The Technology Zone program provides incentives such as tax rebates on Business, Professional and Occupational License (BPOL) and Machinery and Tools Tax (M/T). The qualified business is also placed in the County's Targeted Industry Program, initiating the Fast Track Development Review Process. Technology Zones are intended to stimulate business attraction, growth, and increase employment opportunities. Uses that complement the intent of the technology zones while meeting the intent of the corresponding land use category should be encouraged.

Opportunity Zones (See Map)

The Opportunity Zone program is administered through the Virginia Department of Housing and Urban Development (HUD). This program was included in the Federal Tax Cuts and Jobs Act of 2017, which introduced the Investing in Opportunity Act that established Opportunity Zones and Opportunity Funds. Opportunity Zones are determined by census tracts that have been designated as "low-income" as defined by the US internal Revenue Code Section 45D (e).

Opportunity Zones are intended to revitalize economically distressed communities by utilizing private investments. Investors who invest in Opportunity Zones through Opportunity Funds will qualify for capital gains tax incentives. The Opportunity Zone is depicted in the Spotsylvania County Opportunity Zones Map. Uses that complement the intent of the opportunity zones while meeting the intent of the corresponding land use category should be encouraged.

HUBZones (See Map)

The HUBZone (Historically Underutilized Business Zones) program was created as part of the Small Business Reauthorization Act of 1997 and is administered through the United States Small Business Administration (SBA). The primary goal of the program is to create incentives for the United States federal government to do contracting with businesses by providing those businesses with preferential access to federal procurement opportunities. It is intended to benefit small companies that operate and employ people within HUBZones. In all, there are four (4) Types of HubZone Designations, including Qualified Census Tract; Qualified Nonmetropolitan County; Qualified Indian Reservation; Qualified Base Closure Area. Spotsylvania County has two distinct HUBZone areas whose geographic limits are based on Qualified Census Tracts. The County HUBZones are depicted in the Spotsylvania County HUBZones Map. Per the SBA, for Qualified Census Tracts, a census tract must either: demonstrate a poverty rate of at least 25 percent; or 50 percent or more of its householders must have incomes below 60 percent of the area median household income. Uses that complement the intent of the HUBZones while meeting the intent of the corresponding land use category should be encouraged.

Virginia Business Ready Sites (VBRSP)

The Virginia Economic Development Partnership (VEDP), VBRSP is a discretionary program to promote development and characterization of sites (containing a minimum of 100 contiguous, developable acres) to enhance the Commonwealth's infrastructure and promote the Commonwealth's competitive business environment. The program's goal is to identify, assess, and improve the readiness of potential industrial sites.

VBRSP was developed by a team of state, regional, and local stakeholders including VEDP, DEQ, railroad representatives, utility representatives, civil engineers, and other government, business, and industry representatives. Grants are considered on a competitive basis and made at the discretion of a committee of VBRSP Working Group members.

The VBRSP has two components:

- Site Characterization to assess and designate a site's current level of development
- Site Development to further develop a pool of potential sites across the Commonwealth

In an effort to develop a pool of viable sites, Site Characterization and Site Development grants are available to assist with the costs associated with the initial assessment and the development required to increase a site's currently designated Tier Level to the next Tier Level.

- **Tier 1** – Raw land with interested seller

- **Tier 2** – Site controlled and marketed for development
- **Tier 3** – Zoned industrial/commercial, due diligence complete
- **Tier 4** – Certified as "infrastructure ready"
- **Tier 5** – "Shovel Ready" – permits in place

Requirements:

- Minimum of 100 contiguous acres
- Dollar-for-dollar match by applicant/grant recipient
- Applicant - political subdivisions of the Commonwealth of Virginia, including counties, cities, towns, industrial/economic development authorities

Priorities:

- **Viability** - the development required to prepare and position the site at a higher Tier Level can be implemented practically and successfully within a reasonable period of time.
- **Alignment** – the site is aligned with the local or regional economic development strategy or strategic plan.
- **Economic Impact** – the development of the site has a public purpose and would have a significant economic impact on the community and facilitate further increased prospect traffic and economic growth.
- **Commitment** – the scope of work required to increase a site's currently designated Tier Level to the next Tier Level (Scope of Work) is complete, the necessary financing for the implementation of the Scope of Work is available and documented or will be within a reasonable period of time, the required dollar-for-dollar match of the Site Development Grant requested is identified, and an estimated timeframe for implementation of the Scope of Work has been established.
- **Leveraged Resources** – the use of existing infrastructure, workforce and other community assets, grants and funding, or other resources used to support the site.

In Spotsylvania County numerous sites have been identified for the Business Ready Sites Program. The sites are considered potential "landing" locations for economic development prospects in the future. Of the sites, four (4) have been assigned a business ready site tier. Presently the highest tier site in the County is Tier 2. Three (3) sites have the Tier 2 designation, including: Webster 140 Site along Jefferson Davis Hwy; Gilman Tract East, near Hickory Ridge Road and Jefferson Davis Hwy; Gilman Tract West, located near N. Roxbury Mills Drive and Jefferson Davis Hwy. The remaining Tier qualified site is designated as Tier 1, the Orrock Farm-Spotsylvania, located near Orrock Road at Mallard Road. The County's tier qualified sites meet the minimum acreage threshold as required (minimum 100 acres). The remaining sites are in the process of being evaluated per the Spotsylvania Department of Economic Development. Spotsylvania County's identified VEPD Business Ready sites are summarized in Table 4 that follows:

Table 4: Spotsylvania County Sites in the VEDP Business Ready Sites Program (as of June 2020)							
Name	Address	Tax Map Reference	Business Ready Sites Program Tier	Park Type	Total Acreage	Distance to nearest Interstate (miles)	Distance to nearest Port (minutes)
Gilman Tract East	Hickory Ridge Road & Jefferson Davis Highway	63-A-141	2	-	666	2	53
Crutchfield Tract	Hickory Ridge Road	62-A-90	-	-	372	4.9	53
Ni Village	Jefferson Davis Hwy	49B-1-1A 49-A-82 49-A-81	-	-	333	3.9	51
Gilman Tract West	N Roxbury Mills Drive and Jefferson Davis Highway	63-A-110	2	-	314	3	54
Coleman Family Farm	6222 Smith Station Road	48-A-84	-	-	250	4	59
Webster 200 Site	Route 606	63-A-36	-	-	200	2	52
South Garden/ Broaddus Farm	Mudd Tavern Road	64-A-8	-	-	180	1	52
Gutierrez Site	South Roxbury Mill Road	63-5--C	-	-	174	2	53
Orrock Farm-Spotsylvania	Orrock Road at Mallard Road	76-A-61	1	-	147	1	52
Webster 140 Site	Jefferson Davis Highway	76-A-56 76-A-58C 76-A-58	2	-	140	2	52
Fulks Farm	1601 Belvedere Drive	38-A-26D 38-A-26	-	-	140	7.9	62
Thornburg Towne Center	5122 Mudd Tavern Road	63-A-42 63-A-41 63-A-43C 63-A-40 63-A-44	-	-	100	0.5	47
9040 Jefferson Davis Hwy	9040 Jefferson Davis Hwy	49-A-115	-	-	95	3	57
Thornburg Business Center	5630 Morris Road	63-A-37 63-A-32 63-A-33 63-12—E 63-12—D 63-12—C 63-A-27	-	-	95	2	52
6976 Courthouse Road	6976 Courthouse Road	60-A-5	-	-	70	8	59
Aggregate Rail Site	10201 Benchmark Road	37-A-17B	-	-	69	5	60
515 Lansdowne Road	515 Lansdowne Road	24-12-7	-	-	60	4	62
Jim Morris Road Business Park	Jim Morris Road	38-1-5 38-1-6 38-1-8 38-1-9	-	-	43	6.5	63
Back 40 Site	11032 Tidewater Trail	25-1-2	-	-	40	6	65

Table 4: Spotsylvania County Sites in the VEDP Business Ready Sites Program (as of June 2020)							
Spotsylvania Pkwy at Whitehall Drive	Spotsylvania Pkwy at Whitehall Drive	35-13-5B 35-13-5D 35-13-10A	-	-	38	2.4	56
7020 Harrison Road	7020 Harrison Road	22-8--C	-	-	37	4	66
10813 Rollingwood Drive	10813 Rollingwood Drive	23-A-113	-	-	33	2	61
5008 Mudd Tavern Road	5008 Mudd Tavern Road	63-A-53 63-A-52 63-A-45A 63-A-45B 63-A-50 63-A-54	-	-	32	0	51
5199 Commonwealth Drive	5199 Commonwealth Drive	35-A-91	-	-	32	2.6	55
Thornburg Miller Tract	5901 Mallard Rd	76-1-5 76-1-9	-	Industrial	32	1	52
95 Commerce	Davenport Road and Cosner Drive	36-23-B 36-23-A 36-23-P 36-23-E 36-A-43W	-	-	29	3.6	58
Route 1 and Hood Drive	Route 1 and Hood Drive	24-A-40 35-A-112 23A-2-36	-	-	24	1	54
Tidewater Trail Industrial Lot 4	Haul Road	38-1-4	-	-	24	6.8	64
7501 Lake Anna Pkwy	7501 Lake Anna Pkwy	60-A-3	-	-	20.5	7.9	57
Tidewater Trail Industrial Lot 10	Billy Days Road and Tidewater Trail	38-1-10	-	-	13	7	64
Deep Run Property	Tidewater Trail and Bowman Drive	25-A-8EE	-	-	12	3.7	61
Tidewater Trail Industrial Lot 3	Haul Road	38-1-3	-	-	8	7	63
21 Joseph Mills Drive	21 Joseph Mills Drive	25-A-8X	-	-	6	4.6	63
11615 Shannon Drive	11615 Shannon Drive	24-12-8B	-	-	6	4.5	60
8601 Jefferson Davis Hwy	8601 Jefferson Davis Hwy	49-A-95	-	-	5	3.7	53
11224 New Albany Drive	11224 New Albany Drive	24-20-17	-	-	5	3.9	59
11907 Cherry Road	11907 Cherry Road	22-A-153K	-	-	4	3.3	61
Tidewater Trail Industrial Lot 1	Haul Road	38-1-1	-	-	3.5	6.7	62
46 Joseph Mills Drive	46 Joseph Mills Drive	25-A-8FF	-	-	3	4.3	61
10801, 10805 Courthouse Road	10801, 10805 Courthouse Road	23A-2-21R	-	-	2	1.4	55
5927 Plank Road	5927 Plank Road	12B-A-3	-	-	2	4.4	62

Given the competitive nature of business attraction and retention, it is important to have business ready sites available with available acreage, proper zoning, and infrastructure in place. Efforts should be made to identify and increase the number of Tier designated sites within the County. Proactive efforts to improve the Tier designation to result in Tier 4 or Tier 5 (business ready) designations will improve site attractiveness for development and marketing efforts for prospective investments. Having Tier designated sites, especially higher tier designated sites, within the County makes them more attractive to economic development prospects and site selectors. High Tier sites correspond to reduced cost, time, risk associated with developing a site and establishing business operations. The land use map considers Spotsylvania County's business ready sites and seeks to complement efforts to improve Tier designations. The land use map seeks to avoid assigning a land use category that would inhibit the ability to rezone (if necessary) to business ready friendly zoning designation.

LAND USE MAP GUIDANCE

The Primary Development Boundary (See Map)

A major aim of any ~~Comprehensive~~ comprehensive ~~Planning~~ planning process is ensuring that ~~the provision of community facilities and public services is phased with demand~~ growth happens in a manner that can be supported efficiently and cost-effectively with community facilities and public services. One of the most effective tools for directing the timing and location of new development is the establishment of a ~~Primary~~ primary ~~Development~~ development ~~Boundary~~ boundary to define the area within which public water and sewer utilities will be provided. The Primary Development Boundary (PDB) is shown on the Primary Development Boundary Map and the Future Land Use Map. Land within the boundary is intended to develop with higher residential densities and more intensive non-residential uses than outside of the boundary. By maintaining a ~~Primary Development Boundary~~PDB, the County encourages the most efficient use of the land while preserving the rural character and agricultural and forestal viability of those portions of the County outside the boundary. This boundary is not permanent and may be adjusted when conditions warrant through the amendment process, in accordance with the policies outlined below.

Primary Development Boundary Policies:

1. ~~Rezonings~~ Development proposed outside of the Primary Development Boundary seeking extension of or connection to public sewer and/or water should submit an application for a 2232 Review by the Planning Commission pursuant to the Code of Virginia, Section 15.2-2232. Exceptions to this are outlined in a and b below. Additional 2232 guidance and exceptions are outlined in the Public Facilities Chapter Introduction, specifically under Relation to the Capital Improvement Plan. Those projects not eligible for a 2232 exception or deemed not 2232 compliant should submit a Comprehensive Plan amendment application seeking a change to the Primary Development Boundary. ~~desiring to connect to public sewer and water should submit a Comprehensive Plan amendment.~~
    a. For public sewer services, ~~E~~exceptions include instances pursuant to Spotsylvania County Utility Ordinance (Spotsylvania County Code Section

22-282) and upon satisfaction of the Director of Utilities that a development will not require a County maintained sewer pump station.

~~a.~~b. Individual connections of public water and/or sewer outside of the designated Primary Development Boundary when existing Utility infrastructure is in place to make said connection feasible, as determined by County Utilities.

2. The ability to extend service pursuant to the ~~above mentioned~~above-mentioned Utility Ordinance is not sufficient justification to support a rezoning of the property served or of any land through which the utility lines may extend.
3. Expansions may be approved where the County has determined the change is consistent with the Comprehensive Plan.

The area of land encompassed within the County's Primary Development Boundary (PDB) is approximately 73 square miles (approximately 18% of the County land area). As part of this Comprehensive Plan update, the PDB was expanded slightly, adding approximately 444 additional acres, resulting in corresponding land use designations of commercial, mixed-use light, or employment center. The areas included in the expansion in the New Post Area, Five Mile Fork, and just north of Summit Crossing Road have topographic characteristics favorable for inclusion within the PDB and have been vetted by County Utilities. Per the Planning Department's Future Development analysis spreadsheet last updated January 1, 2021, there is an inventory of 12,049 approved and yet unbuilt residential units including single family detached (3,496), attached (2,314), multi-family (5,095), age restricted (1,144). The vast majority of these future units are located within the PDB. There are significant areas intended for commercial, employment center, and mixed-use development that remain undeveloped at this time. Roughly 1/3rd of the PDB land area remains in undeveloped or underdeveloped status.

Primary Development Boundary "Difficult-to-Serve" Areas

In review of the County Primary Development Boundary (PDB), areas within the PDB have been identified and classified as "difficult to serve" as depicted in the PDB Map and Future Land Use Map. These "difficult-to-serve" areas are specific to difficulties associated with provision of public water and sewer services within the PDB. From a County Utilities standpoint, these areas pose additional challenges related to infrastructure, especially in the near term, and especially related to provision of public sewer. Per County Utilities, "difficult-to-serve" areas within the PDB may not be readily developable for higher intensity uses requiring public water and sewer services. These are areas within the PDB that would require significant infrastructure improvements or capital expenditures in order to provide service. Environmental, topographic, proximity to existing infrastructure, capacity of nearby existing infrastructure challenges all factor into the designation. Development of these areas for higher intensity projects may be inhibited or delayed by lack of readily available public utility services (water and sewer). The cost to extend infrastructure or make necessary upgrades may also not make financial sense for smaller projects. These are cost-benefit considerations for potential site developers in those areas.

Population and Density Estimates Inside and Outside of the Primary Development Boundary (PDB)

The following population and density estimates (Table 5) are based on Geographical Information Systems (GIS) data enrichment tools by ESRI. These tools provide a data apportionment methodology to provide a wide array of demographic, economic, business variables among others. The tool allows for user defined queries of certain geographic areas to provide estimates from known datasets such as census blocks that may not perfectly fit within the parameters of the user defined search area. The Fawn Lake neighborhood has been calculated separately as a Primary Development Boundary-like development served by public water and sewer and yet outside of the designated Boundary. Fawn Lake would otherwise skew population and density figures for the remainder of areas outside of the Primary Development Boundary that are well and septic system supported.

Table 5: Population and Density Estimates

All values approximate - Sourced from ESRI's Data Enrichment Program							
	2010	2010 Density	2010 Pop %		2020	2020 Density	2020 Pop %
PDB	82,657	1,144.7/sq mi	67.5%		94,869	1,313.8/sq mi	67.9%
Non-PDB & Non-Fawn Lake	38,144	112.5/sq mi	31.1%		42,267	124.7/sq mi	30.3%
Fawn Lake	1,722	562.7/sq mi	1.4%		2,497	815.9/sq mi	1.8%
Totals	**122,523**	**295.4/sq mi**			**139,633**	**336.8/sq mi**	

Future Land Use Map (See Map) and Land Use Categories

Land use categories are described in this section along with policies associated with each land use. The land use categories as shown on the Future Land Use Map depict the ~~long range~~long-range recommendations for the general development of Spotsylvania County as is required by the Code of Virginia §15.2-2.2223.

Land Use Policies Applicable to All Land Uses:

1. Rezoning proposals should address public facilities impacts that are specifically attributable to the development.
2. There is an identified need, especially proximate to Fort A. P. Hill, to minimize light pollution.
3. Wherever possible, existing trees and tree buffers should be preserved rather than replacing mature vegetation with new plantings.
4. Provide Fort A.P. Hill an opportunity to comment on rezoning proposals within the Fort A.P. Hill Approach Fan (Map in Appendix A). There is an identified concern with residential development within the Approach Fan which may be impacted by noise associated with Fort A.P. Hill.
5. The County is supportive of the Fort AP Hill Joint Land Use Study recommendations. The study is incorporated by reference into the Comprehensive Plan (See Appendix A for additional information).
6. Encourage consideration of disabled and elderly citizens in the design and implementation of both new development and redevelopment.

7. There is an identified need for the provision of fiber optic cable and other technological infrastructure throughout the Primary Development Boundary, and to the extent feasible, the County as a whole.
8. Redevelopment and investment in existing developed areas should be encouraged provided that the development does not adversely impact adjoining properties, especially adjoining residential properties.
    a. Where higher density or differing land uses are proposed with the support of the future land use map, projects should consider and mitigate impacts of their physical transitions (building height, scale, project density, uses and massing along the project periphery adjacent to existing adjoining development) through means such as screening, buffering, setbacks, project design that includes complementary uses, complementary development character along the project border. Once inland from the project periphery, proposals can then gradually "step up" intensity away from the adjoining development pattern.
    b. Encourage projects to submit design details such as project visualizations/renderings or 3D modeling.
9. Public and private utility projects to establish telecommunications towers, power substations, regulator facilities, should be sited and designed to minimize detrimental impacts to neighboring properties, uses, and roadways. Examples include setbacks and vegetative buffers to reduce size and scale conflicts with nearby uses, especially residential uses; employing stealth technology; replacement of existing infrastructure with smaller, less impactful new technologies; and the use of flush mount or low-profile telecommunications antennas, if practical.
10. ~~Renewable~~ Solar energy ~~generation~~ facilities, ~~such as solar, geothermal, or wind,~~ as defined by the Spotsylvania County Zoning Ordinance should be sited and designed to minimize detrimental impacts to neighboring properties, uses, and roadways, considerate of the following parameters.
    a. To preserve a diversified rural and agricultural economy and maintenance of historically rural character, the total acreage outside of the Primary Development Boundary devoted to solar energy facilities should be limited to no more than three percent (3%).
    b. To minimize the need for new Cross-County transmission lines, Solar energy facilities should be located within one thousand (1,000) feet of high voltage electric power transmission corridors as depicted within the Comprehensive Plan.
    c. To maintain rural character, forestry and agriculture as primary uses outside of the Primary Development Area, there is a preference for separation of solar energy facilities of at least two (2) miles from another approved or constructed facility to reduce the physical and land use impacts related to the frequency and scale of such uses in rural areas.
    d. To reduce visual impacts, solar energy facilities are best located on sites with pre-established and/or preserved vegetative and/or forested buffers of enough depth or density to effectively screen the facility as determined by viewshed analysis along public roadways, nearby or adjacent residential properties, significant cultural or historic resources.
    e. To protect the County's ecological cores, prime agricultural soils and forestry potential, solar energy facilities should avoid designated open space, agriculture and forestry areas per the future land use map.

f. Solar energy facilities of no more than 1,800 acres (total project area) are preferred over larger facilities.
g. Explore opportunities for non-traditional installation methods such as earth screws or earth anchors that may reduce construction noise, expedite installation or removal (if need be).
h. Notwithstanding the above guidance, any solar energy facility approved prior to adoption of this Comprehensive Plan shall be considered to be consistent with the Comprehensive Plan in respect to location, character, and extent. Restrictions recommended herein shall not apply to the extent that any solar energy facility approved by Special Use Permit should ever be reconsidered.

11. Encourage the use of underground storage tanks/cisterns for new proposed development not presently nor proposed to receive future County water service.
12. Encourage the installation of back-up generators or generator-ready hookups for quick-connections at critical infrastructure locations such as all public safety facilities, schools (public and private), complementary uses critical to civic resiliency including but not limited to retail fuel stations, grocery and convenience stores, care facilities (adult and child), and transportation depots.
13. Discourage building footprints within dam break inundation areas.
14. Encourage land use proposals complementary to the Economic Development Zones provided impacts are properly mitigated. Economic Development Zone maps have been included within this Chapter for reference.
15. Protect viewsheds and the natural, historic, and scenic integrity of the County's scenic byways, scenic roads, and Civil War Trails.
16. Enhance access for transportation alternatives such as FRED. Examples include provision of bicycle and pedestrian safe accommodations to access transportation alternatives, improving pick-up and transfer sites considering all-weather conditions, project design meant to ease access and promote the ability to utilize alternatives.
17. The preservation of land via conservation easements are generally supported, especially for purposes of historic preservation, environmental protection, farm and forest preservation.
    a. When land conservation is proposed, carefully consider infrastructure needs of the community and seek to physically accommodate planned public infrastructure improvements meant for community benefit such as future public utility and road right-of-way needs.
18. Refer to the Table of Zoning Districts Complementary to Land Use Designations Inside, and Outside of the Primary Development Boundary to identify appropriate zoning districts associated with the land use category.

Agricultural and Forestal Land Use Category

Agricultural and Forestal- ~~The agricultural~~ and ~~forestal~~ This land use ~~area~~ category represents areas of active agricultural and forestal land within the County, existing agricultural and forestal character, and high to outstanding physical and locational value for agricultural, forestal suitability as exhibited in the Virginia Department of Conservation and Recreation's Natural Heritage Data Explorer Land Use Suitability models. The models are described in Appendix D, Natural Resources. ~~The agricultural~~ This land use category ~~land~~ is primarily intended for

cultivation of ~~used for both~~ crops and livestock purposes, as well as forestry operations, open space, agritourism and other agribusiness, and by-right as zoned rural residential uses. Preservation of existing rural and agricultural friendly zoning designations is encouraged and proposals that would increase residential density above by-right potential or are inconsistent with envisioned primary and secondary uses, especially those that result in significant loss of acreage of agriculture, forestry or silviculture are discouraged.

The Comprehensive Plan recognizes the importance of complementary uses in Agricultural and Forestal areas, considerate of provision of service for populations in the area and agricultural and forestal supply chains. Subordinate or secondary uses generally supported within the Agricultural and Forestal category include: Agriculture and forestry products processing and distribution (i.e. greenhouses, sawmills, feed mills,); Provision of rural, agricultural, forestry goods, services, equipment (i.e. convenience store, garden center, child care center, medical care facility, fuel dispensing facility; farm equipment and supplies establishment); Civic, social, fraternal activities; places of worship; public facilities for provision of service to the community; provision of rural infrastructure and services such as telecommunications infrastructure, broadband, natural gas, electricity (not including power generation plants as a primary use); agritourism and historic tourism (i.e. agritourism uses, camp or recreation ground, bed and breakfast); accessory uses.

~~Prime agricultural~~ Agricultural and ~~forestry~~ Forestal lands are well suited for ~~should be preserved and protected~~ protection from development pressures through enrollment in Agricultural/Forestal Districts or other programs with similar goals. These areas are also well suited for land protection and preservation efforts (e.g. conservation easements). The County supports a “right to farm” policy which limits the circumstances in which farming practices and operations can be considered nuisances to surrounding development. This land use designation is located outside of the limits of the Primary Development Boundary and therefore outside of the public water and sewer service area.

Agricultural and Forestal Land Use Policies:

1. Foster the preservation of agricultural and forestal land to protect the County’s finite inventory of prime agricultural soils and areas of notable agriculture and forestry conservation value. ~~for intrinsic economic benefits.~~
2. Discourage rezonings or special use permits for land uses incompatible with ~~adjacent~~ agricultural, silvicultural, or forestal ~~operations~~ use of the land, or that would have an adverse effect on the continued viability of these uses (e.g. significant loss of prime agricultural soils).
3. When residential development is considered within the Agricultural and Forestal ~~Land~~ land ~~Use~~use, particular care should be paid to the viewsheds along rural roads and buffering to active agricultural lands.
4. The County should encourage the development of ~~tourist~~ tourism and agri-tourism related services. These uses should be compatible with the existing development and may include bed and breakfast type inns, farmers' markets, and resorts.
5. Agribusiness in any form should be encouraged so long as it preserves the rural character of this portion of the County.
6. Road improvements (including road safety and intersection improvements) should ~~take into account~~consider the movement of agricultural freight and machinery, trailered boats and other equipment, rural and tourist populations.

7. The Agricultural and Forestal land use designation is appropriate for conservation easements intended to protect agriculture, forestry, environmentally sensitive areas, and significant historic resources.
8. Applicants should demonstrate adequate well and septic capacity considerate of surrounding uses.

Residential Land Use Categories

There are three distinct residential land use categories. The categories differ by envisioned housing types and densities of residential development. The densities that are provided are ~~simply guides~~ recommendations considerate of existing development and envisioned development patterns and intensity going forward. The appropriate density for each proposal needs to be evaluated in the context of the surrounding community, including the availability or provision of needed infrastructure.

Rural Residential – This category is located ~~encompasses most of the area~~ outside of the limits of the Primary Development Boundary. In general, ~~rural~~ Rural ~~residential~~ Residential development has a recommended maximum density of one unit per two acres ~~and greater~~, including large lot residential, cluster development, farms, and forestland. These properties are served by private wells and septic systems. The preservation of land through conservation easements or preservation methods defined by the County Code may also be appropriate within this land use. Though Agricultural and Forestal land uses are still very much supported in this category, this land use category is more accommodating of Rural Residential rezoning activity than its Agricultural and Forestal counterpart. Rural Residential areas contain fewer areas of notable agricultural or forestal value as exhibited in the Virginia Department of Conservation and Recreation's Natural Heritage Data Explorer Land Use Suitability models. The models are described in Appendix D, Natural Resources. The Rural Residential category exists in areas of existing rural residential character and is concentrated primarily around the periphery of the Primary Development Boundary where employment opportunities and an abundance of goods and services can be accessed in shorter distances through transportation routes compared to more distant Agricultural and Forestal areas. The land use category also exists in proximity to Lake Anna.

~~While the primary goal of the Future Land Use Element in the rural portion of the County is the preservation of farms, forestland, and open space, r~~Rural residents (including disadvantaged populations in rural areas as noted in the Transportation Chapter) ~~also~~ need access to convenient goods and ~~commercial~~ services. Therefore, neighborhood commercial rezonings should be considered in the rural areas ~~provided that the applicant can demonstrate a need for the commercial node and~~ provided that adequate infrastructure is in place or can be added by the applicant to accommodate the use. ~~A need can be demonstrated by the lack of similar facilities in the area and/or by population served, or underserved, in the same service area. If public water and sewer are not available, the applicant must demonstrate adequate well and septic capacity. Similarly, t~~Transportation infrastructure ~~elements~~, such as adequate site distance, signage, and road improvements, must be provided by the applicant to assure safe and convenient access. Site design and architectural elevations should be considered to ensure that the design and appearance of the commercial use is compatible with the architecture and character of the area.

This land use category is located outside of the limits of the Primary Development Boundary and therefore outside of the public water and sewer service area. Applicants should demonstrate adequate well and septic capacity considerate of surrounding uses.

Low Density Residential– This category is reserved for single family attached and detached residences typical in a suburban area. The overall density can be as high as four units per acre, but lower densities are also appropriate. This land use is appropriate within the Primary Development Boundary.

High Density Residential – This urban scale residential category typically includes single family attached and multifamily housing at densities ~~greater than four units~~ of twelve to sixteen units per acre.~~, but clustered single family detached units could also be appropriate within this land use.~~ Typical uses may include duplexes, villas, cluster housing, town homes, residential condominiums, and apartments. Public water and sewer must be available for this type of development to occur, and, therefore, this land use is appropriate within the Primary Development Boundary.

With few exceptions, as depicted in the Future Land Use Map the High-Density Residential land use category represents existing residential projects of a similar size and character to the designation. These tend to be standalone, automobile access-oriented projects in a suburban setting surrounded by other uses within existing developed areas. Such projects and are not well fit into a larger mixed-use plan of development. Undeveloped sites with the land use designation tend to be nearby or adjacent to developed high density sites, supporting potential expansion areas for similar development. Considering land use aspirations, high density residential development is otherwise supported as part of mixed-use development under the mixed-use land use category where a mix of complementary uses of varying densities; walkable live, work, play, shop areas, are promoted and enhanced accessibility and transportation alternatives are available.

Residential Land Use Policies:

1. Residential subdivisions should provide interparcel connections to adjoining undeveloped properties and connect to developments at existing interparcel access points, where possible, to help improve the connectivity of the transportation network and more efficient distribution of traffic.
2. Residential uses within the Primary Development Boundary should provide inter- and intra-development pedestrian paths to link adjoining subdivisions and form a cohesive residential area and alternative transportation and recreational opportunities.
3. Residential infill development should maintain the neighborhood character (massing, bulk, height, density) established by the existing adjacent subdivisions in relation to the adjacent subdivision edge only.
4. For residential development outside of the Primary Development Boundary particular care should be paid to preserving the character of the viewsheds along rural roads and buffering to existing agricultural properties, especially when mapped historic and scenic corridors are present.
5. ~~The signage for neighborhood commercial ventures in the rural portions of the County should not exceed six feet in height to preserve the rural viewsheds and character of the area.~~

~~6.~~5. The County should encourage the development of agribusiness and tourist related services within the Rural Residential areas. These uses should be compatible with the existing development and include bed and breakfast type inns, farmers' markets, campgrounds and resorts.

~~7.~~6. Individual driveways onto the primary rural roads should be discouraged and consolidated wherever possible.

~~8.~~7. Promote the provision of a diverse housing mix by encouraging a range of housing sizes and types that meet the needs of citizens at all income levels throughout all stages of life.

8. Promote the construction of market rate affordable housing units rather than units that are subsidized for the initial sale to ensure that housing remains affordable over time. Depending on the land use designation, examples may include and are not limited to condominiums, townhouses, and small single family homes to larger homes, manufactured homes, and active adult and assisted care facilities.
    a. Affordable housing are those units priced at or below the affordable price range based on the County's methodology for calculating affordability as provided in the Affordability Calculation Table located in the Housing section of this Chapter. This calculation should be updated at least annually.
    b. Encourage residential development projects that integrate a range of complementary residential housing designs and price points (including affordable units).
    c. Considering manufactured homes as a possible source of affordable housing, consistent with the Code of Virginia Sect. 15.2-2223.5, strategies support:
        i. preservation of existing manufactured housing communities;
        ii. creation of new manufactured home communities;
        iii. creation of new manufactured home subdivisions.
9. Rural Residential land use is appropriate for conservation easements intended to protect agriculture, forestry, environmentally sensitive areas, significant historic resources.
10. Outside of the Primary Development Boundary, applicants should demonstrate adequate well and septic capacity considerate of surrounding uses.

Mixed Land Use ~~Category~~ Categories

Mixed Land Use ~~communities~~ areas should serve as a place for Spotsylvania residents to live, work, shop, and play by providing for a variety of land uses in a compact, walkable community with a ~~more~~ dense development pattern. The Mixed Land Use category encompasses a variety of uses, including traditional neighborhoods; higher density residential; non-traditional residential (garage apartments as well as residential units situated over commercial uses); commercial uses (retail and office); light industrial; educational facilities; "cottage" and "artisanal" industries; live-work projects; two or more uses; recreation facilities, and compatible public and other civic facilities. The intensity of the development within the mixed-use category will vary depending upon location, surrounding uses and the availability of mass transit. Larger scale mixed use developments may be proposed under this category or developers may propose smaller projects that that are or will be integrated into a larger ~~mixed~~ mixed-use area. This should be accomplished by utilizing the principles described throughout this category description, with particular attention paid to physical transitions between developments in ~~the~~

size, scale, massing, setback, screening and buffering, street layout, building location on the lot, general aesthetic of the development, parking design and location, and pedestrian accessibility.

Alternative modes of transportation are desired within mixed use areas to encourage pedestrian access and discourage automobile reliance. Tracts of land should be developed to provide continuity among the various land uses and to create a compact and walkable living environment and workplace. Transitional uses and/or project design considerations are required to protect lower intensity and density uses from more intense/dense development. Building heights, location specific densities such as along the project edge should be "stepped down" adjacent to lower intensity and density uses, if applicable. Road, street, and pedestrian corridors should be established in a grid pattern and connect wherever possible to adjoining developments. Mixed use developments will often include both on and ~~off-street~~off-street parking, sidewalks, bike lanes, benches, pedestrian scale lighting, tree lined streets that soften the hardscape and provide shade for pedestrians, fountains and other civic embellishments that assist in fostering ~~create identity,~~ a sense of community, and uniqueness of place.

There are three tiers of the mixed land use category. They are described as follows:

Mixed Use Light- Mixed Use Light is the lowest intensity mixed-use category. This land use category envisions a mix of single-family detached and attached residential development at densities of 4 to 8 units/acre. Except for the development of commercial corridors as described below, most of the land within this land use designation is envisioned to be a mix of residential uses.

The land use designation also supports development of mixed-use commercial corridors of a neighborhood or regional scale along roads with a VDOT functional classification of Major Collector or higher.

In "greenfield" development (presently undeveloped or underdeveloped areas), this land use category is generally located as a transitional land use to promote a gradual, more harmonious increase in density and intensity between low-density residential areas and more intensive mixed-use, employment center, or commercial areas.

For infill development, residential development of a similar size and scale to the existing development patterns is preferred. Development of affordable dwellings and creative infill such as residential "doubles" constructed to appear as single-family homes are appropriate in this land use designation. Affordable single family attached, single family detached, manufactured homes are additional examples. This land use designation has been geographically located to generally preserve the development patterns established in infill areas and discourage land use or intensity changes that would significantly alter the existing community.

Mixed Use General- This land use category envisions a broad mix of commercial, office, residential (single-family attached, multi-family) development in a horizontal mixed use pattern (various uses located within a walkable distance of one another), or in the "traditional neighborhood development" form with various uses "stacked" upon one another in multi-story buildings. Residential densities in these areas are envisioned to exceed 8 units/acre. However, urban or semi-urban densities of 16 units/acre or more and resulting building scale are appropriate and encouraged in this land use area. The land use designation is centrally located

as core areas of mixed-use nodes and away from nearby low-density development. Urban or semi-urban densities and building scale are appropriate in this land use area.

Mixed Use Commercial Heavy. This land use category envisions a commercial and office "heavy" mixed use district. This category promotes development of commercial (such as retail, office, service, lodging, food establishments, entertainment, "cottage" or "artisanal" industries) at a semi-urban or urban scale. Residential development within these areas is intended as a secondary or subordinate use (in total land area and square footage devoted) within the land use area. The land use designation encourages mixes of residential typologies for housing diversification. Residential development here is intended to help diversify the land use mix and provide the ability for residents to be located nearer to employment opportunities and commercial goods and services and inversely for businesses and employers to benefit from a geographically close customer base or "employee pool". Like the Mixed-Use General designation, residential densities, except for the Lake Anna Mixed Use Commercial Heavy designation, are intended to exceed 8 units/acre. Urban or semi-urban densities of 16 units/acre or more and resulting building scale are appropriate and encouraged in this land use area.

At Lake Anna, the Mixed Use Commercial Heavy designation is located outside the limits of the Primary Development Boundary and lacks public water and sewer services. The Lake Anna area in proximity to the Route 208 corridor is envisioned to develop as a "village center" and mixed-use area. Economic Development Overlay Zones exist within this area that further promote commercial, technology, tourism related businesses in the area. The Lake Anna mixed use category includes the Technology Zone, Tourism Zone, and a portion of the HUB Zone. The primary focus of the Lake Anna mixed use area therefore is commercial. Residential development in this area is intended as a secondary or subordinate use (in total land area and square footage devoted). Due to its location outside of the County's Primary Development Boundary Envisioned residential densities and complementary zoning designations are not the same as those within the Primary Development Boundary (see Table of Zoning Districts Complementary to Land Use Designations Outside of the Primary Development Boundary).

Mixed Land Use Policies:

1. Special attention should be given to provision of design guidelines, architectural features and community amenities to enhance placemaking. ~~Mixed land use developments should display characteristics that provide a unique sense of place (examples could include: design guidelines, architectural features, or common color palette, among others).~~
2. Appropriate transitions in size, scale, height, massing ~~scale~~ of building, project density and peripheral density (considering adjoining development, if applicable) and/or setbacks and buffering should be provided from mixed land use developments to adjoining existing developments that exhibit a distinctly different development character.
3. Vehicular and pedestrian connections should be made to adjoining developments at appropriate locations, including at existing interparcel access points.
4. A grid pattern of connected streets ~~should be supported by the County~~ is appropriate. Cul-de-sacs ~~should be~~ are discouraged and only employed in rare instances (e.g. site limitations due to significant environmental or topographic constraints).
5. The County should support public open space and pedestrian accommodations integrated throughout the development.

6. Mixed-Use developments should be designed so that multiple vehicle trips can be combined into one stop by providing several destinations within easy walking distance. This can be encouraged by closely monitoring the provision of parking and ensuring that there is not an excess supply that encourages additional auto trips. ~~Drive-through's should be limited and carefully designed to ensure integration into the character of the development.~~
7. Mixed~~ land -use~~ Use development at Lake Anna should provide local shopping and professional services as well as tourist related uses such as hotels, inns and restaurants.
8. Parking should be located to the rear and sides of buildings preferably at the fringe of development or within structured parking, with the building facades clearly visible from the street.
9. The County should support a diverse housing mix with a range of housing sizes and types that meet the needs of citizens throughout all stages of life and income levels.
10. Promote the construction of market rate affordable housing units rather than units that are subsidized for the initial sale to ensure that housing remains affordable over time. Depending on the mixed-use tier, examples may include and are not limited to condominiums, townhouses, and small single family homes to larger homes, manufactured homes, and active adult and assisted care facilities.
    a. Affordable housing are those units priced at or below the affordable price range based on the County's methodology for calculating affordability as provided in the Affordability Calculation Table located in the Housing Section of this Chapter. This calculation should be updated at least annually.
    b. Encourage mixed-use development projects that integrate a range of complementary residential housing designs and price points (including affordable units).
    c. Considering manufactured homes as a possible source of affordable housing, consistent with the Code of Virginia Sect. 15.2-2223.5, strategies support:
        i. preservation of existing manufactured housing communities;
        ii. creation of new manufactured home communities;
        iii. creation of new manufactured home subdivisions.
11. Quality open spaces should be integrated into developments and may include passive and active areas, pavilions, walking paths, gardens, forested areas, and lakes, pocket parks, among other features.
12. Commercial and Office development within the Mixed-Use Light tier should primarily be oriented and/or along roads with a VDOT functional classification of Major Collector or higher.
13. Residential development within the Mixed Use Commercial Heavy Tier should be a secondary or subordinate use (in total land area and square footage devoted) compared to the balance of the full extent of the land use area within which the project is a part.
14. To enhance site accessibility and reduce internal road network conflict, secure an additional point of ingress/egress to/from the Bowman Center/Sylvania Plant Industrial Center/ Spotsylvania Industrial Park Mixed Use Commercial Heavy area.

Commercial Land Use Category

Commercial- The commercial land use area consists of a variety of retail and office uses, examples of which include, but are not limited to: medical facilities, shopping centers,

restaurants, hotels, automobile service and sales facilities, personal service establishments, office parks, entertainment facilities, and similar uses. The majority of the existing commercial developments within the County are located along Jefferson Davis Highway (U.S. Route 1), Plank Road (U.S. Route 3), and Southpoint Parkway. Connectivity to and accessibility from nearby residential development should be encouraged.

Commercial Land Use Policies:

1. Street patterns for new development should follow an interconnected network to reduce congestion and provide routing alternatives for local traffic.
2. New development should provide interparcel connections to adjoining properties, where appropriate, and should connect to existing interparcel access points.
3. Sidewalks and paths between commercial and office buildings and through parking lots should be provided to ensure safe pedestrian routes and, when possible, connect to FRED bus routes.
4. The County should encourage development patterns that redirect traffic patterns to alleviate congestion. Direct access to existing roads by individual uses or lots should be discouraged.
5. Development should proceed sequentially along and back from the major thoroughfares. Development should not isolate an existing land use or undeveloped parcel.
6. Encourage the retention and expansion of existing business operations, as well as the attraction of new businesses and investment.
7. Encourage non-retail commercial operations.

Employment Center Land Use Categories

The employment Employment center Center land use areas isare envisioned to be the primary location for new office and industrial development within the County, with the a focus on larger scale office complexes, computing and technology-based uses such as data centers, industrial users, and industrial parks, office business parks, entertainment and tourism attractions and complementary uses, where applicable. Where the Employment Center Land Use Category overlaps the County's Economic Development Zones, the land use category seeks to achieve a complementary vision. Efforts to increase residential densities in these areas are discouraged. The Route 1 corridor south of Massaponax to the Thornburg interchange, known as the Jackson Gateway, is envisioned to be an economic driver for the County in the future. High end office parks and campus settings with class A office space is desired here as outlined within the Jackson Gateway Plan developed by the Department of Economic Development and Tourism.

Industrial development within the County is desired Inin the interests of growing local employment, promoting investment within the community, and maintaining a balanced economic base,. industrial development within the County is also desired. Both Depending on the Employment Center land use category, light and heavy industrial uses are suited for the land use designation. appropriate and should be encouraged within the Employment Center category with the Given the nature of these uses, careful consideration of their location and transition to adjoining properties is important. Light industrial uses are usually more consumer-oriented than business-oriented and are manufacturing activities that use moderate amounts of partially processed materials to produce items of relatively high value per unit. Examples include, but are not limited to, the manufacturing of: clothes, shoes, furniture, consumer electronics and home

~~appliances. Processing, assembly or disassembly operations could also fall into this category. Typically these uses cause little pollution. Heavy industrial uses tend to be larger in scale and often can have pollution impacts (noise, smell, etc.) on the surrounding area. While these impacts should be minimized, there is the recognition that not all negative effects can be completely mitigated. The location of these users within industrial parks, both new and existing, should be encouraged to help ensure appropriate transitions that minimize any pollution impacts on neighboring properties. Examples of heavy industrial uses include, but are not limited to: mining operations; refineries, power plants; and the fabrication and assembly of large items.~~

Spotsylvania County recognizes the importance of logistics and distribution-based businesses. They are integral to the economy and provision of goods. Supply chains are far reaching. Growth of online sales has vastly increased access to goods from coast to coast and internationally. Access to these resources require extensive supply chains from manufacturer to warehouse to distribution (road, rail, air, water, pipeline, fiber) to final end user. The County recognizes the importance of Interstate 95, US Route 17, and the RF&P Rail Corridor for far reaching logistics systems connections.

Truck terminals, warehousing and distribution facilities can be considered either light or heavy industrial. Such industrial uses must be considered within the context of their size, scale, transportation systems, service area impacts to determine whether they complement light industrial neighbors or heavy industrial ones.

Except for the Thornburg area where Economic Development Zones advocate for tourism related commercial attractions and complementary uses. As a general "rule of thumb" ~~Some~~ limited commercial development is ~~also~~ considered appropriate within the designated Employment Center areas. ~~The c~~Commercial development such as retail sales establishments or retail plazas ~~is~~ are intended to be secondary or subordinate to the~~se~~ intended employment center uses. ~~, playing a supportive role the office and industrial development.~~ The County's targeted commercial centers with 'big box' retailers and others have been~~,~~ identified separately on the Future Land Use Map as the red 'Commercial' category~~, are intended to be in the eastern Route 3 and Massaponax areas~~. Provision for commercial development also exists within the County's mapped mixed-use areas.

Employment Center Light- The employment center light category is primarily envisioned for light industrial parks, data centers and office parks. Light industrial uses are usually more consumer-oriented than business-oriented and are involved in manufacturing activities that use moderate amounts of partially processed materials to produce items of relatively high value per unit. Examples include but are not limited to the manufacturing of: clothes, shoes, furniture, consumer electronics and home appliances. Processing, assembly or disassembly operations could also fall into this category. Warehousing and distribution may be appropriate in this land use category. High Technology businesses, data centers and "clean" industry are appropriate in this land use. Typically, these uses cause little pollution or risk of nuisance. Operations are typically kept internal to the building footprint with limited outdoor operation of machinery or equipment beyond freight-based delivery or distribution.

Employment Center Heavy- Employment Center Heavy uses tend to be larger in scale and may have pollution impacts (noise, odor, etc.) on the surrounding area. Such uses may have

emissions or a large degree of outdoor machinery of equipment use as part of normal operations. While these impacts should be minimized, there is the recognition that not all negative effects can be completely mitigated. The location of heavy industrial uses should be encouraged to help ensure appropriate transitions that minimize impacts on neighboring properties. Examples of heavy industrial uses include, but are not limited to: mining operations; refineries, power plants with emissions; scrap recycling operations, rail yards, and the fabrication and assembly of large items where the size and scale of facilities and operations are otherwise significantly "out of character" with the surroundings.

Employment Center Land Use Policies:

1. Encourage development of new and ~~Enhance and promote the~~ existing industrial parks and mitigate conflicts with nearby residential areas.
2. Street patterns for new development should follow an interconnected network to reduce congestion and provide routing alternatives for local traffic.
3. Truck dependent businesses should be located where they have access to major thoroughfare(s) and do not have to rely on local roads.
    a. To reduce the extent of impacts on roadways, large Interstate dependent distribution facilities are best suited within three (3) travel miles on sufficiently accommodating roadways to the nearest Interchange of chief access.
4. New development should provide interparcel connections to adjoining properties where appropriate.
5. Sidewalks and paths between commercial, ~~and~~ office, and industrial buildings and through parking lots should be provided to ensure safe pedestrian routes and, when possible, connect to bus routes.
6. Encourage development patterns that redirect traffic patterns to alleviate congestion.
    a. Direct access to existing roads by individual uses or lots should be discouraged
    b. Discourage strip commercial and 'big box' development and promote office and industrial centers in a campus like setting that are linked by pedestrian/bicycle paths, where appropriate, and access roads.
7. Commercial development should ~~only~~ be ~~encouraged to support existing office and industrial development.~~ secondary or subordinate (in total land area and square footage devoted) to the intended uses associated with the employment center land use designations.
8. Development should proceed sequentially along and back from the major thoroughfares.
9. Promote the following components of campus style office development over traditional strip commercial development:
    a. Minimal entrances and conflict points
    b. Landscaped median strip with few stoplights and crossovers allowing for free-flowing traffic
    c. Berms, landscaping and trails or sidewalks along major transportation routes
    d. Pedestrian networks along internal roadways and between complexes
    e. Maximized interparcel connections
    f. Mixed uses provide on-site services
    g. Minimize the visibility of parking lots from the major transportation routes
10. Encourage job creation that provides sufficient income for employees to be able to afford housing within the County.

11. Encourage the retention and expansion of existing business operations as well as the attraction of new businesses and investment.
12. Encourage a ~~balance~~ diversification of uses within the Employment Center category to include light industry, heavy industry and office uses.
13. ~~Distribution centers should be located in areas in close geographic proximity to the interstate with the necessary transportation infrastructure so as to minimize adverse impacts on the County's transportation network.~~Continue economic development site selection and attraction efforts to identify candidate sites, seek tier designation, and improve tier designated sites for the VEDP Business Ready Sites Program.

Open Space Land Use Category

Open Space- The open space land use category is not intended for development other than for passive recreation purposes such as recreational trails, wildlife management areas, natural or historic preservation and interpretation. The land use is intended to preserve and protect historic and natural resources throughout the County and recognizes the inherent value in open space, resource protection, character and viewshed protection. The open space land use category includes park and recreation facilities owned and operated by the County for passive recreation, State and Federal Government parks, as well as those areas deemed worthy of preservation and conservation, such as buffers along major roadways to preserve the rural character in the proximity of the County's historic resources. Roadway buffers especially consider the County's two designated scenic byways and scenic roads. Common open spaces in private developments are also included as they serve to provide ~~as a~~ passive recreation, permanent screening and buffering, natural resource preservation and protection ~~location~~. Lands in existing conservation easement are included in the open space designation. As part of this Comprehensive Plan update, the open space land use category has been expanded to include mapped wetlands and resource protection areas. The intent of the addition is solely based on proactively considering presence of resources and avoiding introducing negative impacts to them. Acknowledgement of such resources under the open space category also "paints a clearer picture" for areas identified for potential development prospects that may be environmentally constrained and as a result developable acreage reduced or inhibited. ~~Active recreation opportunities would likely be located either in the Commercial/Mixed Use (privately run) or Institutional (County run) Land Use Categories.~~

Open Space Land Use Policies

1. Viewsheds from County roads should be preserved.
2. Development in these areas should be generally discouraged, however, if it is to occur, it should occur in such a way to best blend into the existing landscape.
3. The open space land use areas are appropriate for conservation easements intended to protect open space, agricultural and forestal lands, environmentally sensitive areas, significant historic resources.

~~**Institutional Land Use Category**~~

~~The institutional land use category includes County facilities, private and public schools, active recreation parks, and large public service uses such as hospitals. This category focuses on existing land uses and does not reflect any aspirational locations of various public facilities.~~

Institutional Land Uses

Institutional- For the purpose of the future land use element, Institutional land uses include the governmental facilities necessary for the provision of public services, and large public service uses such as airports. Such uses are common throughout the County and are intended to serve geographically dispersed populations within and outside of the Primary Development Boundary. Such uses commonly appear in the County Zoning ordinance as by-right or special uses across rural, suburban, and urban-scale zoning districts. As such, institutional land uses have application county-wide, both inside and outside of the Primary Development Boundary and across all land use categories. Such uses should mitigate their impacts on public facilities such as the local transportation system and carefully consider impacts to assure impact reduction (size, scale, massing) on the physical surroundings and existing development through site design. Institutional Land Use areas in the future land use map reflect existing institutional uses within the County. Refer to the Public Facilities Chapter for insights into areas identified for establishment of additional County managed facilities.

Historic or Scenic Corridors

The Future Land Use Map acknowledges designated historic or scenic corridors within the County. These designations are not intended to change the underlying land use designation but to emphasize the importance of sensitive site and building design. These corridors have been designated recognizing their inventory of significant historic, cultural, scenic resources, and character. Additionally, there are several important high visibility "gateway" or "first impressions" corridors of importance. Stewardship of recognized historic or scenic resources and continued vigilance to avoid diminishing the value of the corridor designations is up to citizens, landowners, developers, and the County as a whole. Historic and scenic corridor designations within Spotsylvania County include Scenic Byways and Roads, and the Civil War Trail. Outside of the Primary Development Boundary, efforts to preserve and protect the scenic value of these corridors are supported. Examples include establishment of conservation easement, enhanced buffering or setbacks, designating open space areas along corridors, architectural design sensitivity to the nearby rural and/or historic vernacular. Within the Primary Development Boundary where development is intended, enhanced site and architectural design is encouraged. Many of these corridors within the Primary Development Boundary already are subject to enhanced design standards associated with the Highway Corridor Overlay District (HCOD). Similar standards are encouraged to be applied along corridors where the HCOD does not exist. The County encourages architectural renderings, design simulations, viewshed analysis' when development is proposed along designated historic or scenic corridors as identified on the Future Land Use Map.

Spotsylvania County's Scenic Byways and Roads, and the Civil War Trail through Spotsylvania County have been described in greater detail below:

Scenic Byways and Roads- The State Scenic Highway and Virginia Byway Act (1966) created the Virginia Byway program. Per the Virginia Department of Conservation and Recreation (DCR), the state scenic byway program is managed by Virginia Department of Transportation (VDOT) in partnership with the DCR. Natural, cultural, historical, recreational and archeological amenities of the commonwealth's scenic roads are recognized through the program, as are unique and varied cultural and features of Virginia's geographic regions.

VDOT's designation process involves municipalities, citizens and the state who cooperatively determine if a road section of at least ten (10) miles warrants designation for its aesthetic, cultural, historical, natural or recreational significance.

Spotsylvania County has two Virginia scenic byways, they include River Road and Guinea Station Road. In order to maintain the integrity of the County's scenic roads, its incumbent upon the County to establish goals aimed at their protection. Fortunately, both corridors are located outside of the Primary Development Boundary and are not expected to or envisioned to experience transformative character changes via development pressures. However, such corridors have been subject to occasional business, utility or telecommunications infrastructure, and residential rezoning proposals that warrant establishing some basic scenic byway protective guidelines. Consideration of the scenic byway designation is often raised as a concern during the public hearing process by citizens interested in maintaining corridor integrity.

VDOT also identifies two transportation corridors within Spotsylvania County as Scenic Roads. Both Scenic Byways and Scenic Roads can be found on VDOT's 2017 Scenic Roads Map. Per VDOT, the scenic roads designation is a historic one, based in Virginia's 1965 Statewide Comprehensive Outdoor Recreation Plan. Scenic Roads in Spotsylvania County include Plank Road (Route 3), extending from the City of Fredericksburg line to Orange County, and Courthouse Road (Route 208), from Interstate 95 to Brock Road. Staff notes that portions of these roads within urbanized areas within the Primary Development Boundary are located within the County Highway Corridor Overlay District, intended to provide enhanced design standards for new development. Otherwise, cognizant of historic resources and interest in maintaining rural character and viewsheds along those corridors, the County has applied open space land use designations. For instance, Courthouse Rd between Smith Station Road and the Spotsylvania Courthouse Battlefield serves as historic rural "gateway" to Spotsylvania Courthouse mixed use area. Rural viewshed protection, enhanced setbacks, buffering, forest preservation, farmland protection, conservation easements, rural context sensitive design are all critical elements to maintaining corridor integrity in these areas.

Civil War Trails Lee vs. Grant Driving Route

Civil War Trails® connects visitors with the great campaigns and lesser-known sites of the Civil War. Stops along the Trail and interpretive signs complemented by map guides, guide visitors as they follow in the footsteps of the generals, soldiers, citizens, and the enslaved who found themselves in the midst of this great struggle.

The approach of Civil War Trails is to interpret—not commemorate or memorialize—the events, people, and places of the most pivotal time in our nation's history.

In Spotsylvania County, the Lee vs. Grant Civil War Trails Driving Route includes: Hill Ewell Drive; a portion of Orange Plank Road extending from Hill Ewell Drive to Brock Road; Brock Road from Orange Plank Road to Courthouse Road in the Spotsylvania Courthouse Area; Courthouse Road to Massaponax Church Road; Massaponax Church Road from Courthouse Road to Jefferson Davis Hwy (Route 1); Jefferson Davis Hwy (Route 1) from Massaponax Church Road to Guinea Station Road; Guinea Station Road extending to the Caroline County line. Significant Civil War sites associated with the 1864 campaign have been highlighted along this route. Within Spotsylvania County, sites include: Todd's Tavern; Spotsylvania Battlefield; Spotsylvania

Courthouse Historic District; Harris Farm; Zion Methodist Church; Massaponax Church; and Plantations on Guinea Station Road.

As outlined in the Historic Resources Chapter the protection and interpretation of significant historic resources is valued in the community. Historic locations and events associated with them help shape the history and character of the County and are a major contributor to local and regional tourism, with associated economic benefits. Like the County's Scenic Byways referenced above, along the Civil War Trails Route efforts should be made to ensure historic resource preservation and protection, including maintaining the aesthetic quality of the corridor, rural and historic viewshed preservation and protection, enhanced setbacks and/or buffering, consideration of the historic architectural vernacular of the area when new development is proposed.

UTILITY, TELECOMMUNICATIONS, AND INTERNET INFRASTRUCTURE

As part of the Comprehensive Plan scope and purpose, the Code of Virginia §15.2-2223.C.8 suggests localities map the designation of corridors or routes for electric transmission lines of 150 kilovolts or more. A map showing the County's existing inventory of such transmission line corridors can be found at the end of this Chapter.

Utilities and telecommunications infrastructure and service reliability is critical in the modern day with application in many areas including personal use, business, public safety, and education. Provision of both publicly and privately administered utility infrastructure to serve the citizens, businesses, public servants (including first responders) of Spotsylvania County requires a geographically expansive network of utility infrastructure that includes all land use designations both inside and outside of the Primary Development Boundary. Provision of public water and sewer (within the Primary Development Area) requires infrastructure such as underground pipes, water treatment facilities, water towers, pump stations, while provision of cellular services by telecommunications providers requires a network of telecommunications towers spread across the County in both rural and developed areas to maintain consistent reliable services. Natural gas and electric providers distribute services by pipe, conduit, or overhead power lines and may require substations, gas regulator facilities. Considering the nature of utilities and telecommunications infrastructure, proposals for these types of facilities should be measured based on their merits and ability to mitigate impacts.

Broad availability of high-speed internet services throughout the County has become increasingly critical in recent years for residents and businesses as the world has become ever more linked to the web for e-commerce, communication, e-learning, news and information sharing. Spotsylvania County recognizes numerous benefits of expanding and enhancing access to high speed internet, including support of: jobs; job growth; education; real estate marketability; telework (a type of transportation demand management (TDM) strategy); economic development; entrepreneurship; tourism; health care; communication/entertainment; public safety and emergency services; other uses and other future uses. The County notes progress in provision of high-speed internet with an additional 12,000 homes provided with cabled broadband service since 2011. However, large rural areas of the County remain unserved by high speed broadband. The County continues to look for creative means (including opportunity for emerging technologies) to help expand broadband services.

Specific to provision of high-speed internet for unserved or underserved populations, especially in rural areas, the County Information Services Department in conjunction with the County Cable and Telecommunications Commission has identified several action items, as follows:

- Continued efforts of the Cable Commission and staff to expand broadband capabilities throughout entire County

•Establish a working timeline for short- and long-term goals
- •Establish broadband subcommittee (immediate)
- •Wireless Services on certain rural County towers (short term –4-8 months)
- •Franchise Agreement renewals (6-12 months)
- •Support for Rappahannock Electric Coop, should their grant application be awarded (long term –no ETA until more information from REC is available)

•Establish a dedicated webpage for broadband initiatives

The County will need to advocate for its citizens for broadband capability, by

- •Continued work with franchise service providers
- •Continued work with cell tower placement and co-location
- •Continued work with grants
- •Continued work on wireless and wired solutions
- •Explore all available technologies
- •Discussion of need for broadband consultant and fulltime broadband staff
- •Formation of broadband subcommittee
- •Broadband plan approval by the Board of Supervisors

HOUSING

Spotsylvania County Residential Land Use Policies set out to *promote the provision of a diverse housing mix by encouraging a range of housing sizes and types that meet the needs of citizens at all income levels throughout all stages of life*, and *promote the construction of market rate affordable housing units rather than units that are subsidized for the initial sale to ensure that housing remains affordable over time.* A summary of the County housing inventory and a calculation to determine an approximate value of affordability within the County is in Table 6 below. Housing priced below the reported amount would be considered affordable within the County based on the methodology employed.

Table 6: Housing Inventory

Spotsylvania County Total Housing Inventory By Housing Type Since 2010											
Year	2020*	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Single Family - Detached	41151	40711	40142	39585	39203	38883	37615	37938	37685	37476	37141
Single Family - Attached	4604	4357	4238	4120	4064	4007	4030	2775	2743	2730	2730
Multi-Family (Apt Units)	5106	4505	4234	3748	3194	3002	2910	3396	3136	3136	3136
Total	50861	**49573**	**48614**	**47453**	**46461**	**45892**	**44555**	**44109**	**43564**	**43342**	**43007**
MH - Personal Property	1506	1495	1402	1418	1482	1496	1497	1482	1510	1537	1523
					Note from Pat Quinn: Criteria changed for 2014.						
					2020 Figures as of January, 2020						

The Commissioner of Revenue's Office of Real Estate Assessment tracks the County housing inventory by housing type over time. The County's total housing inventory by housing type since 2010 is provided in the table above as reference. Based on the Office of Real Estate Assessment's data, the County's multi-family housing inventory is 5,106 units as of January 2020. This data is updated annually. Considering the County housing stock as a whole where there are 41,151 single family detached units and, 4,604 single family attached units. Multi-family units (5,106) account for 10% of the County's total housing inventory. Single family detached units are by far the most prevalent type of housing in the County at nearly 81%.

If we consider the County's population generation rate estimates by housing type, nearly 87% of the County population resides in single family detached homes. 7% of the County population resides in single family attached units and approximately 5% reside in multi-family housing. Presently the County estimates 3.04 persons per single family detached unit, 2.41 persons per single family attached unit, and 1.49 persons per multi-family unit.

Current County student generation rates suggest the single-family detached housing inventory accounts for approximately 84% of the total student enrollment. Approximately 10% of the student enrollment lives in single family attached units. For multi-family units, nearly 2% of the student body lives in market rate units and 4% reside in tax credit units.

The housing inventory also separately counts mobile home units, noting an inventory of 1,506 such units. Based on the information provided, the County mobile home inventory has remained relatively unchanged. Since 2010 the County has seen a slight decrease in total units from 1,523 (in 2010) to 1,506 (in 2020). There are six residential manufactured home "mobile home" parks

within the County ranging from a high of 209 units down to just 4. The total number of mobile home units within the six parks is 853. Of the total, the remaining units are located outside of mobile home parks.

Residential Building Activity

Table 7: Residential Building Activity (2011- 2020)

Spotsylvania County Dwelling Units										
Month	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
January	16	22	28	30	31	54	48	61	71	51
February	22	30	27	41	26	45	40	47	30	65
March	17	21	49	32	29	33	45	68	79	120
April	18	19	40	40	30	31	58	49	51	66
May	18	10	51	45	35	62	75	52	69	59
June	29	22	47	36	46	52	79	56	64	73
July	31	43	27	55	61	52	80	61	79	78
August	18	54	44	42	29	41	58	71	51	85
September	22	29	28	33	27	51	65	67	53	97
October	26	38	37	35	41	50	70	75	52	80
November	16	23	34	24	29	44	47	43	61	58
December	19	30	31	44	40	49	50	36	52	68
Total for Year	**252**	**341**	**443**	**457**	**424**	**564**	**715**	**686**	**712**	**900**
(Total includes SF, TH, APT, SW, DW)										

Source: Spotsylvania County Building Office

Residential building permit data shows an increasing rate of new units since 2011 as the housing market slowly rebounded from the 2008 Housing Crisis that negatively impacted the region. Comparing 2020 data (last full year available) to 2011 data, new residential unit activity is nearly 3.6 times higher with 900 units reported in 2020, versus 252 in 2011. Table 7 above shows the overall increase in residential building activity since 2011.

Occupancy rates for apartments:

CoStar is the largest purveyor of real estate market data and market research in the Country. A report was run in late January 2020 and notes/identifies/accounts for 4,871 multi-family units (nearly on par with the County Office of Real Estate Assessments total multi-family housing inventory described below. Of the units tracked by CoStar, the report notes an additional 527 units under construction with an anticipated 12-month absorption rate of 419 units or nearly 80% of the new units. Market vacancy was at 7.6%. When looking at rental vacancy rates it is good to consider established built out projects that have had time to "lease up" separately from newly opened projects that are still in lease up phase where the market is still absorbing or "filling" the new units. For instance, at the time the report was run, existing well established projects such as Kilburn Crossing (2005, 2017 reno.), Breezewood Apartments (1989), Brittany Commons (1998), Silver Collection at Cosners Corner (2016) had vacancy rates of 6.36%, 5%, 4.02%, and 7.66% respectively. Inversely these projects have occupancy rates of 93.64%, 95%, 95.88%, and 92.34% respectively. Abberly at Southpoint (2016) is a fairly recent addition to the multi-family market but is now established with a vacancy rate reported at 5.71% of 280 units. This results in an occupancy rate of 94.29%. Brand new projects including Keswick I Apartments

(2019), The Allure at Jefferson (2019) ran much higher vacancy rates at 24.17% and 27.33% respectively. These projects are still in “lease up”.

A 2017 Study of the Regional Multi-Family Housing Market by the Fredericksburg Area Association of Realtors found Spotsylvania’s Multi-Family (Apartment Complex Rentals) Vacancy Rate to be 6%. The study was based on information gained from a survey of property managers of apartment complexes with 40 or more units. This threshold therefore accounts for nearly all apartment complexes within Spotsylvania County. The addition of new multi-family projects in lease up periods do influence the vacancy rates over time so some variability is expected over months, years. Additional factors can also influence variability in vacancy rates over time not associated with lack of demand within the market. Variables including but not limited to socio-economic trends and population shifts, seasonal based moving trends (May to September), property management and maintenance factors, increases in rental choice (moving from one project to another), locational factors such as convenience, public safety, proximity to transit and employment, renters shifting to home buyers, out of market relocations, lifestyle and life cycle change, all lead to potential variability within project vacancy rates without suggesting the market as a whole lacks demand.

What percentage of the Multi-Family units are tax credit financed projects:

The Virginia Housing Development Authority (VHDA) publishes a list of tax credit properties statewide searchable by locality. Based on July 7, 2020 data, the VHDA reports County-wide there are 2,411 Tax Credit Units amongst 21 Tax Credit (TC) projects. The tax credit project inventory is in Table 8 that follows:

Table 8: Current Tax Credit Properties- Spotsylvania County (As of July 7, 2020)						
Property Name	**Street Address**	**Jurisdiction**	**Tax Credit Units**	**Total Units**	**Target Type**	**Building Type**
Courthouse Green	8132 Pool Drive	Spotsylvania County	40	40	General	Acquisition/Rehab
Enoch George Manor	10231 Brittany Commons Boulevard	Spotsylvania County	60	60	Elderly	New Construction
Greens of Salem Run	5600 Salem Run Boulevard	Spotsylvania County	200	200	General	New Construction
Heights at Jackson Village	5.3 acres at Old Telegraph Road	Spotsylvania County	187	187	Elderly	New Construction
Keswick	8800 Block of Lake Anna Parkway	Spotsylvania County	120	120	General	New Construction
Keswick II	0 Robert E Lee Dr	Spotsylvania County	116	116	General	New Construction
Keswick Senior	8900 Block of Lake Anna Parkway	Spotsylvania County	100	100	Elderly	New Construction
Kings Crest	11500 Kings Crest Court	Spotsylvania County	99	100	Elderly	New Construction
Meadows at Salem Run II	5711 Castlebridge Road	Spotsylvania County	80	80	Elderly	New Construction
Meadows I	5711 Castlebridge Road	Spotsylvania County	100	100	Elderly	New Construction
New Post	1801 Nottingham Drive	Spotsylvania County	102	102	General	New Construction
Orchard Ridge at Jackson Village	9401 Jefferson Davis Highway	Spotsylvania County	169	169	General	New Construction
Orchard Ridge at Jackson Village II	9401 Jefferson Davis Highway	Spotsylvania County	76	76	General	New Construction
Overlook Terrace	4710 Overview Drive	Spotsylvania County	72	72	General	New Construction

Table 8 Continued: Current Tax Credit Properties- Spotsylvania County (As of JULY 7, 2020)						
Palmers Creek	8934 Jefferson Davis Highway	Spotsylvania County	200	200	General	New Construction
Pines	8835 Crismond Lane	Spotsylvania County	46	46	General	Acquisition/Rehab
Salem Fields	7100 Alpha Court	Spotsylvania County	139	139	General	New Construction
Salem Run I	5715 Castlebridge Road	Spotsylvania County	160	160	General	New Construction
Salem Run II	5715 Castle Bridge Road	Spotsylvania County	108	108	General	New Construction
Timber Ridge	3500 Golden Field Lane	Spotsylvania County	147	147	General	New Construction
Windover Villas	8001 Cherry Tree Drive	Spotsylvania County	90	90	General	New Construction
Source: Virginia Housing (VDHA) Current Tax Credit Properties List as of 07/07/2020.						

Based on the County's 2020 multi-family inventory count of 5,106 units, using VDHA data we have found nearly 47% (47.2%) are tax credit. Of the 2,411 total Tax Credit units, 626, or nearly 26% of all tax credit projects, are age-restricted (non-student generating). Considering school age children and student generation, a recent survey of newer Spotsylvania County tax credit projects compared to market rate ones has found that tax credit project student generation rates exceed market rate student generation. For schools, student generation rates are as follows (see Table 9):

Table 9: Multi-Family Housing Student Generation Rates (2019)		
	Market Rate	**Tax Credit**
Elementary School	0.073	0.291
Middle School	0.047	0.134
High School	0.051	0.139

Multi-family market rate projects tend to generate the fewest children of the three distinct housing types the County tracks (Single family detached, single family attached, multi-family). However, multi-family tax credit projects have student generation rates more akin to single family detached and single family attached units.

Multi-Family demographics:

In 2017, the Fredericksburg Area Association of Realtors (FAAR) commissioned two studies focused on the local housing market. Staff met with representatives of FAAR in late January 2020 to discuss the local housing market, including multi-housing market. FAAR does not believe

the three years that has gone by since release of the 2017 study is enough time to have resulted in a significant change in findings. So FAAR indicated that no update is warranted at this time. Findings of FAAR's 2017 Profile of Demographic, Economic and Housing Market Conditions specific to Spotsylvania County and FAAR's 2017 Multi-Unit Housing Study that focuses on the region and includes locality specific analysis are insightful. As of the 2017 multi-family study conclusions, staff notes the study found:

> *Most of the variables suggest a strong demand for multi-unit housing in the region. Given the robust economic outlook for the region and low vacancy rate, demand may soon overtake supply. Improving transportation options between Fredericksburg (area) and Northern Virginia, specifically I-95 Express Lanes Fredericksburg Extension and the North and South Rappahannock River Crossing Projects, may increase demand for multi-unit housing even more.*

Looking at the Spotsylvania County Housing Study Profile of Demographic, Economic and Housing Market Conditions for multi-family housing conclusions:

> *The shift towards more multifamily housing and more rental housing reflects a younger workforce and stronger growth in industry sectors that pay relatively lower wages. Younger households and households with lower incomes tend to prefer both rental housing and multifamily housing.*

And

> *On the rental side, there will be substantial need for housing affordable to renters earning below $50,000. Based on these estimates of future housing needs in Spotsylvania County, about 57.7 percent of future renters will earn below this level and will need rents at or below $1,250 to be affordable. It is expected that 29.7 percent of new renter households in the County will be able to afford rents between $1,250 and $1,749. In Spotsylvania County, it expected that demand for higher-end rental units will be relatively low, with the suggestion that 7.2 percent of new renter demand will be for units with rents between $1,750 and $2,249 per month and 5.4 percent of units with rents of $2,250 per month or higher.*

The results on housing demands referenced above tied to economic struggle and lower incomes are additionally supported by the United Way of Virginia's Asset Limited, Income Constrained, Employed (ALICE) Study of Financial Hardship, dated Spring, 2017 that found 41% of households below the ALICE threshold and 6% below the poverty threshold. The Study provides additional details into methodology and findings. From the study, primary factors contributing to affordable housing demands, demands for multi-family units include: *low wage jobs dominate the local economy; the basic cost of living outpaces wages, economic conditions worsened for ALICE households from 2007 to 2015, public and private assistance helps, but doesn't provide financial stability.*

The Approved Development Analysis

Per the Planning Department's Future Development analysis spreadsheet (as updated through January 1, 2021), there is an inventory of 12,049 approved and yet unbuilt residential units

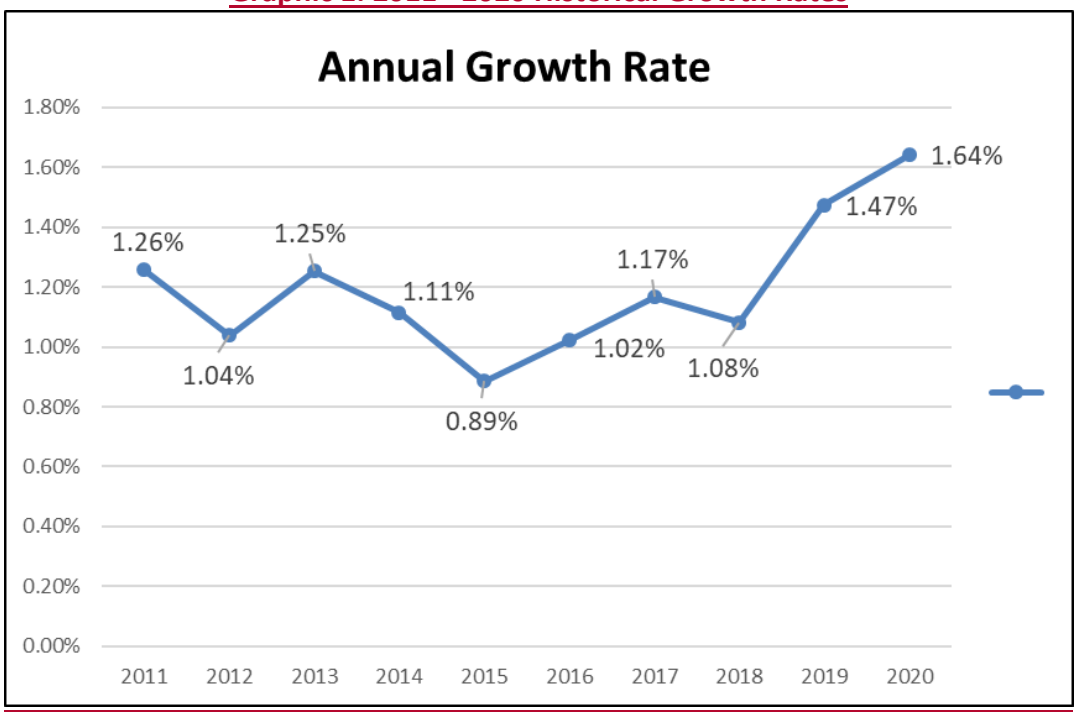
including single family detached (3,496), attached (2,314), multi-family (5,095), age restricted (1,144). The vast majority of these future units are located within the Primary Development Boundary where higher intensity development is intended. Considering multi-family units, the approved yet unbuilt multi-family inventory would nearly double the current inventory of multi-family inventory in the County. Considering the CoStar reported market absorption of 419 units over 12 months, the multi-family inventory would be absorbed over the course of 12 ½ years. Staff acknowledges it is hard to predict exactly when and how many units will come available in the market at any given time. Variables over time have influence on the rate of construction as well as market absorption. As we have seen, some projects that are approved quickly advance to site plan and construction while others sit idle for numerous years. The 12 ½ year scenario above assumes that all approved yet unbuilt multi-family units (5,095) would be constructed perfectly aligned with current market absorption rates.

Considering Spotsylvania County's known residential development "pipeline" projects inventoried above, FAAR's 2017 Profile of Demographic, Economic and Housing Market Conditions specific to Spotsylvania County between the year 2017 and 2032 found:

> *Given the expected characteristics and incomes of net new working households in Spotsylvania County over the next 15 years, it is expected that 74.8 percent (10,800) housing units) will need to be single-family detached or attached homes to meet demand. The remaining 25.2 percent (3,645 housing units) are forecasted to be multifamily. This reflects a shift from current development patterns in Spotsylvania County where 86.7 percent of homes in the County are single-family detached of attached homes and only 8.2 percent are multifamily units. (Five percent of the existing units in Spotsylvania County are mobile homes.)*

Staff notes even with an abundance of approved units of varying types, the County growth rate has remained low over the last decade (See Graphic 1). Staff has included as reference the County's growth rate between 2011 and 2020 (most recent available). The County growth rate has stayed below 2% during this period. Growth rates are based on annual population estimates provided by the US Census Bureau between the decennial census.

Graphic 1: 2011 - 2020 Historical Growth Rates



Source: Calculations based on US Census Population Estimates (all figures as of July 1)

Housing Ratio (Housing Units and Jobs)

Per the April 2020 update of the Virginia Employment Commission's Community Profile for Spotsylvania County there were 36,079 jobs located in Spotsylvania County. This equates to a County jobs: housing ratio of 1: 1.42 (50,861 units (incl. SFD, SFA, MF)/36,079 in County jobs = 1.41), Including the County's Mobile Home inventory of 1,506 units, the jobs to housing ratio is 1.45. Typically, employment to housing ratios between 0.7 and 1.5 are considered beneficial for reducing vehicle travel according to the Environmental Protection Agency (EPA). However, the County's total labor force as a whole is 67,953 as of March 2020, reflective of an imbalance between total labor force size and employment availability within the County. As noted in the Transportation Chapter, the County has a large commuter population that works outside of the County limits, primarily within the Washington DC and Northern Virginia areas. Of the jobs located within the County, many are in historically low wage industries such as retail trade, accommodation and food service. Approximately 30% of County employment is in those fields. New hires by industry have been most significant in those sectors. Based on a 2nd Quarter, 2019 report by the US Census Bureau's Local Employment Dynamics Program, of the 6,310 new hires within the County, over approximately 42% of new hiring was in those fields. This creates a wage to housing affordability divide where low wage workers come from or seek housing opportunities outside of the County where housing costs are less expensive and commute in to work. A large percentage of the County population who can afford local housing prices tend to make their earnings outside of the County to do so where higher pay jobs exist in larger numbers (DC and Northern Virginia) while many of the prevalent lower wage jobs locally lead to a search, often times outside of the County for affordable housing. Based on 2016 data, FAAR reported the average price for a single-family detached home in the County was $287,183 and on an upward trend. FAAR's 2017 Profile of Demographic, Economic and Housing Market

Conditions forecasted that a third of new homeowners will need housing priced below $200,000 by 2032. Half will be able to afford housing priced between $200,000 and $399,999. The remaining population could afford above that price point.

In the rental market, the FAAR study forecasted that nearly 58% of units would need to be priced less than $1,250 per month between 2017 and 2032. These forecasts were based on jobs and income trends in the population forecasted through 2032.

Income and Affordability

Affordable housing is often defined as percent of income devoted to housing costs. The typical percentage used by the US Department of Housing and Urban Development (HUD), housing professionals, and the financial community is 30% of gross income. Affordability can be considered for both owner-occupied and renter-occupied dwellings.

The County has employed a methodology to determine "what is affordable for Spotsylvania County, looking at determining a specific price point based on the methodology below. The methodology was vetted by housing and mortgage professionals and provides good "ballpark" figures.

Accounting for household income, Spotsylvania County has based the calculation of local affordability, or "what is the affordable housing price point" to 30% of gross income of those households earning 75% or less of the County's Median Household Income (gross income). This gives a better "net" income number or "cash on hand" from which families pay their bills. Calculations based solely on gross earnings tend to inflate affordability expectations inconsiderate to the fact that the difference between gross and net income are committed funds (committed funds such as taxes before take home pay). Not all household and family situations are the same. Factors such as family size, number of household earners, insurance, caregiver costs, disability and/or healthcare costs can all influence affordability factors. The Housing Affordability Calculation has been established to set a "rule of thumb" based point of reference for the establishment of affordable housing within the County, or in instances where provision of affordable units has been expressed through development proposals. Its good to note that the County's median household income is based on US Census data representing the full range of households. Median Household income may include more than one earner within the household.

Monitoring the affordable price range should be done on a dynamic basis using the housing affordability methodology outlined in the 2020 Housing Affordability Calculation Tables below (Tables 10-11). The methodology accounts for household income, interest rate, down payment, interest and escrow, allowable debt loads, down payment (assuming 5%), 30-year mortgage. Using most recently updated data and the methodology outlined above, an affordable house costs less than $281,457, or rent of less than $1,237 per month for a household unit. These findings are comparable to FAAR's affordability results in their 2017 study.

Table 10: Affordability Calculation

2020 Housing Affordability Calculation		
Assumption: 2020 Spotsylvania County Median Household Income*		$81,434
A.	**Gross Annual Household Income:**	$81,434
B.	(A x 75%)	$61,076
C.	**Gross Monthly Income:**	
	(B/12 months)	$5,090
D.	**Total Debt permitted by lenders:**	
	(.36 x C)	$1,832
E.	**Monthly Allowable Housing Expense:**	
	E=$'s available for Principle and Interest (PI)= (C x 30%)	$1,527
F.	**Monthly Interest and Taxes Escrowed:**	
	(E x .19)= $'s available for Taxes and Insurance (TI)	$290
G.	**Monthly Mortgage Amount:**	
	(E - F)=$'s available for PI	$1,237
H.	**Estimated Housing Mortgage:**	
	PV((Mortage Interest Rate**/12),30-Yr. Term (mos.),G)*-1	$267,384
Affordable Price Range:		
	(H / .95) 95% consumer mortgage w/5% down	**$281,457**

* Most recently available figure from 2013-2017 American Community Survey 5-Year Estimates

** HSH Associates provides historical interest rate data for 30-year mortagages utilized here. 3.74% based on December, 2019 data.

The County analysis went further to determine housing affordability based on a single income earner within the County. Based on US Census 2017 estimates, the median household income for a 1-person household within the County was $46,231. US Census acknowledges a margin of error of +/- $10,521. If we inflate the estimate to the top of the margin of error (adding $10,521), to $56,752, housing affordability is still markedly reduced compared to the County median household income of $81,434. Using the same methodology as used for county-wide median household income, an affordable house for a single income earner making $56,752 would be priced at or below $196,056 (assuming 5% down). Affordability decreases further to home prices at or below $159,786 if we explore the $46,231 average for a 1-person household reported by the US Census estimates.

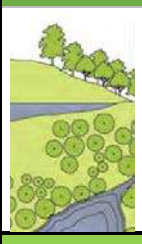
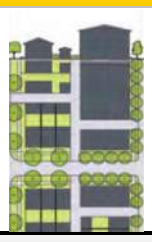
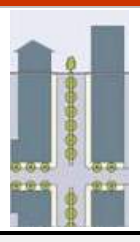
Table 11: Affordability Calculation for 1-Person household

2020 Housing Affordability Calculation		
Assumption: 2020 Spotsylvania County Median Household Income (1-Person Household)*		$56,725
A.	**Gross Annual Household Income:**	$56,725
B.	(A x 75%)	$42,544
C.	**Gross Monthly Income:**	
	(B/12 months)	$3,545
D.	**Total Debt permitted by lenders:**	
	(.36 x C)	$1,276
E.	**Monthly Allowable Housing Expense:**	
	E=$'s available for Principle and Interest (PI)= (C x 30%)	$1,064
F.	**Monthly Interest and Taxes Escrowed:**	
	(E x .19)= $'s available for Taxes and Insurance (TI)	$202
G.	**Monthly Mortgage Amount:**	
	(E - F)=$'s available for PI	$862
H.	**Estimated Housing Mortgage:**	
	PV((Mortage Interest Rate**/12),30-Yr. Term (mos.),G)*-1	$186,253
Affordable Price Range:		
	(H / .95) 95% consumer mortgage w/5% down	**$196,056**
* Most recently available figure from 2013-2017 American Community Survey 5-Year Estimates		
December, 2019 data.		

Housing Affordability calculations as reported for 2020 above should be updated at least annually. This is a dynamic calculation subject to market related changes over time.

Inside of PDB

ZONING DISTRICTS COMPLEMENTARY TO LAND USE DESIGNATIONS WITHIN THE PRIMARY DEVELOPMENT BOUNDARY

ZONING DISTRICTS	LAND USE DESIGNATIONS (INCREASING DEVELOPMENT INTENSITY)								
	OPEN SPACE	LOW DENSITY RESIDENTIAL	MIXED USE LIGHT	EMPLOYMENT CENTER LIGHT	EMPLOYMENT CENTER HEAVY	HIGH DENSITY RESIDENTIAL	COMMERCIAL	MIXED USE GENERAL	MIXED USE COMMERCIAL HEAVY
									
RESIDENTIAL (R)	OPEN SPACE (SEE DESCRIPTION BELOW)								
R-1		C	-	-	-	-	-	-	-
R-2		C	-	-	-	-	-	-	-
R-3		C	-	-	-	-	-	-	-
R-8		-	C	-	-	-	-	-	-
R-12		-	-	-	-	C	-	C	S
R-MHP		C	C	-	-	-	-	-	-
PLANNED DEVELOPMENT HOUSING (PDH)									
PDH-1		C	-	-	-	-	-	-	-
PDH-2		C	-	-	-	-	-	-	-
PDH-3		C	-	-	-	-	-	-	-
PDH-4		C	C	-	-	-	-	-	-
PDH-5		-	C	-	-	-	-	-	-
PDH-8		-	C	-	-	-	-	-	-
PDH-12		-	-	-	-	C	-	C	S
PDH-16		-	-	-	-	C	-	C	S
OFFICES (O)									
O-1		-	C	C	C	-	C	C	C
O-2		-	-	C	C	-	C	C	C
COMMERCIAL (C)									
C-1		-	C	C	C	-	C	C	C
C-2		-	C	C	C	-	C	C	C
C-3		-	-	-	C	-	C	C	C
INDUSTRIAL (I)									
I-1		-	-	C	C	-	S	-	-
I-2		-	-	-	C	-	-	-	-
PLANNED DEVELOPMENT COMMERCIAL (PDC)		-	-	C	-	-	C	C	C
VILLAGE (V)		-	-	-	-	-	-	C	-
MIXED USE (MU)									
MU-1		-	C	-	-	-	-	-	-
MU-2		-	C	-	-	-	-	-	-
MU-3		-	-	-	-	-	-	C	-
MU-4		-	-	-	-	-	-	C	C
MU-5		-	-	-	-	-	-	C	C

C=Complementary Zoning District

S= Secondary/ Subordinate Zoning District(s) meant to complement the intended Primary Users of the Land Use Designation. Secondary/ Subordinate Zoning Districts are NOT intended to become the primary users of the land use area.

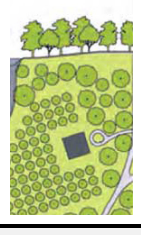
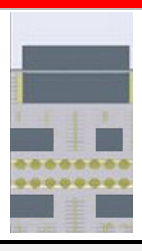
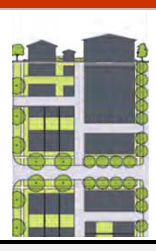
OPEN SPACE= Intended for open space preservation and protection, conservation easements, historic and natural resource preservation and protection, parks, wildlife management areas, common areas, passive recreation. The Open Space land use has application across zoning districts.

INSTITUTIONAL LAND USE

Institutional land uses include the governmental facilities necessary for the provision of public services, and large public service uses such as airports or hospitals. Such uses are common throughout the County and are intended to serve geographically dispersed populations within and outside of the Primary Development Boundary. Such uses commonly appear in the County Zoning ordinance as by-right or special uses across rural, suburban, and urban-scale zoning districts. As such, institutional land uses have application county-wide, both inside and outside of the Primary Development District across all land use categories. Such uses should mitigate their impacts on public facilities such as the local transportation system and carefully consider impacts to assure impact reduction (size, scale, massing) on the physical surroundings and existing development through site design. Institutional Land Uses that appear within the future land use map reflect existing institutional uses within the County.

Outside of PDB

ZONING DISTRICTS COMPLEMENTARY TO LAND USE DESIGNATIONS OUTSIDE OF THE PRIMARY DEVELOPMENT BOUNDARY

ZONING DISTRICTS	LAND USE DESIGNATIONS INCREASING DEVELOPMENT INTENSITY →				
	OPEN SPACE	AGRICULTURAL AND FORESTAL	RURAL	COMMERCIAL	MIXED USE COMMERCIAL HEAVY
					
AGRICULTURAL (A)	OPEN SPACE (SEE DESCRIPTION BELOW)				
A-2		C	-	-	-
A-3		C	-	-	-
RESORT (R)					
R-A		C*	C*	-	-
R-R		-	C*	-	C*
R-C		S*	S*	C*	C*
RURAL (RU)		C	C	-	-
COMMERCIAL (C)					
C-1		S	S	C	C
C-2		S	S	C	C
PLANNED RURAL RESIDENTIAL (PRR)					
PRR-1		C	C	-	-
PRR-2		-	C	-	-
PRR-3		-	C	-	-
PRR-4		-	C	-	-

C=Complementary Zoning District
S= Secondary/ Subordinate Zoning District for uses meant to serve rural populations or complement agricultural or forestal uses.
***=Zoning Districts intended to be employed in the Lake Anna area only.
OPEN SPACE= Intended for open space preservation and protection, conservation easements, historic and natural resource preservation and protection, parks, wildlife management areas, common areas, passive recreation. The Open Space land use has application across zoning districts.

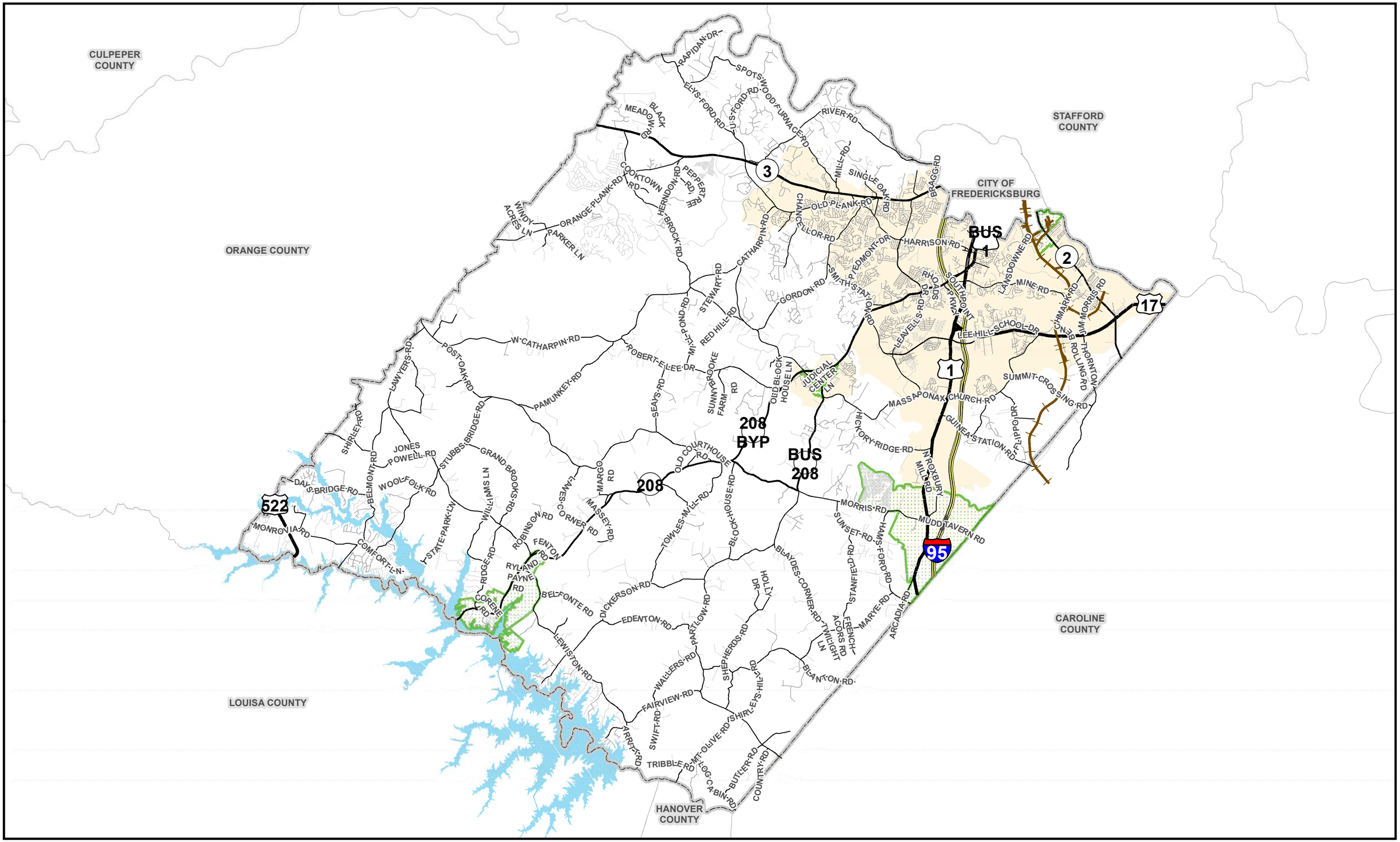
INSTITUTIONAL LAND USE

Institutional land uses include the governmental facilities necessary for the provision of public services, and large public service uses such as airports or hospitals. Such uses are common throughout the County and are intended to serve geographically dispersed populations within and outside of the Primary Development Boundary. Such uses commonly appear in the County Zoning ordinance as by-right or special uses across rural, suburban, and urban-scale zoning districts. As such, institutional land uses have application county-wide, both inside and outside of the Primary Development District across all land use categories. Such uses should mitigate their impacts on public facilities such as the local transportation system and carefully consider impacts to assure impact reduction (size, scale, massing) on the physical surroundings and existing development through site design. Institutional Land Uses that appear within the future land use map reflect existing institutional uses within the County.

DRAFT

Spotsylvania County Tourism Zones

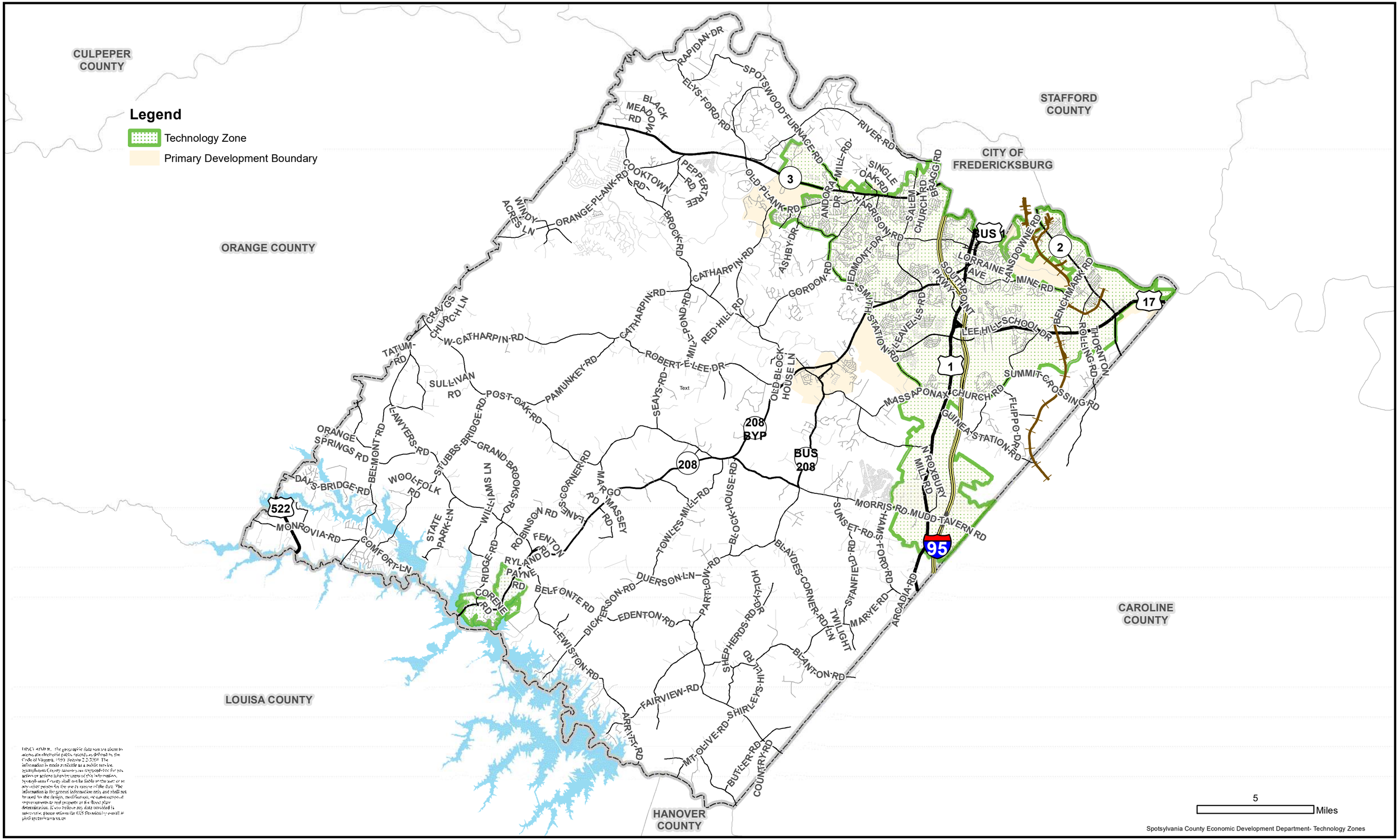
DRAFT NORTH



DRAFT

Spotsylvania County Technology Zones

DRAFT NORTH



DISCLAIMER: The geographic data you are about to access are electronic public records as defined in the Code of Virginia, 1950, Section 2.2-3704. The information is made available as a public service. Spotsylvania County assumes no responsibility for any action or actions taken by users of this information. Spotsylvania County shall not be liable in the event of an error found to be in the use or misuse of the data. The information is for general information only, and shall not be used for the design, modification, or construction of improvements to real property or for a flood plain determination. If you believe any data provided is inaccurate, please inform the GIS Division by e-mail at gis@spotsylvania.va.us

DRAFT

Spotsylvania County Opportunity Zones*

0 0.25 0.5 1 Miles

NORTH

CITY OF FREDERICKSBURG

C-1

HARRISON RD

WALLACE LN

HUDGINS RD

VILLAGE DR

PDH-8

I-2

BUS 1

95

LEAVELLS RD

51177020304

I-1

51177020202

LANSDOWNE RD

LORRAINE AVE

1

O-2

EWELL RD

R-1

RHOADS DR

HOOD DR

C-2

MINE RD

208

R-12

SOUTHPOINT PKWY

51177020305

MU-5

C-3

R-2

RU

*Limits of Opportunity Zones are established by Census Tracts.

Legend

Opportunity Zones*

County Boundary

2017 Aerials

Zoning

C-1, C-2, C-3, I-1, I-2, MU-5, O-1, O-2, PDH-8, R-1, R-2, R-12, RU

DRAFT

Spotsylvania County Historically Underutilized Business Zones (HUBZones)

NORTH

HUBZones data from the US Small Business Administration

Legend

- Historically Underutilized Business Zone
- Primary Development Boundary

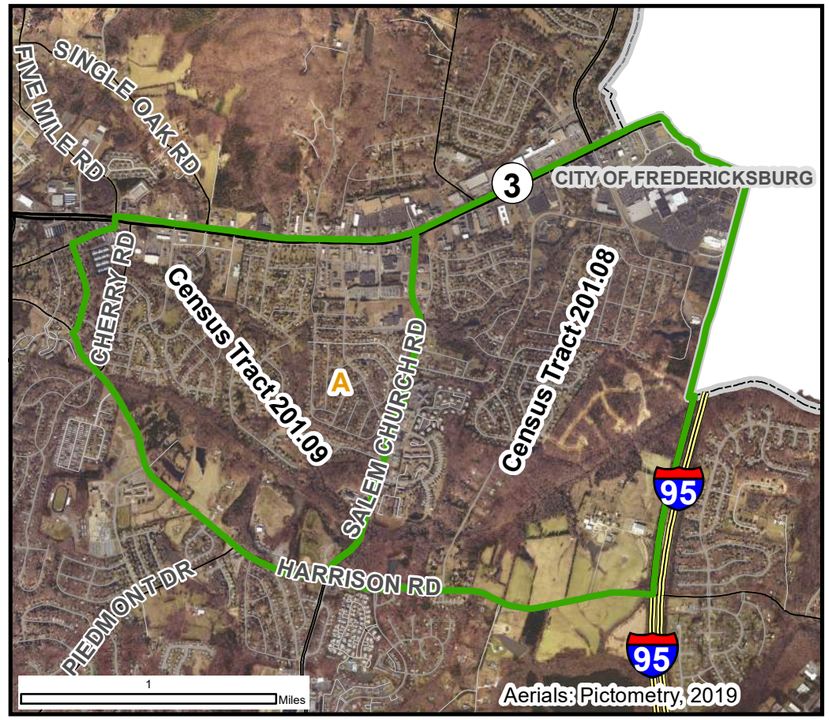
CULPEPER COUNTY
STAFFORD COUNTY
ORANGE COUNTY
CITY OF FREDERICKSBURG
CAROLINE COUNTY
LOUISA COUNTY
HANOVER COUNTY

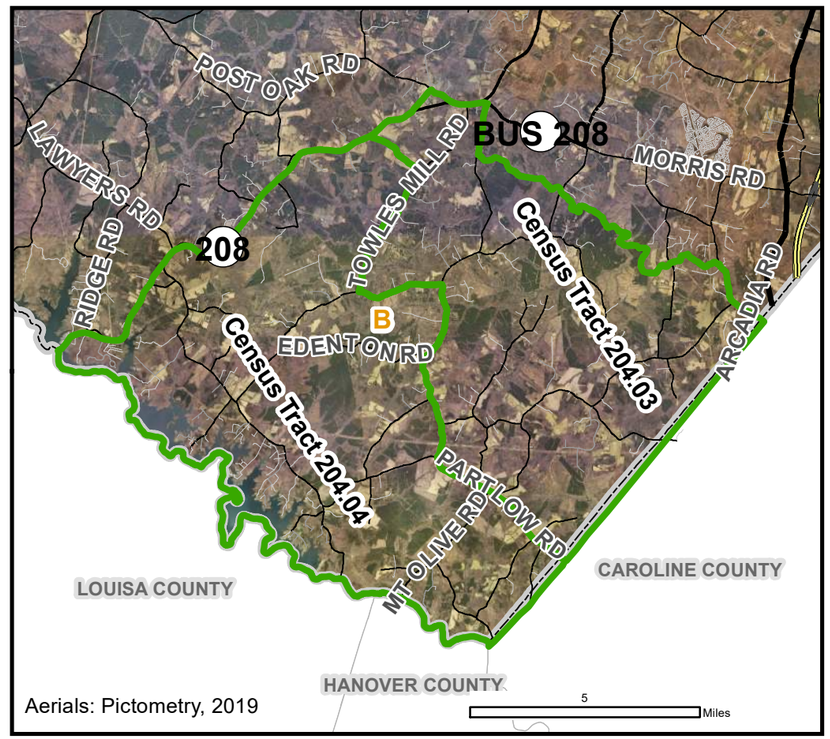
RAPIDAN DR
SPOTSWOOD FURNACE RD
ELYS FORD RD
BLACK MEADOW RD
RIVER RD
MILL RD
FIVE MILE RD
BRAGG RD
ORANGE PLANK RD
OLD PLANK RD
HERNDON RD
WINDY ACRES LN
PARKER LN
BROCK RD
HARRISON RD
CATHARPIN RD
STEWART RD
ASHBY DR
GORDON RD
SOUTHPOINT PKWY
MINE RD
FOSTER RD
BENCHMARK RD
EAGLE DR
ROLLING RD
THORNTON RD
SPOTSYLVANIA PKWY
TATUM RD
CRAIGS CHURCH LN
LAWYERS RD
W CATHARPIN RD
RED HILL RD
OLD BLOCK HOUSE LN
SULLIVAN RD
PAMUNKEY RD
ROBERT E LEE DR
SEAYS RD
POST OAK RD
HICKORY RIDGE RD
N ROXBURY MILL RD
MUDD TAVERN RD
FLIPPO DR
MACEDONIA RD
ORANGE SPRINGS RD
BELMONT RD
DAYS BRIDGE RD
STUBBS BRIDGE RD
STATE PARK LN
WILLIAMS LN
GRAND BROOKS RD
S CORNER RD
MARGO MASSEY RD
BLACK ROCK DR
TOWLES MILL RD
MORRIS RD
HAMS FORD RD
RIDGE RD
RYLAND PAYNE RD
BELFONTE RD
DUERSON LN
DUERSON RD
BLAYDES CORNER RD
STANFIELD RD
ACORS RD
FRENCH RD
ARCADIA RD
CORENE RD
DICKERSON RD
EDENTON RD
LEWISTON RD
SHEPHERDS RD
MARYE RD
FAIRVIEW RD
SHIRLEYS HILL RD
MT OLIVE RD
BUTLER RD
ARRIATT RD
PARTLOW RD

3
2
1
17
208
208 BYP BUS
208
522
95
BUS 1
BUS 208
A
B

5 Miles

DISCLAIMER: This geographic data was developed to assist the structuring public interests as directed by the Code of Virginia, 1950, Section 2.2-3704. The information is made available as a public service. Spotsylvania County assumes no responsibility for any errors or omissions noted by users of this information. Spotsylvania County shall not be liable to the user or to any other person for the use or misuse of the data. The information in the parcel information layer may not be used for the design, land planning, or construction of micro-economic real property or for flood plain determinations. While we believe the data provided is accurate, please refer to the GIS Division to consult all pertinent information.





Spotsylvania County Department of Economic Development & Tourism- HUBZones

DRAFT

Primary Development Boundary

DRAFT

Primary Development Boundary Total Area:

Approximately 72.9 sq. miles.

Difficult to Serve Areas within Primary Development Boundary:

Approximately 8.5 sq. miles.

CITY OF FREDERICKSBURG

CAROLINE COUNTY

Legend

VRE Station (Rail)

Primary Development Boundary

Comprehensive Plan

Primary Development Boundary (PDB)

Difficult to Serve (within PDB)

County Boundary

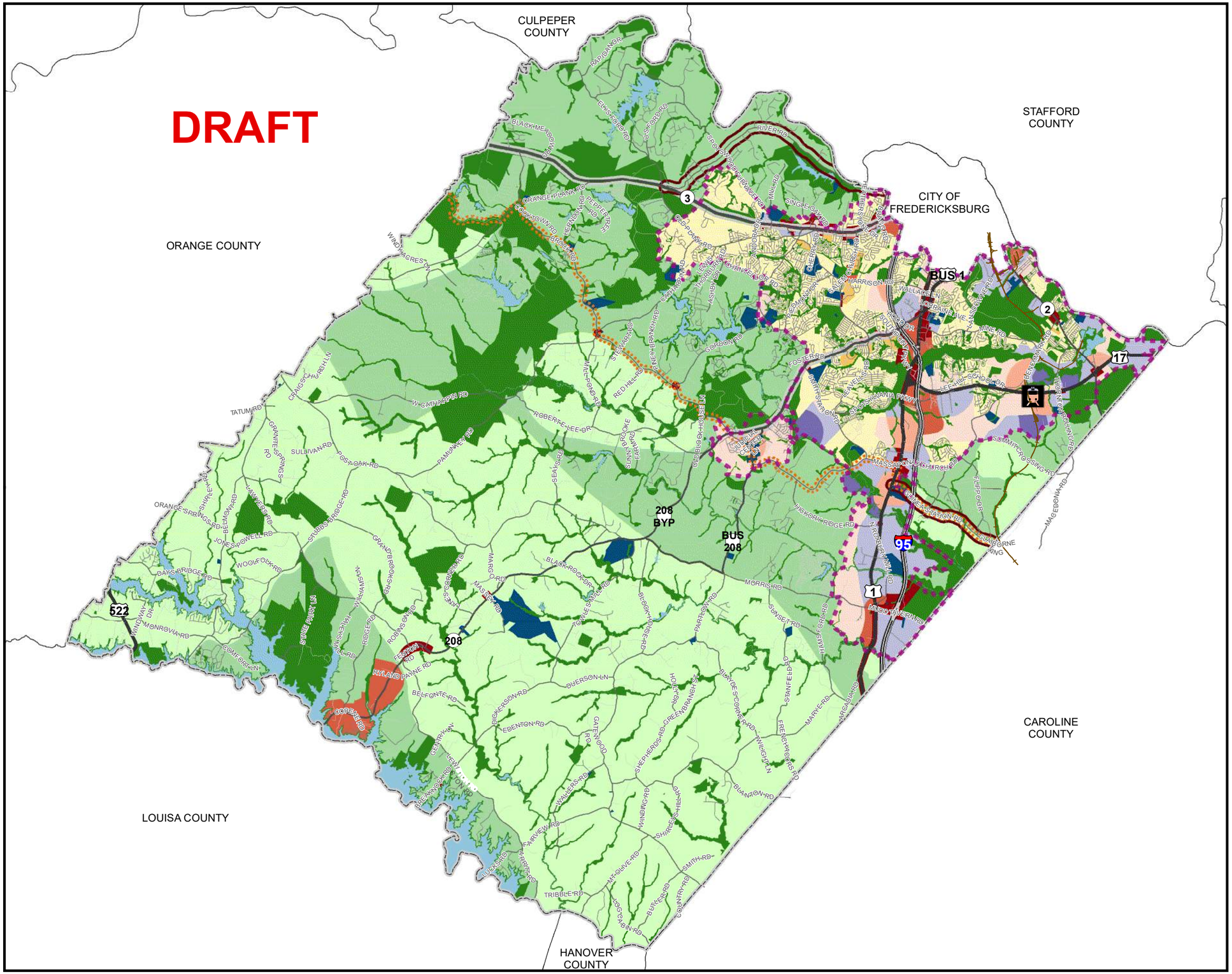
5 Miles

N W E S

DRAFT

SPOTSYLVANIA COUNTY FUTURE LAND USE MAP

NORTH



Legend

- VRE Station (Rail)
- Rail Corridor
- Primary Development Boundary

Land Use Description

- Scenic Byway
- Scenic Road
- Civil War Trail
- Agricultural and Forestral
- Commercial
- Employment Center Heavy
- Employment Center Light
- High Density Residential
- Institutional
- Low Density Residential
- Mixed Use Commercial Heavy
- Mixed Use General
- Mixed Use Light
- Open Space
- Rural
- Water

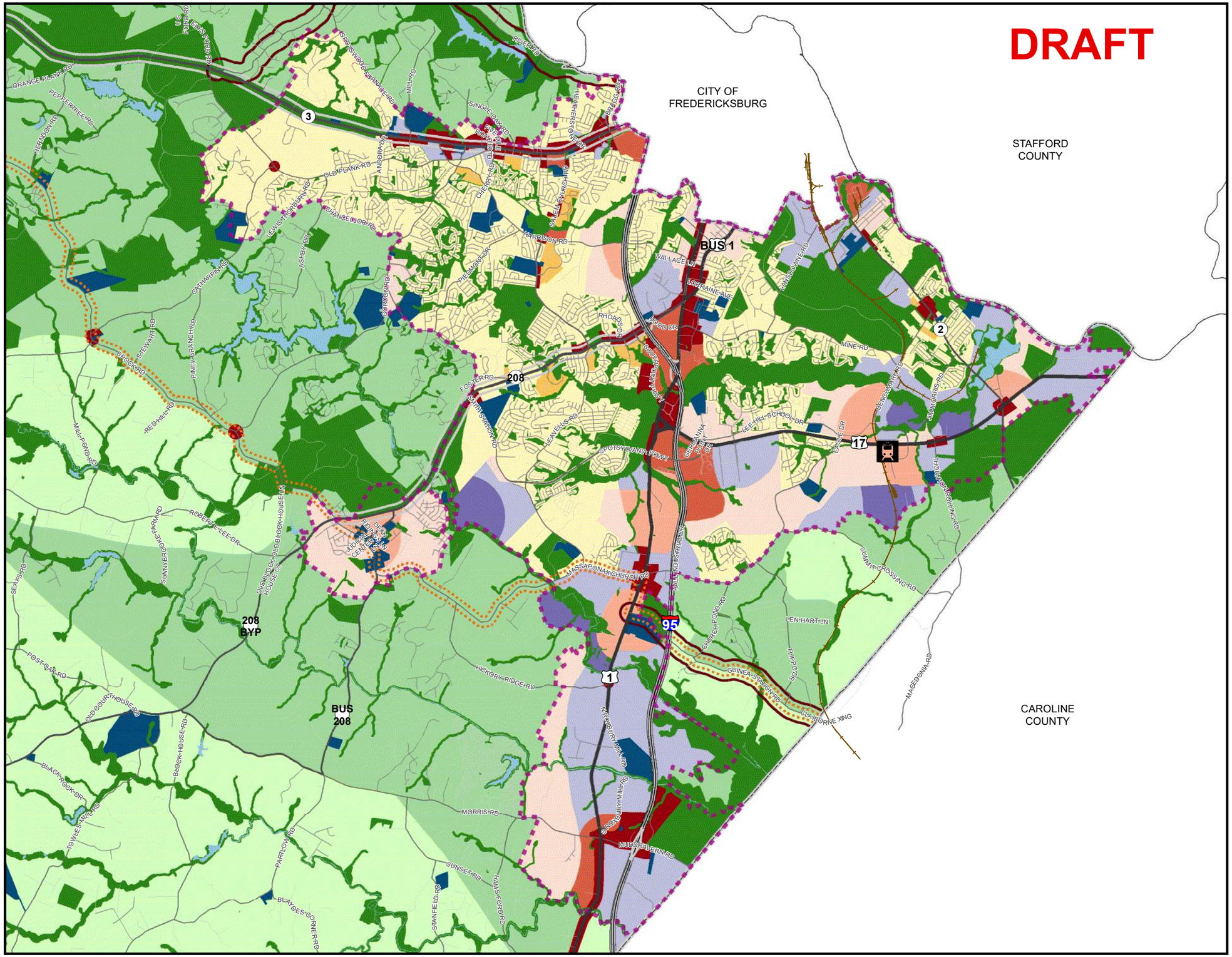
0 2.5 5 10 Miles

Map Approved: _____

DRAFT

SPOTSYLVANIA COUNTY FUTURE LAND USE MAP- PRIMARY DEVELOPMENT AREA

NORTH



Legend

- VRE Station (Rail)
- Rail Corridor
- Primary Development Boundary

Land Use Description

- Scenic Byway
- Scenic Road
- Civil War Trail
- Agricultural and Forestral
- Commercial
- Employment Center Heavy
- Employment Center Light
- High Density Residential
- Institutional
- Low Density Residential
- Mixed Use Commercial Heavy
- Mixed Use General
- Mixed Use Light
- Open Space
- Rural
- Water

0 1.25 2.5 5 Miles

Map Approved: _____

DRAFT

Spotsylvania County Electric Transmission Corridors (150 kV and higher)

DRAFT

CULPEPER COUNTY
ORANGE COUNTY
STAFFORD COUNTY
CITY OF FREDERICKSBURG
CAROLINE COUNTY
LOUISA COUNTY
HANOVER COUNTY

RAPIDAN DR
SPOTSWOOD FURNACE RD
ELYS FORD RD
U S FORD RD
BLACK MEADOW RD
RIVER RD
MILL RD
HEATHERSTONE DR
SINGLE OAK RD
ANDORA DR
HARRISON RD
SALEM CHURCH RD
OLD PLANK RD
CHANCELLOR RD
ASHBY DR
CATHARPIN RD
PIEDMONT DR
HUDGINS RD
LORRAINE AVE
HOOD DR
RHODES DR
LANSDOWNE RD
MINE RD
BENCHMARK RD
JIM MORRIS RD
BARTLETT LN
THORNTON ROLLING RD
LEE HILL SCHOOL DR
SPOTSYLVANIA PKWY
LEAVELLS RD
SMITH STATION RD
FOSTER RD
GORDON RD
STEWART RD
PINEY BRANCH RD
BROCK RD
RED HILL RD
MILL POND RD
ROBERT E LEE DR
OLD BLOCK HOUSE LN
JUDICIAL CENTER LN
SUNNYBROOKE FARM RD
SEAYS RD
W CATHARPIN RD
TATUM RD
CRAIGS CHURCH LN
GRAVEL SPRINGS RD
SULLIVAN RD
POST OAK RD
PAMUNKEY RD
ORANGE SPRINGS RD
BELMONT RD
JONES POWELL RD
WOOLFOLK RD
STUBBS BRIDGE RD
WILLIAMS LN
LAWYERS RD
HALEYS MILL RD
RIDGE RD
ROBINSON RD
LAKE SEES CORNER RD
MARGO RD
SASSEY RD
TOWLES MILL RD
BLACK ROCK DR
BLOCK HOUSE RD
208 BYP
BUS 208
208
MASSAPONAX CHURCH RD
HICKORY RIDGE RD
GUINEA STATION RD
FLIPPO DR
LEN HART LN
SUMMIT CROSSING RD
CLAIBORNE XING
S ROXBURY MILL RD
MUDD TAVERN RD
MORRIS RD
SUNSET RD
HAMS FORD RD
ARCADIA RD
STAMPFIELD RD
BLAYDES CORNER RD
TWILIGHT LN
FRENCH ACORS RD
MARYE RD
GREENBRANCH ST
SHEPHERDS RD
GATEWOOD RD
EDENTON RD
DUERSON LN
DICKERSON RD
BELFONTE RD
CORE NE RD
GENTRY LN
LEWISTON RD
WALLERS RD
BLANTON RD
BREAKNOCK RD
WINDING RD
SHIRLEYS HILL RD
FAIRVIEW RD
SWIFT RD
LUCKS RD
ARTLY RD
TRIBBLE RD
MT OLIVE RD
SMITH RD
BUTLER RD
COUNTRY RD
LOG CABIN RD
ZACHARY TAYLOR HWY
MONROVIA RD
COMFORT LN
1
2
3
17
95

N
W
E
S

Legend

Transmission Line
County Boundary

0 1.25 2.5 5 Miles

Map Approved: _____

Chapter 3

TRANSPORTATION & THOROUGHFARE PLAN

INTRODUCTION

The Transportation Plan

The purposes of this Transportation Plan (Plan) are to identify Spotsylvania County's future transportation needs, serve as a resource for the County's citizens and the development community, and provide a base for the development and implementation of local, regional and statewide transportation plans. It is the intent of this Plan to provide a comprehensive examination of the existing transportation network and appurtenant facilities. This Plan seeks to maintain an efficient transportation system utilizing available and expected resources. The overarching goal of this Plan is to maintain functional and effective transportation systems that keep pace with growth in the future. This Plan provides guidance for shaping the future of transportation in Spotsylvania County.

The Thoroughfare Plan

The recommendations for improvements to the road network in Spotsylvania County as set forth in this Plan consist of several new facilities and the need for improvements to existing facilities. The Plan has a horizon year of 2040. With traffic volumes consistently on the increase locally, the improvement and maintenance of the existing network is of utmost importance, while new facilities will be needed in order to provide capacity for future traffic volumes and increase connectivity. New roads can have a positive impact on existing roads stressed by traffic volumes without adequate capacity by providing a "pressure relief" to better distribute traffic and provide alternative routes for traffic movement. For identified new "concept roads" it is important to note that depicted alignments are conceptual in nature and that no engineering to determine the optimal location has taken place.

Improvements to existing roads are meant to address level of service deficiencies resulting from increasing traffic volumes conflicting with existing road capacity. These tend to result in necessity for addition of new lanes through road widening and intersection improvement projects. Additionally, where capacity isn't being addressed in the form of road widening projects, safety improvements have been targeted along a number of roads, especially outside of the Primary Development Boundary (intended for rural, agricultural and forestal uses and character) in instances where roads would benefit from realignment, more generous travel lane widths and shoulder improvements. As populations grow county-wide it is important to recognize the importance of improved roadways even if capacity isn't necessarily being expanded. Many of these rural roads are also traversed with truck traffic from local timbering operations, agricultural machinery, and towed boat traffic in the area of Lake Anna.

Road corridor based transportation alternatives are addressed as part of the Thoroughfare Plan planned widening and improvement projects as a means to reduce road based demands by including provision of bicycle and pedestrian friendly transportation routes. The Trailways Master

Plan located in Chapter 3A serves as a master plan for bicycle and pedestrian based transportation alternatives. The Trailways Master Plan also directly corresponds to provision of recreational trails considering parks and recreation level of service standards as established in Chapter 4.

The recommended improvements including new concept roads, roadway, interchange and intersection improvements are shown on The Thoroughfare Plan Map with a description of each improvement listed in The Thoroughfare Plan - Project List. Both appear within this Chapter.

Thoroughfare Plan Project Prioritization

Complementary to this Comprehensive Plan update, within the last two years the County Thoroughfare Plan projects have been input into a prioritization scoring list that consider multiple factors as described below.

The prioritization method was developed by Kimley-Horn and Associates for FAMPO initially in 2008 to score projects in the FAMPO Long Range Transportation Plan, the methodology is based the collective experience of other Metropolitan Planning Organizations and localities.

Projects are ranked based on six (6) categories. The categories are;

- Congestion
- Safety
- Environmental Impacts
- Public Support
- Implementation
- Smart Growth

Points are assigned to each of the categories to obtain a total score. The score is weighted with the primary emphasis on two categories; Congestion and Safety. These two categories make up 60% of the total number of points a project can achieve. A perfect score is 100 points.

Congestion scoring is based on the Spotsylvania County Travel Forecasting Model which determines Level of Service based on the following Volume/Capacity Relationship (See Table 1 below). The lower the volume/capacity that is achieved with the improvement, the greater the number of points assigned.

Table 1: Level of Service Volume/Capacity Relationship

Facility Type	A	B	C	D	E	F
Freeway Ramp	< 0.26	0.27-0.42	0.43-0.63	0.64-0.79	0.80-1.00	> 1.00
Multi-lane Arterials	< 0.28	0.29-0.47	0.48-0.66	0.67-0.79	0.80-1.00	> 1.00
2-lane Arterials	< 0.05	0.06-0.17	0.18-0.32	0.33-0.48	0.49-0.91	> 0.92
Collectors, Local Roads						

Safety is scored and based on a projects ability to mitigate geometric deficiencies such as horizontal and vertical alignment, inadequate width or shoulders, or sharp curves and on its crash rate.

The remaining points are assigned to the project based on environmental impacts; whether it impacts wetlands, historical or archaeological sites or the neighborhood community in general, Public/community support; whether the project has local, regional or national support, funding; whether dollars have been assigned to the project or some plans are available; and Smart Growth; whether the project provides intermodal access and promotes sustainable growth. These four factors make up the other 40% of the projects score.

A complete summary of FAMPO's Highway Project Prioritization Methodology can be found **HERE**.

In Spotsylvania County, the prioritization schedule has been broken into two unique project lists identifying top tier prioritization for road projects within the Primary Development Boundary, and identification of top tier projects outside of the Primary Development Boundary. Considerate of the County's large rural areas and rural populations the two tier prioritization system is aimed at drawing a distinction between rural needs and more urbanized area needs. Considered together, often times rural road needs appear subordinate to road needs within more urbanized areas within the Primary Development Boundary resulting in identified rural roads projects appearing continuously throughout numerous Thoroughfare Plan update cycles without any implementation. The prioritization methodology intends to better highlight top tier rural roads needs instead of "burying" them amongst the high priority needs within urbanized areas where traffic volumes, levels of service and population density drive warrant for such improvements. As opposed to the Primary Development Boundary where road improvements tend to have multiple focuses including safety and maintaining level of service standards due to capacity issues, the rural roads projects in many cases are not aimed at capacity enhancements but tend to be more focused on safety related improvements such as wider travel lanes (more leeway for large vehicles), added shoulders, straightening curves, better sight distances. For instance, identified road improvements and intersection improvements along Lawyers Road near Lake Anna have been chiefly aimed at addressing safety issues in that area.

Transportation project scoring and prioritization helps focus implementation and fundraising efforts to address projects of most need and then moving on to next need projects. For reference only, a copy of the prioritization tables as of September, 2019 have been included in the Appendices, specifically Appendix B. It is good to note that these tables are not intended to remain static within the planning period and are subject to potential change. The tables are working documents to be used outside of the Comprehensive Plan. Amendments to the prioritization tables such as acknowledgement of acquired funding that results in scoring amendments are not intended to require a Comprehensive Plan amendment. As noted above, they have been placed as a reference resource only within this Plan. The prioritization tables include details concerning funding status as well (through September, 2019).

CODE OF VIRGINIA REQUIREMENTS

The Code of Virginia requires the study of transportation needs and their incorporation in comprehensive plans. Section 15.2.2223 requires coordination of plan amendments that will substantially affect transportation on state controlled highways with the Virginia Department of Transportation. Following staff review and update and work sessions held with the County Transportation Committee and Planning Commission, the draft Transportation Plan was routed to the VDOT Fredericksburg District Office for review in September, 2019. Following the initial VDOT review and County submittal of revisions on December 20, 2019, the VDOT-Fredericksburg District finalized their review with no additional comments, on March 25, 2020.

Section 15.2-2223 stipulates that the Plan shall designate the "general or approximate location, character, and extent of each feature, including any road improvement and any transportation improvement". It requires that each locality develop a transportation plan that "designates a system of transportation infrastructure needs and recommendations that include the destination of new and expanded transportation facilities and that support the planned development of the territory covered by the plan." The transportation resources may include roadways, pedestrian and bicycle facilities, railways, bridges, waterways, airports, and public transportation. The code requires that maps of improvements and costs accompany the plan, and that the plan be consistent with the Commonwealth's Statewide Transportation Plan and the Six-Year Improvement Program. Section 15.2-2224 requires the study and documentation of road and other transportation improvements and their cost. Section 15.2-2232 requires that corridors of statewide significance are shown in the plan. The section also states that the plan shall control the general or approximate location of transportation facilities and that no street or connection to an existing street shall be constructed, established, or authorized unless it is shown on the plan or has been approved by the Planning Commission as being substantially in accord with the adopted Comprehensive Plan.

RELATIONSHIP TO STATE AND REGIONAL PLANS

The results of the 1990 Census of Population led to the designation of the greater Fredericksburg area as an Urbanized Area by the Census Bureau. With this status came the federal requirements for a 3-C (continuing, comprehensive, and cooperative) transportation planning process and the establishment of the Fredericksburg Area Metropolitan Planning Organization (FAMPO). In order to receive federal funding for eligible projects the local governments of Spotsylvania, Stafford and the City of Fredericksburg must work together as the MPO to carry out transportation planning activities. The MPO is part of the George Washington Region (GW Region), including Spotsylvania, Stafford, King George, and Caroline County and the City of Fredericksburg. The Commonwealth of Virginia and the Federal Government play significant roles in determining whether or not the region's transportation network is adequate to meet current or future conditions and funding of identified needs based on those conditions.

There are a number of transportation plans for Spotsylvania County, the FAMPO region, and the Commonwealth of Virginia. The various plans are: VTrans2040: An Update to Virginia's Multimodal Long-Range Transportation Policy Plan, 2035 Virginia Surface Transportation Plan, Virginia Statewide Rail Plan, the FAMPO 2045 Long Range Transportation Plan (LRTP), FAMPO Transportation Improvement Program (TIP), the Six-Year Improvement Program (SYIP) for Interstates and Primaries (SYIP), and the Secondary Six-Year Plan. Each of these plans is a subset of this Transportation Plan. As each of these plans are revised, the Spotsylvania County Thoroughfare Plan (located within the Transportation Element of the Comprehensive Plan) will serve as the Plan from which projects are prioritized, selected and moved to the funding stage of development.

The VTrans2040 plan and Six-Year plans are available for review **HERE**. While not all of the transportation projects identified within the Six-Year Improvement Program are individually noted in this Comprehensive Plan, the Plan is consistent with those projects on the SYIP, available **HERE**. The FAMPO plans referenced above are available for review **HERE**.

Specific transportation improvement plans and studies are identified below. These plans have been incorporated by reference as an integral part of the Transportation Plan.

Corridor Studies and Project Implementation

VDOT and FAMPO maintain active online resources for tracking local and regional transportation projects and studies, and their details. Fredericksburg regional projects, searchable by status and locality through the VDOT website can be found **HERE.** The FAMPO link to major projects summaries can be found **HERE.** FAMPO Transportation Study information is **HERE.** The Spotsylvania County Transportation webpage includes links to various Transportation Programs, Studies and Documents as well as a link to the VDOT Statewide Road Projects Map, **HERE.** These resources show efforts underway to improve the local transportation system.

Lafayette Boulevard Corridor Study

An initial study was completed in October, 2009 by FAMPO, the corridor study focused on major highway improvements to the Lafayette Boulevard (U.S. Route 1 Business) corridor between U.S. Route 1 in Spotsylvania and Sophia Street in Fredericksburg. It documents existing conditions, provides recommendations, and identifies a plan for implementing corridor improvements consistent with the Thoroughfare Plan and Pedestrian accommodations. In early 2019, FAMPO initiated the Lafayette Boulevard Multimodal Study to look at lower cost highway and transit improvements and bicycle/pedestrian improvements for the same Lafayette Boulevard corridor area covered in the initial. Results for the transit and bicycle/pedestrian component of this study effort are expected by January, 2020 and the highway component for the study is expected by Spring, 2020.

I-95 Jackson Gateway Access Study

In December, 2008 the Fredericksburg Area Metropolitan Planning Organization (FAMPO) established a technical study work group composed of representatives from the Federal Highway Administration (FHWA), VDOT, Spotsylvania County, FAMPO, and Kimley-Horn with the goal to improve traffic safety and operations on the Interstate 95 mainline, interstate ramps, and intersecting arterial roadways such as US 1 and US 17. The group evaluated fourteen possible alternatives that were separated into three categories: a single interchange, a new interchange, and a split interchange. From these, a preferred alternative was selected and an Interchange Modification Report (IMR) was developed. The preferred alternative was selected because it was compatible with the Spotsylvania County Comprehensive Plan, demonstrated the highest capacity and lowest amount of congestion, had less impact on existing and future businesses, and was estimated at the lowest construction cost.

I-95 Exit 126 Interchange Modification Report (IMR) and Planning Study

In 2014, Kimley-Horn prepared an Interchange Modification Report (IMR) for the I-95 Exit 126 interchange in partnership with FAMPO, Spotsylvania County, VDOT, and the Federal Highway Administration (FHWA). The study included key information concerning traffic growth assumptions and future trip generation from four new large developments; Southpoint Landing, Heritage Woods, Jackson Village, and Alexander's Crossing. Three alternatives were developed.

These included; alternative 1 (deceleration lanes and new off-ramp lanes on I-95 and dual left-turn lanes at the off-ramp and US 1), alternative 2 (a new one-lane I-95 southbound off ramp referred to as the J-Ramp) and alternative 3 (which include all of alternative 1 and dual free-flow right turn lanes at the off-ramp and US 1, and an additional southbound through lane on US 1).

US 1 Corridor Study

As of September, 2019, VDOT has been working with consultants to develop a framework for the US 1 Corridor Study within Spotsylvania County. With a 2030 design year assumption, the goals of the Study include: access management improvements (consolidation of access points, traffic movement restrictions); safety; traffic operations (intersection operational improvements); incident management (I-95 relief valve). Study deliverables are expected in 2020 and are intended to outline improvements that may eventually be incorporated into the Spotsylvania County Comprehensive Plan's Transportation Element. The geographic focus of the study is the US 1 Corridor extending from Commonwealth Drive to the Caroline County line. This is an area of the County that has been chiefly been identified for mixed use and employment center development. Part of the study area extending along Route 1 from Massaponax to Thornburg is known as the "Jackson Gateway". "Jackson Gateway", this area of the Route 1 Corridor has been envisioned as an "economic driver" for the County in the future. This Study is well timed in that the full potential of the Jackson Gateway area has not yet been realized. Many areas remain undeveloped or underdeveloped along the corridor presently. This study proactively plans for the necessary improvements along the corridor that will ultimately complement business attraction and retention to the area going forward. County Planning staff expects that any recommended projects resulting from the Study would be incorporated into the Comprehensive Plan as a Transportation Element Specific Comprehensive Plan amendment within the coming years, or as part of the next five-year update cycle.

Route 3 Arterial Management Plan

The Route 3 Arterial Management Plan dated April 11, 2016 consists of an approximate 9.6 mile corridor section of Route 3 from Gordon Road (626) to Route 20. The study details access management standards for development along Route 3, signalization, cross-over closings, and cross-over improvements to enhance safety and traffic flow. The improvements would be triggered by development along the corridor. This Plan is used as a reference document when reviewing applications for development along the corridor.

Route 606 Corridor Study

The Route 606 Corridor Study dated March 27, 2015 consists of an approximate 0.75 mile corridor section of Route 606 from the I-95 interchange to approximately 800' west of Route 1. Key areas of concern include the southbound I-95 ramp, intersections with Route 1 and Dan Bell Lane, and commercial entrances. The study includes access management standards to ensure traffic flows

safely and efficiently between I-95 and Route 1 and includes a roundabout and divided roadway plan.

Massaponax Corridor Study

In August, 2006 the Board of Supervisors authorized the hiring of the firm of Michael Baker, Inc. to perform a Corridor Study which included the area of Jefferson Davis Highway (Route 1) and Interstate 95 with the Harrison Road intersection as the northern limit of the study and the Morris/Mudd Tavern Road intersection as the southern limit. The study area also included Mills Drive (Route 17).

The study evaluated existing and future conditions at intersections within the study area and developed alternatives to address needed improvements within the corridor. These included details on traffic signal spacing, locations of limited access routes, limits, and typical road sections for four, six, and eight lane sections of Route 1 to accommodate build out of the proposed land use plan.

In addition to these tasks, the study also evaluated improvements to both the 126 Interchange in Massaponax and the 118 interchange in Thornburg. The study investigated the feasibility of a new interchange (Jackson Gateway Interchange) between the two existing interchanges taking into consideration the planned hospital (at the time) and at the same time minimizing impacts to wetlands and existing development. Many of the recommendations resulting from the Massaponax Corridor Study have progressed over time to result in substantive projects pursued for implementation. The Study envisioned a number of improvements that were included in the County Thoroughfare Plan and have since progressed, including:

- Spotsylvania Exit 126 Interchange reconstruction concept design
- A new connector road linking Route 1 to Route 17
- Thornburg Exit 118 Interchange replacement
- New connector road linking Spotsylvania Avenue to Germanna Point Drive

It is good to acknowledge that some of the design and alignment details have changed over time as land use and development changes have occurred since the Study's release. Factors such as engineering, cost, land use and development change, design alternatives, project support all impact the ultimate "real world" project that results. The Study still merits mention as a fundamental guiding source of recommended transportation improvements for the Interstate 95 and Route 1 corridor from which planned, implemented, and for future implementation projects have their roots.

The Massaponax Corridor Study is dated September, 2007.

Route 1 & 208 Corridor Study

The corridor study dated December, 2018 was a comprehensive evaluation of Route 1 & 208 to account for the growth in the area and improve the mobility and safety of all road users. The study focused on Routes 1 and 208 within the context of the broader land corridor bounded by two limited access roadways, I-95 (to the east), and Route 17 (to the south). A total of nine (9) intersections were evaluated: Route. 17 and Germanna Point Drive; Spotsylvania Avenue and Market Street; Route 1 and Market Street; Spotsylvania Avenue and Mine Road; Route 1 and Mine Rd/Hood Drive; Route 208 and Hood Drive; Route 208 and Southpoint Parkway/Rollingwood Drive; Route 1 and Courthouse Road/Lafayette Boulevard; and Lafayette Boulevard and Falcon Drive/Mall Drive. The study included the evaluation of a possible roadway connection between Germanna Point Drive and Spotsylvania Avenue. It assessed the potential for reducing congestion on Route 1, and provided conceptual plans, cost estimates, and environmental assessments. The study was funded in part through the Virginia Department of Transportation (VDOT) Revenue Sharing Program.

Route 2 & 17 Corridor Study

The corridor study dated December, 2018 was a comprehensive evaluation of Business Route 2 & 17 from the Caroline County Line to the City of Fredericksburg. It examined opportunities for accommodating future growth, addressing current traffic congestion and mobility, and potential opportunities to improve safety. It provided opportunities to maximize alternate modes of transportation and provide more efficient routes for local circulation. The study also addressed the feasibility of connecting two Industrial Parks within the City of Fredericksburg and the County. The focus of the study was on the Route 2 & 17 roadway within the context of the broader land corridor bounded by the Rappahannock River (to the east) and the CSX railroad (to the west). The study included an evaluation of the six (6) signalized intersection on Route 2/17, Benchmark Road and the intersection of Lansdowne Road and Shannon Park. The study was funded in part through the Virginia Department of Transportation (VDOT) Revenue Sharing Program.

VDOT STARS Study: I-95 Northbound at Exit 126

The purpose of this study is to identify improvements at the Route 1 and Interstate 95 interchange that will mitigate existing congestion and safety issues. The study was prepared by Kimley-Horn and delivered in final form in July, 2018.

The goals of the STARS (Strategically Targeted and Affordable Roadway Solutions) Program are to develop comprehensive, innovative transportation improvements to relieve congestion bottlenecks and create projects that improve critical traffic and safety challenges to be programmed in the VDOT Six-Year Improvement Program.

The report documents the existing and future conditions, the alternatives analyzed, and the preferred alternative, the planning level cost estimate, and preliminary conceptual design.

This project was conducted in two phases: 1) design concept development to specifically determine if a second northbound Route 1 left-turn lane could be constructed under the I-95

bridge at the northbound I-95 signalized intersection, and 2) traffic analysis to document the future year no-build and build results within the study area, primarily focusing on the Rt. 1 at I-95 ramp signalized intersection.

VDOT STARS Study: Route 1 Corridor Study from Mine Road to Market Street

This section of roadway is heavily congested and contains the greatest number of crashes along Jefferson Davis Highway (US Route 1). It experiences an annual average growth rate of 2%. The approximately 0.9- mile study corridor is comprised of two (2) signalized intersections and one non-signalized intersection. As a Corridor of Statewide Significance (CoSS) and part of the National Highway System (NHS) this corridor plays an important role in incident management along the 1-95 corridor. The purpose of the study is to identify operational and safety improvements along the corridor.

Under the supported Alternative 2 scenario, results of the study would result in intersection improvements at the intersection of Route 1 and Mine Road, "Connector Road" (Part of Market Street Extended) and Hood Drive intersection, and a new intersection of a proposed "Connector Road" extending from Hood Drive to the Route 1 intersection.

VDOT Interstate 95 Corridor Improvement Plan Study

In 2019, VDOT conducted a study of potential I-95 improvements for the approximately 180 miles stretch of I-95 in Virginia. This study primarily focused on mainline improvements and interchange safety improvements that benefit I-95 mainline traffic operations and multimodal improvements, e.g., transit, vanpools, commuter parking, and TDM. The study did not consider new interchanges or modifications to existing interchanges which do not benefit I-95 mainline traffic operations. The study results will be used to prioritize I-81 Bill interstate funding that will become available for the I-95 corridor by late 2020. Spotsylvania's stretch of I-95 is included in the State's I-81 Bill I-95 segment from the Prince William County line to the North Carolina line. Starting in FY-21, it is estimated that at least $40 million/annually will be available. In Spotsylvania, widening I-95 from 6 to 8 lanes between Exit 130 to Exit 126 has been identified by the study as a recommended improvement. New Commuter bus service from Massaponax to Northern Virginia/DC and new commuter parking at Exit 118 were also listed as recommended improvements.

AIR QUALITY ASSESSMENT

Transportation conformity is a way to ensure that Federal funding and approval goes to those transportation activities that are consistent with air quality goals.

Conformity applies to transportation plans, transportation improvement programs (TIPs), and projects funded or approved by the Federal Highway Administration (FHWA) or the Federal Transit Administration (FTA) in areas that do not meet or previously have not met air quality standards for ozone, carbon monoxide, particulate matter, or nitrogen dioxide.

These areas are known as “nonattainment areas” or “maintenance areas,” respectively. Regulations governing transportation conformity are found in Title 40 of the Code of Federal Regulations (40 CFR Parts 51 and 93).

In August, 2018, VDOT released a final air quality conformity analysis for the Fredericksburg Area Metropolitan Planning Organization financially constrained fiscal year 2018-2021 Transportation improvement Program and 2045 Long Range Transportation Plan. The conformity analysis was conducted for compliance with the federal transportation conformity rule (40 CFR Parts 51 and 93) and the corresponding state conformity regulation (9 VAC 5-151). The conformity assessment includes Spotsylvania County as part of the Fredericksburg region. Results of the analysis found a recommendation for a finding of conformity with all applicable requirements of the conformity rule.

Per the Virginia Department of Environmental Quality (DEQ) Section 174 of the Clean Air Act requires that areas of the Commonwealth that do not comply with ozone or fine particulate matter ($PM_{2.5}$) national ambient air quality standards (NAAQS) form lead planning organizations (LPOs). LPO members are elected officials from the localities in the nonattainment area and representatives of the Virginia Department of Transportation (VDOT), the Virginia Department of Rail and Public Transport (VDRPT), and the metropolitan planning organizations within the nonattainment area. Other people, such as private citizens and representatives of industry, military installations, and environmental groups, may also participate in the LPOs in an advisory capacity.

The purpose of the LPO in a nonattainment area is to assist in carrying out planning requirements for that area. Planning activities can include examining baseline emissions levels to determine necessary control strategies, examining transportation needs for future growth, and if necessary, creating plans for EPA review and approval to bring the area into attainment with the air quality standards. The extent of the planning requirements depends on the classification of the nonattainment area and the severity of the air pollution problem. The George Washington Air Quality Committee (GWAQC) has been established within the GW Region, including Spotsylvania County. For air quality, emissions modeling is required to be vetted in consultation with the LPO. Per FAMPO, Involvement of the VDEQ staff representative for that Committee in the local inter-agency consultation process for conformity is considered to fulfill that requirement.

The final report for the area can be found through the FAMPO website **HERE**.

Improving traffic flows and reducing traffic delays (less time on the road) through improvements to the transportation system and expanded mobility options via transportation alternatives all contribute to efforts to reduce vehicle emissions and improve air quality. Technological advancements through alternative energy sources to reduce emissions or expanded fuel efficiency also play an integral role.

TRANSPORTATION ALTERNATIVES

The principal modes of transportation within Spotsylvania County include vehicular, rail, transit, bicycle, and pedestrian. The vehicle-oriented roadway system is the most extensive transportation facility in the County by a wide margin and is directly affected by local land use decisions. The Thoroughfare Plan lists roadway improvements needed to maintain the system at acceptable levels of service. The focus of this section is on multi-modal transportation alternatives and concepts that lessen demand or increase capacity/safety of the roadway system at a relatively low cost. Provision of transportation alternatives are also critical to social equity and consideration of disadvantaged populations. Accessibility for Disadvantaged populations follows this Transportation Alternatives portion of the Transportation Plan.

In addition to addressing capacity improvements and transportation alternatives to achieve improved levels of service on County roads, AM and PM Peak hour traffic impacts are amplified locally due to significant out-commuting in the AM of County residents to employment located outside of the County, and return trips home during the PM. The US Census Bureau, 2016 American Community Survey found that nearly 62% (61.9%) of Spotsylvania County residents have employment outside their County of residence. Reduction in the prevalence of out-commuting in the County with increased employment availability within the County across a number of industries is beneficial. Reduced commute times and road miles travelled during AM and PM Peak hours would be beneficial to County residents, promote spending within the community as opposed to out of County during working hours (gasoline sales, lunches, etc.) and result in reduced burdens on local transportation infrastructure.

In 2019, the Fredericksburg Regional Alliance released an updated the Fredericksburg Region Commuter Workforce Study. The study was prepared by the University of Mary Washington Center for Business Research for the Fredericksburg Regional Alliance, George Washington Regional Commission and GO Virginia. 2019 Estimates found an estimated 83,117 people commuted outside the region in the first quarter of 2019. Of that regional total, 40,808 persons originated in Spotsylvania County. Far fewer persons commuted to Spotsylvania County from outside of the region (18,273), or commuted within the region to Spotsylvania County (22,145). The study estimates Spotsylvania County has a net loss of population who commute outside of the region on a daily working day basis of -22,535 persons. The top commuting destinations for Spotsylvania residents commuting outside of the Fredericksburg Region are most heavily directed toward northern Virginia and Washington DC. Smaller populations commute to the west and south (toward Richmond). As a whole, regionally approximately 216,848 people regularly commuted to (17.5%), outside of the region (38.3%), or within the Fredericksburg Region (44.2%). These commuting patterns put a strain on local roadways especially noticeable during peak commute times. Simply, regionally there are many vehicles on the roads all focused on commuting at similar times.

2018 estimates of commuter travel modes found overwhelmingly that commuters tend to use their own vehicles and drive alone (car, truck, or van). In Spotsylvania County, 52,379 persons drove alone to their place of employment. This was followed secondly by carpooling (8,605), public transportation (1,676), walking (426), other means (777), and lastly home based workers (2,967). As a means to reduce traffic loads on local roads, efforts to promote and expand transportation alternatives such as carpools, public transportation, walking or bicycling, and expanded locally based employment opportunities, will all help reduce local traffic burdens. Transportation efficiencies improvements including expanded use of Transportation Alternatives also reduce collective vehicle emissions with resulting improvements to air quality (smog reduction) with corresponding environmental and health benefits.

Transportation Demand Management

Transportation Demand Management (TDM) is a congestion relief strategy. The idea of TDM is to move as many people as possible through the use of techniques that minimize peak demands on the transportation system. These include alternative modes of transportation, flexible work schedules, and mixed-used development where proximity to live, work, play opportunities reduce necessity for lengthy on road travel. Those modes consist of high-occupancy-vehicle (HOV) lanes on the interstate system, ridesharing, park and ride lots, van pools, public and private transit, telecommuting, and provisions for walking and bicycling.

Investments in TDM are particularly stressed as regional needs within VTRANS 2040 where additional mode choice options and capacity and operational enhancements are necessary to reduce local traffic burdens. These TDM needs have been identified for improvements to roadways for vehicular travel, passenger rail, freight rail, bicycle and pedestrian connectivity and other transportation alternatives. Improving local transportation will not be achieved solely via continuous capacity enhancements on local roadways.

Transportation System Management

Transportation System Management (TSM) is the terminology given to represent minor improvements to the transportation system that enhance performance. TSM improvements typically consists of minor intersection and road improvements that afford a safer and more efficient road network. TSM improvements include, but are not limited to, implementation of turn lanes, acceleration/deceleration lanes, traffic signals, signal timing, intersection lighting, pavement marking, signage, horizontal/vertical grade improvements, drainage improvements, median installations, intersection realignments, roundabouts, intelligent transportation systems (ITS), and access management.

As the County continues to grow and develop, emphasis needs to be placed on identifying and implementing TSM projects that can be addressed through federal, state, and local funding. As developments occur within the County they too should address not only major transportation

improvements necessary to mitigate their impact, but also address any TSM improvements that will enhance the safety and operation of the road network directly impacted by the development.

Rail

Virginia's rail network is a valuable asset for the Commonwealth of Virginia. It provides an efficient means of moving freight and passengers both within and through the Commonwealth. By diverting freight and passenger traffic from road to rail, Virginia's rail network relieves congestion, saves lives, improves air quality, helps grow the economy, and complements the Virginia highway network while reducing capital and maintenance expenditures.

The Virginia Department of Rail and Public Transit (DRPT) compiles rail inventory, capacity, economic impacts data, and statewide rail planning as part of the Virginia Statewide Rail Plan. The Plan was last updated in 2017 and provides many additional resources considering the state of rail and rail planning in Virginia **HERE**.

Information concerning passenger and freight rail services in Spotsylvania County has been presented below. Additionally, the Spotsylvania County based Rappahannock Rail Museum has been included in this local rail profile in the interest of tourism, historic resource interpretation, and education.

Rail: Passenger Service

Commuter rail service to Northern Virginia and Washington, D.C. is provided by Virginia Rail Express (VRE), a semi-public agency. VRE is the tenth largest commuter rail agency in the U.S. and is a transportation partnership of Northern Virginia Transportation Commission and the Potomac & Rappahannock Transportation Commissions. Off Crossroads Parkway, south of U.S. Route 17 the VRE began passenger service to a new passenger rail station opened on November 16, 2015. Prior to the 2015 station opening in Spotsylvania County, the City of Fredericksburg downtown passenger rail station was the chief means of access to VRE service locally for Spotsylvania residents. The Spotsylvania station has 1,500 parking spaces for rail and commuter use, a small restroom, and a 700-foot platform with canopy. Presently the station serves VRE ridership exclusively. Since 2015, VRE boardings at the Spotsylvania Station have increased based on boarding survey data collected since station inception. Ridership has increased 17% since the Spotsylvania station opening in 2015. An October 3, 2018 survey of passenger boardings found a total of 789 passengers riding the rail from the Spotsylvania station generally between the hours of 5am and 7:30am distributed amongst eight VRE train arrivals at the station platform. The subsequent October, 2019 survey found a slight increase, up to 801 daily riders from the Spotsylvania Station.

The Spotsylvania Station is the southernmost station on the VRE system. The system serves points north, including the City of Fredericksburg, northern Virginia and Washington DC. Destinations served and the 2019 VRE schedule can be found in Table 2 below. This has been included for reference only and is subject to potentially change through the planning period.

Table 2: VRE Service Schedule

VRE Service Fredericksburg Line

← →

Train Number	Spotsylvania	Fredericksburg	Leeland Road	Brooke	Quantico	Rippon	Woodbridge	Lorton	Franconia / Springfield	Alexandria	Crystal City	L'Enfant	Union Station
300	4:54 a.m.	5:05 a.m.	5:12 a.m.	5:18 a.m.			5:40 a.m.			6:07 a.m.	6:16 a.m.	6:24 a.m.	6:32 a.m.
302 S	5:04 a.m.	5:15 a.m.	5:22 a.m.	5:28 a.m.	5:40 a.m.	5:49 a.m.	5:56 a.m.	6:03 a.m.	6:11 a.m.	6:23 a.m.	6:32 a.m.	6:40 a.m.	6:48 a.m.
304	5:20 a.m.	5:31 a.m.	5:38 a.m.	5:44 a.m.	5:56 a.m.	6:05 a.m.	6:12 a.m.	6:19 a.m.	6:27 a.m.	6:39 a.m.	6:48 a.m.	6:56 a.m.	7:04 a.m.
306 S	5:34 a.m.	5:45 a.m.	5:52 a.m.	5:58 a.m.	6:10 a.m.	6:19 a.m.	6:26 a.m.	6:33 a.m.	6:41 a.m.	6:53 a.m.	7:02 a.m.	7:10 a.m.	7:18 a.m.
308	6:00 a.m.	6:11 a.m.	6:18 a.m.	6:24 a.m.	6:36 a.m.	6:45 a.m.	6:52 a.m.	6:59 a.m.	7:07 a.m.	7:19 a.m.	7:28 a.m.	7:36 a.m.	7:44 a.m.
310 SB	6:20 a.m.	6:31 a.m.	6:38 a.m.	6:44 a.m.	6:56 a.m.	7:05 a.m.	7:12 a.m.	7:19 a.m.	7:27 a.m.	7:39 a.m.	7:48 a.m.	7:56 a.m.	8:04 a.m.
312 B	7:05 a.m.	7:16 a.m.	7:23 a.m.	7:29 a.m.	7:41 a.m.	7:50 a.m.	7:57 a.m.	8:04 a.m.	8:12 a.m.	8:24 a.m.	8:33 a.m.	8:41 a.m.	8:49 a.m.
314 SB	7:33 a.m.	7:44 a.m.	7:51 a.m.	7:57 a.m.	8:09 a.m.	8:18 a.m.	8:25 a.m.	8:32 a.m.	8:40 a.m.	8:52 a.m.	9:01 a.m.	9:09 a.m.	9:17 a.m.

S Special schedules for holidays and snow days.

Recognizing the potential draw of a new passenger rail station in Spotsylvania County along with historic trends of a large resident population commuting north for employment opportunities in northern Virginia and Washington, DC, the County identified the rail station area as well suited for higher density, higher intensity development with a mixed land use designation. This land use designation in the Crossroads area first appeared in the 2008 Comprehensive Plan and has been maintained in the spirit of creating a transit oriented development for easy access for VRE commuter trains. The area has nearby Fire/Rescue services with the recently opened Station 11 along Crossroads Parkway. Higher density residential and mixed use developments have been approved via rezoning in proximity to the Rail Station, consistent with the land use designations in the area including Crossroads Station (Rezoning R11-0004 incl. commercial and apartment development); Wheatland Townhomes (Rezoning R14-0007 incl. 105 SFA Units). Eventually, as the area grows and accessibility from the station is enhanced, the County may well benefit from a more two-way service that would bring travelers to the County for work opportunities and travel/ tourism opportunities.

Image 2: VRE Passenger Service Train at the Crossroads VRE Station

VRE also operates a maintenance and storage yard within Spotsylvania County off Crossroads Parkway just south of the VRE Station. The Spotsylvania maintenance yard for the VRE line is located just south of the Commuter rail station. The facility was recently expanded to include a new storage track and a 33,000 square foot addition to the Service and Inspection building. See Image 3 below.

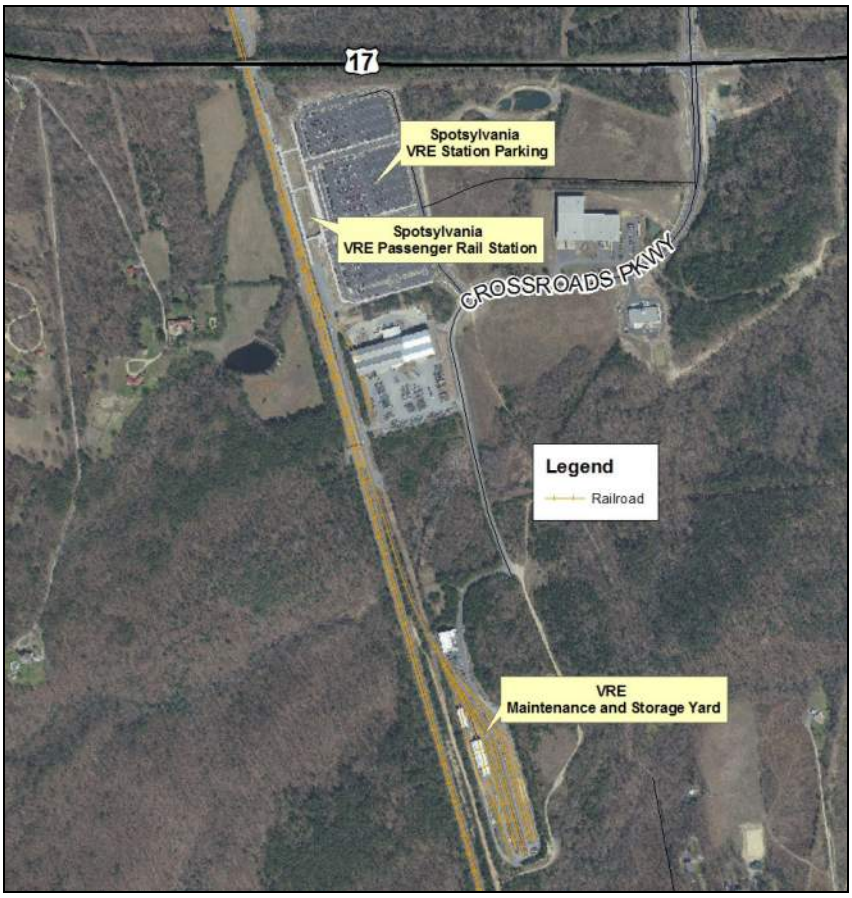


Image 3: Spotsylvania County VRE Operations

AMTRAK service traverses the County and provides additional rail passenger transportation options for passengers within the region with access up and down the east coast and through the entire national AMTRAK system. Within the region, AMTRAK service is available exclusively through Fredericksburg's downtown passenger rail station. VRE and AMTRAK share tracks owned and operated by freight rail carrier CSX Transportation, one of two Class I freight railroads in Virginia.

To address corridor congestion resulting from shared freight and passenger rail services, VRE, CSX and the Virginia Department of Rail and Public Transportation (DRPT) constructed a third track between Crossroads Parkway and Mine Road in Spotsylvania County to more efficiently accommodate passenger and freight rail traffic in the rail corridor, known as the Richmond, Fredericksburg and Potomac Rail (RF&P) Corridor within the region. VRE's long range plan includes completing triple tracking of the CSX main line between Spotsylvania and Alexandria and expanding service with additional peak and mid-day service.

RF&P Rail Corridor enhancements including addition of additional capacity via construction of a third track through the County complements efforts to further enhance passenger rail services along the east coast by adding High Speed Rail as part of the Washington, DC to Richmond

Southeast High Speed Rail project (known as DC2RVA) whose project partners include the Virginia Department of Rail and Public Transit, U.S. Department of Transportation, Federal Railroad Administration. According to the DC2RVA team, increased congestion and demands on the rail corridor are linked to population growth, freight growth, Interstate 95 congestion driving additional rail demand, air travel congestion, limited existing capacity in the corridor infrastructure, opportunity to expand and enhance TDM alternatives, and air quality benefits.

According to the project partners leading the high speed rail initiatives, across the Country, the U.S. Department of Transportation has designated 10 high speed rail corridors in addition to the Northeast Corridor. The Washington, D.C. to Richmond project is the critical link connecting two high speed rail corridors on the East Coast, which are:

- **Washington, D.C. – Richmond, VA – Charlotte, NC**: In 1992 the U.S. Department of Transportation designated the Southeast High Speed Rail Corridor connecting Charlotte, NC, Richmond, VA, and Washington, D.C. This corridor designation has been extended south to Northern FL through subsequent actions of the Department.

- **Boston – New York – Washington, DC:** The Northeast Corridor is the only high speed rail service at present in the U.S. It is also the busiest passenger rail line in the U.S. by ridership and service frequency. Amtrak operates a 150 mph train service known as "Acela" in this corridor.

The Purpose of the DC2RVA project is to increase the capacity between Washington, D.C. and Richmond to deliver higher speed passenger rail, improve conventional speed passenger rail, expand commuter rail, and accommodate growth of freight rail service in an efficient and reliable multimodal rail corridor. This Project will enable passenger rail to be a competitive transportation choice for intercity travelers between Washington, D.C. and Richmond and beyond. The Project extends 123 miles along an existing rail corridor owned by CSX Transportation from the Long Bridge in Arlington, VA, to Centralia, VA in Chesterfield County, south of Richmond. DRPT has recommended specific rail infrastructure improvements and service upgrades to deliver higher speed passenger rail, improve conventional speed passenger service, expand commuter rail, and accommodate growth of freight rail service in the corridor. These recommendations are subject to review and approval by the Federal Railroad Administration (FRA) and the Commonwealth Transportation Board (CTB).

In May, 2019, the US Department of Transportation, Federal Railroad Administration and the Virginia Department of Rail and Public Transportation issued the Tier II Final Environmental Impact Statement and Final Section 4(f) Evaluation concerning the DC2RVA project. For Spotsylvania County, recommendations result in expanded capacity along the existing RF&P Corridor. Third track rail capacity expansion improvements are already in place in Spotsylvania County between the County line with the City of Fredericksburg to the Crossroads VRE station in Spotsylvania County. Plans would extend the third rail south beyond the Spotsylvania Crossroads VRE station. Capacity improvements would result in no changes to the Spotsylvania Crossroads VRE station.

The Washington to Richmond segment will provide the critical link between the Northeast Corridor and the rest of the Southeast High Speed Rail Corridor. Spotsylvania County and its

citizens have been involved in review and comment concerning service and alternatives throughout the Environmental Impact Statement process. For more information regarding the DC to Richmond Southeast High Speed Rail project, visit the project website **HERE**.

Prospects for passenger rail service were greatly expanded in December, 2019 with the announcement of Virginia's acquisition of 350 miles of rail right-of-way, 225 miles of track and intended construction of a new Long Bridge over the Potomac River, adding capacity to the current Long Bridge that operates at 98% capacity during peak hours. The new Long Bridge will include dedicated tracks for passenger rail service. Presently passenger rail is shared and subordinate to freight rail along the corridor. Additional rail capacity will be added in northern Virginia. Announced changes to the rail corridor within the next ten (10) years include doubling Amtrak train service through Virginia, hourly Amtrak service between Richmond and Washington D.C., and expanding VRE service by 75% along the I-95 corridor with added weekend service (including the VRE's Fredericksburg Line). Service frequency along VRE's Fredericksburg Line (including the Spotsylvania VRE Station) is expected to increase from eight to thirteen round trips on weekdays by 2030. Weekend VRE service is initially projected to include a minimum of two northbound trains originating at the Spotsylvania station with two return trips in the afternoon or evening. The capacity and service enhancements have been projected to remove 5 million cars and 1 million trucks from Virginia highways annually. These improvements are expected to greatly enhance both interstate and intrastate passenger rail service and should further boost Spotsylvania's Crossroads VRE area mixed use node (per the future land use map).

Rail: Freight Service

Freight rail offers a number of benefits to the transportation system including but not limited to: fuel efficiency and emissions versus truck traffic; ability to move large quantities of goods from ports and distribution hubs to market; avoided truck trips along road corridors resulting in reduced traffic volumes and wear and tear upon roadways.

Spotsylvania County's RF&P Rail Corridor is part of a significant freight and passenger rail route along the east coast of the United States. The corridor has been experiencing increasing demands and rail traffic volumes. As noted prior, the rail corridor serves a dual use for passenger train and freight rail transportation. According to the Virginia DRPT, demand for freight movement through and within the corridor is growing as economic activity and population increase. Ongoing expansion of Virginia's deep water ports, rail-dependent industries, and intermodal facilities further increases the need for efficient shipment of freight. According to the Virginia DRPT's 2017 Virginia Statewide Rail Plan, the mining and extraction industry sector has been the leading source of freight tonnage in the Virginia freight rail system however the sector is not projected to grow through 2040. Agriculture and manufactured goods however are expected to nearly double their tonnage in all freight movements through 2040.

Table 3: 2017 DRPT Virginia Railway Plan RF&P Corridor Summary

Subdivision:	RF&P Subdivision
Owner	CSX
Operator	CSX
Line Heritage	Richmond, Fredericksburg & Potomac Railroad (RF&P)
Subdivision Route / Mileage	Washington, District of Columbia-Greendale (Richmond), Virginia; 109 miles
FRA Track Class	Class 4
Track Configuration	2-4 main tracks
Maximum Authorized Speed Freight	40-60 mph freight
Maximum Authorized Speed Passenger	70 mph passenger
Wayside Signals	Centralized Traffic Control (CTC) and Automatic Train Control (ATC)
Method of Operation	Centralized Traffic Control (CTC) and Automatic Train Control (ATC)
Maximum Allowable Gross Weight	286,000 lbs.
Clearances	Cleared for trailers (TOFC), double-stacks (COFC), and autorack railcars (20' 2" Above Top of Rail)
Current Traffic Density (2015) in Million Gross Tons	116 MGT
Average Number of Trains per Day	47.1
Train Types	• Intermodal, general manifest, and bulk freight trains • Amtrak long-distance and intercity passenger trains • Virginia Railway Express commuter trains
Industrial Leads	Dahlgren Branch: Dahlgren Junction-Sealston, Virginia; approximately 10 miles; 286,000 lbs. maximum allowable gross weight
FRA Excepted Track	N/A

The extent of freight rail service and rail side accessibility within Spotsylvania County is limited as Spotsylvania County does not have an extensive network of rail traversing the County. CSX is the only freight rail operator in the County operating along a single rail corridor in the northeastern corner of the County. The rail corridor within the County extending from the City of Fredericksburg line to the Caroline County line is approximately 9 miles in length of which approximately 5.7 miles are located within the County's designated Primary Development Boundary. Within the Primary Development Boundary staff notes large stretches of the rail corridor have already been developed, are bordered by protected Civil War Battlefield lands by the National Park Service (Fredericksburg Battlefield) and Civil War Preservation Trust (Slaughter Pen Farm), or limited by significant natural resources including wetlands, steep slopes, resource protection areas. From a land use perspective, the areas within the Primary Development Boundary are where higher intensity uses including industry and distribution centers are envisioned. Some of these industrial and distribution prospects may require or benefit from rail service as part of their site selection process as a necessary element of their manufacturing and distribution chain. The Spotsylvania

Department of Economic Development has confirmed that rail served sites are not often sought locally by economic development prospects but they do occur on occasion and represent very real opportunities for economic development and local employment benefits as well as tax revenue generation and positive spin off economic activity within the community. Considering the prospect of freight rail and economic development prospects, the mapped Exhibit 1 below was created to identify all parcels of 50 or more acres located within 1/4th and 1/2 mile of the rail corridor or rail spurs not already built out or protected via conservation easement or preservation ownership. The analysis shows the land inventory in relation to the 2013 adopted Primary Development Boundary.

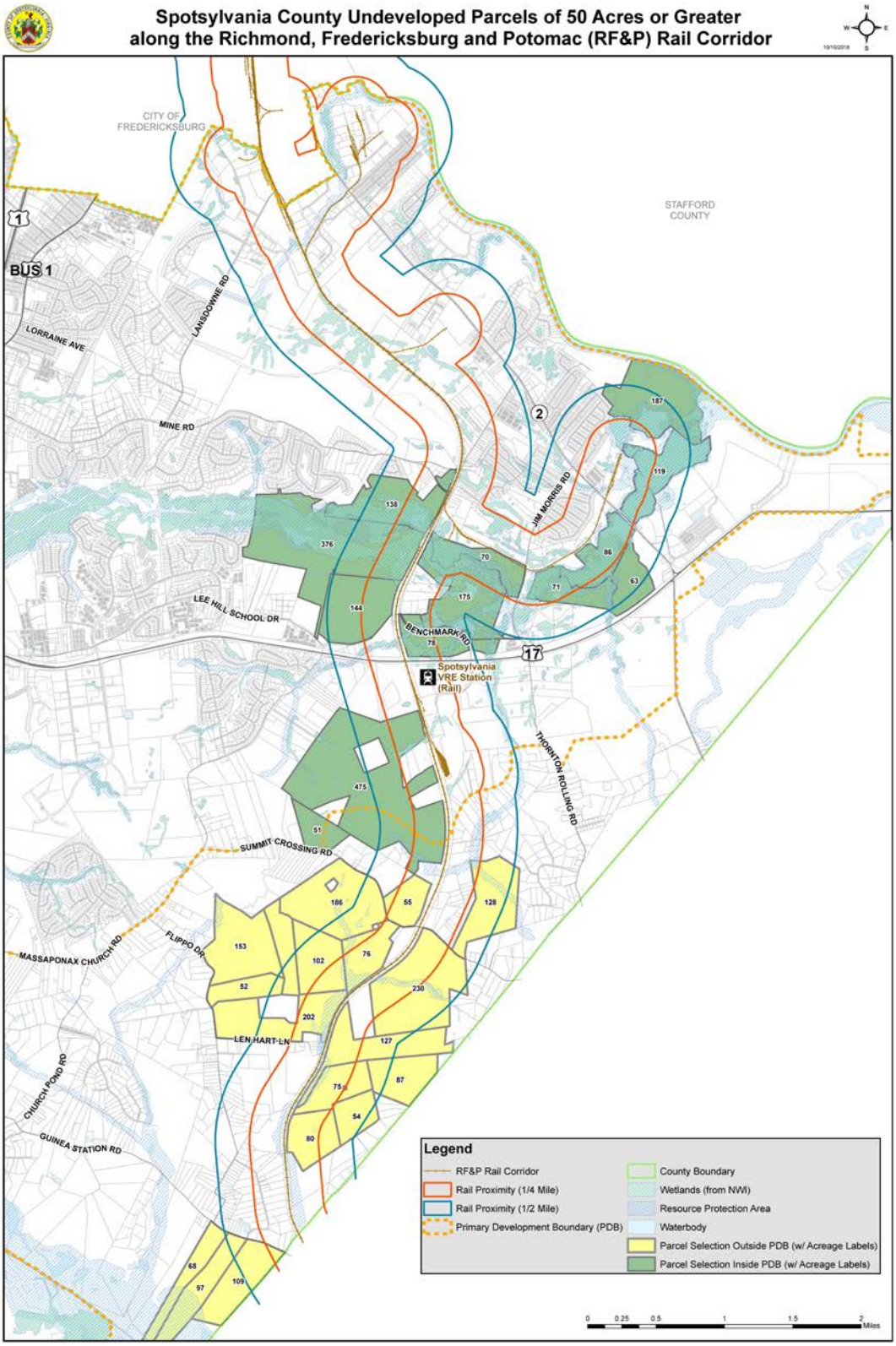


Exhibit 1: Large Parcels in Proximity to Rail Corridor

Presently four rail spurs provide feeder rail into the mainline rail corridor within the County, including: (1) Bowman Center Spur serving industrial center users and the Rappahannock Railroad Museum; (2) Shannon Drive, serving industrial property; (3) Urban Systems Development Property (former General Motors Plant), including idX Virginia plant; (4) Ruffins Pond spur serving Culpeper Wood Preservers. Within the planning period, two of the four rail spurs may to scale back in usage or cease to exist as viable rail spurs due to development impacts or land use trend changes in immediate proximity to the spurs. Tentative plans for development of the "back 40 acres" behind the idX Virginia plant would shorten the rail spur and shifts in land use around the Bowman Center appear to be reducing rail viability there. Such reductions further limit the inventory of sites available for rail ready service.

Rail: History, Education and Interpretation

The Rappahannock Rail Museum (RRM) is located at 11700 Main Street in the Bowman Center off Routes 2/17. The RRM provides railroad-related education to the public, including information about railroad lines and related events in the region, as well as the preservation of historical railroad equipment in the greater Spotsylvania and Fredericksburg areas. The Spotsylvania County Department of Economic Development and Tourism confirms this is a popular tourism destination for the County. Visitors are welcome to tour the museum Saturdays from 9 a.m. to noon. From Mid-March through October (and other Saturdays weather permitting), visitors are welcomed aboard the maintenance of way train ("little yellow train") for short rail excursions to not only learn, but experience how rail workers in the mid 1900's commuter to work sites. All train rides are subject to crew availability, weather, commercial rail activity and other factors beyond RRM's control. The RRM is supported solely through donations and volunteers.

Following a two-year effort, in September, 2018 the museum celebrated an expansion that includes model train exhibits in the HO, O. and N scale layouts as well as exhibit of additional memorabilia from local collections.

Additional information about the RRM can be found **HERE**, or contact the Spotsylvania County Economic Development & Tourism office at (540) 507-7205.

Motor Freight

VTRANS 2040 conducted an analysis of regional freight accessibility. Per VTRANS and as logic would say, in addition to railways, US Route 1/I-95 corridor is the major corridor for freight movement throughout the region. Accessibility of freight origins to these roadways is dependent primarily on the proximity of the origin to highway access ramps. Most activity centers in the region are within an eight-minute drive from a major arterial ramp. VTRANS 2040 notes that an average of 98% of the dollar value of all goods that are moved through the region move by truck. Only 1% of the total dollar value of goods are moved by rail through the region. Such a high dependence on road based freight transport further contributes to the regional traffic burden.

VTRANS acknowledges need for capacity and operational improvements of the local rail corridor to enhance rail reliability that could reduce dependence on road based, motor freight options.

The location of warehouses and distribution centers is another important factor in the level of freight accessibility for the region. As VTRANS 2040 observes, most warehouses and distribution centers in the Fredericksburg Region are clustered around the I-95/US Route 1 corridor in and around the City of Fredericksburg. Most areas adjacent to the I-95/US Route 1 corridor are within a 22-minute drive to warehouses and distribution centers. From a land use and operational efficiency standpoint, nearness to major freight corridors for complementary warehousing and distribution uses is an important land use planning consideration. The closer they are to their chief transportation routes into and out of the region helps speed their efficiency and marketability of sites while lowering the extent of freight impacts on roadways inland, away from these corridors. The Future Land Use Chapter is established to help guide land use recommendations and can play an important role defining areas "best suited" for freight based operations.

Freight Planning- Generally

The FAMPO 2045 Long Range Transportation Plan has identified a number of Regional Freight Movement Needs. Needs were identified within FAMPO's designated regional freight network. Within Spotsylvania County, the following improvements identified in Table 4 below have been identified in the 2045 LRTP for Freight:

Table 4: Regional Freight Movement Improvements Needs for Spotsylvania County

Jurisdiction	Project Name	Termini	Description
Fredericksburg/ Spotsylvania	Shannon Drive Extension	From the end of Shannon Drive to the end of Belman Rd	2-lane extension
Spotsylvania	Lansdowne Road and Shannon Drive Intersection Improvements	0.25 miles from intersection in each direction	TBD in Rte. 2/U.S. 17 Bus. Study (Spotsylvania)
Spotsylvania	U.S. 1 and Hood Drive /Mine Road Intersection Improvements	0.25 miles from intersection along Hood Drive and U.S. 1	TBD in Rte. 208/U.S. 1 Study (Spotsylvania)
Spotsylvania	U.S. 1 and I-95 NB Entrance Ramp Intersection Improvements	.25 miles south along U.S. 1 from intersection, .75 miles down NB I-95 entrance ramp	TBD in VDOT STARS Study
Fredericksburg	Route 2 and Beulah-Salisbury Drive Intersection Improvements	0.25 miles from intersection along Beulah-Salisbury	Right turn lane from Beulah-Salisbury Dr to Dixon St
Spotsylvania	Route 2 and Lansdowne Road Intersection Improvements	0.25 miles from intersection in each direction	TBD in Rte. 2/U.S. 17 Bus. Study (Spotsylvania)
Spotsylvania	Route 2 and Joseph Mills Drive Intersection Improvements	0.25 miles from intersection in each direction	TBD in Rte. 2/U.S. 17 Bus. Study (Spotsylvania)
Spotsylvania	Route 2 and Benchmark Road Intersection Improvements	0.25 miles from intersection in each direction	TBD in Rte. 2/U.S. 17 Bus. Study (Spotsylvania)
Spotsylvania	Route 2 and Jim Morris Road Intersection Improvements	0.25 miles from intersection in each direction	TBD in Rte. 2/U.S. 17 Bus. Study (Spotsylvania)
Spotsylvania	Route 2 and U.S. 17 Intersection Improvements	0.25 miles from intersection in each direction	TBD in Rte. 2/U.S. 17 Bus. Study (Spotsylvania)
Spotsylvania	Route 2 Widening	From .1 miles north of Beulah-Salisbury Drive to U.S. 17	Widen to 4 lanes divided with bike/ped accommodations

Aviation

There are two airports in the George Washington Region that provide general aviation service. First, Shannon Airport is significant to the local transportation system as it serves as a gateway for VIPs and business men and women working in the area. Shannon Airport is located in Spotsylvania County, on Tidewater Trail (Route 2). Shannon Airport is classified as a Non-Reliever General Aviation- Community airport as per the Virginia Department of Aviation. The classification is described as serving the needs of businesses and recreational users but often serve a more limited market area than the regional airports. They provide services such as aircraft rentals, flight instruction and AvGas fuel. In 2016, there were 93 aircraft based at the Shannon Airport. Statewide of the 49 non-reliever general aviation airports, the Shannon Airport had the third highest number of based aircraft (93), behind only Culpeper Regional (127) and Winchester Regional (105).

Based on the Virginia Department of Aviation's 2018 report entitled "Virginia Airport System Economic Impact Study" Spotsylvania County based Shannon Airport is responsible for the

creation of approximately 69 jobs which represent approximately 2.5 Million dollars in wages and approximately $6.8 million in total economic activity. The Shannon Airport has not been identified by the Federal Aviation Administration (FAA) as a National Plan of Integrated Airport Systems (NPIAS) airport as of their 2016 designations. As a result, the airport has not been forecasted by the FAA for future activity (total volume of operations). NPIAS designation provides eligibility for airports to receive federal funding for airport infrastructure development and improvements. More information regarding the FAA NPIAS can be found **HERE**.

The FAMPO 2045 LRTP notes there are no plans to expand the airport because the adjacent geography prevents it. There is a highway located to the north (Tidewater trail) and a railroad directly to the south (RF&P). Staff notes the airport is bounded on the east by the 200-acre Slaughter Pen Farm, under battlefield protection easement by the Civil War Trust. An existing, developing industrial park is to the west. Improvements to the airport going forward are expected to be for onsite facilities improvements and operational efficiencies. The airport does intend on improving facilities and expanding in place however by maximizing site efficiency. In order to further improve airport operations and attract more users to the site, in 2020 airport officials have identified a number of offsite transportation projects that warrant consideration within the planning period. The elevation of Tidewater Trail in relation to the nearby airport runway terminus has been identified as problematic. Recommendations include seeking to lower the elevation of the road by 4' to 5' to ensure passing vehicular and truck traffic remain below the airport runway grade. At present, truck traffic especially interferes with the runway horizon there. Additionally, accessibility to the airport via Shannon Airport Circle is not ideal. Lacking a more substantial means of access, the current configuration also inhibits wayfinding to the airport. The airport lacks right turn lane and a left turn lane from Tidewater Trail. The current access road is narrow and carries traffic not only to and from the airport but also from nearby businesses including the United Way, Wawa, Zentech. Airport officials have envisioned that a new access road may be viable, extending between Shannon Park Drive and the airport, providing the potential for a new and improved point of access for all the aforementioned businesses. The existing point of access would either be closed or limited to a right-in, right-out format only, benefitting traffic along the Tidewater Trail corridor by reducing conflict points and enhancing safety along the corridor as a result. This Plan recommends continued exploration of this alternative access route.

Secondly, the Stafford Regional Airport is located in Stafford County off of exit 136 and Centreport Parkway. The Stafford Regional Airport is classified as a General Aviation- Reliever airport. Such airports are described as general aviation airports located in metropolitan areas that serve to reduce congestion at nearby commercial service airports by providing comparable landside and airside facilities to general aviation operators. As of 2016, there were 68 aircraft based at Stafford Regional Airport.

Statewide the 2018 study notes an overall decrease in the number of certificated active airmen; down 43,000 (-7%), and aircraft; down approximately 13,000 (-6%) from 2010 to 2015 utilizing general aviation airports. However, during the same period increases have been noted for active wing turboprop (350 or 4%), active wing turbojet (1,950 or 17%) and active rotorcraft (700 or 11%).
The complete Virginia Department of Aviation's 2018 Virginia Airport System Economic Impact Study can be located online **HERE**.

There is no commercial service classified airports within the GW Region. Outside of the GW Region, there are major commercial airports that provide both air freight and passenger services to the larger area for both domestic and international passengers. Two are located in the Washington, D.C. area, including Washington Reagan National Airport- approximately 64 miles to the northeast, and Washington Dulles International Airport- approximately 80 miles to the northwest. 60 miles to the southeast is the Richmond International Airport. Per VTRANS 2040, the Fredericksburg Region is located within a one-hour drive to three freight airports, Richmond International, Reagan National, and Dulles International.

To the southwest, the Charlottesville Albemarle Commercial Service Airport- approximately 60 miles, has seen growth in popularity, with a 51% increase in passenger enplanements between 2010 and 2016 as per the Virginia Department of Aviation's 2018 study. An increase in larger aircraft landings is a contributing factor.

More distant, the Baltimore-Washington International (BWI) Airport- approximately 100 miles to the northeast, is also accessible within the greater region via Interstate 95 or Route 301 as primary routes as well as Amtrak passenger rail service from the Fredericksburg passenger rail station to the BWI station with shuttle service to the terminal.

Airport Protection Overlay District

Consistent with requirements of the Code of Virginia Sect. 15.2-2294, the Spotsylvania County Zoning ordinance has an established Airport Protection Overlay District considerate of its one County based airport, the Shannon Airport. As per County Zoning Code Sect. 23-7.7.1, the Airport Protection Overlay District is established to provide for the safe use of Shannon Airport by creating additional regulation of the use of land surrounding the airport, in addition to existing zoning districts, which will protect over flying aircraft from conflicts with land uses, objects, and natural foliage on the ground; and, to protect the safety of air navigation around the airport by limiting the height of structures and foliage under the four (4) approach paths to the airport and generally within nine thousand (9,000) feet of the runway surfaces. Anything above the established height limitations could obstruct aircraft using the airport, create a safety hazard to airport operations, and unnecessarily endanger people, property and land use activities in the vicinity of the airport. Standard zoning height limitations and land use regulations alone are insufficient to provide the required protection for air navigation, according to Federal specifications.

Aviation: History, Education and Interpretation

Like Rail discussed in the previous section, Aviation is highlighted local attraction with focus on aviation history, education and interpretation for residents and tourists at the Shannon Air Museum. The museum is located on the grounds of the Shannon Airport and was founded in the

1970s. Throughout the year the museum displays their rare collection of vintage aircraft, numerous aviation related exhibits and hosts a variety of aviation related events and festivals.

Additional information about the Shannon Air Museum can be found at their website **HERE**.

Commuter Bus Services

FREDericksburg Regional Transit (FRED) provides local linkages to area commuter lots and VRE passenger rail services at the Fredericksburg VRE and Amtrak station. Within Spotsylvania County, Route VS1/VS2, connects two park and ride lots along Plank Road (including Gordon Road commuter lot and Salem Church Crossing commuter lot) with VRE service from downtown Fredericksburg. Per the FY2018 - FY2027 Fredericksburg Regional Transit Development Plan, activity is dispersed fairly evenly between the two lots. Overall activity is higher in the afternoon and evening. This route serves six trains in the morning and seven trains in the afternoon and evening. The first run leaves Gordon Road Commuter lot at 4:35 a.m. and the last run of the day returns to Gordon Road at 8:45 p.m. The route is timed to meet VRE trains and runs Monday through Friday. Reporting 2015 figures, the Regional Transit Plan noted 37,677 total one-way passenger trips utilizing Route VS1/VS2.

Per the Regional Transit Development Plan, additional VRE feeder service has been targeted to include the Spotsylvania VRE Station. Plans would provide feeder service from the planned park and ride lot near Cosner's Corner along the Route 1 corridor with stops in close proximity to residential core areas en route to the station. Annual ridership is estimated to be 32,000 in FRED's target year of 2021 for the VRE feeder service rollout to Spotsylvania. Spotsylvania County transportation staff has also included additional VRE feeder service with the County Smart Scale round 4 projects that would provide additional VRE feeder service from the Route 208 commuter lot off Houser Dr. to the Fredericksburg Train Station that will meet all VRE trains in the morning and afternoon in the future.

Additionally, the Martz Group Virginia provides service from the various park and ride lots in Spotsylvania County to destinations in the greater Washington, D.C. Metro area, as well as Richmond.

The Martz commuter buses stop at the following locations within the FRED service area:

- Route 17 and Falls Run Drive commuter lot, located at 633 Warrenton Road (Stafford County)
- Route 3/Salem Church Road commuter lot, located at 4250 Plank Road (Spotsylvania County)
- Route 208 Park and Ride, located at 10800 Hood Drive (Spotsylvania County)
- Route 610 North Lot – North Commuter lot, located on Staffordboro Boulevard in Stafford.

I-395/95 Commuter Choice Program

In 2019, the Commonwealth of Virginia initiated the I-395/95 commuter choice program with the Northern Virginia Transportation Commission serving as the administrator. This program provides dedicated funding from the I-395 Express Lane project for Transit and TDM improvements for the I-395/95 corridor from the Washington, DC line to Exit 126 in Spotsylvania. See Exhibit 2 for eligible localities in Virginia. Projects must provide some benefit to I-395 Express lane users in order to be eligible for program funding. Eligible types of projects include:

1. New or enhanced local bus service
2. New or enhanced commuter bus service
3. Park and ride lot(s) and access
4. Roadway improvements (Corridor management & ITS)
5. Transportation System Management (TSM)/Transportation Demand Management (TDM)
6. Vanpooling/Carpooling

Exhibit 2: Eligible Jurisdictions

The amount of funding available was $15 million per year for the first year in FY-20 with a modest escalation of this amount expected on an annual basis in the future. The first round of projects

was approved by the Commonwealth Transportation Board in October, 2019. The application period for the second round of projects will begin in Fall, 2020. Potential eligible projects in Spotsylvania County in the future include new express bus service from the Rte 3 Corridor or Massaponax to Northern Virginia/DC, local feeder bus to AMTRAK/VRE, new or enhanced commuter lots, and I-95/Rte 1 corridor management, ITS, TSM, or TDM improvements.

Park and Ride Lots

There are four (4) Virginia Department of Transportation (VDOT) operated park and ride lots in Spotsylvania County and one (1) additional expected within the planning period. One is located on the south side of Route 3 at Salem Church Road (Route 639), which has approximately 670 parking spaces. This is a lighted park and ride lot that includes transit service, and bicycle racks. A second lot is located at the corner of Route 3 and Gordon Road (Route 627). The lot was expanded from 600 spaces to 1,061 spaces in 2015. In addition to the additional parking spaces, the $7.2 million improvement project added: A dedicated High Occupancy Vehicle (slugging) pickup and drop off area; bus lane and bus parking bay; second entrance to the lot accessible from Harrison Road; pedestrian sidewalk connecting the lot with surrounding commercial development. The third park and ride lot in Spotsylvania County is located on Houser Drive off Route 208, which has 823 spaces. This is a lighted park and ride lot that includes transit service access. The fourth is a new 1,500 space lot opened in 2015 with the opening of the new Spotsylvania VRE Passenger Rail station just south of Route 17 off Crossroads Parkway. This is a lighted park and ride lot that includes passenger rail station access, bathroom facility, transit service, and bicycle racks.

Following the results of a 2005 Commuter Lot study combined with County growth and demands upon the existing park and ride lots, the County set a transportation objective in the 2008 Comprehensive Plan seeking the development of a new lot in the Massaponax area. A 2010 screening of potential locations resulted in a favorable recommendation of a location that had been identified as a viable alternative site in the 2005 study at Route 1 and Commonwealth Drive. The project has progressed since that time to site evaluation, engineering, design, and the project has been fully funded via VDOT Smart Scale with a projected opening in 2021. The lot will have approximately 700 parking spaces. Amenities will include parking lot lighting, bus and ridesharing loading areas, bicycle racks, and Route 1 frontage shared use path for future connectivity to adjoining developments and the Spotsylvania Parkway Trail system. This site is located in the midst of residential, commercial, industrial uses, and large mixed use areas with approved projects including Jackson Village, Heritage Woods, Alexanders Crossing.

On October 3, 2018 a commuter lot utilization survey was conducted for all four of the existing commuter lots within the County. Results of that survey are below:

Table 5: Existing Commuter Lot Inventory

Commuter Lot	# Spaces	# Used	Utilization
Route 3 - Old Salem Church	672	371	55%
Route 3 - Gordon	1052	388	37%
Courthouse/Houser	805	406	50%
VRE Spotsylvania Station	1486	711	48%

Though lot utilization varies from day to day it appears there is not presently a warrant in the foreseeable future for additional capacity beyond what's expected within the next couple years with a new Commonwealth Drive lot at Route 1. Beyond the current inventory of commuter lots and looking to potential new geographic areas to serve as noted prior in reference to the VDOT Interstate 95 Corridor Improvement Plan Study, a new commuter lot is being considered at exit 118 (Thornburg). This lot would be expected to serve a future market currently well removed from the existing inventory of commuter lots in the County.

There are a variety of factors that could change commuter lot utilization over time. One influencing factor is geographical convenience and shifts in commuter behavior. The opening of the Spotsylvania VRE station and commuter lot expanded ease of access for VRE ridership within the County and added commuter parking capacity to an area of the County that had not had a nearby commuter lot previously. With expected population growth forecasted to continue there is value in continued monitoring of commuter lot usage trends to assure adequate capacity based on demand is provided.

Vanpooling

A vanpool is a group of commuters who have joined together to ride to and from work. The Potomac and Rappahannock Transportation Committee established the "Vanpool Alliance" in October of 2013 organizing 207 vans. In 2019, the Vanpool Alliance identifies numerous regional benefits associated with higher occupancy commuting options. With a focus on vanpools, regional benefits include reduced traffic congestion, lower commuting costs (allowing several users to split costs by vanpool as opposed to driving alone costs of gasoline, maintenance, insurance, tolls, etc.), improved air quality (higher occupancy vehicles equates to fewer cars on the road and less total emissions), quality of life, and business benefits.

As of Fall, 2018 the Vanpool Alliance has 665 vans and 56 vendors operating in the region. 49% of the Vanpool Alliance fleet originate from Spotsylvania County. The region receives 5307 federal funds based on transit vehicle-miles, passenger miles and other factors. Multiple agencies have established ridesharing services in the region including Department of Rail & Public Transportation (DRPT) and GWRideConnect which assists commuters who are seeking vanpools. The region's vanpool program is one of the most successful of its type in the United States. Per feedback received in October, 2018, GWRideConnect supports the largest vanpool fleet in the State (350 vanpools supported with an average 4,200 daily users). Of the 350 reported, 107 vanpools

originate from Spotsylvania County. More information regarding GWRideConnect can be found **HERE**.

Ridesharing

GWRideConnect is the Transportation Demand Management (TDM) Agency operated by the George Washington Regional Commission (GWRC) that serves the residents of the region. GWRideConnect promotes ridesharing and TDM techniques to assist citizens seeking transportation options to their workplaces and other destinations. It is the goal of the program to promote, plan and establish transportation alternatives to the single occupant vehicle, improving air quality, reducing congestion and improving the quality of life for the citizens.

GWRideConnect is the recognized source for TDM and transportation information and assistance in the George Washington Region. The program offers a free ride matching program in addition to a wide variety of transportation options and solutions connecting citizens to available carpools, vanpools, commuter buses, slug lines, Fredericksburg Regional Transit and the Virginia Railway Express.

GWRideConnect Program Services Includes 11 Work components:

- Ride matching
- GWRideConnect Website
- Follow Up and Database surveys
- Vanpool Formation
- Advantage
- Carpool Formation
- Transit Options Promotion and Support
- Advertising and Promotion
- Commuter Lots
- Employer/Realtor/New Resident Outreach
- TDM, Bike and Pedestrian Promotion

High Occupancy Toll (HOT) Lanes

High occupancy toll roads were built between exit 152 in Prince William County and exit 143 in Stafford County in 2014, with a revised and extended merge area just south of the Garrisonville Road exit opening in 2018. New toll roads are in the process of being built along the Interstate 95 corridor from the exit 143 area of north Stafford County down to Route 17 in south Stafford County to increase capacity to I-95. A new I-95 Interchange just north of the Welcome Center in Fredericksburg is in the planning stage as well. This will result in additional capacity being added to the Rappahannock River Crossing. These improvements are regionally significant and expected to benefit commuter populations within the larger area including Spotsylvania County.

In 2009, the George Washington Toll Road Authority was established which encompasses the City of Fredericksburg and the Counties of Spotsylvania and Stafford for the purposes of alleviating

highway congestion, promoting highway safety, expanding highway construction, increasing the utility and benefits and extending the services of public highways, including bridges, tunnels and other highway facilities, both free and toll, and otherwise contributing to the welfare of the Commonwealth and the George Washington Region. The Authority is governed by a ten-member board of directors. Three members are appointed from each of the original participating localities from among their elected officials, and one member is a designee of the Commissioner of the Virginia Department of Transportation.

Local Bus Service

FREDericksburg Regional Transit (FRED) provides local transit services to the County through a partnership in which the County funds a portion of the service after federal and state grant funding has been applied to funding the service planned for the County. FREDericksburg Regional Transit (FRED) operates bus routes in Spotsylvania County providing weekday services, except holidays. Routing and scheduling is coordinated by FRED and subject to change potentially as demand warrants or as new stop locations are identified. Within Spotsylvania County, FRED recently completed (January 2020) a major investment with the construction of the Lee's Hill Transfer Center (Pictured in Image 4 Below).

Image 4: New Lee's Hill Transfer Station

This new transfer center accommodates 5 buses safely in staggered bus stalls to safely load/ unload passengers, a 20'x10' shelter with a bench, trash receptacle, bike rack, and solar lighting inside to illuminate the shelter to provide additional safety. This new transfer station allows routes in the City of Fredericksburg (F2 and F3) and Spotsylvania (S1, S4, and S5) to meet every hour to allow passengers to transfer to other buses to reach destinations in other locations in the region.

Per the Fredericksburg Regional Transit Development Plan (2018-2027), the need for a transfer center at the Lee's Hill bus transfer stop was identified by FRED as new development occurred in the Market Street/ Spotsylvania Avenue area. As part of the development agreement, the developer agreed to provide a strip of land adjacent to the parking area of the Rappahannock Goodwill Industries building to be used as a bus transfer location. The Site Plan (ST18-0053) for this transfer location was approved January 9, 2019. In addition to significant improvements at the Lee's Hill transfer site, FRED has identified need for infrastructure improvements at bus stop locations throughout the system, focusing especially on high volume boarding locations. Considerate of waiting time, inclement weather, personal physical limitations, FRED has identified need for additional shelters and benches at stop sites. Such improvements help the rider experience. These are viable infrastructure improvements that enhance accessibility to local fixed route bus service for all users including disadvantaged populations.

Expansion of service to include weekend transit is also being considered. Within Spotsylvania County, Routes S1 and S5 have been identified as candidate routes for weekend services. Feeder service is also being explored from park and ride lot(s) in the Cosner's Corner area to the Spotsylvania VRE Station. This multi-modal initiative expands accessibility and is positive. For more information regarding FRED local bus service including routes, fares, schedules, and other related news within FRED's Spotsylvania County and the Fredericksburg regional network can be found at FRED's website **HERE**. FRED tracks route ridership for all its fixed routes. Ridership figures for FRED routes in Spotsylvania County (as provided by FRED) have been provided below in Table 6:

Table 6: FRED Ridership

Spotsylvania County Ridership 2014-2018						
	Route	2014	2015	2016	2017	2018
	VS1	21,687	19,449	9,812	10,003	8,405
	VS2	16,008	13,275	8,164	7,623	6,262
	S1	21,064	20,189	18,317	15,794	12,606
	S1B	15,233	14,291	12,884	11,196	9,025
	S4	15,448	14,682	13,992	12,339	10,908
	S5	25,862	23,636	20,598	18,997	17,154
	Total	115,302	105,522	83,767	75,952	64,360

Route Description	
VS1/VS2	Morning and afternoon/evening service between the Gordon Road commuter lot and downtown VRE station
S1/S1B	Spotsylvania Towne Centre to Lee's Hill Center @ Spotsylvania Avenue
S4	Lee's Hill Center to Courthouse Village
S5	Lee's Hill Center to Germanna CC via Cosner's Corner shops & Spotsylvania Hospital

As exhibited in the table above, ridership within the County has been on a downward trend since 2014. All routes within the County have seen ridership declines of varying degrees since 2014. There are a number of possible reasons for declines in ridership. FRED acknowledges national trends in ridership declines, noting the most frequent cited reasons for declines are:

- Increased automobile ownership spurred by a strong economy and low interest rates
- Moderate gas prices
- Increased tele-commuting and flex-time
- The rise of transportation network companies like Uber and Lyft
- Changes in travel patterns
- Service reliability issues
- Service reductions
- Fare increases

Addressing the last three issues (reliability, service, fares) from FRED's perspective, they would not seem to apply. Since FRED has been able to accurately track on-time performance, reliability numbers have remained steady or improved. FRED has not reduced service (except for the termination of service in Caroline County). Per FRED, "As a rule we provide hourly service; the most often registered suggestion from our customers is for more frequent service and longer hours and additional days. And we have held fares level at $1.25 per boarding for the last three years and at $1.00 per boarding the four previous years; our fares are comparable to those of other transit agencies."

Regarding changes in travel patterns, FRED ridership in the County drastically declined after the opening of the Spotsylvania VRE station. Some customers who had used FRED VRE Express service to travel to the Fredericksburg station are now driving to the Spotsylvania station where there is plenty of close-by parking.

It is hard to point to any one of the other four reasons as the primary factor affecting ridership declines within the FRED system. They all contribute to some extent.

The Fredericksburg Regional Transit Development Plan notes "the trend over the past few years is downward, even as the population has grown. There may be ways to re-deploy the current resources so that ridership improves." Per FRED, there is no magic formula and no single criterion applied to determine warrant new or expanded service. FRED uses the Transit Development Plan to identify emerging demographic and development trends that suggest where new or expanded services might be warranted and where to invest in facilities or other amenities. Additionally, FRED meets regularly with County Transportation and Planning staff to better understand where developments will be taking place and how transit can be incorporated into plans, Transportation proffers, etc. Similarly, FRED meets with developers to discuss how service might be incorporated into their plans. Information is shared with the Public Transit Advisory Board (PTAB), which includes representatives of the Planning departments of our partner jurisdictions and has a committee that focuses on how we might better serve traditionally underserved communities (we are aware of the VTRANS work in this regard). Every year FRED polls the PTAB for recommendations on where we might consider adjusting our services in the coming year.

FRED does not plan or undertake service adjustments or investments in a vacuum. Because of the way they are financed with a mix of Federal, State and local funds, the County and other partner jurisdictions must serve as the impetus for any new or expanded service. FRED cannot attract Federal and State funding (which covers roughly 60 percent of FRED's operating expenses and nearly 90 percent of capital expenses) unless local jurisdictions agree to provide matching funds. This requirement means that FRED can only implement services that the County desires and is willing to provide the local match for.

Teleworking/Telecommuting Centers

Teleworking, also known as telecommuting, means using information technology and telecommunications to replace work-related travel and therefore reduce peak hour commute time traffic volumes that ultimately impact transportation levels of service. With teleworking, employees work at home or at a local telework center one or more days per week. Communication to office staff or clients is accomplished by phone, fax, e-mail, internet, teleconferencing, and/or videoconferencing. Telework is usually implemented by business and government agencies to improve services, reduce costs, reduce vehicle travel, or to help achieve other objectives.

Telework!VA is an organization that provides information on establishing and expanding telework programs for Virginia businesses. The program goal is to provide more opportunity for participation in teleworking. This program is administered by the Commonwealth of Virginia

Department of Rail and Public Transportation (DPRT). More information about Telework!VA can be found on their website **HERE**.

Intelligent Transportation Systems (ITS)

The highway transportation system in Spotsylvania County involves three major elements: 1) vehicles, 2) roadway and 3) the driver. The major visual technique for relaying driver information are signals, static signs, changeable message signs, pavement makings, and driver information systems. Currently, there are a limited number of changeable message signs (CMS) along I-95 and which are becoming increasingly important in improving safety and operation of this corridor. In addition to the CMS signs there are a number of portable signs to relay information to motorists. Motorists are increasingly using GPS navigational software like Waze, Here We Go, Google Maps, MapQuest, Sygic, and NavIT. There are a number of stationary advance presence detection along the interstate used to collect information used by the I-95 Traffic Control Center located in Arlington, Virginia.

Trailways Master Plan- Bicycle and Pedestrian System

The Spotsylvania County Trailways Master Plan was initially adopted by the Spotsylvania County Board of Supervisors on February 22, 2011 as a standalone transportation alternatives and parks and recreation amenities plan. The Trailways Plan was developed with careful attention paid to community input and existing trailways plans at the national, state, regional, and local levels. The plan proposes an integrated system of off road greenway trails as well as roadway based improvements to serve multiple non-motorized transportation users including bicycle, pedestrian, equestrian, and others with a focus on creating safer transportation conditions while expanding recreational opportunities for citizens and tourists to enjoy Spotsylvania County's numerous historic, cultural, scenic, recreational, and commercial/ service attractions located throughout the County.

The Trailways Plan was developed acknowledging that full build-out of the trailways system with all amenities will not take place immediately. This is a flexible, living plan and will be subject to future developments and economic conditions, as the community evolves. Levels of interest, available funding, and community support factors may fluctuate over time and so may the rate at which implementation is feasible.

In the interest of assuring the Trailways Master Plan does not become outdated or inconsiderate of opportunities that may arise from changes elsewhere within other elements of the Comprehensive Plan, in 2019, the critical elements of the plan were reviewed, updated, and incorporated into the Comprehensive Plan in Chapter 3A. Abandonment of the standalone plan in favor of inclusion as a Comprehensive Plan Sub-Chapter better positions it for continued monitor, pursuit, and review and update consistent with the 5 year review and update cycle. Otherwise staff has found there tends to be little impetus to update standalone plans that may become outdated or proactively amended to reflect new opportunities or routing alternatives. The revised and updated Trailways Plan addresses sidewalks, and recreational/commuter trails intended to

create an interconnected network of trails cognizant of provision for transportation alternatives as well as established Parks and Recreation Level of Service Standards and trail deficits expected to grow to 159 miles by the year 2040 based on projected population growth.

ACCESSIBILITY FOR DISADVANTAGED POPULATIONS

For the purpose of the Comprehensive Plan, disadvantaged populations are inclusive of low income, elderly and disabled populations. These are populations that may have challenges due to income based and/or physical or health related limitations that inhibit access to critical services and conveniences within the community including but not limited to: medical care facilities, pharmacies, supermarkets, personal services, social services, financial institutions, employment opportunities, social networking events, places of worship or cultural institutions. Land use and transportation systems planning that promote enhanced accessibility and mobility for disadvantaged populations are complementary to Comprehensive Plan affordable housing goals, and the goals considerate of elderly and disabled populations within the County expressed elsewhere within the Plan. Efforts to enhance accessibility for disadvantaged populations is a critical element of social equity within the Plan.

Accessibility Challenges Today

With the assistance of the Spotsylvania County Department of Social Services, Healthy Generations Area Agency on Aging (HGAAA) (formerly known as the Rappahannock Area Agency on Aging) was contacted to provide "real world" perspective on the current state of accessibility for disadvantaged populations in Spotsylvania County and the greater region. HGAAA is one of more than 600 Area Agencies on Aging in the United States. HGAAA provides both direct and contracted services in the George Washington Planning District (PD16) including the City of Fredericksburg and Counties of Caroline, King George, Spotsylvania, and Stafford, Virginia. The mission of the staff, Board of Directors, and Advisory Council of HGAAA is to enhance the quality of life for all older citizens. HGAAA provides home and community based services to support the continued independence, safety, and health and wellness of our senior population.

It's good to note that the County's 65 and over population grew nearly 35% (34.6%) between 2010 and 2018 based on 2010 US Census figures and 2018 American Community Survey estimates. This age group represented the most significant absolute change in population within the County, adding 20,814 persons between 2010 and 2018. Population growth within the County was followed by those aged 45-64 with 11,724 additional persons, representing a 9.4% growth rate for that age bracket since 2010. These population growth trends locally represent a trend of rising demand for senior services, including accessibility. Need for accessibility is amplified when considering the United Way ALICE (Asset Limited, Income Constrained, Employed) report (released in Spring, 2017) that found 57% of seniors within the County (as of 2015 data) fell below the ALICE

threshold and where therefore financially challenged to afford basic goods and services, including transportation.

Per HGAAA, funding for their Mobility Options Program comes through a Federal Transit Administration (FTA) Section 5310 grant, Enhanced Mobility for Seniors and Persons with Disabilities. The grant is applied for through the Virginia Department of Rail and Public Transportation each year in coordination with Rappahannock Area Community Services Board. This grant funds three initiatives, including: replacement of rolling stock (vehicles), Mobility Management, and through operations funding it supports the Mobility Options Program, specifically door-to-door transportation service. Mobility services have been expanding over the last few years to accommodate, 7 part-time drivers and 1 full-time driver which equate to nearly 7,000 door-to-door trips within the Planning District in FY18. Transportation is provided to seniors over the age of 60 and persons with disabilities to a myriad of destinations including non-emergency medical appointments (non-Medicaid recipients), essential shopping trips, personal trip to the bank, post office, hair salon, Social Security Office, etc. However, services offered do not begin to meet the demand, in Spotsylvania County in particular. Additionally, funding for the Mobility Options Program from DRPT for FY2020 has been reduced almost 50%. This has resulted in a reduction of staff drivers available to provide these trips, and subsequently a reduction in the number of trips that can be provided. Reduced funding resulting in negative impacts to service inevitably results in degraded accessibility for elderly and disabled populations within the County, especially those who have little to no other options.

When assistance cannot be provided by HGAAA, the Mobility Options Program includes provision of an updated inventory of available transportation options in the area. Per the July, 2019 Transportation Resource Guide, the following Mobility options have been identified with service in the region (See Table 7):

Table 7: Transportation Resources

GW REGION TRANSPORTATION RESOURCES
NON-PROFITS/ GOVERNMENT AGENCIES
American Cancer Society Road to Recovery Program
AMTRAK
Bay Transit (Northern Neck)
Disabled American Veterans (DAV)
FREDericksburg Regional Transit (FRED)
George Washington Regional Commission GWRideConnect
Virginia Railway Express (VRE)
Virginia Department of Medical Assistance Services (DMAS)
PRIVATE FOR-PROFIT VENDORS
Advanced Life Support Transportation (ALS)
Angel Rides Inc.
ATK Transportation
Bright Day Transit Services
EL Divine Home Healthcare
JDS Transportation
LifeCare Medical Transport
MVP Transports
VIP Medical Transportation
Wisdom Ride
TAXI CABS
Aero Cab
CCS Taxi
Global Cab Inc.
Virginia Hilldrup Taxi Services
Yellow Cab of Fredericksburg
TRANSPORTATION NETWORK COMPANIES
LYFT
UBER
Source: July, 2019 Healthy Generations Transportation Resource Guide

HGAAA operates an additional transportation program that is available to Agency Senior Café Participants. This service provides rides for those participants to get to and from congregate meal sites two/three times per week and is supported through Older Americans Act funds received through the Department of Aging and Rehabilitative Services.

For accessibility, FRED usage is encouraged but often it is not a viable option for many in the community. Vehicles are often difficult to board for individuals with walkers, canes, limited mobility, and service animals. Limited service hours, routes, and limited deviations also create

barriers. In addition, a lack of supporting infrastructure in the form of sidewalks, curb-cuts, crosswalks, and bus shelters make accessing FRED even more difficult for the disabled and aging populations within the region as a whole.

There are unmet needs for access within Spotsylvania County per HGAAA. There are inadequate resources in place to effectively address demand. Within the Primary Development Boundary, many persons in need appear to be in close proximity to FRED Transit routes but cannot utilize the bus due to a multitude of reasons, not the least of which is convenience and physical limitations. Currently 344 Spotsylvania County residents are listed in the HGAAA client database. The client database continues to grow. HGAAA been able to assist approximately 29% of those residents, however Spotsylvania County residents' trips make the largest portion of ridership at 49%. From HGAAA's experience, families are unable to meet the needs of aging relatives, and family members with disabilities because they work. Transportation intensive requests, e.g. physical therapy, cardio therapy, speech therapy, dialysis, cancer treatments, employment opportunities, education opportunities are unable to be accommodated through their program. In these cases, callers are referred to the inventory (table above). The lack of a comprehensive resource to address transportation needs of elderly and disabled populations and resulting findings show the fractured nature of services, lack of adequate resources to meet demand, and struggle to secure reliable transportation for such populations. Per HGAAA, while the inventory is a great tool, it lacks cost effective options other than the Mobility Options Program. There simply aren't any to be had.

Need exists throughout the County but is focused in more suburban areas due to population density. HGAAA continues to look for funding opportunities and public/ private partnership in the hopes of expanding the program to be able to meet more needs. The next grant cycle for Section 5310 funding will begin in the fall after the release of DRPT's regional Coordinated Human Services Mobility Plan updates. DRPT is aware of the needs of small urban and rural areas across Virginia but is struggling with insufficient federal funding to meet the needs in these areas with no allowance of transferring unused funds from large urban areas. The requests have been larger than the funds available for both Section 5310 replacement vehicles and operating funds. DRPT has also been contacted by programs in some areas without Mobility Managers about the availability of funds for these new programs. Because of the lack of funding, DRPT has made changes to the guidance and reduced funding to only direct program expenses that support the funded project. They further encourage sub-recipients to look for external funding partners.

Regarding services being delivered to one's door, Meals-on-Wheels does deliver locally but only within a four-mile radius from Mary Washington Hospital. HGAAA offers a home-delivered meal program to area residents 60 and older that are completely homebound. Individuals interested in the service will go through an assessment process as funding for this program is also limited. Currently the Agency is delivering to 18 Spotsylvania residents who meet the criteria. There is emerging technology based platforms such as Amazon and DoorDash for the order and fast delivery of various goods. Instacart offers online order based same day delivery of groceries and goods partnered with a number of grocery stores and retail vendors in the region. Elderly and disabled populations have historically been found to be unable to utilize technology to access such platforms, or generally have a mistrust of 'online purchases'. This discovery is in part due to

exploring Uber and Lyft as transportation options for target populations. As the presence of these Transportation Network Companies grows in the Fredericksburg Region it would be helpful to find a way to work with these organizations to facilitate more transportation access for our aging and disabled populations. Currently HGAAA is working on a funding application for the Mary Washington and Stafford Hospital Community Benefit Fund to expand the Mobility Options Program.

Rural Access

Transportation access in rural areas especially (outside of the County Primary Development Boundary) can be a challenging and/or costly endeavor due to lack of available transportation alternatives and/or necessity of vehicle ownership, if physically and financially feasible. Rural areas typically lack an abundance of nearby employment and services whereby requiring greater travel distances to reach them. These areas may lack the critical density necessary to support certain fixed transportation services such as a public bus route. Though population density is lower in the Berkeley and Livingston Districts, as a percentage of their populations, they have higher percentages of persons aged 65 and older, disabled, and low income per regional American Community Survey data presented recently by the George Washington Regional Commission in 2019. These areas also lack proximity to fixed-route transit services such as FRED Bus. In August, 2019 as part of the development of the Virginia Transportation Plan update (VTRANS) the Office of Intermodal Planning and Investment (OIPI) presented regional analysis' results identifying disadvantaged populations beyond ¼ mile access to fixed-route transit service. Fixed route transit service to these areas was acknowledged as not viable however, not having the density thresholds to support fixed route service.

If vehicle ownership is an option, lengthier travel distances to jobs, goods and services result in greater vehicle "wear and tear" and fuel expenditures, associated vehicle upkeep costs that "cut into" a limited budget. County-wide based on 2015 data reported in the statewide 2017 ALICE Study of Financial Hardship report by the United Way show at total 47% of all households can be classified as households in poverty or within the ALICE threshold. ALICE households are households that earn more than the Federal Poverty Level, but less than the basic cost of living for the state. Per the report, "ALICE households are working households; they hold jobs, pay taxes, and provide services that are vital to the Virginia economy, in a variety of positions such as retail salespeople, laborers and movers, customer service representatives, and office workers." "ALICE households vary in size and makeup; there is no typical configuration. In fact, contrary to some stereotypes, the composition of ALICE households mirrors that of the general population. There are young and old ALICE households, those with children and those with a family member who has a disability". As such the ALICE population in many ways reflects the disadvantaged populations being considered for transportation accessibility. These represent households under financial stress who have seen costs to afford basic necessities increase without adequate income gains from low wage jobs during the study years of 2007-2015 as reported in the study. Transportation costs are considered one element of basic necessity and while those costs have remained relatively unchanged as reported, significant cost increases in housing, child care, food, health

care, tax burdens on low wage earnings, etc. have further strained resources for families. These costs often leave little to no room for basic necessities, “rainy day fund” savings or non-essential; discretionary consumer spending.

VTRANS 2040 recognizes accessibility challenges within Spotsylvania County, especially outside of the Primary Development Boundary. Accessibility to employment (number of jobs within 45 minutes) via auto, transit, and pedestrian means are not ideal. In these areas, proximity to major roads results in accessibility improvements as they provide more direct line access to major activity centers.

Outside of the Primary Development Boundary, the land use element considers provision of “neighborhood commercial” in rural and agricultural areas. Agricultural, tourism, and forestry based businesses are also complementary in such areas. The goal is not to promote proliferation of urban sprawl into the countryside but to provide goods and services (and nearby employment opportunities) in close proximity to the rural populations meant to be served. This alone helps reduce the transportation and accessibility burden on disadvantaged populations within the County. As a benefit to the transportation network, the effect is also a reduction in total vehicle miles travelled and cross-county traffic volumes. Such land use provisions within the Comprehensive Plan are complementary to provision of access for disadvantaged populations. Private sector investment has historically been the driving force behind provision of rural goods and services within the County. Such development proposals in rural areas that are aimed at providing a direct goods and services benefit to rural populations should be considered to provide a transportation and access benefit to disadvantaged populations.

Availability of affordable housing in many areas simply does not go “hand in hand” with where the jobs are located. Low income workers are often faced with commuting long distances between locations where housing may be more affordable and where employment exists. This adds traffic burdens on local roads and increases transportation related costs for disadvantaged populations. Planning for and supporting provision of affordable housing near employment rich areas, in mixed use higher density areas, near multi-modal opportunities helps proactively reduce accessibility burdens.

Urban and Suburban Access

Within the Primary Development Boundary, transportation accessibility is best achieved when multimodal transportation options are available nearby. Due to higher densities and a variety of uses, these areas tend to me much more viable for fixed route transit services such as FRED Bus. Mixed Use walkable areas with multi-model transportation options that place goods and services and employment opportunities within close proximity to affordable housing and/or housing designed for the needs of disabled or elderly populations are best suited to provision of accessibility for disadvantaged populations. Throughout the Primary Development Boundary efforts should be made to enhance the system of sidewalks and trails, close gaps within existing systems, and provide safe road crossing locations. When considering how FRED passengers access

the bus system for instance, per the Fredericksburg Regional Transit Development Plan, "walking is by far the method most used (72%), followed by driving alone (7%) and using another bus (6%)." Vehicle ownership based one-dimensional transportation systems are not favorable. Rather, multi-modal opportunities should be supported including the preservation and expansion of transportation alternatives in the community. Transportation alternatives have been identified as beneficial to reducing traffic volume burdens on roads but they are also crucial tools for enhancing access for disadvantaged populations within the County. FRED ridership survey results noted in the Fredericksburg Regional Transit Development Plan found that the majority of respondents worked full time (46%), followed by 21% with part-time employment. FRED bus service does consider enhanced accessibility for disabled and limited mobility persons through its route deviation service. Per the Fredericksburg Regional Transit Development Plan, FRED's route deviation service is designed to allow for vehicles to travel off of regular service fixed routes (up to ¾ mile, no more than three minutes, and safe to traverse) to pick up or discharge a passenger who may find it difficult to access designated bus stops. Passengers who need to use this service are instructed to register with FRED by completing a deviated stop request form. Once approved, riders who need an off-route pick-up or drop-off are instructed to call FRED 24 hours in advance. There is no requirement for users of FRED's route deviation service to provide any evidence of a disability or limited mobility. Each of FRED's revenue vehicles is equipped with wheelchair lifts to accommodate people with disabilities.

The County is currently exploring potential opportunities to extend FRED service. Areas being considered include the Rte 208 corridor to the Spotsylvania Courthouse Village Area, the Rte 1 corridor to Massaponax and Thornburg, the Rte 2/17 corridor from the City to the Bowman Center area, and the Lafayette Boulevard corridor from the City to the Rte 208 PNR lot. These areas have all seen development interest in the last few years and has been identified as core areas for mixed use and employment center type development. Both land use designations prime the area as a good location for providing service to disadvantaged populations. With transportation infrastructure upgrades such as extension of the FRED bus system and bike/ped network, mixed land use designations promoting a walkable mix of uses, and employment opportunities nearby, these areas can provide the type of environment where low income populations can seek nearby employment opportunities and look to increase earning potential.

In August, 2019 as part of the development of the Virginia Transportation Plan update (VTRANS) the OIPI presented regional analysis' results identifying disadvantaged populations beyond ¼ mile access to fixed-route transit service. Within the Primary Development Boundary, disadvantaged populations where fixed route service was identified as potentially viable included the Tidewater Trail (Route 2) corridor extending from the City of Fredericksburg to the New Post mixed use area. FRED Bus Service Route F4 extends as far as the River Club Shopping Center with connections into the City of Fredericksburg including downtown Fredericksburg, Fredericksburg Train Station, and Mary Washington Hospital. Future service extension towards Route 2 and 17 are worthy of exploration as development continues down the corridor.

TRANSPORTATION ANALYSIS TOOL

Transportation Impact Analysis

Traffic Impact Analysis is a study used to estimate impacts of growth and how the transportation network would function once a proposed land use change or development takes place. Depending upon the impacts the analysis can involve VDOT, Spotsylvania County or other government agencies. If the impact is substantial and generates 5,000 new trips per day, equals the existing traffic on a residential road or is within 3,000 feet of connection to a major VDOT highway then VDOT requires a 527 TIA and takes the lead role in scoping the parameters of the study. Spotsylvania County has established additional requirements which are as follows;

- A trip generation threshold is crossed
- A development is proposed within a critical corridor
- A rezoning or land use request is inconsistent with the comprehensive plan
- A development has regional significance
- Or the County Traffic Engineer determines that the development warrants a study

The Table below includes Land Use Size Thresholds for Spotsylvania County and the impact analysis, site issues, or other analysis that is required or appropriate for a TIA.

Table 8: Requirements for Various Types of Traffic Impact Studies

TASK	TRIP THRESHOLD	
	County Traffic Impact Study	527 Impact Traffic Study
Trip Generation	100 Peak Hour or 750 + Daily	400 Peak Hour or 5,000 + Daily
Pre-application or scoping meeting	✓	✓
Impact Analysis Requirement		
Existing conditions analysis LOS at site	✓	✓
Sight distance evaluation	✓	✓
Opposing driveway locations	✓	✓
Existing conditions at nearby intersections	✓	✓
Study area & future road summary	✓	✓
Comparison of trip generation uses	*	
Trip generation for specific uses.	✓	✓
Trip distribution analysis.	✓	✓
Background traffic growth.	✓	✓
Future conditions analysis (LOS) at nearby intersections	✓	✓
Design Year Analysis (6 years beyond Build)		✓
Mitigation identification.	✓	✓
Site Issues		
Evaluate number, location, and spacing of access points	✓	✓
Evaluate access design, queuing, etc…	✓	✓
Evaluate site circulation	*	✓
Other Analysis		
Accident history.	*	*
Gap analysis at unsignalized intersections	*	*
TDM/TSM mitigation measures.	*	✓
Evaluate impacts on travel model	*	

Key

✓ = required

* = may be appropriate on a case by case basis

Travel Demand Forecast Model

Travel demand forecasting models are the major means for the development of a long-range transportation plan. The model is designed to calculate the number of trips, connect their origins and destinations, and identify the roadways or transit routes most likely to be used in completing a trip. Models are used to determine where future transportation problems are likely to occur by identifying congested roads. Once identified the model can test the ability of the highway network or transit system to address those problems.

In 2006, Spotsylvania County developed its first travel demand forecasting model in order to update the County's Thoroughfare Plan and quantitatively evaluate Future Land Use projections. The Spotsylvania Travel Demand Forecasting Model covers the entire Fredericksburg Area Metropolitan Planning Organization (FAMPO) region: the Counties of Caroline, King George, Spotsylvania, and Stafford, and the City of Fredericksburg. The Spotsylvania model was developed based on the FAMPO Travel Demand Forecasting Model.

In 2018, the model was updated with a base year of 2015 to take advantage of the new travel surveys and other information. The update included changes to the road network, population, dwelling units, employment, and household data. The travel demand forecasting model contains a set of mathematical relationships that estimate the total number of trips made by residents and employees in the County on a typical weekday. The model estimates the patterns of origins and destinations between and within all parts of the County and the Fredericksburg metropolitan area. It estimates the proportion of trips that travel by auto and applies auto occupancy factors. The final step is to determine the roads used by each trip on its way from its origin to its destination. This is calculated assuming that each driver attempts to find the quickest path, taking into account expected congestion. The summation of those trips over all the roadway segments produces the total daily traffic volume.

The Spotsylvania County Travel Demand Forecasting Model consists of 1,659 Traffic Analysis Zones (TAZ's). The zone boundaries are based on Census geography, property lines, natural topography, roads, and other features. The TAZ's are points where traffic enters and exits the real roadway system. The number and size of these zones are extremely important in determining the model's accuracy and what roads can be modeled. The County desired a high level of accuracy and wanted the model to represent roads down to the Collector Road level, including many of the Local roads. This allows the County to also use the model to evaluate large mixed use developments as well as long range transportation plans.

The model also estimates 2040 land use at the TAZ level and the 2040 highway network reflects the current Comprehensive Plan. The model is used to evaluate land use changes proposed through the Comprehensive Plan process as well as through rezoning and special use applications. The model can also be used to evaluate future road improvement scenarios.

FUNCTIONAL CLASSIFICATIONS

The roadway functional classification system is a network of roadways grouped into classes each defined according to its purpose with respect to transportation. The system is based on guidelines by the Federal Highway Administration (FHWA). The basic purpose of a given road can be defined as a function of mobility and access. For instance, a high level facility such as an interstate or major arterial are typically characterized as having greater travel speeds as well as greater traffic volumes. On these roadways, the main travel purpose is mobility. Low level facilities such as collector or local roads on the other hand, generally tend to carry fewer vehicles traveling at lower speeds. The main function of these roadways is more related to access. The classification for roads in the County is important because in order to be eligible for Federal funding a roadway must be classified as a collector road or higher.

There are six (6) functional classifications for roads: Freeways/Interstates, Principal Arterials, Minor Arterials, Major Collectors, Minor Collectors and Local Roads. The transportation network in Spotsylvania County is organized by these classifications and matches those used by the Travel Demand Forecast Model. Spotsylvania County follows the latest adopted VDOT Functional Classifications. A map depicting VDOT's 2014 Functional Classifications can be found within this Chapter. VDOT is the official source for such classifications and any future amendments to them that may occur within the Planning Period. The latest VDOT Functional Classifications apply and can be found online **HERE**.

The definition, in part, of each roadway classification is as follows:

Freeways/Interstates are multi-lane highways with limited access at grade-separated interchanges. They are designed to carry high traffic volumes at high speeds linking one state to another for interstate travel and commerce. Typical right of way widths range from 250 feet to 400 feet.

Principal Arterials are highways designed to carry high speed/high volume traffic. Access is generally controlled through at-grade signalized crossings and grade-separated crossings at major intersections. These facilities are most often limited-access roadways intended to carry inter-county traffic and typically link cities and towns. Typical right of way widths range from 110 feet to 200 feet.

Minor Arterials are highways designed to carry high volume traffic at moderate speeds with general access through at-grade crossings and grade-separations at major/high volume intersections. These facilities are controlled-access roadways intended to carry mostly intra-county traffic while still linking cities and towns. Typical right-of-way widths range from 90 feet to 200 feet.

Major Collectors are highways designed to carry moderate speed/moderate volume traffic. These roads serve as major links between arterial roads and tend to serve more local traffic. The typical right-of-way width range is from 90 feet to 120 feet on major collectors.

Minor Collectors are highways designed to carry moderate speed, relatively low volume traffic. Minor collectors are more local serving and connect local streets with other collectors, as well as arterials. Typical right-of-way widths range from 60 feet to 90 feet.

Local Roads include those roads that provide access within residential and commercial areas. These roads are local serving in nature and connect residential and commercial areas with collector roads. In rural areas local roads convey traffic to the collector roads and are in many cases farm-to-market roads that do not meet modern design standards. Typical right-of-way widths for local roads range from 50 feet to 100 feet.

In each of the classifications described above the right-of-way widths will tend to vary to make allowances for bikeways, pedestrian facilities, bus stops, etc. as well as actual design speed.

CORRIDORS OF STATEWIDE SIGNIFICANCE

Corridors of Statewide Significance (CoSS) are multimodal connections to the Commonwealth's major activity centers. They are critical to the movement of people and goods between regions of Virginia and through the state. The CoSS were originally developed under VTrans2025 and validated during the VTrans2035 Update process. The Commonwealth Transportation Board (CTB) is charged with developing criteria for prioritizing the CoSS and conducting studies of the corridors. Corridors identified as CoSS demonstrate all of the following characteristics:

- Multiple modes and/or an extended freight corridor,
- Connection among regions, states and/or major activity centers,
- High volume of travel, and
- Unique statewide function and/or fulfillment of statewide goal

The purpose of identifying and designation CoSS is "to provide a multimodal vision for the corridors to guide localities in their land use and transportation plans. Without guidance, local decisions could degrade a corridor's ability to move people and goods, causing bottlenecks and problems that are costly to fix, and undermine economic and quality of life goals. As Virginia continues to grow, it must take steps now to ensure the right balance of development, transportation capacity, and natural resources. The real value of the CoSS is the identification of strategies within each corridor as the first step in ensuring these corridors are invested in and protected for the future benefit of the entire Commonwealth". There are three tiers of CoSS: National Corridors, Commerce and Mobility Corridors, and Statewide Corridors. These systems are defined by the dynamics of total population, travel patterns, and intermodal and economic potential of the corridor within and outside of Virginia.

Two CoSS traverse Spotsylvania County:

1. *Coastal Corridor (Route 17), Corridor A,* locally includes U. S, Route 17 as it passes through the County, is designated as a Commerce and Mobility Corridor. In whole includes Route 17, Local Transit Services, Port of Virginia (indirect access), Port of Richmond, Rappahannock River, Norfolk Southern Heartland Corridor, Norfolk Southern Coal Corridor, CSX National Gateway Corridor, CSX Coal Corridor, Amtrak, 12 airports, including 2 commercial airports (Newport News-Williamsburg Airport and Norfolk International Airport), Greyhound bus stations, Fredericksburg area VRE (Passenger Rail) accessibility.

   Spotsylvania County includes portions of the Coastal Corridor Segment A2 and A3.

Key Functions:

- Major I-95 alternative to shore destinations and through traffic
- Freight corridor
- Tourism access to Northern Neck and Middle Peninsula

Summary of VTRANS 2040 Needs- A2 Segment (Spotsylvania County):

- Safety issues at interchange of US 17/US 1/I-95
- Reliability issue at US 17 and I-95 south of Fredericksburg
- Congestion issue on US 17 between US 1 and I-95 south of Fredericksburg

Summary of VTRANS 2040 Needs- A3 Segment (Spotsylvania County):

- Congestion issue on US 17/US 1 between US 17 and I-95 south of Fredericksburg
- Slow speeds and safety concerns at interchange of I-95/US 17 and US 3
- Congestion issue on US 17/I-95 between VA Route 3 and US 17/US 17 Business west of Fredericksburg
- Reliability issue on I-95 from US 17 south of Fredericksburg to VA Route 3

Findings of the VTRANS 2040 CoSS assessment of the Coastal Corridor can be found **HERE**.

2. *Washington to North Carolina Corridor (I-95)*, Corridor K, Major corridor components include I-95. I-395, I-495, I-85, I-195, I-295, Routes 1 and 301, WMATA Blue and Yellow Lines, Local Transit Services, Virginia Railway Express, Ports of Alexandria and Richmond, James River, CSX National Gateway Corridor, Park-and-Ride, Amtrak, Dulles International Airport, Ronald Reagan Washington National Airport, Richmond International Airport, other general aviation facilities, Greyhound bus.

   Spotsylvania County is within Segment K3 of the Washington to North Carolina Corridor.

   Key Functions:

   - Commuter Corridor in Northern Virginia and Richmond Areas
   - Through Traffic (“Main Street” of East Coast)
   - Freight Corridor (trucks, CSX Rail Lines)
   - Military Access (Pentagon, Quantico, Ft. Belvoir, Ft. AP Hill, Ft. Lee, etc.)
   - Multimodal Corridor (VRE, Amtrak, Express Bus, HOV/HOT Lanes)
   - Link to Maryland, Washington, D.C., and Capital Beltway from Points South

   Summary of VTRANS 2040 Needs- A2 Segment (Spotsylvania County):

   - High-growth commercial area near VA 3 forecast to be congested by 2025
   - Limited availability/connections to transit modes at park-and-ride lots
   - I-95 at Exit 118- Planned growth in the area may exacerbate congestion issues
   - Reliability issue on I-95 between Exit 126 (US 1/US 17) and Rappahannock River
   - Reliability issue at US 1 and Harrison Road

- Congestion issue on US 1/US 17 at junction with I-95 south of Fredericksburg
- Congestion issue at US 1 and Harrison Road in Fredericksburg
- Congestion issue at US 1 and Massaponax Church Road south of Fredericksburg

Findings of the VTRANS 2040 CoSS assessment of the Washington to North Carolina Corridor can be found **HERE**.

A summary of Six Year Improvement Program projects within CoSS in Spotsylvania County are summarized in Table 9 below. The projects are also included in the Spotsylvania County Thoroughfare Plan.

Table 9: CoSS Projects

Corridors of Statewide Significance (CoSS) Projects in the Six Year Improvement Program			
State Project #	**Description**	**Route**	**VDOT UPC**
0620-088-182	Harrison Road East (Rte 620 & Rte 1 Intersection Improvements)	1/620	51845
0606-088-622	Route 606 bridge replacement over I-95 and roadway improvements	I-95/606	100829
0606-088-653	Reconstruction of Mudd Tavern Road (complements Route 606 I-95 Bridge replacement)	I-95/606	105463
0606-088-654	Reconstruction of Mudd Tavern Road (complements Route 606 I-95 Bridge replacement)	I-95/606	105464

TRAFFIC SAFETY

As noted in the FAMPO 2045 LRTP, "the dramatic rise in population has strained transportation infrastructure pushing the Region's roadway system to capacity. Traffic congestion and safety issues on the interstate, primary, and portions of the secondary road system throughout the urbanized area are plentiful and growing worse and are beginning to impact even the rural localities more and more each year…When demand for a given transportation facility outstrips available capacity for that facility, congestion occurs. It can affect all modes of travel, including highway passenger and freight vehicles, freight rail, commuter rail, metro rail, bus, air traffic and airport ground traffic, ports and waterways."

Growth over time has outpaced the ability to improve roadways to the extent necessary to significantly improve local levels of service and road safety. Based on data presented in the FAMPO 2045 LRTP sourced from the Virginia Department of Motor Vehicles (DMV), between 2012 and 2016, Spotsylvania averaged approximately 12 highway fatalities per year. During the same time, the County's average number of annual crashes based on Virginia DMV data was nearly 2,100. Identification and implementation of improvement projects and for problematic intersections and road segments experiencing elevated crash activities is critical to improving design and capacity based factors that may be associated with crash activity. Additionally, continued pursuit of alternative modes of transportation and efforts to expand their use helps

reduce roadway congestion, improves levels of service, reduces frequency of vehicle conflict, and reduces the volumes of vehicles that may otherwise be at risk of crash on local roads.

HURRICANE EVACUATION

Though infrequent, the region is susceptible to the threat of Hurricane activity and its resulting impacts on personal property, health and welfare, and the transportation system. Within Spotsylvania County the Virginia Department of Emergency Management has identified the Route 17 corridor from the Caroline County line to Interstate 95 as part of the Peninsula Evacuation Route. This evacuation route extends to the coastal Virginia areas including major population centers at Hampton Roads, Newport News, Norfolk, and Virginia Beach. Impacts of evacuation events can be far reaching and strain the transportation system. Aside from pure traffic volume based slowdowns, emergency related power outages can cause significant deficits in demands at critical facilities including but not limited to: public safety buildings; facilities or businesses providing or selling food, water, fuel, lodging; emergency medical care facilities. Lack of operational facilities due to power failure further compound the impact of emergencies and evacuation, including impacts to the transportation system. With the support of the 2017 George Washington Regional Commission Regional Hazard Mitigation Plan, this plan seeks to improve travel conditions associated with designated Hurricane Evacuation Routes and Corridors of Statewide Significance within the County.

TRANSPORTATION GOALS AND STRATEGIES

An overarching goal with specific goals and strategies has been developed to provide direction and rationale for decision making related to transportation in Spotsylvania County. *The overarching goal is to develop a sustainable transportation network that supports the County's Comprehensive Plan and achieves a level of service that promotes safe and efficient operation and movement of people and goods.* The goals and strategies form the foundation for the planning and development of Spotsylvania County's transportation system.

Goal 1: Maintain acceptable Levels of Service on public roads.

Strategies:

1. Achieve no less than a "D" Peak Hour Level of Service on 90% of County secondary roads within the Primary Development Boundary as shown in the Thoroughfare Plan. In the Primary Settlement District, levels of service are lower to encourage development and redevelopment to densities and intensities that maximize use of the existing infrastructure.
2. Achieve no less than a "D" Peak Hour Level of Service on the VDOT Primary Street System.
3. Achieve no less than a "C" Peak Hour Level of Service on 90% of County secondary roads outside of the Primary Development Boundary as shown on the Thoroughfare Plan. Levels of Service standards have been set higher in the rural area to ensure the rural character of the area is not degraded by development.
4. Continue efforts to pave those unpaved roads in the VDOT Secondary System.
5. The County should monitor secondary road links and intersection Levels of Service through a Traffic Count Program to supplement VDOT's existing Traffic Count Program.
6. Utilize the Travel Demand Forecast Model to project future Thoroughfare Plan needs.
7. Preserve and enhance capacity by improving access management, reducing signals, or signal phases, and implementing innovative intersection configurations.

Goal 2: Ensure that new development does not degrade Levels of Service and mitigates its impact on the transportation network.

Strategies:

1. Protect the transportation network from future congestion by:
    a) encouraging joint-use access points for multiple developments,
    b) ensuring connections within and between developments that offer alternative routing for traffic, but does not encourage cut-through traffic, and
    c) encouraging alternative land development and site design techniques such as mixed use and planned unit developments that provide residential, employment, and recreational opportunities connected by a network of internal streets.
2. Require the submission of Traffic Impact Analysis (TIA) in compliance with VDOT's 527 Process or for projects that meet the County TIA threshold which is 750 vehicles per day (VPD), 100 AM Peak hour trips, or 100 PM Peak hour trips. Additionally, to ensure accuracy all TIAs will employ the latest available version of the ITE Trip Generation Manual

to calculate trip generation and the peak hour of the generator rates should be used for AM and PM Peak hour trip generation calculation if data is available.

3. Development proposals, especially for non-destination convenience based uses should include estimates of pass-by trips (traffic already on the road) associated with their use as not all traffic generation can be attributed to adding additional vehicle trips to the roads.
4. Only roadway facilities that are fully funded and programmed for implementation within the first 3 years of VDOT's Six Year Program or the County's CIP should be considered built and eligible for inclusion in a traffic analysis.
5. Large scale and mixed use developments should consider incorporating Transportation Demand Management (TDM) measures that reduce single occupancy vehicle trips.
6. The County should support alternative onsite transportation alternatives and recreational options such as transit, pedestrian and bicycle facilities that are able to, or will, connect to neighboring properties.
7. Discourage road sections allowing only single lane access in any direction without adequate travelway or shoulder width to allow other vehicles to pass in case of disabled vehicle, crash, stopped or pulled over vehicle. A single lane access constrained by a divided median is one example.

Goal 3: Promote alternative modes of transportation and multi-modal facilities to more effectively address demands on the transportation network.

Strategies:

1. Promote Transportation Demand Management measures, such as the rideshare program, which relieve congestion on major transportation routes and promote more efficient use of alternative transportation systems.
2. Promote design and construction of appropriate bicycle and pedestrian facilities meant to enhance safety and avoid conflicts with motorized vehicles.
3. Promote the design and construction of transportation facilities that consider the needs of persons with disabilities as well as the needs of an aging population.
4. Coordinate with a regional transit service to provide timely and efficient bus routes that meet the needs of local transit users.
5. Promote public transit access and enhancement with supporting infrastructure improvements in the form of nearby sidewalk/trail network, curb-cuts, crosswalks, and bus shelters at stop locations.
6. Plan for and support provision of affordable housing near employment rich areas, in mixed use high density areas, near multi-modal opportunities to proactively reduce accessibility burdens.
7. Recognize the accessibility benefits of provision of rural commercial and/or employment opportunities outside of the Primary Development Boundary to rural populations, especially to rural disadvantaged populations.
8. Explore opportunities to expand regional transit services to serve the Thornburg and New Post Areas.
9. Support capacity enhancements and efficiency improvements along the RF&P Rail corridor for freight and passenger transport.

10. Support protection, enhancement, expansion of rail spurs and sidings within the County along the RF&P corridor for the potential growth of freight service and rail reliant industries and their associated employment and economic activity benefits.

11. Support protection, enhancement, expansion of rail spurs and sidings within the County along the RF&P corridor for development complementary to passenger rail service such as transit oriented developments.

12. As a County within the GW Region, Spotsylvania County recognizes the importance of freight systems impacts on the local economy and traffic. The County will support and provide assistance implementing critical improvements efforts associated with the Regional Freight Plan.

13. Road improvement designs intended for the Tidewater Trail corridor should consider Shannon Airport guidance that supports lowering the road elevation by 4' to 5' in proximity to the nearby airport runway terminus.

14. As part of the upcoming update to the George Washington Regional Bicycle and Pedestrian Plan, work with the FAMPO Bicycle and Pedestrian Advisory Committee (BPAC) to develop a regional strategy and identify local policies for e-bikes and scooters. Policy recommendations may warrant inclusion in future iterations of the Comprehensive Plan.

Goal 4: Plan transportation facilities that are environmentally and aesthetically compatible with the character of the County and minimize adverse effects upon historic and environmental resources.

Strategies

1. Minimize negative physical impacts to existing residents and businesses in the planning and design of new transportation facilities.
2. Promote Context Sensitive Design (CSD) in the development of new and expanded roadway improvements. CSD involves developing a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic, and environmental resources, while maintaining safety and mobility.

Goal 5: Plan future transportation facilities that are cost-effective and can be implemented in a timely fashion.

Strategy:

1. Develop and implement a financial plan to achieve the County's transportation system objectives. The Plan should identify all new and existing funding mechanisms, such as Revenue Sharing, to include private funding initiatives and public/private partnerships.

Goal 6: Prioritize transportation projects for consistent implementation and clear direction for development patterns.

Strategies:

1. Develop and implement a working prioritized list of future road projects to achieve the County's transportation system priorities and objectives.
2. The list should identify all proposed improvement projects, new connection points, lane improvement, turn lane/intersection improvements, traffic circles/roundabouts, interchange alternatives, etc. to be coordinated through the regional transportation network including FRED, FAMPO, VRE and surrounding localities for consistent development.
3. The list shall be a working document reviewed and approved by the Transportation Committee and the Spotsylvania County Board of Supervisors.
4. Any inclusions, exclusions and alterations in the priorities approved on the list will require Spotsylvania County Board of Supervisors approval.

Goal 7: Protect the function of Corridors of Statewide Significance and Hurricane Evacuation Routes from unnecessary gridlock created by vehicle abandonment, stranding, excessively long queues and backups, food and water shortages due to power failure at critical facilities.

1. Promote installation of onsite secondary power sources, generator ready hookups or backup generators at critical facilities including but not limited to: public safety buildings; facilities or businesses providing or selling food, water, fuel, lodging; emergency medical care facilities.

DRAFT

THOROUGHFARE PLAN (ROAD IMPROVEMENT PLAN)

SPOTSYLVANIA COUNTY, VA

NEW ROADS AND ROAD EXTENSIONS*

Project	From	To	VDOT Functional Classification (2014)	CoSS	2020 # of Lanes	2040 # of Lanes	Ultimate ROW	Description of Improvement	2020 Length	2040 Length	2020 ADT	2040 ADT	2020 LOS	2040 LOS	Source of Cost Estimate	Total Cost (2040)^
Route 606 Service Road-North	Dan Bell Lane	S Roxbury Mill Rd	N/A	N	0	2	60/variable	New 2-lane roadway	0.00	0.50	0	10,800	unk.	C	UPC 105464 & 111456	$8,000,000
Route 606 Service Road-South	Thornburg Plaza II	.1 mile West of north leg of Route 606 Roundabout	N/A	N	0	2	60/variable	New 2-lane roadway	0.00	0.60	0	9,300	unk.	C	VDOT PCES	$8,000,000
Guinea Station Road Extension (607) (ALTERNATIVE A)	Massaponax Church Rd (608)	Jefferson Davis Hwy (1)	~~Local~~ N/A	N	0	2	60/variable	New facility: two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped. (ALTERNATIVE A ALIGNMENT)	0.00	1.15	0	6,700	unk.	C	VDOT PCES	$9,715,440
Guinea Station Road Extension & Realignment (607) (ALTERNATIVE B)	Massaponax Church Rd (608)	Jefferson Davis Hwy (1) and Realigned Guinea Station Road	N/A	N	0	2	60/variable	New facility: two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped. (ALTERNATIVE B ALIGNMENT)	0.00	2.00	0	6,700	unk.	C	VDOT PCES	$16,896,000
Massaponax Church Rd Extension (608)	Lake Anna Parkway (208)	Courthouse Rd (208)	N/A	N	0	2	60/variable	New Facility: two 12 foot lanes with 6-foot shoulders, sidewalks. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.00	1.52	0	2,700	unk.	B	VDOT PCES	$12,467,000
Chancellor Road Extension (674)	Old Plank Rd (610)	Plank Rd (3)	N/A	N	0	2	60/variable	New 4-lane divided typical section: Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.00	0.90	0	6,000	unk.	B	VDOT PCES	$5,211,500
Rollingwood Dr Extended (711)	Harrison Rd (620)	Rollingwood Dr (711)	N/A	N	0	4	75'-80'	New 4 lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.00	1.50	0	24,000	unk.	E	VDOT PCES	$14,650,300
Germanna Point Dr Extension (1029)	Cotter Rd	Spotsylvania Ave	N/A	N	0	4	75'-80'	New facility: four 12-foot lanes with 2-foot shoulders, 2-2' barriers, 1-10' multiuse trail. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.00	0.91	0	10,300	unk.	C	VDOT PCES	$33,100,000
Houser Dr. Extension (1248)	Houser Dr	Industrial Dr	N/A	N	0	2	60/variable	Expand Industrial Park Accessibility with 2-lane connector road.	0.00	0.20	0	4,000	unk.	B	VDOT PCES	$1,921,600
Market St Extension (1489)	~~Hood Dr (636)~~ Jefferson Davis Hwy (1)	~~Jefferson Davis Hwy (1)~~ VA Site Southern Entrance, onward to Hood Drive (636)	N/A	N	0	2	60/variable	Construct new facility connecting ~~Route 208, Hood Drive~~ VA Site Southern Entrance and Route 1 at Market Street, continuing onward to Hood Drive. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.00	~~1.07~~ 0.5	0	5,700	unk.	B	VDOT PCES	$10,847,500
Chancellor Road Spur	Gordon Rd (627)	Chancellor Rd (674)	N/A	N	0	4	75'-80'	Construct 4-lane divided facility connecting Gordon Rd with Chancellor Rd	0.00	0.50	0	15,000	unk.	B	VDOT PCES	$10,745,000
Lansdowne Road Extension	Tidewater Trail (2/17)	~~Russo Drive~~ Main Street	N/A	N	0	2	60/variable	Extension of Lansdowne Rd to Main Street with a 10ft Share Use Path. Improvement to include a ~~with~~ connection to Russo Drive	0.00	~~0.15~~ 0.24	0	~~6,000~~ 6,500	unk.	B	VDOT PCES	~~$2,152,000~~ $3,000,000
Airport/Industrial Access Road	Shannon Park Dr	Shannon Airport Cir.	N/A	N	0	2	60/variable	Improve access to Shannon Airport and nearby business to reduce volume at Tidewater Trl at Shannon Airport Circle entrance.	0.00	0.13	0	1,000	unk.	A	VDOT PCES	$2,425,000
Spotsylvania Pkwy Extension	Smith Station Rd	Gordon Rd (627)	N/A	N	0	4	75'-80'	Extension of Spotsylvania Pkwy west to Gordon Rd. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.00	3.50	0	10,000	unk.	C	VDOT PCES	$75,215,000

** New Concept Facilities (incl. new roads and extensions) as depicted on the corresponding Thoroughfare Plan Map are presented as conceptual alignments only. Further design and study necessary to determine accurate route.*

INTERSTATE PROJECTS

Project	From	To	VDOT Functional Classification (2014)	CoSS	2020 # of Lanes	2040 # of Lanes	Ultimate ROW	Description of Improvement	2020 Length	2040 Length	2020 ADT	2040 ADT	2020 LOS	2040 LOS	Source of Cost Estimate	Total Cost (2040)^
Super Ramp Construction	I-95 SB Off-ramp	Mills Dr. (US-17)	Interstate	Y	0	2	60	New SB ramp to provide direct connection between I-95 SB off-ramp and US 17	0	1.25	N/A	20,200	N/A	E	VDOT PCES	$90,580,000
Bridge over I-95	0.1 mile west of I-95	0.1 mile East of I-95	N/A	N	0	2	60	Bridge between Jackson Village and Alexander's Crossing developments. 4-lanes with bike/ped accomodations.	0	0.20	N/A	32,365	N/A	E	VDOT PCES	$14,946,000
I-95 Exit 126 Off-Ramp Improvements	I-95 SB Off-Ramp	Southpoint Parkway (711)	Ramp & Principal Arterial	Y	1	2	N/A	Widen I-95 SB Off-Ramp adding an additional left turn on US 1, and lane from the ramp to Southpoint Parkway. Include a sidewalk and retaining wall.	N/A	N/A	11,200	11,500	E	B	VDOT Smart Scale	$15,295,000
I-95 Exit 126 NB On-Ramp Improvements	US Route 1	I-95 NB On-Ramp	Ramp & Principal Arterial	Y	1	2	N/A	Widen I-95 NB On-Ramp and add an additional right turn on US 1	N/A	N/A	10,530	15,200	E	C	VDOT Smart Scale	$22,000,000
I-95 Exit 126 SB On-Ramp Improvements	US Route 1	I-95 SB On-Ramp	Ramp & Principal Arterial	Y	1	2	N/A	Widen I-95 SB On-Ramp and add an additional left turn from US 1 SB	N/A	N/A	9,000	12,000	E	C	County/State	$15,000,000
I-95 SB Widening	1.3 miles south of Exit 130	Exit 126	Interstate	Y	3	4	TBA	Widen I-95 SB from 3-lanes to 4-lanes	2.8	2.8	71,000	106,000	C	D	VDOT PCES	$41,000,000
Harrison Road Interchange	I-95	Harrison Road (620)	Interstate	Y	0	2	TBA	New I-95 Interchange at Harrison Rd.	0	Unk.	N/A	62,700	N/A	D	VDOT PCES	$97,000,000
I-95 Corridor ITS Improvements	1.3 miles north of Exit 130	1.3 miles south of Exit 118	Interstate	Y	0	0	TBA	Interchange and variable message signage improvements.CCTV cameras and fiber optic deployment for improved monitoring.	N/A	N/A	N/A	N/A	unk.	unk.	VDOT PCES	$10,000,000
I-95 Exit 126 NB On-ramp and CD Road	Route 17	I-95 NB	Interstate	Y	0	2	TBD	Major intersection improvements and addition on NB ramp from US-17.	0	1.12	N/A	15,000	N/A	C	Kimley-Horn	$54,270,000
I-95 NB Widening	Exit 126	Exit 130	Interstate	Y	3	4	TBD	Additional I-95 NB General Purpose Lane between Exit 126 and Exit 130.	4.30	4.30	74,000	102,400	D	C	VDOT PCES	$54,000,000

ROAD WIDENINGS AND OTHER EXISTING ROAD CORRIDOR IMPROVEMENTS

Project	From	To	VDOT Functional Classification (2014)	CoSS	2020 # of Lanes	2040 # of Lanes	Ultimate ROW	Description of Improvement	2020 Length	2040 Length	2020 ADT	2040 ADT	2020 LOS	2040 LOS	Source of Cost Estimate	Total Cost (2040)^
Jefferson Davis Hwy (1)	Spotsylvania Co/ Caroline Co. Line	Massaponax Church Rd (608)	Principal Arterial	Y	4	6	150/variable	Widen to a 6-lane typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	6.80	6.80	14,000	38,300	B	C	VDOT PCES	$107,803,400
Jefferson Davis Hwy (1)	Massaponax Church Rd (608)	Spotsylvania Pkwy (628)	Principal Arterial	Y	4	6	150/variable	Widen to a 6-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.35	1.95	27,000	44,500	B	D	VDOT PCES	$52,608,300
Jefferson Davis Hwy (1)	Spotsylvania Pkwy (628)	Harrison Rd (620)	Principal Arterial	Y	4	8	175/variable	Widen to a 8-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.87	3.06	55,000	65,000	E	E	VDOT PCES	$65,573,760
Jefferson Davis Hwy (1)	Harrison Rd (620)	Spotsylvania Co/ Fredericksburg City Line	Principal Arterial	Y	4	6	150/variable	Widen to 6-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.70	0.70	30,000	60,000	C	F	VDOT PCES	$24,831,700
Lafayette Blvd (1 Business)	Spotsylvania Co/ Fredericksburg City Line	Jefferson Davis Hwy (1)	Minor Arterial	N	2	4	75'-80'	Widen to 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.51	1.51	22,000	28,500	F	D	VDOT PCES	$42,261,540
Tidewater Trail (2/17)	Joseph Mills Drive	River Meadows	Minor Arterial	N	2	3	75'-80'	Widen to a 3-lane divided section. With 2-lanes southbound and 1-lane northbound and improve intersections. at Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.54	0.54	24,000	36,000	F	D	VDOT Revenue Sharing	$19,100,000
Tidewater Trail (2/17)	River Meadows	Mills Drive (17)	Minor Arterial	N	2	4	65'-75'	Widen to a 4-lane typical section and improve intersections. Refer tp Trailways Master Plan (Chapter 3A) for Bike/Ped.	4.00	4.00	5,600	8,000	C	B	VDOT PCES	$70,113,000
Sandy Lane Dr (2)	Mills Dr (17)	Spotsylvania Co./ Caroline Co. Line	Minor Arterial	N	2	4	75'-80'	Widen from 2 to 4-lane. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.54	0.54	24,000	36,000	F	D	VDOT PCES	$11,062,300
Plank Road (3)	Harrison Crossing Access Road	Andora Dr (626) / Corter Ave (760)	Principal Arterial	N	6	8	150/variable	Widen to a 8-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.65	0.65	32,500	57,800	C	E	ARRA	$62,800,000
Plank Road (3)	Andora Dr (626) / Corter Ave (760)	Orange Co. Line	Principal Arterial	N	4	6	150/variable	Widen to a 6-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	8.79	8.79	32,000	54,200	C	E	VDOT PCES	$14,839,300
Mills Dr (17) Overpass Replacement	Mills Dr (17) Merge	Germanna Pt./Hospital Blvd.	Principal Arterial	Y	2	4	150/variable	Widen to a 4 lane divided typical section with pedestrian accomodations.Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.64	0.64	20,000	30,000	E	C	UPC 107140	$20,000,000
Mills Dr (17)	Germanna Pt./Hospital Blvd.	Spotsylvania Co/Caroline Co. Line	Principal Arterial	Y	2	4	150/variable	Widen to a 4 lane divided typical section, possibly tapering to a 3 lane section east of Tidewater Trail. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	6.4	6.4	14,000	24,000	C	C	VDOT PCES	$116,417,200
Lake Anna Parkway (208)	Gentry Drive (8301 Lake Anna Pkwy.)	Post Oak/Morris Road (606)	Minor Arterial	N	2	4	125/variable	Widen to a 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.96	1.96	11,500	19,200	C	C	VDOT PCES	$38,354,350
Courthouse Rd (208)	Jefferson Davis Hwy (1)	Smith Station (628)	Minor Arterial	N	4	6	150/variable	Widen to a 6-lane divided. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.72	3.72	39,000	56,750	E	E	VDOT PCES	$86,733,000

DRAFT

THOROUGHFARE PLAN (ROAD IMPROVEMENT PLAN)

SPOTSYLVANIA COUNTY, VA

ROAD WIDENINGS AND OTHER EXISTING ROAD CORRIDOR IMPROVEMENTS

Project	From	To	VDOT Functional Classification (2014)	CoSS	2020 # of Lanes	2040 # of Lanes	Ultimate ROW	Description of Improvement	2020 Length	2040 Length	2020 ADT	2040 ADT	2020 LOS	2040 LOS	Source of Cost Estimate	Total Cost (2040)^
Courthouse Rd (208)	Smith Station (628)	Brock Road (613)	Minor Arterial	N	4	6	150/variable	Widen to a 6-lane divided. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.12	3.12	30,000	42,500	C	B	VDOT PCES	$66,262,300
Courthouse Rd (208)	Lake Anna Parkway (208)	Massaponax Church Rd (608)	Minor, Major Collector (Segments)	N	2	2	60/variable	Widen to two 12-foot lanes with sidewalks.	1.20	1.20	4,700	12,000	C	E	VDOT PCES	$13,315,200
Courthouse Rd (208)	Lake Anna Parkway (208)	Morris Rd (606)	Minor Arterial	N	2	3	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.60	2.60	9,200	5,400	B	A	VDOT PCES	$28,849,600
Courthouse Rd (208)	Post Oak/Morris Rd (606)	Lake Anna/ Louisa County Line	Minor Arterial	N	2	4	60/variable	Widen from 2 to 4-lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	12.00	12.00	10,000	17,500	B	B	VDOT PCES	$100,474,000
Lawyers Road (601)	Courthouse Rd (208)	Stubbs Bridge Road (612)	Major Collector	N	2	2	60/variable	Widen to two 12-foot lanes with 6-foot shoulders.	4.30	4.30	1,970	7,700	A	C	VDOT PCES	$18,042,000
Lewiston Rd (601)	Fairview Rd (622)	Courthouse Rd (208)	Minor Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for	6.88	6.88	1,800	3,200	A	A	VDOT PCES	$28,856,500
Arcadia Rd (603)	Jefferson Davis Hwy (1)	Spotsylvania/Caroline Co. Line	Major, Minor Collector (Segments)	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.38	1.38	3,800	2,700	B	B	VDOT PCES	$7,192,000
Marye Road (605)	Partlow Rd (738)	Arcadia Rd (603)	Major Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	8.40	8.40	2,500	2,000	A	A	VDOT PCES	$43,776,700
Mudd Tavern Rd Bridge over I-95 (606)	Bridge with taper to west	Bridge with taper to east	Minor Arterial	Y	2	4	72'	New bridge with 4-12' lanes, 4' median. 2' shoulders, sidewalk & 10' trail.	0.34	0.34	7,700	14,000	C	C	UPC 100829	$7,820,000
Mudd Tavern Rd (606)	Jefferson Davis Hwy (1)	East of I-95 Mudd Tavern Bridge.	Minor Arterial	N	2	4	75'-80'	Widen to 4-lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.51	0.51	12,600	16,000	C	B	UPC 105456	$21,250,000
Morris Rd (606)	Jefferson Davis Hwy (1)	Courthouse Rd (208)	Minor Arterial	N	2	4	60/variable	Widen from 2 to 4-lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.50	3.50	10,000	12,000	C	B	VDOT PCES	$45,056,000
Post Oak Rd (606)	Lake Anna Parkway (208)	West Catharpin Rd (608)	Major Collector	N	2	2	60/variable	Reconstruct select portions to improve horizontal and vertical alignments. Improve various intersections. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	11.62	11.62	1,700	2,700	A	A	VDOT PCES	$24,921,000
Robert E. Lee Dr (608)	Catharpin Rd (612)	Lake Anna Parkway (208)	Major Collector	N	2	2	60/variable	Widen to two 12-foot lanes with 6-foot shoulders. Reconstruct the intersection at Route 612. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	6.08	6.08	2,500	2,300	A	A	VDOT PCES	$36,475,400
Massaponax Church Rd (608)	Courthouse Rd (208)	Smith Station Rd (628)	Major Collector	N	2	4	75'-80'	Widen to a 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.97	3.97	3,350	19,000	B	D	VDOT PCES	$27,945,300
Massaponax Church Rd (608)	Smith Station Rd (628)	Jefferson Davis Hwy (1)	Major Collector	N	2	4	75'-80'	Widen to a 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.98	0.98	1,500	12,200	A	C	VDOT PCES	$15,292,000
Massaponax Church Rd (608)	Jefferson Davis Hwy (1)	Mills Dr (17)	Major Collector	N	2	4	60/variable	Widen to two 12-foot lanes. Realign portion just east of Route 632. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	4.52	4.52	1,200	5,700	A	B	VDOT PCES	$70,529,300
W Catharpin Rd (608)	Spotsylvania Co/Orange Co Line	Robert E. Lee (608)	Minor Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	7.09	7.09	2,000	3,100	B	B	VDOT PCES	$34,212,600
Thornton Rolling Rd (609)	Mills Dr (17)	Spotsylvania/Caroline Co. Line	Minor Collector	N	2	2	60/variable	Widen to two 12-lanes with 2-foot shoulders, Shared Use Path (East Coast Greenway). Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.90	1.90	3,000	4,500	B	B	VDOT PCES	$9,902,000
Old Plank Rd (610)	Gordon Rd (627)	Plank Road (3)	Major Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.50	0.50	6,000	7,100	B	C	VDOT PCES	$2,605,800
Old Plank Rd (610)	Catharpin Rd (612)	Gordon Rd (627)	Major Collector	N	2	4	75'-80'	Widen to 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.06	3.06	12,700	14,700	C	B	VDOT PCES	$48,727,680
Old Plank Rd (610)	Plank Road (3)	Catharpin Rd (612)	Major Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.80	1.80	5,400	14,000	B	C	VDOT PCES	$14,753,400
Elys Ford Rd.(610)	Plank Rd (3)	Spotsylvania Co./ Culpeper Co. Line	Major Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.84	3.84	3,500	4,600	A	B	VDOT PCES	$19,110,800
Catharpin Rd (612)	W. Catharpin Rd (608)	Piney Branch Rd (624)	Major Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	5.24	5.24	2,500	4,800	A	B	VDOT PCES	$26,078,300
Catharpin Rd (612)	Piney Branch Rd (624)	Old Plank Rd (610)	Major Collector	N	2	3	75/variable	Widen to a 3-lane typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.28	2.28	5,500	8,000	B	C	VDOT PCES	$17,305,200
Monrovia Rd & Stubbs Bridge Rd (612)	Spotsylvania Co/Orange Co Line	Post Oak Rd (606)	Major Collector	N	2	2	60/variable	Improve horizontal and verticle alignments. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	11.38	11.38	600	4,000	A	B	VDOT PCES	$32,000,000
Pamunkey Rd (612)	Post Oak Rd (606)	West Catharpin Rd (608)	Minor Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	4.10	4.10	1,000	3,800	A	B	VDOT PCES	$2,931,800
Brock Road (613)	Courthouse Rd (208)	Gordon Rd (627)	Major Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	12.00	12.00	5,700	10,400	B	D	VDOT PCES	$64,190,860
River Road (618)	Bragg Rd (639)	Motts Run Reservoir/ Park	Minor Collector	N	2	2	60/variable	Shoulder Improvements. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.20	2.20	4,600	8,000	B	C	VDOT PCES	$1,652,000
Harrison Rd (620)	Jefferson Davis Hwy (1)	Lafayette Blvd (1 Business)	Minor Arterial	N	2	2	60/variable	Widen to a 2-12' Lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.17	0.17	5,700	11,200	B	C	VDOT PCES	$8,200,000
Harrison Rd (620)	Old Plank Rd (610)	Gordon Rd (627)	Minor Arterial	N	2	4	75'-80'	Widen to a 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.50	0.50	13,000	23,800	C	C	UPC 107141	$11,200,000
Harrison Rd (620)	Salem Church Rd (639)	Jefferson Davis Hwy (1)	Minor Arterial	N	2	4	75'-80'	Widen to a 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.44	2.44	16,200	48,000	D	E	VDOT PCES	$36,647,700
Orange Plank Rd. (621)	Plank Rd (3)	Spotsylvania Co./ Orange Co. Line	Major Collector	N	2	2	60/variable	Shoulder Improvements. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	7.00	7.00	3,500	11,300	A	C	VDOT PCES	$5,674,800
Fairview Rd (622)	Lewiston Rd (601)	Partlow Rd (738)	Minor Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.81	2.81	3,200	4,200	A	B	VDOT PCES	$10,809,500
Gordon Rd (627)	Spotsylvania Pkwy Extended (New Road)	Harrison Rd (620)	Major Collector	N	2	4	75'-80'	Widen to 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.10	3.10	16,700	20,700	E	C	VDOT PCES	$39,759,000
Gordon Rd (627)	Brock Rd (613)	Spotsylvania Pkwy Extended (New Road)	Major Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	3.00	3.00	9,100	10,500	C	D	VDOT PCES	$17,617,400
Smith Station Rd (628)	Massaponax Church Rd (608)	Gordon Rd (627)	Major Collector	N	2	4	75'-80'	Widen to a 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	5.95	5.95	9,200	21,800	B	C	VDOT PCES	$44,117,600
N,S Roxbury Mill Rd (632)	Replacement Bridge (North Approach)	Replacement Bridge (South Approach)	Minor Collector	N	0	2	60/variable	Demolish existing closed bridge structure and construct a new 2-lane bridge with 10 foot shared use path.	0.00	0.05	0	1,209	N/A	A	VDOT PCES	$2,737,000
Church Pond Rd (633)	Massaponax Church Rd (608)	Guinea Station Rd (607)	Local	N	2	2	60/variable	Shoulder Improvements. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.40	1.40	850	1,500	A	A	VDOT PCES	$1,135,000
Lee Hill School Dr (635)	Germanna Point Dr	Eagle Dr (736)	Minor Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.35	2.35	5,300	6,000	B	B	VDOT PCES	$11,761,600
Hood Rd (636)	Courthouse Rd (208)	Jefferson Davis Hwy (1)	Major Collector	N	2	4	75'-80'	Widen to a 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.44	0.44	12,500	18,500	D	C	VDOT PCES	$12,972,000
Mine Rd (636)	Spotsylvania Avenue	Meadow View Drive	Major Collector	N	2	4	60'-75'	Widen to a 4-lane undivided section with multiuse trail and sidewalk. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	0.32	0.32	17,100	20,000	E	C	VDOT PCES	$16,000,000
Mine Rd (636)	Meadow View Drive	Lansdowne Rd (638)	Major Collector	N	2	4	60'-75'	Widen to a 4-lane undivided section with multiuse trail and sidewalk. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.14	1.14	11,800	15,100	C	D	VDOT PCES	$18,972,000
Mine Rd (636)	Lansdowne Rd (638)	Benchmark Rd (608)	Major Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.30	2.30	6,500	9,700	B	C	VDOT PCES	$13,527,000
Lansdowne Rd (638)	Mine Rd (636)	Spotsylvania Co/ Fredericksburg City Line	Major Collector	N	2	4	75'-80'	Widen to a 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.93	1.93	9,100	10,200	C	C	VDOT PCES	$28,845,700

DRAFT

THOROUGHFARE PLAN (ROAD IMPROVEMENT PLAN)

SPOTSYLVANIA COUNTY, VA

ROAD WIDENINGS AND OTHER EXISTING ROAD CORRIDOR IMPROVEMENTS

Project	From	To	VDOT Functional Classification (2014)	CoSS	2020 # of Lanes	2040 # of Lanes	Ultimate ROW	Description of Improvement	2020 Length	2040 Length	2020 ADT	2040 ADT	2020 LOS	2040 LOS	Source of Cost Estimate	Total Cost (2040)^
Leavells Rd (639)	Courthouse Rd (208)	Smith Station Rd (628)	Major Collector	N	2	4	75'-80'	Widen to a 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.51	2.51	10,500	12,800	C	C	VDOT PCES	$43,866,400
~~Leavells Rd (639) & Salem Church Rd. (639)~~	~~Courthouse Rd (208)~~	~~Plank Rd (3)~~	~~Minor Arterial~~	~~N~~	~~4~~	~~6~~	~~150/variable~~	~~Widen to a 6-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.~~	~~3.60~~	~~3.60~~	~~19,400~~	~~25,100~~	~~D~~	~~E~~	~~VDOT PCES~~	~~$67,650,600~~
Jones Powell Rd (653)	Belmont Rd (652)	Lawyers Rd (601)	Local	N	2	2	60/variable	Widen to two 11-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	1.65	1.65	800	4,350	A	B	VDOT PCES	$5,125,600
Piedmont Dr (673)	Smith Station Rd (628)	Harrison Rd (620)	Major Collector	N	2	2	60/variable	Improve horizontal and vertical alignment and improve side street connections with appropriate turn lanes.	2.24	2.24	6,800	8,500	B	B	VDOT PCES	$10,543,000
Chancellor Road (674)	Old Plank Rd (610)	Gordon Rd (627)	Minor Collector	N	2	4	75'-80'	Widen to a 4-lane divided typical section. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	2.00	2.00	4,100	8,800	B	B	VDOT PCES	$33,758,000
Partlow Rd (738)	Spotsylvania Co/Caroline Co Line	Courthouse Rd (208)	Major Collector	N	2	2	60/variable	Widen to two 12-foot lanes. Refer to Trailways Master Plan (Chapter 3A) for Bike/Ped.	12.56	12.56	3,800	6,100	A	C	VDOT PCES	$39,000,000

INTERSECTION IMPROVEMENT PLAN

Project	Description of Improvement	2020 Length	2040 Length	2020 PM Peak	2040 PM Peak	2020 LOS	2040 LOS	Source of Cost Estimate	Total Cost (2040)^
Courthouse Road (208) & Smith Station Road (628)	The purpose of this project is to increase intersection capacity, reduce delay, and improve traffic flow at the intersection of Courthouse Road and Smith Station Road. Additional turn lanes will be added from the north and southbound directions on Smith Station Road along with through lanes from the east and wesbound direction on Courthouse Road.	N/A	400'	3,500	4,900	E	D	VDOT PCES	$4,872,600
Courthouse Rd (208) & Hood (636)/Houser Drive (1248)	Project will separate the northbound through movement on Hood Drive by providing two left turn lanes, a through lane, and right turn lane.	N/A	N/A	3,700	4,300	E	C	UPC 110987	$6,301,000
Courthouse Rd (208) Turning Lane improvements: Rte 711 (Southpoint Pkwy) to Hood Drive	Construct a 475 ft right turn lane for Rte 711 to Rte 208. Lengthen WB left turn lanes at Rte 711. Restriping of turn lanes at Stoney Creek Drive/Wawa. Construct 240 ft of missing curb lane at Woodland Dr. Provide a 3ed WB lane by reconstructing the I-95 overpass median to be a travel lane with a four ft raised median and restriping turn lanes at Hood Drive/Houser Rd intersection	N/A	N/A	TBD	TBD	TBD	TBD	STATEWIDE PLANNING LEVEL COST ESTIMATES	$7,365,000
Courthouse Rd (208) & Breckenridge Drive (2325)/Brittney Commons (1612)	Extend the eastbound and westbound left turn lanes in both directions on Courthouse Road for approximately 200'.	400'	400'	2,550	3,000	B	t	FAMPO estimate	$952,322
Courthouse Rd (208) Operational and Transit Improvements	Results from VDOT Study include (1) Lengthen WB Route 208 Left Turn Lane for Southpoint Pkwy by approx. 110 ft using grass median to west of I-95/Rte 208 Bridge; (2) Southpoint Pkwy Intersection Improvements; (3) Stoney Creek Drive/Wawa Intersection Imrpovements; (4) WB Rhoades Dr to Woodland Dr to replace about 240 feet of missing curblane that ends at Woodland Dr.	0.60	0.60	4,200	5,880	D	E	VDOT STUDY	$10,000,000 (VDOT Study) & $580,000 Total Transit Cost (Not included in VDOT Cost Estimate)
Harrison Road (620) & Lafayette Boulevard (Business 1)	Extend the existing right turn lane on Lafayette Boulevard 300' from Harrison Road to Lee Street.	300'	300'	3,300	3,900	E	D	VDOT PCES	$835,000
Hudgins Road (661) & Lafayette Blvd (Business 1)	Widen Hudgins Rd to 24 ft between Tignor Lane and Rte 1. The intersection improvement for Hudgins at Rte 1 would upgrade the existing signalized intersection to provide a left and right turn lane from Hudgins to Rte 1. The project would also provide bicycle/pedestrian accomodations along Hudgins Rd from Lafayette Blvd to the West side of Rte 1.	N/A	1,100	TBD	TBD	A	TBD	STATEWIDE PLANNING LEVEL COST ESTIMATES	$3,507,000
Hudgins Road (661) & Jefferson Davis Hwy (1)	Widen Hudgins Rd to 24 ft between Lafayette Blvd and Tignor Lane. Provide a new roundabout or signalized intersection for Lafayette Blvd at Hudgins Rd with bicycle/pedestrian accomodations.	N/A	500'	TBD	TBD	A	TBD	STATEWIDE PLANNING LEVEL COST ESTIMATES	$6,575,000
Spotsylvania Ave @ Market Street	Add a Right turn lane from SB Spotsylvania Ave to Market St and lengthen westbound turn lanes on Rte 208 to 600 feet.	N/A	100'	TBD	TBD	TBD	TBD	STATEWIDE PLANNING LEVEL COST ESTIMATES	$460,000
Business 208 and Massaponax Church Rd	Realign intersection of Massaponax Church Rd with Business 208 to a "T" intersection with a roundabout or conventional intersecton and provide bicycle/pedestrian accommodations.	N/A	100'	TBD	TBD	TBD	TBD	STATEWIDE PLANNING LEVEL COST ESTIMATES	$3,520,000
Andora Dr. & Old Plank Rd Roundabout	Convert existing 4-way stop controlled intersection to a free flow roundabout.	N/A	N/A	1,720	2,100	D	A	VDOT PCES	$2,500,000
Chancellor Rd & Old Plank Rd Roundabout	Convert a 2-way stop controlled intersection to a free flow roundabout to address safety issues.	N/A	N/A	1,450	1,730	D	A	SDI	$1,971,000
Market Street Extension & Hood Drive	Construct new intersection or roundabout at a new intersection resulting from the construction of Market Street Extension that would intersect Hood Drive.	N/A	2170'	N/A	1,400	N/A	C	VDOT PCES	$9,315,350
Lawyers Road & Lake Anna State Park Entrance	Project will add additional right and left turn lanes into the Lake Anna State Park and entrance improvements	N/A	N/A	N/A	N/A	N/A	N/A	VDOT PCES	$985,400
Harrison Road (620) & Salem Church Road/Leavells Road (639)	Extend northbound & southbound left turn lanes & southbound right turn lane. Add a new eastbound & westbound right turn lane, westbound right turn lane, westbound thru lane & esatbound right turn lane.	N/A	N/A	1,400	7,500	E	D	VDOT PCES	$6,100,000
Jefferson Davis Hwy. & Couthouse Road/Lafayette Blvd.	Extend northbound, southbound, eastbound & westbound left turn lanes. Add new eastbound & westbound right turn lanes. Add a second eastbound left turn lane, and convert eastbound & westbound thru/right lanes to exclusive thru lanes.	N/A	N/A	4,050	7,400	D	E	VDOT PCES	$11,200,000
Lawyers Road (601) & Stubbs Bridge Road (612)	Construct new intersection or roundabout at this intersection to address turning movements and crashes.	N/A	N/A	1910	6,027	C	C	VDOT PCES	$2,600,000
Jefferson Davis Hwy. (1) & VA Health Care Center Entrance	Construct a new signal with turn lanes into and out of the VA Health Care Center with pedestrian accomodations.	N/A	N/A	unk.	unk.	unk.	unk.	County	$3,500,000
Jefferson Davis Hwy. (1) & Market Street (1489)	~~Construct an additional WB left turn lane on Mine Road and additional SB thru lane on US 1. Convert SB right turn lane to a thru/right and modify EB approach to a left & thru /right turn.~~ Create an additional WB left turn lane on Market Street and a triple left turn from WB Market Street to SB US Rte 1. The project also includes sidewalk improvements in the intersection area.	N/A	N/A	3,720	4,851	D	C	WS	TBD
Spotsylvania Mall Drive Roundabout	Construct a new roundabout at intersection of Towne Centre Blvd and Bragg Rd	N/A	N/A	N/A	unk.	unk.	unk.	VDOT PCES	$3,300,000
Tidewater Trail (2) & Benchmark Road (608)	Add a Left turn lane for the WB Approach and also add a Left turn lane for the EB Approach and change right turn lane to be shared with through lane for NB approach.	N/A	N/A	2,383	3,108	B	C	VDOT PCES	$4,500,000
Nw Quadrant -Hood Drive (636) & US Rte 1 (P)	Construct a new connector road from Hood Drive to US Rte 1 and add two signals on Hood Drive & US 1 with special 1/2 timing.	NA	NA	NA	10,000	NA	C	WS	$25,000,000

DRAFT

THOROUGHFARE PLAN (ROAD IMPROVEMENT PLAN)

SPOTSYLVANIA COUNTY, VA

THOROUGHFARE PLAN (STUDIES)

Study	Description
Intermediate I-95 Study Area Projects (from North of of Exit 130 (MP 130.7) to North of Exit 118 (MP 119.7))	Studies to include feasibility of collector-distributor (CD) lanes in both directions between Exit 130 and new access points (Harrison Road (620) & Courthouse Road (208)) and include NB CD lanes between Route 3 and US 17 (NB Rappahannock River Crossing project). Potential new interchange to be considered south of Exit 126 along with improvements to existing interchanges at Exit 118 and Exit 126. Additional Exist 126 improvements may include the "J" Ramp, Super Ramp, Alternative 3 (Improvements to US 1 and Southpoint Parkway), Exit 126 to US 1 ramp & signal improvements and/or other recommendations from the KH IMR and companion Planning Study.
Route 3 Arterial Management Plan (Michael Baker International/VDOT)	The Route 3 Arterial Management Plan consists of an approximate 9.6 mile corridor section of Route 3 from Gordon Road (626) to Route 20. The corridor includes 1/4 mile on either side of the Route 3 centerline and includes a total of fifteen intersections.
Route 606 Corridor STAR's Study (VDOT)	The Route 606 Corridor Management Plan consists of an approximate 0.75 mile corridor section of Route 606 from the I-95 Exit 118 interchange to approximately 800' west of Route 1. Key areas of concern include SB I-95 Ramps and Route 606, Route 1 & Route 606, Dan Bell Lane & Route 606, and access management for commercial entrances.
Route 1 (from Interstate 95 to Commonwealth Drive) and Route 208 (from Route 1 to Leavells Road) Corridor Study.	The US 1 and Route 208 Corridor Study will evaluate needs and improvements to US 1 and Route 208 which would be needed if improvements are made to I-95 Exit 126 and assess the impacts of these traffic related improvements on the community.
Route 2/Route 17 Business (US Route 17 to VA-3 Blue and Gray Parkway) Corridor Study	The Route 2/Route 17 Business Corridor Study will evaluate needs and improvements to Route 2/Route 17 Business from the City of Fredericksburg Line to US 17 and assess what impacts these traffic related improvements would have on the community.
Massaponax Corridor Study (Michael Baker International)	The study was initiated by the County to identify projected deficiencies on US 1, US 17 and Route 606 and to provide concepts for roadway improvements and access management to address anticipated future traffic growth. The Corridor Study was designed as a tool to advance projects in VDOT's Six-Year Construction Plan.
I-95 Exit 126 IMR and Planning Study (Kimley-Horn)	The I-95 Exit 126 IMR and Planning Study included SB I-95, NB I-95, US 1, US 17, Route 208, and Southpoint Parkway. The study included four new large developments; Southpoint Landing, Heritage Woods, Jackson Village, and Alexander Crossing. The study focuses on 2020 conditions and identified 2040 improvements and screened alternatives for existing ramp upgrades, J-ramp option and ramp upgrades, and US 1 left and right turn upgrades.

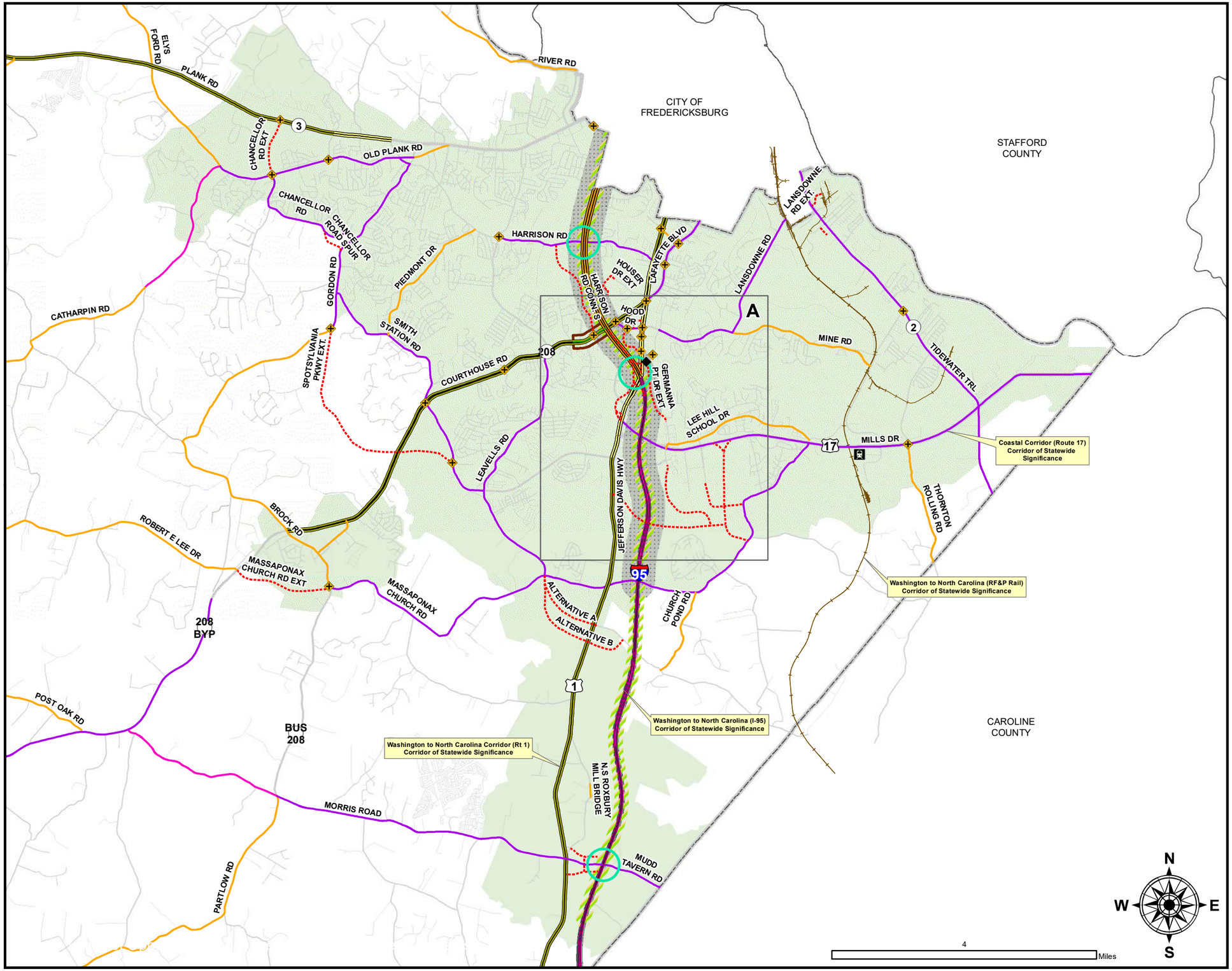
LEGEND [^]- COST PER MILE (UNLESS OTHERWISE NOTED) - SOURCE DOCUMENT IS VDOT PLANNING COST ESTIMATES - JANUARY, 2015 (SEE TRANSPORTATION APPENDIX) - AVERAGES FOR SPOTSYLVANIA REGION, PROVIDING HIGH (WORST CASE) AS OPPOSED TO LOW ESTIMATE. 3% INFLATION PER YEAR ASSUMED

VSTP = Virginia Surface Transportation Plan
CoSS = Corridor of Statewide Significance
FAMPO = Fredericksburg Area Metropolitan Planning Organization
Kimley Horn (KH) = Exit 126 Interchange Modification Report / Planning Study
PCES = VDOT Planning Cost Estimates (January, 2015)
VDOT = Virginia Department of Transportation

DRAFT

SPOTSYLVANIA COUNTY THOROUGHFARE PLAN- PRIMARY DEVELOPMENT BOUNDARY

Map Approved: DRAFT

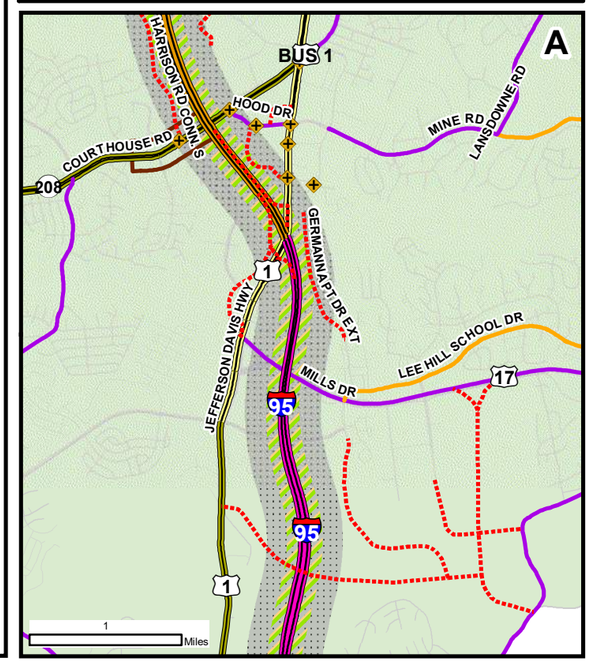


Legend

- VRE Station (Rail)
- Intersection Projects
- Interchange Projects
- 2-Lane Improvement
- 3-Lane Improvement
- 4-Lane Improvement (Divided)
- 6-Lane Improvement (Divided)
- 8-Lane Improvement (Divided)
- Interstate Lane Additions
- Interstate 95
- New Concept Facility*
- Rail Corridor
- Rt 208 Operational Improvements
- I95 Corridor ITS
- I95 Interchange Study Area**
- Primary Development Boundary

* New Concept Facilities are depicted as conceptual alignments only. Futher design and study necessary to determine accurate route.

** I95 Interchange Studies to include feasibility of Collector-distributor (CD) Lanes in both directions between Exit 130 and new access points (Harrison Road (620) & Courthouse Road (208) and include North Bound CD lanes between Route 3 and US 17 (NB) Rappahannock River Crossing project). A potential new interchange south of Exit 126 and additional Exit 126 improvements including to the Interstate Ramp. Alternative 3 (Improvements to US 1 and Southpoint Parkway), Exit 126 to US 1 ramp and signal improvements or other recommendations from the KH Interchange Modification Report and companion Planning Study.



DRAFT

SPOTSYLVANIA COUNTY THOROUGHFARE PLAN

Map Approved: DRAFT

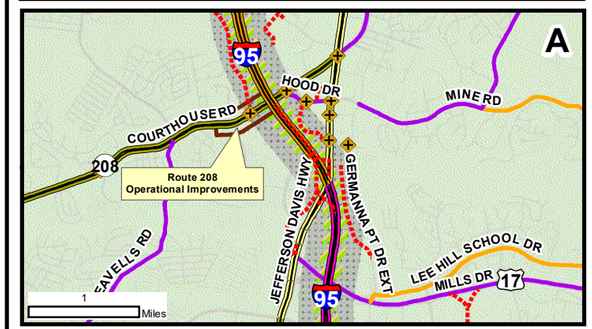
CULPEPER COUNTY
STAFFORD COUNTY
CITY OF FREDERICKSBURG
ORANGE COUNTY
CAROLINE COUNTY
LOUISA COUNTY
HANOVER COUNTY
ELYS FORD RD
PLANK RD
ORANGE PLANK RD
OLD PLANK RD
CHANCELLOR RD
RIVER RD
PIEDMONT DR
HARRISON RD
HARRISON RD COURTHOUSE
BUS 1
A
LANSDOWNE RD
TIDEWATER TRL
MINE RD
CATHARPIN RD
GORDON RD
SMITH STATION RD
SPOTSYLVANIA PKWY EXT
LEE HILL SCHOOL DR
GERMANNA PT DR EXT
LEWELLS RD
MILLS DR
THORNTON ROLLING RD
W CATHARPIN RD
ROBERT E LEE DR
BROCK RD
MASSAPONAX CHURCH RD EXT
MASSAPONAX CHURCH RD
ALTERNATIVE 3
JEFFERSON DAVIS HWY
CHURCH POND RD
POST OAK RD
PAMUNKEY RD
208 BYP
BUS 208
COURTHOUSE RD
MORRIS ROAD
N.S ROXBURY MILL BRIDGE
B
MUDD TAVERN RD
JONES POWELL RD
LAWYERS RD
MONROVIA RD
STUBBS BRIDGE RD
PARTLOW RD
ARCADIA RD
MARYE RD
LEWISTON RD
FAIRVIEW RD
522
208
1
2
3
17
95
Coastal Corridor (Route 17) Corridor of Statewide Significance
Washington to North Carolina (RF&P Rail) Corridor of Statewide Significance
Washington to North Carolina Corridor (Rt 1) Corridor of Statewide Significance
Washington to North Carolina (I-95) Corridor of Statewide Significance
N
W
E
S
8
Miles

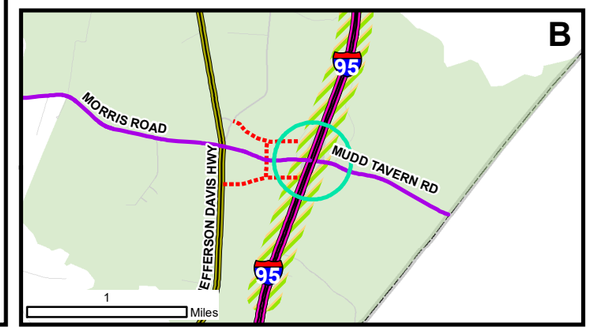
Legend

- VRE Station (Rail)
- Intersection Projects
- Interchange Projects
- 2-Lane Improvement
- 3-Lane Improvement
- 4-Lane Improvement (Divided)
- 6-Lane Improvement (Divided)
- 8-Lane Improvement (Divided)
- Interstate Lane Additions
- Interstate 95
- New Concept Facility*
- Rail Corridor
- Rt 208 Operational Improvements
- I95 Corridor ITS
- I95 Interchange Study Area**
- Primary Development Boundary

* New Concept Facilities are depicted as conceptual alignments only. Futher design and study necessary to determine accurate route.

** I95 Interchange Studies to include feasibility of Collector-distributor (CD) Lanes in both directions between Exit 130 and new access points (Harrison Road (620) & Courthouse Road (208) and include North Bound CD lanes between Route 3 and US 17 (NB) Rappahannock River Crossing project). A potential new interchange south of Exit 126 and additional Exit 126 improvements including to the Interstate Ramp. Alternative 3 (Improvements to US 1 and Southpoint Parkway), Exit 126 to US 1 ramp and signal improvements or other recommendations from the KH Interchange Modification Report and companion Planning Study.





DRAFT

Spotsylvania County VDOT Functional Classifications (2014)

Legend

Functional Classifications (2014*)

- Interstate
- Other Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Rail Corridor
- Primary Development Boundary

*This map portrays county-wide functional classifications as established by VDOT in 2014. Please refer to VDOT as source for official determination and/or potential functional classifications updates that may occur in the future.

0 1.25 2.5 5 Miles

Map Approved: _____

ORANGE COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

CAROLINE COUNTY

LOUISA COUNTY

Coastal Corridor (Route 17) Corridor of Statewide Significance

Washington to North Carolina (RF&P Rail) Corridor of Statewide Significance

Washington to North Carolina Corridor (Rt 1) Corridor of Statewide Significance

Washington to North Carolina (I-95) Corridor of Statewide Significance

ELYS FORD RD
SPOTSWOOD FURNACE RD
RIVER RD
BRAGG RD
ORANGE PLANK RD
HERNDON RD
OLD PLANK RD
HARRISON RD
CATHARPIN RD
PINEY BRANCH RD
GORDON RD
LAFAYETTE BLVD
HANSBOROUGH RD
TIDEWATER TRL
MINE RD
BENCHMARK RD
BROCK RD
MILL POND RD
W CATHARPIN RD
ROBERT E LEE DR
LEAVELLS RD
LEE HILL SCHOOL DR
MILLS DR
SMITH STATION RD
SPOTSYLVANIA PKWY
MASSAPONAX CHURCH RD
FLIPPO DR
PAMUNKEY RD
SEALS RD
208 BYP
BUS 208
LAKE ANNA PKY
HICKORY RIDGE RD
GUINEA STATION RD
JEFFERSON DAVIS HWY
LAWYERS RD
BELMONT RD
STUBBS BRIDGE RD
GRAND BROOKS RD
POST OAK RD
LANES CORNER RD
COURTHOUSE RD
TOWLES MILL RD
BLOCK HOUSE RD
MORRIS RD
SUNSET RD
HAMS FORD RD
DAYS BRIDGE RD
ZACHARY TAYLOR HWY
MONROVIA RD
BLAYDES CORNER RD
STANFIELD RD
MARYE RD
LEWISTON DICKERSON RD
EDENTON RD
WALLERS RD
FAIRVIEW RD
PARTLOW RD
BLANTON RD
ARRITT RD
MT OLIVE RD
LOG CABIN RD
522
208
95
17
2
1
3

N
W
E
S

Chapter 3A

TRAILWAYS MASTER PLAN

TRAILWAYS MASTER PLAN

Introduction

The purpose of the Trailways Master Plan (Plan) is to provide a framework around which a comprehensive system of bicycle, pedestrian, and equestrian friendly improvements can be implemented throughout the County for user safety, provision of non-motorized transportation alternatives, and recreational value. This Plan is expected to positively contribute to transportation systems (as transportation alternatives) and provision of parks and recreation amenities considerate of levels of service as established in the Public Facilities Chapter of the Comprehensive Plan. The Plan also is intended to complement existing and future land uses, economic development and tourism related goals. For the purpose of this Plan, such improvements will be collectively referred to as "trailways".

The Plan includes transportation systems improvements paired with planned road improvement projects as outlined in the Thoroughfare Plan including provision of sidewalks, shared use or multi-use paths, paved shoulders. The Plan also includes interconnected off road corridor greenway trails (varying surface types) considerate of intended user groups, location, connectivity, existing and future land uses, and potential vehicular traffic conflicts and volumes. In a number of instances, planned greenway trails and road corridor based improvements such as planned shared use paths, complement one another and have a shared alignment.

This Plan addresses trailways on public land, public rights-of-way, and private land where the trails are open to the public. This Plan identifies a number of goals, objectives, and implementation strategies that Spotsylvania County can use in the development of an integrated system of trailways. An integrated system would link the existing trailway segments within the County into a larger common network of trailways that access residential areas, state, county, and national parks, forests and wildlife management areas, significant viewsheds, entertainment, water related resources, cultural and historic resources, schools, retail outlets, commercial services, mixed-use areas, employment centers, and transportation nodes. On a larger scale they can be incorporated into a regional system of trailways, effectively allowing for inter- and intra-jurisdictional infrastructure, regional tourism, and promoting regional alternative transportation possibilities.

The Plan has been developed acknowledging that full build-out of the trailways system with all amenities will not take place immediately. This will be a flexible, living plan and will be subject to future developments and economic conditions, as the community evolves. Levels of interest, available funding, and community support factors may fluctuate over time; so may the rate at which implementation of the plan is feasible.

Plan History

As noted in Chapter 3, the Spotsylvania County Trailways Master Plan was initially adopted by the Spotsylvania County Board of Supervisors on February 22, 2011 as a standalone document. The Plan was developed initially with direction from the 2008 Comprehensive Plan, 2009 Parks and Open Space Master Plan, numerous community meetings, community survey, collaboration with

the Spotsylvania Greenways Initiative (SGI), work sessions and public hearing process. In 2011 the Virginia Chapter of the American Planning Association bestowed the 2011 Outstanding Plan Award- Plan Element upon the Plan.

In the interest of assuring the Plan does not become outdated or inconsiderate of opportunities that may arise from changes elsewhere within other elements of the Comprehensive Plan, the critical elements of the Plan were reviewed, updated, and incorporated into the Comprehensive Plan in Chapter 3A, here. Abandonment of the standalone Plan in favor of inclusion as a Comprehensive Plan element better positions it for continued monitor, pursuit, and review and update consistent with the 5-year review and update cycle. Otherwise staff has found there tends to be little impetus to update standalone plans that may become outdated or proactively amended to reflect new opportunities or routing alternatives.

Amendments between the 2011 Plan and this iteration result in an update that more harmoniously links planned greenway trails to road based improvements, reduces potential plan recommendations; potential routes that conflict with existing developments or past community input. Road based implementation has been found to be more favorable and feasible in many instances. Bicycle and pedestrian improvements also lend added support in the awarding of transportation dollars for road improvement projects. Bike/Ped improvements add strength to transportation project applications for funding such as Virginia's Smart Scale applications. Plans also lend support and basis for VDOT Project Scoping, Highway Safety Improvement Program (HSIP) Projects, County guidance on transportation projects managed by others, etc.

This update respects and upholds the many months of work and input that went into the development of the 2011 Trailways Master Plan and allows the planning process and implementation efforts to continue on without a radical shift or abandonment on prior plans and progress. This update is not intended to "reinvent the wheel". This update will play an integral role in administration of the County Design Standards Manual, specifically Article 5 where issues have been identified in the past related to required frontage improvements. This update will also better inform and influence bike/ped related recommendations for rezoning and special use permit applications.

The Code of Virginia requires the study of transportation needs and their incorporation in comprehensive plans. Section 15.2.2223 requires coordination of plan amendments that will substantially affect transportation on state controlled highways with the Virginia Department of Transportation. Following staff review and update and work sessions held with the County Transportation Committee and Planning Commission, the draft Transportation Plan was routed to the VDOT Fredericksburg District Office for review in September, 2019. Following the initial VDOT review and County submittal of revisions on December 20, 2019, the VDOT-Fredericksburg District finalized their review with no additional comments, on March 25, 2020.

Existing Plans

The Trailways Master Plan is Spotsylvania County specific however has been developed to "fit" within the scope of larger regional, state or national scale trail routes that involve Spotsylvania

County. This Plan was created in consideration of other existing plans to ensure that it is consistent and harmonious with those other important planning efforts. The result is a Plan that is intended to complement larger regional, state, and nationally significant trail systems. Specifically, as follows:

Nationally Significant

U.S. Bicycle Route 1

U.S. Bicycle Route 1 was designated by the American Association of State Highway and Transportation Officials (AASHTO) in 1982. The route runs the length of the United States eastern seaboard from Maine to Florida. It is one of the two original U.S. Bicycle Routes. The Bicycle Route also coincides with the Atlantic Coast Trail, an Adventure Cycling Association trail. In Spotsylvania County, the Bicycle Route is designated along Lee Drive, Benchmark Rd, Mills Dr, Massaponax Church Rd, Church pond Rd, Guinea Station Rd. VDOT road signage identifying the Bicycle Route designation was added along the corridor within the past five years.

The American Association of State Highway and Transportation Officials (AASHTO) recognize the segments in North Carolina and Virginia as being the only "official" segments of U.S. Bicycle Route 1.

U.S. Bicycle Route 76

It is important to recognize that the second of the original U.S. Bicycle Routes, U.S. Bicycle Route 76, passes just to the south of Spotsylvania County in Louisa County. The Bicycle Route is an east-west corridor accessing Virginia, Kentucky, and Illinois. With proper mapping and advertisement, proximity of the Bicycle Route to Spotsylvania County potentially could bring additional users into the County, resulting in an additional tourism benefit.

The U.S. Bicycle Route 76 coincides with the TransAmerica Trail, an Adventure Cycling Association trail.

East Coast Greenway (ECG)

Primary users: A multi-use path serving bicycle (road or mountain), pedestrian.

Approximate Distance: 13 Miles

Intended final surface: Asphalt shared use path

The East Coast Greenway (ECG) is a developing trail system, spanning nearly 3,000 miles as it winds its way between the State of Maine's northern boundary with Canada and Key West, Florida, linking all the major cities of the eastern seaboard. The ECG long term vision and plans include a 100% firm-surface road separated trail extending all 3,000 miles. At

present, thirty-two (32) percent of the planned greenway is now located on safe, vehicle traffic-free paths. This figure is up from 25% as reported in the 2011 Trailways Master Plan. A portion of the ECG alignment is planned to pass through Spotsylvania County. The East Coast Greenway Alliance (ECGA) is the non-profit organization spearheading the development of the ECG. Implementation of the greenway is largely accomplished at the local and regional level resulting from recognized community benefits expected to come with inclusion along the planned route. As per the ECG, "The ECG is being built by linking together locally owned and managed trails into a continuous route." Concerning why communities "buy-in" to implementation efforts, "Multi-use trails like the East Coast Greenway are an integral part of local transportation systems. They provide free recreational opportunities for all ages, encourage healthier lifestyles, and bolster local economic development."

The Virginia Department of Conservation and Recreation recognizes the importance of the ECG within the Commonwealth of Virginia and has specifically targeted development of the East Coast Greenway as part of the 2018 Virginia Outdoors Plan.

Within Spotsylvania County, implementation of the ECG has been limited. A commercial pad site located at the corner of Tidewater Trail and Bowman Drive was approved for development via site plan review in December, 2018. The project includes development of a standalone restaurant with a trail frontage improvement along Tidewater Trail. In August, 2018, 0.25 miles of right-of-way intended for future trail construction was secured along Thornton Rolling Road as part of project conditions associated with Board of Supervisors approval of a special use permit application there. This will complement efforts to establish an East Coast Greenway Auxilliary Trail. Otherwise, large scale enhancements associated with ECG conversion from road based to roadside trail are most likely to occur via additional new development and/or road widening projects as targeted by the Thoroughfare Plan including along Tidewater Trail, Mills Dr (Rt 17).

On March 5, 2020 the East Coast Greenway Alliance approved a planned route shift in the region impacting the City of Fredericksburg, Spotsylvania County, and Caroline County. This revision resulted from concerns raised amongst regional partners about the viability of the prior route specifically as it related to Lee Drive (NPS)- Connection pointe between the City of Fredericksburg and Spotsylvania County and Thornton Rolling Road, as connection to Caroline County. In Spotsylvania County, the route shift included realignment of the planned route away from Lee Drive (NPS) and to Tidewater Trail (a previously identified alignment alternative) and complement to the County's Planned Deep Run Trail. This approval followed a Statewide meeting of the East Coast Greenway Alliance held in the City of Fredericksburg on February 5, 2020. At the February 5, 2020 meeting of the Virginia East Coast Greenway (ECG) Committee in Fredericksburg, a group of local planners presented a set of proposed changes for the ECG route through the City of Fredericksburg, Spotsylvania County, and Caroline County. The proposed changes were discussed by the committee members present. Committee members who were not present at the meeting were given until February 21, 2020 to make comments on the proposed route changes.

These changes were proposed for a number of reasons:
• To better align with bike/pedestrian infrastructure plans in localities' Comprehensive Plans and prospects for road improvements (Caroline County connection)
• To route along roads with planned road widening projects and/or planned multi-use trails
• To increase the likelihood of funding and project prioritization for local multi-use trail construction projects
• To route the ECG outside of the Fredericksburg & Spotsylvania National Military Park, where user conflict between motor vehicles and bicyclists has been identified by the National Park Service as an issue along Lee Dr.

No opposition to the proposed route changes were voiced by committee members since the distribution of the presentation. A memorandum issued to Spotsylvania County on March 5, 2020 provided an official notice of changes to the ECG Route in the region. The East Coast Greenway Alliance's online mapping platform (map.greenway.org) will reflect the new route by March 31, 2020, and all future hardcopy maps produced by the Alliance will show the new route.

Virginia Significant

2018 Virginia Outdoors Plan (Va. Dept. of Conservation and Recreation)

The Virginia Outdoors Plan is the State's official document regarding land conservation, outdoor recreation and open space planning. It assists all levels of the public and private sectors to meet needs pertaining to those issues. The plan provides guidance for the protection of lands through actions of the Virginia Land Conservation Foundation (VLCF), and the plan is required in order for Virginia to take part in the federal Land and Water Conservation Fund (LWCF) program. Within Spotsylvania County, a VLCF award was granted to the County in 2011 that resulted in securing a recreational trail easement along a roughly 2-mile segment of the Virginia Central Railway Trail between Brock Road and Jackson Trail East. This easement greatly enhances the opportunity to eventually construct a significant historic portion of the planned VCR Trail. Within Spotsylvania County, both the East Coast Greenway (ECG) and Virginia Central Railway Trail have been identified as featured projects for continued implementation. The 2018 Virginia Outdoors Plan can be found **HERE**.

Virginia Birding and Wildlife Trail (Va. Dept. of Game and Inland Fisheries)

Within Virginia's 43,000 square miles of diverse natural habitat, there are 400 species of birds, 250 species of fish, 150 species of terrestrial and marine animals, 150 species of amphibians and reptiles, and a wide variety of aquatic and terrestrial invertebrates. The *Virginia Birding and Wildlife Trail* program is the first statewide program of its kind in the United States. In Virginia, three phases of the trail link wildlife viewing sites throughout the state. An estimated 1,041 visitors are using each VBWT site annually according to the *2008 Assessment of the Virginia Birding and Wildlife Trail* prepared for the Virginia Department of Game and Inland Fisheries. The study looked at the economic contribution

of the VBWT to a local economy, resulting in a statewide economic impact of $8,638,895 annually.

Spotsylvania County is part of the Piedmont Trail system of the Virginia Birding and Wildlife Trail. In all, the Piedmont area offers 13 loops including expansive grasslands, forested tracts, pineland savannahs, several large reservoirs, and an abundance of rich history and culture. Of the 13 loops within the Piedmont system, four (4) are located within Spotsylvania County; they include: Loriella Park, Ni Reservoir Recreation Area, Spotsylvania Courthouse Battlefield, and Chancellorsville Battlefield. Motts Reservoir Recreation Area, located within Spotsylvania County, but owned by the City of Fredericksburg, is also within the loop system.

Regionally Significant

2045 George Washington Region Bicycle and Pedestrian Plan

Through the Fredericksburg Area Metropolitan Planning Organization (FAMPO), the GWRC has completed and adopted a regional bicycle and pedestrian plan. The most recent iteration of the Plan recommends bicycle and pedestrian improvements within the region through 2045. This plan is part of the Constrained Long Range Plan (CLRP) and serves as a tool to direct resources toward defined, prioritized, cost-effective bicycle and pedestrian improvements. The project area encompasses the entire GWRC region including the City of Fredericksburg, Stafford County, Spotsylvania County, Caroline County, and King George County. Within a regional context, Spotsylvania County specific bicycle and pedestrian needs recommendations are primarily targeted to existing public roadways with recommendations for sidewalks and shared use paths in developed or developing areas, and shoulder improvements in more rural areas primarily located outside of the Primary Development Area of the County. The regional plan also includes the Virginia Central Railway Trail and recommends improvements to accommodate the East Coast Greenway. Recommendations from the regional bicycle and pedestrian plan have been synthesized with identified road improvement projects from the County Thoroughfare Plan, and planned greenway system resulting from the County's 2011 Trailways Master Plan. The result is an updated and refined Trailways Master Plan map for the County (located in Chapter 3A of the Comprehensive Plan). The 2045 George Washington Region Bicycle and Pedestrian Plan can be found **HERE**.

An update to the regional plan is expected to kick-off in 2021 with the Regional Bicycle and Pedestrian Advisory Committee.

County Significant

Spotsylvania County Comprehensive Plan

The Spotsylvania County Comprehensive Plan is a guide designed to encourage the most appropriate use of land, water and resources within the County consistent with the interests of the citizens. The Comprehensive Plan sets forth goals, objectives, policies and

implementation techniques that will guide the development activity within the County and promote, preserve and protect the health, safety, and general welfare of its citizens. Specifically, the Plan provides data and analysis on land use, transportation systems, housing, resource protection, public facilities and utilities. As of 2020, the Comprehensive Plan is the host location for the County Trailways Plan.

Recommendations and levels of service standards established within the Comprehensive Plan; those in the land use, transportation, and parks and recreation public facilities section, establish the warrant for a Trailways Master Plan.

Thoroughfare Plan

An element of the Comprehensive Plan, the Thoroughfare Plan identifies improvements to the road network in Spotsylvania County. Though the Thoroughfare Plan includes plans for new roadways, physical improvements to existing roadway facilities is the primary focus of the plan by volume. Improvements within the plan advocate for expanded lane widths or the addition of new lanes. Planned road improvement projects include include a bicycle and pedestrian-friendly element, whether it is the installation of shoulders, shared use paths, and/or construction of roadside sidewalks. Provision for bicycle and pedestrian accommodations are critical to ensuring improvements meet VDOT acceptance standards. Achievement of trailway implementation goals paired with Thoroughfare Plan road improvement projects results in dual benefits. Integration of roadway based projects with planned greenway trails greatly assist implementation efforts.

Enabling Legislation

To successfully implement this plan, the Spotsylvania County Planning Department requested that the County Attorney's Office identify statutes and ordinances that enable the County to plan for and pursue land acquisition or easements in order to construct and maintain trailway facilities for public use. Their research identified a number of sources of law which can provide guidance planning and implementing trailways within the County. The principal legislation granting authority for this plan is indicated below:

Virginia Open Space Land Act; Va. Code Ann. §§ 10.1-1700 – 10.1-1705:

The Virginia Open Space Land Act enables public landholding bodies to acquire land or easements for the preservation of open space and to obtain and utilize funds to develop and maintain facilities on land acquired. This land shall conform to the official comprehensive plan for the area in which the property is located. No land designated as open-space under the authority of this Act can be converted from that status unless the conversion or diversion is determined by the public body to be essential to development and growth of the region and in accordance with the region's official comprehensive plan and there is other substituted real property of equal or greater value.

Planning, Subdivision of Land and Zoning; Va. Code Ann. § 15.2-2200:

This section of the Virginia Code "encourages" local governments to improve the public health, safety, convenience and welfare of its citizens and to plan for the future development of communities to the end that transportation systems be carefully planned; that new community centers be developed with adequate highway utility, health, educational, and recreational facilities; that the needs of agriculture, industry and business be recognized in future growth; that residential areas be provided with healthy surrounding for family life; that agricultural and forestal land be preserved; and that the growth of the community be consonant with the efficient and economical use of public funds.

Comprehensive Plan to be Prepared and Adopted; Scope and Purpose: Va. Code Ann. § 15.2-2223:

This statute outlines the proper method by which a comprehensive plan is to be prepared and adopted. Every local Planning Commission is to prepare and recommend a comprehensive plan for the physical development of the territory within its jurisdiction and every governing body shall adopt a Comprehensive Plan. In preparation for the comprehensive plan, the commission shall make careful and comprehensive studies of the existing conditions and trends of growth within the locality. In conjunction with the comprehensive plan, "each locality shall develop a transportation plan that designates a system of transportation infrastructure needs and recommendations that may include the designation of new and expanded transportation facilities and that support the planned development of the territory covered by the plan and shall include, as appropriate, but not be limited to, roadways, *bicycle accommodations*, *pedestrian accommodations*, railways, bridges, waterways, airports, ports, and public transportation facilities" (emphasis added).

Legal Status of Plan; Va. Code Ann. § 15.2-2232

This section is critical to the development of a Capital Improvements Plan (CIP) and the identification of specific projects therein. This section establishes that capital projects such as a new park, public building, "feature" must be shown within the adopted comprehensive plan to exhibit substantial accordance with the local comprehensive plan. There are transportation goals, road improvement standards necessary to result in VDOT street acceptance, and parks and recreation related levels of service standards that may necessitate § 15.2-2232 considerations as the County seeks to implement plans or meet levels of service standards concerning trailways projects.

Parks, Recreation Facilities, Playgrounds, etc.; Va. Code Ann. § 15.2-1806(B):

This section of the Virginia Code established that a locality may establish, conduct, and regulate a system of hiking, biking, and horseback riding trails. Towards that end, a locality may set apart any land or buildings owned or leased by it for that purpose and can obtain licenses or permits for such use on land or buildings the locality does not own.

Streets, Sidewalks, and Public Rights-of-way Generally; Va. Code Ann. § 15.2-2001:

This statute sets out the authority of localities to maintain and update streets, sidewalks and public rights-of-way. This includes the authorization that "localities may make, improve and repair sidewalks upon all public rights-of-way and may convert sidewalks to bicycle paths."

Planned Facilities

Planned facilities include upgrades to existing and/or planned roadway right-of-ways and off-road greenway corridors. As noted above, the Plan reflects a synthesis of a number of national, state, and local plans concerning trailway improvements. The following outlines the planned improvements that when complete will result in a comprehensive network of non-motorized transportation system improvements throughout the County.

The trailways map included here in Chapter 3A may not represent all roads where bike/ped improvements may ultimately result. There may be instances throughout the County where existing roads not targeted for thoroughfare plan or regional bicycle and pedestrian plan road improvement or a greenway corridor will still warrant bicycle or pedestrian accommodation as part of required frontage improvements associated with development of land. Article 5 of the Spotsylvania County Design Standards Manual establishes bicycle and pedestrian requirements to be considered as part of site design and development. Additionally, there may be instances where sidewalk gaps, etc. exist along existing roads without larger scale improvements planned. The plan does not intend to dismiss the importance of these improvements to enhance connectivity, bicycle or pedestrian safety, and enhanced accessibility and walkability within the community. The attached map is intended to serve as a guide for implementation of bicycle and pedestrian infrastructure tied to major roadway right-of-way improvement projects and establishment of major greenway corridors that traverse the County.

Roadway Right-of-Way Improvements

Roadway right-of-way bicycle and pedestrian-friendly improvements that have been identified in this plan include the installation of new sidewalks, parallel to road multi-use (or shared use) paths, shoulder improvements, shared road signage improvements, or a combination. Such improvements are intended to promote bicycle and pedestrian activity and connectivity throughout the County and to make existing bicycle and pedestrian activity safer than current conditions for all users. The roadway based improvements identified in this plan include all voting districts of the County and offer residents and outside tourists the ability to travel more safely, resulting in better roadway conditions for bicycles and pedestrians and motor vehicles alike. Recommended improvements tied to roadways are primarily based in Thoroughfare Plan improvement projects as well as the George Washington Region Bicycle and Pedestrian Plan. Improvements also consider the East Coast Greenway and US 1 Bike Route. Opportunities for planned road improvement based bicycle and pedestrian improvements to help implement continuation of greenway corridors have been identified within the plan.

Greenway Improvements

Greenways serve a variety of functions including recreation, transportation, wildlife habitat, water quality protection, flood hazard mitigation, aquifer recharge, erosion prevention, property value enhancement and scenic beauty. Greenway Trails are located in areas of open space, usually linear, that connect and protect various natural, recreational, and historic or cultural resources via features such as streams, ridges, utility easements, or abandoned roads or railroads. Greenways can also serve to connect residential areas with employment, entertainment, commercial retail and services and also act as potential evacuation routes if need be. In the environment, greenways connect natural habitat areas, allowing for the movement of species and promoting healthy ecosystems. Greenway Trails can be publicly or privately owned but for the purposes of this plan would be open for public use and enjoyment. Depending on the identified classification of the trail, greenway trails may accommodate such things as hiking, biking, jogging, roller blade, or equestrian uses or a combination of them. Winter uses for the corridors might also include snowshoeing or cross-country skiing.

Depending on the intended user, environmental conditions and funding, greenway trails may be surfaced with soil, sand, clay, stone dust, woodchip or asphalt materials.

Due to existing land use and development constraints in a number of areas, planned greenway trails such as the Virginia Central Railway Trail include a combination of greenway trail sections (away from road) and sections along the road in the form of a multi-use path. Considerate of past development encroachments upon sections of the corridor and expressed citizen input and concerns, the plan recognizes instances where bypass routes are more favorable paired with planned road widening projects nearby. For the Virginia Central Trail, bypass alternatives were identified as part of the Virginia Central Railway Trail Design Guidelines (October, 2012) prepared for the Fredericksburg Area Metropolitan Organization (FAMPO) and Spotsylvania County by Kimley-Horn and Associates, Inc.

Trailways Master Plan Map (See Map(s))

Based on Geographical Information Systems calculations, in all approximately 100 miles of greenway trails have been identified. This calculated number represents the sum of approximate concept level corridor lengths only and does not consider ancillary spurs from trail heads, from subdivisions, from park facilities, cost based deviations, land acquisition or easement availability and variability, design and construction deviations as may be necessary. The calculated value also avoids assuming the inventory of trail spurs that may be developed to access overlooks and other points of access or interest. Ancillary spurs meant to access the main trail corridors or provide access to points of interest are expected to be identified and planned for during the implementation phase of this plan as particular trailway corridors are studied and engineered for construction. In total therefore it is expected that the greenway plan presented here represents over 100 miles of new trail facilities, significantly decreasing the current and future trailway level of service deficit as outlined in the Parks and Recreation Public Facilities Element found in Chapter 4.

The inventory of planned greenways was developed with extensive community input and consideration of trails deficit as outlined in the adopted Parks and Recreation Public Facilities Section of the Comprehensive Plan. See the Spotsylvania County Trailways master plan map for a complete view of the planned greenway system. Please note that this map plans for the general location of planned greenway corridors only and does not specify any one particular alignment or exact location, except where greenways run contiguous to road corridor based improvements (resulting from road widening projects, etc.). Descriptions of the county-wide greenway bicycle, pedestrian, and equestrian friendly improvements identified within this plan can be found below.

The Spotsylvania Battlefields Loop

The Virginia Central Rail Trail, along with the Ni River Corridor Trail, has been envisioned to be part of a Spotsylvania Battlefields Loop trail system accessed by the East Coast Greenway. The northern portion of the "loop" would feed off of the Virginia Central Railway Trail whose connection to the East Coast Greenway occurs within the City of Fredericksburg. The northern connection will ultimately provide access to both the Fredericksburg Battlefield and Chancellorsville Battlefield to the west prior to connecting with the proposed Ni River Corridor Trail that will run back to the southeast. The Ni River Trail would then provide opportunity for access to the Spotsylvania Courthouse Battlefield before exiting the County into Caroline County en route to the Stonewall Jackson Shrine there. This would be the south end connection to the East Coast Greenway, finishing the "Battlefield Loop". For users who choose to continue west on the Virginia Central Trail they will be able to access the Wilderness Battlefield and Orange County.

A spur off of the East Coast Greenway, the trail loop is envisioned to promote eco and historic tourism throughout the County, taking advantage of the many historic, recreational, and natural resources that it would access.

Potomac, Fredericksburg & Piedmont Railroad (Virginia Central Railway (VCR)) Trail, VCR Auxiliary Trail

Primary users: A multi-use path serving bicycle (road or mountain), pedestrian, and inline skating, with equestrian friendly facilities sharing a western portion the corridor running parallel to the bicycle/ pedestrian friendly trail.

Approximate Distance: Virginia Central Railway Trail: 17.1 Miles (w/ 2.1 miles existing and approximately 2 additional miles in recreational trail easement); VCR Auxiliary Trail: 2 miles

Intended final surface: Mix of asphalt sections and stone dust sections. As part of the Spotsylvania Battlefield Loop system, eventually upgrade to all asphalt or solid pervious from City of Fredericksburg line to intersection with the Ni River Trail. For multi-use pathway with equestrian users to the west as noted in the Trailways Master Plan Map. West of the Ni River Trail intersection, packed soil alongside a stone dust, asphalt, or solid pervious trail may be used. The VCR Auxiliary Trail is intended as an asphalt shared use path and considered the most viable short term option to cross Interstate 95 paired with the planned widening of Harrison Road.

Historical Importance

The Potomac, Fredericksburg, & Piedmont Railroad (PF&P RR) operated 38 miles of three (3) foot gauge railroad between Fredericksburg (with a connection to the Richmond, Fredericksburg, & Potomac Railroad) and Orange County (with a connection to the Orange & Alexandria Railroad). Its predecessor was the standard gauge Fredericksburg and Gordonsville Railroad that was started shortly after the Civil War and built 17 miles of line from Fredericksburg to Parker. The line failed and was sold under foreclosure to become the Fredericksburg, Orange, & Charlottesville Railroad which also failed in 1874. The line was converted to narrow gauge and completed from Parker to Orange in 1878 as the PF&P RR.

Image 1: Developed portion of the VCR Trail between Salem Church Road and Gordon Road in use.

The PF&P RR operated as narrow gauge until after World War I, was sold under foreclosure in 1925 and reorganized as the Orange & Fredericksburg Railroad. In 1926 the line was standard-gauged and the name changed to the Virginia Central Railway (VCR), the second railroad to use that name. In 1930 the Virginia Central Railway projected eastward from Fredericksburg and along the south bank of the Rappahannock River to its mouth near the Chesapeake Bay where a port was to be developed. Construction of the line was never started. In 1938 the entire line was abandoned except for a two-mile segment in Fredericksburg that lasted as late as 1983.

Today the rail lines have been removed but much of the existing rail bed exists throughout Spotsylvania County. In the years following the VCR's abandonment, pieces of the corridor were gradually "carved up" and ended up in public and private ownership. A number of linear sections of the corridor still exist, owned by local Home Owners Associations, private property owners, and some still under public control. The County recognized the benefit of utilizing the VCR corridor for the development of a linear greenway trail in the 2002 Comprehensive Plan. The County has been able to successfully develop a portion of the corridor as a greenway trail connecting Salem Church Road to Gordon Road that is in use today. A Virginia Land Conservation Fund application was made and award was granted to the County in 2011 that resulted in securing a recreational trail easement along a roughly 2-mile segment of the Virginia Central Railway Trail between Brock Road and Jackson Trail East. This easement greatly enhances the opportunity to eventually construct a significant historic portion of the planned VCR Trail. The Fredericksburg Area Metropolitan Planning Organization (FAMPO), in collaboration with Spotsylvania County secured Congestion Mitigation and Air Quality funds to study the design and alignment of the VCR Trail in 2012. Roadway crossing and frontage improvements associated with VDOT and private development projects are expected to enhance the VCR Trail within the planning period, extending it eastward from its current termination point at Salem Church Road.

Though the ultimate goal would be to continue development of the trail along the historic alignment of the VCR, in instances where existing development and/or the grant of easement for use as a trailway along segments of the historic alignment of the VCR Corridor becomes

problematic, alternate alignments, or bypasses are recognized in order to ensure continued progress in the development of this important regional trailway. For instance, at present, eastward extension of the VCR Trail paired with planned Harrison Road widening and Interstate 95 bridge replacement projects appears to be the most viable and cost effective means to cross Interstate 95 with fewest property impacts in the short term, resulting in identification of the VCR Auxiliary Trail as a viable means to bridge Interstate 95 and close the gap between the Spotsylvania County and City of Fredericksburg portions of the greenway trail. The Trailways Master Plan Map has not removed the opportunity to pursue development of the historic rail bed alignment leading up to the base of the Interstate north of Harrison Road. There remains potential to pursue easements and construction along the historic railbed in the area of Interstate 95 but this appears to be a long term option requiring prioritization and a commitment of funds specifically oriented at recreational trail development and a new bicycle/ pedestrian bridge or tunnel through the Interstate 95 right-of-way. The Spotsylvania County Board of Supervisors supported maintaining the historic rail alignment within plans on July 9, 2019 as part of a policy discussion associated with the Hazel Run Bridge Crossing and Virginia Central Trail segment east of Interstate 95.

Plans for the VCR Trail are recognized in the 2045 George Washington Region Bicycle and Pedestrian Plan and the 2018 Virginia Outdoors Plan by the Virginia Department of Conservation and Recreation.

Ni River Trail

Primary users: Bicycle (road or mountain), pedestrian, eventually inline skating. Equestrian use running parallel to the bicycle/ pedestrian friendly trail between the PONI Connector and Todd's Tavern Connector.

Approximate Distance: 11 Miles

Intended final surface: Mix of asphalt sections and stone dust sections. Eventually upgrade to all asphalt or solid pervious. Adjacent to the trail for bicycle and pedestrian users, a parallel packed soil alignment is appropriate for equestrian use between the PONI Connector and Todd's Tavern Connector.

Development of the Ni River Trail acts as the second leg; the southern leg, of the Spotsylvania Battlefields Loop extending to the southeast along the river from the Virginia Central Rail Trail to the Caroline County line where it passes the Stonewall Jackson Shrine. The Ni River Trail is the southern connector to the East Coast Greenway. The connection occurs in Caroline County.

Along the Ni River between the Virginia Central Railroad Trail and Caroline County line exist a number of attractions for users, they include but are not limited to: Chancellorsville Battlefield, Ni Reservoir Recreation Area, Spotsylvania Courthouse Battlefield, Patriot Park. The corridor is also within relatively close proximity to the Historic Courthouse District and Thornburg area.

Image 2: A "blank slate"- natural beauty along the Ni River.

Unlike the Virginia Central Railway Trail that benefits from a relatively intact railbed corridor, the Ni River corridor offers more of a “blank slate” and will require the development of a greenway trail through terrain that, in many cases has been untouched by development. The corridor offers much in terms of natural beauty. Mostly forested or agricultural with larger lot parcels along it, the development intensity along the Ni River corridor is generally less than along the VCR.

The establishment of this greenway corridor trail will be based on the successful attainment of trailway easements along the corridor and implementation of road corridor based improvements in a number of areas. The actual alignment of the trailway along the corridor is expected to occur naturally as easements are negotiated and granted. Here too, the County Utilities Department is considering the acquisition of easements for extension of public utilities along portions of the Ni River. This presents an opportunity to combine the utility and trail projects, with a cost savings, to extend the County’s Ni River Trail Project.

Since the trail initially appeared in the 2011 Trailways Master Plan, the Spotsylvania Greenways Initiative (SGI) has secured an easement and constructed a natural surface Phase 1 segment of the Ni River Trail extending from Route 1 and towards Massaponax Church Road and Patriot Park. Remaining easements and additional funds will be required to secure the complete connection to Patriot Park and upgrade the trail infrastructure.

A portion of the Ni River Trail was also secured with the approval of Fortune’s Landing residential community at the corner of Piney Branch and Catharpin Rd. Fortune’s Landing was approved through rezoning in 2013. As part of that project the applicant has constructed a multi-use path along the Piney Branch Rd frontage and granted right-of-way for future trail extension along the Catharpin Rd frontage. Development of a trail connection between the Fortune’s Landing special use park and trail, and a future park site known as the “Hilldrup Tract” is supported by the Parks and Recreation section of the Comprehensive Plan public facilities element.

Deep Run Spur

> ***"The attack on Hill's left was repulsed by the artillery on that part of the line, against which the enemy directed a hot fire from twenty-four guns. One brigade advanced up Deep Run, sheltered by its banks from our batteries, but was charged and put to flight by the Sixteenth North Carolina, of Pender's brigade, assisted by the Fifty-fourth and Fifty-seventh North Carolina, of Law's brigade, Hood's division"***
>
> -- Robert E. Lee, General
> December 1862

Primary Users: bicycle (road or mountain), pedestrian, inline skating

Approximate Distance: 0.5 to 1 Mile

Intended final surface: Asphalt or solid pervious.

Image 3: Deep Run Trailhead area viewing the Rappahannock River

The convergence of Deep Run and the Rappahannock River in Spotsylvania County just behind the Bowman Center off Route 17, Tidewater Trail played an important part in the December, 1862 Battle of Fredericksburg. Deep Run was the site of the southernmost point of the crossing of the Rappahannock River by Union Troops during the battle who constructed two pontoon bridges there. As a significant part of the battle, to local history and one also containing both State and National Significance, the historic importance of the Deep Run area has been left relatively untapped and appears forgotten. Deep Run was the Union path into the Battle at Slaughter Pen Farm.

The Deep Run Spur offers the ability to expand upon the region's civil war heritage and tourism and to expand interpretive displays associated with the local civil war battles. Development of a greenway trail within close proximity to Deep Run offers a number of exciting opportunities including the establishment of a trailhead or special use park on existing County property fronting the river. The trail would increase access opportunities to waterfront areas as advocated by the Comprehensive Plan.

Image 4: Existing unused crushed stone access road between the Bowman Center and Rappahannock River at Deep Run.

Intended to start at a trailhead at the Rappahannock River, the Deep Run Spur, when ultimately completed, would generally follow Deep Run before climbing terrain and coming to the recently designated National Register of Historic Places Sylvania Plant and navigating the Mixed Use area there. The trail would then run along Tidewater Trail in conjunction with the planned East Coast Greenway Route.

Massaponax Creek Trail

Primary Users: Bicycle (Mountain, Road appropriate in sections), pedestrian, inline skating (appropriate in sections).

Approximate Distance: 13.5 Miles

Intended final surface: Variable natural and stone dust trailway with asphalt segments

Image 5: Existing trailway network along Massaponax Creek off Courthouse Road.

Image 6: Installation of new sewer line along the Massaponax Corridor establishing a linear route and opportunities to pursue trailway development.

The Massaponax Creek Trail is meant to connect the East Coast Greenway and Spotsylvania Avenue Connector Trail in the Lee Hill area to the Virginia Central Rail Trail, extending existing trailway infrastructure in place alongside the Creek associated with the Estates at Breckenridge where an asphalt trailway and public parking area exist off Courthouse Road, and Loriella Park. The trail corridor has a number of points of interest, they include: Virginia Central Rail Trail and the larger Spotsylvania Battlefields Loop system; Loriella Park; Germanna Community College via Spotsylvania Avenue Connector, the East Coast Greenway.

The Spotsylvania County Utilities Department has already secured a trailway easement along with the installation of a new sewer line between Route 673, Piedmont Drive and Route 208, Courthouse Road (see Figure 13). Prior sewer line installation projects along Massaponax Creek, southeast of Route 208, Courthouse Road only have underground utility easements in place and trailway easements would need to be pursued in order to establish the trail linkage to the Spotsylvania Avenue Connector Trail in the Lee Hill area.

A number of roadway crossings will have to be considered while developing this trailway corridor to ensure safety of users. The trailway itself is expected to be of varying surface considering location and existing environmental features. Development of much of the trail is expected to occur within the RPA along Massaponax Creek though a section extending from the East Coast Greenway to the Spotsylvania Avenue Connector would be paved. Future users will find the corridor to be generally natural and forested with commercial and residential development interspersed along the route. Located within the heart of the Primary Settlement District, the corridor will have the ability to serve many nearby housing developments within a five-minute walk or approximately ¼ mile pedestrian shed or walkable catchment area.

East Coast Greenway Auxiliary Trail

Primary Users: Bicycle and Pedestrian

Approximate Distance: 0.5 to 1 Mile

Intended final surface: Asphalt or solid pervious

The East Coast Greenway Auxiliary Trail is meant to provide a direct connection between the East Coast Greenway and the Spotsylvania County VRE station and mixed-use area utilizing Crossroads Parkway and a new overland connector to Thornton Rolling Rd within the Primary Development Boundary.

Spotsylvania Avenue Connector

Primary Users: Bicycle (Road or Mountain), pedestrian, inline skating

Approximate Distance: 1 Mile

Intended final surface: Asphalt or solid pervious

Born from the Massaponax Corridor Study that is referenced in the Transportation Element; Chapter 3, and identified within the County Thoroughfare Plan, the Spotsylvania Avenue Connector Trail is will connect the commercial, lodging, employment center uses centered on Spotsylvania Avenue, and Germanna Community College and surrounding residential developments in the Lee Hill area off Germanna Drive. This connector trail would intersect one proposed to follow Massaponax Creek from the Lee Hill area, extending northward to connect with the Virginia Central Rail Trail. It is expected to be developed as part of the Spotsylvania Avenue/ Germanna Pt Drive Connector Road.

Image 7: Existing asphalt surface Lee Hill Office Complex Trail system

The area between the termination point of the existing Spotsylvania Avenue and Germanna College is undeveloped and forested with wetlands present, offering qualities consistent with a natural greenway trail. Existing trail infrastructure behind the Lee Hill Office Buildings along the edge of stormwater management ponds there should be explored to be tied into the Spotsylvania Avenue Connector Trail. The ponds are active with wildlife for nature interest with geese and a number turtle's witnessed upon visiting the site.

The trailway is in close proximity to a number of Fredericksburg Regional Transit stops and transfer points including routes F2, F3, S1, S4 and S5.

Po River Trail (incl. Norton Prong)

Primary Users: Bicycle (mountain), pedestrian. Equestrian uses running parallel to the bicycle/ pedestrian friendly trail between PONI Connector and Todd's Tavern Spur.

Approximate Distance: 20 Miles

Intended final surface: Clear cut packed/ stabilized soil pathway

The 2008 Spotsylvania Comprehensive Plan initially advocated for the development of walking/ biking trails along the Po River in the Jackson Gateway, Rural, and Agricultural/ Forestal development districts.

The Po River trail is planned to be bookended by two trail head facilities. The easternmost trail head of the Po River Trail for the purpose of this plan is identified as Jackson Gateway South, located in a mixed-use or employment center area as defined by the future land use map. To the west, the Todd's Tavern Spur trail head has been identified. The Po River Trail is intended to be developed as a multi-use greenway trail, serving bicycle, pedestrian, and equestrian users.

Image 8: Example of a side by side bike and pedestrian-friendly and equestrian greenway trail at Lake Anna State Park. This is similar to that proposed along the Po River.

The Po River Trail is planned to connect with the Lake Anna State Park Connector Trail via the Todd's Tavern Spur. The equestrian character of this and other greenways within rural portions of the County are intended to complement and enhance the rural agricultural and forestal land uses outside of the Primary Development Boundary, consistent with land use descriptions.

The Po River and Lake Anna Connector system of trails are integrated into other planned greenways within Spotsylvania County with access to the PONI Connector, the Virginia Central Rail Trail and Ni River Trail. Additional access can be gained through bicycle and pedestrian-friendly roadway improvements as outlined in this plan. In addition to potential horse friendly trail facilities along the western reaches of the Virginia Central Corridor, the PONI Connector, Lake Anna State Park Connector, and portion of the Ni River Trail, the Po River Trail is planned to greatly increase the equestrian trail miles within Spotsylvania County and make Spotsylvania County a horse enthusiast destination for trail riding, and spin-off economic benefits associated with tourism.

Currently there exists no preferred alignment along the Po River though frequent bridge crossings are discouraged due to additional costs. The actual alignment of the greenway trail along the corridor is expected to occur naturally as development occurs, public land acquisition, road improvement projects are implemented, easements are negotiated and granted.

PONI Connector Trail

Primary Users: Bicycle (mountain), pedestrian, equestrian running parallel to the bicycle/ pedestrian friendly trail

Approximate Distance: 3 Miles

Intended final surface: Stone dust with parallel packed/ stabilized soils for equestrian users

The PONI Connector Trail is envisioned to connect the Po River Trail and Ni River Trail by use of an existing overhead utility easement corridor.

The planned connector also will result in the creation of a secondary trail loop, one that is unique to and totally contained within Spotsylvania County. The secondary loop would result in a trail network that utilizes sections of the Ni River Trail, Virginia Central Rail Trail, Lake Anna State Park Connector Trail, Todd's Tavern Spur and the Po River Trail.

The PONI Connector might be thought of as the "Pony" Connector Trail as it connects identified equestrian sections along the multi-use Ni River Trail to the multi-use, equestrian-oriented Po River Trail.

Lake Anna State Park Connector Trail (LASP), Todd's Tavern Spur and Connector

Intended Users: Equestrian running parallel to the bicycle (mountain)/ pedestrian friendly trail

Approximate Distance: LASP: 9 Miles; Todd's Tavern Spur: 6.3 Miles; Todd's Tavern Connector: 1.5 Miles

Intended final surface: Natural Surface packed/ stabilized soils or stone dust.

Image 9: Example from Lake Anna State Park of an equestrian trail.

The Lake Anna State Park Connector Trail has been envisioned to create a link between existing equestrian trails already in place at Lake Anna State Park and an equestrian oriented loop through western and central Spotsylvania County outside of the Primary Development Boundary. The equestrian network would effectively make Lake Anna State Park the southern-most trail head location for equestrian users. When approached during development of the Plan, the State Park expressed interest in the development of such a trail system.

Though subject to deviation, the Connector Trail is envisioned to utilize an existing transmission line easement corridor stretching northward from a trail head, existing trailways and equestrian facilities located at Lake Anna State Park, to intersect with the Po River Trail and the Virginia Central Rail Trail further to the north. A multi-use spur trail and connector, also utilizing existing utility

easements, would access the Todd's Tavern Area, creating a second trail head location for equestrian, bicycle, and pedestrians to access the Po River Trailway and Lake Anna State Park Equestrian Connector Trail.

Significant recreational trail easements are expected to be granted resulting from conditions associated with the April, 2019 approval of a large solar energy facility in western Spotsylvania County. Once secured, the site will include easements for the convergence points of the Todd's Tavern Spur, Po River Trail, Lake Anna State Park Connector, and a small portion of the Virginia Central Railway Trail along the old rail bed. Lengthy easements for segments of the Lake Anna State Park Connector and Todd's Tavern Spur are also expected.

Trail Heads

For the purpose of this plan a trail head can be considered a centralized location along the trail network where users can meet up embarking on a trail ride, or after the ride is complete. Though access, amenities and parking areas are intended to be scattered throughout the greater system of trailways throughout the County, at trail heads you may find enhanced trail amenities above and beyond those you may find along points in between. Trail heads should include and are not limited to public access points to the trail system, parking areas, enhanced signage and availability for bicycle parking, or equestrian hitching posts where appropriate, public restroom facilities. The general location for a number of trail heads have been recommended throughout the trailway system and appear in the Trailways Master Plan map.

If future, more detailed studies recognize the need for additional or modified locations for trail heads, this plan should be considered advisory. As land is acquired and specific trailway implementation issues are addressed, this portion of the plan will need to be flexible in order to execute the goals and objectives listed previously in the document.

Major Trail Heads

A major trail head location can be thought of as a site where parking, access, and basic conveniences are provided and complemented by higher population densities and commercial/ retail activities. These are also excellent locations to establish links between bicycle and pedestrian facilities and mass transit options including FRED Bus and potential VRE services. Most major trail heads are planned to be located within designated mixed-use areas or employment center locations as identified in the Comprehensive Plan Future Land Use Element. These are areas in the County intended for higher density development with a mix of uses where people can "live, work, shop, and play". Alternative modes of transportation are also desired within the mixed-use areas to encourage pedestrian access and discourage automobile reliance. Accommodating higher density housing, mixed-use areas serving also as trailhead locations can provide the trail system large supply of trailway facility users. As a local point of activity, trail heads provide nodes of interest for residents and tourists who may also use the trailhead areas to frequent nearby entertainment, recreation, commercial retail or services, restaurants, hotels, places of employment resulting in a mutual benefit between the trailway user and private industry. They are also intended to be great locations from which to organize and implement

special trailway system based events such as organized bike rides, volunteer day events, educational events or promotions.

Minor Trail Heads

Minor trail head locations are planned to provide the same level of basic services to trailway users but due to geographic location, future land use potential and existing development patterns and population densities, access to a variety of nearby commercial/ retail establishments will be far less likely. These locations will be much more rural in character.

In all, thirteen (13) locations have been identified throughout the County. A fourteenth (14th) location, already existing at Lake Anna State Park, has also been identified as a complement for bicycle, pedestrian, and equestrian users. Under control by the Virginia Department of Conservation and Recreation (DCR), the trail head at Lake Anna State Park has been recognized as a contributing piece of the overall planned network and is referenced only.

General trail head locations are symbolized in the Trailways Master Plan Map. Descriptions are in Table 1 below:

Table 1: Trail Heads

Name	General Location	Voting District	Interest
Elys Ford Rd	Elys Ford Rd/ Rappahannock River/ Hunting Run Reservoir	Chancellor	public boat ramps, fishing, Rappahannock river access, Hunting Run Reservoir access, scenic/ natural/ historic
Courthouse District	Spotsylvania Courthouse Mixed Use Area, Spotsylvania Courthouse Historic District	Berkeley/ Livingston District	Spotsylvania Historic District, County government center, Spotsylvania Courthouse Battlefield, Spotsylvania Courthouse Village and mixed-use area
Lane Anna Area	Route 208, Courthouse Road at Lake Anna	Livingston District	Lake Anna, Lake Anna marina's, Lake Anna State Park and Connector Trail, mixed-use area
Jackson Gateway North	Massaponax Church Rd., Jefferson Davis Hwy., Ni River	Berkeley District	Ni River, Patriot Park, mixed-use area, employment center, Ni River Trail
Jackson Gateway South	Po River, Morris Rd., Thornburg	Berkeley District	Thornburg, mixed-use Area, employment center, Po River, Po River Trail
Bowman Center	Rappahannock River, Deep Run, Bowman Center, Tidewater Trail	Lee Hill District	Potential site for public boat ramp/ water-side park, fishing, Rappahannock River access, scenic/ natural, Civil War historic interpretation, East Coast Greenway, Deep Run Spur, industrial heritage, mixed-use area, employment center
New Post	Mills Dr., Tidewater Trail, Benchmark Rd., Jim Morris Rd., Massaponax Church Rd.	Lee Hill District	VRE station, mixed-use area, employment center, East Coast Greenway, Massaponax Creek Trail
Virginia Central East	Harrison Rd., Salem Church Rd., Virginia Central Railway Trail	Salem/ Battlefield District	Virginia Central Railway Trail, VCR Auxiliary Trail, mixed-use area, Harrison Rd Park
Virginia Central West	Orange Plank Rd.	Livingston/ Chancellor District	Virginia Central Railway Trail, Wilderness Battlefield, LASP Connector
Spotsylvania Medical Center	Jefferson Davis Hwy., Spotsylvania Pkwy., Mills Drive	Lee Hill/ Berkeley District	Spotsylvania Regional Medical Center, employment center, mixed-use area, Massaponax Creek Trail, Spotsylvania Avenue Connector
Lake Anna State Park	Lake Anna State Park	Livingston District	Lake Anna State Park, Lake Anna, LASP Connector
Ni Reservoir North End	Ni Reservoir & Park, Catharpin Rd.	Livingston/ Chancellor District	Virginia Central Railway Trail, Ni River Trail, Jackson Trail East, Chancellorsville Battlefield, Ni Reservoir & Park
Todd's Tavern	Todd's Tavern, Brock Rd., Catharpin Rd., Po River	Livingston District	Todd's Tavern Spur, Todd's Tavern Connector, Po River Trail (incl. Norton Prong), Po River, LASP Connector

Greenway System Design Guidelines

The following greenway system design standards have been provided with the assistance of a Million Mile Greenway (MMG) Community Technical Grant. The grant award provided technical services and design assistance by Photoscience Geospatial Solutions to the Spotsylvania Greenway Initiative (SGI) and Spotsylvania County, resulting in recommended system-wide trailway design standards specific to intended users. These standards should be considered when looking to construct portions of planned trailways or trail head facilities.

With consideration of the intended user(s) and type of trailway to be constructed, trail bases and surfaces should be constructed consistent with the *Design Standards Manual (Article 5- Streets, Parking, and Driveways)*.

Trail Design Guidelines & Sections

Trailhead Design

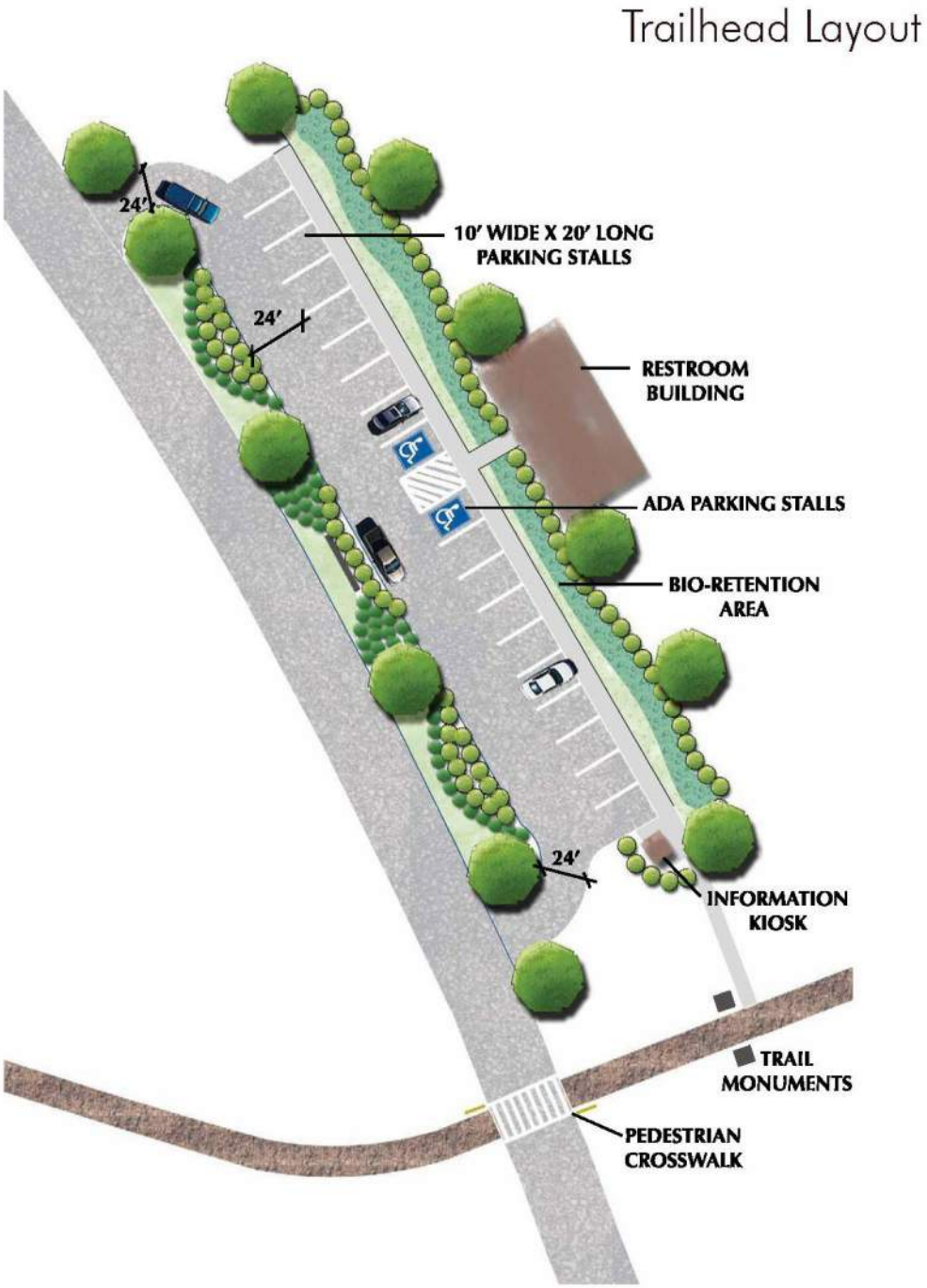
Restrooms:
Located at each trailhead, these ADA accessible restrooms will provide necessary amenities for trail users. The use of sustainable building practices will ensure a low cost of maintenance and operation.

Porous Paving Parking Lot:
Proposed parking lots will be constructed using porous pavement surfaces to help preserve the water quality.

Pedestrian Crosswalks:
High visibility pedestrian crosswalks will be used at all street crossings. Flashing warning signals are proposed to maximize safety for trail users.

Bioretention Areas:
Adjacent to each parking lot and restroom building, bioretention areas will provide a first filter flush of stormwater runoff from paved impervious surfaces.In addition to the use of pervious surface parking lots, the bioretention areas will preserve the water quality of stream corridors.

Trail-Head Signage and Information Kiosks:
Appropriate user-friendly signage should be used throughout the length of the trail and especially near each trailhead. Covered wooden kiosks displaying trail information and recent news, as well as granite or wooden signs showing trail direction will help maximize the trail experience.


Trailhead Layout
24'
10' WIDE X 20' LONG
PARKING STALLS
24'
RESTROOM
BUILDING
ADA PARKING STALLS
BIO-RETENTION
AREA
24'
INFORMATION
KIOSK
TRAIL
MONUMENTS
PEDESTRIAN
CROSSWALK

Equestrian trails will complement the rural character of Spotsylvania County and add yet another layer of recreational enjoyment.

Equestrian Trails

Typical Features and Materials

Typical Features

Trail Width:	Single track, equestrian only = 4' to 5' Double track, equestrian only = 6' to 8' Shared use path, single tread = 10' to 12'
Trail Clearance:	10' minimum overhead ceiling, 12' preferred
Trail Surface:	Crushed Stone, Wood Mulch, Compacted Earth
Trail Grades:	Varies Depending on Level (see hiking trails)
Trail Signage:	Follow United States Forest Service Standards

Design Principle

Construction of equestrian trails with hiking and multiuse is encouraged wherever there is adequate width for coexistence of these facilities. Hiking trails are particularly compatible with such use and are capable of sharing the same tread with equestrian traffic, granting they have proper sight distance and ample passing room for all users. Multiuse trails, however, as designed primarily for pedestrians and bicyclists, are generally preferred to have more considerable width and a lower traffic volume to be compatible as a horseback route. Wherever width allows in the greenway corridor, it is highly recommended that these uses be separated into multiple treads, thereby keeping conflicts minimal. Trail signage should be provided to make all users aware of proper yielding to other traffic.

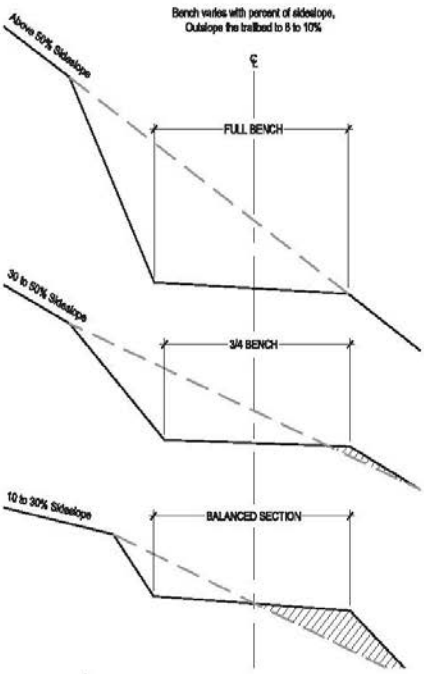
Typical Section

Scenic Hiking Trails

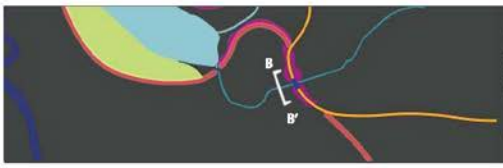
Typical Features and Materials

Typical Features

Trail Width:	Strenuous = 18" to 30"
	Moderate = 24" to 36"
	Accessible = 36" to 60"
Trail Surface:	Materials - Crushed Stone, Wood Mulch
Trail Edges:	Stacked Stone or Heavy Wood Timber
Trail Grades:	Varies Depending on Level (see hiking trails)
Trail Signage:	Follow National Park Service Standards



Typical Section



Stream corridors are desirable locations for trails and greenways; however, ecologically compatible trail standards should be utilized to ensure minimal impacts to the natural hydrologic process.

Stream Corridor Trails

Typical Features and Materials

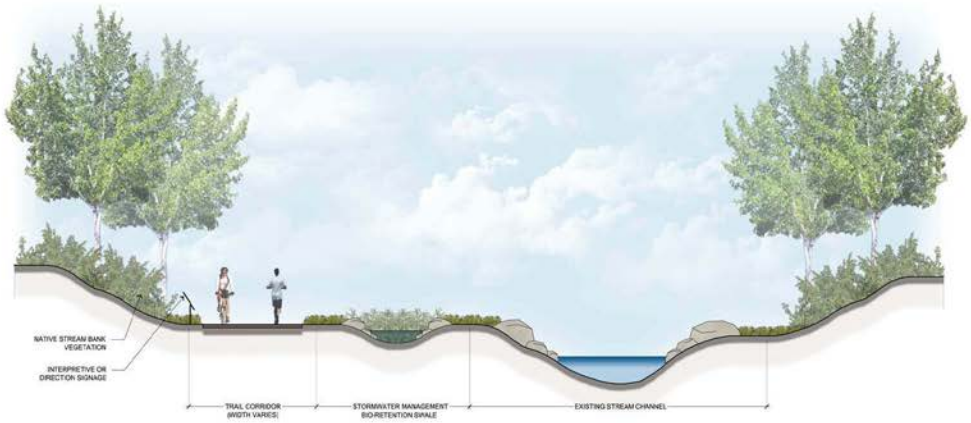
Typical Features

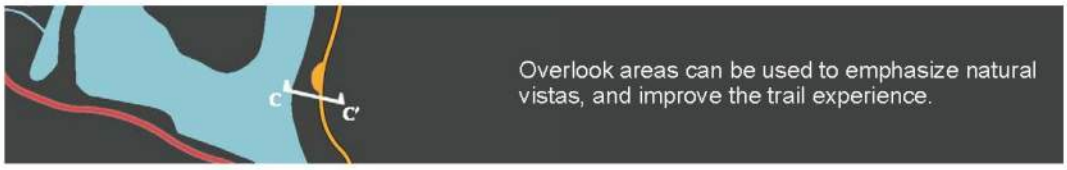
Trail Width:	Varies Depending on Level (see hiking trails)
Trail Surface:	Materials - Crushed Stone, Wood Mulch
Trail Edges:	Stacked Stone or Heavy Wood Timber
Trail Grades:	Varies Depending on Level (see hiking trails)
Trail Signage:	Follow National Park Service Standards

Design Principle

Trails following stream corridors shall be designed in a way that both complements and are compatible with the natural ecological environment and system. Trail and trail components including steps, bridges, rails, signs, furnishings, etc. shall be constructed of natural materials such as wood, stone, and mulch. Concrete, steel, and other more industrial materials shall be used in very limited capacity, and only when natural materials are not suitable. Special design features such as bio-retention swales and other BMP's shall be used to mitigate negative impacts to stream hydrology and water quality when appropriate. Plant materials shall also be native and appropriate for the given micro-climate and pre-existing plant communities. Trails should be respectful of stream buffers / setbacks and local variance requirements.

Typical Section





Overlook areas can be used to emphasize natural vistas, and improve the trail experience.

Overlook Areas

Typical Features and Materials

Design Principle

Overlook areas should be sited to capitalize on specific natural vistas. When no special vista is present, the design should be scaled back to a simple seating or rest area along the trail. In general, overlook areas should be constructed of local materials that blend with or complement the natural environment.

Overlook areas can be elevated observation decks above grade, or flat areas retained by stone or wood walls. Interpretive signs may also be incorporated into the vista, but should be sited away from the natural view.

All applicable building codes should be followed to determine appropriate rail design and height. An appropriate deck or landing area should be provided to match the expected level of use. Overlook areas directly adjacent to multiuse trails or within close proximity to the trailhead will have relatively more users at any given point, and should be designed accordingly with larger observation areas. In contrast, overlook areas accessible only by hiking trails and in remote areas can be designed with a smaller footprint.

Typical Section / Elev.

Multiuse Trails

Typical Features and Materials

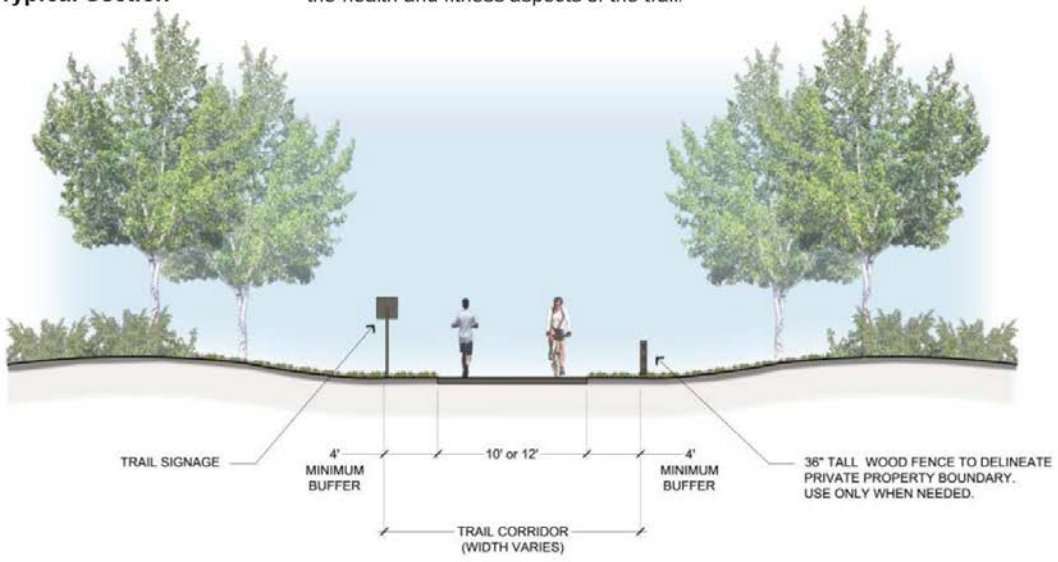
Typical Features

Trail Width:	10' to 12'
Trail Surface:	Crushed Stone, Concrete, or Asphalt
Trail Location:	Easements Along Private Property Lines, Transmission Line Corridors, Through Existing Parks, Through Conservation Areas.
Trail Grades:	5% Overall Maximum
Trail Signage:	Follow Local or VDOT Standards

Typical Section

Design Principle

The simultaneous creation of trails and greenways allows pedestrian and bicycle corridors to be located in park like settings. Because of their popularity, multiuse greenway trails should be designed to accommodate many different user groups. Large trail widths allow for pedestrians and bicycles to interact safely while hard surface and gentle slopes provide a greater range of accessibility. In many cases, multiuse trails are striped to delineate travel lanes and/or user lanes that separate pedestrians from bicycles. Traffic control and directional signs can also increase the safety and functional aspects. Crossing signs, signals, and pavement markings shall be used when trails interact with roadways and other vehicular facilities such as parking lots. Map kiosks combined with exercise stations can also complement the health and fitness aspects of the trail.



Bicycle and Pedestrian System Goals and Objectives

The following goals and associated objectives are intended to build on the strengths of Spotsylvania County and to ensure that the planned system of trailways is developed to the maximum benefit of its users. They are designed to help achieve the County's vision for an integrated network of trailways as identified in the Spotsylvania County Comprehensive Plan.

Goal 1: Improve and expand the existing public-access non-vehicular trails network to create a comprehensive system of interconnected recreational and/ or commuter trails and sidewalks throughout the County.

a. Develop infrastructure in accordance with the Trailways Master Plan.

b. Develop bicycle and pedestrian friendly corridors that offer complementary amenities such as trash receptacles, interpretive or educational signage or displays, bike racks, lighting (where appropriate), benches and seating areas, parking areas, and water fountains.

c. Establish partnerships with State and National partners to promote access to existing state and national parks trailways by incorporating them into the County trailways network.

d. Where appropriate, utilize abandoned roadway beds to establish additional trailway linkages and implement the plan.

e. Ensure that the FRED bus system and VRE station in Spotsylvania County are integrated into the bicycle and pedestrian system, promoting bicycle and pedestrian access to mass transit.

Goal 2: Improve, expand, and construct roadway-based pedestrian and bike facilities.

a. Coordinate with adjoining jurisdictions to ensure the construction of bike and pedestrian improvements along roadways can effectively fit within a regional framework; that improvements will be consistent at the County boundary and can connect into the larger, regional system consistent with the FAMPO Bicycle/ Pedestrian plan as well as other local government plans.

b. Extend bicycle and pedestrian-friendly road improvements and/or trailways to public access points identified along the Rappahannock River and Lake Anna.

c. Develop sidewalk facilities along roadways consistent with Article 5, Streets, parking and Driveways, of the Spotsylvania County Design Standards Manual.

i. Ensure consistency between the Trailways Master Plan and Article 5, Streets, Parking and Driveways, of the Spotsylvania Design Standards Manual.

d. Avoid conflicts between automobiles, pedestrians, and bicycles by identifying and constructing appropriate pedestrian and bicycle facilities.

Goal 3: Develop and promote trail facilities for multiple user-groups, types, and recreational users.

a. For equestrian trails, provide hitching rails and trailer parking accommodations at trail heads.

b. Identify trailway corridors ideal for winter sport uses like snowshoeing or cross-country skiing.

c. Provide handicap-accessible facilities wherever possible, throughout the trails system.

d. For recreational trails, develop a classification system that considers intended users and expected level of difficulty and disclose the information with trail signage throughout the system.

e. Seek technical input and support from local, state, national walking-running, bicycling, equestrian groups during the design and construction phases of trailway implementation and post construction maintenance in order to result in more user friendly trails with feedback from avid user groups.

Goal 4: Review proposed development proposals and land-use projects for compliance with existing and planned trailways and sidewalk improvements.

a. Review all federal, state, regional, and county transportation projects to ensure they include appropriate lateral crossings in the funding, design, and construction of bridges and road projects, as well as bicycle and pedestrian signage, crossing signals and crosswalks that facilitate easy pedestrian and bike access across highways, streams, and railroads.

b. Make land-use decisions that stimulate private sector development and public transportation improvements that are consistent with the County's desired trailways network.

Goal 5: Develop a comprehensive inventory to track the location of trails, sidewalks, bicycle and pedestrian friendly road crossings, bicycle pedestrian right-of-way and easements.

a. Formally name planned public greenway and trail corridors.

b. Trailways and bike & pedestrian improvements and easements should be mapped in an appropriate trailways database or GIS based map.

c. Track plats for easements and infrastructure plans to ensure both easement acquisitions for trails and the construction of trailway segments, and the trail surface has been inventoried.

d. Prepare a current comprehensive inventory of existing trails by type. The inventory will include trails within public parks and open space, paved multi-use trails alongside highways, natural surface trails, and other paths open to the public for non- motorized travel. State and National Park trails will also be inventoried.

e. Report expanded trailway inventory information to the East Coast Greenway, Virginia Department of Conservation and Recreation and George Washington Regional Commission as part of the East Coast Greenway, Virginia Outdoors Plan and George Washington Region Bicycle and Pedestrian Plan update process to ensure consistent and up to date trails information.

Goal 6: Efficiently Implement the Plan.

a. Conduct detailed trailway corridor studies for all proposed off-road trails that address:
   - Recommended crossings of streams or other environmentally sensitive areas.
   - Recommended crossings of public roadways.
   - Recommended public points of access to the trailway, including locating ideal locations for public parking.
   - Identification of possible alternative alignments of the trailway to minimize impacts on existing developed areas.
   - Trailway amenities specific to intended user groups.

b. Seek trailway easements and/or construction along identified bike/pedestrian improvement corridors through rezoning and special use permit commitments.

c. Negotiate trailway easements with private landowners along greenway corridors identified in this plan. In general, the ultimate alignment of the greenway will result from successfully achieved grant of easements over private lands and use of existing public lands.

d. Establish and maintain volunteer Memorandum of Understanding (MOU) agreements between Spotsylvania County and volunteer organizations who seek to help construct, beautify, or maintain the trail system.

e. Ensure adequate right-of-way is dedicated and trailways are developed in conjunction with roadway improvement projects along designated trailway corridors.

f. Pursue easements for all identified bicycle & pedestrian improvements identified in this plan regardless of the implementation schedule.

g. Obtain joint utility and trailway easements when County sewer and waterline installation projects are consistent with identified trailway alignments.

h. Pursue grant opportunities to enhance pedestrian facilities for County-owned properties.

i. Pursue funding, including survey and engineering design, easement acquisition and construction, for projects that provide trail linkages to the battlefield parks and other historic sites.

j. Greenway trails intended for both bicycle and pedestrian users may be developed initially using a natural or stone dust surface to lower the initial cost to construct and complete the establishment of planned trailways. Where appropriate, as outlined in this plan, such surfaces over time can be upgraded to higher quality materials.

Goal 7: Establish safe trailways.

a. Seek to develop a public-private partnership between local law enforcement and citizenry in order to assure that trailway corridors are patrolled for the safety of users.

b. Bike and Pedestrian underpasses should be illuminated for the safety of users.

c. Where appropriate, illuminate public parking access points and trailheads.

d. Establish hours of operation along all public greenway trails for safety of users.

e. Provide trailway signage that advocates for users to walk or ride with a partner and disclose trailway hours of operation and other rules/warnings.

f. Provide trailway mileage markers for users to identify their location in case of emergency.

g. Where appropriate, consider developing a “blue light security telephone” network along isolated segments of greenway trails to notify emergency services of safety and security incidents should they occur.

h. Promote the use of the trailways in the County, therefore providing more “eyes along the trailway”.

i. Regularly inspect and maintain trailway corridors so they do not appear forgotten or abandoned. Ensure that the trails are clean, free of litter and debris.

j. Maintain long sight-lines and avoid routing trails through dense brush to minimize potential low-visibility situations.

k. Prohibit motorized vehicle use of the trailways with the exception of safety patrol, emergency or trailway maintenance vehicles, and personal assistive mobility devices for disabled persons. Disabled vehicles, emergency or maintenance vehicles, personal assistive mobility devices for disabled persons along roadway shoulders are also an exception.

l. Provide proper trail surface maintenance to ensure a safely navigable trailway and ensure no uneven trail surfaces, avoiding falls and/or equipment damage.

m. Install directional signs—spaced uniformly—so that a trailway can be navigated with ease from one end to the other.

n. Provide trailway crossing signage along public roadways where bicycle, pedestrian, or equestrian crossings exist to raise vehicle driver awareness and provide road crossing warnings along trailways at least five hundred feet prior to intersection with roadway for trailway user awareness. Changes in texture of the surface near a roadway crossing should be used where possible.

o. Review (and modify as appropriate) regulations related to trail usage and safety.

Goal 8: Provide regular maintenance of the trailways system.

a. Maintain trails so that they are passable, allowing intended trail user groups to be unimpeded by debris, fallen trees or limbs, or trail surface degradation over time or due to specific weather events.

b. As appropriate, institute limitations on use due to uncontrollable weather events.

c. Maintain the “adopt a trail” program to promote litter free trailways and promote pride in the County trailways system.

d. Reduce the potential maintenance burden by advocating for litter free trailways through outreach and education and trailside regulation signage.

e. Develop and maintain standard operating procedures, outlining the frequency of inspection and maintenance of trails and affiliated facilities throughout the County.

f. Ensure County trailway surfaces, bridge crossings, and public access parking areas are regularly monitored to ensure proper maintenance and safety for users and equipment.

g. Regularly inspect and maintain pedestrian amenities along the trail including but not limited to: trash receptacles, interpretive or educational signage or display, lighting where appropriate, benches/ seating areas, water fountains, exercise stations, trailway identification signage and mile markers.

h. Enact a leave no trace policy for equestrian trails.

Goal 9: Develop and implement an education and outreach program that promotes trail usage and educates users on the benefits of trails and the resources located along them.

a. Inform and educate the public as to the available trailways in Spotsylvania County.

b. Develop interpretive signage along the greenway corridors that portray significant historic events, sites, buildings, monuments, technology, unique natural features or natural processes for educational purposes.

c. Develop historical interpretive signage along the Virginia Central Trail to document the "Screamerville" area, and history of the Civil War in the area and the Virginia Central Railroad.

d. Develop a trail-side signage program for nearby commercial establishments to advertise their location in proximity to the trailway, offering convenience, lodging or dining opportunities to promote access to local businesses by trail users.

e. Explore the feasibility of introducing a Bike Smart Virginia program in local schools to promote bicycle ridership, basic bicycle ridership, basic bicycle safety, road rules, and basic mechanics of the bicycle.

f. Develop a trails inventory mapping feature publicly accessible via Spotsylvania County internet GIS.

g. With partners, develop a County-wide or region-wide trailways map available for public distribution.

h. Promote County trailways through grassroots citizen and organization driven volunteer efforts to maintain and beautify the trail corridors.

i. Utilize volunteer efforts from local gardening organizations and citizens to develop linear flower gardens along segments of greenway corridors.

j. Consider organizing or participating in annual National Trails Day events.

k. Promote organized events centered on use of the County Trailway system.

l. Develop or partner in the development of a local or regional trail system website that can advertise the local trail network, intended user groups, identify points of interest and promote special events.

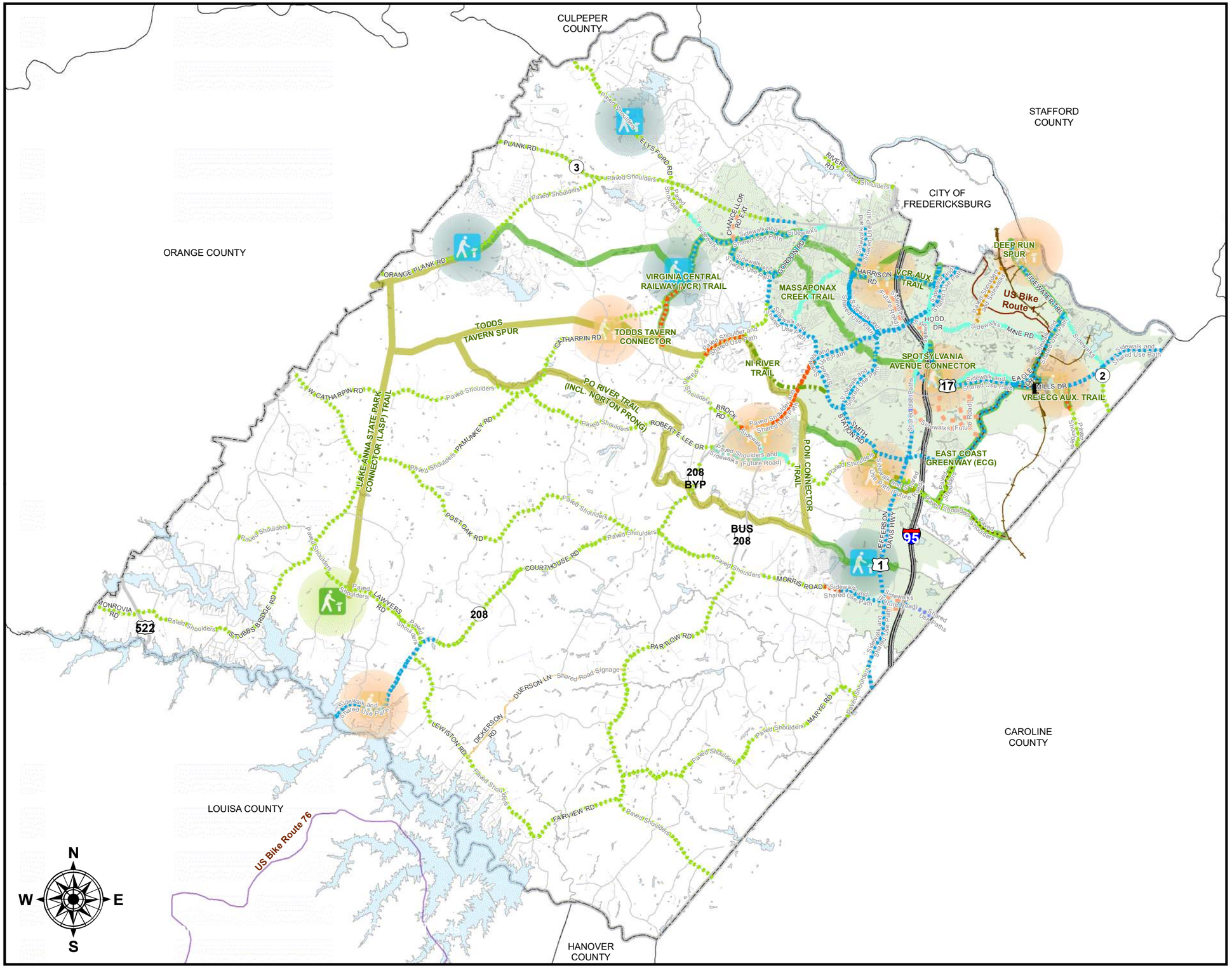
m. Promote the trail system through Spotsylvania County Tourism and other tourism venues.

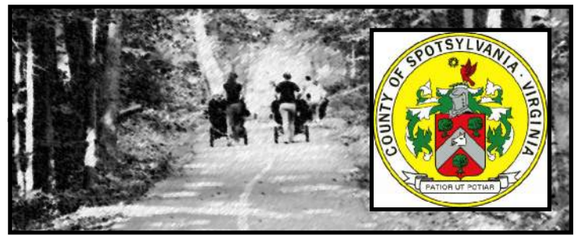
Goal #10: Review and update the Trailways Master Plan consistent with the Comprehensive Plan update cycle.

a. Track plan implementation successes since last update and amend plans as necessary to accommodate new or improved implementation opportunities.

DRAFT

SPOTSYLVANIA COUNTY TRAILWAYS MASTER PLAN





Legend

Trail Heads w/ Proximity Buffers*

- Major
- Minor
- State Park
- VRE Station (Rail)

Road Corridor Improvements

- Shared Road Signage
- Paved Shoulders
- Paved Shoulders and Sidewalks
- Paved Shoulders and Sidewalks (Future Road)
- Paved Shoulder and Shared Use Path
- Paved Shoulder and Shared Use Path (Future Road)
- Shared Use Paths
- Sidewalks
- Sidewalks (Future Road)
- Sidewalk and Shared Use Path
- Sidewalk and Shared Use Path (Future Road)
- US Route 76 Bike Trail
- US Route 1 Bike Trail
- Rail Corridor

Greenways and Primary Users

- Bicycle/ Pedestrian
- Equestrian, Bicycle/ Pedestrian
- County Boundary
- Primary Development Boundary
- Parks

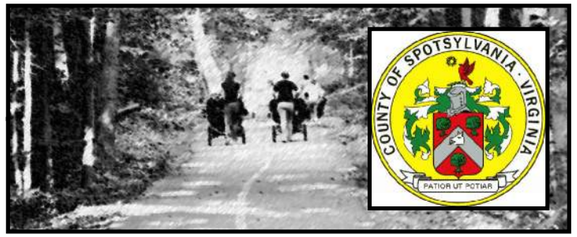
* Trail head locations are depicted with proximity buffers. Proximity buffers are intended to show the general area where depicted trail heads should be located in relation to the trail system. The trail head locations identified here are not intended to be parcel specific or suggestive of any specific location at this time. Further planning will be necessary to determine where such features are best located.

0 1.25 2.5 5 Miles

Map Approved: DRAFT

DRAFT

SPOTSYLVANIA COUNTY ROAD BASED BICYCLE AND PEDESTRIAN IMPROVEMENTS PLAN



Legend

- VRE Station (Rail)

Road Corridor Improvements

- Shared Road Signage
- Paved Shoulders
- Paved Shoulders and Sidewalks
- Paved Shoulders and Sidewalks (Future Road)
- Paved Shoulder and Shared Use Path
- Paved Shoulder and Shared Use Path (Future Road)
- Shared Use Paths
- Sidewalks
- Sidewalks (Future Road)
- Sidewalk and Shared Use Path
- Sidewalk and Shared Use Path (Future Road)
- US Route 76 Bike Trail
- US Route 1 Bike Trail
- Rail Corridor
- Parks
- Primary Development Boundary

The Road Based Bicycle and Pedestrian Improvements Plan focused on implementation of sidewalks and shared use paths along major thoroughfares throughout the Primary Development Boundary and within the Lake Anna Mixed Use area along Route 208. Remaining areas outside of the Primary Development Boundary include bicycle and pedestrian friendly improvements in the form of shoulder improvements or shared road signage. In addition to enhancing ability to use the corridors for bicycle and pedestrian uses, the imporvements are meant to enhance safety by reducing potential conflicts with vehicles. In rural areas, shoulder imporvements also provide greater "room for error" for vehicular traffic and are more accomodating to large vehicles and agricultural machinery.

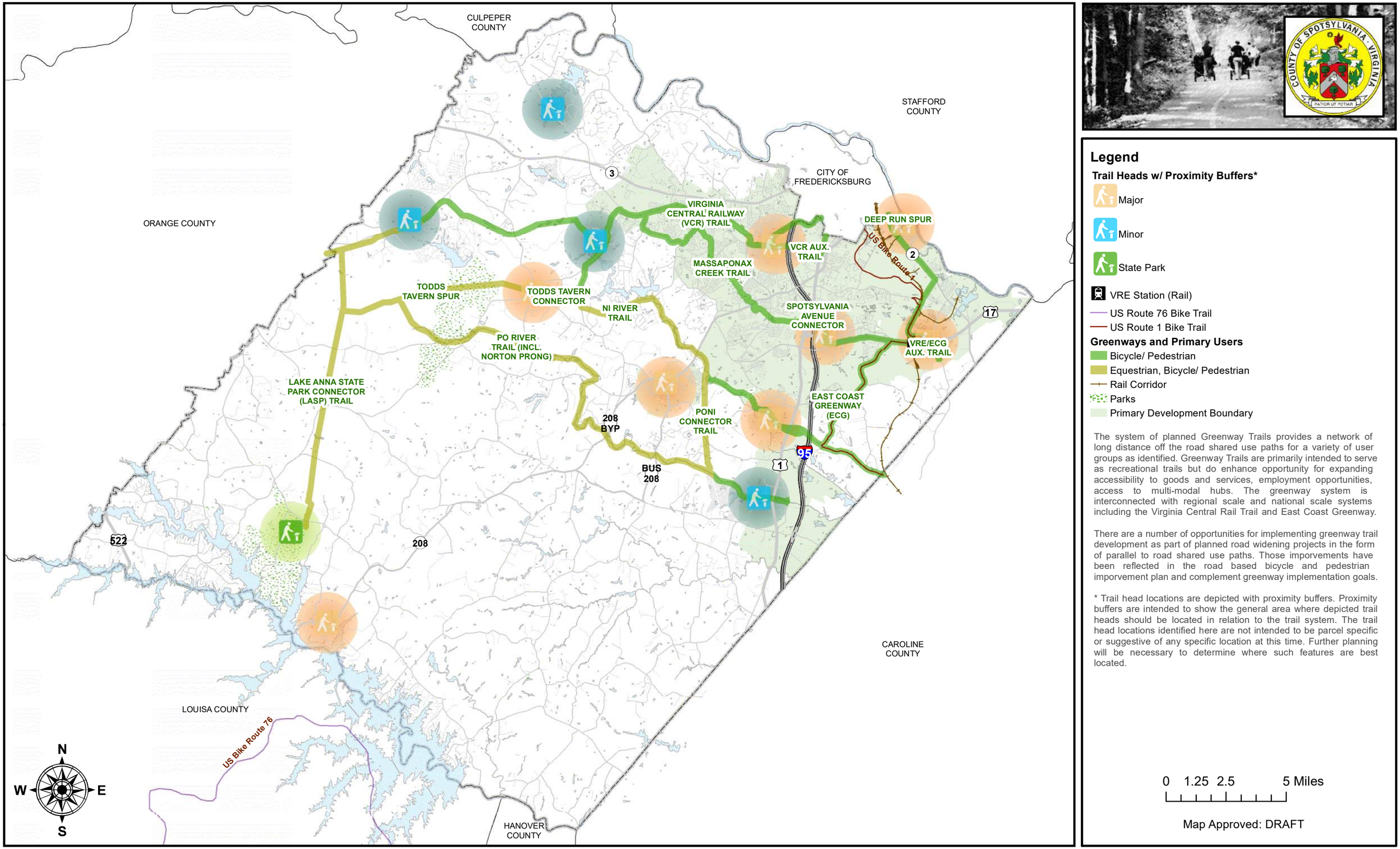
A number of identified road based improvements are expected to be implemented via frontage improvements associated with development or planned road widening projects (See Thoroughfare Plan). A number of planned road based imporvements complement efforts to implement the County Greenways Plan. Those road based improvements have been reflected cognizant of the greenways plan.

0 1.25 2.5 5 Miles

Map Approved: DRAFT

DRAFT

SPOTSYLVANIA COUNTY GREENWAYS PLAN



Legend

Trail Heads w/ Proximity Buffers*

- Major
- Minor
- State Park
- VRE Station (Rail)
- US Route 76 Bike Trail
- US Route 1 Bike Trail

Greenways and Primary Users

- Bicycle/ Pedestrian
- Equestrian, Bicycle/ Pedestrian
- Rail Corridor
- Parks
- Primary Development Boundary

The system of planned Greenway Trails provides a network of long distance off the road shared use paths for a variety of user groups as identified. Greenway Trails are primarily intended to serve as recreational trails but do enhance opportunity for expanding accessibility to goods and services, employment opportunities, access to multi-modal hubs. The greenway system is interconnected with regional scale and national scale systems including the Virginia Central Rail Trail and East Coast Greenway.

There are a number of opportunities for implementing greenway trail development as part of planned road widening projects in the form of parallel to road shared use paths. Those imporvements have been reflected in the road based bicycle and pedestrian imporvement plan and complement greenway implementation goals.

* Trail head locations are depicted with proximity buffers. Proximity buffers are intended to show the general area where depicted trail heads should be located in relation to the trail system. The trail head locations identified here are not intended to be parcel specific or suggestive of any specific location at this time. Further planning will be necessary to determine where such features are best located.

0 1.25 2.5 5 Miles

Map Approved: DRAFT

Chapter 4

PUBLIC FACILITIES PLAN

INTRODUCTION

The projected population growth of Spotsylvania County will require additional public facilities. A larger population translates to more school students as well as more health services, social services, recreation facilities, utilities and solid waste, general government services and increased demands on emergency services and law enforcement. The purpose of the Public Facilities Plan is to assess the current and future public service and facility needs and provide a plan for addressing these needs in an efficient and ~~cost~~ cost-effective manner. The County's public facilities must be carefully coordinated with land use and transportation plans to integrate the provision of services with anticipated population and economic growth, revenues, and available funding. ~~The principal needs identified within the Comprehensive Plan regarding the provision of public facilities and utilities are:~~

- ~~Provide community facilities/services to serve existing and new development in an efficient and cost effective manner;~~
- ~~Provide emergency services and law enforcement to protect citizens and businesses and allow them to enjoy a safe and secure environment;~~
- ~~Promote an integrated information system for the County, supporting the education and the enrichment of all of its citizens;~~
- ~~Serve the recreational needs of the community through a comprehensive system of recreational facilities and programs;~~
- ~~Provide a system of high quality educational opportunities that meet the educational needs of all citizens;~~
- ~~Provide safe and adequate facilities and educational programs for the removal, disposal, and reduction of solid waste; and~~
- ~~Provide a sufficient supply of high quality drinking water and a distribution system to serve the domestic, recreational, industrial, commercial, and fire protection needs of the community at the most economical price possible.~~

Current and future needs should be addressed through existing facilities whenever possible. Where this is not possible, new facilities may be warranted. By identifying criteria for the development of public schools, water or sewer lines, fire and rescue stations, and other facilities, the County can encourage development in appropriate areas and discourage development in inappropriate areas. Appropriate here is meant to be consistent with adopted policies in the Comprehensive Plan. It must be recognized that areas of the County are different and levels of service within these areas will vary. Coordination of County land use, transportation and public facilities development is the key to providing equitable, efficient, and ~~cost~~ cost-effective government services for current and future County residents and to support the business community.

The Public Facilities Plan recommends the general timing and location of future County facilities based on desired service levels. It is designed to function as a needs assessment supporting the establishment of specific project priorities through the annual Capital Improvement Program (CIP). A comprehensive approach integrates facility needs, siting criteria, and design issues with

adopted land use plans and other planning concerns. The Plan will guide the acquisition of public facility sites through the rezoning process and advance purchase or optioning. The Public Facilities Plan does not address funding availability, debt capacity, or other financial concerns; nor does it address facility components, equipment, building design, and numerous other factors best left to the expertise of the operating departments. In addition, the location recommendations are general and should not be interpreted as site specific.

This plan is one element of the Spotsylvania County Comprehensive Plan. As with all components of the Comprehensive Plan, it is intended to function as guide for decision-makers; flexibility is required when fundamental conditions change, or analysis based on new data reaches differing conclusions. The Comprehensive Plan and each of its components should be reviewed and, if necessary, updated periodically based on new data and analysis.

Relationship to the Comprehensive Plan and County Growth Management Strategy

The adoption of the Public Facilities Plan as part of the County's Comprehensive Plan provides an important implementation tool for the County's overall growth management strategy. Articulated through the recommendations of the Comprehensive Plan, this strategy encourages sustainable and orderly growth in designated areas of the ~~c~~County while supporting the overall desires and aspirations of the community.

A key aspect of the growth management strategy involves the appropriate timing and location of future land development.

Relationship to the Capital Improvements Plan

The County's annual Capital Improvement Plan (CIP) addresses short-term facility planning. The CIP proposes a specific schedule for acquisition, development, enhancement or replacement of public facilities over a five (5) year period. It shows the arrangement of selected projects in priority order~~,~~ and establishes cost estimates and anticipated funding sources. Capital Projects identified within the CIP must have support within the Comprehensive Plan. Considerate of the Code of Virginia *§* 15.2-2232 that links Capital projects additions to the Comprehensive Plan. From *§* 15.2-2232:

> *…unless a feature is already shown on the adopted master plan or part thereof or is deemed so under subsection D, no street or connection to an existing street, park or other public area, public building or public structure, public utility facility or public service corporation facility other than a railroad facility or an underground natural gas or underground electric distribution facility of a public utility as defined in subdivision (b) of § 56-265.1 within its certificated service territory, whether publicly or privately owned, shall be constructed, established or authorized, unless and until the general location or approximate location, character, and extent thereof has been submitted to and approved by the commission as being substantially in accord with the adopted comprehensive plan or part thereof.*

At least annually with the budget and CIP adoption process, any new public facility not shown in the Comprehensive Plan shall be reviewed by the Planning Commission to determine whether the facility is substantially in accord with the Plan. In general, a public facility, public utility facility, or public service corporation facility, use or area may be determined to be a current feature of the Comprehensive Plan when it is either specifically identified on the Comprehensive Plan map or described in and supported by the Plan text. Exceptions include:

- Railroad facilities;
- Paving, repair, reconstruction, improvement, drainage, or similar work to an existing public street or public area unless such work involves a change in location or extent of a street or public area;
- Normal service extension of public utilities or public service corporations;
- Any public area, facility, or use which is identified within, but not the entire subject of, a subdivision or site plan provided, that the governing body has by ordinance or resolution defined standards governing the construction, establishment, or authorization of such public area, facility, or use; and
- Facilities approved through acceptance of a proffer made as part of a rezoning.

The following will be considered shown in the Comprehensive Plan:

- Additions to existing public buildings that increase the floor area by less than fifty (5) percent;
- Water and sewer facilities shown in the Water and Sewer Master Plan;
- Water and sewer line extensions and pump stations within the Primary Development Boundary; and
- Water and sewer extensions and pump stations outside of the Primary Development Boundary that serve public facilities shown in the Comprehensive Plan or deemed substantially in accord with the Comprehensive Plan.
- Emergency extensions of public water and sewer to serve users with failing well or septic systems with no alternatives as determined by the County Utilities
- Water and sewer line extensions to serve public facilities otherwise identified and supported in the Comprehensive Plan or Water and Sewer Master Plan.

Facilities of public utilities and public service corporations, such as wireless telecommunications and solar energy facility uses, are also subject to the 2232 Review Process pursuant to the State Code.

OVERVIEW OF THE PUBLIC FACILITIES PLAN

The Public Facilities Plan is organized into ~~six~~ eight (~~6~~8) sections: 1) Public Schools; 2) Parks and Recreation; 3) Fire and Rescue Services; 4) Libraries; 5) Solid Waste Management; ~~and~~ 6) Water and Sewer Facilities; 7) Sheriff's Department; 8) General Government. ~~These should not be construed as the only public facilities which exist within the County, but rather the ones with the largest direct need for increased facilities as the County's population increases. In the near term, general government facilities are largely able to be provided within existing County structures while the needs of judicial services are largely determined by the State. The absence of a section~~

~~devoted to these public services should not be construed as indicating that the County will have no additional needs as its population grows, but rather a recognition that these needs will likely be specific in nature and best addressed at the time they arise.~~

In preparing the Public Facilities Plan, each of the above categories has been addressed in terms of existing conditions, evaluation criteria, future expectations and future plans. In this way the Plan will provide a baseline for future planning, evaluating existing development policies and creating new policies where appropriate.

General Evaluation Criteria

An evaluation of existing public facilities and a determination of needs for future facilities involves several related criteria. These criteria cannot be static or absolute because particular needs and existing conditions vary greatly throughout the County.

Location

Location must be considered in relation to various elements of the Comprehensive Plan, such as existing and future population distribution, zoning, major transportation arteries, topography, and utilities. A centralized location is appropriate for facilities that provide services to intermittent visitors where a time and distance factor is not critical or where the services are highly specialized. Decentralized locations are desirable for facilities that serve day-to-day needs of citizens and where a time and distance factor becomes more important.

Accessibility

The site should be accessible to major transportation routes providing the best possible access to the greatest number of citizens expected to use the facility.

Proximity to Related and Supporting Facilities

There are advantages to the grouping of related or complementary facilities within one complex or area. Convenience to the public is thereby enhanced, operational economics are achieved, and less land is required to provide shared facilities such as parking. Some facilities are also more effective when located adjacent to a business district or shopping center, thereby assuring the greatest convenience to the largest number of people.

Condition and Obsolescence Assessment

In order to determine how to address a facility need, the present state of repair for the particular facility needs to be determined. Existing building space arrangements and special mechanical equipment requirements to meet the function needs of the facility must be considered. The operational efficiency of the facility and its possible adaptation to change or enlargement are factors that must be reviewed to determine the relative obsolescence of the

building plan. Poor condition and high levels of obsolescence may indicate a need for replacement.

Site Adequacy

The site for each building should be adequate to provide for: (a) the space needs of the building and any probable future additions, (b) parking space for vehicles of both visitors and employees, ~~and~~ (c) convenient and safe~~ty~~ access ibility, and (d) bicycle and pedestrian friendly improvements consistent with the County Design Standards Manual.

Supportive of Adopted Planning Policies

The proposed project should support adopted County policies and plans. Without reference to an overall framework for development of the County, projects can be inconsistent and counterproductive. If a project appears justified, even though it is not consistent with adopted policies, then a change in policy should be proposed and reviewed through the planning process.

Public Facilities Maps

Public facilities which form an integral part of the County's land use pattern are shown on the Public Facilities Plan Maps located in this Chapter ~~(Map 1)~~; these include public facilities specific maps for ~~the~~ schools, parks and recreation facilities, fire and rescue, solid waste and various other buildings, structures and sites needed to provide public services. Only existing and ~~known~~ identified future locations (general) are indicated on the map. The criteria established in this Plan shall form the basis for determining future needs and appropriate sites. The locations of existing and future water and sewer systems are identified within the Water and Sewer Master Plan.

KEY GOALS OF PUBLIC FACILITIES PLAN

The principal goals of the Comprehensive Plan regarding the provision of public facilities and utilities are:

1. Provide community facilities/services to serve existing and new development in an efficient and ~~cost~~ cost-efficient manner;
2. Provide emergency services and law enforcement to protect citizens and allow them to enjoy a safe and secure environment;
3. Provide a system of ~~high~~ high-quality educational opportunities that meet the future educational needs of all citizens;
4. Serve the recreational needs of the community through a comprehensive system of recreational facilities and programs;
5. Provide safe and adequate facilities and educational programs for the removal, disposal, and reduction of solid waste; and

6. Provide a sufficient supply of ~~high~~ high-quality drinking water and a distribution system to serve the domestic, recreational, industrial, commercial, and fire protection needs of the community at the most economical price possible.

KEY POLICIES OF THE PUBLIC FACILITIES PLAN

The Public Facilities Plan should serve as the foundation for future decisions concerning the location and expansion of public facilities. In making these decisions, the following policies should be considered:

1. Locate new facilities to provide convenient service to the greatest number of residents.
2. Construct or expand facilities in accord with established criteria and level of service standards.
3. Help guide future growth by coordinating the location of public facilities with recommendations in the Comprehensive Plan.
4. Use the plan as a general guide for the County's Capital Improvements Plan.
5. Ensure equitable distribution of public facilities between established and newly developing areas of Spotsylvania County. Consider existing facility maintenance or replacement needs in already developed areas of the county.
6. Mitigate the impact of public facilities on adjacent planned and existing land uses.
7. Acquire sites for future public facilities as soon as possible, ideally obtaining property for facilities many years before there is a need to build.
8. Use the recommendations of the plan, where feasible, to develop multiple use locations (i.e., joint park/school sites).
9. Use the recommendations of this plan to determine whether proposed public facilities are substantially in accord with the Comprehensive Plan, as required by state law.
~~9.~~10. Continue to monitor economic (industry and construction activity), demographic, socio-economic, and housing trends locally to assess service and facility needs.

DRAFT

Spotsylvania County Government Facilities

DRAFT

Courthouse Area Insert

Government Buildings
- A. Merchants Square Building
- B. Holbert Building
- C. Magistrate's Office
- D. County Attorney's Office
- E. Government Office
- F. Public Safety Building
- G. Capital Projects
- H. Marshall Center

Tourist Sites
- I. Historic Courthouse
- J. Historic Jail
- K. Old Berea Church
- L. Stubbs School

Judicial Buildings
- M. Juvenile and Domestic Relations Court Services
- N. Courthouse
- O. Circuit Court Building

Community Centers
1. Chancellor Community Center
2. Lee Hill Community Center
3. Todds Tavern Community Center
4. Berkeley Community Center

Government Offices
5. Utilities Office
6. Animal Control
7. Parks & Recreation Office
8. Joint Fleet Maintenance Facility
9. Office of Elections/Registrar

Visitor Centers
10. Visitor Center at Massaponax
11. Spotsylvania County Museum

Parks
12. Hunting Run Park
13. Virginia Central Trail
14. Harrison Road Park
15. Cosner Park
16. Loriella Park
17. Ni River Reservoir Park
18. Lee Hill Park
19. Mary Lee Carter Park
20. Patriot Park
21. Marshall Park
22. Chewning Park
23. Legion Fields/Marshall Center
24. Arritt Park

Convenience Sites
25. Wilderness
26. Chancellor Public Use Area
27. Todd's Tavern
28. Mine Road
29. Lee Hill
30. Chewning Park
31. Marshall Park
32. Post Oak
33. Belmont
34. Berkeley
35. Livingston Landfill
36. Cole Hill
37. The Barn

See Courthouse Area Insert

N W E S

Legend

Public Facilities

- Community Center
- Government Office
- Judicial Building
- Tourist Site/Visitor Center
- Parks
- Convenience Sites
- Primary Development Boundary

0 1.25 2.5 5 Miles

Map Approved: _____

Chapter 4A

PUBLIC FACILITIES PLAN- SCHOOLS

PUBLIC SCHOOLS

Introduction

~~The goal of the school system is to provide for the highest quality education for students in the County in the most cost-effective manner.~~ The vision of Spotsylvania County Public Schools is to inspire and empower each student to develop essential skills and access multiple pathways in pursuit of their dreams. Each day, every child yearns to come to school, excited about learning. This vision supports the division's mission that "Together, We Prepare our Students for their Future" and is guided by the school board adopted Strategic Plan: Engage 2025.

The Spotsylvania County Public School ~~System~~ Division offers a comprehensive educational program for grades pre-Kindergarden-12, which includes career and technical education, ~~in addition to vocational education,~~ programs for gifted students, special education, visual and performing arts, and alternative education. ~~and related services, and alternative education.~~ In addition to career and technical courses ~~vocational courses~~ offered at each middle and ~~the local~~ high school, students may take career-based courses at the Spotsylvania Career and Technical Center located adjacent to Courtland High School. Spotsylvania County Public Schools also offers additional programs such as Title I, Virginia Preschool Initiative (VPI), and Head Start. The Title I and Head Start programs receive federal funds while VPI is supported through state and local allocations. Title I funds provide financial assistance to elementary schools with high percentages of children from low-income families to help ensure that all children meet challenging state academic standards. ~~The school system operates a federally funded Title One program for children whose math and reading skills are below grade level and houses Headstart and the Virginia Preschool Initiative (VPI) program for preschool children.~~

The Spotsylvania County Public School ~~System~~ (SCPS) Division consists of Twenty-Nine (29) ~~thirty (30)~~ state accredited schools: seventeen (17) elementary schools, seven (7) middle schools, and five (5) high schools~~,~~. SCPS also has two learning centers: Spotsylvania County Career and Technical Center and John J. Wright Educational and Cultural Center. ~~and the Spotsylvania County Career and Technical Center. Courthouse Academy and the GATES Center provide services to non-traditional secondary students.~~ John J. Wright Educational and Cultural Center serves as a ~~center~~ facility for several alternative education programs, including the Quest program (non-traditional secondary), Courthouse Academy (SWD emotional disabled), Gateway Academy (SWD autism), preschool special ~~education~~ needs, and preschool programs.

The Center for Family and Pre-School Services facility serves as a registration site for VPI and the Head Start pre-school services. It also houses the Parent Resource Center, Child Find, and English language intake services. In addition, there is a Maintenance Warehouse Complex with a print shop that serves both the School Division and the County, and a ~~Joint~~ Fleet Maintenance Facility that provides joint services with the County.

Impact of the COVID-19 Pandemic on the 2020-2021 School Year:

As of October 1, 2020 there were 9,894 ~~At the start of the 2012-2013 school year, 10,817~~ elementary and pre-k students, ~~5,402~~ 5,526 middle school students, and ~~7,506~~ 7,667 high school students, for a total of ~~23,725~~ 23,087 students~~, were~~ enrolled in the school system. These numbers represent a decrease in enrollment of 848 students from the preceding school year on the same date. The 2019 enrollment the year prior actually represented an increase in enrollment from 2018. The elementary school enrollment accounted for 696 of the decrease, with high school enrollments actually increasing slightly by a total of 29 students. Staff believes the overall decrease in enrollment can be directly attributed to the COVID 19 pandemic, which has been a statewide trend. This is because some parents chose to enroll students in home school programs or private schools due to perceived health concerns, even with the school division offering parents a 100 percent virtual learning option for their children. It should be noted that although overall student enrollment decreasing, several schools actually showed slight enrollment increases. The most notable of these schools was Spotsylvania Middle School, which was already overcapacity in the 2019-2020 school year.

Typically, the five-year Capital Improvement Plan (CIP) is reviewed and modified annually by school staff, providing a list by year of capital maintenance, technology and transportation needs. The CIP also provides current year enrollment data as well as enrollment forecasts for the following four years.

Because of the impact COVID-19 has had on student enrollment during the current school year and because school division staff believes that many students who opted out of public school enrollment will return once the pandemic has run its course, 2020-2021 enrollment numbers could not serve as a reliable baseline from which to forecast future student enrollment. Consequently, enrollment projections were not included in the latest 2022-2026 Capital Improvement Plan (CIP).

The third-party demographic study, conducted in 2019 providing enrollment forecasts for the following 10 years continues to help guide future school facilities planning. However, 2020-2021 school year enrollment figures should be considered aberrations, based on the effects of the COVID-19 pandemic. School staff plans to again contract with a third-party firm to update enrollment forecasts post pandemic for the upcoming 2021-2022 school year. This step was originally included in previous planning knowing that the 2021 census data would be a critical source for future growth/enrollment projections.

Another impact of the pandemic was that school staff modified its previous five year CIP (2021-2025) at the request of the County to reflect the needs of the 2021 (current school year) school year only. This was done as a precaution to address potential revenue uncertainties caused by COVID-19 when it first impacted the region. School staff has since returned to the five-year format in devising CIP 2022-2026.

Prior to the Impact of Covid-19:

At the start of the 2019-2020 school year, 10,592 elementary and pre-k students, 5,705 middle school students, and 7,638 high school students, for a total of 23,935 students, were enrolled in

the school system. Overall, the total County student population had not changed significantly. Comparing the 2019-2020 school year total population to that reported in 2012-2013 (prior Comprehensive Plan update), student enrollment grew less than 1% (0.89%). Upon adoption of the County 2013 Comprehensive Plan based on the 2012-2013 school year, student enrollment was 23,725. The recent increase in students can be attributed to modest growth in the middle and high school populations where 5,402 middle school students and 7,506 high school students were reported in the 2012-2013 school year. Elementary School enrollment was down from the 10,817 students reported in 2012-2013.

In 2019, the Spotsylvania County Schools commissioned a demographic study utilizing CropperGIS and McKibben Demographics to look at the current and future student body. Based on a trends analysis the study found total district enrollment is forecasted to increase by 500 students, or 2.1%, between 2019-20 and 2024-25. A decline in student enrollment is expected to occur by the 2026-27 school year. Total enrollment will decrease by 112 students, or-0.5%, from 2024-25 to 2029-30. The detailed analysis did take into consideration the approved and unbuilt units in the County. A January 2020 update to the County's Future Development Analysis found an approved and unbuilt housing inventory of 12,756 units representing an estimated 27,088 additional residents (based on generation rates of persons per unit type). The most recent update from January 2021 notes an approved and unbuilt supply of 12,049 units, down somewhat from the prior year. These updated figures estimate 25,295 additional residents. The report notes that even if the district continues to have a significant amount of annual new housing unit construction over the next 10 years, the rate, magnitude and price of existing home sales will become the increasingly dominant factor affecting the amount of population and enrollment change. Additional factors included in the analysis included birth and death rates, IRS migration reports, Census reports (including age/sex population counts), fertility patterns, distribution of the population by age and sex, rate, and type of existing housing unit sales, change in household size, etc. Factors such as declining fertility rates (below replacement level), increasing median age within the district from 36.3 in 2010 to 41.8 in 2030, and out-migration of the 18 to 24 age cohort contribute to downward trending enrollment findings.

The Spotsylvania Public Schools Division was able to provide analysis of historic enrollment and future enrollment projections through the 2024-2025 school year. Table 1 below shows historic school enrollment starting in the 2009-2010 school year with projections out to the 2023-2025 school year. System-wide, short term student body growth is expected to remain low.

Table 1: Spotsylvania County Enrollment

SPOTSYLVANIA COUNTY PUBLIC SCHOOLS

Historical and Projected Enrollment 2021-2025

Based on Actual Enrollment for October 1, 2019

GRADE	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25
	Historical	Historical	Historical	Historical	Historical	Historical	Historical	Historical	Historical	Historical	Actual	(Projected)	(Projected)	(Projected)	(Projected)	(Projected)
PRE-SCHOOL*	301	331	324	331	327	356	360	400	401	432	462	462	462	462	462	462
K	1752	1686	1673	1705	1714	1588	1565	1586	1567	1545	1623	1615	1631	1631	1630	1626
1	1739	1750	1755	1696	1760	1774	1612	1579	1664	1599	1614	1685	1677	1679	1678	1677
2	1792	1726	1766	1772	1680	1798	1776	1602	1652	1721	1641	1654	1720	1712	1714	1713
3	1731	1781	1725	1774	1782	1713	1801	1792	1646	1698	1758	1683	1684	1751	1742	1745
4	1846	1754	1792	1745	1820	1791	1716	1771	1854	1688	1747	1799	1713	1713	1782	1773
5	1746	1824	1768	1794	1778	1842	1812	1760	1836	1866	1747	1793	1834	1746	1746	1817
Sub-Total	**10907**	**10852**	**10803**	**10817**	**10861**	**10862**	**10642**	**10490**	**10620**	**10549**	**10592**	**10691**	**10721**	**10694**	**10754**	**10813**
Increase		**-55**	**-49**	**14**	**44**	**1**	**-220**	**-152**	**130**	**-71**	**43**	**99**	**30**	**-27**	**60**	**59**
Percent		**-0.50%**	**-0.45%**	**0.13%**	**0.41%**	**0.01%**	**-2.03%**	**-1.43%**	**1.24%**	**-0.67%**	**0.41%**	**0.93%**	**0.28%**	**-0.25%**	**0.56%**	**0.55%**
6	1842	1748	1811	1777	1801	1787	1785	1850	1788	1841	1924	1789	1827	1875	1770	1779
7	1803	1844	1756	1870	1829	1813	1814	1828	1885	1806	1937	1969	1830	1870	1918	1809
8	1818	1809	1879	1755	1901	1836	1867	1858	1865	1899	1844	1977	2010	1868	1909	1958
Sub-Total	**5463**	**5401**	**5446**	**5402**	**5531**	**5436**	**5466**	**5536**	**5538**	**5546**	**5705**	**5735**	**5667**	**5613**	**5597**	**5546**
Increase		**-62**	**45**	**-44**	**129**	**-95**	**30**	**70**	**2**	**8**	**159**	**30**	**-68**	**-54**	**-16**	**-51**
Percent		**-1.13%**	**0.83%**	**-0.81%**	**2.39%**	**-1.72%**	**0.55%**	**1.28%**	**0.04%**	**0.14%**	**2.87%**	**0.53%**	**-1.19%**	**-0.95%**	**-0.29%**	**-0.91%**
9	2212	2025	2012	2070	1976	2087	2017	2014	2043	2025	2118	2031	2171	2210	2052	2096
10	1904	1990	1864	1861	1892	1835	1928	1928	1910	1874	1947	2018	1931	2064	2101	1953
11	1820	1750	1864	1721	1732	1828	1773	1824	1839	1820	1775	1861	1928	1844	1971	2005
12	1886	1820	1783	1854	1781	1769	1852	1800	1864	1860	1798	1831	1915	1982	1898	2022
Ungraded/TT/PG	24	30	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-Total	**7846**	**7615**	**7526**	**7506**	**7381**	**7519**	**7570**	**7566**	**7656**	**7579**	**7638**	**7741**	**7945**	**8100**	**8022**	**8076**
Increase		**-231**	**-89**	**-20**	**-125**	**138**	**51**	**-4**	**90**	**-77**	**59**	**103**	**204**	**155**	**-78**	**54**
Percent		**-2.94%**	**-1.17%**	**-0.27%**	**-1.67%**	**1.87%**	**0.68%**	**-0.05%**	**1.19%**	**-1.01%**	**0.78%**	**1.35%**	**2.64%**	**1.95%**	**-0.96%**	**0.67%**
TOTAL	**24216**	**23868**	**23775**	**23725**	**23773**	**23817**	**23678**	**23592**	**23814**	**23674**	**23935**	**24167**	**24333**	**24407**	**24373**	**24435**
INCREASE		**-348**	**-93**	**-50**	**48**	**44**	**-139**	**-86**	**222**	**-140**	**261**	**232**	**166**	**74**	**-34**	**62**
PERCENT		**-1.44%**	**-0.39%**	**-0.21%**	**0.20%**	**0.19%**	**-0.58%**	**-0.36%**	**0.94%**	**-0.59%**	**1.10%**	**0.97%**	**0.69%**	**0.30%**	**-0.14%**	**0.25%**

* Includes Head Start, Early Childhood Special Education & Pre-Kindergarten

Current Student Generation Rates

In analyzing County growth trends, it is important to consider student generation rates that are expected to coincide with increased residential development and population growth. To do so, the County tracks student generation rates based on housing types including single family detached, single family attached, and multi-family units. Student generation rates differ based on housing type and can be further influenced by additional factors such as bedroom counts, lifecycle stage of resident, state of the economy, etc. Student generation directly relates to the potential capital facility's needs (new schools, school expansion, etc.) when the existing inventory of schools near their level of service based "built for" student capacity.

Table 2 below identifies the latest calculation of student generation rates. A variety of factors associated with the economy, demographics and housing may change student generation rates over time. At minimum these rates should be recalculated in conjunction with the Comprehensive Plan 5-year update cycle for accuracy sake in consideration of projecting impacts of additional students resulting from residential growth.

Table 2: Population and Student Generation Rates

Population and Student Generation Rates as of January, 2020				
Population Generation Rates	**Single Family Detached**	**Single Family Attached**	**Multi-Family (MF)**	
Persons Per Unit	3.04	2.41	1.49	
Students Per Unit			**Market Rate (MF)**	**Tax Credit (MF)**
Elementary	0.2577	0.3072	0.073	0.291
Middle	0.1307	0.1286	0.047	0.134
High	0.1832	0.1453	0.051	0.139

Level of Service Standards

For the purpose of the Public Facilities Plan, school capacity is the key Level of Service indicator. The Plan for school system expansion is based on the County School Board school design capacity as follows:

- Elementary Schools: 930-950 students
- Middle Schools: 940-~~960~~ 1,200 students
- High Schools: 1,900-2,100 students

Not all existing schools were constructed under the current level of service standard and may have building capacity that differs from the current design capacity identified above for future schools.

School enrollments considering building capacity in existing schools have been previously reported by the Spotsylvania County Public Schools in the collection of tables below (See Table 3) based on figures provided in the pre-pandemic demographic study. The tables show that the majority of schools have remaining capacity and are expected to continue to have remaining capacity through the 2024-2025 school year. Capacity issues do exist at specific schools however, at the Middle School level, specifically Battlefield, Chancellor, Spotsylvania and High School level, specifically Massaponax High School.

School staff had previously partnered with Moseley Architects to conduct Planning the Plan Studies I and II. Planning the Plan Study I analyzed each school's current instructional capacity and provided suggestions about how to maximize existing school spaces.

Planning the Plan Study II reviewed school capacities, projected student enrollment, and analyzed feeder patterns. This information served to identify areas from which to initiate the high school redistricting effort, relieving immediate overcapacity issues at Massaponax High School and targeting the renovation and expansion of Courtland High School.

Table 3: Schools Built Capacity Considering Historic and Projected Future Enrollment

Elementary Schools- Northern Region

School Year	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Battlefield Elementary	**678**	**648**	**639**	**644**	**658**	**645**	**618**	**649**	**655**	**675**	**696**	**705**	**700**	**705**	**710**
Building Capacity	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833
Harrison Rd. Elementary	**812**	**851**	**856**	**822**	**818**	**806**	**793**	**792**	**783**	**812**	**836**	**845**	**856**	**874**	**895**
Building Capacity	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936
Salem Elementary	**642**	**645**	**660**	**635**	**690**	**666**	**629**	**646**	**645**	**612**	**604**	**604**	**609**	**609**	**604**
Building Capacity	815	815	815	815	815	815	815	815	815	815	815	815	815	815	815
School Enrollment (Total)	**2132**	**2144**	**2155**	**2101**	**2166**	**2117**	**2040**	**2087**	**2083**	**2099**	**2136**	**2154**	**2165**	**2188**	**2209**
Building Capacity (Total)	2584	2584	2584	2584	2584	2584	2584	2584	2584	2584	2584	2584	2584	2584	2584
Seats Available	**452**	**440**	**429**	**483**	**418**	**467**	**544**	**497**	**501**	**485**	**448**	**430**	**419**	**396**	**375**

Elementary Schools- Eastern Region

SCHOOL YEAR	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Cedar Forest	**765**	**732**	**716**	**771**	**757**	**727**	**746**	**749**	**740**	**725**	**723**	**734**	**724**	**721**	**727**
Building Capacity	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936
Lee Hill Elementary	**554**	**670**	**692**	**702**	**691**	**648**	**652**	**669**	**662**	**653**	**684**	**707**	**713**	**743**	**746**
Building Capacity	807	807	807	807	807	807	807	807	807	807	807	807	807	807	807
Parkside Elementary	**955**	**691**	**694**	**728**	**755**	**765**	**773**	**865**	**867**	**857**	**874**	**863**	**868**	**838**	**846**
Building Capacity	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936
Spotswood Elementary	**410**	**537**	**564**	**537**	**556**	**528**	**512**	**551**	**568**	**553**	**545**	**538**	**537**	**548**	**560**
Building Capacity	641	641	641	641	641	641	641	641	641	641	641	641	641	641	641
School Enrollment (Total)	**2684**	**2630**	**2666**	**2738**	**2759**	**2668**	**2683**	**2834**	**2837**	**2788**	**2826**	**2842**	**2842**	**2850**	**2879**
Building Capacity (Total)	3320	3320	3320	3320	3320	3320	3320	3320	3320	3320	3320	3320	3320	3320	3320
Seats Available	**636**	**690**	**654**	**582**	**561**	**652**	**637**	**486**	**483**	**532**	**494**	**478**	**478**	**470**	**441**

Elementary Schools- Southern Region

SCHOOL YEAR	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Berkeley Elementary	**351**	**325**	**319**	**306**	**281**	**255**	**268**	**294**	***295***	**267**	**279**	**280**	**279**	**274**	**269**
Building Capacity	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353
Livingston Elementary	**460**	**444**	**451**	**444**	**421**	**433**	**420**	**406**	**408**	**393**	**397**	**386**	**386**	**379**	**376**
Building Capacity	504	504	504	504	504	504	504	504	504	504	504	504	504	504	504
Riverview Elementary	**614**	**623**	**653**	**712**	**717**	**696**	**685**	**619**	**624**	**664**	**682**	**707**	**717**	**735**	**747**
Building Capacity	907	907	907	907	907	907	907	907	907	907	907	907	907	907	907
School Enrollment (Total)	**1425**	**1392**	**1423**	**1462**	**1419**	**1384**	**1373**	**1319**	**1327**	**1324**	**1358**	**1373**	**1382**	**1388**	**1392**
Building Capacity (Total)	1764	1764	1764	1764	1764	1764	1764	1764	1764	1764	1764	1764	1764	1764	1764
Seats Available	**339**	**372**	**341**	**302**	**345**	**380**	**391**	**445**	**437**	**440**	**406**	**391**	**382**	**376**	**372**

Elementary Schools- Western Region

SCHOOL YEAR	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Brock Road Elementary	**764**	**769**	**729**	**753**	**720**	**693**	**656**	**658**	**665**	**681**	**677**	**668**	**654**	**655**	**668**
Building Capacity	907	907	907	907	907	907	907	907	907	907	907	907	907	907	907
Chancellor Elementary	**360**	**363**	**374**	**387**	**401**	**418**	**424**	**441**	**463**	**459**	**460**	**465**	**455**	**463**	**467**
Building Capacity	455	455	455	455	455	455	455	455	455	455	455	455	455	455	907
Wilderness Elementary	**752**	**757**	**763**	**763**	**761**	**736**	**746**	**719**	**678**	**699**	**701**	**678**	**671**	**671**	**677**
Building Capacity	936	936	936	936	936	936	936	936	936	936	936	936	936	936	936
School Enrollment (Total)	**1876**	**1889**	**1866**	**1903**	**1882**	**1847**	**1826**	**1818**	**1806**	**1839**	**1838**	**1811**	**1780**	**1789**	**1812**
Building Capacity (Total)	2298	2298	2298	2298	2298	2298	2298	2298	2298	2298	2298	2298	2298	2298	2298
Seats Available	**422**	**409**	**432**	**395**	**416**	**451**	**472**	**480**	**492**	**459**	**460**	**487**	**518**	**509**	**486**

Elementary Schools- Central Region

School Year	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Courthouse Road Elem.	**881**	**870**	**854**	**829**	**832**	**828**	**813**	**809**	**812**	**812**	**814**	**820**	**821**	**821**	**826**
Building Capacity	907	907	907	907	907	907	907	907	907	907	907	907	907	907	907
Courtland Elementary	**608**	**577**	**586**	**564**	**539**	**563**	**527**	**535**	**535**	**556**	**555**	**560**	**563**	**589**	**576**
Building Capacity	789	789	789	789	789	789	789	789	789	789	789	789	789	789	789
Robert E. Lee Elementary	**478**	**507**	**516**	**502**	**506**	**519**	**515**	**540**	**508**	**512**	**501**	**494**	**473**	**457**	**447**
Building Capacity	585	585	585	586	586	586	586	586	586	586	586	586	586	586	586
Smith Station Elementary	**768**	**794**	**751**	**762**	**759**	**716**	**713**	**678**	**642**	**662**	**663**	**667**	**668**	**672**	**672**
Building Capacity	986	986	986	986	986	986	986	986	986	986	986	986	986	986	986
School Enrollment (Total)	**2735**	**2748**	**2707**	**2657**	**2636**	**2626**	**2568**	**2562**	**2497**	**2542**	**2533**	**2541**	**2525**	**2539**	**2521**
Building Capacity (Total)	3267	3267	3267	3268	3268	3268	3268	3268	3268	3268	3268	3268	3268	3268	3268
Seats Available	**532**	**519**	**560**	**611**	**632**	**642**	**700**	**706**	**771**	**726**	**735**	**727**	**743**	**729**	**747**

Middle Schools

School Year	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
Battlefield Middle	**800**	**808**	**791**	**798**	**792**	**817**	**802**	**834**	**837**	**859**	**876**	**883**	**887**	**875**	**858**
Building Capacity	807	807	807	807	807	807	807	807	807	807	807	807	807	807	807
Chancellor Middle	**814**	**844**	**819**	**858**	**813**	**825**	**849**	**861**	**835**	**866**	**870**	**876**	**869**	**863**	**854**
Building Capacity	857	857	857	857	857	857	857	857	857	857	857	857	857	857	857
Freedom Middle	**862**	**858**	**857**	**883**	**844**	**824**	**780**	**769**	**815**	**823**	**809**	**752**	**739**	**727**	**717**
Building Capacity	948	948	948	948	948	948	948	948	948	948	948	948	948	948	948
Ni River Middle	**719**	**683**	**687**	**715**	**749**	**745**	**764**	**723**	**707**	**723**	**728**	**744**	**740**	**726**	**679**
Building Capacity	774	774	774	774	774	774	774	774	774	774	774	774	774	774	774
Post Oak Middle	**739**	**753**	**752**	**781**	**765**	**747**	**726**	**727**	**688**	**748**	**722**	**711**	**680**	**703**	**697**
Building Capacity	948	948	948	948	948	948	948	948	948	948	948	948	948	948	948
Spotsylvania Middle	**821**	**828**	**806**	**805**	**780**	**800**	**876**	**909**	**934**	**940**	**996**	**998**	**994**	**996**	**1008**
Building Capacity	907	907	907	907	907	907	907	907	907	907	907	907	907	907	907
Thornburg Middle	**646**	**672**	**690**	**691**	**693**	**708**	**739**	**715**	**730**	**746**	**734**	**703**	**704**	**707**	**733**
Building Capacity	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790
School Enrollment (Total)	**5401**	**5446**	**5402**	**5531**	**5436**	**5466**	**5536**	**5538**	**5546**	**5705**	**5735**	**5667**	**5613**	**5597**	**5546**
Building Capacity (Total)	6031	6031	6031	6031	6031	6031	6031	6031	6031	6031	6031	6031	6031	6031	6031
Seats Available	**630**	**585**	**629**	**500**	**595**	**565**	**495**	**493**	**485**	**326**	**296**	**364**	**418**	**434**	**485**

High Schools															
School Year	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
QUEST (formerly GATES)	60	48	33	31	25	33	23	21	36	41	41	41	41	41	41
Building Capacity	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
Chancellor High	1355	1380	1380	1342	1330	1304	1299	1268	1288	1317	1347	1417	1433	1402	1404
Building Capacity	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427
Courtland High	1220	1192	1219	1190	1176	1173	1146	1179	1176	1413	1434	1471	1471	1427	1466
Building Capacity	1265	1265	1265	1265	1265	1265	1265	1265	1265	1565	1565	1565	1565	1565	1565
Massaponax High	1908	1870	1858	1829	1925	1964	2022	2027	2017	1745	1793	1858	1962	2003	1998
Building Capacity	1830	1830	1830	1830	1830	1830	1830	1830	1830	1830	1830	1830	1830	1830	1830
Riverbend High	1941	1923	1913	1866	1942	1933	1919	1981	1919	1918	1922	1937	1930	1923	1939
Building Capacity	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995
Spotsylvania High	1131	1113	1103	1123	1121	1163	1157	1180	1143	1204	1204	1221	1263	1226	1228
Building Capacity	1611	1611	1611	1611	1611	1611	1611	1611	1611	1611	1611	1611	1611	1611	1611
School Enrollment (Total)	7615	7526	7506	7381	7519	7570	7566	7656	7579	7638	7741	7945	8100	8022	8076
Building Capacity (Total)	8218	8218	8218	8218	8218	8218	8218	8218	8218	8518	8518	8518	8518	8518	8518
Seats Available	603	692	712	837	699	648	652	562	639	880	777	573	418	496	442
										Courtland Reno. Increased Cap.				1565	

~~All applications for a rezoning and/or special use permit for residential dwelling units should contain the following information:~~

~~1. Number and type(s) of dwelling unit(s) proposed~~
~~2. Anticipated occupancy date for proposed dwelling units~~
~~3. Anticipated number of children per household type~~

Facility Design and Location Criteria

The following criteria should be used in determining appropriate sites and design for additional school facilities.

- Provide new facilities to adequately and equitably serve all areas of the ~~county~~County.
- Schedule school construction to relieve overcrowding and plan for new growth before it occurs.
- Provide up-to-date learning facilities including advances in technology and related instructional software.
- Continue to coordinate school site planning and development with the Parks and Recreation Department in order to maximize community recreational facilities.
- Obtain optimal locations and minimize costs through advance acquisition of suitable sites.
- Provide locations for new schools that minimize travel distance for current as well as future students.
- Elementary, Middle and High Schools site design should minimize impacts of the recreational areas on adjacent residences. Sports facilities and their parking areas should be buffered from nearby homes.
- Pursue acquisition of school sites in projected growth areas of the ~~county~~County.
- School construction should follow the guidelines of the Virginia Department of Education, as outlined within *"Guidelines for School Facilities in Virginia's Public Schools"*.
- School sizes should be based on not only the design capacity, i.e. the number of students, but also on the program capacity as programs such as Special Education and Career and Technical Education course have mandated federal caps that may not utilize square footage or pupil/teacher ratios.

Recommendations

The following are recommendations for the provision of adequate school facilities.

- ~~Consider realignment of Attendance Zones to best utilize existing facilities to accommodate student population before constructing new school facilities.~~
- Continue to analyze existing educational environments to examine whether they can be re-purposed to support research based best instructional practices.
- ~~Look to~~ Continue to examine the feasibility of renovating and/or constructing additions to existing school facilities before constructing new school facilities for cost efficiency purposes. The school division's CIP 2022-2026 includes a full renovation and expansion of Spotsylvania Middle School due to current and anticipated student growth generated by new residential developments in the school's attendance zone.

The CIP also identifies renovation of Chancellor High and Middle School's mechanical, electrical and plumbing systems, and repurposing existing spaces for new programs at Spotsylvania High School and the Career and Technical Center.

In addition, modular units have been added at Spotsylvania Elementary School (formerly known as Robert E Lee Elementary), Parkside Elementary School, and Massaponax High School to accommodate expected future student enrollment generated by approved residential developments in those schools' attendance zones. Ten modular units were added to Spotsylvania Middle School prior to the 2019-2020 school year to handle current student growth generated by new housing developments in the school's attendance zone as well as to accommodate future student growth during the school's anticipated renovation and expansion.

- ~~Establish new Attendance Zones based on the safest and shorter school bus routes in order to get students to and from school in a timely fashion~~
- Construct new schools/facilities to ~~provide~~ expand the best educational opportunities for students ~~by~~ and prevent~~ing~~ overcrowded classroom sizes, unsafe and long bus trips, etc.
    - Construct additional classroom capacity at Thornburg Middle School.
- Maintain levels of service by staying consistent with state standards for classroom size by education level and full utilization of school facilities based on building capacity
- Reduce bus travel distances for students going to and from school in a safe manner when possible.
- Reduce land costs for new schools through advance acquisition.
- Consider realignment of Attendance Zones to best utilize existing facilities to accommodate student population before constructing new school facilities. For example, the afore-mentioned high school redistricting effort was initiated prior to the 2019-2020 school year to successfully alleviate student capacity issues at Massaponax High School. This effort was greatly assisted by the renovation and expansion (by approximately 300 students) of Courtland High School, which was then able to take additional students from other high schools in the division to alleviate potential future overcrowding.
- Consider expanding or enhancing specialized educational programs and their necessary capital facilities considering potential student demand, market demand for skills (future employment opportunities), and costs to implement. Examples include but are not limited to newly formed or expanded Career and Technical programs.
- All applications for a rezoning and/or special use permit for residential dwelling units should contain the following information:

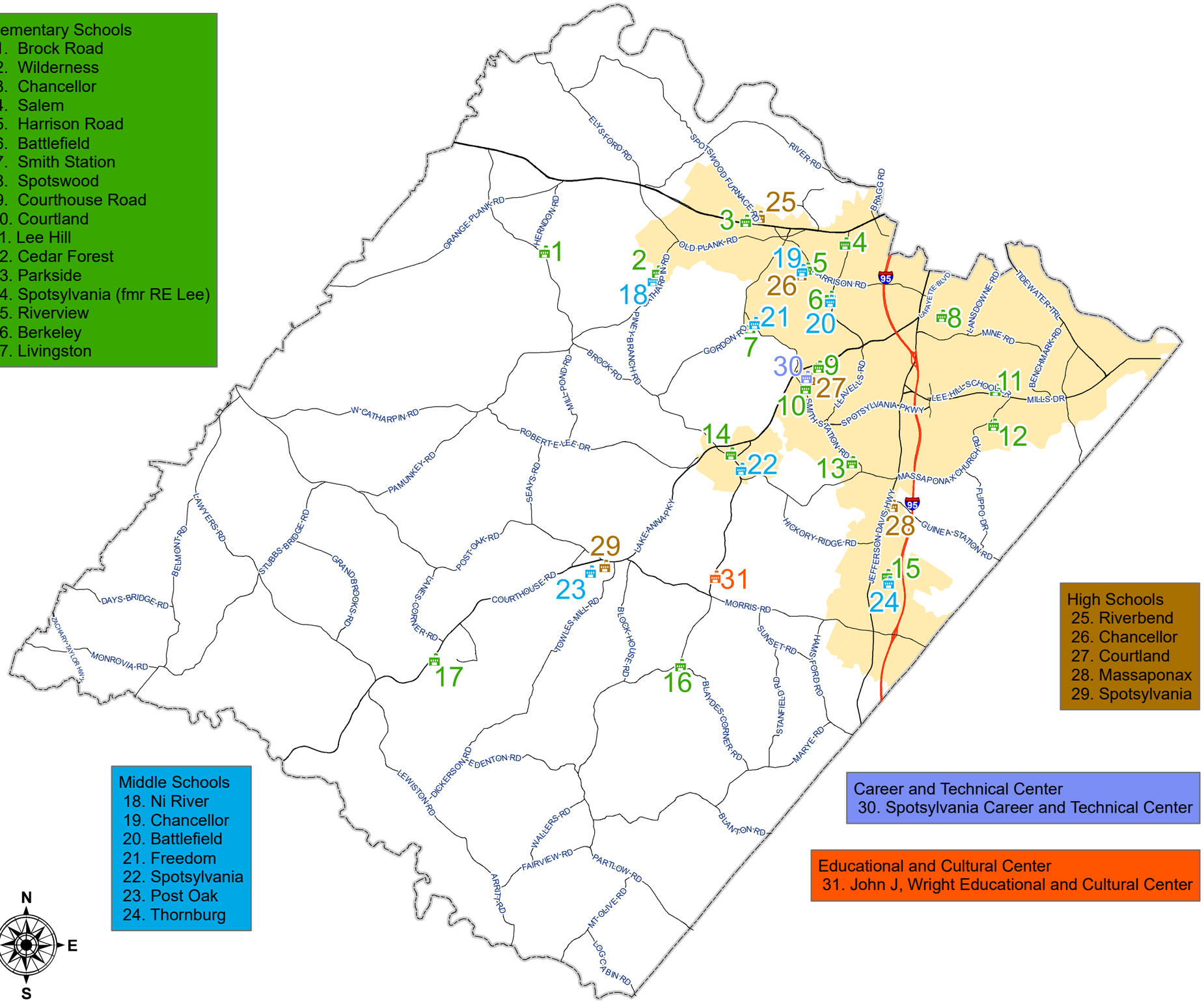
    - Number and type(s) of dwelling unit(s) proposed
    - Anticipated occupancy date for proposed dwelling units
    - Anticipated number of children per household type (student generation rate)

Future School Bond Referendum

The school division's remaining bond authority to complete capital projects will run only through Fiscal Year 2022. In order to fully fund the projects in CIP 2022-2026, a new school bond referendum will be necessary. This referendum is scheduled for November 2021.

DRAFT

Elementary Schools
1. Brock Road
2. Wilderness
3. Chancellor
4. Salem
5. Harrison Road
6. Battlefield
7. Smith Station
8. Spotswood
9. Courthouse Road
10. Courtland
11. Lee Hill
12. Cedar Forest
13. Parkside
14. Spotsylvania (fmr RE Lee)
15. Riverview
16. Berkeley
17. Livingston



High Schools
25. Riverbend
26. Chancellor
27. Courtland
28. Massaponax
29. Spotsylvania

Middle Schools
18. Ni River
19. Chancellor
20. Battlefield
21. Freedom
22. Spotsylvania
23. Post Oak
24. Thornburg

Career and Technical Center
30. Spotsylvania Career and Technical Center

Educational and Cultural Center
31. John J, Wright Educational and Cultural Center

N
W E
S

Spotsylvania County Public Schools

Legend

School Type

- Career & Technical Center
- Educational &Cultural Ctr
- Elementary School
- High School
- Middle School
- Primary Development Boundary

0 1.25 2.5 5 Miles

Map Approved: _____

Chapter 4B

PUBLIC FACILITIES PLAN
FIRE, RESCUE, AND EMERGENCY MANAGEMENT

FIRE, RESCUE, AND EMERGENCY ~~SERVICES~~MANAGEMENT

Introduction

Fire protection and emergency medical service are indispensable services that are essential to the safety and quality of life of every County resident. The overall goal is to ensure adequate fire protection, response, and emergency medical services for the county's residents, businesses, and tourists.

Fire and rescue services are provided to Spotsylvania County residents and visitors through the Department of Fire, Rescue and Emergency Management (FREM), a system comprised of both volunteer and career personnel. Within the Department, along with career personnel who staff County operated Fire and Rescue Stations, t~~T~~here are three volunteer organizations (rescue squads and fire companies) providing services to the County. They include the Spotsylvania Volunteer Fire ~~and EMS~~ Department, Chancellor Volunteer Fire and Rescue Department and Spotsylvania Volunteer Rescue Squad. ~~The Spotsylvania County Department of Fire, Rescue and Emergency Management provides career personnel who staff fire and rescue stations. The~~Although volunteer station staffing levels vary with the amount of trained volunteers, ~~The the C~~County ~~is currently working towards providing~~provides personnel at ~~each~~ all 11 County Fire and Rescue Stations ~~station~~ seven days per week, 24 hours per day.

Services provided by the department are divided into five distinct categories as follows:

1 Fire - Fire suppression, first responder program, public fire education, and company inspection programs.
~~company inspection programs.~~

2 Rescue - Emergency medical treatment ~~and~~, transport, and public education.

3 Emergency Management/Support Services - Plans for natural or man-made disasters, processes ~~Material~~ Safety Data Sheets (~~M~~SDS), responds to hazardous materials spills, investigates environmental issues (illegal dumps, spills, etc.), coordinates search and rescue efforts, provides ~~in~~ in-house vehicle repair and maintenance for fire and EMS vehicles, and provide logistical support for the department.

Spotsylvania County is classified as a risk locality being located within the 10 Mile Emergency Protection Zone (EPZ) for the North Anna Nuclear Power Plant. Spotsylvania County has a Radiological Emergency Response Plan in accordance with the provisions of Nuclear Regulatory Commission (NRC) 10CFR 50.47, 10CFR-50 Appendix E, NUREG-0654 and FEMA REP Manual. Our staff conducts yearly training and exercise to validate the Radiological Emergency Response Plan. Spotsylvania conducts a FEMA/DHS evaluated exercises every two years where we are graded on areas such as evacuations, mass care, public notification, and radiological monitoring and decontamination. Results of the

FEMA/DHS graded exercises are reported to the Nuclear Regulatory Commission and available to the public.

4 Fire and EMS Administration - Provides administrative support for the entire department, develops ~~. Develops~~ departmental ~~-~~budgets, establishes departmental policy and procedures~~, processes fire inspections, fire investigations, fire and EMS reports and departmental related permits~~ , and administers the Revenue Recovery Program for Spotsylvania County. Administration also processes fire inspections, fire investigations, fire and EMS reports, and departmental related permits.

5 Fire Prevention – Performs plan review (site plan, building plan, and subdivision plat), conducts new construction and existing occupancy inspections to ensure compliance with applicable codes and standards, conducts investigations of fires, issues related permits (blasting, fireworks, burning, etc.)

Existing Facilities

Currently, there are ~~10~~ 11 Fire ~~Companies~~ and ~~10~~ Rescue Stations spread throughout the County. ~~Some~~ These facilities are joint facilities ~~and some are stand-alone facilities devoted to either~~ providing fire ~~or~~ and rescue services from each of them. The specific stations are listed in the table below. ~~The facilities currently housing Fire Company 5 and Rescue 5 are being consolidated and a new joint use facility will be constructed in the Route 3 corridor in 2014.~~ Plans are ~~also~~ being developed for a replacement facility to replace the existing Fire and Rescue Station 3, and a new ~~fire~~ Fire and ~~rescue~~ Rescue ~~station~~ Station ~~(~~#121~~)~~ in the vicinity of ~~Mills Drive and Benchmark Road~~Jefferson Davis ~~highway~~Hwy. and Massaponax Church R~~o~~ad. The existing facilities map shows the locations of current and known future stations.

The County maintains an automatic ~~mutual~~ aid agreement~~s~~ with the City of Fredericksburg, Orange, Louisa, Hanover, Stafford, King George, and Caroline Counties. There is an existing mutual aid agreement with Culpeper County that is in the update process presently. At this time there is no specific timeline on when the agreement will be finalized, however, Culpeper's mutual aid agreement is expected to convert to an automatic aid agreement within the planning period. ~~and the Counties of Louisa, Orange, Caroline, and Hanover. The Department of Fire, Rescue and Emergency Management (FREM)~~ Aid agreements within the region have improved over time and are expected to continue to be enhanced as noted above, within the planning period. Prior to this Comprehensive Plan update, the County had acknowledged several mutual aid agreements with adjacent localities. Mutual aid agreements assured regional cooperation and mutual FREM assistance across County or City boundaries when help was requested. Automatic aid agreements as opposed to mutual aid agreements result in more proactive, efficient and effective responses in case of emergencies, resulting in enhanced response times with a greater supply of FREM resources to stabilize the situation. With automatic aid, cooperating localities need not wait for a call for assistance from a nearby locality and therefore can dispatch vital resources more quickly.

FREM also seeks to reduce demand for fire and rescue services through a proactive fire prevention and safety education program. The program includes numerous public education activities as well as a fire safety inspection program.

The primary indicator of level of service in regard to fire protection is response time. The target response times are 6 minutes for suburban and 8 minutes for rural in 90% of responses, with an overall average of 7 minutes in 90% of responses countywide. ~~The current level of service is measured by distance from the various stations whether the station is fire or rescue only or a joint use location.~~ The ability to meet this is predominately dependent on two factors, the proximity of the response location to a station, and the availability of equipment and personnel at the station. During the next Comprehensive Plan amendment cycle these levels of service standards will be retired and replaced by a new methodology which measures "Unit Hour Utilization" and "Assembled Fire Fighting Force." The Unit Hour Utilization will measure the Utilization, or load/demand in a period of time, relative to the Unit Hour supply. The Assembled Fire Fighting Force, according to NFPA 1710/1720 measures the response time from dispatch to the point where the necessary equipment and teams (not just a first responder) are onsite to effectively resolve an incident. These more advanced measurement techniques will become available over the next few years due to capital improvements made by the County in FREM and Information Technology.

As of 2019, ~~A~~approximately ~~90~~ 67% of the land area of the County is within ~~the desired~~ a five-~~mile~~ mile-driving ~~radius~~ distance of a fire station. This is a standard commonly used by the Insurance Services Organization (ISO), a group funded by the insurance industry to establish insurance rates on a national level. As of April 1, 2021, Spotsylvania's ISO Public Protection Classification Rating is a 2/10; areas within 5 road miles of a fire and rescue station are categorized with the rating of a 2, while those outside the 5 road miles are categorized with a rating of 10.

Road distance-based service areas have been mapped with the assistance of FireView Software administered by the Spotsylvania County GIS office. In past iterations of the Comprehensive Plan, response distances had been mapped based on an equal 5-mile radius buffered around fire stations (appearing as circles). Though the distances were reflective of standards they did not factor in the road-based routes necessary for fire and rescue apparatus to travel from station to the location of an emergency. With improvement of technology available, the County has enhanced its portrayal of response times, depicting "real world" distances considerate of the road network and routing. ~~An even greater percentage of the existing structures are within the five-mile radius due to the density of development in the Primary Development Boundary. This is a standard commonly used by the Insurance Services Organization (ISO), a group funded by the insurance industry to establish insurance rates on a national level.~~

Many variables can affect response time and the generation of fire/rescue calls by a given population. Among them are geography, road networks, age and density of population, traffic volumes, inclement weather, and age and quality of the building stock. The analysis of the

department focuses on future population projections and call loading within a fire/rescue district or response zones. A threshold of 2,500 total calls per year is used as the benchmark indicator of full capacity at any single fire/rescue station, staffed with one fire apparatus and one ambulance. Under 2021 conditions, per Spotsylvania County FREM the number of units staffed in each station is still 1 Fire apparatus and 1 Ambulance. It is the intention of FREM leadership to continue to utilize volunteer agencies whenever possible to supplement career staffing, which has resulted in several instances where County FREM has been able to staff more than the minimum number of units in each station, but the regularity of this occurrence is not yet frequent enough to expand the benchmark indicators.

As of August 2019, the County has been providing 24/7 minimum staffing through career personnel, with added capacity provided through volunteer participation. However, the volunteer staffing has not been consistent. This has resulted in a continuation of maintaining the minimal staffing of 1 Fire apparatus and 1 Ambulance in each station. Therefore, service area call thresholds are based on 2,500 total calls per year for any and all fire/rescue service areas throughout the County. County FREM staff have provided Incident Counts for fiscal year 2019 and 2020 considering call volume versus capacity (See Table 1 below). Fire and Rescue Station #4 and 6 are well over capacity based on service thresholds.

Table 1: Station Capacity vs. Volume

Fire & Rescue Station	Capacity	July 1, 2018-June 30, 2019			July 1, 2019-June 30, 2020		
		Annual Call Volume* (July 1, 2018 - June 30, 2019)	Volume vs Capacity	% Residential Calls	Annual Call Volume* (July 1, 2019 - June 30, 2020)	Volume vs Capacity	% Residential Calls
1	2500	1935	565	63%	1995	505	70%
2	2500	838	1662	65%	759	1741	68%
3	2500	558	1942	74%	587	1913	73%
4	2500	4298	-1798	46%	4246	-1746	42%
5	2500	1309	1191	66%	1322	1178	70%
6	2500	3935	-1435	60%	3857	-1357	62%
7	2500	876	1624	68%	909	1591	72%
8	2500	1118	1382	45%	1090	1410	46%
9	2500	518	1982	79%	540	1960	77%
10	2500	1360	1140	85%	1378	1122	85%
11	2500	1803	697	65%	1830	670	69%
Total	**27500**	**18548**	8952	**60%**	**18513**	**8987**	**62%**

*call volume does not include mutual aid to surrounding jurisdictions

Distance and call volume-based level of service gaps have helped drive recommended short- and long-term fire and rescue station additions recommendations as depicted in the FREM 5-Mile Response Map. In the short term, Fire and Rescue Station #12 is expected to go into service in the Massaponax area. Construction of Station #12 is expected to occur in 2023-2024. Longer

term target additions for Fire and Rescue stations include the Elys Ford area in northwest Spotsylvania County, Shady Grove, and Post Oak.

Level of Service Standards

Level of Service is evaluated through multiple means. The ~~alpha~~ primary measure of service is response time but response time is driven by several factors. The primary factors are station location, equipment availability, and staffing levels and availability.

There are ~~four~~ three LOS standards for fire and rescue:

1. Respond to 90% of all fire and emergency medical service incidents within 6 minutes of being dispatched when the incident is located in the ~~Primary Development Boundary~~suburban districts of the County. These districts include areas covered by Stations 1, 4, 5, 6, 10, and 11. The planned Station 12's district will also be included in this list of districts.
2. Respond to 90% of all fire and emergency medical service incidents within 8 minutes of being dispatched when the incident is located ~~outside the Primary Development Boundary~~rural districts of the County. These districts include areas covered by Stations 2, 3, 7, 8, and 9.
3. Achieve a 7-minute average countywide response time for 90% of the county's incidents.
   ~~Achieve a 1 : 11,000 ratio of stations per capita.~~

Location Criteria

The following criteria should be used in determining appropriate sites for additional stations in order to provide a consistent level of service across the County.

- Locate stations at points with quick access to a major arterial road. If possible, sites should be located near two major arterials that offer both east/west and north/south travel.
- Locate new fire/rescue stations near mixed-use centers where possible, based on key site planning considerations such as access, safety, and response time.
- Response times will also be considered in evaluating and selecting appropriate sites. This will ensure that the targeted response goals are being met.

Design Criteria

The following design criteria should be considered when developing a new site for emergency response stations.

- Co-locate fire and rescue facilities for maximum efficiency. Consider co-locating with other public facilities as well.

- Acquire sites of at least 3 acres in the urban area since there is the availability of county water and sewer lines and 5 acres in the rural area in order to accommodate drainfields in order to provide for co-location of public facilities and future expansion.

Recommendations

The following are recommendations for the provision of adequate Fire and Rescue facilities.

General

- Coordinate with lead/ support agencies and Implement regional and Spotsylvania County specific mitigation action strategies associated with the current iteration of the George Washington Regional Commission Regional Hazard Mitigation Plan.
- Work with local and regional stakeholders to update the Regional Hazard Mitigation Plan consistent with the required review and update five (5) year cycle as established in the Federal Disaster Mitigation Act of 2000, administered by the Federal Emergency Management Agency (FEMA).
- Explore development of a County Wildland Fire Mitigation Plan in partnership with the Virginia Department of Forestry.

Short Term

- Integrate technologies and adopt procedures necessary to measure performance using the Unit Hour Utilization and Assembled Fire Fighting Force metrics.
- Study Fire and Rescue calls and responses, as well as ~~u~~Unit ~~h~~Hour ~~u~~Utilization to determine whether ~~separate facility needs~~ LOS needs dictate the construction of additional stations in some areas, and/or staffing additional fire apparatus and ambulances in existing facilities. ~~should be established for the two services.~~
- Build replacement ~~FC/RS 5~~Fire and Rescue Station 3 ~~on Route 3~~in the Partlow area.
- Secure land for and build ~~FC/RS 11~~Fire and Rescue Station 12 in the ~~Mills Drive~~Jefferson Davis ~~Highway~~Hwy. / ~~Benchmark~~ Massaponax Church ~~Road~~ Rd. area.
- ~~Secure land for and build a new fire and rescue station to split the call volume handled by stations #4 and #6.~~
- Build the Classroom and Logistics Facility at the Rappahannock Regional Training Center to facilitate improved system-wide training abilities and meet logistical storage needs.
- Implement traffic management strategies and technology, such as traffic signal preemption devices to facilitate improved response times.
- Continue efforts to update the aid agreement with Culpeper County, resulting in conversion from a mutual aid agreement to an automatic aid agreement.

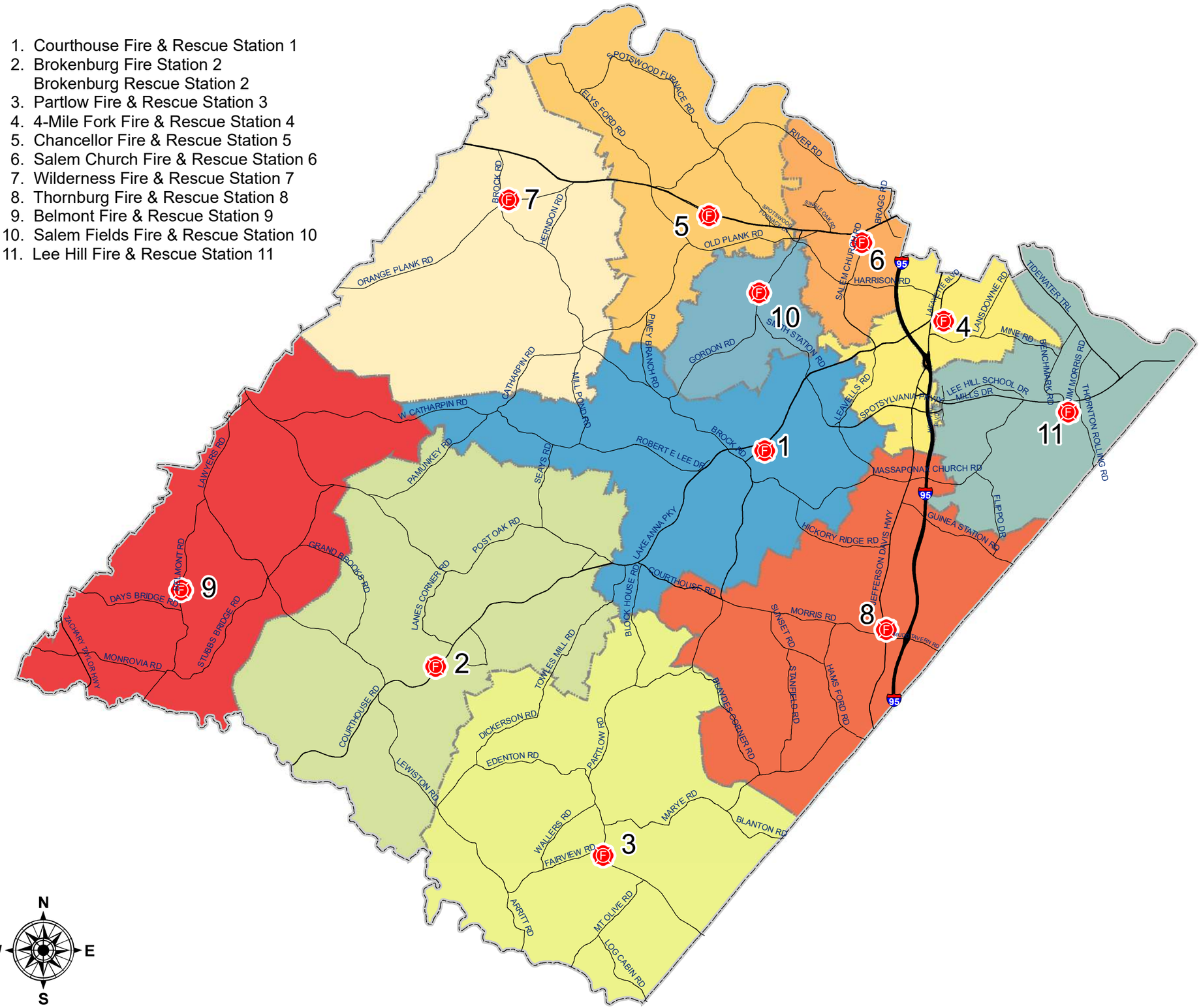
Long Term

- ~~Secure property for the replacement of the FC/RS 3 facilities into a new consolidated use site.~~

  ~~The land acquisition~~Acquire land for fire/rescue joint use sites ~~will need to occur~~ in order to relieve the burden on existing fire/rescue facilities. ~~Possible~~ Considering level of service standards, new locations are in ~~the~~ Shady Grove, ~~Massaponax Church, and~~ Post Oak~~, and River Road/Spotswood Furnace Road areas.~~and northwestern Spotsylvania County (north of Route 3).

DRAFT

1. Courthouse Fire & Rescue Station 1
2. Brokenburg Fire Station 2
   Brokenburg Rescue Station 2
3. Partlow Fire & Rescue Station 3
4. 4-Mile Fork Fire & Rescue Station 4
5. Chancellor Fire & Rescue Station 5
6. Salem Church Fire & Rescue Station 6
7. Wilderness Fire & Rescue Station 7
8. Thornburg Fire & Rescue Station 8
9. Belmont Fire & Rescue Station 9
10. Salem Fields Fire & Rescue Station 10
11. Lee Hill Fire & Rescue Station 11



N
W E
S

Spotsylvania County Fire/Rescue Stations First Response Zones

Legend

FREM Stations with First Response Zones

Existing Fire/Rescue Station^

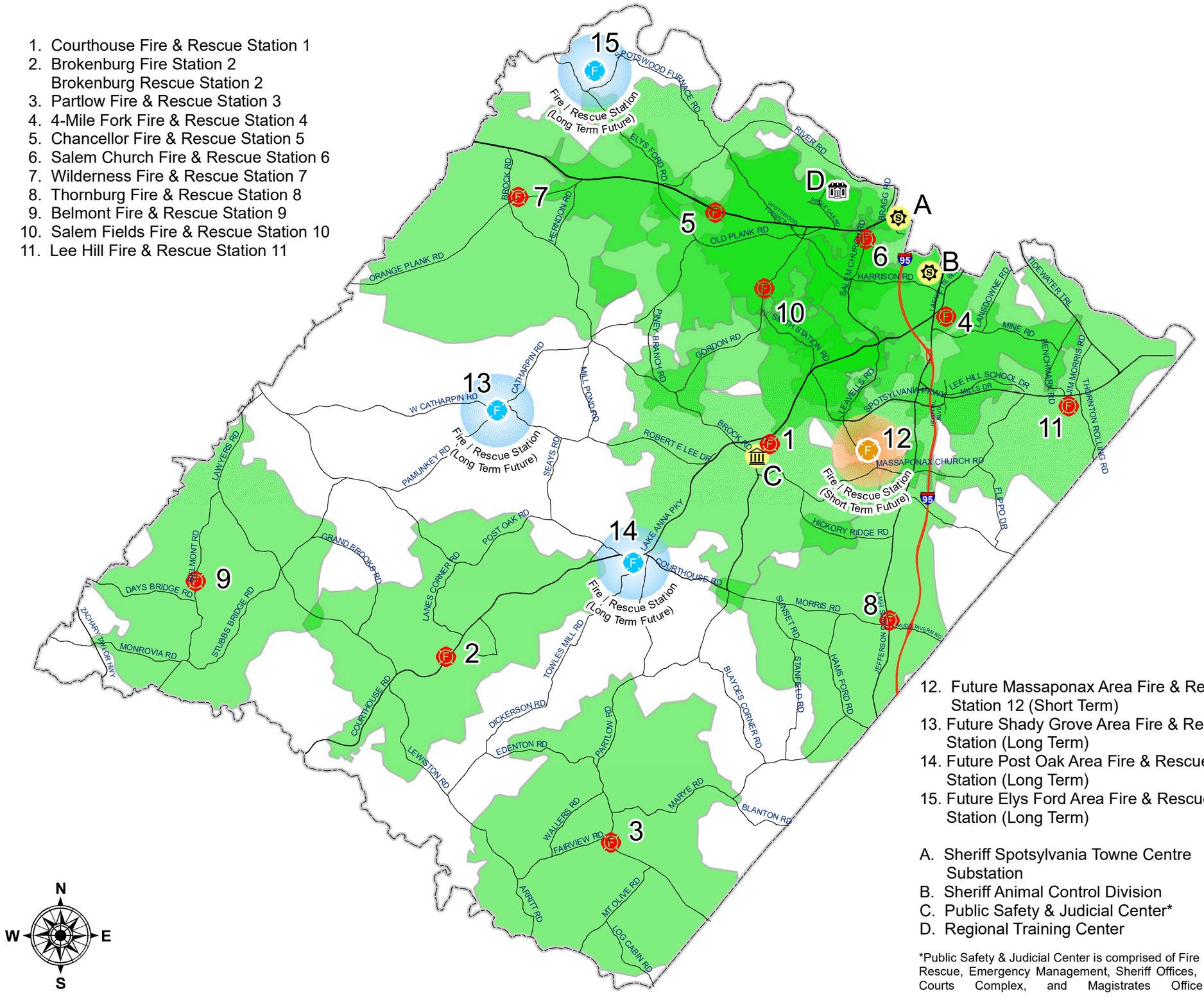
^Symbology includes corresponding First Response Zones for each of the existing fire/rescue stations. The entire County has First Response Zone coverage.

0 1.25 2.5 5 Miles

Map Approved: _____

DRAFT

1. Courthouse Fire & Rescue Station 1
2. Brokenburg Fire Station 2
   Brokenburg Rescue Station 2
3. Partlow Fire & Rescue Station 3
4. 4-Mile Fork Fire & Rescue Station 4
5. Chancellor Fire & Rescue Station 5
6. Salem Church Fire & Rescue Station 6
7. Wilderness Fire & Rescue Station 7
8. Thornburg Fire & Rescue Station 8
9. Belmont Fire & Rescue Station 9
10. Salem Fields Fire & Rescue Station 10
11. Lee Hill Fire & Rescue Station 11



12. Future Massaponax Area Fire & Rescue Station 12 (Short Term)
13. Future Shady Grove Area Fire & Rescue Station (Long Term)
14. Future Post Oak Area Fire & Rescue Station (Long Term)
15. Future Elys Ford Area Fire & Rescue Station (Long Term)

A. Sheriff Spotsylvania Towne Centre Substation
B. Sheriff Animal Control Division
C. Public Safety & Judicial Center*
D. Regional Training Center

*Public Safety & Judicial Center is comprised of Fire Rescue, Emergency Management, Sheriff Offices, Courts Complex, and Magistrates Office

Spotsylvania County Public Safety 5-Mile Response Map

Legend

Public Safety Buildings

- Fire / Rescue Station
- Fire / Rescue Station (Long Term Future)^
- Fire / Rescue Station (Short Term Future)^
- Sheriff Substation
- Safety & Judicial Center
- Training Center

Distance (Miles)

5-Mile Response Distance

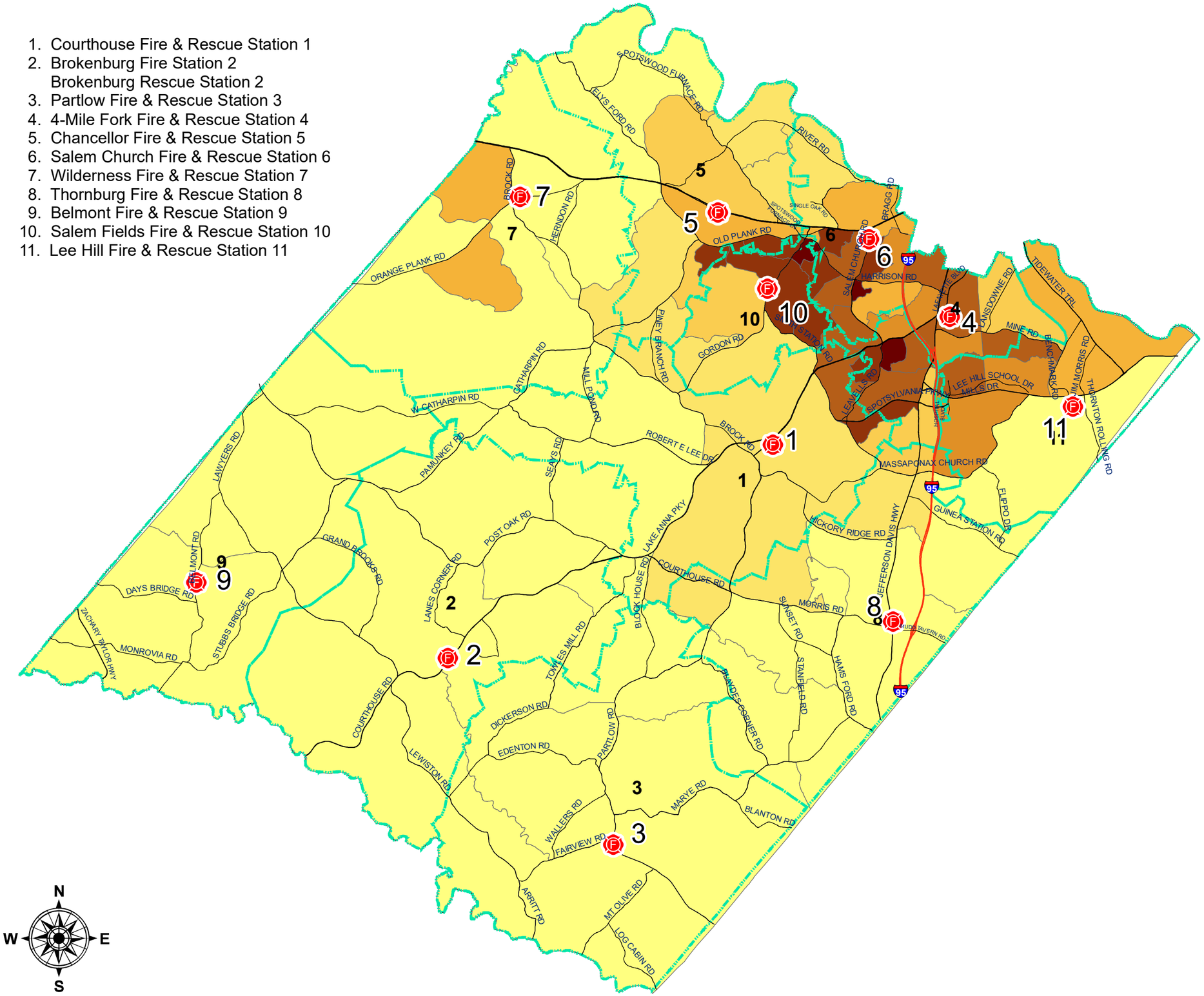
^Symbology includes proximity/ area buffers. Locations symbolized for new stations are not intended to suggest a specific location at this time but rather represent a general area where a new station has been recommended.

0 1.25 2.5 5 Miles

Map Approved: _____

DRAFT

1. Courthouse Fire & Rescue Station 1
2. Brokenburg Fire Station 2
   Brokenburg Rescue Station 2
3. Partlow Fire & Rescue Station 3
4. 4-Mile Fork Fire & Rescue Station 4
5. Chancellor Fire & Rescue Station 5
6. Salem Church Fire & Rescue Station 6
7. Wilderness Fire & Rescue Station 7
8. Thornburg Fire & Rescue Station 8
9. Belmont Fire & Rescue Station 9
10. Salem Fields Fire & Rescue Station 10
11. Lee Hill Fire & Rescue Station 11



2019 Estimated Block Group Population Density Relative To Existing Fire/Rescue First Response Zones

Legend

FREM Stations with First Response Zones

Existing Fire/Rescue Station^

2019 US Census Block Group Estimated Density (Persons per BG Acre)*

- 0.01 - 0.27
- 0.28 - 0.49
- 0.50 - 0.77
- 0.78 - 1.73
- 1.74 - 2.51
- 2.52 - 4.10
- 4.11 - 6.34
- 6.35 - 9.37

^Symbology includes corresponding First Response Zones for each of the existing fire/rescue stations.
*The Block Groups are provided by the US Census Bureau and supplemented with ESRI Total Population Estimates for 2019. Analysis conducted prior to County Boundary change with Orange County.

0 1.25 2.5 5 Miles

Map Approved: _____

Chapter 4C

PUBLIC FACILITIES PLAN- SHERIFF

SHERIFF

Introduction

The Sheriff is a constitutional officer of the Commonwealth of Virginia and is elected by the voters of Spotsylvania County. The Sheriff provides law enforcement services to the citizens of the County, including the enforcement of all State and County criminal codes; serves civil and criminal papers; provides for the enforcement of all State and County animal codes and supervisors the operations of the County's animal shelter; and protects and maintains the security of the courts operating in the County.

There are five divisions within the Sheriff's Office that together, serve all law enforcement functions described above: Patrol Operations Division, Criminal Investigations Division, Courts Security/Civil Process Division, Administrative Services Division, and Animal Control Division. Some of the specialty functions within these divisions are the Street Crimes Unit, Crime Prevention Unit, Emergency Response Team, Bicycle Team, Canine Unit, Hostage Negotiation Team, Dive Team, Ground Search and Rescue Team, and Traffic Services Unit.

Emergency Communications is also part of the Sheriff's Office. The Emergency Communications division is a 24/7 operation that serves as the 911 answering point for calls for service and the dispatching of public safety services.

On December 3, 2011, a 58,000 square foot Public Safety Building located at 9119 Dean Ridings Lane was dedicated. The Sheriff's Office, 911 Dispatch Center, and the administrative offices of Fire, Rescue, and Emergency Management are located in the Public Safety Building. The building includes a forensics lab, bay for inspecting vehicles involved in crimes, a physical fitness facility, and an outdoor kennel for police and fire dogs.

Per FY 2022-'26 CIP project objectives, *since the building* (public safety) *was completed in 2011, public safety staffing and programs have expanded to the point of needing additional space, particularly for the Sheriff's office*. The County Finance office confirmed that the amount of added Sheriff's Office staffing since 2011 (FY 2012) is nearly 70 positions. Not all of those positions are based in the Public Safety Building. For example, nearly 20 Courts deputies have been added and those "reside" in the courts buildings. 14 School Resource Officers have been added and those "reside" in the Schools. Per communication with the County Sheriff's office the Public Safety Building has seen staffing increases since 2011 and expects there will be additional staffing needs with growth in the County. Per feedback from the Sheriff's office the Criminal Investigation Division and Administrative Services are already space constrained and additional square footage will also provide opportunity to expand the Emergency Operations Center (EOC) to benefit both the Sheriff's office and FREM. In addition to need for additional space for staffing there is a critical need for additional storage space at the facility that is now insufficient. Presently a two story addition is envisioned. As part of the project review and design process the County may like to consider a below grade addition that would add additional square footage and additional opportunity for growth and space planning. A sub-grade basement addition could add an additional 4,000 sq ft.

The public safety expansion is estimated to address current space needs as well as needs ten (10) to fifteen (15) years into the future.

The Sheriff's Office maintains one substation, located in the Spotsylvania Towne Centre, and the Animal Shelter, located at 450 TV Drive.

Level of Service Standards

1. Maintain a 1 : 1,500 ratio of Deputies per capita.

Facility Location and Design Criteria

The following criteria should be used in determining appropriate sites and design for additional or expanded Sheriff and Animal Control facilities.

- Provide new facilities to adequately and efficiently serve all areas of the county.
- Provide animal shelter facilities consistent with 2-VAC 5-110 Rules and Regulations Pertaining to ~~A~~ a Pound or Enclosure to be Maintained by ~~Each~~ each County or City (http://www.vdacs.virginia.gov/animals/regulations.shtml)

Recommendations

The following are recommendations for the provision of adequate Sheriff and Animal Control facilities.

Short Term:

- ~~Enclose outdoor kennel at the Public Safety Building~~
- Expand Animal Shelter or partner with non-profit animal shelter(s) to provide the service.
- Expand the public safety building to meet existing space needs and those within the planning period.

Long Term:

- Substation in Livingston District co-located with other public facilities.

DRAFT

Spotsylvania County Public Safety Existing Facilities

1. Courthouse Fire & Rescue Station 1
2. Brokenburg Fire Station 2
   Brokenburg Rescue Station 2
3. Partlow Fire & Rescue Station 3
4. 4-Mile Fork Fire & Rescue Station 4
5. Chancellor Fire & Rescue Station 5
6. Salem Church Fire & Rescue Station 6
7. Wilderness Fire & Rescue Station 7

8. Thornburg Fire & Rescue Station 8
9. Belmont Fire & Rescue Station 9
10. Salem Fields Fire & Rescue Station 10
11. Lee Hill Fire & Rescue Station 11

A. Sheriff Spotsylvania Towne Centre Substation
B. Sheriff Animal Control Division
C. Public Safety & Judicial Center*
D. Regional Training Center

*Public Safety & Judicial Center is comprised of Fire Rescue Emergency Management, Sheriff Offices, Courts Complex, and Magistrates Office

Legend

Public Safety Buildings

- Fire / Rescue Station
- Sheriff Substation
- Public Safety & Judicial Center
- Training Center
- Primary Development Boundary

0 1.25 2.5 5 Miles

Map Approved: _____

Chapter 4D

PUBLIC FACILITIES PLAN

SOLID WASTE COLLECTION & DISPOSAL

SOLID WASTE COLLECTION & DISPOSAL

Introduction

The Spotsylvania County Department of Public Works prepares a Solid Waste Management Plan every five years in accordance with the Virginia State Code. The Plan is an integral part of provision for solid waste services for Spotsylvania County and is incorporated as part of the Comprehensive Plan by reference. At the present time, the 2020 Solid Waste Management Plan is in effect. The next update is due in ~~2015~~ 2025. For planning purposes, the Comprehensive Plan incorporates by reference the latest version of the Solid Waste Management Plan. The Plan is based on a twenty (20) year planning period and deals with all aspects of solid waste management from operation of the landfill to the development of convenience sites to litter control efforts to the development of recycling and other educational programs. The objectives of this plan are to protect the health, safety and the welfare of the citizens of Spotsylvania by providing for and planning for the present and future solid waste disposal needs for the County. It is the intent of the County to provide these services as efficiently and economically as possible. The plan minimizes the amount of solid waste disposed of in the County's landfill by providing an integrated plan of recycling and education. This will serve to maximize the life span of the existing landfill and promote the effective and efficient use of limited natural resources. The information contained in this section is derived from that plan.

Existing Facilities

Spotsylvania County operates one landfill facility in the southern part of the County. Known as the Livingston Landfill, ~~i~~it is located north of State Route 602 and east of State Route 208 approximately 3 miles southeast of Brokenburg. The entire site covers approximately 538 acres, with 250 acres ultimately proposed for disposal of municipal solid waste. Future unknown variables, regulatory changes, efficiency improvements, increased recycling rates, population and waste generation changes over time all influence landfill lifecycle going forward beyond 2023. Though estimates vary, all agree additional phases will add over fifty (50) additional years to the landfill's estimated facility life beyond the Phase I closure.

Currently 85 acres are permitted for use as a landfill under the authority of the Virginia Department of Environmental Quality. This is designated as Phase 1 (cells 1 through 6). ~~and approximately 20-25 years of capacity remain.~~ As per the 2020 Solid Waste Management Plan the estimated date of closure of Phase I is 2023. Future unknown variables, regulatory changes, efficiency improvements, increased recycling rates, population and waste generation changes over time all influence landfill lifecycle going forward beyond 2023. Of the 85 acres permitted as Phase 1, 55 acres will be actual disposal area with the remainder to be used for roads, drainage area, and buffers. The facility is designed with a capacity of 5.4 million cubic yards. This total includes 310,000 cubic yards of final cover (cap, cushion, and topsoil), 220,000 cubic yards of liner and drainage layers, 968,000 cubic yards of daily and intermediate cover and 3.87 million cubic yards of waste. The current waste stream five-year average (2015-2020) is ~~approximately 40,000~~ 136,000 tons annually or ~~110~~ 373 tons per day. This updated figure is up from 40,000

tons annually that had been reported as part of the 2013 Comprehensive Plan. As per the 2015 Spotsylvania County Solid Waste Management Plan in 2012/ 2013 a substantial increase was observed due to an increase of commercial volume accepted at the Livingston Landfill. The County sourced commercial volume was previously leaving the County for private sector landfills in adjoining regions. Increased competitiveness due to more favorable tipping fees has been attributed to the shift of commercial haulers selecting the Livingston landfill over out of County sites. Commercial haulers/ users are defined as those customers delivering brush/leaves/landscape debris by means of mechanical dumping (dump trucks, box trucks, dump trailers) and vehicles clearly associated with a related commercial business (trucks with advertisements, trailers with multiple mowers, multiple site visits within 24 hours, etc). Solid Waste growth can also be attributed to an increase in economic activity and the landfill capturing the majority of any waste leaving the County. Solid Waste growth can also be attributed to an increase in economic activity and the landfill capturing the majority of any waste leaving the County. ~~The composted tonnage is approximately 23,000 tons annually.~~

Increased annual volumes inevitably impact the speed at which the landfill grows in relation to its ultimate capacity. However, increases in commercial tipping overall are viewed as beneficial in financial support of operations and offsetting costs associated with provision of Solid Waste Services. These increases also represent the County taking a larger share of solid waste management for solid waste generated within the County borders as opposed to its waste being exported out of the County.

The Solid Waste Division is actively looking at ways to add efficiencies and build additional capacity into existing operations including the Livingston Landfill whereby extending the viable life of such facilities while maintaining or improving upon levels of service. One example being considered during this planning period is the concept of landfill mining meant to increase the capacity and revitalize previously closed landfill cells.

Spotsylvania County maintains a comprehensive solid waste disposal program that includes the disposal of household, commercial, and industrial waste. The ~~residential~~ household component of the stream comprises approximately 90% of the waste that is placed in the landfill. The remainder consists of ~~business/commercial/~~ construction demolition and debris, and commercial and industrial waste (10%).

The Solid Waste Division, with the assistance of third-party consultants, is evaluating the landfill's existing gas extraction system and planning for potential opportunities to expand that system. The primary objective of the evaluation is to define best management practices for the future, and ensure that our existing system is operating, maintained, and monitored at an optimum level.

Currently, residents of the County are provided with 13 convenience sites located at various locations throughout the County. The sites have designated areas for household waste and recycling. ~~as well as specific containers for different recyclable materials.~~ Table 1 identifies the individual convenience sites.

Table 1
Spotsylvania County Convenience Sites

Convenience Site	Location
The Barn	2805 Lewiston Road
Belmont	7102 Belmont Road
Berkeley Public Use Area	6013 ~~Standfield~~ StanfieldRoad
Chancellor Public Use Area	5917 Harrison Road
Chewning Park	13001 Post Oak Rd
Cole Hill Creek	5029 Partlow Road
Lee Hill	9904 Lee Hill ~~School Drive~~Park Road
Livingston Landfill	6241 Massey Road
Marshall Park	7114 Massaponax Church Road
Mine Road	4010 Mine Road
Post Oak	10020 Post Oak Road
Todds Tavern	10653 Brock Road
Wilderness	10501 Orange Plank Road

More information regarding County convenience sites including: contact information; location; hours of operation; recycling items accepted can be found **HERE**.

~~Spotsylvania County has been providing voluntary drop off facilities for recycling since 1989. Spotsylvania County built a recycling center in 1992 at a cost of $63,000. The center is equipped with a loading dock, horizontal bailer and other equipment necessary to process material to market specifications. The recycling operations include the mulching program; tire recycling; CFC recovery; collect, bail, market commodities; and household hazardous waste collection.~~ Virginia mandates a recycling rate of 25%. ~~Spotsylvania currently recycles 31% of the waste generated.~~ In the most recent three years the County has achieved a recycling rate at a range of 28-36%. Single stream recycling containers are available at each convenience site. Single stream recycling includes mixed paper, plastics, cardboard, aluminum, and glass. In addition to single stream containers, the County also offers opportunities to recycle metal, used motor oil, antifreeze, batteries, appliances, latex paint, and brush and yard waste.

The County offers household hazard waste collection twice a year for residential disposal of chemicals, toxic wastes, or hazardous liquid materials. This collection effort is accomplished through third party contract services.

In accordance with the Biosolids Management Plan, Spotsylvania County adopted the composting process as the choice method to stabilize its biosolids. In 2001, the County committed to composting their biosolids, which also requires some materials from the mulching program. The composting facility is located at the Livingston Landfill and was expanded in 2010. The County ~~composes~~ composts 100% of biosolids produced and maintains 100% diversion of all wood waste out of the landfill. Tree trimmings, logs and brush are collected and periodically ground to provide the bulking agent required for the composting program. In 2003, the

compost was registered with the United States Compost Seal of Testing Assurance Program. This program certifies through rigorous testing that the product not only achieves class A criteria according to the US EPA Part 503 regulations, but that it meets growing standards of quality for attributes such as particle size, stability, and soluble salt content to name a few. In that same year, the product was registered as a fertilizer with the Virginia Department of Agriculture. The compost was later trademarked as Livingston's Blend and marketed/distributed with information regarding proper applications. The County was awarded the 2012 Gold Winner Solid Waste Association of North America Composting Division. Details of the award and Spotsylvania's composting operations can be found **HERE**.

Future Expectations

The County Code specifies that only waste that is both discarded and collected within the County limits may be disposed of at the County's Livingston landfill. This helps regulate the inflow of material and also helps plan for future landfill growth, as we can review trends of incoming material compared with population growth and development specific to Spotsylvania County. However, the County Code does not require commercial haulers doing business within the County to dispose of their collected waste at Livingston landfill, rather the Code specifies Livingston's tipping fees for commercial disposal. The dynamic of these two codes have balanced the waste steam at Livingston in years past.

Continued growth in the County whether it is commercial, industrial or residential will put additional pressure on the existing landfill and the convenience sites. The sequence of development for the Livingston Landfill currently includes five phases. The County has active permits for Phase I and has applied to the Department of Environmental Quality for permits to develop Phase II. Provided the waste stream grows at a similar rate as the population projections, ~~the landfill~~ phases I & II have the ~~has~~ capacity to ~~remain open~~ provide sanitary landfill services to the County until ~~about 2083~~approximately ~~2085~~2047. ~~This is subject to change if a large hauler elects to being utilizing the facility.~~ Phases III, IV, and V are conceptual phases that identify potential landfill development on approximately 196 acres of County property. Estimated landfill capacity is subject to change with changes in County policy and code.

~~Additional population will require additional convenience sites that are convenient and readily accessible to the population concentrations. The existing convenience sites may need to be expanded and the remaining collection sites will need to be closed and replaced with convenience sites although not necessarily on a one for one basis.~~

The Phase II development was initiated in 2018 with a landfill expansion conceptual evaluation. Many considerations were reviewed as part of the conceptual evaluation including: the property's wetlands and environmental setback requirements, the geographic location of existing landfill cells and opportunities to improve existing conditions while maximizing future capacity, expansion sequencing, cell development costs, cell volumes and cell life, and cost efficiency. As the design of phase II developed, project elements such as roads and disposal cells were modified to minimize direct impacts to wetlands and streams. Project elements were also

designed to meet all Virginia Department of Environmental Quality siting criteria. The phase II lateral expansion of the landfill facility encompasses approximately 37 acres and consists of four waste disposal cells. The expansion provides for approximately 5,370,000 cubic yards of landfill capacity (not including liner and cap), which is equivalent to 3,423,000 tons of waste. Assuming a consistent and constant waste stream, the phase II expansion will provide approximately 24 years of life expectancy.

Environmental stewardship is a long-term strategic goal of the County. As part of the phase II development, the County intends to mine a portion of a disposal cell that stopped accepting waste in 1993. A portion of the closed cell, referred to as permit #99, does not have a geosynthetic membrane liner. The County intends to mine the unprotected buried waste area so that a membrane liner may be installed and tied into the existing liners of adjacent cells. As a result of this solid waste management strategy, all buried waste at the Livingston property will be protected by a double geosynthetic membrane lining system which will provide long term protection of the groundwater system, minimizing environmental impacts and needs of long term corrective action planning.

Location Criteria

The existing Livingston landfill property has the acreage to ~~will suffice for the next 70-75 years (approximately)~~ provide sanitary landfill capacity throughout the 21st century and thus will not need replacement or relocation during this Comprehensive Plan horizon.

Convenience sites should be located according to the following criteria:

- A ~~5~~ 5-mile radius level of service standard should be maintained. This means that a convenience site's population should be within 5 miles of the site. Current geographical spacing of the County's convenience sites complements the 5-mile service area goals with coverage for the majority of County land and residents presently. Small service area gaps outside of the 5-mile service area exist in the northwest corner of the County near Spotswood Furnace Road; at Lake Anna near the Route 208 corridor and bridge crossing; Smith Road. Overall, these are not major population centers, and, in all instances, the additional mileage is less than 1 mile.
- Convenience sites should not be located on arterial or major collector roads.
- Preference should be given for joint use sites such as with fire/rescue station, parks, and other public facilities.
- The entrance to a convenience site should be readily accessible to the large vehicles required to service them.
- Adjoining land use (current and future) should be considered.
- Individual site use trends and traffic counts should be evaluated when determining new or expanded sites.

Design Criteria

- Convenience sites should be a minimum of two acres in area in order to accommodate parking, stacking and staging areas as well as the waste collection facilities. The sites should be of adequate size to expand if necessary.
- Sites should be located in areas that will allow for adequate screening of the facilities from adjacent land uses. Mitigation measures for the site's impact on adjacent properties should be addressed in the design of the site.
- Site should be planned to accommodate expansion, including site area, entrance design, road improvements, etc.

Recommendations

The following are recommendations for ~~the provision of adequate~~ solid waste planning~~: facilities.~~

Short term~~:~~

- Implement a County decal program that will enable solid waste staff to effectively identify residents of Spotsylvania County using convenience sites for residential use.
- Adopt a policy that restricts commercial disposal to a select number of disposal sites.
- Update tipping fees and disposal of select items with current market rates.
- Evaluate strategies to make brush and yard waste recycling operations sustainable, in cooperation with the County's composting facility.
- Continue to implement goals of the latest Solid Waste Management Plan that is incorporated by reference within the Comprehensive Plan.
- ~~Develop a full-service convenience center in the Massaponax area to replace the Mine Road and Lee Hill sites.~~
- Consider one site to include the County's Public Works Center for collection, fleet, recycle processing, material transfer, and mulching.
- Continuously review and reference the Solid Waste Management Plan consistent with the Code of Virginia.
- Update applicable Chapters of the Comprehensive Plan upon completion of updates to the Solid Waste Management Plan considering any future needs, opportunities, or recommendations that apply.

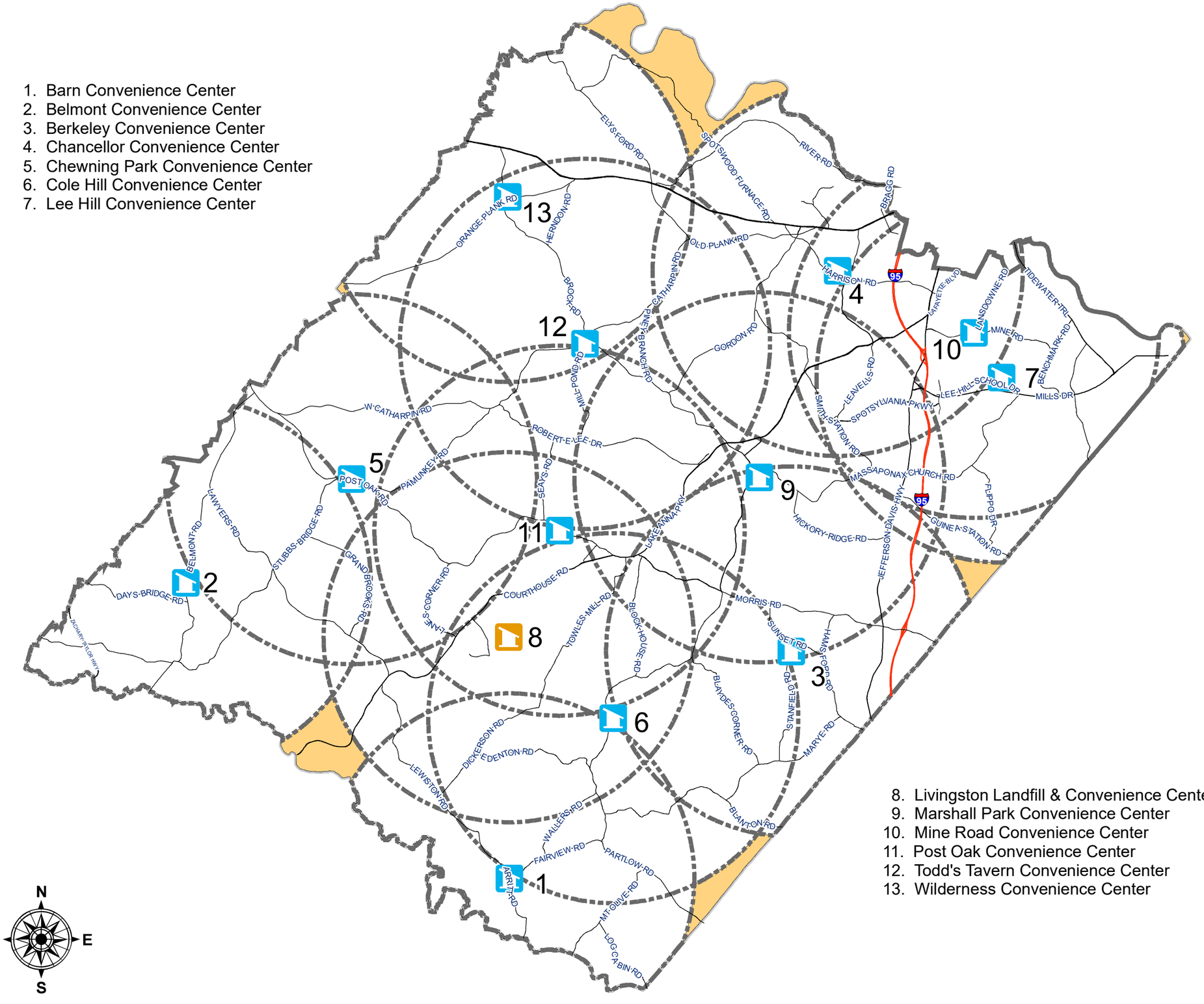
Long term~~:~~

- ~~Update upon completion of the 2015 update to the Solid Waste Management Plan.~~
- Monitor recycling industry trends and markets on an international and national level.
- Update educational recycling programs as the industry grows and changes and continue to build partnerships with commercial recycling businesses.
- Continue developing sustainable solutions for bio solids, yard waste and brush recycling.
- Evaluate the benefits of managing the solid waste division as an enterprise fund.

- Evaluate the benefits of purchasing additional properties adjacent to the County's existing property. Additional property with sanitary landfill potential and value may provide long term solid waste management benefits to the County.

DRAFT

1. Barn Convenience Center
2. Belmont Convenience Center
3. Berkeley Convenience Center
4. Chancellor Convenience Center
5. Chewning Park Convenience Center
6. Cole Hill Convenience Center
7. Lee Hill Convenience Center



8. Livingston Landfill & Convenience Center
9. Marshall Park Convenience Center
10. Mine Road Convenience Center
11. Post Oak Convenience Center
12. Todd's Tavern Convenience Center
13. Wilderness Convenience Center

N
W E
S

Spotsylvania County Solid Waste 5-Mile Service Areas

Legend

Solid Waste Collection Centers

Items Accepted

- Household Trash Only
- Household, Commercial, Constr., Demo.
- 5 Mile Service Areas
- Located Beyond 5-Mile Service Area

0 1.25 2.5 5 Miles

Map Approved: _____

Chapter 4E

PUBLIC FACILITIES PLAN- WATER AND SEWER

WATER AND SEWER FACILITIES

~~Overview~~ Introduction

The latest approved version of the County Water and Sewer Master Plan~~, adopted in 2002~~ is incorporated by reference into the Comprehensive Plan. ~~as an Element of the Comprehensive Plan,~~ It identifies short and long range improvements required to meet development guidelines as established by the Comprehensive Plan. As the County grows additional demand will be placed on water/sewer existing infrastructure and County water resources. ~~areas for expansion and establishes a timeline for implementation.~~ It is an axiom of planning that development follows water and sewer lines, as well as roads. When these facilities are upgraded in response to growth pressures, their improvement can stimulate further development. That development will increase demands on schools, recreation programs, emergency services, and other services in a continuing cycle of growth, demand, service provision, and more growth. Ensuring that the provision of community facilities and public services is phased with demand is a major aim of any Comprehensive Planning process.

One of the most effective tools for directing the timing and location of growth is the establishment of a Primary Development Boundary to define the area within which public utilities will be provided. Utility services will not be provided by the County outside of the Primary Development Boundary, where development is discouraged. Per the Future Land Use Element of the Comprehensive Plan, areas located outside of the County Primary Development Boundary are overwhelmingly designated for rural residential and agriculture and forestal land uses. With lack of public water and sewer availability in these areas, water and sewer availability comes via private well and septic systems serving individual lots. Private utility services particularly for residential uses meant to serve collections of residences outside of the Primary Development Boundary are discouraged. The threat of systems failures (such as mass drainfields), insufficient funding, management, or maintenance poses risk for service supported residents reliant on such services and the County utilities department who may have few options but to take over management and maintenance functions in areas not intended for County utility service. By establishing a Primary Development Boundary, the County will encourage more efficient use of the land while preserving the rural character of those portions of the County outside the boundary. The Primary Development Boundary is depicted ~~o~~in the Primary Development Boundary Map, embedded within the Public Facilities Water and Sewer Facilities, and in the Future Land Use Map, located in Chapter 2. ~~Land Use Map (Map 1).~~ This boundary is not permanent and can be adjusted through the Comprehensive Plan amendment process when conditions warrant.

Existing Water Service

The Spotsylvania County water system, ~~serving~~ serves more than ~~29,000~~32,000 customers with drinking water in the County and ~~providing~~ provides bulk finished water to the City of Fredericksburg. The distribution system consists of multiple pressure zones that are supplied by seven storage tanks, two water treatment facilities and three reservoirs.~~, has undergone~~

~~dramatic changes since the acceptance of the original 1994 Water and Sewer Master Plan. Spotsylvania County, in partnership with the City of Fredericksburg, has developed a regional water supply, treatment and distribution system to serve the five pressure zones in Spotsylvania County (Five Mile Fork, American Central, Mine Road, Battlefield, and City) and three zones in the City of Fredericksburg.~~

The Spotsylvania County water system consists of the following principal features:

Ni Reservoir

The Ni Reservoir, the raw water supply to the adjacent Ni Water Treatment Plant, was constructed in 1974 and the reservoir has a volume of 1.4 billion gallons with a surface area of approximately 420 acres.

Ni Water Treatment Plant

The Ni WTP was constructed in 1974 expanded to its current peak capacity of 6.0 mgd.

Motts Run Reservoir

The Motts Run Reservoir was built in 1969 and is owned by the City of Fredericksburg, but is jointly operated by the City of Fredericksburg and Spotsylvania County. The total reservoir volume, prior to modifications, is 1.3 billion gallons with a surface area of 160 acres.

Motts Run Water Treatment Plant and Intake on the Rappahannock River

The Motts Run WTP serves Spotsylvania County and the City of Fredericksburg. The Motts Run water treatment facility and Rappahannock River raw water pumping station were completed in the spring of 2000. The plant currently has a firm capacity of approximately 12.5 mdg and a limited summer peak ~~current treatment plant~~ capacity ~~is~~ of 15 mgd. The plant is expandable to 24 mgd.

Hunting Run Side-Stream Storage Reservoir and Intake on the Rapidan River

The Hunting Run water supply dam and side-stream reservoir was completed in November of 2002. The reservoir volume is 209 billion gallons and the surface area is approximately 420 acres. Water is released into the Rapidan River to supplement the Rappahannock River during periods of low flow to allow continued river intake for the Motts Run WTP.

Existing Sewer Service

Spotsylvania County sewerage system consists of the following principal features:

Massaponax Wastewater Treatment Plant

The Massaponax WWTP was constructed in 1975 and has been expanded to 9.4-mgd (million gallons per day) capacity. The plant is a state of the art biological nutrient removal facility. The wastewater treatment plant serves the Massaponax Creek drainage basin and includes the pump-over from the American Central sewage collection system and a small part of the upper Hazel Run drainage basin which is also pumped into the Massaponax Creek basin. Facilities are

in place to enable sewage from the Deep Run drainage basin to be pumped to the Massaponax Creek drainage basin. Deep Run wastewater may also be treated at the FMC WWTP. Construction has been completed for the Courthouse Area Sewage Pumping Station that conveys sewage from the Courthouse Area to the Massaponax Creek interceptor.

FMC Wastewater Treatment Plant

The original FMC industrial WWTP began operation in 1967 and purchased by the County in 1980 and upgraded to 4-mgd capacity. Sewage from the City of Fredericksburg is treated at this plant.

Thornburg Wastewater Treatment Plant

The Thornburg WWTP was constructed in 1972 and has been expanded to a 345,000-gpd capacity.

Sewers and Interceptors

The sewer system is broken into collection sewers and four major interceptors. The interceptors are defined by the drainage basins that they serve: Massaponax Creek, Hazel Run, Deep Run, and Long Branch (which is a part of the Hazel Run drainage basin).

~~A regional pump station to serve the Jackson Gateway service area is being designed and construction will be phased as needed based on demand.~~

All Spotsylvania County sewers and interceptors have been mapped on the County GIS system.

GOALS, POLICIES, AND STRATEGIES

Goal: Within the Primary Development Boundary, ~~P~~provide a sufficient supply of high quality drinking water and a distribution system to serve the domestic, recreational, industrial, commercial, and fire protection needs of the community at the most economical price possible.

Policy: Supplement the existing supply of potable water and fire flow for Spotsylvania County citizens.

Strategies

1. Utilize the Water and Sewer Master Plan to develop a comprehensive approach for the development of new and/or additional water sources.
2. Utilize the Water and Sewer Master Plan to develop a Capital Improvement Program so as to phase water supply and fire flow improvements for designated County growth areas in a timely and cost effective manner.
    a. A project to construct a 1 MG elevated water storage tank and all attendant facilities and structures serving the tank including, but not limited to, utilities and roads, near Massaponax High School, and, if technically possible, to be located on Massaponax High School's property as that location is ideal to provide the best water service in the most cost efficient manner and will have

the least impact on surrounding properties and/or environmental and/or historic resources of significance. This tank will provide additional storage volume to the County's distribution system, increase available fire flow rates to the Route 1 corridor and Thornburg areas, and help to support the anticipated water demand from future development in the Thornburg area. The tank may also allow for the colocation of telecommunications facilities to further support the communication and broadband needs of County citizens. Construction for this project is planned to start in calendar year 2022.

~~2.~~3. Continue to promote a Water Conservation Program throughout the County and protect the County's surface and groundwater supplies for the benefit of all.

~~3.~~4. Provide for a cost sharing program with developers to fund water- improvements.

Goal: Provide for the adequacy of all new and existing sewage treatment that meets the needs of the community in an environmentally safe manner and only in targeted growth areas of the County.

Policy: Locate new or upgraded sewer facilities consistent with the Water and Sewer Master Plan to support orderly and efficient development.

Strategies

1. Update and utilize the Water and Sewer Master Plan to provide a phased, prioritized program for the extension of the County sewer system to identified development districts.
2. Utilize the Water and Sewer Master Plan to develop a Capital Improvement Program to phase sewer treatment improvements for designated County growth areas in a timely and cost effective manner.
3. Continue to provide for a cost sharing program with developers to fund sewer improvements.
4. Eliminate and consolidate individual pump stations through the provision of regional pump stations or gravity sewer extensions.

Goal: Support capacity and efficiency enhancements to continue to provide quality service within a growing community.

Policy: Invest infrastructure enhancements in areas intended for growth, and strategically locate new facilities to the betterment of operations and customer service.

Strategies

1. Focus infrastructure expansion and enhancements to the Primary Development Boundary.
2. Discourage and avoid potential cost, maintenance, and management risks associated with private utility systems intended to serve collections of residential users with mass drainfields, etc. located outside of the Primary Development Boundary.
3. Seek to co-locate the County Utilities and Public Works group to a recently acquired parcel located along Gordon Road (TM 21-A-84,) through construction of a modern new facility with adequate facilities to meet the needs to service a growing customer base.

a. Explore opportunities to co-locate additional public facilities onsite, including a potential park site on remaining acreage.

Chapter 4F

PUBLIC FACILITIES PLAN
LIBRARY FACILITIES

LIBRARY FACILITIES

Introduction

The Central Rappahannock Regional Library (CRRL) is a regional public library system serving the City of Fredericksburg and the Counties of Spotsylvania, Stafford, and Westmoreland. It is governed by a seven-member ~~Library~~ Board of Trustees appointed by the participating jurisdictions. The regional library was established in 1969 by the Commonwealth of Virginia as a model system to demonstrate the value of regional resource sharing between cooperating jurisdictions.

The CRRL system consists of a ~~Headquarters facility, six (6~~Library Administration Center and nine (9) branches~~, and a bookmobile,~~ as well as an Access Services location, IdeaSpace in downtown Fredericksburg, and a joint-use facility at Germanna Community College's Barbara J. Fried Center in Stafford County, all connected by daily courier service ~~and~~. The library offers an extensive regional ~~catalog~~collection of physical and ~~database system. The Headquarters~~electronic materials as well as wide-ranging databases. The Fredericksburg branch in downtown Fredericksburg houses special collections ~~for the system~~ including ~~Virginia, Law,~~Virginiana (historical and family research) and ~~the regional Library of Congress Collection~~a Law Library. Access Services, adjacent to the Library Administration Center on Lafayette Boulevard, offers a Talking Book Library, free reading materials, and devices for the visually impaired or has language processing issues~~. The administration is also located in the Headquarters, as well as centralized acquisitions,~~ provided through a federally supported program. IdeaSpace, located on Princess Anne Street, is a stand-alone makerspace offering state-of-the-art technologies such as a soundbooth for audio/video recording, 3D printers, and drawing tablets. Library on the Go, CRRL's outreach~~, cataloging, account~~ program, provides library services~~, graphics, network services, and the circulation department. Two (2) of the~~ to communities and facilities with limited access to library branches ~~are located within~~. Library on the Go includes two (2) satellite centers in rural locations in Spotsylvania County with internet access and wireless printing, mobile Grow a Reader outreach to area preschools, Head Start programs, and Lobby Stop service to local assisted living and senior apartments. All administrative functions of CRRL are centralized at the Library Administration Center including collection services, accounting, human resources, graphics, and network services.~~. The C. Melvin Snow Branch was opened in 1998 and the Salem Church Branch was opened in 1994.~~

Existing Facilities

Three (3) CRRL branches are located in Spotsylvania County. The Salem Church branch, on Salem Church Road, was first opened in 1994; the facility was expanded and renovated in 2009. The C. Melvin Snow branch in the Spotsylvania County courthouse area opened in 1998, and the County's most recent library facility, the Spotsylvania Towne Centre branch, opened in August 2018. The County also has ~~a~~two (2) satellite locations, one (1) each in the Livingston ~~district~~and Berkeley districts that operates on a limited schedule.

~~Below is a~~ Table 1 below lists~~ing~~ ~~of~~ the existing permanent library facilities directly serving Spotsylvania County and their capacities in terms of overall floor space together with the current

total of materials at each branch, as well as the system holdings available to Spotsylvania residents.

Table 1
Spotsylvania County Library Resources

Branch	Gross Sq. Ft. of Floor Space	Total Books / Materials
Salem Church Branch	25,000	95,523
~~A.~~ Snow Branch (Spotsylvania Courthouse ~~(Snow Library~~)	~~4,500~~5,000	~~42,611~~31,473
~~B. Salem Church~~Spotsylvania Towne Centre Branch	2,100~~25,000~~	~~99,968~~6,049
Spotsylvania Physical Collection Subtotal	**32,100**	**133,045**
~~C.~~ Fredericksburg Branch* (Central ~~Library~~)	12,300~~[1]~~	~~231,544~~30,994
Regional Physical Collection Subtotal	**44,400**	**164,039**
Digital Collection**	-	38,394
Regional Collection (Physical and Electronic)	**44,400 (.3 sq ft/capita)**	**202,433**

~~Total Library Facilities in Proximity (includes Fredericksburg and Spotsylvania)~~*The Fredericksburg Branch facility, used jointly by residents in the City of Fredericksburg, Stafford, and Spotsylvania Counties is 36,900 sq. ft. For purposes of space analysis, 12,300 sq. ft. is attributed to the total square footage of each jurisdiction.

**The Digital Collection, used jointly by residents in the City of Fredericksburg, Stafford, and Spotsylvania Counties consists of 115,183 materials. For purposes of collection analysis, one-third of that collection or 38,394 materials are attributed to Total Books and Materials.

Standards

~~The recommended minimum standards for Virginia Public Libraries are approved and adopted by the Virginia State Library and are adopted by the Central Rappahannock Regional Library Board. These standards are the recommended standards for localities in the Commonwealth for the provision of library services in each locality.~~ Spotsylvania County ~~citizens~~residents benefit from participation in ~~the Central Rappahannock Regional Library~~ a regional library system and as such, ~~have the opportunity to~~ can access the collections and databases, resources, staff expertise, ~~technology,~~ and ~~databases~~technologies of a much larger library. ~~The system was~~CRRL has been recognized ~~in American Libraries Magazine~~nationally as ~~one of the top~~ a Star Library by the Library Journal Index of Public Library Service for ten (10) years based on physical materials circulation, electronic materials circulation, branch visits, program attendance, and public computer use.

~~[1] The Headquarters facility, used jointly by residents in the City of Fredericksburg, Stafford, and Spotsylvania Counties is 36,900 sq. ft. For purposes of space analysis, 12,300 sq. ft. is attributed to the total square footage of each jurisdiction.~~

Planning for Library Excellence: Standards for Virginia Public Libraries (PFLE) are the recommended standards for public libraries ~~in the nation~~approved and adopted by the Library of Virginia Board. PFLE, updated in 2019, has established the following service ratings: essential, enhanced and exemplary, accompanied by a corresponding star rating for ease of use and advocacy. ~~of its size in the cost efficient delivery of a broad range of user services.~~

E = "Essential" services meeting the basic needs and expectations of a public library, including circulation, internet access, and basic reference assistance, as mandated in the Code of Virginia. ★
EE = "Enhanced" services, providing a robust array of services beyond basic needs and expectations, such as community programming for all ages, a responsive digital environment, and specific research assistance. ★★
EEE = "Exemplary" services with advanced features in service provision on all fronts. ★★★

PFLE 2019 service ratings are simultaneously cumulative, progressive and aspirational. For example, to attain an E ★ rating, a library will meet ALL criteria but may surpass some E ★ requirements. Wherever possible, the measures are progressive and aspirational, as a library system purposefully and strategically sets its sights on the next rating, as community need and funding dictates. CRRL strives and plans for a minimum EE rating in the core adopted standards listed below; CRRL currently meets the rating for Collections. The EE ★★ rating requirements are included below.

Level of Service Standards

~~The Library of Virginia Board Summary of Standards:~~

~~**Service Criteria**~~

~~1. A. Collection 2 to 4 books/materials per capita~~
~~2. B. Buildings 0.6 to 1 square foot per capita~~
~~C. Computer Workstations 0.33 to 1 public workstation per 1,000 population~~
~~3. D. Location (*Rural*) 15 - 30 minute drive (15 - 20 mile radius)~~
~~E. Location (*Urban*/Suburban) 10 - 20 minute drive (2 - 8 mile radius)~~

~~**Location Criteria**~~

~~The goal of the library system is to provide County citizens convenient access to high-quality library services. The following are location objectives:~~

- ~~The selection of sites for library facilities should take into consideration geographic obstacles to transportation. All buildings should be on or near heavily traveled roads, or in or near shopping areas and be clearly visible to traffic.~~
- ~~Provide new facilities to adequately and equitably serve all areas of the County. Schedule library land acquisition and/or construction to respond to both current unmet demand and new growth when it occurs.~~

- ~~Provide locations for libraries that are within a 10 to 15-minute drive within the Primary Development boundary and within a 15 to 30-minute drive outside of the Primary Development Boundary.~~
- ~~Sites should be located along main travel corridors with consideration of minimizing users' drive time. The site should be chosen to support the mission of providing library material and services to the greatest number of people.~~
- ~~An alternative to construction of new facilities is to establish new libraries in leased commercial spaces such as shopping centers. In Fredericksburg and other locations, public libraries serve as anchor stores and can draw one to two thousand patrons a day. Branches could be located within the proposed mixed-use development areas proposed on the County's Future Land Use Map.~~

Collections

High-quality collections are carefully built over time. A successful collection supports the services the library provides and helps the library meet its defined goals. Collection development also takes into account other library and information resources in the community, the region, and the state. Weeding outdated, unused, and inaccurate materials is part of the collection development process.

A successful collection embodies the principle of free access to ideas on all sides of an issue, including potentially controversial topics. The size and format mix of a successful collection is unique to each community, considering factors such as broadband access, population and square mileage served, facility square footage, annual budget, circulation, etc.. Those responsible for collections should develop a strategy to determine their own community needs.

CRRL's Collections Level: EE ★★

★★ 1: The library complies with all standards of Level E.

★★ 2: The library provides digital resources to supplement those made available by the Library of Virginia, as meets the needs of its communities.

★★ 3: The library has a preservation policy, if it holds special collections, including local history.

★★ 4: At least every three years, the library evaluates its collection to determine strengths and weaknesses, allocating resources to address the identified weaknesses.

Facilities - Size and Location

A public library building should offer the community a compelling invitation to enter. The building design should be adaptable to changing use patterns. The building should accommodate public use, support staff efficiency, and encourage economy. It must comply with the latest regulations of the Americans with Disabilities Act and all local and state requirements for public buildings. Please note that the square footages indicated are TOTAL square footages for the population and may be spread among branches. For example, a four-branch library system might determine their square footage based on voting district populations or other municipality divisions to determine appropriate square footage for an individual branch. As a general guideline, libraries should strive to meet the below recommendation but library size should be determined by a space/needs analysis for that community.

CRRL currently offers Spotsylvania County residents .3 square feet per capita of physical facility space; the minimum threshold to meet EE ★★ is .7 square feet per capita.

Service Level	Population Served (Spotsylvania County)	Total Gross Square Feet per Capita
EE★★	100,001 - 500,000	.7 SF

CRRL's Facilities Level: E ★
Goal Facilities Level: EE ★★
★★ 1: The library complies with all standards of Level E.
★★ 2: The building promotes energy efficiency, usage of natural daylight, waste reduction, and improvement of air quality.
★★ 3: When possible, newly constructed and renovated library facilities are to be "green" or sustainable facilities, constructed with ecologically sound materials.
★★ 4: Library facilities are located:

- in urban areas, no more than 15 minutes' driving time from residents as an average of multiple travel time studies from a) the edges of the service area to the nearest available library and b) between available libraries.
- in rural areas, no more than 20 minutes' driving time from residents.
- where possible, on a public transportation route.

Recommendations and Future Needs

~~For the purposes of the Public Facilities Plan, the collection calculation has become less important with the availability of materials electronically. The volume of books and materials available through the Library of Congress has caused the ratio of books and materials per capita to so greatly exceed the identified standard that Spotsylvania County no longer utilizes this measure for planning purposes. This renders library floor space as the level of service indicator. The floor space needs to be divided into the general library floor space need, together with a specific need for public meeting space. While the overall floor space is important, as the County looks to the future, the availability of public meeting space is the key level of service indicator. The public meeting space need is partially met through the provision of meeting rooms at library facilities, but also through the provision of community centers as identified within the Parks and Recreation portion of this chapter. These combined spaces are considered in the Parks and Recreation portion and evaluated against a level of service standard there.~~

~~**Level of Service Standards**~~

- ~~The Level of Service Standard for Library facilities is 0.3 square foot per capita.~~
- ~~The Level of Service Standard for public meeting space can be found in the Parks and Recreation portion of this chapter.~~

~~**Future Needs**~~

~~It is not anticipated that there will be significant increases in the need for physical space for library services. The space increases that do occur should be aimed at increasing the availability of meeting space for various community groups. Libraries also play an important role in aiding the provision of internet access to the citizens of the County. To this end, the use of wireless hotspots at library and other County facilities should be explored to increase the availability of internet access.~~

Although use of electronic materials has increased, there remains a strong need for fixed library facilities. CRRL customers continue to demand physical materials, quality age-level programming, public computers, and group meeting spaces. Therefore, the standards adopted by the Library of Virginia Board and CRRL Board of Trustees remain applicable. Residential expansion in the Massaponax area has created a need for a fourth County branch as residents in that area must travel to the Spotsylvania Courthouse, downtown Fredericksburg, or Route 3 for library services. Those three (3) locations are all 8-10 miles from Massaponax with a drive of 15 - 20 minutes.

Presently, residents of the Livingston District and the Berkeley District can access library services including computers with wireless internet, wireless printing, and homework help from satellite locations in those communities one evening a week. However, small library branches similar to the Snow branch should be considered in future planning so those residents will have access to the full range of library services.

Chapter 4G

PUBLIC FACILITIES PLAN- PARKS AND RECREATION

PARKS AND RECREATION FACILITIES

Introduction

The Park's and Recreation Facilities Plan (The Plan) combines leisure and recreational objectives with the suitable locations necessary to provide a broad-based recreation and open space programs. Parks and recreation facilities provide visual relief from concrete and pavement, make surroundings more habitable, and preserve and protect natural and historical resources. These facilities provide varying recreational opportunities for people of all ages, income levels, ethnic groups and physical abilities. As Spotsylvania County continues to grow, the significance of parks and recreation planning, including land acquisition and development increases. This chapter Chapter provides detailed standards, criteria and policies for provision of recreation facilities.

The County's Department of Parks and Recreation (The Department) is responsible for maintaining all local County operated parks and community centers. In addition, this Department administers a number of organized activities including baseball, basketball, softball, soccer and football teams, cheerleading squads and a variety of classes, programs and special events. The Parks and Recreation Department is responsible for youth and adult sports and facilities within the County. The Department is responsible for planning, implementing, and evaluating sports programs. This includes volunteer coach recruitment and background checks; contracting and scheduling officials; facility scheduling; maintenance, requisitioning, inventory, and distribution of equipment for each sport; supervision of sport activities; advertisement of program offering; certification of youth coaches; scheduling regular season play and tournaments; and scheduling field use for private groups. A summary of Fiscal Year 2018 Field/ Gym Rentals through the Department has been provided for reference below (See Table 1):

Table 1: Fiscal Year '18 Spotsylvania Parks and Recreation Field and Gym Reservations through the Department*

Sport	Games	Practices	TOTAL
Football	31	95	126
Basketball	65	217	282
Soccer	344	274	618
Baseball/ Softball	1,630	2,365	3,995
Total	2,070	2,951	**5,021**
*FY '18 rental activities include school fields and gyms.			

This data can be updated to track Parks and Recreation field/gym rentals activities over time. Due to the Covid outbreak there was a significant downturn in activities during months that are typically of heaviest use for sports facilities. Covid significantly impacted fiscal year 2020 resulting in a-typical results during that time. As of now the impacts of Covid are not expected to be suggestive of a long term trend. Continued monitor of field activities going forward will help establish clearer trend lines for demand.

Due to the popularity of organized sports teams, ~~this~~ the Department has identified a need for additional playing and practice fields. Future park development in the County will be aimed at meeting these, and other identified level of service-based needs.

The Department is responsible for training, directing, and supervising approximately 175 full-time, part-time, and seasonal employees and over 2,794 volunteers. The parks maintenance staff manages and maintains parks, recreational areas and facilities to assure safe, healthy, and attractive passive and active leisure activities. The staff also prepares school and other athletic fields for recreation and sports programs.

~~Spotsylvania County is fortunate to have the Fredericksburg and Spotsylvania National Battlefield Parks encompassing 5,800 acres within the County to serve some of the passive recreation needs. Lake Anna, a 13,000-acre man-made lake, is one of Spotsylvania's most valuable recreational resources. Water skiing, boating and swimming attracts thousands of visitors to its shores. Anglers can take advantage of the more than 33 species of fish found in its annually stocked waters. Lake Anna State Park with its 2,810 acres is a focal point of Lake Anna. More than 9,900 acres of the County's current land uses are public parklands. The State and Federal parks, however, are not controlled by the County and, therefore, cannot provide some of the recreational opportunities sought by residents.~~

The ~~County Parks and Recreation~~ Department continues to strengthen its cooperative relationship with the school system in the design, development, use, and maintenance of school recreational facilities. This relationship is critical in the overall delivery of parks and recreation facilities County-wide and includes recreational land of ~~76~~ 92 acres at elementary schools, ~~175~~ approximately 57 acres at middle schools and ~~168~~ 31 acres at the high school level. Elementary and middle schools make up the majority of the school recreation space consistently available for after school community use. High school use is limited dependent upon the time of year and amenity. 8 acres are also available at John J. Wright Educational and Cultural Center.

For more information about the County Parks and Recreation Department including facilities, activities, and programs, the Department publishes an annual report that can be found **HERE**.

~~The County historically has not developed nor maintained any Neighborhood Parks as many Neighborhood Parks exist through neighborhood homeowner's associations. There are estimated to be approximately 1,400 acres of homeowner association owned property in the County, some of which is utilized for Neighborhood Parks.~~

Existing Facilities

In order to achieve the long range goals of the ~~Parks and Recreation~~ Department, it is necessary to review the inventory of current park ~~-~~lands and facilities to determine acceptable level of service standards ~~for park lands and facilities~~ and to then establish a strategic plan for the identification of new ~~park and recreation~~ facilities as the County grows.

In ~~2013~~2020, ~~607~~ 535.5 acres of accessible County parkland is operated by the ~~Spotsylvania County~~ Department ~~of Parks and Recreation~~. The County also owns a future District Park size 65 acre site known as the Hilldrup Tract that is not presently developed or accessible as a usable park. Within the planning period, staff expects additional public access parks acreage to be made accessible at Keswick Park (36 Acres Community Park site and amenities) and the Fortunes Landing fifteen (15) acre Special Use Park fronting the Ni Reservoir. These new park acres, when activated, will add an additional 131 acres to the inventory for a total parkland inventory of 651.5 acres.

Additionally, it is estimated that there are approximately ~~186~~ 188 acres of School Board ~~community park land~~ shared use recreational space that is programmed by the ~~Parks and Recreation~~ Department for community use at elementary, middle, and high school sites. This figure also includes the John J Wright Educational and Cultural Center.

The ~~Parks and Recreation~~ Department also operates the County's community centers. These centers, in addition to the available spaces within the County libraries, offer a valuable ~~tool~~ resource to the County population in the provision of events and meeting space. It is important that provision of these spaces continue to serve the variety of needs of County residents.

As a complement to County Parks managed facilities, Spotsylvania County is fortunate to have the Fredericksburg and Spotsylvania National Battlefield Parks encompassing 5,800 acres within the County to serve some of the passive recreation needs. Lake Anna, a 13,000-acre man-made lake, is one of Spotsylvania's most valuable recreational resources. Water skiing, boating and swimming attracts thousands of visitors to its shores. Anglers can take advantage of the more than 33 species of fish found in its ~~annually~~ stocked waters. Lake Anna State Park with its 2,810 acres is a focal point of Lake Anna. More than 9,900 acres of the County's current land uses are public parklands. The State and Federal parks, however, are not controlled by the County and their missions and offerings are not identical to those of the County's and, therefore, cannot provide some of the recreational opportunities sought by residents.

~~Classification~~ Activation Type

Park~~s and recreation areas~~ may have distinctly different intended uses and character. Park activation for different user groups tends to be identified as either for passive recreation (passive parks) or active recreation (active parks). Some parks may have a combination of both active and passive offerings. The character of active and passive parks is summarized below: ~~are classified according to the facilities (passive and active) that they may offer.~~

Passive Parks

~~-~~A passive park is an outdoor ~~facility~~ area, or portion of an outdoor ~~facility~~ area that is used for passive recreational activities, such as pedestrian activities, hiking, and jogging, or serves as ~~or features,~~ an historical, cultural, ecological, or archeological attraction for exploration, education, interpretation. A passive park does not include organized competitive activities, except events for uses allowable within a passive park. Generally, a passive park is maintained in a natural state, except for minimal clearing for paths, trails, sitting area, walkways or auxiliary structures. In urban settings, passive parks may have more hardscape (walking paths, sitting walls, etc.), open lawn, and landscaped areas ~~which~~ that may be used for informal group activities. Examples of passive park features may include: trails or walkways for hiking, walking, horseback riding, bicycling; informal areas used for concerts, areas for photography, nature studies, educational studies, or fishing; ecological areas and nature interpretive programs~~;~~, nature centers~~,~~; ornamental gardens or landscapes; historical markers, public arts installations or civic monuments; scenic overlooks; and picnic areas ~~which~~ that may include but are not limited to shelters, grilling areas ~~scenic overlooks~~, and restrooms.

Active Parks

An active park refers to any outdoor ~~facility~~ area that includes the following facilities or facility types: athletic fields~~;~~, sports complexes, buildings or structures for recreational activities~~;~~, concessions~~,~~; community gardens~~;~~, courses or courts; ball fields~~;~~ children's play area, dog play area, swimming area, or a bike path. Active parks may ~~Allows~~ allow for uses such as organized team sports; or serve~~s~~ as ~~or features~~ a cultural, historical or archeological attraction~~;~~ that ~~and~~ is open to the public. ~~Special Use Parks are highly specialized recreation areas that serve the entire cCounty. Generally, they provide unique activities such as marinas, trails, historic areas, golf courses, dog parks, roller skating/skateboarding, amphitheaters, or other facilities generally not offered by the other park categories. These may exist independently or may be developed in combination with other parks.~~

Classification

There are six main classifications of parks located within the County, including District Parks, Community Parks, Special Use Parks (incl. Trails/ Linear Parks), County Schools shared use recreational space, Neighborhood Parks, and Other Parks (ex. State & National Parks). These classifications have been described and inventoried below (Table 2):

~~Meeting spaces are used for a variety of functions ranging from parties and celebrations to strategic planning meetings for members of the local business community. In recognizing the variety of users of the space, it is important to recognize the different needs that they may have for the space. The most important identified needs are the availability of kitchen facilities for the celebratory type uses of the facilities, and the provision of internet access for the business-related uses of the spaces.~~

Table 2: Existing Public Park & Recreation Areas

Park	Classification	Active	Passive	Total Acres
Hilldrup (Tract)* - *presently undeveloped*	District Park	~~0~~	~~65~~	65*
Loriella Park	District Park	61	147	208
Patriot Park	District Park	40	91	131
Keswick Park*	Community Park	-	-	36*
Arritt Park	Community Park	14	12.5	26.5
Chewning Park	Community Park	7.5	2.5	10
Cosner Park	Community Park	9	2	11
Harrison Road Park	Community Park	10	12	22
Lee Hill Park	Community Park	6.5	13.5	20
Legion Fields/Marshall Center	Community Park	22	2	24
Marshall Park	Community Park	14	11	25
Mary Lee Carter Park	Community Park	~~3.5~~4.0	0.5	4.~~0~~5
Hunting Run Recreation Area	Special Use Park	~~27~~20	0	~~27~~20
Ni River Recreation Area	Special Use Park	1	4	5
Belmont Park	Special Use Park	0	23	23
Fortunes Landing*	Special Use Park	-	-	15*
Virginia Central Trail	Trails/ Linear Parks	2	3.5	5.5
TOTAL COUNTY PARK ACREAGE		217.5	324.5	~~607~~ 535.5*

*Keswick, Fortune's Landing and Hilldrup not included in Total Acres calculation. Keswick and Fortune's Landing Parks are expected within the planning period but have not yet been completed or open for public access as of Comprehensive Plan adoption. The Hilldrup Tract is the site of a future but not yet open public park site. When developed and accessible, Total Acres will be 651.5.

District Parks

District Parks are large parks usually greater than fifty acres in size. They contain the most extensive facilities of the County parks system. These types of parks tend to be the most popular of County Parks and Recreation managed parks due to their size, location, and ability to attract organized recreational activities such as league sports, and abundance of recreational facilities. District Parks are generally located in urbanized areas and offer a variety of facilities such as: swimming pools, amphitheaters and recreation centers. District Parks serve a larger area of the

County and offer facilities that people are willing to travel further to use. The service area for a District Park is usually within a twenty-minute drive or about six to twelve miles, depending on the urbanization of the area. District Parks should be located near major collector roads in order to provide greater access to them. The park should also be accessible by pedestrians and bicycles. Spotsylvania County currently has three District Parks, they are identified in the table above. However, only two of these parks are developed (Patriot and Loriella). The Hilldrup tract is sixty-five (65) acres in size and currently undeveloped.

Community Parks

Community Parks are recreational areas containing four to fifty acres that provide a wide range of activities (varying based on size). Community Parks generally include: tennis courts, playgrounds, baseball/softball fields, multi-purpose fields, basketball and picnic areas. The service area for community parks is a ten-minute drive or approximately two to six miles, depending upon where the park is located and the degree of urbanization. There are eight Community Parks currently located within Spotsylvania County. A ninth is expected within the planning period with the future opening of the 36-acre Keswick Park. Due to location, limited size and recreational amenities offered, the smaller Community Parks may not and have tended not to attract as much interest among County residents as the larger Community and District Parks.

Special Use Parks

Special Use Parks have a county-wide service area and provide unique activities such as boating & fishing areas, dog parks, water parks, skateboard parks, golf courses, linear trail systems, community centers, and other facilities that are usually not found in other County parks. There are three Special Use Parks within the County with a fourth expected within the planning period at Fortune's Landing. Belmont is currently an undeveloped Special Use/ Community Park. Both Hunting Run Recreation Area and Ni River Recreational Area offer boat rentals, boat ramps, and fishing areas. The County is lacking in many of the more niche facilities that can be offered through Special Use Parks and these underserved needs should be taken into account when planning for development. The Motts Run Reservoir would also be considered a Special Use Park; however, operated by the City of Fredericksburg, the facility has not been included in calculations.

Image 1: Hunting Run Recreational Area

The County also manages a roughly 2-mile-long section of the Virginia Central Trail at present, classified as Trails/ Linear Park. Trails/ Linear Park areas are specialized areas within the County that are established to protect and preserve natural areas and cultural corridors, linking Spotsylvania County residents with recreational areas. By utilizing natural areas, abandoned railroad right-of-ways, along utility easements, and greenways along waterways, the Parks Department could provide low cost trails that provide both recreation and non-motorized transportation. Linear Parks can be any length, and include picnic areas, historic areas, and trails.

Image 2: Virginia Central Trail

County Schools Shared Use Recreational Space

County Schools Shared Use Recreational Space provide additional recreational areas within Spotsylvania County and are jointly operated and maintained by the School System and Parks and Recreation Department. Such Shared Use Recreational Spaces are similar to Community Parks in the activities they provide such as: tennis courts, gymnasiums, athletic fields, playgrounds, and basketball courts. The service area is two to six miles or a ten-minute driving area. While the Spotsylvania County School Board's primary mission is providing the education of children, an inherent part of the education system is physical fitness. The School Board provides gymnasiums, playgrounds, multi-purpose fields, tennis courts, and basketball courts located on school grounds. Also designating schools as Community Use Parks, allows for additional passive and active recreational area for County residents. The County Schools Shared Use Recreational Space range in size as shown in Table 3 below.

Table 3: Existing County Schools Shared Use Recreational Space

Elementary Schools	Total Acreage	Active Acreage
Battlefield Elementary School	60	3.5
Berkeley Elementary School	17	4
Brock Road Elementary School	24.3	6.3
Cedar Forest Elementary School	55	7
Chancellor Elementary School	12	4.1
Courthouse Road Elementary School	30	3
Courtland Elementary School	(*)	7.5
Harrison Road Elementary School	(*)	3
Lee Hill Elementary School	21.4	4
Livingston Elementary School	15.1	4.1
Parkside Elementary School	26.8	7.8
Riverview Elementary School	29.8	7
Robert E. Lee Elementary School	14.1	4.1
Salem Elementary School	19.5	4.5
Smith Station Elementary School	24.9	10.9
Spotswood Elementary School	19.2	4.2
Wilderness Elementary School	104	7
TOTAL:	**473.1**	**92**

Middle Schools	Total Acreage	Active Acreage
Battlefield Middle School	(*)	3.5
Chancellor Middle School	(*)	8
Freedom Middle School	76.7	10
Ni River Middle School	(*)	10
Post Oak Middle School	(*)	4
Thornburg Middle School	(*)	8.5
Spotsylvania Middle School	34	12.5
TOTAL:	**110.7**	**56.5**

High Schools	Total Acreage	Active Acreage
Chancellor High School	94.1	5
Courtland High School	100	7
Massaponax High School	105.4	8
Riverbend High School	90.3	5
Spotsylvania High School	250	6
TOTAL:	**639.8**	**31**

Other	Total Acreage	Active Acreage
John J. Wright Educational and Cultural Center	19.6	8
TOTAL:	**19.6**	**8**

Note the (*) above represents schools that share land (total acreage). Active acreage has been separated out by school within the larger "complex" when multiple schools are on a single campus.

Non-County Operated Parks

Summaries for Parks within Spotsylvania County including Neighborhood Parks and Other Public and Private Parks described below are not owned by the County and are not operated by the Department of Parks and Recreation. These areas provide varying levels of recreational opportunities and access to County citizens are considered contributing and complementary to County-wide Parks and Recreation goals.

In 2008-2009 during the development of the 2009 Parks and Open Space Element within the 2008 Comprehensive Plan (Parks and Open Space Element added via Comprehensive Plan Amendment) a concept was presented that would have reduced the satisfactory County level of service (LOS) standard for park acres and facilities to 75% of standard; a 25% reduction cognizant of non-County owned Parks and Recreation type facilities. When the subject was discussed at the Parks and Recreation Commission on October 16, 2008, the Parks and Recreation Commission had supported the reduced standard.

The 75% of standard concept was ultimately not supported by the Board of Supervisors and a 100% of standard including County schools shared use recreational spaces (open to public use) was adopted at public hearing on March 10, 2009. There were a number of reasons why the LOS discount was not supported including: (1) not all outside facilities could be considered open to all County residents (limited to paying members or residents of a specific community or HOA); (2) purpose and management of outside facilities may have focus that deviates from that of a public park; (3) standard was adopted as a County Parks and Recreation services standard and should not be discounted by outside resources. Further discount essentially diminishes the quality and quantity of County Parks and/or their facilities.

Since 2009, the 100% LOS standard including the schools shared use recreational spaces was subsequently reviewed with the Comprehensive Plan Public Facilities Advisory Groups and carried forward with the adoption of the 2013 Comprehensive Plan and it remains today in the current iteration of the Comprehensive Plan.

As a result, the Parks described below are acknowledged and valued but historically have not been included within Parks and Recreation acreage or facilities inventories used to calculate County LOS standard surpluses or deficits to determine whether additional facilities are warranted.

Neighborhood Parks

The County historically has not developed nor maintained any Neighborhood Parks as many such parks exist through neighborhood homeowner's associations in subdivisions that offer such amenities. Neighborhoods associated with Lee’s Hill, Summerfield, and Fawn Lake are some examples. The County acknowledges that homeowner’s association recreational amenities such as tennis courts, pools, gyms, tot lots, and golf courses provide valuable resources to County citizens within the developments in which they reside and can meet the recreational needs of

some in the community. However, such Parks are not widely accessible for public access and and such facilities can be limited in their offerings depending on the development scale and resources. Being privately managed, the County historically has not tracked and has no management role with Neighborhood Parks and their recreational facilities.

Other Public and Private Parks

National Parks:

Spotsylvania County has four significant American Civil War Battlefield Parks as well as the standalone Salem Church historic battlefield site (part of the Battle of Chancellorsville) managed by the National Park Service encompassing over 6,200 acres within the County to meet some of its passive recreational needs. With easements the total land area expands to over 7,200 acres. The four national battlefields represent not only a segment of cultural resources, but substantial passive recreational land and open space area, within the County. A current inventory of the National Park Service managed land area within Spotsylvania County and their interpretive trails has been compiled in Table 4 below:

Table 4: National Parks Inventory

National Military Parks	Total Acreage Owned	Passive Acreage Owned	Total Acreage (With Easements)	Interpretive Trails (Miles)
Chancellorsville Battlefield	1,840.3	1,840.3	2,712.4	6.8
Fredericksburg Battlefield	1,230.4	1,230.4	1,341.3	5.6
Spotsylvania Battlefield	1,327.8	1,327.8	1,394.9	5.9
Wilderness Battlefield	1,810.1	1,810.1	1,846.6	3.9
Salem Church	3.2	3.2	3.2	-
TOTAL:	6,211.8	6,211.8	7,298.4	22.2

Additional Public Access Protected Civil War Battlefield Lands:

Additional Civil War battlefield lands have been preserved by the Civil War Trust as well as the Central Virginia Battlefields Trust. The Civil War Trust manages an additional 415.91 acres of preserved, publicly accessible lands traversed by 5.52 miles of interpretive trails (3.64 miles at Chancellorsville and 1.88 miles at Slaughter Pen Farm (part of the Fredericksburg Battlefield) off Tidewater Trail in the northeast of the County.

As of 2020, the Central Virginia Battlefields Trust has 461 acres in ownership with an additional 8.63 acres in easement. Easement acreage is not readily open for public access except by organized tour or with granted permission of landowners. Harris Farm (1.74 acres) and Pelham's Corner (4.5 acres) are always open to the public and include interpretive wayside exhibits, monument at Harris Farm, and a cannon at the Pelham's site. The Central Virginia Battlefields Trust stress that the remaining acreage is not generally open to the public except for special

tours operated by the CVBT, NPS, or others with permission. CVBT manages no interpretive trails.

State Parks:

Lake Anna is a 13,000 acre manmade lake and is a valuable recreational resource. Fishing, camping, water skiing, boating, and swimming in Lake Anna and 2,810 acre Lake Anna State Park attracts thousands of visitors to the area. Anglers can take advantage of the more than 33 species of fish found in its stocked waters. An inventory of Lake Anna State Park amenities has been compiled in Table 5 below. This information is provided in the Virginia Department of Conservation and Recreation 2017 inventory of outdoor recreation facilities. Lake Anna State Park also offers Cabin and Campground rentals.

Table 5: State Parks Inventory

State Parks	Total Acreage	Active Acreage	Lake Fishing Acres	Beach Acres	Boat Accesses	Hiking Trail (Miles)	Horse Trail (Miles)
Lake Anna State Park	2,810	60	13,000	2	3	15	5

Privately Operated Recreational Facilities:

There are a number of privately operated recreational facilities within Spotsylvania County. The County acknowledges their presence and services offered to members of the community. A variety of private gyms and fitness centers are available for membership based health and fitness offering opportunities including but not limited to: weight lifting; running/ track; weight loss and/or cardio training; yoga; indoor pools, organized instructor led exercise, etc. One such facility, the Rappahannock Area YMCA is located adjacent to the County's Patriot Park. The Virginia Youth Soccer Association and Fredericksburg Football Club (FFC) (formerly known as Fredericksburg Area Soccer Association (FASA)) operate a large outdoor soccer complex in the New Post Area of the County, hosting large tournaments. The Fredericksburg Field House offers indoor turf fields for organized sports. An 18-hole golf course, tennis, pool, fitness/ gym is offered at the Fredericksburg Country Club for members. A private disc golf course is offered at The Blockhouse Disc Golf and Country Club off Block House Road. Private camping is offered at the KOA Campground off Guinea Station Road, and the Indian Acres Club of Thornburg off Morris Road.

Meeting Spaces at Community Centers and Public Libraries

The following facilities (Table 6) are owned and operated by the County or are maintained in part by the County through mutual agreement. Information is provided for planning purposes. Utilization data is included in the Parks & Recreation annual report (Accessible Online **HERE**).

Meeting spaces are used for a variety of functions ranging from parties and celebrations to strategic planning meetings for members of the local business community. In recognizing the variety of users of the space, it is important to recognize the different needs that they may have for the space. The most important identified needs are the availability of kitchen facilities for the

celebratory type uses of the facilities, and the provision of internet access for the business-related uses of the spaces.

Table 6: Existing Meeting Spaces at ~~Areas~~Community Centers and Public Libraries

Facility	Internet Access	Kitchen	Meeting Space Size (sf)	Total Acreage	Active Acreage
Berkeley Community Center	~~No~~Yes	Yes	1,560	5	2
Chancellor Community Center	No	Yes	1,230	1	1
Cosner Park/Lee Hill Community Center*	~~No~~Yes	Yes	2,080	-	-
~~Harrison Road Community Center~~	~~No~~	~~Yes~~	~~1,748~~		
~~Lick Run Community Center~~	~~No~~	~~No~~	~~1,274~~		
Todds Tavern Community Center	No	Yes	928	2	2
Marshall Center Auditorium	No	No	5,000	N/A	N/A
Marshall Center Activity Room A**	No	No	1,080	N/A	N/A
Marshall Center Activity Room B**	No	No	1,080	N/A	N/A
Marshall Center Activity Room C**	No	No	1,080	N/A	N/A
Marshall Center Activity Room D**	No	No	936	N/A	N/A
Salem Church Library	Yes	2/6 rooms have access	1,932	N/A	N/A
Senior Center at Marshall Center- Main Lounge**	~~No~~Yes	Yes	3,819	4	3
Snow Library	Yes	No	1,147	N/A	N/A
Library at Spotsylvania Towne Center	Yes	No	N/A	N/A	N/A
TOTAL COUNTY MEETING SPACE	-	-	~~24,894~~ 21,872	12	8

*Cosner Park/ Lee Hill Community Center acreage reported separately as part of Cosner Park total acreage in Existing Parks and Recreation Areas Table.

** Marshall Center meeting spaces can accommodate multiple user groups simultaneously. However, kitchen space is limited to the Senior Center- Main Lounge.

County Parks Facilities Inventory

The Spotsylvania County Parks Facilities Inventory quantifies the number of facilities located County-wide. The facility inventory is a useful tool to review not only existing facilities available but those needed in the future considering LOS Standards based on population. Currently, there are no County operated public golf courses, indoor pools or recreational centers, roller skating rink, skateboard park, dog parks, racquetball courts, equestrian trails, or volleyball courts. These are more specialized or niche facilities that should be considered based on demand when opening a new park facility or adding to existing parks as funding is available. The Inventory sheets on the following pages (Exhibit 1) summarize Parks facilities available at County Parks and Community Centers.

Exhibit 1: Facilities Inventory

Parks and Recreation Facilities (9-24-18) Revised 1-8-21

Arritt Park

- 1- Small Multi-Purpose Field
- 2- Small Diamonds
- 1 Picnic Shelter (10 Tables)
- Pond
- Playground
- Restrooms
- Picnic Area (4 random tables)

Berkeley Community Center

- Meeting Room
- Kitchen
- Restrooms

Chancellor Community Center

- Meeting Room
- Kitchen
- Restrooms
- Tennis/ Pickle Ball Court

Chewning Park

- 2- Small Diamonds
- Picnic Area (1 random table)
- 1 Picnic Shelter (6 Tables)
- Playground
- Restrooms

Cosner Park

- 2- Small Diamonds
- 2-Basketball Outdoor Courts
- 1- Large Multi-Purpose Field
- Playground
- 2-Lighted Tennis/ Pickle Ball Courts
- Picnic Area (1 random table)

Harrison Road Park

- 1 Large Diamond
- 2- Small Multi-Purpose Field
- Playground
- Picnic Area (1 random table)
- Trail 2.1 Miles (see Virginia Central Trail)

Virginia Central Trail

- Trails 1.2 & .9 Miles

Hunting Run Recreation Area (March-October)

- Boat Rental/ Check –In Station
- Boat Launch Area w/ dock
- Fishing
- Fishing Pier
- Restrooms
- Picnic Area (9 random tables)

Lee Hill Community Center

- Meeting Room
- Restrooms
- Adjoining Picnic Shelter (11 Tables)

Lee Hill Park

- 2- Small Diamonds -1-Lighted

Legion Complex

- Track
- 2- Multi-Purpose Fields, 1 Lighted
- 1-Small Diamond Lighted
- 1-Large Diamond Lighted
- Restrooms

Loriella Park

- 2- Small Diamonds, 1 Lighted
- Pond
- 1 Large Diamond Lighted
- Trail 2.9 miles
- 4- Multi-Purpose Field, 1 Lighted
- Playground
- Outdoor Swimming Pool/ Bath House /Concession Stand (May- Sept.)
- 4-Lighted Tennis Courts
- Multi-Purp./ Basketball Court
- Disc Golf Course 18 Holes
- 2-Picnic Shelters (9/9 Tables)
- 3- Restrooms
- Open Play Area
- Picnic Area (5 random tables)

Marshall Center / Auditorium

- 5 Meeting Rooms
- Kitchen
- Restrooms
- Gymnasium
- Auditorium

Marshall Park

- 2- Small Diamonds, 1 Lighted
- 2- Basketball Outdoor Courts Lighted
- 1- Small Multi-Purpose Field – Lighted (Fall only)
- Playground
- Restrooms
- Picnic Area (2 random tables)
- Open Play Area

Mary Lee Carter Park

- Multi-Purpose Field
- Trail .2 Miles
- Playground
- Picnic Area (1 random table)

Ni River Recreation Area (March-October)

- Picnic Area (3 random tables)
- Picnic Shelter (12 tables)
- Restrooms
- Boat Rental/ Check –In Station
- Boat Launch Area
- Fishing

Patriot Park

- 2- Small Diamonds, Lighted
- 4- Large Diamonds, 2 Lighted
- 2-Basketball Courts
- Trail 3.1 Miles,
- 6-Multi-Purpose Fields, 2 Lighted
- Amphitheater
- 3-Restrooms
- Picnic Area (6 random tables)
- Playground

Todd's Tavern Community Center

- Meeting Room
- Kitchen
- Restrooms

Spotsylvania County School Facilities-

Elementary Schools

Battlefield Elementary -

- 2 Small Multipurpose Fields
- Playground
- Outdoor Basketball
- Gym

Berkeley Elementary-

- Playground
- Outdoor Basketball
- Gym

Brock Road Elementary -

- 1 Small Multipurpose Field
- Playground
- Outdoor Basketball
- Gym

Cedar Forest Elementary -

- 1 Large Multipurpose Field
- Playground
- Outdoor Basketball
- Gym

Chancellor Elementary

- 1 Large Multipurpose Field
- 2 Playgrounds
- Gym
- Outdoor Basketball

Courthouse Road Elementary -

- 1 Large Multipurpose Field
- Playground
- Outdoor Basketball
- Gym

Courtland Elementary -

- 1 Small Multipurpose Field
- 1 Large Multipurpose Field
- Playground
- Outdoor Basketball
- Gym

Harrison Road Elementary

- 1 Large Multipurpose Field
- Playground
- Gym

Parkside Elementary -

- 1 Large Multipurpose Field
- Playground
- Outdoor Basketball
- Gym

Robert E. Lee Elementary

- 1 Large Multipurpose Field
- Playground
- Outdoor Basketball

Riverview Elementary -

- 1 Large Multipurpose Field
- Playground
- Gym

Salem Elementary -

- 2 Small Multipurpose Fields
- Playground
- Gym

Smith Station Elementary -

- 1 Small Multipurpose Field
- Playground
- 1 Large Multipurpose Field
- Outdoor Basketball
- Gym

Spotswood Elementary-

- Playground
- Gym

Lee Hill Elementary -

- 1 Small Multipurpose Field
- Playground
- Gym

Livingston Elementary-

- Playground
- Gym

Wilderness Elementary -

- 1 Small Multipurpose Field
- Playground
- Outdoor Basketball
- Gym

Middle Schools

Battlefield Middle -

- 1 Small Diamond
- 1 Large Multipurpose Field
- 1 Track
- Gym

Chancellor Middle -

- 1 Small Diamond
- 2 Large Multipurpose Fields
- Gym

Freedom Middle -

- 1 Small Diamond
- 1 Large Diamond
- 3 Large Multipurpose Fields
- 1 Track
- Gym

Ni River Middle -

- 2 Small Diamonds
- 2 Large Multipurpose Fields
- 1 Track
- Gym

Post Oak Middle -

- 1 Small Diamond
- 1 Large Multipurpose Field
- Gym

Spotsylvania Middle -

- 2 Small Diamonds
- 1 Large Diamond
- 2 Small Multipurpose Field
- 1 Large Multipurpose Field
- Gym

Thornburg Middle -

- 1 Small Diamond
- 2 Small Multipurpose Fields
- 1 Large Multipurpose Field
- 1 Track
- Gym

John J Wright Educational & Cultural Center -

- 1 Small Diamond
- 1 Large Multipurpose Field
- Playground
- Gym

High Schools

Chancellor High -

- 1 Small Diamond
- 1 Large Diamond -Lighted
- 3 Large Multipurpose Fields -1 Lighted
- Track- Lighted
- 6 Tennis Courts

Courtland High -

- 1 Small Diamond -Lighted
- 1 Large Diamond - Lighted
- 3 Large Multipurpose Fields -1 Lighted
- Track- Lighted
- 6 Tennis Courts
- 2 Outdoor Basketball Courts

Massaponax High -

- 2 Small Diamonds – 1 Lighted
- 2 Large Diamonds – 1 Lighted
- 4 Large Multipurpose Fields -1 Lighted
- Track- Lighted
- 6 Tennis Courts

Riverbend High -

- 2 Small Diamonds – 1 Lighted
- 2 Large Diamonds– 1 Lighted
- 4 Large Multipurpose Fields -1 Lighted
- Track- Lighted
- 6 Tennis Courts

Spotsylvania High -

- 2 Small Diamonds – 1 Lighted
- 2 Large Diamonds – 1 Lighted
- 3 Large Multipurpose Fields -1 Artificial Turf Lighted, 1 Lighted
- Track- Lighted
- 6 Tennis Courts

County Parks Facilities Maintenance

Park amenities vary in age and condition. The Spotsylvania County Parks and Recreation Department recently updated a comprehensive list of parks facilities, documenting their age, condition, and estimated replacement timeline. These types of facility maintenance inventories ensure amenities are inspected and kept in good repair and/or replaced if need be. Continued tracking of Parks Facilities to monitor age and condition is warranted into the future in the interest of protecting public investments and ensuring operability.

Level of Service Standards for Parks & Recreation Acreage, Facilities, Community Centers and Public Meeting Spaces (Including Public Libraries).

New development presents demands for County-wide parks and meeting space facilities. Staff notes as of January 1, 2021 the County Approved Development Analysis noted 12,049 approved/enabled residential units that had yet to be constructed from prior rezoning approvals and subdivision activities. There are additional "pipeline" projects actively being considered or under review that could add to this number in time. Additional units are enabled in the form of by-right undeveloped lots scattered throughout the County that may or may not have additional division potential enabled by County Code as well. Considering this, it is important that the County provide both current and future residents adequate recreation services that meet current and future demand according to established LOS. The future demand for parks, open

space, and recreation facilities must be measured, and means must be identified for maintaining the established County-wide level of service for these important services after new development occurs.

Standards

Parkland Acres Per 1,000 Population: Utilizing an acres per 1,000 population standard for ~~passive recreation~~ Parks helps to ensure that as the County maintains a consistent LOS objective for parkland growth to serve a growing population. ~~becomes increasingly suburban and urban, opportunities for citizens to enjoy the natural environment persist.~~

Table 7: Land Needs Standards

Spotsylvania County Comprehensive Land Needs, 100% Standards With Schools									
Year				2020	2020	2030	2030	2040	2040
Population				138,449	138,449	159,641	159,641	181,549	181,549
Park Type		Standard (ac/1000)	Existing Acreage	Required Acreage	(-) Deficit/ Surplus	Required Acreage	(-) Deficit/ Surplus	Required Acreage	(-) Deficit/ Surplus
Community	Total*	3	179	415	-236	479	-300	545	-366
Community	Active	1.5	87	208	-121	239	-152	272	-185
District	Total^	7	404	969	-565	1117	-713	1271	-867
District	Active	3.5	101	485	-384	559	-458	635	-534
Special Use**	Total	1.8	68.5	249	-181	287	-219	327	-258
Special Use	Active	0	23	0	23.0	0	23.0	0	23.0
School	Total	0	1243	0	1243	0	1243	0	1243.2
School	Active	0	187.5	0	188	0	188	0	187.5
Community Ctr	Total	0	12	0	12	0	12	0	12.0
Community Ctr	Active	0	8	0	8	0	8	0	8.0
Total w/o Water	**Total**	**11.8**	**1907**	**1634**	**261**	**1884**	**11**	**2142**	**-248**
	Active	5	**406.5**	**692**	**-294**	**798**	**-400**	**908**	**-509**
Recreational Water	Total	6.2	841	858	-17	990	-149	1126	-285
Total w/ Water	**Total**	**18**	**2748**	**2492**	**256**	**2874**	**-126**	**3268**	**-520**
Note: Population projections sourced from Weldon Cooper Center for Public Service. 2020 Population from US Census Estimates (as of July 2020)									
*Community Parks total acreage includes future Keswick Park acreage expected within planning period.									
^ District Parks total acreage includes Hilldrup tract (presently undeveloped).									
** Special Use Parks total acreage includes Fortune's Landing Park acreage expected within the planning period. Special Use acreage inventory also includes Virginia Central Trail Linear Park acreage.									

Table 7 above shows the parkland needs for all of Spotsylvania County based on 100% County parkland needs LOS standards based on park type or classification. The table acknowledges public access recreational acreage associated with schools as well. Schools related park acreage is not available for general public usage during school hours so they are not as readily available for use as other County parks. Though schools lands are not classified as a specific park classification or type, they do offer a variety of facilities beneficial especially to organized league sports. Recognizing this, the County adopted a 100% LOS standard that factors in schools acreage.

Currently there are 143 acres of Community Parks within Spotsylvania County. This total acreage is expected to increase to 179 acres with the addition of Keswick Park (36 acres) within the planning period. As of 2020, when comparing existing park land to the standard, a deficit of -236 acres existed. Without additional acreage the deficit will grow through 2040. District Parks currently total 404 acres. Again when compared with the standard it resulted in a deficit of -565 acres as of 2020. By 2040, without additional District Park Land, the deficit will grow to -867 acres considering population growth. The Special Use Parks comprise 68.5 total acres, resulting in a deficit of -181 acres by 2020, increasing to -258 acres by 2040.

Dismissing particular standards for the various classifications of parks and looking at park related acreage as a whole, if we add the schools and community centers acreage that are complementary to parks and recreation function, as a whole the County fares well in terms of total acres though 2030. Between 2030 and 2040 however a deficit is expected to occur. Active Park acres are where the County is actively running a deficit compared to standard. This deficit is expected to grow over time unless additional active acres are added. Additional park acres in active status are warranted during the planning period. Between 2020 and 2040 the deficit in active park acres is expected to grow from -294 acres to -509 acres if no action is taken. It is good to note that some additional park acres in active status are expected to "come online" with the development of Keswick Park and opportunities at the District Park size Hilldrup Tract in particular.

The County has also established a standard for recreational water acreage that acknowledges recreational opportunities associated with water such as fishing and paddling. Considering recreational water acreage, recreational land needs acreage deficits are removed altogether through 2020 due to acreage associated with recreational water contributing to exceeding standard. However, if no new parkland or recreational water acreage is added between 2020 and 2030, deficits are expected to appear and grow as population increases. The recreational water 841 acres reported in the table above represents County managed reservoirs at Ni Reservoir (411 Acres) and Hunting Run Reservoir (430 Acre). Additional resources exist within the community that are worthy of mention including, but not limited to: Motts Run Reservoir (City of Fredericksburg); Rappahannock and Rapidan Rivers; Lake Anna.

Community Centers standard 1 per 15,000 population: Utilizing a Community Center per 15,000 population standard ensures that adequate public meeting space will remain available as the County population continues to grow.

Table 8: Community Centers Needs

Spotsylvania County Comprehensive Community Centers Needs									
Year				**2020**	**2020**	**2030**	**2030**	**2040**	**2040**
Population				**138,449**	**138,449**	**159,641**	**159,641**	**181,549**	**181,549**
		Standard	Existing	Required	(-) Deficit/	Required	(-) Deficit/	Required	(-) Deficit/
		(1/15,000)	Comm Ctr.*	Comm Ctr.	Surplus	Sq. Ft.	Surplus	Sq. Ft.	Surplus
Community Ctr	**Total**	**15,000**	**5**	**9**	**-4**	**11**	**-6**	**12**	**-7**
Note: 2020 Population from US Census Estimates (as of July 2020). Population projections sourced from Weldon Cooper Center for Public Service									
*Community Centers inventory includes: Marshall Center; Berkeley; Chancellor; Lee Hill; Todds Tavern.									

Presently Spotsylvania County manages 5 community centers. The inventory is expressed in Table 8 above. The County experienced a reduction of two community centers since the last Comprehensive Plan update including the Harrison Road Community Center and Lick Run Community Center. Through the year 2020 based on County standard, a deficit of 4 community centers presently exists. Without additional community centers added to the inventory this deficit is expected to grow to 7 by the year 2040 based on projected population growth. Considering County standards, the Comprehensive Plan is supportive of adding community center(s) to result in deficit reductions and maintain level of service.

The average recommended size for a community center ranges from 3,000 to 3,500 square feet (including meeting spaces, kitchen, bathrooms, etc.) The Spotsylvania Department of Parks and Recreation has identified the Lee Hill Community Center as an example of Community Center design and amenities most in demand at this time. In order to maximize their usefulness and demand, new community centers should consider the Lee Hill Center as a model. A schematic of that center is below for reference (Exhibit 2):

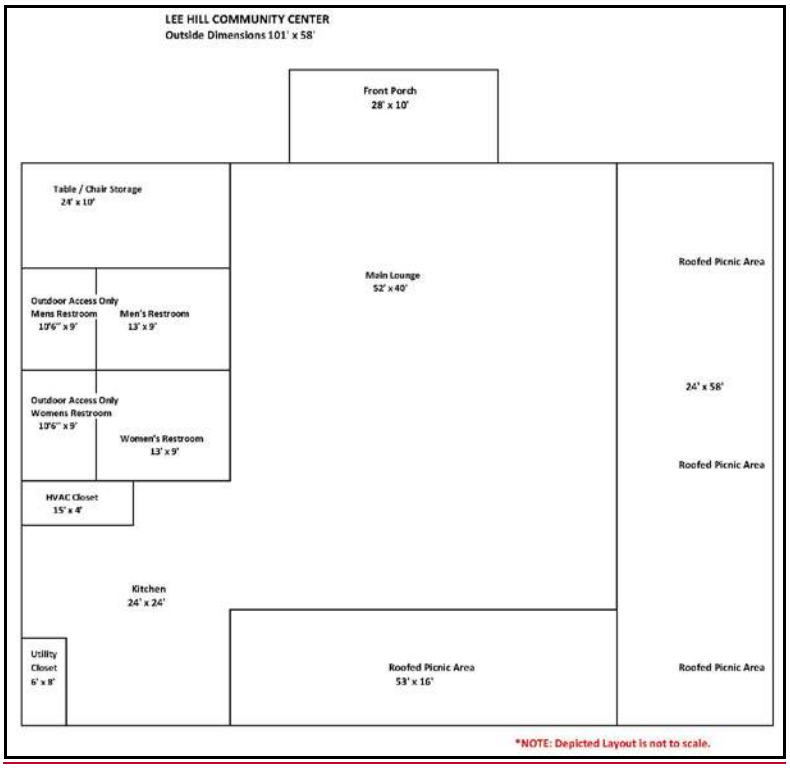


Exhibit 2: Community Center Model

~~Community Centers/~~ **Public Meeting Spaces at Community Centers and Public Libraries standard 200 Square Feet Per 1,000 Population:** Utilizing a square foot per 1,000 population standard for publicly available meeting space ensures that adequate public meeting space will remain available as the County population continues to grow. This is a County standard initially adopted as part of the 2013 Comprehensive Plan.

Table 9: Community Meeting Space Needs

Spotsylvania County Comprehensive Public Meeting Space Needs at Community Centers and Public Libraries									
Year				**2020**	**2020**	**2030**	**2030**	**2040**	**2040**
Population				**138,449**	**138,449**	**159,641**	**159,641**	**181,549**	**181,549**
		Standard	Existing	Required	(-) Deficit/	Required	(-) Deficit/	Required	(-) Deficit/
		(sqft/1000)	Sq. Ft.*	Sq. Ft.	Surplus	Sq. Ft.	Surplus	Sq. Ft.	Surplus
Community	**Total**	**200**	**21,872**	**27690**	**-5818**	**31928**	**-10056**	**36310**	**-14438**
Note: 2020 Population from US Census Estimates (as of July 2020). Population projections sourced from Weldon Cooper Center for Public Service									
*Existing Square Footage of Public Meeting Spaces include Spotsylvania County Community Centers and Libraries within County limits.									

Spotsylvania County presently has a public meeting space inventory of 21,872 sq.ft., accounting for the County's current inventory of public access meeting spaces within Community Centers as well as meeting spaces within Public Libraries in the County. The County has a set LOS standard for community meeting spaces of 200 sq ft per 1,000 residents. Considering a 2020 estimated County population of 138,449, in order to meet County LOS the County has warrant for 27,690

sq.ft. of public meeting space, resulting in a deficit of -5,818 sq.ft. As shown in the table above (Table 9), this deficit will grow as population grows if no additional meeting space is added to the inventory. In the short term, much of the identified deficit may be tied to the recent community center losses. The Harrison Road Community Center had offered an additional 1,748 sq. ft. of public meeting space. That Center was closed to accommodate needed Transportation systems improvements associated with a Route 1 (Jefferson Davis Hwy.) and Harrison Road intersection improvement project. The Lick Run Community Center's closure in November, 2018 is the result of the displacement and subsequent relocation of the Spotsylvania County Museum. The Lick Run Community Center resulted in a loss of 1,274 square feet of meeting space. Considering the lost meeting space and Spotsylvania County standard, there is warrant for additional meeting spaces whether they be at a new or expanded community center or in the public libraries. No new meeting space inventory was added with the recent opening of the Library at Spotsylvania Towne Center.

Parks Facility Standards: Perhaps ~~M~~more important than the raw park-land acreage needs are standards for recreation facilities to activate the sites for recreational use ~~which~~ that ~~should be~~ have been formulated to plan for recreation needs and serve as a basis for capital planning. Many of these recreational facilities are necessary to create Active Park acres that presently run a LOS deficit expected to grow over time. Pursuit of additional recreational amenities to meet LOS standards complements efforts to reduce active park acres deficits. The goal is to maintain a consistent LOS for the County population consistent with projected growth over time.

The following ~~chart~~ table shows the recommended County facility standards and their corresponding surpluses or deficits over time considering population estimates and projections. Many ~~that have been~~ were derived from national and state standards and adopted as the County standard in 2009. Considerations for pickleball popularity has resulted in a new standard added as part of this update.

Due to the wide array of potential recreational facilities it is impractical to establish a set LOS standard for all the potential options available, especially "big ticket", specialized or niche facilities. Other more niche amenities have also been accommodated for consideration based on their uniqueness and fit within the community and their projected demand. Demand based parks and recreation planning has become more popular in recent times. For instance, the Virginia Department of Conservation and Recreation (DCR) now bases many of its recommendations within the Statewide Virginia Outdoors Plan on survey research to gauge demands for new parks facilities.

FACILITY	NATIONAL STANDARD	STATE STANDARD	SPOTSYLVANIA STANDARD	2012 Need (Rounded) *	County Provision	Other Provision
Baseball/Softball Diamond (Lighted Regulation) (Lighted Little League)	1/2,500 - -	1/2,000 - -	1/3,000 (1/15,000) (1/30,000)	42 8 4	48 5 7	6
Basketball (Indoor) (Outdoor)	1/5,000 - -	1/5,000 - -	1/5,000 (1/5,000) (1/10,000)	25 25 13	43 25 18	9 - 9
Bike/Fitness Trails	1 System/ Region	3.5 Miles/1,000	1 Mile/1,000	126	22.8	-
Community Center	-	-	1/15,000	8	7	
Golf	-	9 Holes/25,000	9 Holes/25,000	45 Holes	0	54 Holes
Horseshoes	-	-	1/10,000	13	0	-
Indoor Recreation Center/ Pool Complex	-	-	1/50,000	3	0	1
Multi-Purpose Fields (Field Hockey, Football, Lacrosse, Soccer, etc)	3/20,000	3/10,000	1/2,000	63	51	10
Playgrounds	1/5,000	-	1/5,000	25	22	-
Swimming Pool	1/20,000	1/15,000	1/20,000	6	1	25
Tennis (Lighted)	1/2,000 -	1/2,000 -	1/2,000 (1/10,000)	63 13	46 6	48

Table 10: Amenities Standards

County Parks Amenities Requirements 100% Standards with Schools								
AMENITY	SPOTSYLVANIA STANDARD		Year 2020	Year 2020	Year 2030	Year 2030	Year 2040	Year 2040
	per residents	Existing	Required	Population	Required	Population	Required	Population
		Facilties	Facilities	138,449	Facilities	159,641	Facilities	181,549
				(-)Deficit/		(-)Deficit/		(-)Deficit/
				Surplus		Surplus		Surplus
Baseball/ Softball Field	3,000	50	46	4	53	-3	61	-11
Baseball Lighted Regulation	15,000	9	9	0	11	-2	12	-3
Baseball Lighted Little League	30,000	10	5	5	5	5	6	4
Basketball Court	5,000	45	28	17	32	13	36	9
Basketball Indoor	5,000	25	28	-3	32	-7	36	-11
Basketball Outdoor	10,000	20	14	6	16	4	18	2
Bike/Fitness Trails (miles)	1,000	22.1	138	-116	160	-138	182	-159
Indoor Recreation Center/ with Pool	50,000	0	3	-3	3	-3	4	-4
Playgrounds	5,000	27	28	-1	32	-5	36	-9
Swimming Pool	20,000	1	7	-6	8	-7	9	-8
Tennis	2,000	46	69	-23	80	-34	91	-45
Tennis Lighted Courts	10,000	6	14	-8	16	-10	18	-12
Multipurpose Fields (Football, Field Hockey, Lacrosse & Soccer Fields)	2,000	73	69	4	80	-7	91	-18
Pickleball Courts	15,000	5	9	-4	11	-6	12	-7
Other (Specialized or niche amenities)	Case by Case considering uniqueness and demand							
Note: 2020 Population from US Census Estimates (as of July 2020). Population projections sources from Weldon Cooper Center for Public Service.								

Over the planning period considering the County's adopted LOS standards for parks and recreation, many amenities will see growing deficits as population increases. Within the short term, recreational bike fitness trails and tennis courts comprise the most notable deficits compared to County standard. It is good to note that tennis courts can and have served dual purposes as Pickleball Courts, requiring Pickleball striping so the facility can serve dual purposes.

Bicycle and fitness trails include shared use paths such as the Virginia Central Trail that extends from Salem Church Road to Gordon Road presently. School running tracks also qualify and are included within the County's existing inventory identified in the table above. Leavells Road extending from Harrison Road to Hilltop Plaza Way has an expanded sidewalk to accommodate a wider array of users. This path serves several residential developments along the Leavells Road corridor and provides access to Loriella Park. Bicycle and fitness trails also include nature and historical interpretive trails that may be utilized by a host of users for walking, mountain biking,

cross country running, equestrian usage, etc. Staff has acknowledged the presence of other trails through the County including the Ni River Trail by the Spotsylvania Greenways Initiative (presently a nature trail envisioned to be part of the planned Ni River Trail system), historic interpretive trails associated with National Park Service, Civil War Trust, and Central Virginia Battlefields Trust lands, as well as recreational trails at Lake Anna State Park. Lake Anna State Park also includes an equestrian trail system. These trails overwhelmingly provide opportunity for passive recreation in the form of natural surface walking paths limiting potential usage to certain activities. For users that can benefit from interest in natural walking paths, these trails help buffer and/or reduce the lack of availability for such user groups.

Recognizing the need to establish a Comprehensive Trailways Master Plan to address citizen interest and formulate a plan to reduce LOS deficits, Spotsylvania County adopted a Trailways Master Plan in 2011 that included plans for both roadside and off-road greenway trails. In 2011 the Virginia Chapter of the American Planning Association bestowed the 2011 Outstanding Plan Award-Plan Element upon the Spotsylvania County Trailways Master Plan. The Plan had historically been a standalone document incorporated by reference within the Comprehensive Plan. As a Plan element in the interest of assuring such a plan does not become outdated or inconsiderate of opportunities that may arise from changes elsewhere within other elements of the Comprehensive Plan, staff shifted crucial plan elements into this Comprehensive Plan recognizing its applicability to both Transportation planning (road based) and Parks and Recreation. The Trailways Plan is now located within the Comprehensive Plan and updated accordingly on the same schedule.

~~**Level of Service Standards for Parks & Recreation and Public Meeting Space**~~

~~New development presents demands for Countywide parks and meeting space facilities. It is important that Spotsylvania County provide both current and future residents adequate recreation services that meet current and future demand according to established levels of service. The future demand for parks, open space, and recreation facilities must be measured, and means must be identified for maintaining the established Countywide level of service for these important services after new development occurs.~~

- ~~Multi-Purpose Field 1 per 2,000 residents~~
- ~~Tennis Court 1 per 2,000 residents~~
- ~~Baseball/Softball Diamond 1 per 3,000 residents~~
- ~~Basketball Court 1 per 5,000 residents~~
- ~~Playground 1 per 5,000 residents~~
- ~~Horseshoes 1 per 10,000 residents~~
- ~~Community Centers 1 per 15,000 residents~~
- ~~Swimming Pool 1 per 20,000 residents~~
- ~~Indoor Recreation Center 1 per 50,000 residents~~
- ~~Trails 1 mile per 1,000 residents~~
- ~~Passive Recreation Space 4 acres per 1,000 residents~~
- ~~Golf 9 holes per 25,000 residents~~

- ~~Public Meeting Space 200 sf per 1,000 residents~~

Recommendations

~~Because of this plan's strategy for homeowner association provided recreation facilities together with the uniqueness of sites associated with special use parks, the~~ The following general, short and long-term recommendations focus on the current and future needs for provision of public parks within Spotsylvania County. ~~including community, school/community use and district parks. Additionally, the joint work of the County Board of Supervisors and the School Board has led to innovative and cost effective approaches to school facility design that serves both the educational needs of our students as well as new facility standards that maximize the cost effectiveness of school construction for after school use.~~

Specific capital projects recommendations are based in the warrants established by County LOS standards and efforts to meet such standards. Decisions concerning adoption of the County Capital Improvement Plan (CIP) are guided by the Comprehensive Plan. As per the Code of Virginia, localities must be able to exhibit Comprehensive Plan support for public projects, including new Parks and Recreation facilities. CIP projects must be supported by the Comprehensive Plan by State Code. The Code of Virginia Sect. 15.2-2232 required that improvements be shown in the Comprehensive Plan, specifically identifying the "location, character and extent of each feature shown on the plan." Sect. 15.2-2232 establishes:

> … unless a feature is already shown on the adopted master plan or part thereof or is deemed so under subsection D, no street or connection to an existing street, park or other public area, public building or public structure, public utility facility or public service corporation facility other than a railroad facility or an underground natural gas or underground electric distribution facility of a public utility as defined in subdivision (b) of § 56-265.1 within its certificated service territory, whether publicly or privately owned, shall be constructed, established or authorized, unless and until the general location or approximate location, character, and extent thereof has been submitted to and approved by the commission as being substantially in accord with the adopted comprehensive plan or part thereof.

The purpose of the Public Facilities Element in the Comprehensive Plan (including Parks and Recreation) is to establish County LOS standards and identify specific capacity building projects that help justify CIP inclusion as well as calculation of proffers concerning residential rezoning applications. In the case of Parks and Recreation related proffers they are based solely on necessary capacity expansion projects (based in LOS) identified within the County CIP. Proffer values are determined considering population increases above the by-right potential of a project area resulting from a residential rezoning, and their proportionate per unit, per person share of the cost of the new facility.

~~Although some areas of the County are not served by one or more parks, this does not mean park acquisition efforts in these areas are necessarily warranted. Before a commitment is made to the acquisition of any given park facility, a minimum population base is to be projected within the facility's service radius within 20 years. This is important to ensure that the facility will be sufficiently utilized.~~

The following are general recommendations for the provision of local public park areas. The general location of proposed public park areas should be based on land acquisition needs, service area needs and the population served.

General

1. Spotsylvania County will have sufficient park facilities to meet County Park Standards as well as current and future demand. Provide community, district, and special use parks that meet a 100% level of service standard, including schools.

    a. Encourage all new schools and community centers to include provisions for public recreational acres, and amenities. Co-location of future schools, community centers, and parks will benefit Spotsylvania County by adding more recreational opportunities and avoiding duplication of recreational facilities.

        - Formally adopt a school/park and recreation policy that would include the following:
            - Provide for specific facility standards and designs for all community type use facilities at new school sites.
            - Provide for the Park & Recreation Department's operational & maintenance agreements.
            - Provide for an agreed upon short and long- range plan for the improvement and expansion of community use facilities, where feasible, at existing school sites including use of available school lands.
            - Strive for a County provision to meet the Level of Service Standards for Multi-Purpose Fields and Baseball/Softball Diamonds as these are specifically needed for programmed Parks & Recreation activities.

    b. Protect, maintain, and enhance current parks and open space areas in Spotsylvania County and acquire additional parkland and facilities within the County, consistent with adopted level of service standards.

        - The acquisition of park lands and development of park amenities should occur based on population estimates.

c. Provide an annual CIP submission of needed facilities based on adopted standards and replacement schedules.

d. Optimize existing parks that are not built out by improving or adding new facilities to enhance efficiencies or reduce known LOS deficits within the planning period.

- An emphasis should be placed on the current utilization of the parks with installation of artificial lighting to enhance and extend the availability of current athletic fields.

2. Preserve natural areas, parks, open space area, archaeological and architectural sites and cultural resources in Spotsylvania County.

a. Encourage protection of, access and interpretation of significant cultural or historical resources within new or existing park land.

b. Maintain and update a database and/ or mapping project that includes an inventory of all parks, open spaces, nature preserves, onsite historic and cultural sites, park amenities, trail systems.

3. Preserve and expand upon the existing recreational trails network within the County by implementing the Spotsylvania Trailways Master Plan (found in the Transportation Element of the Comprehensive Plan) consisting of off-road greenway trails and roadside based trail corridors.

a. Encourage VDOT to construction of bicycle lanes and/or paths complementary to recreational trailways plan implementation efforts in conjunction with road widening projects, where appropriate.

1.Formally adopt a school/park and recreation policy that would include the following:

a. Provide for specific facility standards and designs for all community type use facilities at new school sites.
b. Provide for the Park & Recreation Department's operational & maintenance agreements.
c. Provide for an agreed upon short and long range plan for the improvement and expansion of community use facilities, where feasible, at existing school sites including use of available high school lands.
d. Future site acquisitions by either the School Board or the Parks & Recreation Department will be considered for joint or complementary use.

~~Strive for a County provision to meet the Level of Service Standards for Multi-Purpose Fields and Baseball/Softball Diamonds as these are specifically needed for programmed Parks & Recreation activities.~~

4. Consider adding additional specialized or niche recreational amenities that do not warrant a specific level of service standard based on their uniqueness and fit within the community as well as projected demand.

5. Consider additional public/private partnerships or any other joint opportunities in the delivery of park and recreation service delivery ~~similar to~~like the YMCA/School Board/ County partnership at the Patriot Park District Park.

6. Continue to support the development of privately managed and maintained neighborhood parks and private recreational amenities that will ultimately serve County residents within their particular developments.

~~4. Provide an annual CIP submission of needed facilities based on adopted standards.~~

Short Term

~~Focus on what we have:~~

~~1. Optimize existing parks that are not built out.~~

1. Seek to replace the Harrison Road and Lick Run Community Centers at new locations similarly located to their former ones (approximately within a mile) considerate of nearby populations historically served by those centers respectively, and geo-spacing/facility separation to reduce service area overlap. ~~Develop master plans for the Hilldrup and Belmont properties.~~

2. Seek to locate a new Community Center in the Partlow Area.

~~4. An emphasis should be placed on the current utilization of the parks with installation of artificial lighting to enhance and extend the availability of current athletic fields.~~

~~An emphasis should also be placed on the acquisition and development of the planned school construction so to include the provision for additional school/community use facilities. The current availability of surplus vacant or underutilized land at existing school sites should be considered for the many parks and recreation facility needs of County residents.~~

Long Term

~~The acquisition and development of park should occur based on population estimates.~~

~~The acquisition and development of all new schools should include the provision for school/community use facilities.~~

1. Explore acquisition and/or development of an indoor aquatic recreation center.

2. Develop master plans for the Hilldrup and Belmont Properties.

3. Explore the acquisition of land in the Lee Hill/Massaponax area for a new district park.

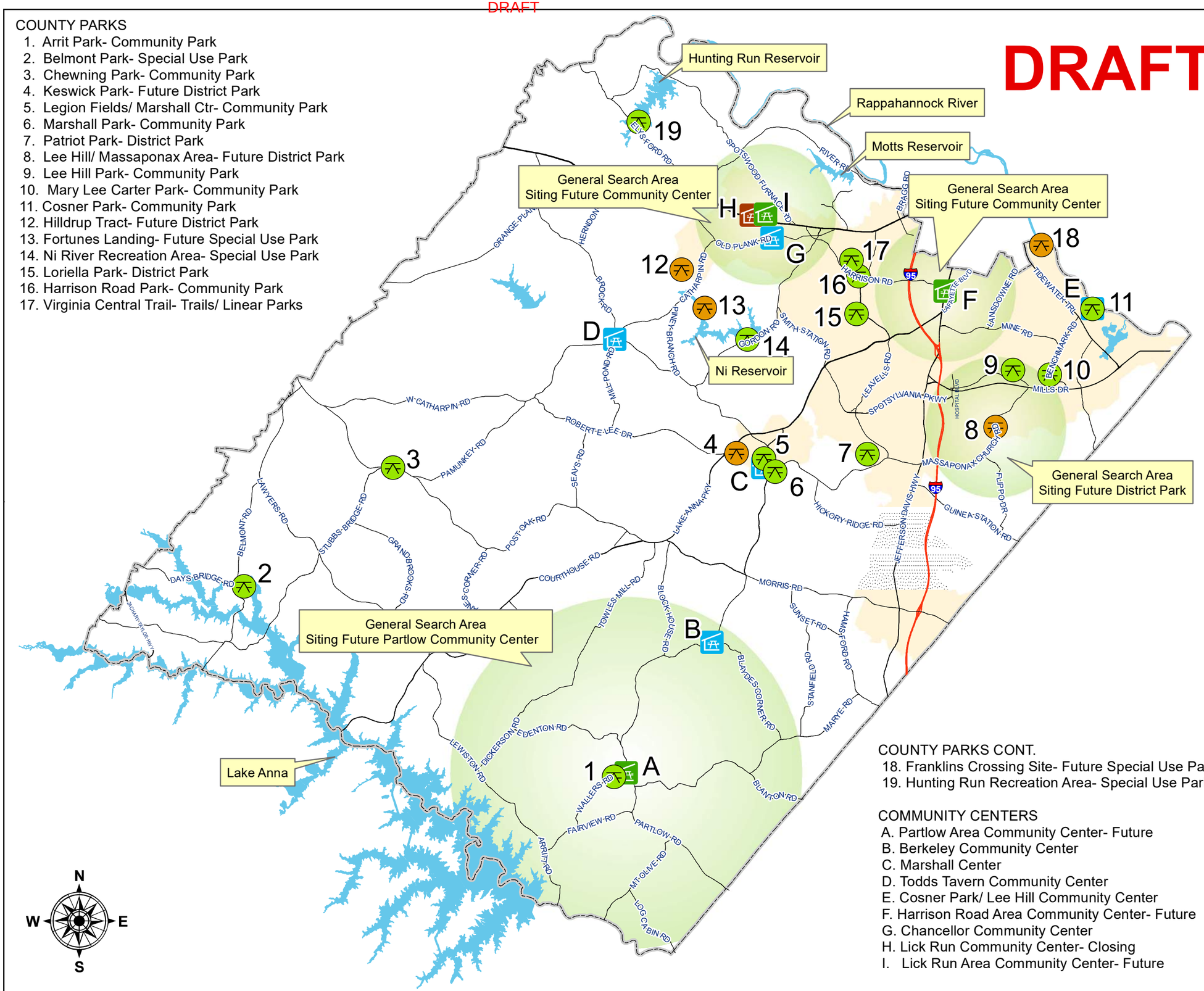
4. Continue to implement the County Trailways Plan through various means including Parks and Recreation projects, Transportation Projects, Private Development frontage and amenity improvements, etc. A number of candidate projects have been suggested to expand the trailways network and help address the sizable level of service deficits for such facilities. These candidate projects have been identified due to their location in proximity to heavily populated areas, historic and cultural resources attractions and tourism, and physical location in relation to existing trail systems with the aim of closing "gaps" or extending trails with existing usage. Candidate projects are as follows:

- Ni River Greenway Trail northward through the Hilldrup Tract District Park generally along the Ni River Corridor to include nearby County owned historic lands associated with Catherine's Meadow. (Approximately 1 Mile)
- Deep Run Trailhead (including portion of trail), riverside park, river access, and historic interpretation site at the County owned Franklin's Crossing site. (Approximately ½ Mile)
- Ni River Greenway Trail gap between its current terminus and Patriot Park (between Route 1 and Patriot Park). (Approximately ½ Mile)
- Complete implementation of the Phase I Massaponax Creek Greenway Trail, including necessary bridge crossings, between the Courthouse Road public parking area, Loriella Park, and planned Mussel Farm site. (Approximately 1 ¼ Miles)
- Pursue construction of the Virginia Central Greenway Trail and trailhead along the Whitehall/Lakeside Virginia Land Conservation Fund easement extending between Brock Road and Jackson Trail East. (Approximately 2 Miles)
- Ni River Trail to establish a roadside based bicycle and pedestrian friendly connection between the Hilldrup Tract (Future District Park) and future public park at Fortune's Landing fronting the Ni Reservoir.
- Eastward expansion of the Virginia Central Trail by seeking roadside based bicycle and pedestrian improvements between Salem Church Road and the City of Fredericksburg via the Route 1 corridor and Harrison Road widening and Interstate 95 bridge replacement projects.
- Westward expansion of the Virginia Central Trail through Gordon Road, Harrison Road, and Old Plank Road improvement projects.

- Seek roadside bicycle and pedestrian friendly improvements along Tidewater Trail and Benchmark Road to help implement the Deep Run Trail and East Coast Greenway in Spotsylvania County from the Bowman Center to County VRE Station.

DRAFT

COUNTY PARKS
1. Arrit Park- Community Park
2. Belmont Park- Special Use Park
3. Chewning Park- Community Park
4. Keswick Park- Future District Park
5. Legion Fields/ Marshall Ctr- Community Park
6. Marshall Park- Community Park
7. Patriot Park- District Park
8. Lee Hill/ Massaponax Area- Future District Park
9. Lee Hill Park- Community Park
10. Mary Lee Carter Park- Community Park
11. Cosner Park- Community Park
12. Hilldrup Tract- Future District Park
13. Fortunes Landing- Future Special Use Park
14. Ni River Recreation Area- Special Use Park
15. Loriella Park- District Park
16. Harrison Road Park- Community Park
17. Virginia Central Trail- Trails/ Linear Parks



COUNTY PARKS CONT.
18. Franklins Crossing Site- Future Special Use Park
19. Hunting Run Recreation Area- Special Use Park

COMMUNITY CENTERS
A. Partlow Area Community Center- Future
B. Berkeley Community Center
C. Marshall Center
D. Todds Tavern Community Center
E. Cosner Park/ Lee Hill Community Center
F. Harrison Road Area Community Center- Future
G. Chancellor Community Center
H. Lick Run Community Center- Closing
I. Lick Run Area Community Center- Future

Spotsylvania County Parks and Recreation Facilities and Needs

Legend

County Parks
- Future Park
- Park

Community Centers
- Community Center Closing
- Community Center
- Future Community Center*

General Siting Buffer (Future Projects)

Primary Development Boundary

0 1.25 2.5 5 Miles

Map Approved: _____

Chapter 4H

PUBLIC FACILITIES PLAN- GENERAL GOVERNMENT

GENERAL GOVERNMENT

Introduction

The General Government portion of the Public Facilities Chapter seeks to identify capital facility needs for County government operations not associated with operational needs of the Sheriffs, FREM, Solid Waste, Water and Sewer, Parks and Recreation, Schools that have each been addressed elsewhere within this Chapter. For the purpose of this Chapter, General Government includes but is not limited to governmental services including but not limited to: County Administration, Treasurer, Commissioner of Revenue, County Attorney, Voter Registrar, Cooperative Extension, Community Development, Division of Social Services, Courts, Human Resources, Finance, Information and Computer Services, Public Works and Facilities Management.

Per Spotsylvania County Public Works, the County has two separate documents that are used for general guidance for planning. It is good to note that these guiding documents have resulted in several projects, implemented and complementary to their recommendations. Not all recommendations have been pursued. Due to passage of time and population trends changes since the adoption of these two guiding documents there is an identified need to review and update space needs study and ultimate recommendations going forward. For instance, population projections based on historic growth rates leading up to the early 2000's resulted in much more robust population expectations for the year 2020, 2025. A March 2005 update concerning the Spotsylvania County Government Center Campus Master Plan projected a County population in 2020 of approximately 200,000, and between 230,000 to 250,000 or more by 2025. The latter 2000's has seen a slowing of population growth that is less than 2% annually. Since the Campus Master Plan, population growth has not kept pace with the population projections assumed in 2005. As noted elsewhere in the Comprehensive Plan, US Census 2020 population estimates report a County population of 138,449. A brief overview of the County's existing guiding documents for general government space needs is below:

2013 General Government and Judicial Center Space Needs

Prepared by Peck, Peck, & Associates, this document looks at various services in the County and establishes an anticipated space need based on Departmental director input. The space needs study itself was constrained and not allowed to look at construction of a new building.

2001 Facility Space Needs Analysis

Prepared by Moseley, Harris, and McClintock: This document developed the Courthouse Master Plan (by Moseley Architects) and noted the need for additional buildings. Several of the projects listed in this plan have been or are being implemented including: a new public safety building (completed), new Circuit Court (completed), General District Courthouse expansion (under construction as of this update), and a New Government Building (remains unbuilt at this time). The Courthouse Master Plan addresses County government functions located in the Spotsylvania Courthouse Area, Spotsylvania County's governmental hub.

Capital Projects Recommendations

In terms of identifying the need for new spaces the County typically considers individual space needs assessments by Department as the need arises and in recent years has not performed a comprehensive space needs update. For specific metrics that guide County space needs recommendations there are two groups where space needs are driven primarily by ratio of personnel and workload. One of those is the courts which we use the judge to case load ratio to determine the number of judges needed and by extension the number of courtrooms needed. This is done by looking at current average case load per Judge in Virginia and comparing to case loading seen in Spotsylvania. This however is not a set number per code and is a discretion of the courts. The other is Social Services which has required turnaround times for case loading which impacts personnel and therefore space needs. The determination of personnel to achieve the case load requirements are subjective and not quantified and are at the discretion of the Director of Social Services.

Recommendations

The following recommendations for the provision of general government facilities going forward have been compiled with the assistance of Spotsylvania County Public Works. Capital Project recommendations for general government identified below have their basis in the aforementioned studies and continued monitor of existing conditions considering departmental feedback and personnel to workload ratios as described above. These projects remain as projects targeted for implementation to address relatively short-term needs.

Capital Projects Needs

(1) 50,000-60,000 sq.ft. new build in the Spotsylvania Courthouse area for the Department of Social Services and VA Department of Health offices.
(2) Construction of a joint use complex along Gordon Road, specifically Tax Map# 21-A-84 for Spotsylvania County Utilities and Public Works. Also see Parks and Recreation and Water and Sewer Elements of Public Facilities Chapter concerning this site.

Future Planning Needs

(1) Review and update the County's space needs assessment and recommendations for future long-term capital project needs.

Chapter 5

HISTORIC RESOURCES PLAN

INTRODUCTION

Spotsylvania County has a proud tradition of Historic Preservation. This element continues that proud tradition while ensuring that the property rights of Spotsylvania County landowners are not violated by the goals, objectives or implementation strategies of this element. The County aspires to achieve these goals and objectives, however, it is important to emphasize that they are voluntary in nature.

HISTORY

The same accidents of geography that brought war, destruction, and eternal fame to Spotsylvania County between 1861 and 1865 are now combining to alter the County's landscape in a much more permanent way than the Civil War ever could. Those changes are coming at such a rapid pace that immediate action is critical.

Early Virginia historic transportation corridors in Spotsylvania County tended to follow water courses east and west providing routes for the products of agriculture and industry to find their way to market. With the establishment of cities and towns along the Fall Line, north-south travel along roads and later rails gained greater importance. These factors, combined with Spotsylvania County's position midway between Washington, D.C. and Richmond, destined the County to be the prime battleground of the Civil War, as peacetime avenues of commerce became avenues of invasion.

Today, proximity to Washington, D.C. and Richmond and 20th century innovations in both highway and rail travel along the traditional north-south corridor have transformed much of Spotsylvania County into a sprawling bedroom community favoring ~~-~~the homogenized corporate and residential architecture of suburban America. In the last 20-30 years, much of that change has been so dramatic that former residents can scarcely recognize the landscape of their youth. These changes are most notable in growth areas of the County, especially within the Primary Development Boundary. ~~In short, Spotsylvania County is in danger of losing its historic character.~~

As the County enters the 300th anniversary of its founding within the Planning period (2021), ~~T~~the purpose of this Preservation Plan is to grapple with the difficult issue of how to accommodate growth and still preserve the character-defining nature of the County that makes it such a desirable place to live and which draws visitors from across the ~~country~~Country, if not from around the world. Key to the plan is to identify those resources and characteristics that make the County unique; but, more than that, the plan suggests actions that should be taken by government, the business community, and individuals to preserve a special heritage and sense of place before they are lost forever.

Within Spotsylvania County, the Spotsylvania Museum and Spotsylvania County Tourism are chiefly involved in the promotion and enhancement of historic resources throughout the County with a focus that includes and goes well beyond the Civil War history for which the County is highly known. As outlined within the Historic Resources Appendices (Appendix C), Spotsylvania County history, settlement, culture cannot be defined solely within the four-year period associated with the American Civil War. The various time periods exhibited within the Appendix

provide an abundance of opportunities to "tell the story" and preserve parts of Spotsylvania County's history. There are public, private, and non-profit opportunities to enhance historic resources preservation and interpretation within the County. A number of Historic Resources Policies and Strategies identified within this Plan are aimed at realizing such opportunities.

National Park Service

Federally, the National Park Service directly owns or has easements upon nearly 7,300 acres within Spotsylvania County. The acreage is regionally managed as part of the Fredericksburg and Spotsylvania National Military Park that includes preserved Civil War battlefields associated with the Battles of Fredericksburg, Chancellorsville, Wilderness, and Spotsylvania Courthouse. More information regarding the Fredericksburg and Spotsylvania National Military Park can be found **HERE**.

Virginia Department of Historic Resources

The Virginia Department of Historic Resources (DHR) is the State Historic Preservation Office. DHR fosters, encourages, and supports the stewardship and use of Virginia's significant architectural, archaeological, and historic resources as valuable assets for the economic, educational, social, and cultural benefit of citizens and communities. DHR offers a wide array of resources devoted to the research and documentation, preservation, and interpretation of resources throughout Virginia, including Spotsylvania County. A link to Virginia DHR can be found **HERE**.

Greater Fredericksburg Tourism Partnership

The Greater Fredericksburg Tourism Partnership is a regional tourism collaboration promoting regional tourism attractions (including historic sites) and complementary accommodations (food, lodging), within the Fredericksburg Region that includes the City of Fredericksburg, Spotsylvania County, Stafford County. Together with the Commonwealth of Virginia, the Greater Fredericksburg Tourism Partnership operate a regional tourism website that can be found **HERE**.

Spotsylvania County Museum

The County Museum's mission is to support Spotsylvania County citizens, Spotsylvania County leadership and the American public by moving toward a "world-class museum" dedicated to the collection, accountability, preservation and interpretation of Spotsylvania County's cultural and natural history, enhancing community cohesion and economic development through education and programs for the County's citizens and the American public, with a special emphasis on the Civil War. The "bricks and mortar" museum archives County historic resources, offers historical exhibits, virtual online exhibits, resources for genealogy, and a gift shop. A link to the Spotsylvania County Museum can be found **HERE**.

Spotsylvania County Tourism

Spotsylvania County Tourism promotes County tourism attractions including a variety of historic and cultural attractions, recreation, entertainment, events, and complementary accommodations for food and lodging. Historic Tours of the County presently linked on the

Tourism website include: Courthouse Historic District Web Tour, Trolley Winery Tours and a Bit of History, African American Heritage Tours, John Cummings- Battlefield Guide Service, and Scott Walker- Hallowed Ground Tours.

Additional resources within the County of historic interest include, but are not limited to: African American Heritage Trail, John J. Wright Museum and Cultural Center, Rappahannock Railroad Museum, Shannon Air Museum, Spotsylvania County Visitor Center. More information regarding Historic and Cultural Resources promoted by the Tourism office can be found **HERE**.

~~The Plan contains policies and strategies that aim to preserve the County's many resources and its successful implementation ultimately rests in the hands of the community. Historic and Cultural Preservation should be undertaken on behalf of the citizens of the County. The stakeholders in this endeavor – property owners, land developers, local government, preservation groups, and interested citizens – must have viable and creative tools to be good stewards of their historic and cultural resources. The adoption and implementation of this Plan provides the tools and focuses efforts to ensure the future of our historic and cultural resources.~~

THE CODE OF VIRGINIA - ENABLING LEGISLATION

The Virginia Constitution and the Code of Virginia grant authority to Virginia jurisdictions to protect their historic resources. Section 15.2-2224 of the Code of Virginia requires that certain surveys and studies be made in preparation of the Comprehensive Plan. Related to historic resources, the County can either survey and study historic areas or list historic areas identified and surveyed by the Department of Historic Resources in the Comprehensive Plan. Spotsylvania County has surveyed and studied historic resources and the documentation of that study is found in Appendix C.

Enabling legislation exists in the Code of Virginia to allow jurisdictions such as Spotsylvania to adopt a historic overlay district, which the ~~county~~ County has in Chapter 23, Zoning, Code of the County of Spotsylvania. Spotsylvania County's Historic Overlay District Ordinance and Comprehensive Plan are the foundation for the County's historic preservation program. In partnership with the Fredericksburg and Spotsylvania National Military Park, Spotsylvania County should promote and protect the four Civil War battlefield parks in the County. Voluntary measures, including protection and advocacy efforts by private and non-profit groups, are an essential part of the County's preservation program. Additionally, the County should set an example for the community in its stewardship of its historic buildings.

HISTORIC RESOURCES POLICIES AND STRATEGIES

This Plan contains goals, policies and strategies that aim to preserve the County's many resources and its successful implementation ultimately rests in the hands of the community. Historic and Cultural Preservation should be undertaken on behalf of the citizens of the County. The stakeholders in this endeavor – property owners, land developers, local government, preservation groups, and interested citizens – must have viable and creative tools to be good stewards of their historic and cultural resources. The adoption and implementation of this Plan provides the tools and focuses efforts to ensure the future of our historic and cultural resources.

GOAL: Spotsylvania County is known for the beauty of its agricultural and rural environment and for its wealth of historic and cultural resources. Spotsylvania recognizes that these assets are essential components of its identity, with an economic value worthy of protection. Spotsylvania County seeks to preserve and promote these resources through the following policies and strategies.

Policy 1: Encourage and promote the voluntary protection and preservation of scenic, historic, cultural, architectural, and archaeological resources.

Strategies:

1. Support the voluntary designation of National and State, historic register sites.
2. Support the preservation of resources with local, state, or national significance.
3. Promote the continuance and expansion of the Agricultural/~~-~~Forestal District program to promote agricultural land preservation and protection of the rural farm~~/~~and forest character of the county.
4. Promote and protect agriculture, forestry, and open space as the primary use of land in rural areas to promote the scenic character and economy of this area of the ~~county~~County.

Policy 2: The County should support projects that consider and mitigate the impact of development projects on historic and cultural resources during the rezoning, special use, and capital project planning processes.

Strategies:

1. Development applications and staff reports should identify historic and cultural resources in proximity to proposed rezoning, special use, or capital project, and evaluate the impacts of the project on the resources in question.
2. Consider appropriate architectural treatment, transitions, and/or buffering between development projects and National or State historic register sites to prevent or minimize degradation of the historic property.
3. The County should support ~~the~~ efforts to ~~preservation~~ preserve ~~of~~ important scenic and historic lands ~~as a component of the rezoning actions~~ through ~~placing these resources in~~ easements or dedicated open space.
4. The County should support efforts that propose to ~~the preservation~~ protect scenic viewsheds, scenic byways, and rural character outside of the Primary Development Boundary.
5. ~~4.~~ The County should support efforts that propose to preserve or rehabilitate ~~of~~ historic structures within ~~by incorporating them into~~ the design of new development projects.

Policy 3: Integrate historic and cultural preservation goals with economic development, tourism, capital facility, and public safety goals.

Strategies:

1. Develop procedures involving maintenance and care for ~~county~~ County owned cultural and historic resources.

2. Work with the National Park Service to solve critical road and public safety issues facing the community within or in close proximity to battlefield parks to ensure that necessary improvements can occur while minimizing impact to the battlefield park.
3. Foster a strong and complementary relationship between tourism promotion and historic preservation efforts, including the promotion and awareness of the County's historic resources through the economic development efforts associated with the tourism industry.

Policy 4: Enhance public understanding and appreciation of the unique nature of Spotsylvania County's history, culture and character.

Strategies:

1. Maintain a GIS-based inventory of historic, archaeological, and cemetery resources.
2. ~~Identify roads eligible for and pursue~~ Consider expanding scenic byway ~~listing~~ designations within the County to emphasize the importance of viewshed and character sensitive design of development proposals along such corridors.
3. Work with the National Park Service to enhance the Civil War visitor experience to both the battlefield parks and County in general.
4. Develop additional heritage tourism trails to promote new historic tourism ventures that capitalize on Spotsylvania history, including such topics as mill sites, gold mines, churches, etc.
5. Collaboration with the University of Mary Washington that will enable students to put their knowledge to use while acquiring hands-on experience and, at the same time, helping the County implement strategies of the Historic Preservation Plan.
6. Collaborate with local non-profit preservation organizations to hold historic preservation workshops and other historic awareness activities.
7. Continue to support ~~local history~~living history related events including but not limited to the County's 300 year anniversary, Civil War reenactments.
8. Where appropriate, support projects that incorporate historic markers and/or signage documenting historic figures, groups, events, or architecture of local, state, or national significance associated with the project area.

Chapter 6

NATURAL RESOURCES PLAN

INTRODUCTION

Spotsylvania County's natural resources play a significant role in defining its character and environmental health and also play a role in its economic activities, helping support local tourism and employment. The County's rich heritage and character have been an important aspect of the high quality of life as well as a source of pride for residents.

As presented in ~~the following section~~this Chapter, the Plan contains policies and strategies that aim to promote the consideration of, and protection of the County's sensitive natural resources. The primary themes of these strategies address resource identification and protection, education and public awareness, and expanded economic opportunities as a means to build value into the preservation of County resources. Implementation of ~~Natural~~ natural ~~Resource~~ resource policies and strategies should be undertaken on behalf of the citizens of the County. The stakeholders in this endeavor – property owners, land developers, local government, preservation groups and special interest groups, and interested citizens – must have viable and creative tools to be good stewards of their natural resources. The adoption and implementation of this Plan helps guide efforts to ensure a future for our natural resources.

THE CODE OF VIRGINIA - ENABLING LEGISLATION

This element along with its corresponding appendices (Appendix D) have been compiled to comply with the Code of Virginia Sec. 15.2-2224, Surveys and studies to be made in preparation of plan; implementation of plan, Sec. 15.2-2223.2, Comprehensive plan to include coastal resource management guidance, and 9VAC25-830-170, Comprehensive Plans, per the Chesapeake Bay Preservation Area Designation and Management Regulations. Additionally, the information is an educational resource for the community, offering valuable insights into environmental resources. It is also a critical resource for land use planning within Spotsylvania County.

~~This element, along with its corresponding appendices, have been compiled and provided to comply with the Code of Virginia Sec. 15.2-2223.2. Comprehensive plan to include coastal resource management guidance, and Sec. 15.2-2224. Surveys and studies to be made in preparation of plan; implementation of plan.~~

Natural Resources survey and study materials can be found within the Natural Resources Appendix D. ~~have been compiled to satisfy the Code of Virginia 15.2-2224. Surveys and studies to be made in preparation of plan; implementation of plan.~~ Due to their nature providing background, inventory, or reference information~~,~~ as opposed to providing guidance or offering land use direction, such information has been located in Appendix D of this Comprehensive Plan. Natural Resource topics covered include, but are not limited to: (1) Soils and Groundwater, (2) Water Reservoirs and Dam Break Inundation Zones, (3) Wetlands, Watersheds, and Streams, (4) Identification of Protection Policies, (5) Vegetation and Wildlife, (6) Forestry, (7) Production of Food and Fiber, (8) Land Conservation~~, (9) Implementation and Funding Resources.~~

NATURAL RESOURCES POLICIES AND IMPLEMENTATION STRATEGIES

Policy 1: Balance the protection of environmental resources and natural wildlife habitats with development.

Strategies:

1. The County should support the mitigation of impacts upon unique and/or endangered resources including rare species (See Natural Resources Appendix D, Table ~~39~~) and their habitats as part of the development review process.
2. Catalog open space and greenways in GIS in order to promote systematic linkages and connections where feasible to establish wildlife corridors.
3. Encourage land development practices, which minimize impervious cover to promote groundwater recharge, and/or tree preservation.
4. Encourage the use of the voluntary tree preservation credit described in the Design Standards Manual that is available as a tool to reduce clear cutting and protect existing trees on a development site.
5. Encourage recycling.
6. Enhance litter control efforts including enforcement and cleanup along County roadways.
7. Reduce long term energy costs for County buildings through energy audits and energy efficiency improvements to achieve greater savings.
8. Support the maintenance and growth of the local forestry industry, local food and fiber production (agriculture), and mining.
9. Promote multiple uses of forested land where appropriate such as outdoor recreation, wildlife habitats, watershed protection, and timber harvesting.
10. Locate land uses where their tolerance is compatible with existing or proposed noise levels and/ or reduce impacts though vegetative buffering or building design.
11. Protect designated open space, agricultural and forestal land use areas for their intended uses. Support new approaches to enable landowners to generate revenue from these land uses.

~~10.~~12. Promote conservation and/or planting of forests (reforestation) within three-hundred (300) feet of perennial streams, lakes and reservoirs.

~~11. Promote dark sky lighting.~~

13. Support efforts to manage or reduce invasive plant species in favor of native, non-invasive varieties.

Policy 2: Protect the County's potable water resources.

Strategies:

1. Review all applications for extraction of mineral resources to prevent irreversible impacts to the environment, impacts to existing development and to ensure reclamation (assuring re-use potential and/ or non-contamination) for future development.
2. Consider exhausted or closed quarry sites as possible recreational lakes and/ or water reservoirs.
3. ~~Initiate a county-wide study to identify and protect aquifer and groundwater recharge areas.~~ Seek groundwater hydrology studies for development proposals increasing density or intensity of development reliant on well water.
4. ~~Continue efforts to discontinue chlorine and fluoride water treatment methods in favor of alternative methods.~~

Policy 3: Seek to create public/ private partnerships to promote and protect natural resources while integrating natural resource goals with community and economic development, tourism and, public safety goals.

Strategies:

1. Promote public and private cooperation in the preservation of environmentally sensitive areas for public open space, park, and recreation activities having minimal impact on the site.
2. Identify and make available a list of resources, including existing programs and potential funding sources that community members may like to pursue to improve environmental conditions.
3. Support development of a County Wildland Fire Mitigation Plan in partnership with the Virginia Department of Forestry.
4. Consider guidance of the latest Regional Hazard Mitigation Plan, hereby incorporated by reference.

Policy 4: Investigate the feasibility of providing additional public access points for boating (incl. canoe, kayak), fishing along the Rappahannock River and Lake Anna. The access points should be developed only after soil stability has been determined and an appropriate method has been designed to minimize erosion and its subsequent sedimentation impact.

Strategies:

1. Consider selling County land along navigable waterways or, where feasible, working with private developers and/ or regional or state agencies to speed up and promote private development with public water access.

Policy 5: Promote Natural Resource Protection through Education.

Strategies:

1. Include education areas in parks for observing and learning about the natural and physical environments, including ecology, wildlife, plants, geology, hydrology, and landforms.
2. ~~1.~~Continue to pursue development of a fresh water mussel farm along the Massaponax Creek Corridor.

Policy 6: Consider Virginia Institute of Marine Science Guidance.

The following coastal resource guidance, provided by the Virginia Institute of Marine Science (VIMS) applies to the tidal extent of the Rappahannock River. The County is working to create its own shoreline and eco environment document to address the non-tidal tributaries, streams, creeks and rivers. County environmental staff is currently working with Caroline County on researching non-tidal tributaries, creeks, streams and river shoreline restoration and preservation that will address our common watersheds and will be easily adaptable for the entire ~~county~~County.

1. Refer to the guidance presented in the locality's Comprehensive Coastal Resource Management Plan (CCRMP) prepared by VIMS to guide regulation and policy decisions regarding shoreline erosion control.
2. Utilize VIMS Decision Trees for onsite review and subsequent selection of appropriate erosion control/shoreline best management practices: http://ccrm.vims.edu/decisiontree/index.html.
3. Utilize VIMS' CCRMP Shoreline Best Management Practices for management recommendation for all tidal shorelines in the jurisdiction.
4. Consider a policy where the above Shoreline Best Management Practices become the recommended adaptation strategy for erosion control, and where a departure from these recommendations by an applicant wishing to alter the shoreline must be justified at a hearing of the board(s).
5. Encourage staff training on decision making tools developed by the Center for Coastal Resources Management at VIMS.
6. Follow the development of the state-wide General Permit being developed by VMRC. Ensure that local policies are consistent with the provisions of the permit.
7. Evaluate and consider a locality-wide permit to expedite shoreline applications that request actions consistent with the VIMS recommendation.
8. Seek public outreach opportunities to educate citizens and stakeholders on new shoreline management strategies including Living Shorelines.
9. Follow the development of integrated shoreline guidance under development by VMRC.
10. Evaluate and consider a locality-wide regulatory structure that encourages a more integrated approach to shoreline management.
11. Consider preserving available open spaces adjacent to marsh lands to allow for inland retreat of the marshes under rising sea level.
12. Evaluate and consider cost share opportunities for construction of living shorelines.

APPENDIX A

LAND USE - FORT A.P. HILL APPROACH FAN MAP
&
JOINT LAND USE STUDY (JLUS)

7.0 Spotsylvania County

7.1 Community Profile

Spotsylvania County is approximately equidistant from Richmond and Washington, D.C. and is one of the fastest growing counties in Virginia. The County's location along Interstate 95 (I-95), proximity to major urban centers and a high quality of life contribute to the area's growth and popularity. Based on U.S. Census Bureau data, the county experienced a growth rate of 113% between 1990 and 2010 and by 2010 maintained a population of 122,397. Population estimates as of July 1, 2012 are 125,684.[1] The Weldon Cooper Center for Public Service's population projections suggest that the County will add 101,520 residents or grow by 83 percent between 2010 and 2030. This projection assumes an average growth rate of approximately 3 percent per year, similar to a historic rate of approximately 3 percent between 2000 and 2010. [2]

A large portion of the county's growth is located along the I-95 and U.S. Route 1 corridors and although suburban style development has increased in the past decade, the county's 407 square miles are primarily rural and agricultural with rolling hills and forests. Fort A.P. Hill is located southeast of Spotsylvania County. Even though the county does not share a border with the installation, aviation operations associated with training do impact Spotsylvania County.

7.2 Current Tools and Programs

7.2.1 Comprehensive Plan and Future Land Use

The Spotsylvania County Comprehensive Plan, adopted in 2013, includes a Future Land Use Map to guide land development. The plan outlines several objectives, including:

- Plan for the orderly development of the County.
- Promote a diverse and vibrant economic base.
- Maximize the use of existing infrastructure and public facilities to ensure the most efficient operation of facilities and the provision of services.
- Accommodate projected residential growth in a manner that is fiscally responsible.
- Strive for safe and affordable housing for people of all ages.
- Ensure land use policies recognize and accommodate anticipated population increases.
- Encourage a community service sector and a commercial base that meets the needs of the citizens and businesses in Spotsylvania County.

[1] Spotsylvania County, Virginia, Comprehensive Plan, Adopted November 2013, Chapter 1: Introduction and Vision.
[2] Spotsylvania County, Virginia, Comprehensive Plan, Adopted November 2013, Chapter 1: Introduction and Vision.

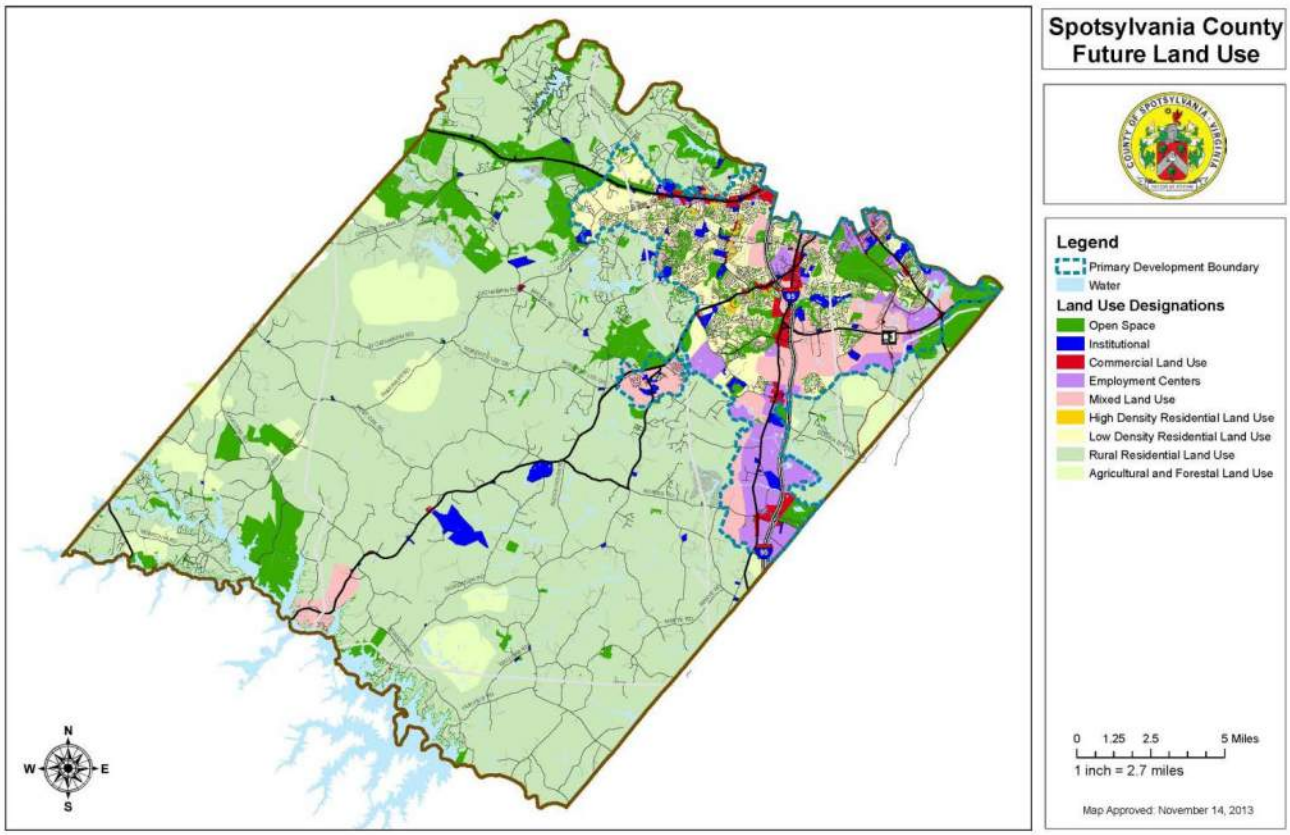


Figure 7.1 Spotsylvania County Future Land Use Map
Source: Spotsylvania County Comprehensive Plan, 2013

Spotsylvania County has a primary development boundary, which defines a public water and sewer service area, that aligns with the county's growth strategy. Spotsylvania's growth areas are concentrated around the City of Fredericksburg and along I-95. The primary development boundary is intended to contain development within the primary development district and preserve rural and agricultural lands.

The land in Spotsylvania that is two to three miles from Fort A.P. Hill falls both within and outside of the primary development boundary. Some of this area is under the Fort A.P. Hill Tier I and Tier II approach fans (see Chapter 8 for operational descriptions of Fort A.P. Hill); therefore, the future land use plan recommends a policy to "provide Fort A.P. Hill an opportunity to comment on rezoning proposals within the Fort A.P, Hill Approach Fan"[3] and recommends that rezoning proposals including residential development include "proffered commitments to noise attenuation, real estate disclosures, and/or other measures recommended by Fort A.P. Hill."[4]

[3] Spotsylvania County, Virginia, Comprehensive Plan, Adopted November 2013, Amended February 22, 2011, Chapter 2: Future Land Use Element.
[4] ibid.

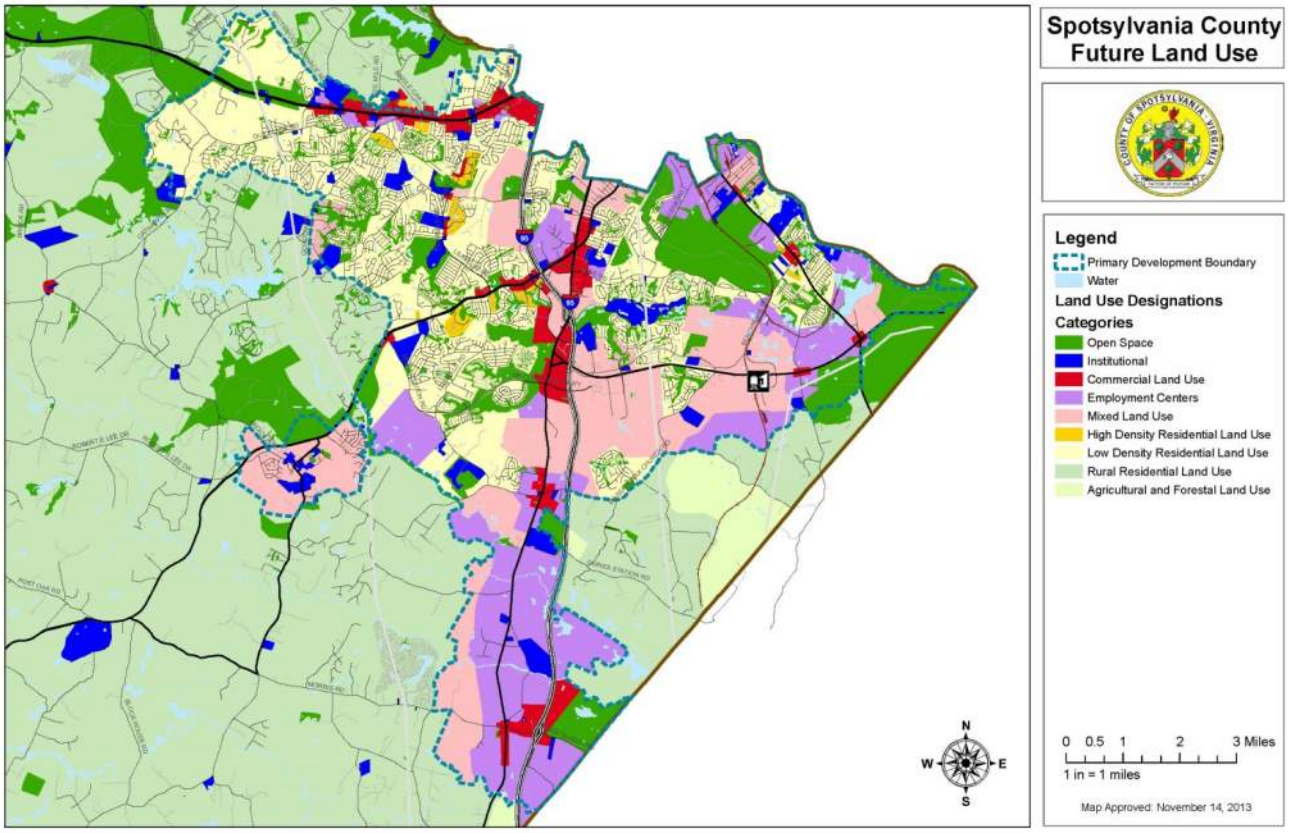


Figure 7.2 Northeast Focus Area - Spotsylvania County Future Land Use Map
Source: Spotsylvania County Comprehensive Plan, 2013

The land closest to Fort A.P. Hill lies outside of the Primary Development Boundary and is designated as rural residential, open space, and agricultural and forestal land uses. The rural residential district is intended to conserve rural character while also accommodating large lot residential and cluster developments. The open space land use includes conserved lands and park and recreation facilities. The agricultural and forestal land use includes active agricultural land. Land within the primary development boundary, located in the northeastern portion of Spotsylvania County, is intended to be developed in a series of mixed-use communities and include significant employment centers. The county is actively encouraging a mix of residential, commercial, and office development, including a transit-oriented development within this district. Generally, northeast of these areas is a significant concentration of suburban residential developments. The future land use plan outlined in the Comprehensive Plan calls for mixed-use and employment center land uses in the portion of the primary development district that is closest to Fort A.P. Hill. According to the Comprehensive Plan, the mixed land use category is defined as permitting "traditional neighborhood; higher density residential; commercial uses (retail and office); light industrial; educational facilities; recreation facilities and compatible public and other civic facilities."[5] The employment center category includes office, industrial and commercial land uses.

[5] ibid.

7.2.2 Zoning

The county land closest to Fort A.P. Hill is currently zoned for mixed use (MU), commercial (C-3), industrial (I-1 and I-2), and rural (RU) land uses (See Figure 7.3). The MU district allows for a mix of uses in a compact, walkable community. The C-3 district permits general commerce activity. The I-1 district permits light industrial uses and the I-2 district permits medium and heavy industrial uses. The RU district permits agriculture, single-family detached (one dwelling unit per three acres), wildlife sanctuaries, public uses, parks, places of worship, and schools. Zoning within the primary development district, including those areas within the installation's approach fan, is likely to change over the next several years to align with the future land use plan.

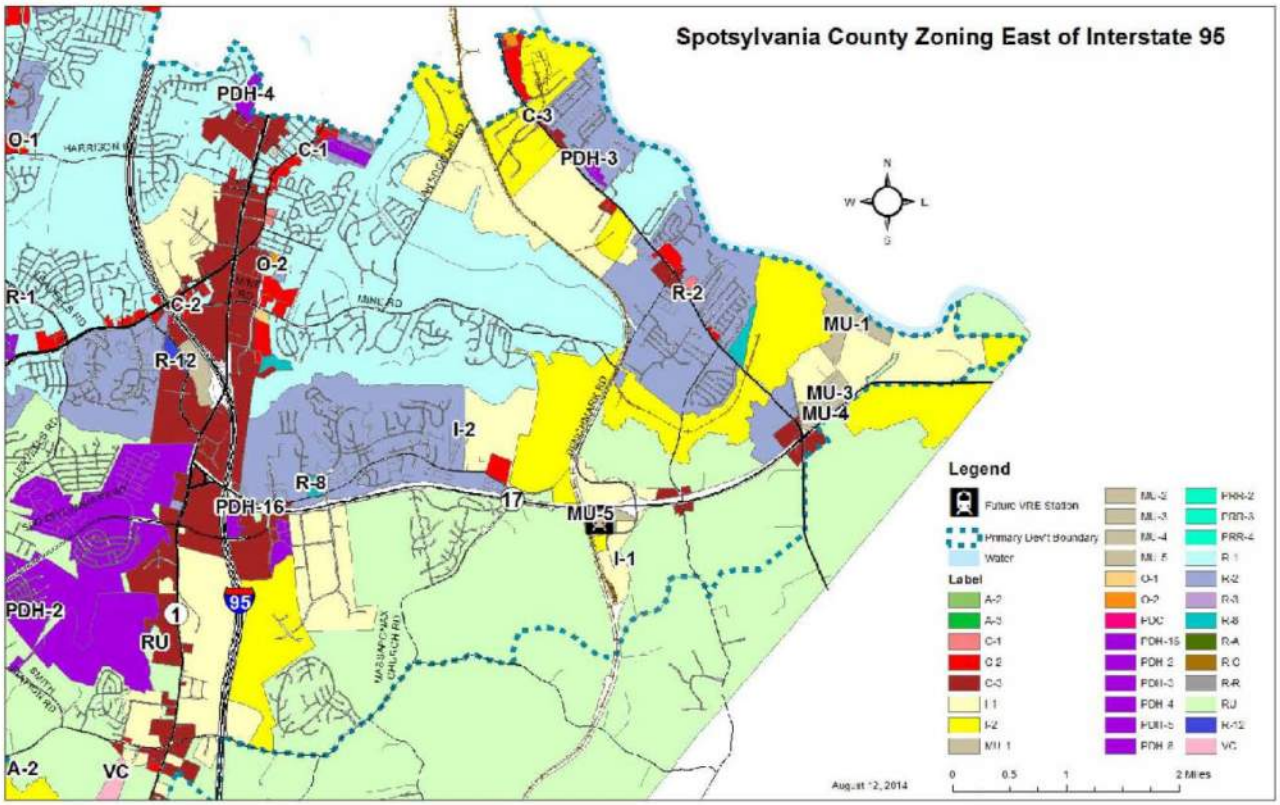


Figure 7.3 Northeast Focus Area - Spotsylvania County Zoning
Source: Spotsylvania County, August 2014

7.2.3 Infrastructure Plans

Spotsylvania County has several infrastructure plans near Fort A.P. Hill to encourage growth within its primary settlement district. The county has already extended water and sewer service along Route 2 and U.S. Route 17 to the undeveloped land within the primary development boundary. At this time, the county does not plan to extend water and sewer infrastructure further toward Fort A.P. Hill due to topography constraints which would require cost-prohibitive pumping.[6]

[6] Interview with Spotsylvania County, October 23, 2012.

Several transportation projects are underway or planned to alleviate congestion and extend transit as identified in the 2040 Long Range Transportation Plan (LRTP) prepared by FAMPO and GWRC. Two projects on the LRTP short-list of critical transportation projects are in Spotsylvania County near Fort A.P. Hill: widening Route 2 from the Spotsylvania-Fredericksburg border to the intersection with U.S. Route 17 and widening U.S. Route 17 from I-95 to the Spotsylvania-Caroline County border. The Route 2 widening project is unfunded and listed for funding in the 2036-2040 cycle. The U.S. Route 17 widening project is unfunded and listed for funding in the 2026-2030 cycle.

In addition to the roadway expansions, new transit service is coming to Spotsylvania County. The Virginia Railway Express is constructing a new station within the Crossroads Station development south of Route 17. This station will be completed in 2015 and will fall under the Tier I approach fan.

7.3 Challenges and Opportunities

7.3.1 Challenges

- **Aircraft Noise.** A wide range of aviation training occurs at Fort A.P. Hill, including fixed wing and rotary aircraft operations. The Assault Landing Zone (ALZ) facility, which is located in the northwestern portion of the installation, has two associated approach (take-off and landing) fans that correspond to approximate noise zones and altitudes of fixed wing aircraft that use the ALZ (See Chapter 8.0, Fort A. P. Hill). Approaches to the ALZ can range from 300 to 1,000 feet above ground level and the majority of takeoffs and landings occur to the northwest of the ALZ, over Spotsylvania County. Once in flight, aircraft often follow racetrack patterns that extend slightly into Spotsylvania County. The fans were developed by the installation in absence of official noise contours since the number of flights is not high enough to warrant contours. The inner-most fan (closest to the installation) represents altitudes less than 1,700 feet above ground level (AGL) and noise levels approaching 80 dBA. The outer fan represents altitudes between 1,700 and 3,500 feet AGL and noise levels below 80 dBA. While average noise levels in the fan areas are anticipated to be below typical airfields, there is a potential for individual overflights to generate undesirable noise levels on current and future development. Aviation noise complaints have been documented in and around the fan areas of Spotsylvania County. In addition, rotary aircraft routes exist around the perimeter of the installation and are in close proximity to the county boundary.

- **Aircraft Training Routes Overlap with County Investment Priorities** Spotsylvania County has identified growth areas and infrastructure investment priorities along the U.S. Route 17 and Route 2 corridors that are located in relatively close proximity to training areas on Fort A.P. Hill. This area of the county has been the recipient of utility and roadway infrastructure improvements geared toward supporting higher density mixed use development and recent re-zonings in the area have been consistent with the county's growth goals for the area. The northern approach fan for the ALZ covers a portion of the county's growth area as shown in Figure 7.4.

- **Fort A.P. Hill Night-time Operations Require Dark Skies.** Fort A.P. Hill conducts night-time training operations that utilize night vision equipment. The success of night-time operational activities is dependent upon dark conditions that are affected by ambient light levels. Night vision training occurs at the Laser Range near U.S. Route 17 and at the ALZ and Drop Zone. As Spotsylvania County grows, the installation is concerned that new development within the county's growth area may generate night-time illumination that will compromise the installation's ability to implement its night-time training operations.

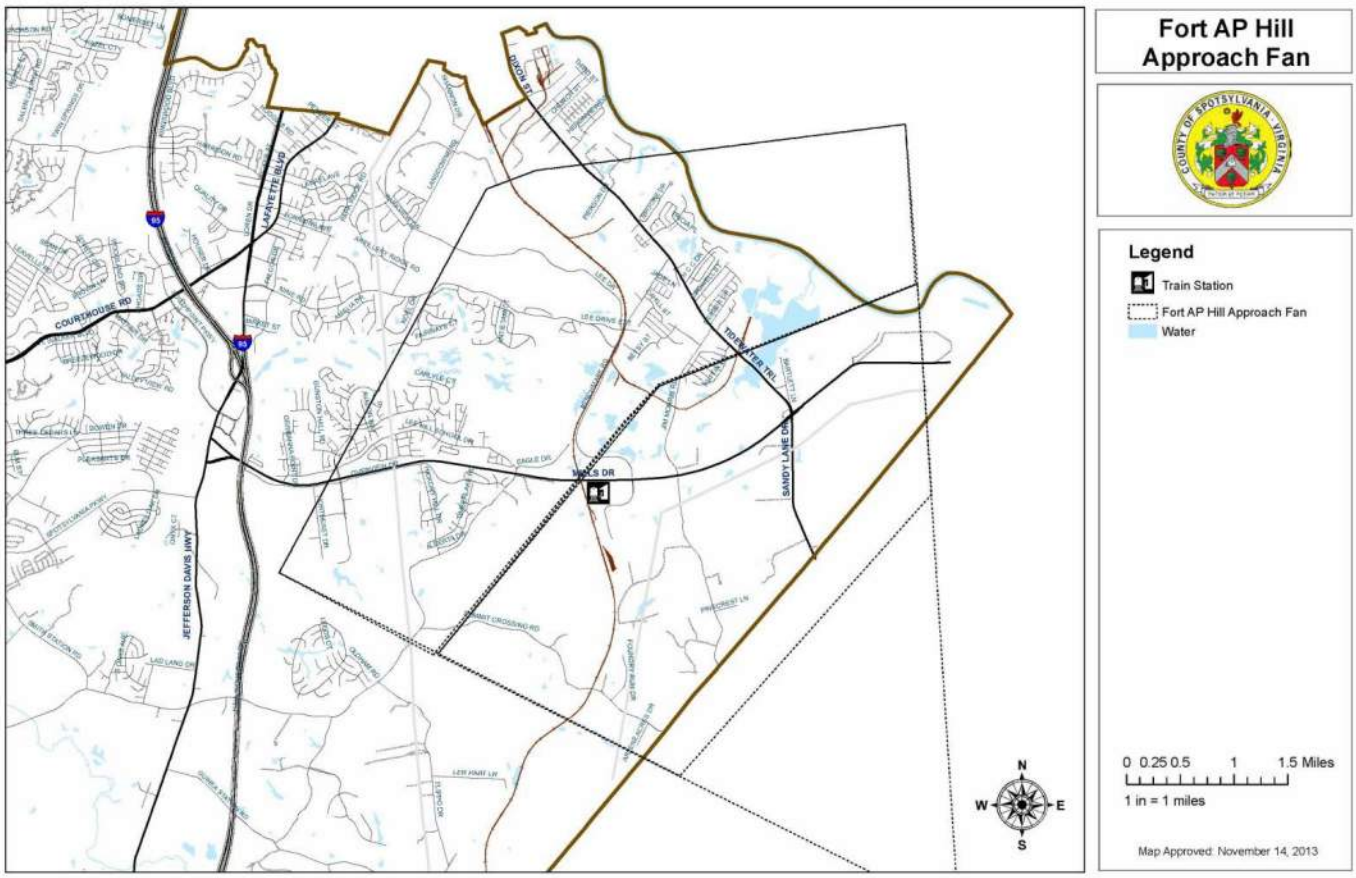


Figure 7.4 Fort A.P. Hill Approach Fan
Source: Spotsylvania County Comprehensive Plan, 2013, Appendix

7.3.2 Opportunities

- **Integration of the Fort A.P. Hill Operational Area Into Planning Policy.** Spotsylvania County has already recognized the installation's operations in its future plans by recognizing and including the installation's Approach Fans in the county's Comprehensive Plan. The fans are part of a larger operational area (see Chapter 8.0, Fort A.P. Hill) in which Fort A.P. Hill conducts training.

- **Coordinated Development Reviews.** Spotsylvania County and Fort A.P. Hill have established effective procedures for communication. For example, the county provides the installation an opportunity to comment on proposed re-zonings within the approach fans. Continued open dialogue will help develop mutually beneficial outcomes for the county and the installation.

- **Reduce Noise Impacts.** Proffered commitments to noise attenuation, real estate disclosures, and/or other measures recommended by Fort A.P. Hill as part of rezoning applications could help mitigate against future noise complaints in the county's growth area. The installation has expressed concerns about increased residential density in Spotsylvania County that could lead to an increase in noise complaints and pressure to modify training operations. The county has had success in obtaining lighting controls and sound attenuation for recent rezoning applications and is actively working with the installation on these issues to minimize the impacts of development on its mission.

- **Develop a Dark Skies Ordinance.** Adoption of a county-wide dark skies ordinance would put in place lighting controls and requirements on new development county-wide and would help alleviate the installation's concerns about increased light pollution. Fort A.P. Hill should work with the county to ensure adequate lighting requirements and standards are captured in the ordinance.

7.4 Recommendations

Based on feedback received from Spotsylvania County, this section establishes a set of recommended actions for the county to consider that could strengthen coordination between the county and the installation. The recommendations are organized into the categories described below.

- **Coordination** – to facilitate coordination between Spotsylvania County and Fort A.P. Hill.
- **Communication** – to improve the dissemination of locality and military operational information.
- **Economic Development** – to foster economic development opportunities in Spotsylvania County.
- **Utilities** – to evaluate opportunities for improved broadband services around Fort A.P. Hill.
- **Community Development/Planning** – to reduce noise and vibration impacts on residents.

Each recommendation includes action steps, a timeframe, rough order magnitude of costs and staffing requirements.

- **Timeframe**. Identifies when the proposed recommendation should be initiated using one of three timeframe categories:
    - **Immediate (highest priority)** Now
    - **Short-term (high priority)** Less than one year
    - **Mid-term (moderate priority)** Between one and four years
    - **Long-term (lower priority)** More than four years
- **Order of Magnitude Cost.** Provides a high level, Rough Order-of-Magnitude (ROM) cost impact for local jurisdictions and the installation to implement the strategy. Costs do not consider efforts undertaken by other parties beyond the JLUS partners.
    - **$** = < $100,000
    - **$$** = $100,000 - $300,000
    - **$$$** = > $300,000
- Potential Staffing Requirements. Provides an estimate of the potential required staff involvement and staff time of local jurisdictions and/or Fort A.P. Hill to implement the recommendation. Staffing requirements do not include efforts conducted by other parties.
    - **L** = minimum
    - **M**= moderate
    - **H** = high

Table 7.1 Spotsylvania County JLUS Recommendations

Recommendation			Action Steps	Timeframe	Cost	Staffing
Coordination	1.1	Through an executed MOU, work with the other JLUS partners to establish the Fort A.P. Hill Executive Steering Committee (ESC) including local elected officials and the Fort A.P. Hill Garrison Commander to discuss community, installation and other compatibility issues on a regular scheduled basis and to coordinate and collaborate on the following: • Capital improvement and infrastructure planning • Comprehensive plan and other planning document updates • Long range planning for newly proposed missions and on-base facilities, recognizing mission-related operational security requirements exist • Environmental studies related to air and water quality impacts • Pursuit of joint funding for studies The ESC should include a Working Committee at the planning director level that will form subcommittees as necessary to explore specific issues and opportunities.	• Agree upon key communication procedures contained in the draft MOU and identify primary internal points of contact to produce and receive notices. • Identify appropriate secondary partners for participation in the MOU. • Sign the MOU. • Define issues to review and information to share. • Exchange information about upcoming infrastructure studies and plans. • Modify planning processes to include opportunity for installation/community input early on - before development of alternatives and as part of benefits/impacts review. • Involve utilities and public works personnel in discussions. • Explore ways to include the installation in any sub committees that are formed for plan updates (i.e. transportation, utilities, etc.). • Fort A.P. Hill to hold regular meetings/briefings with locality representatives during plan/project developments.	Immediate	-	-
	1.2	Continue to solicit input from Fort A.P. Hill as part of a technical review process on development related submittals and text amendments within the Fort A.P. Hill influence area.	• Formalize Fort A.P. Hill as a technical review committee member or similar status and define consultation. procedures to obtain installation input • Seek input from the installation on all development related proposals and text amendments and consider the input in decision-making processes. • Fort A.P. Hill provides written input on development related proposals and text amendments.	Short-term	$	M
Communication	2.1	Issue Fire Warning Orders (through Caroline Alert and other media and social network venues) of training activities that are non-routine and have the potential to be louder than normal, as well as controlled burn activities, including the proposed time and duration of aviation and ordnance operations.	• Fort A.P. Hill Public Affairs Officer (PAO) to define multiple media and social network outlets for alerts, including ESC and Installation Command Council (ICC). • Develop template for alerts defining information elements. • Localities to include warnings on websites and social media venues. • Seek feedback on effectiveness of alerts from localities and public (during surveys or other planning processes).	Short-term	$	M

Recommendation			Action Steps	Timeframe	Cost	Staffing
	2.2	Re-structure and expand the ICC to include local businesses, residents, installation employees, non-profits, etc., to serve as a citizen group designed to promote positive community and installation relations and to help organize and sponsor events and activities and support economic development.	• ESC to evaluate ICC membership and redefine membership to accomplish intent of strategy. • Hold ICC meeting. • Establish leadership and purpose of ICC and carry out activities.	Mid-term	$	L
	2.3	Update locality websites to recognize the installation, its mission, its location, links to the installation web page, contact information for key personnel, and fire warning orders. Update installation website to include more information about operations, training, noise impacts and complaint procedures, avoidance areas and key points of contact.	• Update community websites with links to Fort A.P. Hill key personnel contact information, fire warning orders, and noise reporting procedures. • Update installation website with locality links, fire warning orders, property claims process, noise impacts and complaint procedures and contacts, and avoidance areas.	Mid-term	$$	M
Economic Development	3.1	Support Fort A.P. Hill's pursuit of establishing Washington-Baltimore-Northern Virginia General Schedule (GS) pay grades for all personnel stationed at the installation.	• Fort A.P. Hill to pursue pay grade issue with the U.S. Office of Management and Budget. • Localities to write letters of support.	Short-term	$	M
	3.2	Using manning/training personnel data from the installation updated on a bi-annual basis, pursue commercial and retail uses off base that support on base employees and local visitors, tourists and residents.	• Fort A.P. Hill to establish a recurring data collection process to document training personnel numbers of partner groups and rotational units. • Provide data to ESC on bi-annual basis.	Short-term	$	M
Utilities	4.1	Coordinate extension of broadband / telecommunication services to better serve the communities around the installation.	• Develop a ESC subcommittee to focus on broadband issues and to coordinate services.	Long-term	$$	M
Community Development / Planning	5.1	Support real estate disclosure for prospective buyers or renters as part of real estate transactions for properties within the influence area and as part of subdivision plats.	• ESC to work with Fredericksburg Area Association of Realtors (FAAR) to develop a basic disclosure statement for the influence area and an amended point of sale document that includes disclosure. • Support FAAR in their pursuit of enabling legislation for noise disclosure. • Consider incorporating a statement on subdivision plats regarding proximity to installation and potential for noise.	Mid-term	$$	M
	5.2	Encourage sound attenuation for new construction of residences, schools, hospitals, nursing homes, churches and other buildings with public gathering spaces.	• Utilize the proffer system or special use permit requirements to achieve higher sound attenuation standards. • Consider the development of model sound attenuation standards for new construction. • Incorporate attenuation practices into standard subdivision and plan review processes.	Mid-term	$$	M

Recommendation			Action Steps	Timeframe	Cost	Staffing
	5.3	Consider developing a model 'Dark Skies' Ordinance that sets forth specific requirements for lighting. Consider applying the ordinance county and town-wide for all six JLUS communities. Incorporate input from Fort A.P. Hill.	• Localities to develop dark skies ordinance (using input from the installation). • Incorporate lighting best practices into standard subdivision and plan review processes. • Provide information to utility providers regarding requirements.	Mid-term	$$	M
	5.4	Develop a voluntary sound attenuation and lighting retrofit program for existing noise sensitive uses and high-demand lighting uses (such as sports complexes). Investigate federal or state funds to offset potential retrofit costs.	• ESC to jointly conduct a feasibility study for a residential sound and lighting retrofit program. • Identify potential retrofit candidates. • Research funding sources.	Long-term	$$	M

DRAFT

Fort AP Hill Approach Fan

Legend

- Train Station
- Fort AP Hill Approach Fan
- Water

0 0.25 0.5 1 1.5 Miles

1 in = 1 miles

Map Approved: November 14, 2013

APPENDIX B

(FOR REFERENCE ONLY) *
TRANSPORTATION EXHIBIT - PROJECT PRIORITIZATION TABLES

*These tables are included as an exhibit for reference only. They are not intended to be static and are subject to change outside of the Comprehensive Plan over time.

DRAFT

APPENDIX B: TRANSPORTATION EXHIBIT - PROJECT PRIORITIZATION TABLES

Projects within the Primary Development Boundary Prioritization Methodology

No#	Project	Congestion (30 points)					Safety (30 points)				Environment (16 Points)		Public Support (8 points)		Implementation (8 Points)			Smart Growth (8 Points)		Total Score
		Existing LoS	Future LoS	Continuity & Connectivity	Service to Major Centers	Freight Use	Safety	Crash Rate	Bike / Ped.Safety	Security	Natural Environment	Neighborhood	Existing Plans	Other Support	Funding	Project Ready	Agency Cooperation	Smart Growth	Intermodal	
	Funded Projects or in the CIP																			
1	Mudd Tavern Bridge over I-95(606)	7	7	7	4	5	18	6	4	2	4	4	4	4	3	4	1	4	4	**92**
2	Rte.17 Bridge Replacement & Widening to Germanna/Hospital	5	7	7	4	3	18	6	4	2	4	4	4	4	3	4	1	4	4	**88**
3	Mudd Tavern Rd.(606)-Jeff. Davis Road to E. of I-95 Bridge	5	7	7	4	5	18	0	4	2	4	4	4	4	3	4	1	4	4	**84**
4	Exit 126 Off-Ramp & Intersection Turn Lane Improvements	7	7	7	4	5	9	6	1	2	4	4	4	4	3	4	1	4	4	**80**
5	Andora Drive & Old Plank Road Roundabout	5	5	6	0	0	18	3	1	0	4	8	4	4	2	3	0	4	0	**67**
6	Chancellor Road & Old Plank Road Roundabout	5	5	5	0	0	18	3	1	0	4	8	4	3	2	3	0	4	0	**65**
7	Route 3 Operational Improvements	5	5	1	2	3	12	6	1	0	4	4	4	3	2	3	1	1	3	**60**
	Funding Pending																			
8	Tidewater Trail (2/17) - City Line to Church Street	5	7	6	4	5	18	6	4	2	4	4	4	4	3	2	1	4	4	**87**
9	Harrison Road at Salem Church Road	5	7	7	4	3	18	6	4	2	4	4	4	4	3	2	1	4	3	**85**
10	US-1 at Rte. 208 / Lafayette Blvd. Intersection	5	7	7	4	5	18	6	1	2	4	4	4	4	3	2	1	4	3	**84**
11	Germanna Pt. Extension-Cotter Road to Spotsylvania Ave.	5	5	7	4	3	12	3	4	2	0	4	4	3	3	2	1	4	4	**70**
	Unfunded Projects																			
12	Jeff. Davis Hwy.(1)-Massaponax Church to Spotsy. Pkwy.	0	5	7	4	5	12	6	4	2	4	8	4	4	2	4	1	4	1	**77**
13	Tidewater Trail (2) & Lee Hill Drive / Joseph Mills Drive	2	5	4	2	3	18	6	4	2	4	8	4	3	2	3	1	1	3	**75**
14	Jeff. Davis Hwy.(1)-Spotsy. Pkwy. To Harrison Road	2	2	7	4	5	12	6	4	2	4	8	4	4	2	2	1	4	1	**74**
15	US-1 & Hood Drive / Mine Road	5	7	4	2	3	18	6	0	2	4	8	2	2	3	3	1	1	3	**74**
16	Tidewater Trail (2) & Shannon Park / Mansfield Drive	0	7	4	2	3	18	6	4	2	4	8	3	3	2	3	1	1	3	**74**
17	Tidewater Trail(2) & Lansdowne Road	2	7	4	2	3	18	3	4	2	4	8	4	3	2	3	1	1	3	**74**
18	Hood Drive(636)-Courthouse Rd. to Jefferson Davis	2	5	1	4	3	18	6	4	0	4	8	2	4	3	3	1	4	1	**73**
19	Tidewater Trail(2)-Benchmark Road to Lansdowne Road	5	5	4	4	3	12	6	4	0	4	8	3	2	2	2	1	4	4	**73**
20	Harrison Road(620)-Plank Road to Gordon Road	2	5	4	4	3	18	6	4	0	4	4	4	4	3	2	1	1	3	**72**
21	Lafayette Blvd.(Bus. 1)-County Line to Jefferson Davis	2	5	4	4	3	18	6	4	0	4	4	4	2	3	1	1	4	3	**72**
22	Courthouse Road-Jefferson Davis Hwy. to Smith Station	2	5	7	4	3	12	6	4	2	4	4	4	4	2	1	1	4	3	**72**
23	Mills Drive(17)-Germanna Pt. to Massaponax Church Rd.	0	2	7	4	5	15	6	4	0	4	4	4	2	2	2	1	4	4	**70**
24	US 1 & Market Street / Denny's Entrance	0	5	4	2	3	18	6	1	2	4	8	2	2	3	3	1	1	3	**68**
25	US 17 & Germanna Point Drive / Hospital Boulevard	2	5	1	2	3	18	6	1	2	4	8	2	2	3	3	1	1	3	**67**
26	Harrison Road(620)-Salem Church to Jefferson Davis Hwy.	2	2	4	4	3	12	6	4	0	4	8	4	4	2	3	1	1	3	**67**
27	Courthouse Road (208) & Hood Dive / Houser Drive	5	7	1	2	3	18	0	1	2	4	8	2	2	3	3	1	1	3	**66**
28	Courthouse Road (208) & Southpoint Pkwy. / Rollingwood Drive	2	5	1	2	3	18	6	0	2	4	8	2	2	3	3	1	1	3	**66**
29	Mills Drive(17)-Massaponax Church Road to County Line	0	0	7	4	5	12	3	4	2	4	8	3	2	3	2	1	4	1	**65**
30	Jefferson Davis Hwy.-Harrison Road to County Line	0	0	7	4	3	12	6	4	2	4	8	4	2	2	1	0	4	1	**64**
31	Lafayette Blvd.(Bus. 1) & Falcon Drive / Mall Drive	2	5	1	2	3	18	0	4	0	4	8	1	2	3	3	1	1	3	**61**
32	Harrison Road(620)-Jefferson Davis Hwy. to Lafayette	2	5	1	2	3	12	6	4	0	4	8	3	4	2	2	1	1	1	**61**
33	Gordon Road(627)-Smith Station to Harrison Road	2	5	7	2	3	9	6	4	0	4	8	3	1	2	2	1	1	1	**61**
34	Market Street & Spotsylvania Avenue	2	5	1	2	3	18	3	0	0	4	8	1	2	3	3	1	1	3	**60**
35	Tidewater Trail(2)-Jim Morris Road to Benchmark Road	0	2	4	4	3	9	6	4	2	4	4	4	2	2	2	1	4	3	**60**
36	Tidewater Trail(2)-Mills Drive to Jim Morris Road	0	2	4	4	3	9	6	4	2	4	4	4	2	2	2	1	4	3	**60**
37	Mine Road(636)-Jefferson Davis Hwy. to Lansdowne Road	2	5	4	2	3	9	6	4	0	4	4	3	2	3	2	0	4	3	**60**
38	Plank Road(3)-Harrison Rd. to Spotsylvania/Orange Co. Line	0	2	4	4	5	9	3	4	2	4	4	4	2	3	2	1	1	4	**58**
39	Old Plank Road-Catharpin Road to Gordon Road	2	2	4	2	3	18	6	4	0	4	4	2	1	1	1	1	1	1	**57**
40	Minr Road & Spotsylvania Avenue / Falcon Drive	2	2	1	2	3	18	3	0	0	4	8	1	2	3	3	1	1	3	**57**
41	US 17 & Tidewater Trail (2)	0	7	4	2	3	18	0	1	0	4	4	2	1	2	3	1	1	3	**56**
42	Lansdowne Road(638)-Mine Road to County Line	0	5	7	4	5	9	6	4	0	4	4	2	2	1	1	0	1	0	**55**
43	Massaponax Church(608)-Courthouse to Smith Station	2	5	1	1	3	12	6	4	0	4	8	3	2	1	1	0	1	1	**55**
44	Massaponax Church(608)-Jeff. Davis Hwy. to Mills Drive	0	2	4	4	5	12	6	1	0	4	8	3	2	1	1	1	1	0	**55**
45	Route 17 Relocated-Mills Drive to Jefferson Davis Hwy.	0	0	7	4	5	18	0	4	2	4	4	1	2	2	0	0	1	0	**54**
46	Massaponax Church(608)-Smith Station to Jeff. Davis Hwy.	0	0	4	4	3	12	6	1	2	4	8	3	2	1	1	0	1	1	**53**
47	Smith Station628)-Gordon Road to Massaponax Church	2	5	4	1	3	9	6	4	0	4	4	4	2	1	1	1	1	0	**52**

**** The future LoS reflects the LoS without improvements***

DRAFT

APPENDIX B: TRANSPORTATION EXHIBIT - PROJECT PRIORITIZATION TABLES

		Projects within the Primary Development Boundary Prioritization Methodology																		
No#	**Project**	**Congestion (30 points)**					**Safety (30 points)**				**Environment (16 Points)**		**Public Support (8 points)**		**Implementation (8 Points)**			**Smart Growth (8 Points)**		**Total Score**
		Existing LoS	Future LoS	Continuity & Connectivity	Service to Major Centers	Freight Use	Safety	Crash Rate	Bike / Ped Safety	Security	Natural Environment	Neighborhood	Existing Plans	Other Support	Funding	Project Ready	Agency Cooperation	Smart Growth	Intermodal	
	Unfunded Projects																			
48	Piedmont Drive(673)-Smith Station Road to Harrison Rd.	2	5	1	1	3	18	6	1	0	4	4	2	1	1	1	0	1	0	**51**
49	Leavells Road(639)-Courthouse Road to Smith Station	0	0	1	0	3	18	6	4	0	4	4	3	2	2	1	1	1	1	**51**
50	Rollingwood Dr. Extended(711)-Harrison Rd. to Rollinwood	0	0	7	4	3	18	0	1	0	4	4	2	1	2	2	0	1	1	**50**
51	Tidewater Trail (2) & Benchmark Road / Commerical Drive	0	2	1	1	3	18	0	1	0	4	4	3	1	2	3	1	1	3	**48**
53	Lee Hill School Drive(635)-Germanna Pt. to Eagle Dr.	0	2	1	2	3	12	6	4	0	4	4	3	2	1	1	0	1	1	**47**
54	Mine Road(636)-Lansdowne Road to Benchmark Road	0	0	4	2	3	6	6	4	2	4	4	4	1	2	1	0	1	1	**45**
55	Guinea Station Extension(607)-Massaponax Church to Rt. 1	0	2	1	2	3	18	0	4	0	4	4	2	1	2	1	0	1	0	**45**
56	Brock Road(613)-Courthouse Road to Gordon Road	0	2	1	2	3	12	0	1	2	4	4	3	2	1	0	0	1	1	**39**
57	Market Street Extension-Hood Drive to Jefferson Davis Hwy	0	0	1	2	3	6	0	4	2	0	8	3	2	3	0	1	1	1	**37**
58	Massaponax Church Extension(608)-Lake Anna Pkwy to 208	0	0	7	2	3	6	0	1	0	4	4	2	2	2	2	0	1	0	**36**
59	Shannon Drive - Belman Connector Road	0	0	4	4	5	0	0	1	0	4	4	2	1	2	2	0	1	0	**30**
	New Projects for the Thouroughfare Plan (Unranked)																			
1	Chancellor Road Extension - Old Plank Road - Plank Road																			

**** The future LoS reflects the LoS without improvements***

DRAFT

APPENDIX B: TRANSPORTATION EXHIBIT - PROJECT PRIORITIZATION TABLES

Highway Projects Outside of the Primary Development Boundary Prioritization Methodology

No#	Project	Congestion (30 points)					Safety (30 points)				Environment (16 Points)		Public Support (8 points)		Implementation (8 Points)			Smart Growth (8 Points)		Total Score
		Existing LoS	Future LoS	Continuity & Connectivity	Service to Major Centers	Freight Use	Safety	Crash Rate	Bike / Ped Safety	Security	Natural Environment	Neighborhood	Existing Plans	Other Support	Funding	Project Ready	Agency Cooperation	Smart Growth	Intermodal	
	Funded Projects or in the CIP																			
1	Bloomsbury Road Improvement	0	2	1	0	0	18	0	1	0	4	4	3	4	2	4	0	4	0	**47**
	Funding Pending																			
	N/A- No Projects at this time																			
	Unfunded Projects																			
2	Lake Anna Parkway(208)-Post Oak/Morris to S. of R.E. Lee	2	0	7	4	3	15	3	4	2	4	4	3	2	3	2	1	1	0	**60**
3	Courthouse Road(208)-Post Oak Road to Louisa Co. Line	0	2	4	2	3	15	3	4	2	4	8	3	1	2	0	1	4	1	**59**
4	Elys Ford/Old Plank(610)-Spotswood Furnace to Catharpin	0	2	4	4	3	15	0	4	0	8	8	1	1	2	2	0	4	0	**58**
5	Gordon Road(627)-Brock Road to Smith Station Road	0	2	4	1	3	18	6	1	0	4	4	4	1	1	1	1	1	0	**52**
6	Robert E. Lee Dr.(608)-Cartharpin Rd. to Lake Anna Pkwy.	0	5	4	0	3	12	6	4	0	4	4	4	1	1	1	0	1	0	**50**
7	Courthoue Road(208)-Post Oak/Morris to Lake Anna Pkwy.	0	2	4	4	3	15	0	1	2	4	4	2	1	2	2	1	1	1	**49**
8	Courthouse Road(208)-past R. E. Lee Drive to Massey Farm	0	0	4	2	3	15	3	1	2	4	4	3	1	2	1	0	1	0	**46**
9	Monrovia/Stubbs Bridge Rd.-County Line to Post Oak Road	2	5	4	2	3	9	0	1	0	4	4	2	1	2	2	0	4	0	**45**
10	Post Oak Road(606)-Lake Anna Pkwy. to W. Catharpin Rd.	0	0	4	0	3	15	6	1	0	4	4	2	2	1	1	0	1	0	**44**
11	Partlow Road(738)-Spotsy. Co. Line to Courthouse Road	0	2	1	0	3	12	6	4	0	4	4	2	1	1	1	0	1	1	**43**
12	Brock Road(613)- Courthouse Road to Gordon Road	0	2	1	2	3	15	3	4	0	4	4	2	1	1	0	0	1	0	**43**
13	Jones Powell Road-Belmont Road to Lawyers Road	0	0	1	0	3	12	6	4	0	4	4	2	2	2	1	0	1	0	**42**
14	Catharpin Road(612)-W. Catharpin Road to Piney Branch	0	2	1	0	3	15	6	1	0	4	4	1	1	1	1	0	1	0	**41**
15	Catharpin Road(612)-Piney Branch to Old Plank Road	0	2	1	0	3	15	6	1	0	4	4	1	1	1	1	0	1	0	**41**
16	Lawyers (601) & Stubbs Bridge Road (612) Roundabout	0	0	1	0	3	18	3	1	0	4	4	2	1	1	1	0	1	0	**40**
17	Lawyers Road-Courthouse to Jones Powell Road	0	0	1	0	3	15	3	1	0	4	4	2	1	1	1	0	1	0	**37**
18	Marye Road(605)-Partlow Road to Arcadia Road	0	2	1	0	3	9	3	4	0	4	4	1	1	1	2	0	1	0	**36**
19	W. Catharpin Road(608)-County Line to Pumunkey Road	0	2	1	0	3	9	3	4	0	4	4	1	1	1	1	0	1	0	**35**
20	Lewiston Road(601)-Fairview Road to Courthouse Road	0	2	1	0	3	9	3	4	0	4	4	1	1	1	1	0	1	0	**35**
21	Fairview Road(622)-Lewiston Road to Parlow Road	0	2	1	0	3	9	3	4	0	4	4	1	1	1	1	0	1	0	**35**
22	Lawyers Road (601) & Lake Anna Park Ent. Lane improvements	0	0	4	2	3	9	3	1	0	4	4	1	1	1	0	0	1	0	**34**
23	Pamunkey Road(612)-W. Catharpin Rd. to Post Oak Road	0	2	1	0	3	9	0	4	0	4	4	1	1	1	0	0	1	0	**31**
	New Projects for the Thouroughfare Plan (Unranked)																			
1	Spotsylvania Parkway Extension - Smith Station Road to Gordon Road																			

APPENDIX C

HISTORIC RESOURCES

HISTORIC RESOURCES

The following Historic Resources appendix resources have been studied and documented to satisfy Virginia State Code Sec. 15.2-2224, Surveys and studies to be made in preparation of plan; implementation of plan. Additionally, the information is an educational resource for the community, offering valuable insights into environmental and land use planning within Spotsylvania County.

HISTORY OF SPOTSYLVANIA COUNTY

A timeless sense of self, place and community are at the center of life. Spotsylvania's heritage supports this truth as the foundation for present and future change. A preservation plan, therefore, includes a summary of character defining history. The following time periods have been established by the Virginia Department of Historic Resources for use in cultural resource documentation.

Pre Historic Native American, Late Woodland Period, Pre 1607

Before European settlement, present day Spotsylvania County was home to the Siouan tribes. While these Native Americans were dominantly nomadic, there tended to be an ethnic division of land among them. The Fall Line marked the boundary between the Coastal Algonquians and the Piedmont Siouan-speakers at the end of the Late Woodland period. The land between the North Anna and Rappahannock Rivers, principally roamed by the Manahoacs, formed the region that later became Spotsylvania County.

Settlement to Society, 1607-1750

Forts and friendly Indian settlements were established as the first colonists arrived from Europe. Alexander Spotswood was appointed Lieutenant Governor to the Colony of Virginia in 1710, and playing a significant role in westward expansion. Importing German immigrants, mainly indentured servants, he devised a settlement based on iron ore discoveries along the Rapidan River, and founded the County of Spotsylvania in 1721. The first permanent settlement in 1725 was called Germanna. Spotswood's Tubal Furnace site was one of the first sources of iron discovered and mined in the colonies. It continued to be a success throughout the colonial period as well as a foundation for future growth.

In 1729 The Spotsylvania County Court petitioned the Assembly to authorize the construction of a road from an ironwork site at Fredericksville to the Rappahannock River. This road, approximately following part of modern State Route 208, became a major transportation route and opened opportunities for settlement.

Religion also played a large role in the organization of settlement in the County. St. George's was established as the official parish and undertook the process of dividing land into parcels. By 1731 a second parish was created, eventually resulting in the re-districting of lands to the west and creating Orange County. The County Court moved from Germanna to the new town site of Fredericksburg.

Within the following decade Spotsylvania experienced the largest population increase of the colonial period. Tobacco became the thriving industry and center of activity, bringing in an influx of servants. However, there remains little evidence of a slave population during this period. The cost of welfare increased, causing eventual problems.

Colony to Nation, 1750-1789

Combined with the outbreak of small pox in 1748, drought and poor tobacco crops caused an economic depression in the 1750s. The first "poor house" was created. Tensions over church meeting locations resulted in another division of St. George's Parish along the Po River. In 1769, Berkeley Parish and St. George's Parish divided Spotsylvania County directly in half. This division added stress as the County continued to pay an increasing welfare cost from a lower tax base.

The canal, Plank Road, and the narrow gauge railway were unsuccessful attempts to establish competitive transport links westward.

Debate over the location of the courthouse divided the County along town and county lines. Although separate, both town and county moved toward freedom from religious and political scrutiny of the Royal Crown. The war for the nation's independence was fought and won. In 1778 the Assembly passed an act which permitted the relocation of the county seat to the geographic center of Spotsylvania. The first court session was held in 1781. In 1782, Fredericksburg became its own political entity with a separate district court established in 1789.

Early National Period, 1789-1830

The time between the writing of the Constitution and the Civil War proved to be prosperous for Spotsylvania County. With its close ties to Fredericksburg, so too came close associations with many important historical figures such as George Washington, Revolutionary War generals Hugh Mercer and George Weedon, naval war hero John Paul Jones, and future U.S. president James Monroe. Due to plentiful and fertile farmland, agriculture was the main occupation in Spotsylvania during this period, something which is still evidenced today.

Spotsylvania County prospered industrially in this era as well. Governor Spotswood's early network of roads for the transportation of iron and his importation of skilled iron workers established a self-sufficient iron empire that set in motion the rise of America's iron and steel industry. Spotswood's furnace remained important throughout the early 19th century and in 1842 it was acquired by the United States Government for a cannon foundry which proved useful in the Mexican-American War.

Antebellum Period, 1830-1860

During this period of growth throughout the Union, Spotsylvania continued to emerge slowly despite the increase in population and profits generated by the tobacco and mining industries. The early decades of the Antebellum Period were the zenith of the plantation system.

Increase in production prompted the Commonwealth of Virginia to construct a transportation network for better access to the markets, finally succeeding in opening the West and Southwest to settlement. Spotsylvania was no longer one of the leading producers of iron and lead, but the County began to extract gold from local mines.

Spotsylvania County should be noted for its role in African American history. During the years before the Civil War, African Americans worked as slaves and occasionally as free men and women, making them an important factor in the area's development. They were employed in various occupations, including farm

and plantation work, domestic service, and skilled trades (such as blacksmiths, carpenters, coopers, and needle workers). They also worked in the iron, construction, and shipping industry on the Rappahannock River, as well as in their own businesses. By the first half of the 19th century, Spotsylvania's population had reached about 11,000, over 50% of which were African American.

Expansion of the school system was limited, with no public schools established as of 1837. In 1846 the Commonwealth required that the courts appoint a public school superintendent and commissioners. By 1860 each county was to create at least three public schools. But the Civil War intervened and Spotsylvania did not act on the law until the 1870s.

The Civil War, 1861-1865

While Spotsylvania County is rich in history from all eras, it is best known for its role in the Civil War. Situated between two capitals, the County became a bloody stage. Four major battles were fought in the County: Fredericksburg, Chancellorsville, The Wilderness, and Spotsylvania Court House. Today, core areas of those battlefields are preserved within the Fredericksburg and Spotsylvania National Military Park system, the second largest battlefield park in the world.

- Fredericksburg - December 11-13, 1862
  Union General Ambrose Burnside attempted to break Confederate General Robert E. Lee's lines along a ridge behind Fredericksburg. Although the Sunken Road in Fredericksburg is well-known as the site of a bloody one-sided repulse, the battle was actually decided in the Confederate's favor in fields south of the city in Spotsylvania County.

- Chancellorsville - April 27- May 6, 1863
  General Lee's greatest victory took place at Chancellorsville. Outflanked by Burnside's successor, "Fighting Joe" Hooker, Lee sent Stonewall Jackson on a flanking maneuver of his own. The result was another Confederate victory, but at a heavy price, as Jackson was mortally wounded by his own men.

- The Wilderness - May 5-6, 1864
  A new Union commander, Ulysses S. Grant, struck at Lee in Spotsylvania County in the Spring of 1864 in The Wilderness. Two days of bloody combat brought stalemate and the decision of Grant to try to get between Lee and Richmond at the crossroads town of Spotsylvania Court House.

- Spotsylvania Court House - May 8-21, 1864
  The Union Army lost the race to Spotsylvania Court House. Undeterred, Grant continued to slam his great army against Confederate entrenchments. The bluecoats won initial success in a May 12 attack, but it degenerated into another costly deadlock at the "Bloody Angle". When further attacks failed, Grant once again side-stepped Lee and departed Spotsylvania County.

Reconstruction and Growth, 1865-1917

While prior to the Civil War Spotsylvania County was a farming society with plantations and slave homes, following the Emancipation Act the immense number of freed slaves required housing and infrastructure.

The number of African Americans decreased, and only ten percent of the white population remained. Yet there were still almost 5,000 freedmen needing home, land and sustenance. This proved to be a consistent trend, with an enormous increase in small, bungalow type housing occurring in the last decade of the 19th century.

African American schools also emerged. The first school for blacks began classes in November, 1867. The first African American high school was built by a local carpenter in 1909, and in 1913 the first class in the Snell Training School started.

The beginning of the 20th century saw commercial construction becoming more prominent. Commercial growth began even before the automobile arrived, driven by mining coal and mineral resources. Zinc, gold, lead and silver mining in the first quarter of the 1900s provided a period of wealth.

World War I to World War II, 1917-1945

While the mining industries benefited from the expanded railroad system, the next decade saw improvements on road systems. The predecessor of Route 1, the Richmond-Washington Highway, was begun in 1918. Often muddy, as it was a gravel roadway, it was paved over in 1927. The number of registered cars was doubling almost every decade, establishing a base for hotels, food, gasoline stations and entertainment.

Federal and state government programs began to expand and sponsor public works programs that improved highways and constructed parks, encouraging growth and affecting the landscape of Virginia and its historic resources. Despite the development and growth potential, the population of the county did not increase at a tremendous rate and housing began to decline.

World War II to the Present

Spotsylvania County's population began to experience tremendous population growth beginning in 1945. The need to move products for commerce and war requirements initiated new transportation planning. Suburbanization and highway systems allowed people to live at great distances from where they worked. By 1955, the state had more urban than rural dwellers.

The County saw much of its development in the 20th century as a result of its proximity to the cities of Richmond and Washington D.C., which were growing at such a rate that their suburbs spread as far north and south as Spotsylvania. The first subdivision ordinance was created in 1961. The completion of Interstate 95 (I-95) in the 1960's, the extension of the Virginia Railway Express to Fredericksburg in the 1990's, expanding military installations, and new business parks have been significant factors in making Spotsylvania one of the fastest growing counties in Virginia.

Today, much of the Primary Development and Transition areas have been developed or are intended for development as high density and mixed use locations purposely close to I-95 and the City of Fredericksburg. In the midst of this change some historic places and/ or structures have been lost, but Spotsylvania has still managed to retain rural and agricultural character over much of its land.

History continues to be made as time goes by. As new eras emerge the Comprehensive Plan should be updated to look back and document significant historical events that occur in more recent times.

PAST AND PRESENT PRESERVATION EFFORTS IN SPOTSYLVANIA COUNTY

Tracing its history back to 1721, Spotsylvania County has contributed to the historical assets of the Commonwealth of Virginia. Within the planning period, Spotsylvania County will celebrate its 300th anniversary (1721 to 2021). In recognition of the many natural habitats, archaeological sites, historical landscapes and structures of historical and architectural significance there have been many efforts made at the private, local, state and federal level to protect these non-renewable resources. In addition, Spotsylvania County benefits from a substantial base of completed surveys on which it can build its current historic preservation efforts.

Efforts by Private Groups

As Spotsylvania's population continues to grow, the County increasingly is dealing with the threat of development encroachment upon significant historic and/ or cultural resources. Perhaps most in danger is the County's open space and its vast Civil War resources. In recent years, these problems have been recognized not only within the community, but also highlighted by national organizations.

In the 1960s the Spotsylvania Historical Association, Inc. (SHA) spearheaded a drive to get information from property owners about their historic properties. It was an informal attempt but the collection of files became the basis for the "Handbook of Historic Sites in Spotsylvania County," finished in 1987 by an Ad Hoc committee. It was first called "The Red Book" due to the color of the large binder that held the pages. Both phases of the County architectural survey, completed in 1996 and 2000, included many properties listed in the 1987 Red Book.

While the County has long taken pride in its significant history, it is only more recently that private groups have paid serious attention to preservation efforts, as development pressures have increased. In 1998, the Chancellorsville Battlefield was named to the National Trust for Historic Preservation's list of the *11 Most Endangered Historic Places*. The Trust focused on the battlefield's placement among one of the nation's major transportation routes and the repercussions of a proposed rezoning which would compromise the integrity of the historic site. In 2005, the County was recognized in several other national publications, including another National Trust most endangered list as part of a historic corridor called *The Journey Through Hallowed Ground*, which follows US Route 15 from Pennsylvania through Virginia. In addition, the National Park Service designated the Chancellorsville site a *Priority 1 Endangered Civil War Battlefield* and the Civil War Preservation Trust (CWPT) named the entire county to their annual *History Under Siege Report*. These recent and numerous designations reveal that the fight to preserve Spotsylvania's history has reached a new level as the County makes decisions to deal with the pressure from growth and development.

As a result of their concentration within the Region, numerous private preservation efforts center around the preservation of the County's Civil War battlefields. A regional organization formed in 1996 by local citizens, Central Virginia Battlefields Trust (CVBT), has a national as well as local membership base. Their goals are to purchase and preserve Civil War battlefield sites outside the Fredericksburg and Spotsylvania National Military Park (FSNMP) boundary. Within Spotsylvania County, in 2020 the CVBT reported approximately 461 acres in ownership with an additional 8.6 aces in easement.

In 2018, the Civil War Trust (formerly the Civil War Preservation Trust) reported management of approximately 416 acres.

The Friends of Wilderness Battlefield's purpose is to assist the FSNMP in its efforts to preserve the Wilderness Battlefield in Spotsylvania and Orange Counties. One specific success for the group has been the restoration of Ellwood (1790). In 2003 the group, in partnership with FSNMP, began a two year long fund-raising campaign to support the restoration of this historic house which was prominent in the Battle of the Wilderness.

While seeing historic "Salem Church" lost in a sea of traffic and commercial development on Rt. 3 west is considered a failure by preservationists, local groups have had several outstanding accomplishments in their fight against the destruction of Spotsylvania's history. Possibly the most important successes in the past several years has been that of preserving over 200 acres north of Plank Road, near Lick Run and the "First Day" fighting of the Battle of Chancellorsville and 205 acres of Slaughter Pen Farm on Tidewater Trail.

Most of Spotsylvania County's private preservation groups or historical societies have been formed in the past twenty to thirty years, as development has started to move at a faster pace. These organizations focus on grassroots preservation advocacy that include citizen education, donations of easements and protection of cultural resources for citizens and tourists.

The Spotsylvania Preservation Foundation, Inc. (SPFI) for example, founded in 1988 by a group of historic home owners, was created in order "to preserve and protect historic resources through education, advocacy and community involvement." The group believed that the establishment of a Historic Ordinance and Architectural Review Board was critical to preservation efforts. Members also wanted to become advocates for sensitive land use decisions to prevent the degradation of historic resources. The group contributed to the restoration of the "Spotsylvania Jail" (1855) located in the Spotsylvania Court House Historic District. SPFI disbanded in the mid-2000s.

A developer led effort to study and seek Virginia Landmarks Register and National Register of Historic Places designation for the Bowman Center, also referred to as the Spotsylvania County Industrial Park, and Sylvania Plant Historic District was successful in late 2019 and early 2020. Monument Development of Richmond, Virginia led the effort. A Virginia Landmarks Register designation was applied in December, 2019. This was followed by National Register listing in February, 2020. The historic designation helps recognize the historic importance of the site while potentially benefitting efforts to rehabilitate the site with tax credits made eligible by inclusion in the historic register.

Local and State Government Actions

In October 1987, the Board of Supervisors of Spotsylvania County approved a historic district ordinance as enabled by the Code of Virginia. In order to carry out the provisions of this section, an architectural review board known as the Historic Preservation Commission was created. The Commission's role is to encourage the sensitive rehabilitation of the historic structures within this district through a design review process. Reviews are mandated for proposed development or alterations to properties within historic districts. Certificates of Appropriateness are issued when such activities preserve historic character. The Preservation Commission has since designated eight historic sites and districts for protection: Fredericksburg and Spotsylvania National Military Park, Rapidan Dam Canal of the Rappahannock Navigation, Tubal Furnace Archaeological Site, Spotsylvania Court House Historic District, St. Julien, Prospect Hill, Massaponax Church, and La Vista.

The National Register of Historic Places designates one Historic District within Spotsylvania County. On September 8, 1983 the Spotsylvania Courthouse District was accepted in the National Register after much discussion by the Board of Supervisors. This area encompasses 101 acres, and 25 buildings. Architecture, engineering and event themes are cited as being historically significant to the district. Federal and Greek Revival designs are the predominant architecture styles within this area which historically functioned for a variety of uses including: commerce/trade, domestic, government, and religion.

In December 1995, the Virginia Department of Historic Resources (VDHR), in conjunction with Spotsylvania County contracted with EHT Traceries, Inc., an architectural history and historic preservation firm, to conduct a Historical Architectural Survey of Spotsylvania County, Virginia. The Project was funded jointly by Virginia and the County under the terms of the Historic Preservation Fund Matching Grant Program. The area in the County's 'primary settlement district', the area slated for dense growth, was surveyed first. The final compilation of data documented 124 properties to the Reconnaissance Level and 12 properties to an Intensive Level. The survey was continued, as recommended, in a second phase conducted between October 1999 and December 2000 by the architectural and historic preservation firm of EHT Traceries, Inc. under the direction of the VDHR and the Spotsylvania County Planning Department. The project was fully completed in February 2001, encompassing the survey and/or documentation of 152 historic properties. In March of 2005 a Cost Share Survey was awarded from the Department of Historic Resources for Archaeological Resources and an archaeological predictive model was developed.

On August 18, 2003 Spotsylvania County was certified as a Certified Local Government (CLG). In June of 2013, Spotsylvania was one of thirty-one CLGs in Virginia. The CLG program was created by the National Historic Preservation Act of 1966, as amended in 1980, and establishes a partnership between local governments, the federal historic preservation program, and the Virginia Department of Historic Resources (DHR). The program allows DHR, as the State Historic Preservation Office, to recommend for certification local governments that have put key elements of a sound local preservation program in place in their communities. Designation as a CLG gives a local government a way to participate more formally in the state and national historic preservation programs. General requirements for certification are identified in the federal program; specific requirements for the Virginia program have been established by DHR.

Goals of the Virginia CLG program are threefold:

- Promote viable communities through preservation
- Recognize and reward communities with sound local preservation programs
- Establish credentials of quality for local preservation programs

Spotsylvania County was named a "Preserve America Community" in 2005 (www.preserveamerica.org). In June of 2013, Spotsylvania is one of twenty-three other Virginia communities recognized in the program for its efforts to preserve cultural resources and history. The program boosts heritage tourism and fosters an appreciation for local resources while aiding community revitalization. Grants are available, road signs are erected and the Preserve America logo is used for publicity.

In 2009, The Spotsylvania County Department of Economic Development and Tourism, (through the support of a Preserve America Grant from the National Park Service) commissioned Rivanna Archeological Service of Charlottesville, Virginia to conduct a comprehensive study of the County for the purpose of

documenting a general history, with an emphasis on its African American history. Their final product was presented in March, 2010 and formed the basis of The African American Heritage Trail. More information can be found **HERE**.

Federal Government Actions

On the federal level, past and current preservation efforts are largely limited to Civil War resources and monitored through the National Park Service. The Fredericksburg and Spotsylvania areas were home to some of the bloodiest battles that occurred, and this hallowed land possesses a great deal of significant Civil War history. There are two main efforts overseen by the National Park Service in Spotsylvania County.

The first of these efforts, the Fredericksburg and Spotsylvania National Military Park (FSNMP), encompasses the battlefields of Fredericksburg, Spotsylvania, Chancellorsville, and Wilderness. The FSNMP's headquarters are located at the historic Chatham estate, which served as the Union headquarters and a hospital during the battle of Fredericksburg. Efforts to organize a national park on the site of these historic battles first ensued in the late nineteenth century by a dedicated group of local residents who were backed by Civil War veterans. The residents felt that a national park showcasing the area's Civil War history would be a sound economic investment as it would draw tourists to the area. Congress repeatedly denied the citizens' request until legislation authorized the park in 1927. The acquisition of land began in the early 1930s. As of June, 2013, the Park encompasses 8480.83 acres in federal ownership and easements in all 5 jurisdictions including Spotsylvania, Stafford, Caroline, Orange County, and the City of Fredericksburg. The National Park Service continues to work with the Civil War Trust and the Central Virginia Battlefields Trust to protect lands within the park's legislated boundary.

Each of the battlefields offers a variety of information accessible to the public. Tools for self-guided tours are available, educational programs are held throughout the year, and special lectures are also given. The preservation efforts of the FSNMP focus directly on the landscape preservation of the protected land within the Fredericksburg, Spotsylvania, and Chancellorsville battlefields, and the several contributing buildings also acquired by the National Park Service. These are the Old Salem Church, which served as an infirmary for both the North and South; the Stonewall Jackson Shrine, which is the plantation office where Jackson died, and the previously recognized Chatham Manor.

The second federal preservation effort that the FSNMP participated in is through a grant issued in 1994 by the American Battlefield Protection Program, a subsidiary of the National Park Service. This grant allowed for the creation of the Related Lands Database, the first of its kind in the United States. The grant generated funds for a survey in areas of the county that lie outside of the existing National Military Park Boundaries, but may have significance to the Civil War. The database was developed by the FSNMP Cultural Resource Manager, Noel G. Harrison.

The database was an exciting new tool initially intended for use in rezoning and development procedures in the county. However, the Army Corps of Engineers in conjunction with the Virginia Department of Historic Resources has been able to utilize the database, and over 800 acres have been conserved using it as a tool in wetlands conservation. As administrators of the Clean Water Act, the Army Corps of Engineers is responsible for wetlands conservation, which is subject to the National Historic Preservation Act of 1966. This act has allowed for the formulation of the land mitigation process, which requires developers or landowners to mitigate damage to historic resources by "setting aside core historic resources and ensuring their perpetual protection." Thus the Related Lands Database has been successful for a variety

of reasons: it has been a useful tool in formulating mitigation, developers have preserved lands that would have been otherwise not identified as historic resources, viewsheds along park boundaries are more protected, and some lands at risk outside the park boundaries are now secure.

In 2019, hard copies of the Related Lands Database were scanned and are now also available electronically. Spotsylvania County GIS has digitized the Database as a GIS layer for mapping interpretation purposes, consistent with Historic Resources Policies and Strategies.

Spotsylvania County Landmarks Listed in the Virginia Landmarks Register and the National Register of Historic Places (www.nps.gov/history/nr)

- Rapidan Dam Canal of the Rappahannock Navigation
- Saint Julien
- Andrew's Tavern
- Fredericksburg and Spotsylvania County Memorial National Military Park
- Prospect Hill
- Tubal Furnace Archaeological Site
- Spotsylvania Court House Historic District
- Stirling
- Massaponax Baptist Church
- Kenmore Woods
- Fairview
- La Vue
- La Vista
- Bloomsbury Farm
- Oakley
- Walnut Grove
- Spotsylvania County Industrial Park/Sylvania Plant Historic District/Bowman Center, added to the Virginia Landmarks Register in December, 2019; National Register of Historic Places in February, 2020.

Additional Historic Resource Documentation and Recognition

In addition to existing Virginia and National Register designated historic sites within Spotsylvania County, there are a number of additional historic resources of significance, some of which are potentially eligible for such formal designations. Periodically the County conducts historic, cultural and archaeological resource surveys to document important historical resources throughout the County. The results of those surveys are maintained by the Planning office.

The Virginia Department of Historic Resources also maintains records and determines whether resources are potentially eligible for Virginia or National historical register designations. For more information regarding the Virginia Department of Historic Resources, visit: http://www.dhr.virginia.gov/.

Virginia Cultural Resource Information System (V-CRIS)

The Virginia Cultural Resource Information System (V-CRIS) provides online access to extensive database of information in the Virginia Department of Historic Resources (DHR) Archives including documented architectural and archeological resources.

Within the V-CRIS, as per the Virginia Department of Historic Resources (DHR), The V-CRIS data provided in the mapping system is a point or polygon representation of archaeological or architectural resources that are documented by the Virginia Department of Historic Resources. At this time, not all resources that have been surveyed at the reconnaissance or intensive level have been digitized. This information has been gathered over many years and the representation depicted is based on the field observation date and may not reflect current ground conditions. The map is for general illustration purposes and is not intended for engineering, legal or other site-specific uses.

As a development review tool, County staff and local decision makers are able to utilize the V-CRIS to make better informed decisions regarding the prospect of development impacts in areas where historic resources, whether architectural or archaeological, are or are likely to occur. Such models can and have resulted in requests for additional information in an effort to mitigate potential negative impacts upon historic resources where V-CRIS identifies potential conflicts. Additionally, V-CRIS can help better inform land use decisions as part of the County Comprehensive Plan creation, review, and update processes whereby helping guide informed planning efforts.

The V-CRIS can be found **HERE**

APPENDIX D

NATURAL RESOURCES

NATURAL RESOURCES APPENDIX

The following Natural Resources appendix resources have been studied and documented to satisfy Virginia State Code Sec. 15.2-2224, Surveys and studies to be made in preparation of plan; implementation of plan, Sec. 15.2-2223.2, Comprehensive plan to include coastal resource management guidance, and 9VAC25-830-170, Comprehensive Plans, per the Chesapeake Bay Preservation Area Designation and Management Regulations. Additionally, the information is an educational resource for the community, offering valuable insights into environmental resources. It is also a critical resource for land use planning within Spotsylvania County.

PHYSIOGRAPHY

Spotsylvania County's total land area is approximately 407 square miles. The land surface is generally rolling and slopes gradually in a southeasterly direction to an irregular north/south line following the Interstate 95 corridor, where it drops slowly to a low flat plain. Elevations range from a high of about 450 feet above sea level in the western section of the County to sea level in the northeastern area along the Rappahannock River.

The most significant landform issue is the split of the county into two physiographic provinces; the Atlantic Coastal Plain and the Piedmont Plateau. The area of transition between the provinces, known as the fall line, marks the boundary between the free flowing rivers to the west and tidal to the east.

CLIMATE HAZARDS

Regional Hazard Mitigation Plan

The George Washington Regional Commission (GWRC) and its member localities in collaboration with The Berkley Group, led an effort to update the Regional Hazard Mitigation Plan in 2017. The Hazard Mitigation Plan is expected to be updated again within the Comprehensive Plan planning period.

Hazard Mitigation is the sum of the many actions that can be taken at the local and regional level in setting goals, developing strategies, and outlining tasks and schedules to reduce or eliminate long-term risk to human life and property from a variety of natural hazards. In preparing this plan, the GWRC and its member localities including: City of Fredericksburg; Caroline County; King George County; Spotsylvania County; Stafford County; Town of Bowling Green; Town of Port Royal, have identified natural hazards that pose a potential threat; determined the likely impacts of those hazards; assessed vulnerability to the studied hazards, as well as the Region's current capability to address those hazards; set mitigation goals; and determined and prioritized appropriate strategies that can lessen the potential impacts of hazard events.

The Plan serves two roles within the George Washington Region. First, it identifies natural hazards that pose a threat to the safety, health, and economy of the Region, as well as steps that can be taken to reduce the impact of these natural hazards in the future and helping communities get "back on their feet" and back to normal lives as quickly and easily as possible. The community can reduce both the impact and cost of natural disasters by being prepared in advance rather than acting only after disaster has struck. The Plan contains a comprehensive assessment of natural hazards, including assessing the

types of hazards, their risk to the region and localities, documentation of historic incidents, and identification of mitigation action strategies to help proactively plan for and address such incidents if and when they occur.

Second, the Plan ensures the Region's compliance with the Disaster Mitigation Act (DMA) of 2000, which requires that local governments develop natural hazard mitigation plans in order to qualify for both pre-disaster and post-disaster grant opportunities. The Disaster Mitigation Act of 2000 establishes the legal basis for this plan, and for the Federal government's overall nationwide efforts to reduce the cost of disasters in the United States. This act establishes the Pre-Disaster Mitigation Program (PDM), as well as new requirements for the post-disaster Hazard Mitigation Grant Program (HMGP), both serving to give greater responsibility for hazard mitigation planning to local governments. DMA 2000 requires local governments to develop natural hazard mitigation plans in order to qualify for both pre-disaster PDM grants and post-disaster HMGP grants. The Act requires that these plans demonstrate "a jurisdiction's commitment to reduce risk from natural hazards, serving as a guide for decision makers as they commit resources to reducing the effects of natural hazards", and must be updated every 5 years. The prior Regional Hazard Mitigation Plan update occurred in 2012, with Spotsylvania County Board of Supervisors endorsement of that plan having occurred on September 11, 2012.

Each of the Hazard Mitigation Plan chapters were reviewed and updated for 2017 to reflect currently available information and up to date local mitigation strategies. Changes include updates to the hazards that have occurred, review and revision of current capabilities, review and update of the previous plan's mitigation strategies, as well as reconsideration of locality specific and overall regional mitigation goals and strategies.

The updated 2017 Hazard Mitigation Plan was approved by the Federal Emergency Management Agency (FEMA) on September 25, 2017 and locally endorsed by resolution of the Spotsylvania County Board of Supervisors on October 10, 2017. The Hazard Mitigation Plan is expected to be updated again within the Comprehensive Plan planning period. The latest version of the approved Hazard Mitigation Plan is incorporated by reference into the Comprehensive Plan.

For more information about natural hazards and local mitigation strategies, the 2017 Regional Hazard Mitigation Plan is available online **HERE**.

Radon

As per the Virginia Department of Health, Radon is a naturally occurring, radioactive gas that you can't see, taste or smell. It is produced by the breakdown of uranium in soil, rock and water. Radon is usually most concentrated in the lowest level of the home. Radon may also be present in well water and can be released into the air in your home when water is used for showering and other household uses. Radon entering homes through water may be a small risk compared to radon entering though the soil. High levels of radon have been found in all 50 states.

Indoor radon is the second leading cause of lung cancer after smoking. Radon causes an estimated 7,000 to 30,000 lung cancer deaths each year. A combination of smoking and high levels of radon in your house increases your risk. Radon enters homes most commonly through:

- cracks in foundations;

- openings around sump pumps and drains;
- construction joints;
- cracks in walls;
- crawl spaces; and
- in some cases from well water.

An increased risk of lung cancer is the only known health effect associated with exposures to elevated radon levels. When radon decays within your lungs it releases energy that can damage lung tissue and lead to lung cancer over the course of your lifetime. Not everyone exposed to elevated levels of radon will develop lung cancer.

Your chances of getting lung cancer from radon depend mostly on:

- How much radon is in your home.
- The amount of time you spend in your home
- Whether you are a smoker or have ever smoked.

The EPA Radon risk map was released in 1994 (see Exhibit 1 below). Spotsylvania County is considered to be at HIGH risk (e.g Zone 1) for indoor radon levels. Considering potential concerns related to radon risk, the EPA recommends that all homes and apartments below the third floor be tested.

Radon test data is available from professional testers and several different vendors of radon test kits. There are many factors that can influence radon levels in a particular home that the only way to know for sure is to test. Houses next door to each other can have very different levels. If Radon is significant enough to warrant mitigation, a soil gas collection system using passive piping can be installed. Proper installation of such a system is thought to reduce the indoor radon level in the home by 50%.

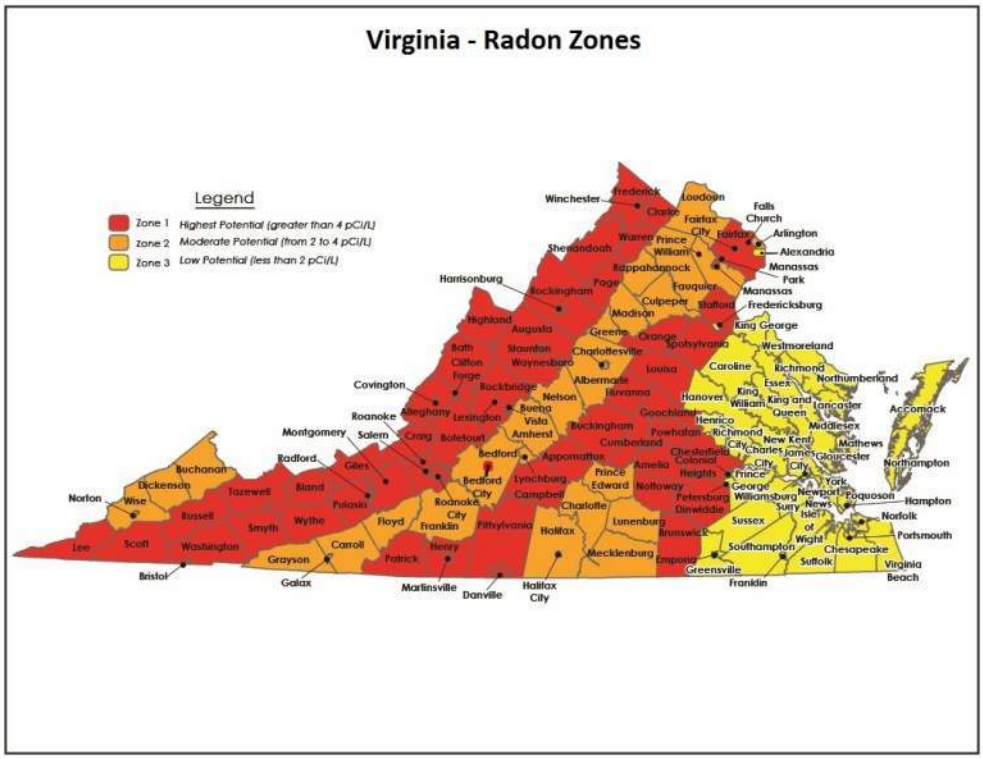


Exhibit 1: Virginia-wide Radon Zones

For more information concerning Radon and the Virginia Department of Health's Indoor Radon Program, **CLICK HERE.** Additionally, the United States Environmental Protection Agency has information available, **HERE.**

LIGHT POLLUTION

Light pollution results from atmospheric illumination caused by man- made lighting sources such as outdoor lighting fixtures that are not exclusively downward directed below a horizontal plane. The impacts of light pollution have been linked to negative health effects on humans and wildlife including birds and nocturnal animals. Light pollution inevitably leads to negative impacts the ability to star gaze and impacts areas intended to remain in their historically rural or agricultural character. In many ways outdoor lighting that beams out into outer space or anywhere above a horizontal plane is essentially viewed as inefficient or wasteful lighting because it doesn't serve a viable purpose when it comes to illuminating buildings or parking areas.

Beyond these impacts, light pollution has also been identified as problematic for flight operations associated with airports and military bases. Much of the northeast corner of Spotsylvania County falls within the Fort AP Hill approach fan, established for aerial approach to the base. Base representatives worked with County staff to provide input in the development of this proposed amendment. The 2014 Fort AP Hill Joint Land Use Study (JLUS) supported the Spotsylvania County outdoor lighting ordinance in consideration of light pollution impacts. As per the JLUS:

Fort A.P. Hill conducts night-time training operations that utilize night vision equipment. The success of night-time operational activities is dependent upon dark conditions that are affected by ambient light levels. Night vision training occurs at the Laser Range near U.S. Route 17 and at the ALZ and Drop Zone. As Spotsylvania County grows, the installation is concerned that new development within the county's growth area may generate night-time illumination that will compromise the installation's ability to implement its night-time training operations.

Adoption of a county-wide dark skies ordinance would put in place lighting controls and requirements on new development county-wide and would help alleviate the installation's concerns about increased light pollution. Fort A.P. Hill should work with the county to ensure adequate lighting requirements and standards are captured in the ordinance.

In order to reduce the impacts of light pollution and protect a clear night sky the County had an established a goal in both the 2008 and 2013 Comprehensive Plans to promote "dark-sky" or "night-sky" friendly lighting. Due to amendments to the Comprehensive Plan considering state legislation related to proffers, the Spotsylvania County Board of Supervisors approved amendments to the County Outdoor Lighting ordinance on September 13, 2016 in order to shift what had been a County goal to an ordinance format where consistent, measurable and enforceable outcomes can be assured. "Dark sky" or "night sky" lighting is used to represent outdoor lighting that is downward focused below a horizontal plane similar to the graphic below. The result minimizes the likelihood of illuminating the atmosphere above whereby the effect is the inability to see stars at night.

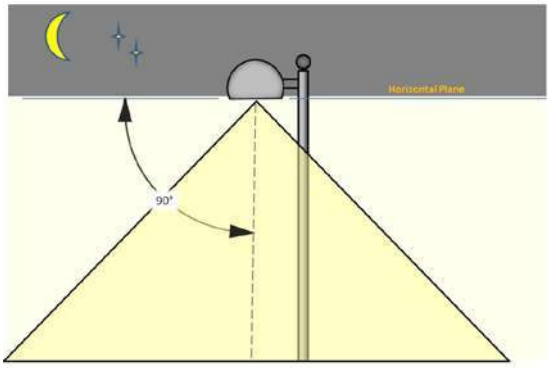


Exhibit 2: Downward directed lighting

The resulting outdoor lighting ordinance is meant to be simple and enforceable by the zoning enforcement office. The language, located in the Spotsylvania County Code Sec. 23-5.12 was developed with the assistance of lighting industry representatives, the zoning office and Fort AP Hill, and the Spotsylvania County Planning Commission. Staff wanted to ensure the ordinance was respectful of modern and emerging technologies and was therefore worded to accommodate flexibility.

PHYSICAL CONSTRAINTS TO DEVELOPMENT

A variety of factors can physically constrain or inhibit the extent of development feasible in a location. Naturally occurring constraints could include presence of wetlands, steep slopes, acid sulfate soils, septic suitability, groundwater availability, hydric soils, additional soils or underlying geological conditions. Established conservation lands in easement or ownership and regulatory protections such as the river protection overlay district, reservoir protection overlay district, floodplain overlay district, resource protection areas, zoning limitations and open space requirements, stormwater management infrastructure, limits of available public water and sewer all have the potential to physically constrain the extent of development. Many of these factors are explored in more detail in the pages that follow. The County GIS system includes map data on many of the aforementioned constraints and makes them available online **HERE**. Additionally, County GIS is developing a more extensive suite of soils related information for public access in the form of a new web application online to become accessible through the Spotsylvania Geohub site **HERE**.

GEOLOGY

The geology of the County is generally comprised of precambrian, cambrian, and paleozoic formations. The principal geologic units found within the county are indicated below in order of the youngest to the oldest:

Table 1: Geology	
System	**Unit**
Tertiary (Miocene, Eocene)	Calvert and Aquia Formations
Lowe Cretaceous	Patuxent Formation
Paleozoic and precambrian formations of uncertain age/relationship	Petersburg Granite
Formation of uncertain age	Granite, Granite Gneiss, Hornblende Gabbro, Metamorphosed Sedimentary Rocks, Quartz Diorite, and Metamorphosed Volcanic and Sedimentary Rocks

The Piedmont Plateau geology is dominated by granite gneiss, schist, and granite rocks, generally of the paleozoic and precambrian age. Small intrusive dikes of horneblende gabbro and similar rocks are also present.

Coastal Plain geology is dominated by patuxent, aquia, and calvert formations, and can be characterized by its veneer of sand, gravel and clay deposits.

Geology and Groundwater

The character and position of rocks and rocky formations control the collection, storage, transmission quality and yield of groundwater. Since groundwater is contained in and controlled by rocks, each rock formation or unit is profiled below with respect to groundwater potential.

Coastal Plain Province

In the Coastal Plain, the average well yields 11 gallons of water per minute at a 50-foot depth. Some yield as much as 50 to 60 gallons per minute. Many of the deeper wells produce water that contains objectionable minerals. To the southeast of the City of Fredericksburg, patuxent formations are found. Patuxent formations are the most prolific aquifers, yielding 20 to 50 gallons per minute from deep wells. There are no true aquifer recharge areas within the county; however, silty clay sediments within the Coastal Plain provide the most permeability and promise of recharge to artesian aquifers by means of vertical seepage.

Calvert Formation

This formation occurs within the southeastern portion of the Coastal Plain area and generally consists of green clay, and very fine white sand. The calvert formation is not an important aquifer although it does serve as a form of barrier confining water to the deep water-bearing sands.

Aquia Formation

This formation principally consists of fine-grained sands and moderate amounts of clay. No wells are known to produce from this formation within the county. The aquia formation is exposed above the patuxent formation.

Patuxent Formation

This formation occurs within the eastern most portion of the Coastal Plain area of the county and consists of white sand with lesser amounts of coarse gravel present. Clay lenses are common throughout the formation. The sands and gravel of the patuxent formation are the most prolific aquifers within Spotsylvania County. Wells, which have tapped water-bearing zones of the patuxent, which usually locate at a depth of 100 to 400 feet, have produced between 20 and 50 gallons per minute.

Piedmont Province

Within the Piedmont, small supplies of water are available near the surface where weathering has partially decomposed the rocks. Below the weathered zone, water occurs in fractures and along contacts between different rock types. Average wells extend to depths of 50 to 250 feet and yield from 5 to 15 gallons of water per minute, with some of the better wells yielding approximately 40 gallons per minute; this type of yield is suitable for domestic residential uses but little else. Most wells are shallow, as there is very little change of increasing well yields by drilling more than a few hundred feet due to the decrease in size and number of fractures in the rocks. In addition, objectionable minerals tend to increase with added depth.

Petersburg Granite

The Petersburg granite unit occurs within the northeastern portion of the Piedmont area of Spotsylvania County and is well exposed in the vicinity of the Rappahannock River. It is a coarse to fine grained pink granite intruded by fine-grained blue granite. Small supplies of water sufficient for domestic use are available from the weathered zone of these rocks where fractures are encountered, with yields greater than 20 gallons per minute possible.

Granite Gneiss Unit
The granite gneiss unit occurs within the southeastern portion of the Piedmont area of Spotsylvania County and consists of a gray medium to fine-grained granite gneiss with intrusions of light gray granite. Small to moderate supplies of water have been produced from these rocks. Yields ranging from 1.5 to 62 gallons per minute were produced from wells at Indian Acres. The depths of these wells range from 128 to 525 feet.

Granite
The granite unit occurs within the central and far western portion of the Piedmont area of Spotsylvania County and is primarily composed of gray biolite granite and quartz menozite. Small supplies of water have been produced from this unit with yields ranging from a few gallons per minute to 15 gallons per minute.

Horneblende Gabbro - Quartz Diorite
These units occur at several isolated locations as small elliptical bodies intruding the older rocks. Blue quartz is predominant in the quartz diorite, and the horneblende gabbro is composed chiefly of horneblende and other dark-colored minerals. These geologic units are poor sources of water with small accumulations of water occurring along the contact zones between these rocks and the surrounding formations.

Metamorphosed Sedimentary Rocks
These rocks occur in the north/south belts within the western portion of the Piedmont area of Spotsylvania County and consist of a combination of schists, phyllites, gneisses and quartzites interlayed with igneous rocks. Rocks included in this unit have been fairly good sources of water in most areas. The chance of obtaining substantial groundwater yields depends much on encountering fractured zones within the crystalline rocks. Yields range from a few gallons per minute to over 100 gallons per minute in a few cases. A number of wells constructed for domestic uses in the county have averaged over 30 gallons per minute.

Metamorphosed Volcanic and Sedimentary Rocks
These rocks occur in north/south belts within the western portion of the Piedmont area of the county and consist of quartzites, phyllites, gneisses and schists. Most wells developed in these rocks produce less than 20 gallons per minute although a few wells have produced higher yields. Insufficient groundwater is a problem for the majority of the county for purposes other than low density residential uses. As the drain on groundwater supplies grows more severe and as intensity of use increases, less water will remain in the aquifers. In the future, reductions in residential densities may be necessary to guard against over-taxing of aquifers. The amount of impervious cover of aquifers and recharge areas associated with development further reduces the quantity of groundwater. The requirements for groundwater supply regulate the density of residential development and the extent of commercial/ industrial expansion into areas not served by a central water supply system.

Spotsylvania County straddles the Fall Line, a geologic zone where the sediments of the coastal plain lap up onto the metamorphic and igneous rocks of the piedmont.

Piedmont Rocks: Igneous Rocks of the Western Piedmont

OCpg *plagiogranite tonalite* (Pavlides, 1990).

Includes leucocratic to mesocratic plagioclase- and quartz-rich metamorphosed intrusive rocks containing little or no potassium feldspar. Plagioclase is variably altered to epidote, white mica, and chlorite. Quartz, generally blue, forms granoblastic aggregates that locally have cores of coarse-grained quartz with wavy extinction. Garnet is present locally. Hornblende, generally a minor constituent, is particularly abundant in the southwest portion of the pluton. Many of the plagiogranitic rocks have undergone cataclasis and are protomylonitic to mylonitic.

Piedmont Rocks: Stratified Rocks of the Western Piedmont

Mine Run complex (OZI, OZII, OZIII; Pavlides, 1989; 1990)

OZI *mélange zone I* (Pavlides, 1989).

Fine-grained schist and phyllite matrix encloses coarse-grained metasandstone beds locally; contains exotic blocks of mafic and felsic metavolcanic rocks (vo) similar to metavolcanic rocks of the Chopawamsic Formation (Ccv). Blocks of blastomylonitic tonalite and granodiorite gneiss (gn) are present locally.

OZII *mélange zone II* (Pavlides, 1989).

Schist and phyllite matrix is more complexly deformed than the matrix of mélange zone I; contains metavolcanic blocks (vo) similar to Chopawamsic Formation rocks (Ccv), in addition to granitoid blocks of altered tonalite and granodiorite (gr); intruded by the Ellisville biotite granodiorite (SOe).

OZIII *mélange zone III* (Pavlides, 1989).

Phyllite and schist matrix contains abundant euhedral magnetite; many matrix rocks are highly deformed on a mesoscopic and microscopic scale. Mafic exotic blocks (mf) include amphibolite, ultramafic rocks, serpentinite, and talc; many mafic and ultramafic blocks are composite. Biotite gneiss blocks (gn) are also present. Metavolcanic olistoliths (vo) are rare.

Geophysical signature: Strong positive magnetic anomaly. This unit is intruded by the Ellisville biotite granodiorite (SOe).

OCu *metasedimentary rocks, undivided* (Pavlides, 1990).

Gray to green phyllite, gray to white metasiltstone and fine-grained quartzite, fine-grained mica schist, green slate and phyllite, and sparse granule quartzite and graywacke; may be coeval in part with Old Mill Branch Metasiltstone Member of the Popes Head Formation (OCpo).

SOe *Ellisville biotite granodiorite* (Pavlides, 1990).

Mesocratic, coarse- to medium-grained, equigranular to porphyritic, massive to strongly foliated granodiorite. Mineralogy: quartz + plagioclase + potassium feldspar + biotite; accessories include epidote, allanite, titanite, and apatite. Porphyritic rocks contain potassium feldspar megacrysts up to 1.5 cm across; myrmekite commonly occurs adjacent to potassium feldspar. Brownish-green, strongly pleochroic biotite is associated with, and in places poikilitically encloses epidote, allanite, titanite, and apatite. Subhedral epidote locally encloses euhedral titanite. Pleochroic

green amphibole and muscovite are minor constituents locally. The Ellisville has been dated at 440±8 Ma (Rb-Sr whole rock; Pavlides and others, 1982).

Rocks of the Central Virginia Volcanic-Plutonic Belt

PMf *Falmouth Intrusive Suite* (Pavlides, 1980).

Fine grained to pegmatitic granite, quartz monzonite, granodiorite, and tonalite; consists of dikes, sills and small plutons. Mineralogy: plagioclase + quartz + microcline + biotite + muscovite + hornblende ± garnet + epidote + apatite + titanite + opaque minerals; myrmekite common. The unit has been dated at 300-325 Ma (U-Pb zircon and Rb-Sr whole-rock; Pavlides and others, 1982). These rocks intrude the Ta River Metamorphic Suite (Cta), Falls Run Granite Gneiss (Sf), Holly Corners Gneiss (CZh), Quantico Formation (Oq) and porphyroblastic garnet-biotite gneiss (Ym; Po River Metamorphic Suite of Pavlides, 1980).

Sf *Falls Run Granite Gneiss* (Pavlides, 1980).

Pink to white, coarse-grained, strongly-foliated hornblende-biotite granite to monzonite gneiss. Mineralogy: microcline + plagioclase + quartz + biotite + muscovite ± hornblende; apatite, epidote, titanite, and magnetite-ilmenite are accessories; myrmekite is common. The Falls Run has been dated at 410 Ma (U-Pb zircon and Rb-Sr whole-rock; Pavlides and others, 1982); the gneiss intrudes Ta River Metamorphic Suite **(**Cta) and the Holly Corners Gneiss (CZh).

Quantico Formation (Oq, Oqq; Pavlides, 1980)

Oq *slate and porphyroblastic schist.*

Gray to black, graphitic, pyritic phyllite and slate (northern Piedmont); metamorphic grade increases to the southwest to produce porphyroblastic staurolite-, kyanite-, and garnet-biotite-muscovite schists. Locally the unit contains felsic metatuff, metagraywacke, and micaceous quartzite interbeds; thickness has been estimated at as much as 3000 feet (Pavlides, 1980). Mineralogy: quartz + muscovite + biotite ± garnet ± staurolite ± kyanite + opaque minerals; chlorite is a common secondary mineral. Geophysical signature: strike-elongated positive linear magnetic and radiometric anomalies. The unit was originally named Quantico Slate by Darton (1894), and modified to Quantico Formation by Pavlides (1980). An Ordovician age for the Quantico is indicated by fossils collected by Watson and Powell (1911) and more recently by Pavlides and others (1980). The Quantico unconformably overlies older units in the northeastern Piedmont, and is correlated with the Arvonia Formation to the southwest.

Oqq *micaceous quartzite.*

Light-gray, fine- to medium-grained quartzite and quartzose muscovite schist. Mineralogy: quartz + muscovite + plagioclase ± microcline. This lithology occurs as thin discontinuous lenses at the base of the Quantico; thin diopsidic calcsilicate layers are also found locally in the lower part of the Quantico (Pavlides, 1980).

Ccv *Chopawamsic Formation, undivided*, (Pavlides, 1981).

Includes laterally discontinuous lenses and tongues of metamorphosed felsic, intermediate, and mafic volcanic flows and volcanoclastic rocks, with interlayered quartzite, quartzose greywacke, schist, and phyllite. Volcanic flows are locally highly vesicular; fragmental breccia and tuff are common. Felsic flows are typically light-gray aphanitic rocks with phenocrysts of quartz and

feldspar; intermediate flows are dark-green amphibole-bearing rocks with fine-grained quartz-feldspar matrix; greenstone metabasalts contain blue green amphibole, chlorite, albitic plagioclase, and quartz. Geophysical signature: linear strike-elongate pattern of elevated magnetic anomalies.

The Chopawamsic is correlated with the James Run Formation in Maryland; the James Run has been dated at 570 to 530 Ma (U-Pb zircon; Tilton and others 1970). The Chopawamsic is unconformably overlain by the Late Ordovician Arvonia and Quantico Formations. Pavlides (1981 and subsequent works) has made the interpretation on the basis of geologic and geochemical data that the Chopawamsic and related plutons represent an ancient island-arc sequence.

Cta *Ta River Metamorphic Suite, (undivided)*.

Layered sequence consists dominantly of greenish-gray to black, medium- to coarse-grained, poorly to well-lineated, massive to well-layered amphibolite and amphibole-bearing gneiss and schist; includes interlayered ferruginous quartzite, and minor biotite gneiss, felsic volcanic rocks, gabbro and granite. Amphibolitic rocks commonly contain quartz-epidote lenses and veins. Proportion of biotite gneiss and schist increases from northeast to southwest along strike, as does grade of regional metamorphism. Mineralogy: (hornblende, tremolite-actinolite, and cummingtonite) + quartz + calcic oligoclase ± epidote ± biotite ± garnet. Geophysical signature: linear positive and negative magnetic and radiometric anomalies.

Pavlides (1981) correlated the Ta River with the Chopawamsic and James Run Formations, and considered the Ta to be a more oceanward facies of a Chopawamsic island arc sequence, on the basis of geologic and geochemical factors. The Quantico Formation generally overlies the boundary between the Chopawamsic and the Ta, obscuring the contact relationships.

Cg *amphibole metagabbro*.

Dark-greenish-gray, coarse-grained, massive, hornblende metagabbro. Mineralogy: plagioclase + hornblende + biotite + clinopyroxene + quartz; relict olivine and myrmekitic intergrowths of quartz in other minerals are characteristic. Geophysical signature: small circular areas marked by positive magnetic anomalies. Metagabbro intrudes Ta River Metamorphic Suite.

CZh *Holly Corner Gneiss* (Pavlides, 1980; 1990).

Dark- gray to black, fine- to medium-grained, strongly-foliated hornblende-biotite-rich gneiss. Mineralogy: hornblende + plagioclase + biotite + quartz + titanite; accessory minerals include zircon, epidote, microcline, chlorite; trace amounts of apatite, calcite, muscovite, and opaque minerals are present. Myrmekitic intergrowths are common.

Rocks of the Eastern Piedmont

PzYgr *granite gneiss* (Pavlides, 1990).

Fine- to medium-grained, light-gray to white granite to tonalite gneiss; composed of biotite, oligoclase, quartz, and porphyroblastic microcline, with accessory muscovite, epidote, titanite, and magnetite; hornblende occurs locally within diffuse compositional layering. Inclusions of biotite gneiss and amphibolite are present locally. Unit occurs as irregular lenticular to tabular masses within porphyroblastic biotite gneiss (Ymd).

PzYpm *quartzofeldspathic gneiss* (Bobyarchick and others, 1981).

Light-gray, fine- to coarse-grained, foliated, layered muscovite-bearing quartzofeldspathic gneiss; contains inter-calated quartz-muscovite schist. Mineralogy: quartz + plagioclase + microcline + garnet + muscovite + biotite.

Ya *amphibolite, amphibole gneiss, and schist*.

Melanocratic, fine- to coarse-grained, weakly to strongly foliated, irregularly layered amphibole-rich gneiss and schist. Mineralogy: hornblende + clinopyroxene + plagioclase + magnetite + biotite ± scapolite ± garnet ± quartz ± epidote. Geophysical signature: narrow, strike-elongate, positive magnetic anomaly. Lenses and layers of amphibolite and amphibole gneiss are interlayered with porphyroblastic garnet-biotite gneiss (Ymd). The mafic rocks constitute 50 percent or more of the section in a zone about 0.62 mile wide surrounding outcrop areas of State Farm gneiss (Ysf); farther away from the State Farm contact, lenses and layers of amphibolite and amphibole gneiss are more widely scattered, but are laterally persistent and outline map-scale structures (Marr, 1985). Amphibolite and interlayered biotite gneiss adjacent to the State Farm gneiss were named the Sabot amphibolite by Poland (1976), who characterized the formation as a tabular sheet 0.7 to 1.0 km thick. He and Goodwin (1970) interpreted these amphibolites as metamorphosed mafic volcanic or pyroclastic rocks. Glover and others (1989 and references therein) report a low-angle regional discordance between the base of the Sabot and the compositional layering in the underlying State Farm Gneiss.

Ymd *porphyroblastic garnet-biotite gneiss.*

Heterogeneous layered sequence is dominantly garnetiferous biotite gneiss and porphyroblastic gneiss, migmatitic in part, with subordinate interlayered amphibolite and amphibole gneiss (Ya), pelitic-composition gneiss, calcsilicate gneiss, biotite-hornblende-quartz-plagioclase gneiss, and garnetiferous leucogneiss. These lithologies contain amphibolite-facies metamorphic mineral assemblages consistent with rock chemistry. Farrar (1984) reports relict granulite-facies assemblages in some rocks. This unit underlies a wide area that surrounds the State Farm antiform (Poland, 1976; Reilly, 1980; Farrar, 1984) and two subsidiary antiforms to the northeast; the unit includes the Maidens gneiss and portions of the Sabot amphibolite of Poland (1976), the eastern gneiss complex and Boscobel granodiorite gneiss of Bobyarchick (1976), and the Po River Metamorphic Suite of Pavlides (1980). Poland (1976) and Reilly (1980) proposed that the Maidens gneiss and Sabot amphibolite were a Late Precambrian- to Early Paleozoic-age volcanic-sedimentary cover sequence unconformably overlying the State Farm gneiss. Farrar (1984) interpreted relict granulite-facies mineral assemblages to have equilibrated during Grenville-age regional metamorphism; this contributed to his conclusion that the Sabot and Maidens, in addition to the State Farm, are Grenville or pre-Grenville in age. Porphyroblastic garnet-biotite gneiss (Ymd) is intruded by rocks of the Carboniferous-age Falmouth Intrusive Suite (Pavlides, 1980).

Coastal Plain

al *alluvium (Holocene).*

Fine to coarse gravelly sand and sandy gravel, silt, and clay, light- to medium-gray and yellowish-gray. Deposited mainly in channel, point-bar, and flood plain environments; includes sandy deposits of narrow estuarine beaches, and mud, muddy sand, and peat in swamps and in fresh- and brackish-water marshes bordering tidewater rivers. Grades into colluvium along steeper

valley walls at margins of unit. Mostly Holocene but, locally, includes low-lying Pleistocene (?) terrace deposits. As much as 80 feet thick along major streams.

QTu *Quaternary and Tertiary deposits*, undifferentiated.
Tabb through Windsor Formations and alluvial/tidal prism deposits.

Qt *Tabb Formation, undifferentiated* (upper Pleistocene, Johnson, 1976).
Sand, silt, and peat of coast-parallel plains seaward of the Suffolk and Harpersville scarps, includes coeval terrace deposits along major river valleys west to Fall Line. Subdivided into three members (Johnson, 1976).

Qsh *Shirley Formation* (middle Pleistocene, Johnson and Berquist, 1989).
Light- to dark-gray, bluish-gray and brown sand, gravel, silt, clay, and peat. Constitutes surficial deposits of riverine terraces and relict bay mouth barriers and bay flood plains (altitude 35-45 feet) inset below depositional surfaces of the Chuckatuck Formation (Johnson and Peebles, 1984). Upper part of unit is truncated on the east by the Suffolk and Harpersville scarps; locally, lower part occurs east and west of scarps. Fluvial-estuarine facies comprises (1) a lower pebble to boulder sand overlain by (2) fine to coarse sand interbedded with peat and clayey silt rich in organic material, including *in-situ* tree stumps and leaves and seeds of cypress, oak, and hickory, which grades upward to (3) medium- to thick-bedded, clayey and sandy silt and silty clay. Marginal-matrix facies in lower James River and lowermost Rappahannock River areas is silty, fine-grained sand and sandy silt containing *Crassostrea virginica*, *Mulinia*, *Noetia*, *Mercenaria*, and other mollusks. *Astrangia* from lower Rappahannock River area has yielded a uranium-series age of 184,000 ± 20,000 yrs B.P. (Mixon and others, 1982). Thickness is 0 to 80 feet.

Qcc *Charles City Formation* (lower Pleistocene (?), Johnson and Berquist, 1989).
Light- to medium-gray and light-to dark-yellowish and reddish-brown sand, silt, and clay composing surficial deposits of riverine terraces and coast-parallel plains at altitudes of 70 to 80 feet. Unit is adjacent to, and inset below, the Windsor Formation and older deposits. Bay or shallow-shelf facies of the Charles City (Johnson and Peebles, 1984), present beneath flat to gently seaward-sloping plain in Suffolk area, includes a thin, basal, gravelly sand grading upward into fine- to medium-grained sand and an uppermost clayey and sandy silt; lower and middle parts of unit contain clay-lined, sand-filled burrows. Fluvial-estuarine facies in terrace remnants along major rivers consists of cross-bedded gravelly sand and clayey silt. Thickness is 0 to 55 feet, or more.

QTw *Windsor Formation* (lower Pleistocene or upper Pliocene, Coch, 1968).
Gray and yellowish- to reddish-brown sand, gravel, silt, and clay. Constitutes surficial deposits of extensive plain (altitude 85-95 feet.) seaward of Surry scarp and of coeval, fluvial-estuarine terraces west of scarp. Fining-upward sequence beneath plain consists of a basal pebbly sand grading upward into cross-bedded, quartzose sand and massive, clayey silt and silty clay; lower and upper parts of sequence were deposited, respectively, in shallow-marine or open-bay and restricted-bay or lagoonal environments. In terraces west of Surry scarp, fluvial-estuarine deposits comprise muddy, coarse, trough cross-bedded sand and gravel grading upward to sandy silt and clay. Thickness is 0 to 40 feet.

Tb1/Tb2 *Bacons Castle Formation* (upper Pliocene, Coch, 1965).

Gray, yellowish-orange, and reddish-brown sand, gravel, silt, and clay; constitutes surficial deposits of high plain extending from Richmond, eastward to the Surry scarp. Unit is subdivided into two members: Tb1, massive to thick-bedded pebble and cobble gravel grading upward into cross-bedded, pebbly sand and sandy and clayey silt, and Tb2, predominantly thin-bedded and laminated clayey silt and silty fine-grained sand. Tb2 is characterized by flaser, wavy, and lenticular bedding and rare to common clay-lined burrows including *Ophiomorpha nodosa*. Thickness is 0 to 70 feet.

Tc *Chesapeake Group* (upper Pliocene to lower Miocene, Darton, 1891).

Fine-to coarse-grained, quartzose sand, silt, and clay; variably shelly and diatomaceous, deposited mainly in shallow, inner- and middle-shelf waters. Ages of units based on studies of foraminiferal, nannofossil, diatom, and molluscan assemblages in Virginia and adjacent states (Andrews, 1988; Gibson, 1983; Gibson and others, 1980; Poag, 1989; Ward and Blackwelder, 1980; Ward and Krafft, 1984). Includes the following formations, from youngest to oldest:

Chowan River Formation (upper Pliocene, Blackwelder, 1981).

Gray to dusky blue-green sand, fine- to medium-grained, clayey and silty, commonly very shelly; grades laterally into laminated, silty clay and upward into cross-bedded, biofragmental sand, clayey silt, and silty clay. Discontinuous pebbly to bouldery sand at very irregular base of unit. Mollusks include *Glycymeris hummi*, *Noetia carolinensis*, and *Carolinapecten eboreus bertiensis*. Thickness is 0 to 50 feet. Recognized only in southeasternmost Virginia and North Carolina.

Yorktown Formation (lower upper Pliocene to lower Pliocene, Clark and Miller, 1906).

Bluish-gray and brownish-yellow sand, fine- to coarse-grained, in part glauconitic and phosphatic, commonly very shelly, interbedded with sandy and silty blue-gray clay. In lower York and James River basins, unit includes cross-bedded shell hash. Mollusks include *Glycymeris subovata*, *Chesapecten jeffersonius*, *Chesapecten madisonius*, *Mercenaria tridacnoides*, *Panopea reflexa*. Coarse-grained sand and gravel facies of the Yorktown in up dip areas is mapped separately as unit psg. Thickness is 0 to 150 feet.

Eastover Formation (upper Miocene, Ward and Black-welder, 1980).

Dark-gray to bluish-gray, muddy sand, very fine to fine, micaceous, interbedded with sandy silt and clay. Lower part of unit is dominantly medium- to very-thin-bedded and laminated silt and clay interbedded with very-fine sand, lenticular and wavy bedding common; upper part is mainly very-fine- to fine-grained sand containing abundant clay laminae. Typical mollusks include *Chesapecten middlesexensis*, *Marvacrassatella surryensis*, *Glossus fraterna*. Thickness is 0 to 270 feet.

St. Marys Formation (upper and middle Miocene, Shattuck, 1902).

Bluish- to pinkish-gray, muddy, very-fine sand and sandy clay-silt, locally abundantly shelly. *Chesapecten santamaria*, *Buccinofusus parilis*, and *Ecphora gardnerae* are characteristic mollusks. Occurs northeast of Mattaponi River. Thickness is 0 to 40 feet.

Choptank Formation (middle Miocene, Shattuck, 1902).

Olive-gray sand, fine to very-fine, clayey and silty, shelly, and diatomaceous clay-silt; commonly forms fining-upward sequences. Mollusks include *Chesapecten nefrens*, *Mercenaria cuneata*, *Ecphora meganae*. Thickness is 0 to 50 feet.

Calvert Formation (middle and lower Miocene, Shattuck, 1902).

Commonly consists of 2 to 7 fining-upward sequences. Each sequence includes a light- to dark-olive-gray basal sand, very fine to fine, clayey and silty, very sparsely to abundantly shelly; grades upward to sandy, diatomaceous clay-silt and diatomite. Typical mollusks include *Chesapecten coccymelus*, *Crassatella melinus*, *Ecphora tricostata*. hickness is 0 to 600 feet.

psg *Pliocene sand and gravel*.

Interbedded yellowish-orange to reddish-brown gravelly sand, sandy gravel, and fine to coarse sand, poorly to well-sorted, cross-bedded in part, includes lesser amounts of clay and silt in thin to medium beds. Commonly caps drainage divides (altitude 250-170 feet) in western part of Coastal Plain. Lower part of unit, showing flaser and lenticular bedding and containing rare to abundant *Ophiomorpha nodosa*, represents deposition in marginal-marine environments and is, in part, a near-shore equivalent of the more down dip, marine facies of the Yorktown Formation. In the northern part of the Coastal Plain, the more poorly sorted and less cleanly washed upper part of unit, which lacks fossils, comprises fluvial-deltaic sediments that prograded eastward across the shelf during a regressive phase of the Yorktown. To the south, the upper part of unit is massively bedded clayey sand in places containing heavy mineral concentrations that average 8 percent or more; the sands are near shore, beach and dune origin; interstitial clay was derived, in part, from *in-situ* weathering of feldspar sand. Thickness is 0 to 50 feet.

msg *Miocene sand and gravel.*

Fine- to coarse-grained sand, sandy gravel, silt, and clay, gray to light-yellowish-gray, commonly oxidized to yellowish-orange and yellowish-brown; pebbles and cobbles are deeply etched. Commonly caps interfluves at northwestern edge of Coastal Plain and constitutes thin Coastal Plain outliers in easternmost Piedmont where deposits directly overlie weathered crystalline rocks. In part, may represent a fluvial to marginal-marine facies of the Choptank Formation. Thickness is 0 to 30 feet.

Tl *Lower Tertiary deposits* (Oligocene, Eocene, and Paleocene).

Mostly fine- to coarse-grained glauconitic quartz sand and clay-silt, shelly in part; includes lesser amounts of sandy limestone and limey sand. In outcrop, unit comprises the Pamunkey Group (Brightseat, Aquia, Marlboro, Nanjemoy, and Piney Point Formations) and the Old Church Formation. In subsurface, unit includes Eocene and Oligocene strata not included in the Pamunkey and Old Church. Ages of formational units based on foraminiferal, nannofossil, dinocyst, pollen, and molluscan studies (Frederiksen, 1979; Gibson and others, 1980; Gibson and Bybell, 1984; Edwards, 1984, 1989; Edwards and others, 1984; Poag, 1989; Ward, 1985; Ward and Krafft, 1984). Stratigraphic sections vary widely, comprising one or more of the following formations:

Old Church Formation (Ward, 1985) and unnamed glauconitic sands (upper Oligocene).

In inner and middle Coastal Plain, unit is 0 to 5 feet of olive-gray, fine- to coarse-grained, shelly, very sparsely glauconitic quartz sand of the Old Church Formation; typical fossils include *Anomia ruffini*, *Lucina sp.*, and *Mercenaria capax*. In subsurface of outer Coastal Plain, unit includes about 45 feet of dark-olive-gray to greenish-black glauconite sand with lesser amounts of quartz; sand has olive-brown clay-silt matrix.

Lower Oligocene beds.

Olive-gray to grayish-olive sand, very-fine-grained, clayey and silty, micaceous, glauconitic; coarsens upward to a very-fine- to fine-grained sand. Unit is 0 to 50 feet thick; identified only in subsurface of Eastern Shore area (Exmore, core hole, R. B. Mixon and D. S. Powars, personal communication).

Chickahominy Formation (upper Eocene, Cushman and Cederstrom, 1945).

Predominantly olive-gray clayey silt and silty clay, very compact, glauconitic, micaceous, contains abundant finely crystalline iron sulfide. Coarsens downward to a very-fine- to fine-grained sand, pebbles at base. Rare fragmental shell, microfossils very abundant. Thickness is 0 to 100 feet; present in subsurface of southeastern Virginia.

Piney Point Formation (middle Eocene, Otton, 1955).

Olive-gray and grayish-olive-green, glauconitic quartz sand, medium-to coarse-grained, poorly sorted, contains scattered quartz pebbles, interbedded with carbonate-cemented sand and moldic limestone. Unit is characterized by large, calcitic shells of the oyster *Cubitostrea sellaeformis*, a middle Eocene marker. Aragonitic mollusks are generally leached, leaving only molds and casts. Thickness is 0 to 60 feet.

Nanjemoy Formation (lower Eocene, Clark and Martin, 1901).

Dark-olive-gray, greenish-gray, and olive-black glauconitic quartz sand, fine- to coarse-grained, very clayey and silty, intensely burrowed, sparsely to abundantly shelly, interbedded with sandy clay-silt. Sand in upper part of unit is less clayey, very micaceous, and contains scattered quartz pebbles. Typical mollusks include *Venericardia potapacoensis*, *Venericardia ascia*, and *Macrocallista subimpressa*. Unit is 0 to 140 feet thick.

Marlboro Clay (lower Eocene (?) and upper Paleocene, Clark and Martin, 1901).

Light-gray, pinkish-gray, and reddish-brown kaolinitic clay, massively bedded to laminated, interbedded with lesser amounts of laminated and ripple cross-laminated silt and very-fine-grained sand. Contains rare molds of small mollusks and arenaceous foraminifera. Thickness is 0 to 30 feet.

Aquia Formation (upper Paleocene, Clark and Martin, 1901).

Light- to dark-olive gray, glauconitic quartz sand, fine- to coarse-grained, clayey and silty, thick- to massively bedded, sparsely to abundantly shelly. Lower part of unit is more poorly sorted and more calcareous than upper part and contains a few thin to medium beds of olive-gray, white, and pale greenish-yellow limestone. Upper part of unit is moderately well sorted and characterized by thin beds of the large, high-spired gastropod *Turritella mortoni*. Other common mollusks include *Cucullaea gigantea*, *Ostrea sinuosa*, and *Crassatellites alaeformis*. Thickness is 0 to 130 feet.

Brightseat Formation (lower Paleocene, Bennett and Collins, 1952).

Olive-gray to olive-black, micaceous quartz sand, fine- to very fine-grained, clayey and silty, variably glauconitic. Thickness is 0 to 20 feet.

Kp *Potomac Formation* (Lower and Upper(?) Cretaceous, McGee, 1886).

Light-gray to pinkish- and greenish-gray quartzo-feldspathic sand, fine- to coarse-grained, pebbly, poorly sorted, commonly thick-bedded and trough cross-bedded. Sand is interbedded with gray to green, massive to thick-bedded sandy clay and silt, commonly mottled red or reddish-brown. Includes lesser amounts of clay-clast conglomerate and thin-bedded to laminated, carbonaceous clay and silt. In the inner Coastal Plain, unit was deposited mainly in fluvial-deltaic environments, intertongues eastward with thin glauconitic sands of shallow-shelf origin. Spore and pollen assemblages and leaf impressions of ferns and cycads indicate an Early Cretaceous age (Doyle and Robbins, 1977). In some down dip areas, uppermost part of unit may be of earliest Late Cretaceous age. Thickness ranges from a featheredge at western limit of outcrop to more than 3500 feet in subsurface of outermost Coastal Plain.

MINERAL RESOURCES AND INDUSTRIES

As part of this Comprehensive Plan update, County Planning efforts as they relate to Natural Resources have been enhanced to gain a better understanding of available mineral resources and opportunities they present, their value and location. Proactively considering such resources as part of land use planning and economic development efforts expand upon the planning scope and vision established in prior Comprehensive Plans. Land use planning and project approvals that conflict with the fixed geographic location of valued mineral resources effectively degrades the value of such resource potential due to lack of consideration, dismissing the potential economic, technological, social impacts value of available raw materials. The absence of planning to consider subgrade resources when land use and development above grade are planned and approved "leaves mineral resources on the table" unable to be utilized, trapped below a land use vision that my conflict or may not have considered the subgrade resources present.

Efforts to plan with a larger emphasis, accommodation and consideration of mineral resources can put the County in an advantageous leadership position early on as efforts are made to enhance sourcing of raw materials from domestic locations, and the opportunities and growth of economic value associated with increased demands from emerging and future technologies.

The Virginia Department of Mines, Minerals, and Energy Division of Geology and Mineral Resources (DMME) have provided insights into Mining, Mineral Resources and Industries within Spotsylvania County, as follows:

The availability of mineral resources within Spotsylvania County limits offer exceptional opportunities. The County overlaps two geologic provinces, each containing a diversity of mineral resources that can supply basic construction materials well into the future. A map of Spotsylvania County's Geology and Mineral Resources can be found within this Appendix for reference.

Most of Spotsylvania County is in the Piedmont province and is under-laid by igneous and metamorphic rocks. The easternmost portion of the County is in the Coastal Plain province and is predominantly underlain by sand, gravel and clay strata that are deposited on the rocks similar to those in the Piedmont portion.

In addition, and as a consequence of the geologic diversity, there are many other potential growth opportunities with deposits of industrial clays, natural agricultural supplements, and metallic resources. Perhaps most economically advantageous and considerate of new and emerging technologies and

industries the presence of "critical elements" such as graphite, tantalum, niobium, rare earth elements, among others, will be key materials for energy production and storage in the future. Federal and State resource analysts (Including representatives of the Virginia Department of Mines, Minerals and Energy) recognize the urgent need to identify new domestic resources to reduce the present reliance on foreign imports to supply these materials. Per DMME, "we are really just beginning to do these assessments and Spotsylvania looks as promising as any County in Virginia."

The positive aspects of jobs creation and economic growth opportunities that local mining operations provide are often overshadowed by the negative perceptions of unmitigated surface disturbance, noise, environmental contamination, etc. Much of the negative perception is based on antiquated mining practices and legacy sites.

Summary of Mineral Resources and Mining Industries in Spotsylvania County, Virginia

The DMME regulates five mine permits with active mineral mining operations in Spotsylvania County (See Table 2). The total land acreage under permit is about 983 acres. Three of the permitted mines produce sand and gravel for construction aggregate. The mines are located in sedimentary strata mapped as the Quaternary age Charles City Formation (Qcc) and unnamed units of Neogene age (Nsg). The other two permitted operations quarry granitic rocks for crushed stone and also produce manufactured sand that is a by-product of rock crushing.

MINERAL RESOURCES AND INDUSTRIES IN SPOTSYLVANIA COUNTY, VIRGINIA
TABLE 2: Active Mining Operations in 2016

A	B	C	D	E	F	G	H	I	J	K
COMPANY NAME	PERMIT ID	MINE NAME	MINE TYPE	COMMODITY/PRODUCT	ORIGINAL PERMIT DATE	PERMIT ACRES	DISTURBED ACRES	RECLAIMED ACRES	LONGITUDE	LATITUDE
LUCK STONE CORPORATION	08203AC	SPOTSYLVANIA PLANT	QUARRY	GRANITE / CRUSHED STONE	5/29/2002	385.6	326.9	0.0	-77.55083	38.21111
KENT BROTHERS LLC	13413AB	THE PITT	OPEN PIT	GRAVEL	8/19/1997	10.2	10.2	0.3	-77.47192	38.21951
VULCAN CONSTRUCTION MATERIALS LP	90294AC	NEW POST S&G	QUARRY	SAND AND GRAVEL	1/22/2004	50.7	50.7	3.4	-77.39779	38.24142
LUCK STONE CORPORATION	90440AA	MASSAPONAX PLANT	QUARRY	GRANITE / CRUSHED STONE	7/17/2002	229.6	139.4	0.0	-77.53059	38.18405
BARDON, INC	90468AB	FULKS PIT	OPEN PIT	SAND AND GRAVEL	2/16/2012	306.4	169.3	0.0	-77.38420	38.23237

Data Sources:
Columns A-K: Virginia Department of Mines, Minerals, and Energy - Division of Mineral Mining
Note1: Latitude (N) and Longitude (W) in decimal degrees; North American Datum 1983 (NAD 83)
Prepared by:
Virginia Department of Mines, Minerals, and Energy - Division of Geology and Mineral Resources
Date of this report:
9/7/2017

In 2016, mines in the County produced a total of about 1.6 million short tons of aggregate with an estimated value of $23.8 million (See Table 3). The value of mineral mine products has increased by almost 22 percent from 2014 when the total value was estimated to be about $19.6 million (Table 3). Employment in the mines has been relatively steady since 2014 (See Table 4). There were a total of 37 workers directly employed by the mining companies in 2016 earning approximately $2 million in wages (Table 4). Independent contractors and service providers employed by the mines are not included in the employment and wage information.

MINERAL RESOURCES AND INDUSTRIES IN SPOTSYLVANIA COUNTY, VIRGINIA
TABLE 3: Summary of Annual Production Reported by Mining Operations and Estimated Value, 2014-2016

A	B	C	D	E	F	G	H
COMPANY NAME	PERMIT ID	MINE NAME	MINE TYPE	COMMODITY/PRODUCT	YEAR	TONNAGE (short tons)	MINERAL VALUE (x $1000)
LUCK STONE CORPORATION	08203AC	SPOTSYLVANIA PLANT	QUARRY	GRANITE / CRUSHED STONE	2016	1,228,341	
KENT BROTHERS LLC	13413AB	THE PITT	OPEN PIT	GRAVEL	2016	1,071	
VULCAN CONSTRUCTION MATERIALS LP	90294AC	NEW POST S&G	QUARRY	SAND AND GRAVEL	2016	0	
LUCK STONE CORPORATION	90440AA	MASSAPONAX PLANT	QUARRY	GRANITE / CRUSHED STONE	2016	0	
BARDON, INC.	90468AB	FULKS PIT	OPEN PIT	SAND AND GRAVEL	2016	407,864	
SPOTSYLVANIA TOTAL					**2016**	**1,637,276**	**$23,770**
LUCK STONE CORPORATION	08203AC	SPOTSYLVANIA PLANT	QUARRY	GRANITE / CRUSHED STONE	2015	1,045,994	
KENT BROTHERS LLC	13413AB	THE PITT	OPEN PIT	GRAVEL	2015	27,362	
VULCAN CONSTRUCTION MATERIALS LP	90294AC	NEW POST S&G	QUARRY	SAND AND GRAVEL	2015	0	
LUCK STONE CORPORATION	90440AA	MASSAPONAX PLANT	QUARRY	GRANITE / CRUSHED STONE	2015	0	
BARDON, INC.	90468AB	FULKS PIT	OPEN PIT	SAND AND GRAVEL	2015	427,809	
SPOTSYLVANIA TOTAL					**2015**	**1,501,165**	**$20,299**
LUCK STONE CORPORATION	08203AC	SPOTSYLVANIA PLANT	QUARRY	GRANITE / CRUSHED STONE	2014	885,469	
KENT BROTHERS LLC	13413AB	THE PITT	OPEN PIT	GRAVEL	2014	134,342	
VULCAN CONSTRUCTION MATERIALS LP	90294AC	NEW POST S&G	QUARRY	SAND AND GRAVEL	2014	0	
LUCK STONE CORPORATION	90440AA	MASSAPONAX PLANT	QUARRY	GRANITE / CRUSHED STONE	2014	0	
BARDON, INC.	90468AB	FULKS PIT	OPEN PIT	SAND AND GRAVEL	2014	527,988	
SPOTSYLVANIA TOTAL					**2014**	**1,547,799**	**$19,552**

Data Sources:
Columns A-G: Virginia Department of Mines, Minerals, and Energy - Division of Mineral Mining
Column H: The Virginia Division of Geology and Mineral Resources estimated the mineral value using reported tonnage data and commodity unit average values for Virginia published annually in USGS Minerals Yearbook (http://minerals.usgs.gov/minerals/pubs/commodity), and USGS Mineral Industry Surveys (http://minerals.usgs.gov/minerals/pubs/commodity/mis.html). Unit values are subject to revision and may not be available for all commodities.
Prepared by:
Virginia Department of Mines, Minerals, and Energy - Division of Geology and Mineral Resources
Date of this report:
9/7/2017

MINERAL RESOURCES AND INDUSTRIES IN SPOTSYLVANIA COUNTY, VIRGINIA
TABLE 4: Summary of Workers, Hours, and Wages for Mining Operations, 2014-2016

A	B	C	D	E	F	G	H	I	J
			PRODUCTION		OFFICE			TOTAL	
COMPANY NAME	PERMIT ID	YEAR	WORKERS	HOURS	WORKERS	HOURS	WORKERS	HOURS	WAGES (x $1000)
LUCK STONE CORPORATION	08203AC	2016	23	54,810	0	0	23	54,810	
KENT BROTHERS LLC	13413AB	2016	1	1,120	1	10	2	1,130	
VULCAN CONSTRUCTION MATERIALS LP	90294AC	2016	0	0	0	0	0	0	
LUCK STONE CORPORATION	90440AA	2016	0	0	0	0	0	0	
BARDON, INC.	90468AB	2016	8	11,853	4	5,815	12	17,668	
SPOTSYLVANIA TOTAL		**2016**	**32**	**67,783**	**5**	**5,825**	**37**	**73,608**	**$1,977**
LUCK STONE CORPORATION	08203AC	2015	22	53,117	0	0	22	53,117	
KENT BROTHERS LLC	13413AB	2015	0	0	0	0	0	0	
VULCAN CONSTRUCTION MATERIALS LP	90294AC	2015	0	0	0	0	0	0	
LUCK STONE CORPORATION	90440AA	2015	0	0	0	0	0	0	
BARDON, INC.	90468AB	2015	9	11,413	4	5,537	13	16,950	
SPOTSYLVANIA TOTAL		**2015**	**31**	**64,530**	**4**	**5,537**	**35**	**70,067**	**$1,977**
LUCK STONE CORPORATION	08203AC	2014	22	49,565	0	0	22	49,565	
KENT BROTHERS LLC	13413AB	2014	2	1,535	1	40	3	1,575	
VULCAN CONSTRUCTION MATERIALS LP	90294AC	2014	0	0	0	0	0	0	
LUCK STONE CORPORATION	90440AA	2014	0	0	0	0	0	0	
BARDON, INC.	90468AB	2014	7	15790	2	3616	9	19,406	
SPOTSYLVANIA TOTAL		**2014**	**31**	**66,890**	**3**	**3,656**	**34**	**70,546**	**$1,924**

Data Sources:
Columns A-J: Virginia Department of Mines, Minerals, and Energy - Division of Mineral Mining
Note 1: In accordance with 45.1-161.292:35(E) of the Mineral Mine Safety Laws of Virginia, wage data has been withheld (W) to protect confidential information reported by individual permit holders. The annual wage data shown is aggregated for all permits.
Note 2: Number of employees, hours, and wages reported by independent contractors working on the listed permits is not included.
Prepared by:
Virginia Department of Mines, Minerals, and Energy - Division of Geology and Mineral Resources
Date of this report:
9/7/2017

Per DMME, Spotsylvania County occupies portions of two geologic provinces with a wide variety of mineral and energy resources utilized in the past and present, and potentially available for development

in the future. In the northeastern quarter of the County, unconsolidated sediments are part of Virginia's Coastal Plain while the remainder of the County is underlain by crystalline rocks of the Piedmont province. The eastern half of the County contains sand and gravel, clay and granite resources used for construction aggregate. Sand and gravel deposits occur along Massaponax Creek within the Potomac Formation (Kp), and in the middle of the county hosted in the Ta River Metamorphic Suite (Ta). The central and western portions of the County are within the Piedmont physiographic province. Here, northeast-trending bands of rocks mapped as the Mine Run Complex and the Chopawamsic Formation (Ccv) host gold, copper, iron and zinc deposits (See Table 5). Mining and exploration of these metallic deposits dates back to the early 1800s; the first occurrence of lode gold in Virginia was reported in 1806 at the Whitehall mine located near Shady Grove Church (Watson 1907). This and other important historic gold mines including the Goodwyn and Mitchell mines are located in Virginia's gold-pyrite belt (Lonsdale, 1927).

Geologic maps of Spotsylvania County are available in reports from the U.S. Geological Survey (USGS) including mapping at 1:100,000 scale (Mixon et al., 2000) and portions of the county at 1:24,000 scale (Bobyarchick, et al., 1981; Weir, et al., 1985). These reports are available for free download on the USGS website, **HERE**.

MINERAL RESOURCES AND INDUSTRIES IN SPOTSYLVANIA COUNTY, VIRGINIA
TABLE 5: Summary of Historic Mineral Extraction and Processing Sites and Mineral Occurrences

A	B	C	D	E	F	G	H
POINT ID	QUADRANGLE NAME	PRIMARY COMMODITY	LATITUDE	LONGITUDE	LOCATION TYPE	LOCATION NAME	SITE REFERENCE(S)
169B-101	Guinea	sand and gravel	38.23077	-77.49969	pit		
169B-102	Guinea	sand and gravel	38.22878	-77.49791	pit		
169B-103	Guinea	sand and gravel	38.22729	-77.49387	pit		
169B-104	Guinea	sand and gravel	38.24096	-77.47316	pit		
169B-105	Guinea	sand and gravel	38.24097	-77.47314	pit		
169B-106	Guinea	sand and gravel	38.23706	-77.47412	pit		
169B-107	Guinea	sand and gravel	38.23998	-77.46848	pit		
169B-108	Guinea	sand and gravel	38.23835	-77.46756	pit		
169B-109	Guinea	sand and gravel	38.23930	-77.46507	pit		
169B-110	Guinea	sand and gravel	38.23711	-77.46629	pit		
169B-111	Guinea	sand and gravel	38.23805	-77.46349	pit		
169B-112	Guinea	sand and gravel	38.23762	-77.45953	pit		
169B-113	Guinea	sand and gravel	38.23082	-77.46152	pit		
169B-201	Guinea	clay	38.24184	-77.42049	sample with potential use		
169B-202	Guinea	clay	38.22206	-77.45483	sample with potential use		
169B-203	Guinea	sand and gravel	38.23310	-77.44881	pit	K. & K. Partnership	
169B-204	Guinea	sand and gravel	38.23315	-77.44672	pit		
169B-205	Guinea	sand and gravel	38.23235	-77.44442	pit		
169B-206	Guinea	sand and gravel	38.22858	-77.43734	pit		
169B-207	Guinea	sand and gravel	38.22761	-77.43670	pit		
169B-208	Guinea	sand and gravel	38.22777	-77.43313	pit		
169B-209	Guinea	sand and gravel	38.22816	-77.42136	pit		
169B-210	Guinea	sand and gravel	38.23803	-77.43995	pit		
169B-301	Guinea	sand and gravel	38.22794	-77.41618	pit		
169B-302	Guinea	sand and gravel	38.22888	-77.41241	pit		
169B-303	Guinea	sand and gravel	38.23376	-77.41001	pit	Haney & Adair Trucking	
169B-304	Guinea	sand and gravel	38.24949	-77.40483	pit		
169B-305	Guinea	sand and gravel	38.24910	-77.40016	pit		
169B-306	Guinea		38.24397	-77.41228			
169B-307	Guinea	sand and gravel	38.24959	-77.41145	pit	Tarmac - Mid Atlantic, New Post Plant	
169B-308	Guinea	sand and gravel	38.24967	-77.40678	pit	Tarmac - Mid Atlantic, New Post Plant	
169B-401	Guinea	gravel	38.18251	-77.47044	pit	Franconia Gravel Company	
169B-402	Guinea	sand and gravel	38.17567	-77.48824	pit		
169B-403	Guinea	sand and gravel	38.17509	-77.48601	pit		
169B-404	Guinea	sand and gravel	38.17401	-77.48601	pit		
169B-405	Guinea		38.19466	-77.49735	processing plant	Exposaic Industries, Inc. of Virginia	
169B-701	Guinea	sand and gravel	38.16429	-77.47621	pit		
169B-702	Guinea	sand and gravel	38.15950	-77.47832	pit		
169B-703	Guinea	sand and gravel	38.15799	-77.48118	pit		
169B-801	Guinea	sand and gravel	38.13213	-77.45660	pit		
169B-802	Guinea	sand and gravel	38.13709	-77.45085	pit	Caroline S. & G.	
169B-803	Guinea	sand and gravel	38.14107	-77.44312	pit	L. S. Sorber	
169B-804	Guinea	sand and gravel	38.12766	-77.43402	pit		
169B-805	Guinea	sand and gravel	38.12609	-77.43346	pit		
170A-301	Spotsylvania	sand and gravel	38.23268	-77.53632	pit	W. L. Hicks	
170A-302	Spotsylvania	sand and gravel	38.22589	-77.54002	pit	Leavells Shop Corporation	
170A-303	Spotsylvania	sand and gravel	38.22596	-77.50430	pit	CAD Association; Ltd. Partners	
170A-401	Spotsylvania	sand and gravel	38.19196	-77.62457	pit	J. S. Shelton Trucking Company	
170A-501	Spotsylvania	gravel	38.20592	-77.56253	crushed stone quarry	Martin Marietta Aggregates	
170A-601	Spotsylvania	sand and gravel	38.18987	-77.52782	pit	Dickerson Brothers	
170A-602	Spotsylvania	sand and gravel	38.20627	-77.51274	pit	W. L. Hicks	
170B-101	Brokenburg	gold	38.23912	-77.73834	shaft	Whitehall	Sweet et al (1989), Sweet and Trimble (1983), Credner (1868), Cline (1921), Sweet (1980), Sweet (1971), Luttrell (1966), Watson (1907), Hotchkiss (1881), Silliman (1837)
170B-101	Brokenburg	gold	38.23913	-77.73840	shaft	Whitehall	
170B-102	Brokenburg	gold	38.24738	-77.72768	prospect pit	Randolph	Sweet and Trimble (1983), Cline et al (1921), Sweet (1980), Luttrell (1966), Pardee and Park (1948)
170B-102	Brokenburg	gold	38.24739	-77.72776	prospect	Randolph	
170B-401	Brokenburg	gold	38.20810	-77.74728	prospect pit	Powell's	Sweet and Trimble (1983), Sweet (1980)
170B-401	Brokenburg	gold	38.20813	-77.74731	prospect	Powell's	
170B-601	Brokenburg	sand and gravel	38.17986	-77.63953	pit	Marion S. Copes, Jr., Inc.	
170B-901	Brokenburg	sand and gravel	38.15519	-77.65089	pit	Bishop & Settle Construction Company, Inc.	
170C-401	Lake Anna East	clay	38.07015	-77.74046	sample with potential use		
170D-201	Ladysmith	sand and gravel	38.12220	-77.55094	pit	Stanley Construction Company	
171A-301	Belmont	gold	38.24897	-77.75796	prospect pit	Beazely	Sweet and Trimble (1983), Cline et al (1921), Sweet (1980), Luttrell (1966)

MINERAL RESOURCES AND INDUSTRIES IN SPOTSYLVANIA COUNTY, VIRGINIA
TABLE 5: Summary of Historic Mineral Extraction and Processing Sites and Mineral Occurrences

A POINT ID	B QUADRANGLE NAME	C PRIMARY COMMODITY	D LATITUDE	E LONGITUDE	F LOCATION TYPE	G LOCATION NAME	H SITE REFERENCE(S)
171A-301	Belmont	gold	38.24898	-77.75791	prospect	Beazely	Sweet et al (1989), Sweet and Trimble (1983), Sweet et al (1989), Cline et al (1921), Sweet (1980), Lutrell (1966)
171A-302	Belmont	gold	38.21101	-77.76265	open pit	Roney	
171A-302	Belmont	gold	38.21102	-77.76259	quarry	Roney	
171A-303	Belmont	gold	38.20967	-77.76167	quarry	Roney	
171A-303	Belmont	gold	38.20969	-77.76174	open pit	Roney	Sweet et al (1989), Sweet and Trimble (1983), Sweet et al (1989), Cline et al (1921), Sweet (1980), Lutrell (1966)
171A-501	Belmont	zinc	38.17607	-77.79765	shaft	Valzinco	Sweet et al (1989), Pavlides et al (1982), Grosh (1949), Poole (1974), Luttrell (1966)
171A-501	Belmont	zinc	38.17607	-77.79768	shaft	Valzinco	
171A-601	Belmont	gold	38.19998	-77.77483	prospect pit	Rawlings	Sweet and Trimble (1983), Cline et al (1921)
171A-601	Belmont	gold	38.19999	-77.77480	prospect	Rawlings	
171A-602	Belmont	gold	38.19770	-77.77744	open pit	New Grindstone	Sweet et al (1989), Sweet (1980), Sweet and Trimble (1983), Cline et al (1921), McCaskey (1911), McCaskey (1912)
171A-602	Belmont	gold	38.19771	-77.77739	quarry	New Grindstone	
171A-603	Belmont	gold	38.19421	-77.76582	quarry	Grindstone (Hill)	
171A-603	Belmont	gold	38.19421	-77.76589	open pit	Grindstone (Hill)	Sweet et al (1989), Sweet and Trimble (1983), Cline et al (1921), Luttrell (1966), McCaskey (1911), McCaskey (1912), Sweet (1980)
171A-604	Belmont	gold	38.19358	-77.77985	prospect	Prospect B	
171A-604	Belmont	gold	38.19361	-77.77988	prospect pit	prospect pit B	Sweet and Trimble (1983)
171A-605	Belmont	gold	38.18490	-77.75812	prospect	Johnston's	
171A-605	Belmont	gold	38.18499	-77.75817	prospect pit	Johnston's	Sweet and Trimble (1983), Sweet (1980)
171A-606	Belmont	gold	38.17499	-77.78159	prospect	Mitchell	
171A-606	Belmont	gold	38.17508	-77.78165	open pit	Mitchell	Sweet and Trimble (1983), Cline et al (1921), Sweet (1980), Pardee and Park (1948), Watson (1907)
171A-801	Belmont	copper	38.15994	-77.80093	prospect pit	Marva	Sweet et al (1989), Cline et al (1921), Luttrell (1966)
171A-801	Belmont	copper	38.15996	-77.80096	prospect	Marva	
171A-802	Belmont	gold	38.14203	-77.80634	quarry	Stajar's (Starrs)	
171A-802	Belmont	gold	38.14208	-77.80638	open pit	Stajar's (Starrs)	Sweet and Trimble (1983), Morrill (1972), Sweet (1980)
171A-803	Belmont	gold	38.13956	-77.80659	quarry	Goodwyn	
171A-803	Belmont	gold	38.13957	-77.80661	open pit	Goodwyn	Sweet and Trimble (1983), Cline et al (1921), Sweet (1980), Luttrell (1966), Watson (1907), Hotchkiss (1881)
171A-804	Belmont	gold	38.13784	-77.80807	open pit	Goodwyn	Sweet and Trimble (1983), Cline et al (1921), Sweet (1980), Luttrell (1966), Watson (1907), Hotchkiss (1881)
171A-804	Belmont	gold	38.13784	-77.80810	quarry	Goodwyn	
171A-805	Belmont	gold	38.13942	-77.80394	quarry	Knapp	
171A-805	Belmont	gold	38.13946	-77.80399	open pit	Knapp	Sweet and Trimble (1983), Sweet (1980), Anonymous (1884)
171D-301	Lake Anna West	N/A	38.08945	-77.78703	furnace	Fredericksville Iron Furnace (Gov. Spotswood)	NONE
171D-301	Lake Anna West	iron	38.08946	-77.78700	furnace	Fredericksville Iron Furnace	
182C-701	Fredericksburg	sand and gravel	38.27409	-77.49319	pit	Alfred Ventura	
182C-702	Fredericksburg	sandstone	38.29143	-77.47935	dimension stone quarry	Aquia Sandstone	
182C-703	Fredericksburg	gravel	38.28685	-77.47842	pit	W. C. Spratt, Inc.	
182C-805	Fredericksburg	sand and gravel	38.27275	-77.43842	pit	Massaponax Sand & Gravel	
182C-806	Fredericksburg	sand and gravel	38.25462	-77.42331	pit	Massaponax Sand & Gravel	
182C-901	Fredericksburg	sand and gravel	38.25361	-77.41068	pit	Tarmac - New Post Plant	
182C-902	Fredericksburg	sand and gravel	38.25076	-77.40730	pit	Tarmac - New Post Plant	
182C-903	Fredericksburg	sand and gravel	38.25132	-77.40436	pit	Tarmac - New Post Plant	
183C-301	Chancellorsville	gold	38.33963	-77.65681	prospect pit	Hunting Run	Sweet (1980), Sweet and Trimble (1983), Lonsdale (1927)
183C-302	Chancellorsville	gold	38.35560	-77.63282	prospect pit	Brinton	Sweet (1980), Sweet and Trimble (1983), Lonsdale (1927), Pardee and Park (1948)
183C-501	Chancellorsville	gold	38.30978	-77.66712	prospect pit	prospect pit A	Sweet (1980), Sweet and Trimble (1983)
183C-601	Chancellorsville	iron	38.31291	-77.62734	open pit	unknown	NONE
183C-602	Chancellorsville	iron	38.31534	-77.63002	open pit	unknown	NONE
183C-701	Chancellorsville	gold	38.27992	-77.71914	prospect pit	Marsden	Sweet (1980), Sweet and Trimble (1983), Cline et al (1921), Luttrell (1966)

MINERAL RESOURCES AND INDUSTRIES IN SPOTSYLVANIA COUNTY, VIRGINIA
TABLE 5: Summary of Historic Mineral Extraction and Processing Sites and Mineral Occurrences

A POINT ID	B QUADRANGLE NAME	C PRIMARY COMMODITY	D LATITUDE	E LONGITUDE	F LOCATION TYPE	G LOCATION NAME	H SITE REFERENCE(S)
183C-801	Chancellorsville	gold	38.26666	-77.68121	prospect pit	Quaker	Sweet (1980), Sweet and Trimble (1983), Pardee and Park (1948), Cline et al (1921), Luttrell (1966)
183C-901	Chancellorsville	gold	38.28869	-77.65311	prospect pit	Furnace	Sweet (1980), Sweet and Trimble (1983)
183C-902	Chancellorsville	N/A	38.28864	-77.64860	furnace	Catherine Furnace	NONE
183D-114	Salem Church	gold	38.35710	-77.62146	shaft	United States	Sweet et al (1989), Sweet (1980), Sweet and Trimble (1983), Maury (1837), Pardee and Park (1948), Lonsdale (1927), Silliman (1837), Watson (1907), Park (1936), Credner (1868), Luttrell (1966)
183D-115	Salem Church	zinc	38.34650	-77.61070	prospect pit	Pruitt #4	Sweet et al (1989), Luttrell (1966)
183D-202	Salem Church	gold	38.34322	-77.57607	open pit	Ramsey	Sweet (1980), Sweet and Trimble (1983), Lonsdale (1927), Cline, Watson and Wright (1921), Luttrell (1966)
183D-203	Salem Church	gold	38.33687	-77.58204	open pit	Bell	Sweet (1980), Sweet and Trimble (1983), Lonsdale (1927), Luttrell (1966), Conley (1978)
183D-401	Salem Church	gold	38.33250	-77.60983	open pit	Gardiner	Sweet (1980), Sweet and Trimble (1983), Lonsdale (1927), Luttrell (1966), Credner (1868)
183D-402	Salem Church	gold	38.32975	-77.58910	open pit	Smith	Sweet (1980), Sweet and Trimble (1983),
183D-403	Salem Church	N/A	38.33078	-77.61211	furnace	Spotswood	Lonsdale (1927), Luttrell (1966) NONE
183D-501	Salem Church	gold	38.32374	-77.56561	open pit	Mott	Sweet (1980), Sweet and Trimble (1983), Credner (1868), Luttrell (1966)
183D-601	Salem Church	granite	38.32496	-77.50449	quarry	Fredericksburg Stone Co.	
183D-602	Salem Church	granite	38.32421	-77.50023	quarry	Fredericksburg Stone Co.	
184D-901	Mine Run	sand and gravel	38.26245	-77.76789	pit	Michie Contracting Company	

Data Source:
Columns A-H: If Point ID (column A) is "###(A-D)-###": Virginia Department of Mines, Minerals, and Energy - Division of Geology and Mineral Resources MRV;
If Point ID (column A) is "10#######": U.S. Geological Survey Mineral Resources Data System (MRDS).
Note1: Latitude (N) and Longitude (W) in decimal degrees; North American Datum 1983 (NAD 83)
Prepared by:
Virginia Department of Mines, Minerals and Energy - Division of Geology and Mineral Resources
Date of this report:
4/8/2013

Past Production

In the past granite was quarried for crushed stone or dimension stone at a number of sites along the Rappahannock River, west of Fredericksburg and also along the Hazel River, south of Fredericksburg, and near Chancellorsville. Sandstone has been quarried in the Fredericksburg area for use as dimension stone. Following are some of the major inactive stone quarries and sand & gravel pits in the County:

-Alum Springs Quarry, Hazel Run, Fredericksburg (1815)
-Aquia Sandstone Quarry, Hazel Run, Fredericksburg (early 1800s)
-Willis Hill Quarry, Hazel Run, Fredericksburg (early 1800s)
-Battlefield Granite Company, 2.5 miles NW of Fredericksburg (1893-1896)
-Cartright and Davis, NW of Fredericksburg (1899-1912)
-Battlefield Granite Corporation, NW of Fredericksburg (1914-1919)
-Fredericksburg Stone Company, NW of Fredericksburg (1958-1975)
-Haney and Adair Trucking-SE of Fredericksburg (1973-1975)
-Leavells Shop Corporation, SW of Fredericksburg (1970s)
-Alfred Ventura, south Fredericksburg (1975-1976)
-Franconia Gravel Corporation, S of Fredericksburg (1975-1982)
-Massaponax Sand and Gravel Corporation, SE of Fredericksburg (1919-1990)

Mica has been mined from the Edenton mine, located in the southwestern part of the County, about a mile northeast of the North Anna River. Kyanite is found in schists in the western part of the County, and glauconitic or greensand marl is found in the eastern part of the County. Monazite, a phosphate of the rare earths, occurs in saprolite over granitic rocks near Post Oak and Five Mile Fork.

Since its discovery in 1806 within the County, gold mining and prospecting were carried on intermittently from about forty-one sites in the northern and western parts of the County. Reported gold production from Spotsylvania County is as much as 105,300 ounces with the bulk of the production from the Whitehall, Marshall (exact location unknown), and the United States mines. At the Valzinco mine, located near Porters, lead and zinc ore, with some copper mineralization was mined by the Bertha Mineral Co. (1909-1912), the Virginia Lead and Zinc Corp., (1914-1918), and by the Panaminas Co. from 1942-1945; 500,000 pounds of lead and 1,250,000 pounds of zinc were produced during these periods. There is also reported by-product production of gold at this mine in the 1940s. Iron ore was mined from gossans in western Spotsylvania County for use in local iron furnaces. Pyrite occurrences have been prospected in the vicinity of Chancellorsville.

Clay materials were formerly extracted for use in the manufacture of brick at Fredericksburg. Three samples of clay materials were tested and found suitable as raw materials for the manufacture of brick. These samples include a sample of Tertiary clay, 5 miles south of Fredericksburg; a sample of Tertiary clay, 3.5 miles southeast of Fredericksburg, and a sample of clay residuum over granitic rocks, located near Lewistown in the southeastern part of the County.

References

Following is a list of references and resources for Spotsylvania County mineral resources, which includes both references cited above as well as additional sources of information. Most references can be obtained by contacting DGMR at 434-951-6341 or by visiting the Virginia Department of Mines, Minerals and Energy website.

Building Stone

Harrison, N., 1986, Fredericksburg's Battlefield Granite: Virginia Division of Mineral Resources Virginia Minerals, v. 32, n. 3. Available via the Virginia Department of Mines Minerals and Energy **HERE**.

Sweet, P.C., 1990, Present and future dimension stone industry in Virginia, in: Zupan A.W., and Maybin, A.H. (eds), Proceedings of the 24th Forum on the Geology of Industrial Minerals, May 2-5, 1988, Greenville, South Carolina, p. 129-135.

Webb, H.W., and Sweet, P.C., 1992, Interesting uses of stone in Virginia – Part I: Virginia Division of Mineral Resources Virginia Minerals, v. 38, No 4. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Clay

Calver, J.L., Hamlin, H.P., and Wood, R.S., 1961, Analyses of clay, shale, and related materials – northern counties: Virginia Division of Mineral Resources Mineral Resources Report 2, p. 170-182. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Sweet, P.C., 1982, Virginia clay material resources: Virginia Division of Mineral Resources Publication 36, p. 112-113. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Sweet, P.C., 1986, Clay-material samples collected 1981-1984, Virginia Division of Mineral Resources Publication 68. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Copper

Luttrell, G.W., 1966, Base- and precious-metal and related ore deposits of Virginia: Virginia Division of Mineral Resources Mineral Resources Report 7, p. 167 Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

General – mineral production

Gilmer, A.K., Enomoto, C.B., Lovett, J.A., and Spears, D.B., 2005, Mineral and fossil fuel production in Virginia (1999-2003): Virginia Division of Mineral Resources Open-File Report 05-04. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Geology

Bobyarchick, A.R., Pavlides, Louis, and Weir, Karen, 1981, Piedmont geology of the Ladysmith and Lake Anna East quadrangles, and vicinity, U.S. Geological Survey Miscellaneous Investigations Series Map I-1282.

Mixon, R.B., Louis Pavlides, D.S. Powars, A.J. Froelich, R.E. Weems, J.S. Schindler, W.L. Newell, L.E. Edwards, and L.W. Ward, 2000, Geologic map of the Fredericksburg 30' X 60' quadrangle, Virginia and Maryland: U.S. Geological Survey Geologic Investigations Series Map I-2607.

Wier, K. and Pavlides, Louis, 1985, Piedmont geology of the Spotsylvania quadrangle, Spotsylvania County, Virginia: U.S. Geological Survey Geologic Investigations Series Map I-1568.

Glauconitic marl

Clark, W.B., Miller, B.L., Berry, E.W., and Watson, T.L., 1912, Physiography and geology of the Coastal Plain Province of Virginia: Virginia Geological Survey Bulletin 4, p. 90-95, 248-249. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Gold

Lonsdale, J.T., 1927, Geology of the Gold-Pyrite Belt of the northeastern Piedmont Virginia: Virginia Geological Survey Bulletin 30, p. 84-85. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Luttrell, G.W., 1966, Base- and precious-metal and related ore deposits of Virginia: Virginia Division of Mineral Resources Mineral Resources Report 7, p. 167. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Sweet, P.C., 1971, Gold mines and prospects in Virginia: Virginia Division of Mineral Resources Virginia Minerals, v. 17, n. 3. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Sweet, P. C., 1982, Gold occurrences in Virginia, an update: Virginia Division of Mineral Resources Virginia Minerals v. 28, n. 4, p. 33-41. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Sweet, P. C., and Trimble, D., 1983, Virginia gold resource data: Virginia Division of Mineral Resources Publication 45, p. 183-192. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Watson, T.L., 1907, Mineral resources of Virginia: The Virginia Jamestown Exposition Commission, J.P. Bell Company, Lynchburg, Virginia, p. 553-554. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Granite

Steidtmann, E., 1945, Commercial granites and other crystalline rocks of Virginia: Virginia Geological Survey Bulletin 64, p. 41. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Iron

Watson, T.L., 1907, Mineral resources of Virginia: The Virginia Jamestown Exposition Commission, J.P. Bell Company, Lynchburg, Virginia. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Lead

Luttrell, G.W., 1966, Base- and precious-metal and related ore deposits of Virginia: Virginia Division of Mineral Resources Mineral Resources Report 7, p. 167. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Mica

Brown, W.R., 1962, Mica and feldspar deposits of Virginia: Virginia Division of Mineral Resources Mineral Resources Report 3. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Pyrite

Lonsdale, J.T., 1927, Geology of the Gold-Pyrite Belt of the northeastern Piedmont Virginia: Virginia Geological Survey Bulletin 30, p. 9-10, 89-90. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Poole, J.L., 1973, Iron sulfide mines in Virginia: Virginia Division of Mineral Resources Virginia Minerals v. 19, n. 3, p. 29-33. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Sandstone

Watson, T.L., 1907, Mineral resources of Virginia: The Virginia Jamestown Exposition Commission, J.P. Bell Company, Lynchburg, Virginia. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Zinc

Luttrell, G.W., 1966, Base- and precious-metal and related ore deposits of Virginia: Virginia Division of Mineral Resources Mineral Resources Report 7, p. 167. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

SOILS

Soils are a basic resource consisting of air, water, mineral and organic matter. Arranged in layers called horizons, these natural formations are termed soil profiles or classifications. The composition of a soil profile is determined by various factors such as parent material, relief, climate and vegetation. Classification of soils is important for determining the best uses and development constraints of an area.

Due to its varied physiography, Spotsylvania County is one of the most diverse soil communities in Virginia. Approximately 42 soil classifications have been mapped in the County by the United States Department of Agriculture, Soil Conservation Service (SCS). These maps, along with suitability charts, are published in the Soil Survey of Spotsylvania County Virginia, which was completed in 1985.

The soil survey is the County's best source of information concerning soil locations and development constraints. However, the field data only apply to a depth of five or six feet and do not eliminate the need for on-site investigations. In addition, it is common for great differences in soil properties to occur within short distances. Also, some of the survey fieldwork may be outdated, particularly data on septic limitations. In spite of the above precautions, the soil survey remains highly useful for general planning purposes. Pertinent characteristics for water quality planning, including presence of hydric soils, septic limitations, depth of water table, shrink/swell potential, degree of slope, and erodability/ permeability are indicated for each classification and quantified by acreage. This data enables planners to make broad, County-wide assessments of soil conditions and limitations, providing insight into land use and development prospects and limitations.

The Spotsylvania County Geographical Information Systems (GIS) Department graphically depicts County soils as a map layer as part of the Interactive Web Based GIS located **HERE**. Soils data is produced and distributed by the Natural Resources Conservation Service (NRCS) Soil Survey Geographic Database (SSURGO). NRCS provides web based access to current soil surveys that are searchable by location at their Web Soil Survey site **HERE**.

Overview of Soil Conditions

By and large, most of Spotsylvania's soils are conducive to development. Because of the County's rolling topography, it possesses an abundance of broad upland terraces, convex ridgetops and well drained lands. Both the Piedmont and Coastal Plain areas are dissected by well-established drainageways, which keeps the water table low and reduces the problems with ponding, flooding and saturated soil. Some central portions of the County, however, are only moderately well drained by the smaller streams prevalent in that area. In addition, limitations to development can result from underlying rock formations and steep slopes found along some of larger streams and river terraces.

In certain sensitive areas, County soils exhibit a number of characteristics, which can limit development or add significantly to development costs. The major limitations are discussed in each subsection below:

Steep Slopes (See Map)

The topography of Spotsylvania County is generally rolling hills of the piedmont and flat coastal plains. Steep slopes, including those in excess of 40% are most prevalent in the northern and northeastern portions of the County. Steep slope areas tend to provide the greatest risk of slope and streambank erosion threats within the County. Steep slope areas benefit from retaining natural vegetation with root

systems providing soil stabilization. Erosive threats upon steep slopes can be linked to soil type, gravity, drainage velocity over steep surfaces (wash-out effect). Typically, steepest slopes are found adjacent to the County's larger streams and rivers. The Rapidan, Rappahannock, Massaponax Creek corridors and their tributaries contain the majority of the County's steepest slopes. Utilizing USDA Natural Resources Conservation Service (NRCS) mapping data, the County has included a Steep Slopes map for reference.

Per NRCS in reference to the map data, slope gradient is the difference in elevation between two points, expressed as a percentage of the distance between those points. The slope gradient is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Shrink-Swell Soils

Shrink/swell soils are those that shrink when dry and swell when wet. While uncommon in Spotsylvania, shrink/swell soils can result in severe and costly damage to roads, building foundations, and other structures. Most soil classifications within the County are characterized as having a low to moderate shrink/swell potential (98%). The only soils noted for high shrink/swell characteristics are Orange-Iredell loams. These particular soils are estimated to comprise only 1.3% (3,427 acres) of the County's total land area. Local shrink/swell soils are believed to be scattered in small, isolated locations within the County, usually on broad convex ridgetops or side slopes. Precision determinations of shrink-swell soils presence is determined by detailed map units in the soil survey or through soil testing.

Hydric Soils (See Map)

Hydric soils are those that are sufficiently wet to support the growth and regeneration of hydrophytic vegetation. Since various state and federal laws safeguard wetlands, development activity on hydric soils is generally discouraged. Usually, the inherent wetness of hydric soils discourages development interest.

In certain instances, hydric soils may be exempt from wetland regulations, if they have been drained or converted to agricultural use (prior conversions). However, where hydric soils remain undisturbed and support wetland vegetation, development is usually prohibited or costly mitigation measures are required (e.g. construction of replacement/artificial wetlands).

The United States Environmental Protection Agency Soil Survey Geographic database (SSURGO) classifies the following levels of hydric soils status concerning hydric rating: "Hydric" means that all components listed for a given map unit are rated as being hydric. "Predominantly hydric" means components that comprise 66 to 99 percent of the map unit are rated as hydric. "Partially hydric" means components that comprise 33 to 66 percent of the map unit are rated as hydric. "Predominantly non-hydric" means components that comprise up to 33 percent of the map unit are rated as hydric. "Non-hydric" means that none of the components are rated as hydric. The assumption here is that all components of the map unit are rated as hydric or non-hydric in the underlying database.

Five (5) classifications within the County are considered hydric: Aqults, Cartecay, Fluvaquents/ Udifluvents, Partlow and Toddstav soils. In total, about 16% of Spotsylvania's soils (44,463 acres) are defined as partially or predominantly hydric. If undrained, areas of hydric soils are saturated, flooded or

ponded for a significant duration of the year. The water table for hydric soil generally lies just above (+12") or slightly below the surface (-36").

In Spotsylvania, hydric soils are coincident with the County's drainageways, floodplains and stream bottomlands and are depicted on the Hydric Soils Map. In a few cases, hydric soils may be found along stream terraces, toe slopes, and in upland depressions. More precise locations of hydric soils can be determined through the detailed map units in the soil survey. Many non-hydric soils in the county also contain "inclusions" of hydric soils, which can account for up to 20% of the dominant soil classification. Therefore, there may be small, isolated wetlands scattered in non-hydric areas of the County.

Hydric Soils are mapped based on a hydric rating, or a percentage of a map unit that meets the criteria for hydric soils. Hydric rating is further explained by the USDA **HERE**. Utilizing USDA Natural Resources Conservation Service (NRCS) Soil Survey mapping data, the County has included a Steep Slopes map for reference within this Appendix.

Per NRCS in reference to the map data, this rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor non-hydric components in the higher positions on the landform, and map units that are made up dominantly of non-hydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit. The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components. Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation. The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or non-hydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) has made available a guide entitled Field Indicators of Hydric Soils in the United States as a helpful resource for onsite identification. The guide can be found **HERE**.

Erodibility/Permeability (See Map)

Soil erosion is the process whereby rock and soil particles are detached from their original location by wind and water, and transported or deposited to a new site. Soil is considered highly erodible if it is easily detached or relocated. The water quality problems associated with erosion are considerable, particularly uncontrolled sediment originating from construction sites, stream embankments (slopes) and agricultural fields. Mitigating sources of erosion through best management practices is a key focus of the Chesapeake Bay legislation.

Uncontrolled sedimentation can have a number of adverse consequences, particularly when transported to receiving waters. Sediments can screen sunlight to aquatic habitats and spur algae growth (via organic sediments). Coarse soil particles can clog drainage ditches and accelerate channel scouring, while eroded fine silt can smother aquatic organisms and hinder their reproduction. A related area of concern is that many pollutants adhere themselves directly to soil particles. Urban and agricultural erosion can contain a variety of pollutants, such as petroleum products, phosphates, heavy metals, pesticides and bacteria. As a result, erosion is now considered to be the largest source of water pollution in the United States.

Soil that is highly permeable is that which allows liquid to be rapidly transmitted or percolated when the soil is saturated. This rapid rate of transmission can be downward or in slight lateral direction. Highly permeable soils can present a water quality hazard since pollutants may be transferred directly into the water supply before being adequately filtered. The use of on-site septic systems and underground storage tanks should be avoided in areas of highly permeable soils. The rapid movement of effluent through the soil diminishes its natural filtration ability, which can lead to the contamination of groundwater or nearby shallow wells.

Utilizing USDA Natural Resources Conservation Service (NRCS) Soil Survey mapping data, the County has included a Erodibility (K Factor-Whole Soils) map for reference in this Appendix. Per NRCS in reference to the map data, Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

"Erosion factor Kw (whole soil)" indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

The permeability and erodibility of Spotsylvania's soils have also been mapped in digital form as part of the VirGIS database. The VirGIS database defines highly erodible soils as those with an erodibility index (EI) equal to or greater than eight (8). Highly permeable soils are those having a permeability equal to or greater than six inches (6") of water movement per hour to a depth of 72". Based on the VirGIS criteria, significant portions of the County were found to be either highly erodible, highly permeable, or both.

Although no hard figures are available, health officials acknowledge that instances of substandard plumbing may be found in areas with permeable soils, thus exacerbating water quality problems. The following discussion provides a more in-depth look at septic suitability issues and protection policies in the County.

Septic Suitability Factors (See Map)

Spotsylvania County has deferred to the Virginia Department of Health's (VDH) regulations for the design and approval of onsite sewage systems. National technological advances in sewage treatment and disposal and supporting regulatory changes in Virginia have allowed alternative treatment and

disposal designs to overcome many previously insurmountable site and soil limitations. VDH regulations governing design, construction, installation, and the operation and maintenance for conventional and alternative residential sewage systems and private water wells are available **HERE**.

As stated earlier, Spotsylvania is one of the most diverse soil communities in Virginia. Great differences in soil properties occur within short distances. The ability of a site to accommodate onsite sewage septic systems is dependent on several performance-related factors. These include size of lot, slope, depth of the soil, percolation rate, filtering characteristics, and susceptibility to ponding/wetness, depth of the water table, and depth to bedrock or restrictive horizons.

Site features and soil properties limit the use of septic systems in various ways. Generally, septic systems perform best when there is deep, unsaturated soil material beneath the absorption field. This allows for efficient filtering and disposal of effluent waste. The ability of a soil to absorb and treat effluent will be restricted if there is a high water table, poor permeability, or a minimal depth to bedrock. Likewise, site difficulties with bedrock or a cemented pan can interfere with installation. Finally, groundwater can be polluted if there is hillside seepage, a high water table, fractured bedrock, or highly permeable soils (sand/gravel) below the absorption area.

Since each factor above can vary over short distances, each lot or parcel must be evaluated to determine whether it can support the proposed development, and if it can, what the size, design and location of the septic system should be. On-site evaluations, therefore, are the only definitive means of determining septic suitability for a particular parcel.

The purpose of a site evaluation is to understand the soil system and the hydrology of the site, to predict wastewater flow through the soil and into subsurface materials, and to preliminarily design a subsurface absorption system that complements the soil system and the hydrology of the site. The evaluation process is intended to allow the collection and documentation of sufficient information to determine the potential for a site to support a subsurface absorption system. A site evaluation follows a systematic approach that includes the description of surface characteristics, the interpretation of those characteristics for use in a subsurface absorption system, and the documentation of all results. The process of data collection, evaluation, and design is often repeated several times for each system. During each repetition, new information is obtained and a new design is tried until a design is developed that provides the best match with the site conditions. The comprehensive site evaluation requires considerable expertise by the evaluator. The evaluator must have substantial knowledge about soil science, geology, subsurface absorption system design, and environmental health. In Virginia, evaluators are licensed as Onsite Soil Evaluators (OSE) through the Department of Professional and Occupations Regulation (DPOR http://dpor.virginia.gov/). These certified professionals assist applicants in determining the suitability of sites for onsite sewage systems. In cases where alternative technology is required, the OSE may work in coordination with a licensed professional engineer to develop a suitable design for a system to fit lot conditions.

Generalized information on soil types and septic suitability criteria can be found utilizing USDA Natural Resources Conservation Service (NRCS) Soil Survey mapping data. Per NRCS in reference to their map data, septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on soil properties that affect absorption of the effluent,

construction and maintenance of the system, and public health. For reference, a septic suitability map has been included in this Appendix.

General Septic Limitations

The USDA Natural Resources Conservation Service (NRCS) Soil Survey provides a helpful, generalized view of septic limitations within the County.

There are county-wide septic limitations of varying degrees. The majority of the County is classified as having either very limited or somewhat limited septic tank suitability. With technological advances and emergence of alternative systems over the years, some of the issues regarding septic suitability in the County can, and have been overcome.

Although Spotsylvania possesses an abundance of elevated, well-drained soils, other site factors limit the use of septic systems. Typical suitability problems in the local area include slow perk rates, shallow depth of bedrock, wetness, and steep slopes. Again, technology can overcome some of these limitations.

Depth to Water Table (See Map)

Soils with a shallow depth to water table can pose additional constraints to development. Wet soils may readily compact under the weight of structures and settle at different rates. This can result in foundation cracks and loss of structural integrity. Costly engineering work, which is often required to successfully build on such soils, adds to the overall cost of development. In addition, the potential for wet basements, ponding and other drainage problems can reduce the desirability of such lands for development.

Approximately one-third of the County's soils have a shallow depth to water table. This figure includes soils with a water table depth of less than 18"; and those soils with a water table ranging between 18" - 36" of the surface.

Areas with a shallow depth to water table generally coincide with other sensitive features in the County, such as floodplains, stream corridors and drainage ways. Upland areas of the County may also have shallow depth to water tables, such as depressions or broad terraces that are distant from sizeable drainage ways. More precise locations of shallow water tables can be determined through the detailed map units in the soil survey. It is good to note that the water table tends to vary throughout the year with seasonal changes and precipitation patterns.

Depth to Water Table mapping is made available by the USDA NRCS and can be accessed **HERE**. Utilizing USDA Natural Resources Conservation Service (NRCS) Soil Survey mapping data, the County has included a Depth to Water Table Map for reference within this Appendix.

In reference to the data depicted in the aforementioned map, per NRCS, "Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table. This attribute is actually recorded as three separate values in the

database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Soil Drainage

Seven classes of natural soil drainage are recognized by the United States Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS), including: excessively drained; somewhat excessively drained; well drained; moderately well drained; somewhat poorly drained; poorly drained; very poorly drained. These classes are defined in the "Soil Survey Manual" that can be found at the USDA's NRCS website **HERE**. The majority of Spotsylvania County has been classified with well drained soils. Such soils are prevalent within areas that have historically supported agricultural and forestry operations. Much of the well-drained soils areas fall within areas designated with Rural, Agricultural-Forestal, and Open Space land uses outside of the County's Primary Development Boundary. Poorly drained soils primarily appear in the northeastern and eastern portions of the County, including within large portions of the Primary Development Boundary. Poorly drained soils tend to be catchment areas for water within low lying areas, along stream or river corridors where wetlands, resource protection areas, water bodies are present throughout the County. The County's Primary Development Area contains the greatest concentration of moderately well drained soils as per the NRCS rating.

According to the NRCS, natural soil drainage (or drainage capacity) refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil.

Soil Drainage Capacity mapping is made available by the USDA NRCS and can be accessed **HERE**. Utilizing USDA Natural Resources Conservation Service (NRCS) Soil Survey mapping data, the County has included a Soils Drainage Map for reference within this Appendix.

Groundwater Recharge Areas

Groundwater is accumulated water under the earth's surface. Sometimes groundwater is close to the surface; sometimes it is very deep, held in underground aquifers. Groundwater can surface—or discharge—through natural means, such as in a spring, or with human help, such as in a pumped well.

Groundwater is replenished—or recharged—through surface water seeping from streams or lakes into the ground or through precipitation percolating into the ground. For the groundwater table to stay at the same level, the amount of recharge must equal the amount of discharge.

Aquifers represent a geological unit, which can store and supply significant quantities of groundwater. Aquifer recharge is a function of groundwater recharge rates. Groundwater recharge represents the net amount of water that infiltrates the soil matrix to a point below the root zone of vegetation. Groundwater recharge necessarily accounts for the loss of gross precipitation due to evapotranspiration (physical and biological uptake), consumption, and surface runoff. These losses are determined by impervious cover, slope, and soil properties affecting percolation. The quantity of groundwater making it into the aquifer is based on the geology and aquifer pumping rates, but is less well modeled than

groundwater recharge. Factors such as karst geology in sedimentary formations and fractured trap rock affect the transport of groundwater into aquifers.

Urbanization, and drought poses a threat to our groundwater supply in several ways. Urban development increases the amount of impervious (nonporous) surface in a watershed. Impervious surface inhibits groundwater recharge because precipitation cannot penetrate the surface and runoff may be diverted elsewhere through storm sewer systems. In drought situations, consumption outweighs the rate of replenishment, further stressing the availability of groundwater.

Urbanization also increases the amount of pollution in our environment. If soil is contaminated or surface runoff is polluted, the quality of the groundwater will be affected. Polluted groundwater and/or a diminished supply of groundwater are of particular concern where groundwater is the major source for drinking and irrigation water. This is especially important for areas reliant on private well and septic systems. In Spotsylvania County, roughly 82% of the County's total land area is located outside of the County's Primary Development Boundary (where public water and sewer is provided), and therefore reliant on private well and septic systems. Well and septic lots still exist within the Primary Development Boundary also. This is most prevalent in areas where utility infrastructure has not yet caught up to past Primary Development Boundary expansions and older housing stock where public utility connection had not been available historically and a retrofit would be necessary to convert service.

Citizens can help protect groundwater supplies by:

- Don't pour toxic or hazardous waste down the drain, into a toilet, on the ground, or into storm drains.
- Properly dispose of litter and pet waste.
- Don't dump anything into a sinkhole.
- Don't use or store fertilizers, pesticides, gasoline or any toxic materials near a well.
- Pump out septic tanks regularly.
- Use porous material such as flagstone, gravel, stone, or interlocking pavers rather than asphalt or concrete.
- Conserve water in your home and landscape.

In areas where development is prevalent or likely to occur in the future, negative impacts upon groundwater recharge areas can be reduced by reducing the amount of impervious surfaces in exchange for additional green space/ open space and use of pervious paving or concrete materials that allow precipitation to percolate into the soils rather than diverted away through stormwater drainage systems.

Contaminated Soils

The United States Environmental Protection Agency (EPA) Superfund program is responsible for cleaning up some of the nation's most contaminated land and responding to environmental emergencies, oil spills and natural disasters. To protect public health and the environment, the Superfund program focuses on making a visible and lasting difference in communities, ensuring that people can live and work in healthy, vibrant places. You can learn more about the Superfund Program **HERE**.

The EPA manages one Superfund Site within Spotsylvania County. Contaminants result from a wood preservation operation that operated onsite between 1937 and 1988 in the area of Benchmark Road and the Massaponax Creek Floodplain. The site was initially listed on the National Priorities list in 1986. Site remediation is ongoing. More information about the history of the site and efforts to cleanup contaminants can be found **HERE**.

Storage Tank Related Contaminants

The Virginia Department of Environmental Quality (DEQ) implements the Underground Storage Tank (UST) program under Article 9 of State Water Control Law. Article 9, first enacted in 1987, enables DEQ to receive UST notifications, receive federal grant funds, develop regulations, conduct cleanups, and provide overall supervision of UST activities in the state. The technical requirements for USTs are included in Virginia regulation 9 VAC 25-580 et seq. entitled "Underground Storage Tanks: Technical Standards and Corrective Action Requirements."

The financial responsibility requirements for USTs are found in Virginia Regulation 9 VAC 25-590 et seq. entitled "Virginia Petroleum Underground Storage Tanks Financial Responsibility Requirements Regulation." State housing law Section 36-99.6 provides for local code officials to permit and inspect UST installations, upgrades, repairs, and closures statewide in support of the program. In Virginia there were some 75,000 USTs (19,000 active) at 25,000 facilities with some 3,000 owners. VA-DEQ maintains the notification records for USTs and receives annual federal grant funding to support the program. In general, after December 22, 1998 all regulated USTs must have spill containment provisions at the fill pipe; overfill devices to alert the owner when overfills may occur; corrosion protection on both tank and product lines; release detection on both tank and product lines; and, financial responsibility.

Refer to Virginia DEQ for more information regarding Underground Storage Tanks **HERE**.

Article 11 of the State Water Control Law addresses Above Ground Storage Tanks (ASTs). The Virginia State Water Control Board in 1998 adopted the regulation, 9 VAC 25-91-10 et seq., which consolidated three repealed regulations, that is, (i) Oil Discharge Contingency Plans and Administrative Fees, 9 VAC 25-90-10 et seq. (ii) Facility and Aboveground Storage Tank Registration Requirements), 9 VAC 25-130-10 et seq., and (iii) Aboveground Storage Tanks Pollution Prevention Requirements, 9 VAC 25-140-10 et seq.

The AST regulations were revised on November 1, 2015. The AST regulations were revised primarily to incorporate new performance standards for certain aboveground storage tanks located in the City of Fairfax as mandated by the 2011 General Assembly. Other changes align Virginia's regulatory requirements with federal requirements and current industry standards.

Refer to the Virginia DEQ for more information regarding Aboveground Storage Tanks **HERE**.

Leaking Storage tanks pose contamination risk to soil health and groundwater. The Virginia DEQ maintains locality specific lists of pollution complaint cases that includes both regulated and non-regulated USTs and ASTs. The Virginia DEQ categorizes cases as “open” or “closed”. Spring, 2018 data received from the Virginia DEQ for Spotsylvania County note 9 cases in “open” status and 214 cases that have been “closed” with closure dates covering a period of time between 2018 and the late 1980s. Of 9

"open" cases, 2 are considered regulated tanks (i.e. gas stations) while the remaining 7 are non-regulated tanks (i.e. home heating oil releases).

POTABLE WATER

Spotsylvania County has four surface water sources for its public supply. The Ni River Water Treatment Plant draws water from the Ni Reservoir. Our second and third water sources are for the Motts Water Treatment Plant, which draws water from the Motts Run Reservoir and from the Rappahannock River. Our fourth source is the Hunting Run Reservoir, which can release water into the Rapidan River. This water flows into the Rappahannock River and is withdrawn at the Motts Run intake. Combined, as of 2017, Spotsylvania County treatment facilities provide roughly 3.7 billion gallons of clean drinking water every year. The Spotsylvania County Utilities/Public Works Department manages the public water system and continually monitors water quality. Annual water quality reports are made publicly available and can be found **HERE**.

As Spotsylvania's population grows and water demands increase, it is becoming increasingly important to manage not only the water supply and treatment, but also the demand on an ongoing basis. The Board of Supervisors authorized the Director of Utilities/Public Works to establish a comprehensive Green Initiative and Water Conservation Program under Chapter 22 - Section 22- 140 of the Spotsylvania County Code as a proactive approach to demand management. The ultimate goal of water conservation is not to prevent water use, but to maximize efficiency and the benefit from each gallon used. More information regarding the Water Conservation Initiative can be found **HERE**.

The County's Primary Development Boundary is a major factor in establishing the County's long term development potential, sustainable investment in public infrastructure, and future land use vision. As noted in the Future Land Use Chapter, a major aim of any Comprehensive Planning process is ensuring that the provision of community facilities and public services is phased with demand. One of the most effective tools for directing the timing and location of new development is the establishment of a Primary Development Boundary to define the area within which public water and sewer utilities will be provided. This Boundary effectively creates an "urban growth boundary" like area as land within the boundary; supported by public water and sewer, is intended to develop with higher residential densities and more intensive non-residential uses than outside of the boundary. By maintaining a Primary Development Boundary, the County encourages the most efficient use of the land and focusing growth while preserving the rural character and agricultural viability of those portions of the County outside the boundary and slowing "urban sprawl" and the resulting loss of agricultural, forestal, rural acreage.

WATER RESERVOIRS

In Spotsylvania County, publicly accessible water reservoirs provide a source of potable water for residents or a cooling function for the generation of power. They also provide natural resource preservation, natural habitat preservation, recreational opportunities for fishing and electric motor boating. Significant sources of potable water within Spotsylvania County include the Ni Reservoir, Motts Run Reservoir (serving the City of Fredericksburg), and Hunting Run Reservoir. Considering existing capacity and factoring for growth, the County Utilities Department estimates no additional water source capacity expansion will be necessary to serve Spotsylvania County citizens utilizing public water until the year 2050. Lake Anna chiefly serves as a water supply to cooling purposes associated with the North

Anna Power Station and has become a destination for water recreation as well. They have been summarized below.

Reservoirs are protected locally within the Reservoir Protection Overlay District, created for the purpose of protecting and promoting the public health, safety and welfare by preserving existing and potential public drinking water supply reservoir sites and protecting them from the danger if water pollution. Regulations within such districts are established to prevent water quality degradation due to pollutant runoff from septic fields, construction sites, lawns or material storage areas and to reduce sediment loadings that shorten reservoir life.

Ni Reservoir The Ni Reservoir is a 411-acre Spotsylvania County water supply reservoir located near Chancellorsville. Angler success is very good at this impoundment for largemouth bass in the 15" size range and the potential exists for an occasional trophy fish. There are also bluegill, redear sunfish, chain pickerel, white perch, and crappie available in good numbers for anglers to pursue.
The VDGIF released a Management report concerning the status of the fishery at the Ni Reservoir in 2003. That report can be found **HERE**. The Spotsylvania County Department of Parks and Recreation manages recreational access to the reservoir. Information regarding accessibility, amenities, and regulations can be found **HERE**.

Motts Run Reservoir

Motts Run is a City of Fredericksburg water supply reservoir located in Spotsylvania County. It is a steep-sided, 160-acre lake that is normally quiet and receives light fishing pressure. The shoreline is undeveloped, making it one of the more scenic lakes in Northern Virginia. Motts Run Reservoir is also open for public access, operated by the City of Fredericksburg.

Hunting Run Reservoir

Hunting Run Reservoir is a 420-acre water supply reservoir owned and operated by Spotsylvania County. The lake was stocked by the Virginia Department of Game and Inland Fisheries (VDGIF) and opened to fishing by Spotsylvania County in fall, 2007. There is one access point near the upper end of the lake off Ely's Ford Road. The lake has an excellent largemouth bass population that is currently "bass heavy" or "predator heavy", and size structure has recently shifted downward. The combination of the lake reaching full pool in 2009 (productivity surge) combined with additional planned forage stockings and highly encouraged angler harvest of bass below the slot should allow the population to realize its trophy potential.

The VDGIF released a Management report concerning the status of the fishery at Hunting Run Reservoir in 2015. That report can be found **HERE**. The Spotsylvania County Department of Parks and Recreation manages recreational access to the reservoir. Information regarding accessibility, amenities, and regulations can be found **HERE**.

Lake Anna

Lake Anna is a 13,000-acre reservoir in the rolling fields and forested triangle formed by the Cities of Charlottesville, Fredericksburg, and Richmond, Virginia. The lake was created by Virginia Electric and Power Company in 1972 to provide cooling water for the North Anna Power Station. Lake Anna was formed by damming the North Anna River, one of the principal tributaries of the Pamunkey and York Rivers. The Power Station and Lake is now controlled by Dominion Energy.

The lake's 200+ miles of shoreline are dotted with houses, marinas, campgrounds and a large state park. Lake Anna and its watershed lie astride three counties of Central Virginia with a rich history and diversified environment. Louisa County on the south side of Lake Anna encompasses over 50% of the watershed. Orange County to the northwest of Lake Anna is the smallest county in both area and population, and comprises about 25% of the watershed. Spotsylvania County to the north of Lake Anna contains only 20% of the lake watershed, but is the most populous and rapidly growing of the three counties.

In addition to its cooling function, the Lake has become a recreational destination for boating, fishing, water skiing, wind surfing, as well as residential, business, and commercial development. These opportunities around the lake provide an economic benefit to the local economy, and are dependent on the water quality of the lake to support and maintain the recreational setting. Lake Anna is one of Virginia's premier fishing waters, hosting a fish population of striped bass, largemouth bass, perch, crappies, catfish, and bluegill, and is the site of numerous bass tournaments. The lake is served by over half a dozen marinas and several public boat launching sites which charge a small fee for launching services.

Ever growing popularity for use of the lake as a recreational resource has increased concerns within the last few years about user safety and conflicting interests on the water and shoreline burdened by increasing recreational craft traffic traversing the lake surface. Increased recreational craft traffic upon the Lake has also led to lakeshore erosion issues resulting from wake action impacting the shoreline.

Lake Anna has also been identified with a number of water impairments as noted in the following pages considering the Water Quality Assessment Integrated Report. Harmful algae bloom warnings (for the species Cylindrospermopsis) were recently issued in August, 2018 for the Pamunkey and North Anna Branches of Lake Anna in Orange, Louisa and Spotsylvania County. As per the Virginia Department of Health, Algae blooms can occur when warm water and nutrients combine to make conditions favorable for algae growth. These conditions have occurred recently with the significantly warmer temperatures and sunny weather, which occurred after high amounts of rainfall over the last month. Discolored water or scums that are green or blueish-green should be avoided as they are more likely to contain toxins.

The Virginia Department of Health and the Virginia Harmful Algal Bloom Task Force, which includes the Virginia Department of Health, Virginia Department of Environmental Quality, and the Old Dominion Phytoplankton lab, will continue to monitor water quality at Lake Anna. The advisories will be lifted following a minimum of two consecutive weeks of acceptable levels for algal cell counts and/or toxin concentration.

For everyone's safety, the lake is patrolled by the Department of Game and Inland Fisheries' game wardens, County sheriff's offices, a Coast Guard Auxiliary flotilla, and three local flotillas.

The Virginia Department of Environmental Quality (DEQ) coordinates with the Lake Anna Citizen Association (LACA) to perform water quality monitoring of Lake Anna on a yearly basis. Overall, the main body of the lake meets the water quality standards for aquatic life (dissolved oxygen, pH, temperature, nutrients) uses. Lake Anna does not support fish consumption. The entire lake is listed with a PCB impairment, due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. There is also a portion of the main lake that is also listed with mercury impairment, based upon fish tissue data. As per the most recent water quality study dated April, 2018, overall most Lake readings are over acceptable bacteria readings for E.Coli with issues most prevalent in the west end (Orange County, Spotsylvania County, Louisa County) and southwest side of the lake (Louisa County).

The LACA makes the latest water quality status updates available online **HERE**.

Dominion Energy provides details regarding lake levels, water temperatures, and the overall functionality of the lake in its cooling function. That information can be found online **HERE**.

Dam Break Inundation Zones

The Spotsylvania Utilities Department have completed mapping of County Dam Break Inundation Zones for existing dams at the Hunting Run Reservoir, Ni Reservoir, and Motts Run Reservoir. These dams were put in place in the creation of local water supply reservoirs.

The Inundation Zone is the area that encompasses the affected downstream features should a dam break regardless of the current condition of the dam. The Dam Break Inundation Zone is determined using a computer model simulated dam break prepared by a professional engineer. The potentially impacted features such as homes, roads, commercial buildings, etc. dictate and result in the Hazard Classification designations. Dam Break Inundation Zone Computer Modeling and Mapping is required by the Virginia Department of Conservation and Recreation for all regulated dams for Hazard Classification (Exception for dams determined to be Special Criteria Low Hazard).

Private owners of regulated dams are required to provide the Inundation Zone Mapping to the local County or City authority for inclusion into municipal mapping. In Spotsylvania County, the dams at Lake Anna and Fawn Lake are examples. Their inundation zones have been studied and pictured in local mapping. Other private dams within the County have yet to be mapped. As part of the 2017 Regional Hazard Mitigation Plan, Spotsylvania County has established a goal to assure mapping of all dam break inundation zones including the private dams, are completed by 2025.

Staff is also requesting dam break information from adjacent localities to determine whether any of their inundation zones may impact Spotsylvania County in any way. Stafford County's Lake Mooney (formerly Rocky Pen Run Reservoir) along the Rappahannock River is one example. The Keaton Run Dam in Orange County is one example where the inundation area does include parts of northwest Spotsylvania County. Mapping has been secured for that inundation area and is included for reference within the County mapping system.

A computer model simulated dam break can be used for an Incremental Damage Analysis to determine if the minimum required spillway capacity could be lowered without increasing the hazard downstream

to people or facilities. If the owner of a dam elects to have this work done, it must be done by a professional engineer.

All development as defined by the Code of Virginia, located within a mapped Dam Break Inundation Zone is subject to review by the Virginia Department of Conservation and Recreation to make a determination of the potential impacts of the proposed development on spillway design flood standards required for the dam. In order to be consistent with the Code of Virginia, on December 13, 2016 the Spotsylvania County Board of Supervisors approved an amendment to the Zoning Ordinance, specifically Chapter 23, Article 7, to add Division 2A- Dam Break Inundation Zones. As part of County development review procedures, proposed developments are to be checked to determine whether they fall within a mapped dam break inundation zone. Projects located within dam break inundation zones are then routed to the Department of Conservation and Recreation for review, subject to the Dam Safety Act, Article 2, Chapter 6, Title [10.1], §§ 10.1-604, 10.1-605, 10.1-606 et seq., of the Code of Virginia. The Department of Conservation and Recreation is responsible for administration of the Virginia Dam Safety Act.

The Spotsylvania County Geographical Information Systems (GIS) Department graphically depicts the limits of mapped Dam Break Inundation Zones as a map layer online as part of the Interactive Web Based GIS located **HERE**.

WETLANDS

Wetlands are a valuable natural resource. They reduce floodwater damage by storing the floodwater for slow release, serve as groundwater discharge and recharge areas, improve water quality, and provide food and habitat for fish and wildlife. In addition, wetlands can be recreational and aesthetic resources. Two major legislative acts protect wetlands from alteration, destruction or potential misuse: The Clean Water Act of 1972 as amended, and the Chesapeake Bay Preservation Act of 1988.

Wetlands are defined as transitional lands between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is covered with shallow water. Wetlands must have the following three attributes: 1) at least periodically the land supports hydrophilic vegetation; 2) the substrate is predominantly undrained hydric soils; 3) the substrate is non-soil and is saturated with water or covered with water at some time during the growing season. This means that lands flooded at least a week at a time with supporting aquatic vegetation are generally considered to be wetlands.

The Spotsylvania County Geographical Information Systems (GIS) Department graphically depicts County wetlands as a map layer as part of the Interactive Web Based GIS located **HERE**. Wetlands data is produced and distributed by the National Wetlands Inventory (NWI).

Presence of Water

The physical nature of wetlands varies from place to place as well as season to season. As a result, the extent of wetness required to identify a wetland area may be a source of confusion to the untrained. Certain kinds of wetlands may have standing water on them throughout the year while others have water on the surface for a short period of time or not at all.

Wetland Vegetation

Wetland vegetation is characterized by hydrophytes. According to the National Audubon Society, hydrophytes are a special group of plants that can tolerate various degrees of flooding, or live in frequently saturated areas. It is a rather large group. There are whole scores of different kinds of wetland plants. These hydrophytes are distinctive in that they can only live in the conditions that wetlands provide. Thus they are good indicators of wetlands, and are used to delineate wetlands. An example of a hydrophyte would be a water lily.

Hydric Soils

Wetland soils are different from their upland counterparts. The presence of water affects the soil development. They are usually a gray color and have mottles (uneven spots or blotches) present. The technical definition says that hydric soils are soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part.

Significance of Wetlands

Water Quality Control

- chemical and organic waste processing
- nutrient removal and transformation
- sediment retention

Due to their position between upland and deep water, wetlands can intercept surface water runoff from land and filter floodwaters. The way wetlands remove pollutants from the water supply has to do with the biotic life they support. Aquatic organisms such as algae and bacteria take up minerals and breakdown organic matter.

If sewerage is added upstream, the organic level will have been considerably reduced by the time the water has traveled several miles. Wetlands and wetland plants are nutrient traps and really help reduce air and water pollution problems. Runoff from development areas is a big source of wetland contamination. Runoff from agricultural areas tends to contain high levels of nitrogen and phosphorous, the two major chemicals of fertilizers. Runoff from urban sites is usually polluting the water with dangerous chemicals and/or domestic sewage. But wetlands are very efficient at removing this waste from the environment.

Flood Control

- hydrologic cycle
- water storage

Wetland soils act like a living sponge and soak up the rain, letting it enter the ground water system. The wetland also acts as a temporary storage basin or depression, wetlands are a perfect place for excess flood water to go. Wetlands lower flood crests and lessen the danger of flash floods downstream, therefore reducing the likelihood of flood damage. They "protect crops in agricultural areas as well as protecting roads, buildings, and human health and safety".

Groundwater Recharge

- critical groundwater recharge areas
- groundwater discharge

With growing urban development there are becoming significantly fewer areas available for groundwater recharge. It is increasingly important to conserve wetlands to keep some of these areas open. Wetlands are also important for groundwater discharge. Wetlands release the water they store slowly to provide long-term base-flow to streams and lakes. They also provide a steady source of moisture for the local climate.

Erosion Control

- sediment stabilization
- shoreline buffer
- wave attenuation
- current velocity
- storms
- ice

Wetlands on the shores and banks of rivers, ponds and beaches do many things to prevent erosion. Wetland plants growing on the banks stabilize the shore material. Their roots bind the soil and make it harder to erode. Wetlands along the shores and banks also prevent erosion by reducing the force of the moving water. The wetland's presence causes friction of the wave or current movement, lessening its power to erode.

Fish and Wildlife Diversity and Abundance

- habitats for rare and endangered species
- habitats for waterfowl and other birds
- fish spawning and nursery grounds
- home to many species of plants
- biodiversity

A large number of animals and plant types require wetland habitats for survival. Many of these organisms live primarily in wetlands, like the wood duck, muskrat, cattail, and swamp rose. Other types, like the peregrine falcon and white tail deer, don't directly reside in wetlands, but they rely on them for survival. The wetlands provide food, water, and cover for these animals - all essentials for living. Many of the organisms that need wetlands to survive are endangered species. "More than one-third of the nation's threatened and endangered species live only in wetlands and nearly one-half of these species use wetlands in some point in their lives". Acre for acre swamps often equal rain forests in biological diversity.

Food Chain Support

- detritus

Wetlands can be regarded as the farmlands of the aquatic environment since great volumes of food (plant material) are produced by them annually. The wetland food chain starts with detritus, which is "dead leaves and stems that break down in the water to form small particles of organic matter". Small aquatic invertebrates and forager fish eat the detritus. Then larger predatory fish hunt and eat these invertebrates and forager fish. Finally, man catches and eats the larger predator fish.

Recreation

- nature observation
- education
- hunting and fishing

There is a substantial tourist trade in wetlands every year. "More than one-half of adults in the US hunt, fish, birdwatch, or photograph wildlife. Wetlands are usually very beautiful places in their own right. They are good places to enjoy nature through hiking, boating and other recreational activities. One can get a first-hand look at ecological processes, such as energy flow, recycling, and limited carrying capacity. Wetlands are essentially "living museums" or "outdoor laboratories" important for their educational qualities. Wetlands also support a large trade of recreational fishing and hunting.

Natural Products for Human Use

- seafood harvesting
- fish

- shellfish
- timber production
- peat moss mining
- fur trapping

Humans have harvested many things from natural wetlands. Seafood is a very important product strongly tied to wetlands. According to the National Oceanic and Atmospheric Administration (NOAA) Annual Commercial Landing Statistics, U.S. commercial fishermen landed 9.9 billion pounds of seafood in 2017 (up 3.6% from 2016), valued at $5.4 billion, an increase of 2.1% from the prior year.

According to the Commercial Landing Statistics, Virginia's commercial fishermen landed approximately 338 million pounds of seafood in 2017, valued at about $188 million.

The collection of U.S. commercial fisheries landings data is a joint state and federal responsibility. The cooperative State-Federal fishery data collection systems obtain landings data from state-mandated fishery or mollusk trip-tickets, landing weighout reports provided by seafood dealers, federal logbooks of fishery catch and effort, and shipboard and portside interview and biological sampling of catches. State fishery agencies are usually the primary collectors of landings data, but in some states NOAA Fisheries and state personnel cooperatively collect the data. Survey methodology differs by state, but NOAA Fisheries makes supplemental surveys to ensure that the data from different states and years are comparable.

Statistics for each state represent a census of the volume and value of finfish and shellfish landed and sold at the dock rather than an expanded estimate of landings based on sampling data. Principal landing statistics that are collected consists of the pounds and ex-vessel dollar value of landings identified by species, year, month, state, county, port, water and fishing gear. Most states get their landings data from seafood dealers who submit monthly reports of the weight and value of landings by vessel. Increasingly, however, states are switching to mandatory trip-tickets to gather landings data. At the conclusion of every fishing trip, seafood dealers and fishermen indicate their landings by species on trip-tickets and may be required to record other data such as fishing effort and area fished.

Managed Wetlands

In managed wetlands, the water level is actively managed for a specific purpose.

- rice paddies
- cranberry bogs
- blueberry crops
- catfish farms
- storm-water management facilities
- wildlife refuges
- duck hunting clubs

Five Major Classifications and Characteristics of Wetlands

A classification system was established and adopted by the US Fish and Wildlife Service on December 12, 1977. This classification system was established due to the increased recognition of the value of wetlands and the need for more defined, reliable classification information that could be accepted universally amongst all other government agencies. This system allows for better inventory, evaluation,

and management of wetland areas. This system defines five major classifications of wetlands: Marine (oceanic), Estuarine (tidal), Riverine (river), Lacustrine (lake), and Palustrine (marsh or swamp). Marine and estuarine habitats include coastal wetlands such as tidal marches and mangrove swamps. Lacustrine, riverine, and palustrine wetlands represent freshwater systems and account for 90% of the nation's wetland inventory. Lacustrine wetlands are associated with lakes, riverine wetlands are found along rivers and streams, and palustrine wetlands include marshes, swamps and bogs.

Marine System

This system consists of the open ocean overlying the continental shelf. Marine habitats are exposed to the waves and currents of the open ocean and the characteristics of the water are determined by the ebb and flow of the oceanic tides. Salinities exceed 30%. An example of a marine system wetland is a mangrove swamp.

Estuarine System

This system consists of deep water tidal habitats and adjacent tidal wetlands that are usually semi-enclosed by land but have sporadic access to the ocean water that is usually diluted by freshwater runoff from the land. This system includes both estuaries and lagoons. Examples are the Chesapeake Bay and Chincoteague Bay, and the Lower Rappahannock below its fall line.

Riverine System

This system includes all wetlands and deeper habitats contained within a channel except for habitats with water containing ocean derived salts in excess of .5%. The riverine system is bound on the landward side by upland, by the channel bank (including natural and man-made levees), or by wetland dominated by trees, shrubs, mosses or lichens. The water is usually, but not always, flowing in this type of system. The Upper Rappahannock and the Ni and Po Rivers are categorized as this type of system.

Lacustrine System

This system includes wetlands and deep water habitats with the following characteristics: situated within a topographic depression or a dammed river channel, may lack trees, shrubs, mosses or lichens, and the total area may exceed 20 acres. The waters may be tidal or non-tidal. This system includes permanently flooded lakes and reservoirs (Lake Superior), intermittent lakes, and tidal lakes (Grand Lake, Louisiana). Within Spotsylvania County, this system includes Lake Anna, the Ni and Motts Run Reservoirs, and other ponds throughout the county.

Palustrine System

This system groups the tidal and non-tidal vegetated wetlands traditionally called by names such as marsh, swamp, bog and fen that are found throughout the United States. It also includes the small, shallow, permanent or intermittent water bodies often called ponds. Palustrine systems may also occur as islands in lakes or rivers, in isolated catchments, or on slopes. In Virginia, this system includes the Great Dismal Swamp.

WATERSHEDS

There are three main watersheds that drain Spotsylvania County, dividing the County into north, central, and south. The Spotsylvania County Geographical Information Systems (GIS) Department graphically depicts County watersheds and sub-watersheds as map layers as part of the Interactive Web Based GIS located **HERE**.

Descriptions of the watersheds are as follows:

Rappahannock Watershed

According to the Virginia Department of Environmental Quality (DEQ), The Rappahannock River Basin drains an area of 2,715 square miles, approximately 6% of the Commonwealth's total area, and is 184 miles in length, varying in width from 20 to 50 miles. The Basin is bordered by the Potomac-Shenandoah River Basin to the north, and the York River Basin and Chesapeake Bay/Small Coastal Basin to the south and east.

The northern portion of Spotsylvania County is drained by the Rappahannock River watershed, a Major Chesapeake Bay watershed whose Spotsylvania County tributaries include Massaponax Creek, Deep Run, Hazel Run, Motts Run, Mine Run, Hunting Run, and Wilderness Run.

Potentially the most valuable natural resource in the area, the Rappahannock River has considerable scenic, recreational, and historical attributes. In the past, the River served as an important transportation corridor. Today, it is considered a promising source of water for domestic and industrial consumption. The Rappahannock River is the cleanest major tributary flowing into the Chesapeake Bay, and the maintenance of that distinction is essential to efforts to restore Virginia's estuary. The protection of this resource should be of paramount importance to localities along the River.

Spotsylvania County borders on two separate and distinct sections of the Rappahannock River. Above the fall line, the river is a free flowing fresh water stream winding its way through high-forested bluffs. Development that has occurred above the fall line has posed no immediate threat to the river, in part due to the fact that much of the shoreline is owned by the City of Fredericksburg and remains is a natural state, thereby establishing an effective, though thin, buffer. Within Spotsylvania County, lands adjacent to the Fredericksburg easement are located outside of the County Primary Development Boundary and the County land use vision and existing zoning in these areas are characteristic of large lot rural residential, forestry, and agricultural uses. Intense development pressure has not been supported, directed, or occurred in close proximity to the Rappahannock River above the fall line. The County zoning ordinance includes a River Protection Overlay District meant to further assure water resource protection of the Rappahannock River above the fall line. The River Protection Overlay District is intended to promote the public health, safety, and welfare through the protection of valuable river resources that provide or may provide drinking water and recreational opportunities. Regulations within such districts are established to prevent water quality degradation due to pollutant runoff from septic fields, construction-sites, or material storage areas. Requirements associated with the River Protection Overlay District can be found in Section 23-7.4. of the County Zoning ordinance.

The river below the fall line is tidal and its shores have seen greater development of many types: industrial, residential, recreational, and agricultural. Below the fall line are also located a number of wastewater treatment facilities, two of them in Spotsylvania County, and another in Stafford County. Because the two sections of the Rappahannock River are so different, actions to protect the river will be different for each. In addition to the Rappahannock, there are many valuable resources along the County's networks of streams. Stream corridors are relatively undeveloped because of the presence of floodplains and steep slopes. Wetland, Floodplain Overlay Districts, the River Protection Overlay District, and Resource Protection Areas are in place to further protect these vital environmentally sensitive resources. In addition, these areas are often wooded, making them excellent buffers for filtering out impurities in water moving toward a stream, and good wildlife corridors.

The Code of Virginia, § 62.1-69.27. Commission purposes and mission, establishes the purpose and mission of the Rappahannock River Basin Commission:

> *The Commission's purposes and mission shall be to provide guidance for the stewardship and enhancement of the water quality and natural resources of the Rappahannock River Basin. The Commission shall be a forum in which local governments and citizens can discuss issues affecting the Basin's water quality and quantity and other natural resources. Through promoting communication, coordination and education, and by suggesting appropriate solutions to identified problems, the Commission shall promote activities by local, state and federal governments, and by individuals, that foster resource stewardship for the environmental and economic health of the Basin.*

The Friends of the Rappahannock (FOR) was founded in 1985 as a non-profit, grassroots conservation organization whose mission includes the protection and restoration of the Rappahannock River through advocacy, active restoration, and community education. Their efforts are invaluable to responsible river stewardship with positive benefits resulting in the Rappahannock watershed. Friends of the Rappahannock, including their Rappahannock River Report Card can be found **HERE**.

In 2019, the University of Maryland Center for Environmental Science Chesapeake Bay Report Card downgraded their water quality score for the Rappahannock River from a C grade to a D with the most notable loss resulting from degraded aquatic habitat. 2018 high rainfall totals paired with “extreme heat” in 2019 were identified as the source of the downgrade. These are macro level factors associated with the overall climate and not representative of any specific localized direct impacts. To help guard against such impacts the Friends of the Rappahannock notes “Cleaning up the Rappahannock means making it more resilient”. Per FOR:

> *To restore the Rappahannock River to a healthier condition, we must understand what makes a river system resilient. In a resilient river system, forests and wetlands along streams and shorelines form a protective barrier that reduces erosion, absorbs pollutants, shades the water and encourages groundwater infiltration. Robust populations of filter feeders like oysters and mussels digest pollutants and suspended particles, keeping the water clear, while abundant aquatic grasses create oxygen and provide habitat for fish and other wildlife. The river system works together to maintain stability and balance, which defends it against adverse conditions like high rainfall and heat.*

Mattaponi Watershed

A minor watershed whose tributaries include the Matta River, Po River, and Ni Rivers drain the center portion of Spotsylvania County. The Mattaponi drains into the York River watershed, a major Chesapeake Bay watershed, whose tributaries include York River, Pamunkey River, Mattaponi River.

Lake Anna Watershed

Lake Anna Watershed, whose tributaries include the North Anna River, Plentiful Creek, Northeast Creek and a portion of Terry's Run and Foremost Run drains the southern portion of the County. The Lake Anna watershed drains into the larger York River Major watershed. The Lake Anna watershed is that portion of the landscape that collects and provides the water flow to maintain water levels in the lake. Comprising three hundred and forty-two (342) square miles, or 218,860 acres in portions of the three (3) counties that border the lake: Louisa (57.4%), Orange (22.3%) and Spotsylvania (20.3%).

The watershed is approximately twenty-eight (28) miles long extending from the main dam on the eastern edge of the watershed to the edges of Gordonsville and Orange on the western edge. At the widest point the water shed is approximately eighteen (18) miles wide extending from Louisa on the southern boundary to the intersection of Routes 522 and 20 on the north.

STREAM, RIVER CORRIDORS AND SHORELINES

Virginia Scenic River Program

Virginia Scenic Rivers Program's intent is to identify, designate and help protect rivers and streams that possess outstanding scenic, recreational, historic and natural characteristics of statewide significance for future generations. The program's enabling legislation is the Virginia Scenic Rivers Act of 1970, §10.1-400. This program is managed by the state and should not be confused with the Federal Department of the Interior's Wild and Scenic Rivers Program. One of the program's strengths is the partnership forged between citizens, local governments and the state. This partnership begins in the evaluation phase and continues through and after the designation process.

The Rappahannock River, extending from its headwaters near Chester Gap to Ferry Farm is a designated Virginia Scenic River. Managed by the Virginia Department of Conservation and Recreation (DCR), the Virginia Scenic Rivers Program's intent is to identify, designate and help protect rivers and streams that possess outstanding scenic, recreational, historic and natural characteristics of statewide significance for future generations.

Scenic river designations result from initiatives from partnerships of local groups, local governments, state agencies and the Virginia General Assembly. In addition to existing designated state scenic rivers, other river segments have been deemed worthy of further study. The Virginia Outdoors Plan Mapper can be consulted **HERE** to locate and view additional segments.

Public and Private Access to Waterfront Areas

The six Chesapeake watershed States and the District of Columbia have all noted a high need for additional access in their State-wide Comprehensive Outdoor Recreation Plans (SCORPS), public access

plans, and boating infrastructure plans. In Virginia's current SCORP; Department of Conservation and Recreation's Virginia Outdoors Plan (dated 2018), Visiting natural areas (Rank 1); sunbathing/ relaxing on a beach (Rank 6); viewing the water (Rank 7); swimming/ beach/lake/river (open water) (Rank 8); freshwater fishing (Rank 10) rank amongst the top ten (10) recreational activities by participation. Statewide, access to Natural areas and water trails have been identified as two of the seven most needed outdoor recreation opportunities based on the 2017 Virginia Outdoors Demand Survey. The Virginia Outdoors Plan can be found **HERE**.

The Strategy for Protecting and Restoring the Chesapeake Bay Watershed was released in May 2010, in response to Executive Order 13508 (Chesapeake Bay Protection and Restoration). This strategy includes a key goal to "Conserve Land and Increase Public Access." The basis for this goal lies in the long-standing public demand for greater access to the water in the Chesapeake Bay watershed, a 64,000 square-mile watershed with nearly 18 million residents. Specifically the goal seeks to *Expand public access to the Chesapeake Bay and its tributaries through existing and new local, state and federal parks, refuges, reserves, trails and partner sites.*, The strategy aims to increase public access to the Bay and its tributaries by adding 300 new public access sites by 2025. According to Chesapeake Progress that helps federal, public, and internal oversight groups track the Chesapeake Bay Program's progress towards the goals and outcomes of the Chesapeake Bay Watershed Agreement, between 2010 and 2017, 153 boat ramps, fishing piers and other public access sites were opened on and around the Chesapeake Bay. This marks a 51 percent achievement of the goal to add 300 new access sites to the watershed by 2025 and brings the total number of access sites in the region to 1,292.

Consistent with the past public access planning efforts of the Chesapeake Bay Program, all tidal streams and bays with boating opportunities are included in the planning area. The plan covers "fifth-order streams" and higher. Stream order is a system for classifying streams and rivers based on a scale of 1 to 12, with first-order streams being the smallest and twelfth-order the largest. Typically, first- through third-order streams are small headwater tributaries. The Amazon River for example; the largest river in the world, is a twelfth-order stream. Within the Chesapeake watershed, the lower Susquehanna and lower Potomac are seventh-order streams; the Shenandoah River, a tributary of the Potomac, is a sixth-order stream; the York River is also a sixth-order stream, while one of its tributaries, the Pamunkey River, is a fifth-order stream. Fifth-order streams are large enough to offer canoe/kayak use during at least some part of the year.

The cost of developing the different types of access varies depending on the type of facility planned, the location, and characteristics of the proposed site. The most variable factor is the price of the land to be acquired for the access site. In some cases, the land is already in public ownership; in other cases, the land will have to be purchased. The cost of land in tidal areas of Virginia is dependent on its characteristics. Well-drained land above the floodplain, which is suitable for development of septic drain fields, has a higher value than low, poorly-drained land. Also, land fronting on deep water has a higher value than land adjacent to shallow waters to be suitable for boating. Lands that suffer from severe erosion generally cost less than stable or accreting lands.

Locally, along the Rappahannock River, existing access includes parks that front on the river in the City of Fredericksburg such as the City dock where the Captain John Smith Blueway Trail has a starting or termination point. The site also includes a boat launch and waterside walkway for fishing and water views. Further upstream, a canoe and kayak launch site has been provided in the Downtown

Fredericksburg area in Riverfront Park off Sophia Street. A canoe/ kayak launch, fishing and riverfront views are offered at the City's Old Mill Park, accessed via Caroline Street. The City of Fredericksburg has jurisdiction over the Rappahannock Riverfront throughout the City and within Spotsylvania County to the west of the City line where the overwhelming majority of the Rappahannock riverfront is in City ownership. The Virginia Department of Game and Inland Fisheries has established an access point on the Rappahannock Motts Landing (Route 618) in Spotsylvania County (City of Fredericksburg jurisdiction). Another access point is located on the Rapidan River at Elys Ford (Route 610) in Spotsylvania County about 14 miles upstream of Motts Landing. Access may also be gained via several non- established points. Descriptions of a variety of public access points, user groups, routes and fishing opportunities can be found at the Virginia Department of Game and Inland Fisheries website **HERE**.

The Friends of the Rappahannock, based on Fall Hill Avenue within the City of Fredericksburg promotes advocacy, education, river protection and restoration efforts throughout the Rappahannock River Corridor. Their efforts also include promotion of river access for recreational uses, offering organized kayak outings, etc. along the river. More information regarding the Friends of the Rappahannock can be found **HERE**.

The Spotsylvania County riverfront is limited to points east of the City along the Tidal portion of the Rappahannock River. East of the City of Fredericksburg there is presently no formalized public access to the river in Spotsylvania County. The Spotsylvania riverfront at present tends to be comprised of naturally forested slopes descending down to the waters edge. Extensive historic wooden bulkheads in varying conditions of decay line the river on both the Spotsylvania and Stafford shorelines. The image below is one example (See Image 1):

Image 1: River Shoreline

This portion of the Rappahannock River is considered a Category 2 site, requiring additional planning and review, prior to development. The Plan acknowledges that the identification of potential access sites is not a closed or static process. New opportunities for access will continue to be identified over time by citizens, non-governmental organizations, and local, state, and federal government.

The Rappahannock River east of Fredericksburg in Spotsylvania County has been recognized locally as a potential public access site, offering citizens additional public access opportunities along the Rappahannock River, to provide boating, bank fishing, picnicking, and other recreational uses. This

section of the river could be easily accessible by vehicles off Route 17. One potential location worthy of consideration for public water access, historic interpretation and parkland is the historic Franklin's Crossing area (a significant Civil War era site) within the County owned land inventory (See Image 2 below). The site is located adjacent to a developed industrial area (known as The Bowman Center) targeted for mixed use development, infill, and historic building revitalization for a variety of attractions, employer spaces, and residential opportunities. This site is in close proximity to the Route 17 Corridor, City of Fredericksburg, East Coast Greenway and planned Deep Run Recreational Trail systems and would be a positive complement to expanded public access goals. The Public Facilities Chapter of the Comprehensive Plan Public Facilities Element has identified this area as a recommended site for implementation of the Planned Deep Run Spur, a trail head, a riverside park with provision of river access and historic interpretation. The Deep Run Spur and trail head are also included within the Trailways Master Plan, located in Chapter 3A of the Transportation Element.

Image 2: Rappahannock Riverfront

Since 2013, additional private access sites beneficial to residents of their associated private development projects have been envisioned east of the City along the Rappahannock River. The New Post mixed use project is one example with docks and waterside access under construction as of the Summer, 2018. A picture of the site is below (See Image 3):

Image 3: New Post Waterfront Access

The Department of Health has a number of regulations that could impact existing or proposed public access sites.

- Local health department inspectors must approve any construction that requires development of a septic field to treat wastewater.
- The Bureau of Shellfish Sanitation is concerned about the public's health related to the consumption of oysters. Shore development, including marinas, are continually evaluated to determine effects of water quality and impacts on shellfish beds.
- The Division of Waste Water Engineering requires the development of adequate sanitary facilities in all new marinas, including pump out capability for boats.

The Virginia Department of Conservation and Recreation provides a map resource for water access points (boating) and water trails as part of its Virginia Outdoors Plan Mapper, accessible **HERE.** The resource does not include County reservoirs.

Shoreline access structures along the Rapidan and Rappahannock Rivers are also tracked by the Virginia Institute of Marine Science's (VIMS) Center for Coastal Resources Management. Shoreline access structures and additional shoreline conditions layers are available and can be searched by locality. The VIMS Comprehensive Map Viewer for Spotsylvania County can be found **HERE**.

Additional public water accesses for water recreation and fishing are available in the County at water reservoirs, including Ni Reservoir, Hunting Run Reservoir, Motts Reservoir (City of Fredericksburg owned and operated). Provision for water access also exists at Lake Anna where a number of private docks and marinas are located. Provision for public access can be found at Lake Anna State Park, operated by the Virginia Department of Conservation and Recreation. Reservoirs are addressed above in the Water Reservoirs Section and additionally have been acknowledged Parks and Recreation amenities noted in the Public Facilities Element of the Comprehensive Plan for Parks and Recreation.

Shoreline and Streambank Erosion

The Virginia Institute of Marine Science's Center for Coastal Resources Management provides locality specific map viewers that depict a number of shoreline condition analysis' and preferred shoreline BMPs along the Rappahannock and Rapidan River corridors. As noted above concerning provision of public and private access to waterfront areas, Spotsylvania County's jurisdiction along the riverfront is chiefly limited to the Rappahannock River, east of the City of Fredericksburg. As per VIMS, this section of the Rappahannock River, approximately 8 miles, is chiefly forested in its riparian areas. As per the VIMS River System Pie Charts, over 34% of the Rappahannock River east of Fredericksburg (within Spotsylvania County) has a forest land use/ land cover. The Forest land use/land cover is followed by Agriculture (approximately 21%), Residential (approximately 19%), and grasslands (approximately 12%). Commercial, Industrial and paved land uses make up the remaining 15% of the riparian area. VIMS notes approximately 120 feet of wholly bare banks along this section of the Rappahannock River. The majority of the shoreline has full coverage. Partial bank coverage is chiefly noted along the riverbank associated with the Fredericksburg Country Club. Defended shorelines in this area include bulkheads (.03 miles) and riprap (.02 miles) shoreline stabilization. Of nearly 7.78 miles, only .06 miles have been classified as defended shoreline.

VIMS has identified a number of preferred shoreline BMPs along the Rappahannock River east of Fredericksburg. These improvements are included within the VIMS Comprehensive Map Viewer and based on mapped location, include guidance to either:

(1) Remove existing bulkheads and failed revetments, if present. Construct new revetment as far landward as possible; grading the bank if possible and including vegetation buffers where possible. If grading is not possible, construct or repair existing revetment in the same alignment; only consider a bulkhead if previously present and the site is limited by navigation. Enhance sand beach/dune, and/or vegetated wetlands present. Consider a shoreline enhancement project. In high energy settings where shoreline extends more than 200 feet see option for Offshore Breakwater with Beach Nourishment.

(2) Remove existing shoreline structure if present; grade bank if necessary and install a non-structural living shoreline which may include riparian buffer planting along the bank, and/or marsh plants, coir logs, or oyster reefs along the shoreline. Best choice for low energy environments.

(3) Highly Modified Areas: Management options for this shoreline may be limited due to the presence of highly developed upland (e.g. commercial wharfs) or infrastructure directly adjacent to the shoreline (e.g. road) and will depend on the need for and limitations posed by navigation access and erosion control. Seek expert advice on the design of your project.

Like the County's Rappahannock River frontage west of the City of Fredericksburg, much of the County's Rapidan River frontage is also in ownership by the City of Fredericksburg. There are also a number of privately owned and Homeowners Association parcels along the Rapidan River. For both the Rapidan River and Rappahannock River west of the City of Fredericksburg, VIMS notes total shoreline coverage for nearly the entire length of the Rivers along the Spotsylvania County frontage. Partial bank coverage is noted adjacent to the City of Fredericksburg line and in proximity to the City of Fredericksburg's Motts Reservoir outflow at Mine Run. The Mine Run site, owned by the City of Fredericksburg, includes a public water access site with associated parking. Its good to note that Resource Protection Area's (RPA) have been mapped along both the full extent of the Rapidan and Rappahannock Rivers as a shoreline protection measure. The Rappahannock River basin (including the Rapidan River) is also under environmental stewardship of the Friends of the Rappahannock and the Rappahannock River Basin Commission.

The VIMS Comprehensive Map Viewer for Spotsylvania County can be found **HERE**.

Elsewhere in the County, County Environmental Codes Division says no other shoreline or streambank erosion issues have been identified, referencing the George Washington Regional Commission and Friends of the Rappahannock as sources.

EXISTING PROTECTION POLICIES: WATER RELATED RESOURCES

Legislation and Programs

Federal

The Clean Water Act calls for "maintaining and restoring the chemical, physical and biological integrity of our nation's waters." It covers every aspect of water-related topics in the United States. The part that pertains to wetlands is regulated by the U.S. Army Corps of Engineers (Corps) under Section 404, which regulates what you can build on or fill in a wetland with; it covers every kind of wetland, whether it's salt or freshwater, public land or private. The use of fill or dredged materials constitutes a pollutant, and is regulated by the Corps. The purpose of this legislation is that if there is a more efficient way to achieve the desired results, the permit will be denied. The Corps can only issue permits that are not contrary to the public interest. In addition, the Corps can only permit the least environmentally damaging practicable alternative.

The permits are approved by the Corps, who evaluate the applications based on the recommendations of the Environmental Protection Agency (EPA). The EPA sets the standards for review and the Corps complies. The EPA can veto a permit issued by the corps if it feels that the permit has been issued erroneously, but it rarely does. Both agencies share the authority to decide what constitutes a wetland, and other governmental agencies (like the Fish and Wildlife Service and the National Marine Fisheries Service) also provide input. As a result, definitions quite frequently either overlap or leave gaps, and there can be much dispute throughout the permit review process. However, the vast majority of Corps permits are general permits and have all environmental documentation provided by and approved by the agencies in advance.

To review a permit, the Corps performs an environmental assessment of the area and first determines whether jurisdictional streams and/or wetlands are present on a property. Subsequently, the impact of the proposed activity in jurisdictional areas is determined. If there is a way to achieve less impact to the aquatic environment, the Corps will make the appropriate recommendations and ask the applicant to amend the application.

To improve the efficiency of the federal review process, the Corps has developed several general permits to include nationwide permits, regional permits and programmatic permits for activities on similar scope and minimal adverse impacts to the aquatic environment. For common requests, most nationwide permits are easily verified by the Corps. However, Department of the Army permits (individual permits) are issued or denied based on a public interest review on a case-by-case basis. For instance, nationwide permits can be granted for small-scale activities like riprap, bulkheads, and dredge and/or fill projects involving less than 25 cubic yards of fill. Several nationwide permits require notification procedures and may not be easily verified if federally listed endangered or threatened species are involved or if historic properties that are listed or eligible for listing in the National Register of Historic Places.

Enforcement of these regulations can be difficult, as compliance is largely voluntary. If someone decides to forego the permit process, it is possible the infraction will go completely undetected. In most cases, the Corps depends on the public for surveillance of unauthorized activities. Perpetrators may face

penalties that include suspension, revocation of permits, fines, civil or criminal prosecution, and enforced mitigation processes.

One form of wetland mitigation is the process of "wetland banking"; that is, the Corps will allow the altering of a wetland if other wetlands are created to compensate for the loss of the wetlands. Mitigation operates on a ratio basis. In the Norfolk District the mitigation ratios are as follows: 2:1 mitigation for the loss of forested wetlands, 1.5:1 for the loss of scrub/shrub wetlands and 1:1 for the loss of emergent wetlands. For example, if a builder proposes to fill five acres of forested wetlands then he would need to provide 10-acres of forested wetlands somewhere else. This is generally done in one of two ways: an artificial wetland is constructed, or the builder will purchase 10-acres of wetland credits from an approved wetland mitigation bank.

State

Chesapeake Bay Act

The Commonwealth of Virginia adopted the Chesapeake Bay Preservation Act in September 1989 to partially fulfill provisions of an interstate regional agreement made in 1984 between the states of Virginia, Maryland, Pennsylvania and Washington, D. C. The Bay Act mandates all Tidewater Virginia localities to establish programs, plans and ordinances to protect and improve Bay water quality. Spotsylvania is one of the 89 jurisdictions affected by the Bay Act. All of these communities border tidal waters, such as the Rappahannock River, Chesapeake Bay, or their tributaries; and have a considerable, cumulative impact on water quality.

The Bay Act legislation requires localities to establish programs to ensure compliance with the established goals set forth in the Bay Act. The initial program included a comprehensive inventory of the environmental characteristics of the locality, the identification of environmentally sensitive areas and their designation as such in officially adopted protection districts comprised of Resource Protection Area, Resource Management Areas and Intensely Developed Areas. The second component of the program includes adoption of performance criteria for guiding site development, and the provision of non-point source pollution standards to protect state water quality.

After preliminary environmental inventories were conducted, a designation was made of the Resource Protection Areas (RPAs) and the Resource Management Areas (RMAs). In 1992, the County adopted criteria for land use development in these areas. RPA's and RMA's are described in greater detail in pages that follow.

Tidal Wetlands Act of 1972

The enactment of the Tidal Wetlands Act of 1972 gave the Virginia Marine Resources Commission (VMRC) the responsibility for issuing *tidal* wetlands permits under Chapters 12 and 13 of Title 28.2 of the Code of Virginia and authorizing localities to adopt their own wetlands zoning ordinances. This means that each locality has the option of imposing local restrictions on top of those outlined at the federal and state level. At the state level, the Department of Environmental Quality (DEQ) and the VMRC further oversee the use of the Clean Water Act.

In the absence of a local wetland board, the VMRC is responsible for administering the permitting process. If there is a local board, the responsibility of issuing permits rests with them, and they do so based on guidelines set by the VMRC and the Virginia Institute of Marine Sciences (VIMS).

Virginia Water Protection Permit Program (DEQ)

The Department of Environmental Quality (DEQ) Virginia Water Protection permit (VWPP) program serves as Virginia's Section 401 certification program for federal Section 404 permits issued under the authority of the Clean Water Act and the Commonwealth's non-tidal wetlands program under the State Water Control Law, independent of 401 certification.

DEQ VWPP program strives to protect state waters, which are defined by State Water Control Law (62.1-44.3) and VWP program regulations (9VAC 25-210) as *all water, on the surface and under the ground, wholly or partially within or bordering the Commonwealth or within its jurisdiction, including wetlands,* through the issuance of a VWP permit or the certification of US Army Corps nationwide permits (NWP) or regional permits (RP). Permits issued by the VWP permit program protect state waters by ensuring no net loss of wetland acreage and function through mitigation requirement similar to the Corps outlined above and by avoidance and minimization of the wetland impacts to the maximum extent practicable. However, some activities are excluded, as detailed in Virginia Administrative Code 9 VAC 25-210-60, from requiring any type of VWP permit due to provisions in the law.

VWPP program conducts compliance inspections on mitigation and construction sites in order to ensure compliance with regulations and permit conditions and also investigates reports of alleged unpermitted activities in wetlands and initiates enforcement actions if alleged violations of law or regulation are found. Responses to alleged noncompliance and unpermitted impacts can result in various levels of resolution and can range from no action to referral to enforcement and potential penalties.

Final 2016 305(b)/303(d) Water Quality Assessment Integrated Report

The Virginia Department of Environmental Quality (DEQ) released the Final 2016 305(b)/303(d) Water Quality Assessment Integrated Report (Integrated Report) on April 2, 2018. The 2016 Integrated Report is a summary of the water quality conditions in Virginia from January 1, 2009, through December 31, 2014.

This biennial report satisfies the requirements of the U.S. Clean Water Act sections 305(b) and 303(d) and the Virginia Water Quality Monitoring, Information and Restoration Act. The goals of Virginia's water quality assessment program are to determine whether waters meet water quality standards, and to establish a schedule to restore waters with impaired water quality.

Water quality standards designate uses for waters. There are six designated uses for surface waters in Virginia:

- aquatic life
- fish consumption
- public water supplies (where applicable)
- recreation (swimming)
- shellfishing

- wildlife

Additionally, several subcategories of aquatic life use have been adopted for the Chesapeake Bay and its tidal tributaries. The standards define the water quality needed to support each of these uses. If a water body contains more contamination than allowed by water quality standards, it will not support one or more of its designated uses. Such waters have "impaired" water quality. In most cases, a cleanup plan (called a "total maximum daily load") must be developed and implemented to restore impaired waters.

Section 303(d) of the Clean Water Act (CWA) and the United States Environmental Protection Agency's Water Quality Planning and Management Regulations (40 CFR Part 130) require states to develop total maximum daily loads (TMDLs) for water bodies that are exceeding water quality standards. The TMDL process establishes the allowable loadings of pollutants for a water body based on the relationship between pollution sources and in-stream water quality conditions.

On December 29, 2010, the U.S. Environmental Protection Agency established the Chesapeake Bay Total Maximum Daily Load (TMDL). The TMDL is a historic and comprehensive "pollution diet" to restore clean water in the Chesapeake Bay and the region's streams, creeks, and rivers.

A number of elements are in place to ensure that all pollution control measures needed to fully restore the Bay and its tidal rivers are in place by 2025. Practices will also be in place by 2017 to meet 60 percent of the necessary pollution reductions. Actions are being taken across six states and the District of Columbia to reduce nitrogen, phosphorus and sediment loads to meet the clean water goals of the Bay TMDL.

The Virginia DEQ has made the Final 2016 305(b)/303(d) Water Quality Assessment Integrated Report available online at the link **HERE**.

Table 6 below provided by the Virginia Department of Environmental Quality contains information for the listed impaired streams in the Final 2016 Water Quality Integrated Report (IR). The information is organized by waterbody, with the waterbody type identified. The specific segments of the waterbody that are listed in the 2016 IR are given, as well as a description of where the segment begins and ends. The impaired designated use is listed, along with the cause.

There are a couple of things about this information that should be noted:

1. Some portions of an identified segment may fall outside of the Spotsylvania County boundary.
2. The impairment information is from the Final 2016 IR. Compared to a similar Table presented within the 2013 Spotsylvania Comprehensive Plan based on the Final 2010 IR there are some segments that were identified previously that are no longer listed as impaired. Additionally, there are some new impaired segments now listed that were not identified previously.
3. Those aquatic life impairments that are suspected to be caused by natural conditions will undergo investigation to determine if the causes of the impairment are from natural conditions or from anthropogenic sources. Depending on the result of this study, a TMDL may not be needed.

Table 6: Impaired Resources

Waterbody Name	Waterbody Type	Segment ID	Location	Impaired Designated Use	Cause	TMDL	Report Link
Rapidan River	River	VAN-E18R_RAP03A02 VAN-E18R_RAP02A02 VAN-E18R_RAP01A02	Segment begins at the confluence with Wilderness Run, rivermile 7.78, and continues downstream until the confluence with the Rappahannock River.	Fish Consumption	Mercury in Fish Tissue	No	
		VAN-E18R_RAP03A02	Segment begins at the confluence with Wilderness Run, rivermile 7.78, and continues downstream until the confluence with Middle Run.	Recreation	Escherichia coli	Yes	Bacteria TMDL for the Rapidan River Basin
Wilderness Run	River	VAN-E18R_WIL01A08	Segment begins at the confluence of North Wilderness Run and South Wilderness Run and continues downstream until the confluence with the Rapidan River.	Recreation	Escherichia coli	Yes	Bacteria TMDL for the Rapidan River Basin
Hazel Run	River	VAN-E20R_HAL01A00	Segment begins at the Route 95 crossing and continues downstream until the confluence with the Rappahannock River.	Fish Consumption	PCBs	No	
				Recreation	Escherichia coli	Yes	Bacteria TMDL for the Tidal Freshwater Rappahannock River Watershed
Massaponax Creek	River	VAN-E20R_MAP02A02	Segment begins at the confluence with an unnamed tributary to Massaponax Creek, just upstream of Route 1, and continues downstream until the confluence with another unnamed tributary, approximately 0.25 rivermile upstream of Ruffins Pond.	Aquatic Life	pH	No	
		VAN-E20R_MAP04A02 VAN-E20R_MAP03A02 VAN-E20R_MAP02A02	Segment begins at the confluence with an unnamed tributary, approximately 1.1 rivermiles downstream from Route 673, and continues downstream until the confluence with another unnamed tributary, approximately 0.25 rivermile upstream of Ruffins Pond.	Recreation	Escherichia coli	Yes	Bacteria TMDL for the Tidal Freshwater Rappahannock River Watershed
Motts Run Reservoir	Reservoir	VAN-E19L_MOT02A02 VAN-E19L_MOT01A02	Entire Motts Run Reservoir waterbody	Fish Consumption	Mercury in Fish Tissue	No	
Rappahannock River	Estuarine	VAN-E20E_RPP03A02 VAN-E20E_RPP02A02 VAN-E20E_RPP01A02	Segment begins at the fall line at Route 1 and continues downstream until the outlet of waterbody VAN-E20E.	Fish Consumption	PCBs	No	
				Recreation	Escherichia coli	Yes	Bacteria TMDL for the Tidal Freshwater Rappahannock River Watershed
Plentiful Creek	River	VAN-F07R_PLT01A00	Segment begins at the confluence with an unnamed tributary to Plentiful Creek, upstream from the Route 601 bridge, and continues downstream until the confluence with Lake Anna.	Recreation	Escherichia coli	Yes	Bacteria TMDL for York River Basin
Terrys Run	River	VAN-F07R_TRY03A08	Segment begins at the headwaters of Terrys Run and continues downstream until the confluence with Horsepen Branch.	Recreation	Escherichia coli	Yes	Bacteria TMDL for York River Basin
				Fish Consumption	PCBs	No	
Music Branch	River	VAN-F09R_MUS01A06	Segment begins at the headwaters of Music Branch and continues downstream until the confluence with Northeast Creek.	Recreation	Escherichia coli	Yes	Bacteria TMDL for the Pamunkey River Basin
Northeast Creek	River	VAN-F09R_NST03A08	Segment begins at the confluence with an unnamed tributary to Northeast Creek, at rivermile 9.39, and continues downstream until the confluence with another unnamed tributary to Northeast Creek, approximately 0.67 rivermiles upstream from Route 622.	Recreation	Escherichia coli	Yes	Bacteria TMDL for the Pamunkey River Basin
		VAN-F09R_NST01A08	Segment begins at the confluence with an unnamed tributary to Northeast Creek and continues downstream until the confluence with the North Anna River.	Recreation	Escherichia coli	No	*TMDL Currently Under Development*
		VAN-F09R_NST04A08 VAN-F09R_NST03A08	Segment begins at the confluence of Knights Branch with Music Branch, forming Northeast Creek, and continues downstream until the confluence with another unnamed tributary to Northeast Creek, approximately 0.67 rivermiles upstream from Route 622.	Aquatic Life	Dissolved Oxygen	No	*Suspected Natural Conditions*
		VAN-F09R_NST04A08 AND VAN-F09R_NST02A98	Segment begins at the confluence of Knights Branch with Music Branch, forming Northeast Creek, and continues downstream until the confluence with an unnamed tributary to Northeast Creek, approximately 2.28 rivermiles downstream from Route 208. AND Segment begins at the confluence with an unnamed tributary to Northeast Creek, approximately 0.67 rivermiles upstream from Route 622, and continues downstream until the confluence with another unnamed tributary to Northeast Creek.	Aquatic Life	pH	No	
Brock Run	River	VAN-F15R_BRK01A06	Segment begins at the confluence with Wash Branch and continues downstream until the confluence with the Ni River.	Recreation	Escherichia coli	No	
Ni River	River	VAN-F15R_NIR01A00	Segment begins at the confluence of an unnamed tributary to the Ni River, approximately 0.95 rivermiles downstream from the Route 608 bridge, and continues downstream until the confluence with the Po River, forming the Poni River.	Aquatic Life	Benthic-Macroinvertebrate Bioassessments	No	
Glady Run	River	VAN-F16R_GDY01A10	Segments begins at the headwaters of Glady Run and continues downstream until the confluence with the Po River.	Recreation	Escherichia coli	No	
Po River	River	VAN-F16R_POR01A10	Segment begins at an unnamed tributary to the Po River and continues downstream until the confluence with the Ni River, forming the Poni River.	Recreation	Escherichia coli	No	
Matta River	River	VAN-F18R_MTA01A00	Segment begins at the confluence with an unnamed tributary to the Matta River, approximately 0.5 rivermile upstream from the Route 646 bridge, and continues downstream until the confluence with the Poni River, forming the Mattaponi River.	Recreation	Escherichia coli	No	
		VAN-F18R_MTA02A04	Segment begins at the confluence of the Mat River and the Ta River and continues downstream until the confluence with an unnamed tributary to the Matta River, approximately 0.5 rivermile upstream from Route 646.	Aquatic Life	Benthic-Macroinvertebrate Bioassessments	No	
Ta River	River	VAN-F18R_TAR01A00	Segment begins at the confluence with Bluff Run, approximately 0.7 rivermile upstream from Route 738, and continues downstream until the confluence with the Mat River, forming the Matta River.	Aquatic Life	Dissolved Oxygen	No	*Suspected Natural Conditions*
					pH	No	
Ni River Reservoir	Reservoir	VAN-F15L_PNB01A02 VAN-F15L_NIR02A02 VAN-F15L_NIR01A02	Entire Ni River Reservoir waterbody	Fish Consumption	Mercury in Fish Tissue	No	
Lake Anna	Reservoir	VAN-F07L_TRY01A04 AND VAN-F07L_NAR01A02	Segment includes the Terrys Run arm of Lake Anna. AND Segment includes the lower portion of Lake Anna, beginning near the northern end of the Route 690 bridge, and continues downstream until the dam.	Fish Consumption	Mercury in Fish Tissue	No	
		VAN-F07L_TRY01A04 VAN-F07L_PMC02A02 VAN-F07L_PMC01A04 VAN-F07L_PLT01A04 VAN-F07L_NAR04A06 VAN-F07L_NAR03A02 VAN-F07L_NAR02A02 VAN-F07L_NAR01A02	Entire Lake Anna waterbody	Fish Consumption	PCBs	No	

Virginia Department of Environmental Quality 2016 Impaired Waters (Category 4 & 5)								
Waterbody Name	Waterbody Type	Segment ID	Location	Impaired Designated Use	Cause/ VA Category	Cycle First Listed	TMDL Schedule	Size
Rapidan River	River	VAN-E18R_RAP01A02	Segment begins at the confluence with Hunting Run, at rivermile 1.35, and continues downstream until the confluence with the Rappahannock River.	Fish Consumption	Mercury in Fish Tissue/ 5A	2010	2022	1.24 Miles
		VAN-E18R_RAP02A02	Segment begins at the confluence with Middle Run, rivermile 5.10, and continues downstream until the confluence with Hunting Run.	Fish Consumption	Mercury in Fish Tissue/ 5A	2010	2022	3.64 Miles
		VAN-E18R_RAP03A02	Segment begins at the confluence with Wilderness Run, rivermile 7.78, and continues downstream until the confluence with Middle Run.	Fish Consumption	Mercury in Fish Tissue/ 5A	2010	2022	2.58 Miles
Wilderness Run	River	VAN-E18R_WIL01A08	Segment begins at the confluence of North Wilderness Run and South Wilderness Run and continues downstream until the confluence with the Rapidan River.	Recreation	Escherichia coli/ 4A	2008	2020	5.56 Miles
Hazel Run	River	VAN-E20R_HAL01A00	Segment begins at the Route 95 crossing and continues downstream until the confluence with the Rappahannock River	Fish Consumption	PCB in Fish Tissue/ 5A	2006	2018	4.72 Miles
		VAN-E20R_HAL01A00	Segment begins at the Route 95 crossing and continues downstream until the confluence with the Rappahannock River.	Recreation	Escherichia coli/ 4A	2004	2016	4.72 Miles
		VAN-E20R_HAL01A00	Segment begins at the Route 95 crossing and continues downstream until the confluence with the Rappahannock River.	Aquatic Life	Benthic-Macroinvertebrate Bioassessments/ 5A	2012	2024	4.72 Miles
Hazel Run Unnamed Tributary	River	VAN-E20R_XHN01A10	Segment begins at the headwaters of the unnamed tributary, and continues downstream to the confluence with Hazel Run.	Recreation	Escherichia coli/ 4A	2014	2026	1.53 Miles
Massaponax Creek	River	VAN-E20R_MAP03A02	Segment begins at the confluence with an unnamed tributary to Massaponax Creek, approximately 0.25 rivermile upstream from the Route 639 bridge, and continues downstream until the confluence with another unnamed tributary, just upstream from Route 1.	Recreation	Escherichia coli/ 4A	2010	2022	1.67 Miles
		VAN-E20R_MAP04A02	Segment begins at the confluence with an unnamed tributary, approximately 1.1 rivermiles downstream from Route 673, and continues downstream until the confluence with another unnamed tributary, approximately 0.25 rivermile upstream from Route 639.	Recreation	Escherichia coli/ 4A	2008	2020	2.17 Miles
		VAN-E20R_MAP02B12	Segment begins at the confluence with an unnamed tributary to Massaponax Creek, just upstream of Route 1, and continues downstream until the confluence with another unnamed tributary, at rivermile 2.68.	Aquatic Life	pH/ 5A	2006	2018	5.19 Miles
		VAN-E20R_MAP02B12	Segment begins at the confluence with an unnamed tributary to Massaponax Creek, just upstream of Route 1, and continues downstream until the confluence with another unnamed tributary, at rivermile 2.68.	Recreation	Escherichia coli/ 4A	2004	2016	5.19 Miles
Massaponax Creek Unnamed Tributary	River	VAN-E20R_XFE01A02	Segment begins where XEN joins XFE and continues downstream until the confluence with Massaponax Creek at rivermile 8.06	Aquatic Life	pH/ 5A	2016	2028	1.27 Miles
Motts Run Reservoir	Reservoir	VAN-E19L_MOT01A02	Segment includes the lower half of Motts Run Reservoir; beginning at rivermile 0.8 and continuing downstream until the lake's discharge.	Fish Consumption	Mercury in Fish Tissue/ 5A	2008	2020	62.88 Acres
		VAN-E19L_MOT02A02	Segment includes the upper half of Motts Run Reservoir; beginning at the upper end of the reservoir and continuing downstream until rivermile 0.8.	Fish Consumption	Mercury in Fish Tissue/ 5A	2008	2020	74.29 Acres
Mine Run	River	VAN-E19R_MIN01A14	Segment begins at the headwaters of Mine Run and continues downstream to the upper end of the Motts Run Reservoir.	Recreation	Escherichia coli/ 5A	2014	2026	4.01 Miles
Deep Run	River	VAN-E20R_DEP03A12	Segment begins at the headwaters of Deep Run, and continues downstream to the confluence with an unnamed tributary at rivermile 2.19, downstream of Route 638.	Aquatic Life	pH/ 5A	2012	2024	1.56 Miles
Rappahannock River	Estuarine	VAN-E20E_RPP01A02	Segment begins at the confluence with Massaponax Creek and continues downstream until the outlet of waterbody VAN-E20E. This segment represents the upper reach of VAN-E21E_RPP05A02. Portion of CBP segment RPPTF.	Recreation	Escherichia coli/ 4A	2006	2010	0.19 Sq. Miles
		VAN-E20E_RPP02A02	Segment begins at the confluence with Deep Run and continues downstream until the confluence with Massaponax Creek. Portion of CBP segment RPPTF.	Recreation	Escherichia coli/ 4A	2002	2010	0.23 Sq. Miles
		VAN-E20E_RPP03A02	Segment begins at the fall line at Route 1 and continues downstream until the confluence with Deep Run. Portion of CBP segment RPPTF.	Recreation	Escherichia coli/ 4A	2002	2010	0.21 Sq. Miles
		VAN-E20E_RPP01A02	Segment begins at the confluence with Massaponax Creek and continues downstream until the outlet of waterbody VAN-E20E. This segment represents the upper reach of VAN-E21E_RPP05A02. Portion of CBP segment RPPTF.	Fish Consumption	PCB in Fish Tissue/ 5A	2004	2016	0.19 Sq. Miles
		VAN-E20E_RPP02A02	Segment begins at the confluence with Deep Run and continues downstream until the confluence with Massaponax Creek. Portion of CBP segment RPPTF.	Fish Consumption	PCB in Fish Tissue/ 5A	2004	2016	0.23 Sq. Miles
		VAN-E20E_RPP03A02	Segment begins at the fall line at Route 1 and continues downstream until the confluence with Deep Run. Portion of CBP segment RPPTF.	Fish Consumption	PCB in Fish Tissue/ 5A	2004	2016	
Plentiful Creek	River	VAN-F07R_PLT01A00	Segment begins at the confluence with an unnamed tributary to Plentiful Creek, upstream from the Route 601 bridge, and continues downstream until the confluence with Lake Anna.	Recreation	Escherichia coli/ 4A	1998	2006	3.30 Miles
Terrys Run	River	VAN-F07R_TRY03A08	Segment begins at the headwaters of Terrys Run and continues downstream until the confluence with Horsepen Branch.	Recreation	Escherichia coli/ 4A	2010	2022	4.36 Miles
		VAN-F07R_TRY03A08	Segment begins at the headwaters of Terrys Run and continues downstream until the confluence with Horsepen Branch.	Fish Consumption	PCB in Fish Tissue/ 5A	2006	2018	4.36 Miles

Virginia Department of Environmental Quality 2016 Impaired Waters (Category 4 & 5)								
Music Branch	River	VAN-F09R_MUS01A06	Segment begins at the headwaters of Music Branch and continues downstream until the confluence with Northeast Creek.	Recreation	Escherichia coli/ 4A	2008	2020	3.56 Miles
Northeast Creek	River	VAN-F09R_NST03A08	Segment begins at the confluence with an unnamed tributary to Northeast Creek, at rivermile 9.39, and continues downstream until the confluence with another unnamed tributary to Northeast Creek, approximately 0.67 rivermiles upstream from Route 622.	Recreation	Escherichia coli/ 4A	2006	2018	6.36 Miles
		VAN-F09R_NST04A08	Segment begins at the confluence of Knights Branch with Music Branch, forming Northeast Creek, and continues downstream until the confluence with an unnamed tributary to Northeast Creek, approximately 2.26 rivermiles downstream from Route 208.	Recreation	Escherichia coli/ 4A	2012	2024	3.52
Northeast Creek Unnamed Tributary	River	VAN-F09R_XIA01A06	Segment begins at the headwaters of an unnamed tributary to Northeast Creek and continues downstream until the confluence with Northeast Creek, approximately 0.46 rivermiles upstream from the Route 208 crossing.	Recreation	Escherichia coli/ 4A	2016	2028	3.00 Miles
Brock Run	River	VAN-F15R_BRK01A06	Segment begins at the confluence with Wash Branch and continues downstream until the confluence with the Ni River.	Recreation	Escherichia coli/ 4A	2008	2020	2.56 Miles
		VAN-F15R_BRK01A06	Segment begins at the confluence with Aunt Sarah Spring Creek and continues downstream until the confluence with the Ni River.	Aquatic Life	Dissolved Oxygen/ 5A	2012	2024	2.56 Miles
		VAN-F15R_BRK01B12	Segment begins at the headwaters of Brock Run, and continues downstream to the confluence with Aunt Sarah Spring Creek.	Aquatic Life	pH/ 5A	2014	2026	3.21 Miles
Lewis Run	River	VAN-F15R_LWS01A12	Segment begins at the outlet of Cool Spring Lake, and continues downstream to the confluence with the Ni River.	Aquatic Life	Dissolved Oxygen/ 5A	2012	2024	1.46 Miles
Ni River	River	VAN-F15R_NIR01A00	Segment begins at the confluence of an unnamed tributary to the Ni River, approximately 0.95 rivermiles downstream from the Route 608 bridge, and continues downstream until the confluence with the Po River, forming the Poni River.	Aquatic Life	Benthic-Macroinvertebrate Bioassessments/ 5A	2010	2022	5.68 Miles
Glady Run	River	VAN-F16R_GDY01A10	Segments begins at the headwaters of Glady Run and continues downstream until the confluence with the Po River.	Recreation	Escherichia coli/ 4A	2010	2022	9.30 Miles
Po River	River	VAN-F16R_POR01A10	Segment begins at an unnamed tributary to the Po River and continues downstream until the confluence with the Ni River, forming the Poni River.	Recreation	Escherichia coli/ 4A	2010	2022	7.21 Miles
Matta River	River	VAN-F18R_MTA01A00	Segment begins at the confluence with an unnamed tributary to the Matta River, approximately 0.5 rivermile upstream from the Route 646 bridge, and continues downstream until the confluence with the Poni River, forming the Mattaponi River.	Recreation	Escherichia coli/ 4A	2004	2016	11.89 Miles
		VAN-F18R_MTA02A04	Segment begins at the confluence of the Mat River and the Ta River and continues downstream until the confluence with an unnamed tributary to the Matta River, approximately 0.5 rivermile upstream from Route 646.	Aquatic Life	Benthic-Macroinvertebrate Bioassessments/ 5A	2008	2020	1.24 Miles
North Anna River	River	VAP-F09R_NAR01A00	From Bull Run to the Doswell PWS intake approximately 0.5 mi upstream of the Rte. 30 bridge.	Recreation	Escherichia coli/ 4A	2016	2028	1.73 Miles
Ta River	River	VAN-F18R_TAR01A00	Segment begins at the confluence with Bluff Run, approximately 0.7 rivermile upstream from Route 738, and continues downstream until the confluence with the Mat River, forming the Matta River.	Aquatic Life	Dissolved Oxygen/ 5C	2010	2022	3.76 Miles
		VAN-F18R_TAR01A00	Segment begins at the confluence with Bluff Run, approximately 0.7 rivermile upstream from Route 738, and continues downstream until the confluence with the Mat River, forming the Matta River.	Aquatic Life	pH/ 5C	2010	2022	3.76 Miles
Mat River	River	VAN-F18R_MAT01A12	Segment begins at the confluence with an unnamed tributary, at rivermile 2.14, and continues downstream to the confluence with the Ta River to form the Matta River.	Recreation	Escherichia coli/ 4A	2014	2026	2.30 Miles
Cool Spring Lake Unnamed Tributary	River	VAN-F15R_XJM01A12	Segment begins at the headwaters of the unnamed tributary, and continues downstream to the inlet of Cool Spring Lake.	Aquatic Life	pH/ 5A	2016	2028	1.29 Miles
Cool Spring Lake Unnamed Tributary	River	VAN-F15R_XJM01A12	Segment begins at the headwaters of the unnamed tributary, and continues downstream to the inlet of Cool Spring Lake.	Aquatic Life	Dissolved Oxygen/ 5A	2012	2024	1.29 Miles
Lake Anna	Reservoir	VAN-F07L_TRY01A04 AND VAN-F07L_NAR01A02	Segment includes the Terrys Run arm of Lake Anna. AND Segment includes the lower portion of Lake Anna, beginning near the northern end of the Route 690 bridge, and continues downstream until the dam.	Fish Consumption	Mercury in Fish Tissue/ 5A	2010	2022	1563.4 Acres
Lake Anna	Reservoir	VAN-F07L_TRY01A04	Segment includes the Terrys Run arm of Lake Anna.	Fish Consumption	PCB in Fish Tissue/ 5A	2006	2018	4.36 Miles
		VAN-F07L_TRY01A04	Segment includes the Terrys Run arm of Lake Anna.	Fish Consumption	PCB in Water Column	2010	2022	431.09 Acres
		VAN-F07L_PMC02A02	Segment includes the Pamunkey Creek Arm of Lake Anna from the beginning of the inundated waters of Pamunkey Creek downstream to the confluence with the Terry's Run arm of the lake.	Fish Consumption	PCB in Fish Tissue/ 5A	2006	2018	471.89 Acres
		VAN-F07L_PMC01A04	Segment includes the Pamunkey Creek arm of Lake Anna beginning at the confluence with the Terrys Run arm of the lake and continuing downstream until the confluence with the North Anna River at The Splits	Fish Consumption	PCB in Fish Tissue/ 5A	2006	2018	802.74 Acres
		VAN-F07L_PMC01A04	Segment includes the Pamunkey Creek arm of Lake Anna beginning at the confluence with the Terrys Run arm of the lake and continuing downstream until the confluence with the North Anna River at The Splits.	Fish Consumption	PCB in Water Column	2010	2022	802.74 Acres
		VAN-F07L_PLT01A04	Segment includes the Plentiful Creek arm of Lake Anna.	Fish Consumption	PCB in Fish Tissue/ 5A	2006	2018	109.04 Acres
		VAN-F07L_NAR04A06	Segment includes the upper portion North Anna River of Lake Anna beginning at the start of the inundated waters of the North Anna River downstream until the boundary of the F06 watershed.	Fish Consumption	PCB in Fish Tissue/ 5A	2006	2018	1422.31 Acres
		VAN-F07L_NAR03A02	Segment includes the upper portion North Anna River portion of Lake Anna, beginning at the boundary of F07, and continues downstream until the start of the lacustrine waters of Lake Anna (0.7 miles upstream from 8-NAR044.68).	Fish Consumption	PCB in Fish Tissue/ 5A	2006	2018	1141.85 Acres
		VAN-F07L_NAR02A02	Segment begins at the start of the lacustrine waters of Lake Anna (0.7 miles upstream from 8-NAR044.68), and continues downstream until the northern end of the Route 690 bridge.	Fish Consumption	PCB in Fish Tissue/ 5A	2006	2018	3039.18 Acres
		VAN-F07L_NAR01A02	Segment includes the lower portion of Lake Anna (lacustrine), beginning near the northern end of the Route 690 bridge, and continues downstream until the dam.	Fish Consumption	PCB in Fish Tissue/ 5A	2002	2014	1563.36

Chesapeake Bay TMDL Phase I Watershed Implementation Plan

The Phase I Watershed Implementation Plan (WIP) was developed by the Commonwealth of Virginia as required by the U.S. Environmental Protection Agency (EPA) as an implementation plan for the Chesapeake Bay Total Maximum Daily Load (TMDL).

The Chesapeake Bay TMDL WIP can become a continuation of work begun with Virginia's Tributary Strategies in 2005. In Spotsylvania, those strategies included the York River Tributary Strategy and the Rappahannock River Tributary Strategy.

The Chesapeake Bay TMDL Phase I Watershed Implementation Plan charts out actions necessary to achieve the Chesapeake Bay TMDL allocations by the year 2025. It incorporates the principles of adaptive management so that the success or failures of actions can be evaluated and adjustments to programs and strategies are made. The plan incorporates the experience of tributary strategy development along with new knowledge and new tools.

The WIP acknowledges shortcomings in available data or in our ability to analyze data where this is an issue. The actions proposed will be based on the best available science and data, but we expect the base of knowledge and information to expand and to make adjustments accordingly in consultation with affected stakeholders and the Environmental Protection Agency (EPA). Virginia is also bound by the provisions of state law that require cost evaluations along with a benefit analysis for implementation plans. Adjustments to this plan will be considered based on cost effectiveness and other key factors.

Although the Chesapeake Bay TMDL is often discussed and thought of conceptually as a single TMDL, it is comprised of 92 segments. Virginia contributes drainage to 39 segments within the watershed. All 39 segments are listed as impaired for excessive nutrients and sediments.

The WIP contains pollution loads allocated or assigned to different source sectors of nitrogen, phosphorus and suspended solids. These sectors include wastewater treatment plants, agriculture, forest, urban stormwater, onsite/septic and air sources that contribute to the nutrient and sediment (also referred to as total suspended solids or "TSS") problems of the Chesapeake Bay. The plan also provides broad strategies proposed to meet those allocations. In accordance with federal expectations, those strategies and contingencies included in the plan are intended to meet reasonable assurance requirements for the Chesapeake Bay TMDL. However, we acknowledge that this is a plan and does not confer any additional budgetary, regulatory or legal authority to governmental agencies. Any programs or strategies that are not currently authorized by state law or regulation may be pursued through the legislative process or through the Virginia Administrative Process Act.

Considering the WIP, Virginia Soil and Water Conservation Districts, Regions, and localities have developed strategies aimed at improving TMDL's by sector through a number of measures including implementation, capacity building, or new Best Management Practice (BMP) approach.

The Virginia Total Maximum Daily Load (TMDL) program is a process to improve water quality and restore impaired waters in Virginia. Specifically, TMDL is the maximum amount of pollutant that a water body can assimilate without surpassing the state water quality standards for protection of the five beneficial uses: drinking water, recreational (i.e., primary contact/swimming), fishing, shell fishing, and aquatic life. If the water body surpasses the water quality criteria during an assessment period, Section

303(d) of the Clean Water Act (CWA) and the United States Environmental Protection Agency's (USEPA) Water Quality Management and Planning Regulation (40 CFR Part 130) both require states to develop a TMDL for each pollutant.

Beaver Creek, Mountain Run, Pamunkey Creek, Plentiful Creek, and Terrys Run were initially placed on the Commonwealth of Virginia's Section 303(d) List of Impaired Waters in 1998 for exceeding of the bacteria standard. Goldmine Creek was initially placed on the list in 2004 for exceeding of the bacteria standard. After these listings, a TMDL study was conducted in 2005 to identify bacteria sources in the watersheds and set limits on the amount of bacteria these rivers can tolerate and still maintain support of the Recreational Use.

A TMDL Implementation Plan (IP) was developed to reduce bacteria levels to attain water quality standards allowing delisting of the impaired waters from the Section 303(d) List. The TMDL IP describes control measures, which can include the use of better treatment technology and the installation of best management practices (BMPs), to be implemented in a staged process. Local support and successful completion of the implementation plan will enable restoration of the impaired water while enhancing the value of this important resource for the Commonwealth. Opportunities for Louisa, Orange, and Spotsylvania Counties, local agencies, and watershed residents to obtain funding will improve with an approved IP.

Approved TMDL Reports

Virginia's goal is that all streams attain the appropriate beneficial uses. These beneficial uses are described by the following use goals:

- drinking water use
- primary contact/swimming use
- fishing use
- shellfishing use
- aquatic life use

These uses are protected by application of the state's numeric and narrative water quality criteria. When the beneficial uses are not being met, the state must take steps to ensure that water quality is restored. One very important step in restoring water quality in the impaired streams is the development of TMDLs. A TMDL Study identifies sources of pollution and reductions needed from the identified pollutants to attain water quality standards. Pollution from point sources such as residential, municipal, or industrial discharges and non-point sources such as residential, urban, or agricultural runoff are included in the TMDL study. Table 7 below includes approved TMDL studies applicable to Spotsylvania County. For reference, hyperlinks to the approved studies have been provided within the Final Report column.

Table 7: Approved TMDL Reports- Spotsylvania, County							
TMDL Project	**Basin**	**City/County**	**Pollutant(s)**	**Final Report**	**EPA approval date**	**SWCB approval date**	**Comments**
Tidal Freshwater Rappahannock River Watershed	Rappahannock River	Caroline, King George, Spotsylvania, Stafford	E. Coli	Final Report	5/5/2008	4/28/2009	N/A
Mattaponi River Watershed	York River	Caroline, King and Queen, Orange, Spotsylvania	E. Coli	Final Report	7/19/2016	6/27/2016	N/A
Pamunkey River and Tributaries	York River	Caroline, Hanover, King William, Louisa, New Kent, Spotsylvania	E. Coli	Final Report	4/27/2015	12/11/2014	This project replaces the Pamunkey River & Northeast, Monquin, & Black creeks equations and modifies the 4 South Anna River segments & Taylors Creek from the Pamunkey River Basin project. It also replaces the Mechumps Creek & the Matadequin Creek projects.
Terrys Run, Pamunkey Creek, Beaver Creek, Mountain Run, Gold Mine Creek, Plentiful Creek	York River	Louisa, Orange, Spotsylvania	E. Coli	Final Report	11/4/2005	9/27/2006	N/A

TMDL Prioritization

The Virginia DEQ is implementing the national 303(d) Program Vision which calls for the prioritization of impaired waters for TMDL or TMDL alternative development over a six year window (currently 2016-2022). EPA announced the 303(d) Program Vision in December, 2013, making this 2016-2022 priority window the first phase of the Vision. While the national 303(d) Program Vision involves prioritizing

impaired waters for TMDL or TMDL alternative development, DEQ took this opportunity to also prioritize impaired waters that require a stressor analysis report or a natural conditions report.

In the summer of 2015, DEQ released a 2016-2022 draft list of prioritized impaired waters. This draft list was public noticed for a 30-day public comment period that started on July 27th, 2015. One comment was received during this public comment period that did not result in any changes to the priorities list. The final list of prioritized impaired waters was established following public comment period. Soon thereafter in early winter of 2015-2016, EPA announced that these priorities lists could be revised. This opportunity to revise the priorities list was due to challenges incurred by states throughout this first prioritization process, in addition to the fact that EPA was now allowing TMDL revisions to be included as priorities for the first time. DEQ revised the list of prioritized impaired waters and public noticed it for public comment from April 4th, 2016 to May 4th, 2016 with no comments received. In 2018, EPA provided states the opportunity to adjust their priorities lists to adapt to changes in program resources. This revised list was public noticed for public comment on April 2nd, 2018. The revised 2016-2022 TMDL program list of prioritized impaired waters specific to Spotsylvania County can be found below in Table 8.

Table 8

TMDL Program List of Prioritized Impaired Waters for 2016-2022

City/County	Water Name	Impaired Use	Impaired Cause	Assessment Unit ID	Size	Units	Water Body Type	Formal Priority	Report Type
Spotsylvania	Brock Run	Recreational	E. coli	VAN-F15R_BRK01A06	2.57	Miles	River/Stream	Yes	TMDL
	Glady Run	Recreational	E. coli	VAN-F16R_GDY01A10	9.31	Miles	River/Stream	Yes	TMDL
	Po River	Recreational	E. coli	VAN-F16R_POR01A10	7.21	Miles	River/Stream	Yes	TMDL
	Mat River	Recreational	E. coli	VAN-F18R_MAT01A12	2.30	Miles	River/Stream	Yes	TMDL
	Matta River	Recreational	E. coli	VAN-F18R_MTA01A00	11.89	Miles	River/Stream	Yes	TMDL

Chesapeake Bay TMDL Phase II Watershed Implementation Plan

Per the Environmental Protection Agency, there are three phases of WIPs developed by the Bay jurisdictions. Phase I and Phase II WIPs were developed and submitted to EPA in 2010 and 2012, respectively. Both Phase I and Phase II WIPs describe actions and controls to be implemented by 2017 and 2025 to achieve applicable water quality standards. The Phase II WIPs build on the initial Phase I WIPs by providing more specific local actions.

Chesapeake Bay TMDL Phase III Watershed Implementation Plan

Virginia's Final Phase III WIP can be found **HERE**.

Virginia Marine Resources Commission

A joint permit application process for authorization of work in the waters of the Commonwealth of Virginia is available from Local Wetlands Boards, the Virginia Marine Resources Commission, the Virginia State Water Control Board, the Tennessee Valley Authority, and the U.S. Army Corps of Engineers. The Virginia Marine Resources Commission functions as the clearinghouse for the joint permit application.

The Virginia Marine Resources Commission permit program is authorized by Title 62.1, Waters of the State, Ports and Harbors, Section 62.1, Authority Required for Use of Subaqueous Beds, and Chapter 2.1, Wetlands. These laws require permits for the use of state-owned bottomlands and tidal wetlands.

Comprehensive Coastal Resource Management for Tidewater Virginia Localities
For consistency with the Code of Virginia § 15.2-2223.2. Comprehensive plan to include coastal resource management guidance, Spotsylvania County has incorporated the following coastal resource guidance, provided by the Virginia Institute of Marine Science (VIMS) into the Comprehensive Plan:

Coastal resource guidance applies to the tidal extent of the Rappahannock River. The County is working to create its own shoreline and eco environment document to address the non-tidal tributaries, streams, creeks and rivers. County environmental staff is currently working with Caroline County on researching non-tidal tributaries, creeks, streams and river shoreline restoration and preservation that will address our common watersheds and will be easily adaptable for the entire county.

Issue Statement

Coastal ecosystems reside at the interface between the land and the water, and are naturally very complex. They perform a vast array of functions that encompass biological, chemical and physical processes. Humans derive benefits from coastal ecosystems such as habitat, water quality, and shoreline stabilization.

For example, coastal wetlands absorb nutrients that drain off the upland. This is an important filtering process that improves water quality in the adjacent receiving waters. Humans benefit from having good water quality; therefore, the wetland is providing a service in that capacity.

Beaches and dunes are another component of the coastal ecosystem valued by humans. Although typically regarded for their recreational value, beaches and dunes also provide a number of other important direct and indirect services. Beaches and dunes provide habitat, foraging and nesting areas for shore birds, turtles, and crustaceans, among other organisms. They also act as the first line of defense to incoming high energy storm waves and therefore provide an important function protecting uplands from erosion and structural loss.

The science behind coastal ecosystem resource management has revealed that traditional resource management practices limit the ability of the coastal ecosystem to perform many of these essential functions. The loss of these services has already been noted throughout coastal communities in Virginia as a result of development in coastal zone areas, coupled with common erosion control practices. Beaches and dunes are diminishing due to a reduction in a natural sediment supply. Wetlands are drowning in place as sea level rises and barriers to inland migration have been created by construction of bulkheads and revetments. There is great concern by scientists at the Virginia Institute of Marine

Science and on the part of the Commonwealth of Virginia that the continued armoring of shorelines and construction within the coastal areas will threaten the long-term sustainability of coastal ecosystems under current and projected sea level rise.

In the 1980s, interest arose in the use of planted wetlands to provide natural shoreline erosion control. Today, a full spectrum of living shoreline design options is available to address the various energy settings and erosion problems found. Depending on the site characteristics, they_range from marsh plantings to the use of rock sills in combination with beach nourishment. Studies have found that these approaches minimize impacts to the natural coastal ecosystems while successfully combating shoreline erosion.

Research continues to reinforce the principle that an integrated approach for managing tidal shorelines enhances coastal resources. Therefore, adoption of new guidance and shoreline best management practices for coastal communities is now necessary to insure that functions performed by coastal ecosystems will be preserved and the benefits derived by humans from coastal ecosystems will be maintained into the future.

Policy Statement

In 2011, the Virginia Assembly passed legislation to amend §28.2-1100 and §28.2-104.1 of the Code of Virginia and added section §15.2-2223.2, to codify a new directive for shoreline management in Tidewater Virginia. In accordance with section §15.2-2223.2, all local governments shall include in the next revision of their comprehensive plan beginning in 2013, guidance prepared by the Virginia Institute of Marine Science (VIMS) regarding coastal resource management and, more specifically, guidance for the appropriate selection of living shoreline management practices. The legislation establishes the policy that living shorelines are the preferred alternative for stabilizing eroding shorelines. Adoption of the VIMS shoreline guidance will help communicate to stakeholders, including private and public property owners, contractors, and developers the Commonwealth's preference for a living shorelines approach wherever possible.

This guidance, known as Comprehensive Coastal Resource Management Plans, is being prepared by VIMS for localities within the Tidewater region of Virginia. It explicitly outlines where and what new shoreline best management practices should be considered where coastal modifications are necessary to reduce shoreline erosion and protect our fragile coastal ecosystems. This guidance will include a full spectrum of appropriate management options which can be used by local governments for site-specific application and consideration of cumulative shoreline impacts. The guidance applies a decision-tree method using a based resource mapping database that will be updated from time to time, and a digital geographic information system model created by VIMS.

Health District

The Rappahannock Health District (VDH) provides environmental health services in Spotsylvania County. The Spotsylvania Office has two (2) Environmental Health Specialists assigned in the onsite program and four (4) in food protection. The Specialists also have responsibilities in rabies control, nuisance complaint and abatement, emergency preparedness and other duties as assigned.

Local environmental offices are tasked with managing the records for onsite systems in that locality. They review and issue approval for construction permits for well and septic systems, inspection reports, and provide quality assurance for private sector permits and approvals. In Spotsylvania County, most construction permits are prepared by OSE or PE's working in coordination with an OSE.

At present, the County enforces the Chesapeake Bay Act which specifies minimum pump out requirements and reserve area requirement for new onsite systems, and has adopted the minimum state sanitary regulations as promulgated by the Health Department. Those regulations establish minimum standards for septic system capacity, minimum separation distance between drainfields and the water table, minimum setbacks to wells and from impounded and natural waterways.

By law, local governments have the authority to adopt ordinances or regulations that are more stringent than State Health Department Regulations. The County has the option to further strengthen or tailor the State Code to meet its local site and soil performance conditions. Neighboring jurisdictions have customized their sanitary codes in various ways to protect sensitive resources.

Chesapeake Bay Septic Pump-Out Program

The septic pump-out program is a required element of the County's Chesapeake Bay Preservation Act (CBPA) program and at the state-level, the program is administered by the Virginia Department of Environmental Quality (DEQ) Office of Watershed and Local Government Assistance Programs. The DEQ Office of Watershed and Local Government Assistance Programs (Section 9 VAC 10-20-120.7), in conjunction with the Spotsylvania County Chesapeake Bay Ordinance (Section 6A-10(B) (1)), requires private Septic tanks to be pumped out or inspected every five (5) years.

The Spotsylvania County Code Compliance Environmental Engineering group administers the program within the County. Regular pumping or inspection of septic tanks extends the life of septic systems and ensures environmental protection of our natural resources.

The Chesapeake Bay Septic Tank Pump-Out Program is a State Mandated Program; there are no provisions for exceptions to this mandate. Everyone with a septic tank must comply. Whether the home is a summer lake home, weekend home, or has a reduced number of occupants, the property must still have the septic tank pumped out.

As an alternative to the mandatory pump-out, the owner has the option of having a plastic filter installed and maintained in the outflow pipe from the septic tank to filter the solid material from the effluent while sustaining adequate flow to the drainfield to permit normal use of the septic system. Owners with systems with such a filter will need to submit the filter documents to the County. Plastic filters require regular maintenance to keep them from clogging and backing sewage into a home. Routine maintenance typically includes the removal and proper disposal of non-biodegradable solids from the filter and then hosing down the filter over your septic tank to return the filtered solids to the tank for additional treatment. While not mandatory, the Virginia Department of Health still recommends that systems with plastic filters pump have their septic tanks pumped regularly to maintain peak system performance and extend the life of the drainfield. Such a filter shall satisfy standards established in the Sewage Handling and Disposal Regulations (12 VAC 5-610) administered by the Virginia Department of Health.

Local Zoning and Ordinances

Local governments have a major role to play in maintaining the health of the Chesapeake Bay environment. Through the judicial administration of zoning laws and subdivision and land use ordinances, local governments influence how land will be used and how and where development will take place. The zoning of land uses ensures that land is protected from incompatible uses and development activities follow the intent of the local comprehensive plan. Careful administration of these land use controls provides local governments with the tools they need to manage growth and to keep it within the carrying capacity of the local infrastructure. Local zoning, subdivision, and site plan review ordinances should be consulted in developing public access sites. These tools may also be used to protect good public access resources.

To better understand the problem one must remember that in the past the Rappahannock and York Rivers both were noted for their aquaculture and recreational uses including commercial/recreational fishing and swimming. These activities have been drastically curtailed due to the increasing degradation of the water quality within these 2 rivers that ultimately flow to the Chesapeake Bay. Several factors related to land use and their associated land disturbances have impacted our watersheds through the years.

The identified contributing activities in the past were focused on urbanization, farming, timbering & gold mining however they have recently been redefined to focus on sediment transport and introduced pollutant loads such as fertilizer, etc.

There is not one factor, entity or use that needs to be considered but all of them in their entirety must be focused on to slow the water down through quantity control measures and to stop the continuing deterioration of water quality from introduced pollutant loads. Storm events do not discern as to the development, farm, forest or mine nor a specific use or practice being performed. The stormwater runoff flows regardless the use of the land that is devoid of vegetation to move the water and its associated sediment quickly. The stormwater runoff will also pick up the unused portions of all pollutant loads such as fertilizer (nitrogen & phosphorous) that is being introduced to the ground and relocate it in the creeks, streams, rivers and ultimately the bay.

To help better understand the activities that must be monitored, they break down into the following two (2) sections to be considered

1. Land disturbance; these are activities that are related to the actual removal of the vegetative ground cover's root system which have traditionally been through development, farming, silviculture & mining within the commonwealth.
2. Pollutant loads such as fertilization for example (nitrogen & phosphorous); these are activities that have been closely related to pet waste, fertilizing lawns and agricultural crops/activities. Other potential pollutant load sources are petroleum based products, metals and other elements that are usually introduced through friction or maintenance of daily routines.

When considering the many factors that have impacted the water quality of the Commonwealth's waters the highest items of concern are phosphorous and nitrogen as the primary contributing players. For water quality, the amount of water flow from impervious surfaces need to be reduced through practices that will allow the water to re-infiltrate into the soil to recharge the groundwater aquifers as it

was doing before any land disturbance activity occurred. The introduction of low impact development (LID) techniques by means of infiltration facilities, landscaping and vegetative buffer will help to achieve this goal and promote both better water quantity and quality of stormwater runoff.

Other potential sources of pollution may include industrial discharges and the discharges from municipal sewage treatment plants (STPs). If improperly maintained or treated, discharges from the wastewater plant can introduce chlorine, bacteria, and nutrients into the receiving waters, with the potential to cause harmful environmental effects.

In late July 2020 the Spotsylvania County Laboratory Services Environmental Compliance Manager was able to confirm that the Massaponax Wastewater Plant has one effluent outfall along the Rappahannock River, east of the City of Fredericksburg. The effluent travels through a cascade aerator prior to surface discharge into the Rappahannock River. Additionally, the County has two other Wastewater Plants. The FMC Wastewater Plant effluent discharges into the Rappahannock in proximity to the Bowman Center/FMC/Sylvania Plant through one submerged outfall. The Thornburg Wastewater Plant discharges through one effluent outfall into an unnamed tributary that leads to the Po River. DEQ approves all designs and conducts site inspections at each location routinely. Authorization to discharge for all of the Wastewater Plants is in accordance with the effluent limitations and monitoring requirements outlined in the permits issued by DEQ.

As part of the permitting process, DEQ takes into account potential waterway risks and builds in the necessary protections into the permit. DEQ writes the permits for each plant based on permit renewal data, continuous monitoring data, Virginia Environmental Laboratory Accreditation Program (VELAP) certified laboratory data, technical inspections, and the conditions in and around the waterway that the plants discharge into. There are no documented concerns with any of the discharges that exist or that need to be mitigated. No known potential waterway risks exist with any of the plants. All plants operate within compliance with their permits and are in good standing with DEQ.

The condition of water in impoundment (reservoirs) that feed into River systems are also a consideration. As of the July, 2020 update from the Environmental Compliance Manager there are no documented DEQ related water quality and pollutant concerns for County reservoirs or downstream rivers. There are no known natural or man-made concerns with County reservoirs. The County monitors the flow-rate out of the reservoirs among additional flows at reservoirs and water treatment plants that are monitored (includes flows going in and out of the reservoirs as well as the instream flow by measurements to ensure they do not withdrawal too much water and stay within compliance with their permits) in order to stay in compliance with County permits.

Reservoir water is released according to our permits and designed in a way that ensures scouring downstream is as minimal as possible. The reservoirs are continuously monitored to optimize water quality. However, water pollution monitoring would be mandated by the State. The County does not have any mandated reservoir testing for water pollution required by the State. As part of the EPA's Fourth Unregulated Contaminant Monitoring Rule, the source water from all reservoirs were tested for Haloacetic Acid Indicators that included Total Organic Carbon and Bromide. This rule affected all Public Water Systems in the United States and will be used to create future regulations.

Resource Protection Area (RPA)

As described by the Virginia Department of Environmental Quality (DEQ), the Chesapeake Bay Preservation Act and regulations require that a vegetated buffer no less than 100 feet wide be located adjacent to and landward of all tidal shores, tidal wetlands, non-tidal wetlands connected by surface flow and contiguous to tidal wetlands or along water bodies with perennial flow. These features, including the 100-foot buffer, comprise the Resource Protection Area (RPA), and serve a direct water quality function by removing excess sediment, nutrients, and potentially harmful or toxic substances from groundwater and surface water entering the Chesapeake Bay and its tributaries. Buffers also help to absorb periodic flood surges, and supply thermal protection, food, and cover to fish and other wildlife, stabilize stream-banks, and provide recreation and aesthetic values.

Generally, vegetation in the 100-foot buffer must be preserved on lots that include an RPA, and established where it does not exist. The regulations permit a property owner to modify the buffer by removing vegetation for several reasons:

- To provide for reasonable sight lines
- The construction of access paths
- General woodlot management
- Shoreline erosion control projects

The total amount of land designated as RPAs in Spotsylvania County is estimated to be 12,800 acres, or roughly 5% of the county's total land area. Development in the RPA is limited to water-dependent facilities and redevelopment. In the RPA, a 100-foot buffer of vegetation that is effective in limiting runoff, preventing erosion, and filtering non-point source pollution from runoff must be retained if already present, or established if it does not exist. Clearing in the RPA is limited to what is necessary to provide for reasonable views of the water, and for general woodland management purposes. Cleared vegetation must be replaced with other vegetation is equally effective in protecting water quality.

The Spotsylvania County Geographical Information Systems (GIS) Department graphically depicts the limits of RPA as a map layer online as part of the Interactive Web Based GIS located **HERE**.

Resource Management Area (RMA)

In Spotsylvania County all land outside of the designated RPA is designated as a Resource Management Area. The RMA is protected by the County's Chesapeake Bay Preservation Ordinance (CBPO) and the County Design Standards Manual through the establishment of standards which apply to all development and redevelopment activities.

Resource Management Areas are intended as buffer areas outside of the RPAs wherein environmental factors are still significant to warrant water quality protection. These include areas where development impacts should be mitigated through the implementation or application of design guidelines and performance criteria. These areas include floodplains, highly erodible soils (including steep slopes), highly permeable soils, hydric soils, and isolated non-tidal wetlands not included in the RPA.

The CBPO and Design Standards require that no more land should be disturbed than is necessary to provide for the desired use or development. On-site impervious cover must be minimized, indigenous

vegetation should be preserved, on-site sewage disposal systems not requiring a VPDES permit must be pumped at least once every five years, an on-site 100% reserve sewage disposal site must be provided, stormwater runoff must be controlled with the use of best management practices, and on lands where agricultural activity is taking place a Chesapeake Bay Conservation Plan is required.

Reservoir Protection Overlay District

The Reservoir Protection Overlay District is established in the Spotsylvania County Zoning Ordinance. As per Spotsylvania County Code Sec. 23-7.5.1(a), Reservoir Protection Overlay Districts are created for the purpose of protecting and promoting the health, safety and welfare by preserving the existing and potential public drinking water supply reservoir sites and protecting them from water pollution. Regulations within such districts are established to prevent water quality degradation due to pollutant runoff from septic fields, construction sites, lawns, agricultural lands or material storage areas and to reduce sediment loadings that shorten reservoir life. This district is in addition to and overlays all other zoning districts where it is applied, so that any parcel lying in such an overlay district shall also lie in one or more zoning district. The minimum lot size for any residential use where such lot is contiguous to a reservoir site is five acres for lots to be served by private septic systems and two acres for lots to be served by public sewer.

The Spotsylvania County Geographical Information Systems (GIS) Department graphically depicts the limits of the Reservoir Protection Overlay District information available as a map layer online as part of the Interactive Web Based GIS located **HERE**.

River Protection Overlay District

The River Protection Overlay District is established in the Spotsylvania County Zoning Ordinance and is focused on areas in proximity to the Rappahannock River extending from the Fredericksburg (City) line to Orange County. As per Spotsylvania County Code Sec. 23-7.4.1(a), River Protection Overlay Districts are created for the purpose of promoting the public health, safety and welfare through the protection of valuable river resources that provide or may provide drinking water and recreational opportunities. Regulations within such districts are established to prevent water quality degradation due to pollutant runoff from septic fields, construction sites, or material storage areas. This District is in addition to and overlays all other zoning districts where it is applied. The effect is to create a new district that has the characteristics and limitations of the Overlay District.

The minimum lot size for a single-family dwelling in River Protection Overlay Districts is five acres for lots to be served by private septic systems. Lots to be served by public water and sewer, or public well and public sewer are subject to the lot size requirements of the underlying zoning district, which in most cases is two acres within subdivision and one acre outside of subdivision.

In addition to any use limitations in the underlying zoning districts, the following use limitations apply in the River Protection Overlay District:

- The placement of septic fields within the one-hundred-year floodplain is prohibited.

- Before the issuance of a land-disturbing permit for any activity that will disturb more than ten thousand (10,000) square feet of land, a site plan for the control of erosion and sediment runoff must be submitted to and approved by the department of utility construction and erosion control (single-family dwellings outside of subdivisions are exempt from this requirement).
- The aboveground storage of hazardous liquid materials, including fuel oil, pesticides, herbicides, etc., in bulk greater than one thousand (1,000) gallons without approved containment structures is prohibited.

The Spotsylvania County Geographical Information Systems (GIS) Department graphically depicts the limits of the River Protection Overlay District information available as a map layer online as part of the Interactive Web Based GIS located **HERE**.

Floodplains

One hundred-year floodplains are defined as areas with a one percent chance of being flooded in any given year. In order to qualify for flood insurance, the Federal Emergency Management Agency (FEMA) requirements prohibit development within the floodway (water channel) and strongly discourage development in the adjacent 100-year floodway fringe.

With enhanced analytical tools to more properly map floodplain areas, FEMA, its mapping partner, working with Spotsylvania County are in the process of updating the County Flood Insurance Rate Map (FIRM). The result of the updated FIRM maps will lend greater insights into areas subject to flooding and the extent of flooding likely to occur. This update is expected to result in changes to the regulatory floodplain boundaries, resulting in areas removed from prior floodplain designations while others are added.

The County GIS office updated the County floodplain information and has made it publicly available in July, 2018 via Web Based GIS **HERE**.

Floodplain Overlay District

The Floodplain Overlay District is established in the Spotsylvania County Zoning Ordinance. As per Spotsylvania County Code Sec. 23-7.2.1, the Floodplain Overlay District was created to prevent the loss of property and life, the creation of health and safety hazards, the disruption of commerce and governmental services, the extraordinary and unnecessary expenditure of public funds for floor protection and relief, and the impairment of the tax base.

The Spotsylvania County Geographical Information Systems (GIS) Department graphically depicts the limits of the Floodplain Overlay District information available as a map layer online as part of the Interactive Web Based GIS located **HERE**.

Massaponax Creek Watershed Plan

The Friends of the Rappahannock (FOR), in partnership with Spotsylvania County received a Small Watersheds Program Grant from the Alliance for the Chesapeake Bay to develop and implement a water quality management plan for the Massaponax Creek watershed. The "Rapid Watershed Planning Handbook" will be used for this planning effort. The goal of this plan is to assist the County in preserving water quality and riparian corridors within the context of continued economic development. The Plan serves to guide the development of the County's regional stormwater plan, and well as future Comprehensive Plan revisions. Additionally, this project will use the planning process as a means to:

- Educate County staff, elected officials and citizens on the importance of watershed/ resource based planning:
- Reduce nutrient and toxics loads by specifying state-if-the-art stormwater management and site design practices;
- Demonstrate and model effective watershed planning to other localities; and cultivate an informed and active grassroots constituency of FOR in the watershed, increasing their capacity to advocate locally for water quality protection.

FLORA AND FAUNA

Spotsylvania Natural Heritage Resources

The Virginia Department of Conservation and Recreation's mission is to "Conserve, protect, enhance and advocate wise use of the Commonwealth's unique natural, historical, recreational, scenic and cultural resources."

Spotsylvania County has historically reached out to the Virginia Department of Conservation and Recreation considering Natural Resources. Concerning the identification and protection of flora and fauna, the Department of Conservation and Recreation is a chief source of information to determine via predictive models whether proposed development may threaten a Natural Heritage Resource and warrant additional study, resource avoidance, or additional support for conservation efforts. The Department of Conservation and Recreation's Natural Heritage Division has provided the following County Profile information regarding Natural Heritage Resources applicable to Spotsylvania County:

Natural heritage resources as defined by the Virginia Department of Conservation and Recreation – Division of Natural Heritage (DCR) are the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations such as caves and karst features. Spotsylvania County is currently home to twenty-nine distinct types of natural heritage resources with 48 total occurrences throughout the county (Natural Heritage Resources). In addition, DCR has identified twenty-five terrestrial and aquatic conservation sites (Conservation Sites) as areas necessary for their survival. The Natural Heritage Resources and Conservation Sites can be found on the following pages in Exhibit Map (See Exhibit 3) and Table format (See Table 9-10).

DCR identifies and protects natural heritage resources statewide and maintains a comprehensive database of all documented occurrences of natural heritage resources in Virginia. DCR has developed conservation sites that contain known populations of natural heritage resources and include adjacent or

surrounding habitat vital for their protection. Conservation sites do not represent protected lands. See Table 10 for existing conservation sites in Spotsylvania County. They are recommended for protection and stewardship because of the natural heritage resources and habitat they support but are not currently under any official protection designation. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites can be used to screen development projects for potential impacts to natural heritage resources, aid local and regional planning, identify targets for acquisitions and easements and guide priorities for restoration activities.

An example of a conservation site in Spotsylvania County is Lake Anna Uplands Conservation Site. In addition to multiple rare species and habitat types found here, the site/ecosystem is critically important because of the geographic location adjacent to Lake Anna. Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. Lake Anna Uplands Conservation Site has been given a biodiversity significance ranking of B5, which represents a site of general significance. The natural heritage resources associated with this conservation site are:

Red milkweed (Image 4)	*Asclepias rubra*,	G4G5/S2/NL/NL
Ten-angle pipewort (Image 5)	*Eriocaulon decangulare*,	G5/S2/NL/NL
Piedmont / Central Appalachian Mixed Oak / Heath Forest		G5/S5/NL/NL

Image 4: Red Milkweed (Asclepias rubra, G4G5/S2/NL/NL)

Red milkweed, a state rare perennial herb, inhabits wet pine savannas, sandhill seeps, seepage swamps (Weakley, in prep.). It has also been documented in such disturbed areas as powerline rights-of-way (TNC, 1996). This species produces dull red to lavender flowers from June through July (Radford et al., 1968). Like many wetland species, this species has suffered a loss of habitat due to conversion and/or draining of wetlands. In addition, this plant has declined as a result of active fire suppression, which has

eliminated significant herbaceous-dominated wetlands (DCR, 1989). Red milkweed is currently known from 29 locations in Virginia's coastal plain and piedmont regions, of which 4 occurrences are historic.

Ten-angle pipewort a state rare plant, inhabits bogs, savannas and low pinelands and blooms from June through October (Radford et. al., 1968). This plant is currently known from 14 locations throughout Virginia and known historically at 3 locations.

Image 5: Ten-angle pipewort (Eriocaulon decangulare, G5/S2/NL/NL)

The Piedmont / Central Appalachian Mixed Oak / Heath Forest community is a matrix forest of dry, infertile uplands of the Mid-Atlantic region. In Virginia, it is most common in the Piedmont, but also occurs in the inner (western) part of the Coastal Plain and at low-elevations (mostly toe slopes and valley floors) of the mountains. This unit is distinct among Virginia's oak/heath forests in its occurrence on low-elevation, rolling to sub-level, usually non-rocky terrain. The vegetation is a closed to very open oak forest with mixed and variable canopy dominance by white, black, scarlet, and chestnut oaks. Various pine spp., including Virginia, shortleaf, eastern white, and pitch pines are frequent overstory associates, particularly following fire or logging disturbances. Southern red oak, post oak, pignut hickory, and mockernut hickory are infrequent canopy trees. Black gum, downy serviceberry and, in the southern part of the range, sourwood attain exceptional abundance and stature in these forests, dominating the sub-canopy layers and occasionally reaching the overstory. Red maple and sassafras are other common understory trees. In typical stands, the shrub layer is dominated by deciduous ericaceous species such as blueberries and black huckleberry. Herbaceous species are sparse, and species-richness is low.

The Piedmont / Central Appalachian Mixed Oak / Heath Forest community evolved in pre-settlement habitats that were subject to frequent fires, and all the dominant species are at least somewhat dependent on fire for successful reproduction. Although still fairly common, many stands of this community type have been altered by repeated logging or completely destroyed by conversion of sites to silvicultural loblolly pine. Because of widespread fire exclusion, poor recruitment of oaks and invasion by red maple, beech, and other fire-intolerant trees are characteristic of remaining stands.

Potential Threats to Natural Heritage Resources:

The great threat to this area and its bird species is the ongoing conversion of habitat to residential and commercial development. Interest in the area from developers and potential homeowners has led to a rise in land valuations and subdivision of privately-owned land for development. Alteration of the local hydrology by land disturbance can change or eliminate habitat and diminish water quality. Fragmentation of forests and the introduction of invasives, both flora and fauna, can have a direct effect on the survival of many native plants. Threats to the Natural Communities are incompatible development, and recreational activities, invasive species; incompatible agricultural and forestry.

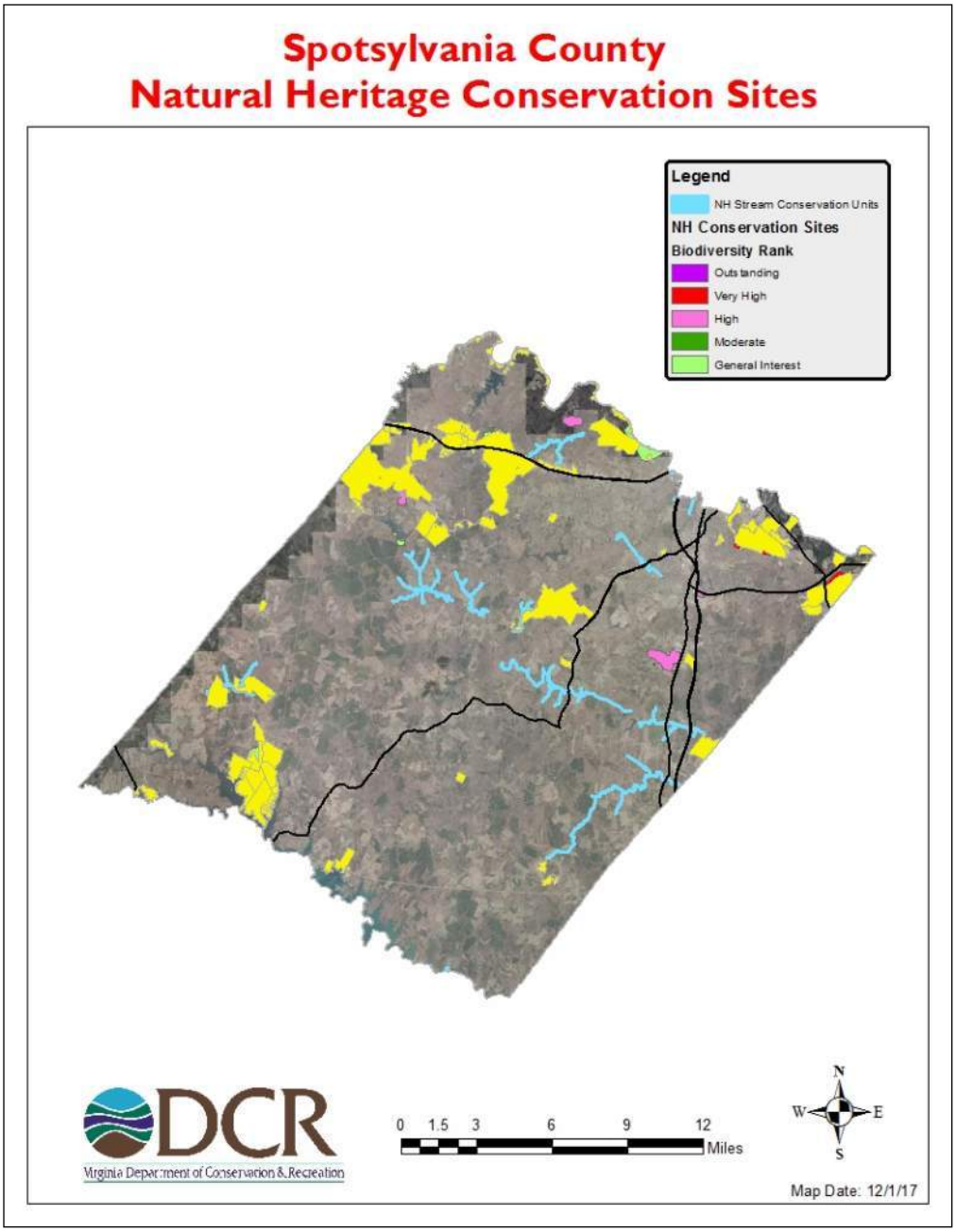


Exhibit 3: Conservation Sites

Literature Cited

Department of Conservation and Recreation. 1989. A Natural Heritage Resources Inventory and Biological Assessment of the Elko Tract, Henrico County, Virginia. Prepared by the Department of Conservation and Recreation's Division of Natural Heritage. 7 November 1989.

Fleming, G.P., K.D. Patterson, and K. Taverna. 2017. The Natural Communities of Virginia: a Classification of Ecological Community Groups and Community Types. Third approximation. Version 3.0. Virginia Department of Conservation and Recreation, Division of Natural Heritage, Richmond, VA. http://www.dcr.virginia.gov/natural-heritage/natural-communities/ [Accessed: *December 6, 2017*]

Harvill, A.M., Jr. T.R. Bradley, C.E. Stevens, T.F. Wieboldt, D.M.E. Ware, and D.W. Ogle. 1986. Atlas of the Virginia Flora, 2nd ed. Virginia Botanical Associates, Farmville, VA.

Radford, Albert E., Harry E. Ahles, and C. Ritchie Bell. 1968. Manual of the Vascular Flora of the Carolinas. The University of North Carolina Press, Chapel Hill.

Radford, A.E., H.A. Ahles, C.R. Bell. 1968. Manual of the Vascular Flora of the Carolinas. University of North Carolina Press, Chapel Hill. p. 266.

The Nature Conservancy. 1996. Biological and Conservation Data System. Arlington, Virginia, USA.

Weakley, A.S. In prep. *Flora of the Carolina's and Virginia*. The Nature Conservancy, Southeastern Regional Office.

Definitions of Abbreviations Used on Natural Heritage Resource Lists of the Virginia Department of Conservation and Recreation

Natural Heritage State Ranks

The following ranks are used by the Virginia Department of Conservation and Recreation to set protection priorities for natural heritage resources. Natural Heritage Resources, or "NHR's," are rare plant and animal species, rare and exemplary natural communities, and significant geologic features. The criterion for ranking NHR's is the number of populations or occurrences, i.e. the number of known distinct localities; the number of individuals in existence at each locality or, if a highly mobile organism (e.g., sea turtles, many birds, and butterflies), the total number of individuals; the quality of the occurrences, the number of protected occurrences; and threats.

S1 - Critically imperiled in the state because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation from the state. Typically 5 or fewer populations or occurrences, or very few remaining individuals (<1000).

S2 - Imperiled in the state because of rarity or because of some factor(s) making it very vulnerable to extirpation from the state. Typically 6 to 20 populations or occurrences or few remaining individuals (1,000 to 3,000).

S3 - Vulnerable in the state either because rare and uncommon, or found only in a restricted range (even if abundant at some locations), or because of other factors making it vulnerable to extirpation. Typically having 21 to 100 populations or occurrences (1,000 to 3,000 individuals).

S4 - Apparently secure; Uncommon but not rare, and usually widespread in the state. Possible cause of long-term concern. Usually having >100 populations or occurrences and more than 10,000 individuals.

S5 - Secure; Common, widespread and abundant in the state. Essentially ineradicable under present conditions, typically having considerably more than 100 populations or occurrences and more than 10,000 individuals.

S#B - Breeding status of an animal within the state

S#N - Non-breeding status of animal within the state. Usually applied to winter resident species.

S#? - Inexact or uncertain numeric rank.

SH - Possibly extirpated (Historical). Historically known from the state, but not verified for an extended period, usually > 15 years; this rank is used primarily when inventory has been attempted recently.

S#S# - Range rank; A numeric range rank, (e.g. S2S3) is used to indicate the range of uncertainty about the exact status of the element. Ranges cannot skip more than one rank.

SU - Unrankable; Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.

SNR - Unranked; state rank not yet assessed.

SX - Presumed extirpated from the state. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.

SNA - A conservation status rank is not applicable because the element is not a suitable target for conservation activities.

Natural Heritage Global Ranks are similar, but refer to a species' rarity throughout its total range. Global ranks are denoted with a "G" followed by a character. Note GX means the element is presumed extinct throughout its range. A "Q" in a rank indicates that a taxonomic question concerning that species exists. Ranks for subspecies are denoted with a "T". The global and state ranks combined (e.g. G2/S1) give an instant grasp of a species' known rarity. These ranks should not be interpreted as legal designations.

FEDERAL LEGAL STATUS
The Division of Natural Heritage uses the standard abbreviations for Federal endangerment developed by the U.S. Fish and Wildlife Service, Division of Endangered Species and Habitat Conservation.

LE - Listed Endangered
LT - Listed Threatened
PE - Proposed Endangered
PT - Proposed Threatened
C - Candidate (formerly C1 - Candidate category 1)
E(S/A) - treat as endangered because of similarity of appearance
T(S/A) - treat as threatened because of similarity of appearance
SOC - Species of Concern species that merit special concern (not a regulatory category)
NL – no federal legal status

STATE LEGAL STATUS
The Division of Natural Heritage uses similar abbreviations for State endangerment.

LE - Listed Endangered
PE - Proposed Endangered
SC - Special Concern - animals that merit special concern according to VDGIF (not a regulatory category)

LT - Listed Threatened
PT - Proposed Threatened
C - Candidate
NL - no state legal status

For information on the laws pertaining to threatened or endangered species, please contact:

U.S. Fish and Wildlife Service for all FEDERALLY listed species;
Department of Agriculture and Consumer Services, Plant Protection Bureau for STATE listed plants and insects
Department of Game and Inland Fisheries for all other STATE listed animals

Conservation Sites Ranking

Brank is a rating of the significance of the conservation site based on presence and number of natural heritage resources; on a scale of 1-5, 1 being most significant. Sites are also coded to reflect the presence/absence of federally/state listed species:

Conservation Site Ranks	Legal Status of Site
B1 – Outstanding significance	FL – Federally listed species present
B2 – Very High significance	SL – State listed species present
B3 – High significance	NL – No listed species present
B4 – Moderate significance	
B5 – Of general Biodiversity significance	

Natural Heritage Data Explorer (NHDE)

The Virginia Department of Conservation and Recreation describes (NHDE) as an ArcGIS Server based interactive mapping application that anyone can use to map the conservation status and conservation values of lands. The NHDE is a combination of three tools used to access Natural Heritage, Conservation Lands, and conservation planning data and information, and used to obtain Environmental Review services.

As a development review tool, County staff and local decision makers are able to utilize the NHDE to make better informed decisions regarding the prospect of development impacts in areas where natural heritage resources are, or are likely to occur. Such models can and have resulted in requests for additional information in an effort to mitigate potential impacts upon threatened or endangered species and their habitats where models identify potential conflicts. Additionally, models can help better inform land use and public service decisions as part of the County Comprehensive Plan creation, review, and update processes whereby helping guide informed planning efforts.

The NHDE can be found **HERE**

2015 Virginia Wildlife Action Plan

As per the Virginia Department of Game and Inland Fisheries, the 2015 Wildlife Action Plan (Plan) was written to offer strategies for rising to the challenges of the 21st century. The Plan describes opportunities to maintain and improve our natural habitats, allowing us to conserve wildlife in ways that benefit people. It details efforts to restore our rivers, maintain our forests, and prevent species from declining to the point where federal protections are imposed. Practical actions based on the best

available science describe how we help our wildlife and our human communities adapt to changing conditions. Most importantly, the Plan demonstrates that some of our most critical conservation issues can be addressed in a cost-effective way using proven techniques and technologies.

The updated 2015 Action Plan identifies 883 species that are in decline statewide. Habitat loss is the single greatest challenge impacting these species. The Plan identifies strategies to conserve and restore these species through conservation efforts. In addition to a statewide overview, the Action Plan describes strategies for 21 multi-county planning regions which are roughly consistent with Virginia's Planning District Commissions. Spotsylvania County is located within the George Washington Region Chapter of the Plan. Within the George Washington Region, 76 of the statewide 883 species are believed to either occur or have occurred. For each planning region, the Action Plan identifies the local wildlife priorities, the habitats those species rely upon, threats impacting these species and habitats, and conservation actions that can be taken to address those threats. The Plan identifies: priority places for either conservation or restoration within each planning region, programs working to address threats or define best management practices, and data that could be used to document and evaluate the success of conservation actions. Within Spotsylvania County, those areas identified where Top Tier Species of Greatest Conservation Needs have the greatest density include: northwestern; central; south-central; southeastern Spotsylvania County. These are areas of the County that historically have had fewer development pressures where agriculture, forestry, and large lot rural residential land uses prevail and are supported by the County Future Land Use vision, outside of the Primary Development Boundary. Finally, the updated Action Plan describes climate trends that have been projected for Virginia and identifies actions that can be taken to conserve wildlife under changing climatic conditions.

The 2015 Wildlife Action Plan is made available online by the Virginia Department of Game and Inland Fisheries Here.

Virginia Fish and Wildlife Information Service (VaFWIS)

The Virginia Fish and Wildlife Information Service (VaFWIS) complements the Wildlife Action Plan and provides an interactive mapping service to help identify a number of geographic based natural resources overlays including: designated trout waters; anadromous fish waters; designated waters for threatened and endangered species; bald eagle nest sites, concentration areas and roosts; Wildlife Action Plan Tier I and II observations (approximate locations within 2 miles); predicted habitat for Wildlife Action Plan Tier I and II Species.

As a development review tool, County staff and local decision makers are able to utilize the VaFWIS to make better informed decisions regarding the prospect of development impacts in areas where Tier I and II species and their habitats are or are likely to occur. Such models can and have resulted in requests for additional information in an effort to mitigate potential impacts where areas of potential conflict exists. Additionally, VaFWIS can help better inform land use and public service decisions as part of County Comprehensive Plan creation, review, and update processes whereby helping guide informed planning efforts.

The VaFWIS can be found **HERE**.

U.S. Fish and Wildlife Service Information for Planning and Consultation (IPaC)

The U.S. Fish and Wildlife Service IPaC service assists in the environmental review process by identifying species and resources that may be impacted by activities at a specific location. Like the VaFWIS and NHDE services referenced previously, IPaC offers an easy to use mapping system to help geo-locate resources to consider as part of the development review process.

As a development review tool, County staff and local decision makers can utilize the IPaC service to make better informed decisions regarding the prospect of development impacts in areas where endangered species, critical habitat, migratory birds or other natural resources are, or are likely to occur. Such models can and have resulted in requests for additional information in an effort to mitigate potential impacts where areas of potential conflict exists. Additionally, IPaC can help better inform land use and public service decisions as part of County Comprehensive Plan creation, review, and update processes whereby helping guide informed planning efforts.

The IPaC service can be found **HERE**.

FORESTRY

The Virginia Department of Forestry's mission is to "protect and develop healthy, sustainable forest resources for Virginians". As per the Virginia Department of Forestry, their Vision envisions a healthy, abundant, forest resource providing economic and environmental benefits to the Commonwealth on a sustained basis. We see a resource whose scenic beauty enhances natural surroundings and whose protected environment supports clean water and wildlife. We further see a diverse forest resource as a part of natural ecosystems. We envision the economic benefits of forest industry to be in balance with the environmental values of the resource.

Spotsylvania County has historically reached out to the Virginia Department of Forestry to seek updated Spotsylvania County forestry profile information as part of the Comprehensive Plan update process, as follows:

County Profile

Forestry in Spotsylvania County, as it is most anywhere, is dictated largely by its soils, its historical uses and management techniques, local demands and the natural forest cover present. Historically, Spotsylvania County was rich in minerals as well as in agricultural and forestal resources. The County seal, with an image of three trees, reflects the importance of forestry to the local economy.

During colonial times, a great deal of effort was spent in mining iron ore, gold, silver and other minerals from the soils of this county. The county was named after colonial Lt. Gov. Alexander Spotswood (1676-1740), who, among other things, was responsible for establishing iron furnaces and foundries in the area. As these resources were being mined, productive timberland was harvested to provide firewood to operate the furnaces used to melt these minerals into a usable form.

During the Civil War, four major battles and countless minor battles and skirmishes were fought in the area, earning Spotsylvania the title "Crossroads of the Civil War." Civil War-era photos show the vast amount of open land during this time period; the timber had been cleared to provide firewood for the numerous furnaces in the county, as well as to make way for crop fields. The northwest area of the county is called "Wilderness," where large areas of dense shrub land made the area nearly impossible to

travel through. The "Wilderness" shrubs grew in the poor soils that resulted from forest clearing and the removal of raw materials.

Both the mining operations and the land clearing combined with poor agricultural practices have left Spotsylvania with depleted topsoils. Additionally, certain areas of the county have poorly drained soils that may be the result of a 'plow pan' or 'hard pan' layer, developed during agricultural tillage. Once bountiful regions had now been reduced to marginal productivity, at best. Although marginal for agriculture, the soils were good for pine plantations, predominately Loblolly pine (Pinus taeda).

Once the Civil War ended, with much of the pre-war workforce no longer available, much of the cleared land throughout the county reverted back to forest land. A considerable amount of the hardwoods (oak, hickory, poplar, etc.) existing in the county today is a result of the forest succession that began after the Civil War ended.

After the turn of the 20th century, and most of the 1900s, forestry and forest products were an important part of the economy of Spotsylvania County. Numerous portable sawmills, permanent sawmills and timber harvesters operated in the area, providing a livelihood for many families. The operations were responsible for harvesting the hardwoods, milling the product on site in the forest, and shipping only the final product (in the form of rough lumber) out of the forest. This process usually focused on trees of merchantable size, species and quality, and left un-merchantable trees uncut. Primary products for this era included grade lumber and railroad ties, among others. This method of harvesting timber was common for several reasons: harvesting timber was very labor intensive, so crews only focused on what was profitable, and there was generally little to no market value for smaller or poorly formed trees. However, in some cases, this left the forest devoid of any market value, often for decades after the harvest.

Prior to the 1950's, it was commonplace for a landowner to sell the standing timber and land together as a unit, or once the timber had been harvested, sell the land for a very low cost. The value of the land was in the forest, and with the forest having been harvested, the landowner would then be required to pay taxes on the property until the forest matured again, possibly taking many decades. In some cases, the landowner was unwilling to carry that long. Clearing the land for agriculture was generally not an option because it was often not suited for farming. However, due to the differences of agriculture and farming, land that was substandard for agriculture often grows pines very well.

Beginning in the 1960's and 1970's, paper companies, such as WestVaCo, Continental Can, Bear Island, Chesapeake and other smaller, locally owned sawmills would purchase these lands for the expressed purpose of growing pines for fiber production.

Eventually, clear cutting as a method of timber harvesting was used more frequently, primarily due to the marketability of previously un-merchantable wood, such as hardwood pulpwood, as well as the onset of mechanized harvesting (which reduced the amount of manual labor required in the harvesting process). Clear cutting made it possible for the forest landowner to reforest using planted pine; the pine plantation was thereby developed.

As a result of Interstate 95 being built during the early 1960s, and the fact that Spotsylvania lies mid-way between Washington, D.C., and Richmond, the population of Spotsylvania began to grow. Prior to that, much of the timberland in the county was owned in large tract sizes by paper and pulp companies,

sawmills and other timber producers as a relatively inexpensive commodity. As the population of Spotsylvania increased, however, so did the value of the land. Developers and builders were able to buy land to subdivide, further increasing the price of real estate. This once rural county has now become suburbanized, with large tracts of land being broken into smaller and smaller pieces, contributing to forest fragmentation.

Table 11: Forestry Land in Spotsylvania County	
Land Use	Acres
Total Area of Spotsylvania County	252,499
Commercial Timberland	143,374
Total Area of Forestland	150,656
Nonforest Area	89,439
Water	12,403
% of Spotsylvania County in Forest	60%

Table 12: Forest Lands Ownership		
Ownership	Acres	Percentage
Area of Forestland all classes	150,656	100%
National Park	1,456	1%
State	8,709	6%
County	5,826	4%
Private Ownership	134,665	89%

Currently, there are still a large number of loblolly pine plantations of considerable size being managed here in the County. However, many of the paper and pulp companies have sold their holdings here in the County; some of which has gone to landowners with forest management goals, while other tracts have been converted into housing developments. Converting a pine plantation into a housing development presents two important issues:

1. It creates a fire hazard for the homes of that community (due to the highly flammable nature of loblolly pine) and;

2. The larger forest, now subdivided, is now much more difficult to manage. Due to the difficulty in managing this stand, often the forest becomes overcrowded, stressed, and susceptible to insects and diseases. Trees killed by insects and diseases (often this occurs in areas of several acres or more) become a fire hazard and have no market value whatsoever.

Bearing this history in mind, and its influences on the forests of today, the soils of Spotsylvania County are by and large well suited for Loblolly and Shortleaf pine. Pines can be grown in a higher quality and in a shorter amount of time than hardwoods. In Spotsylvania, on upland sites, a typical hardwood forest is dominated by white oak, red oak, hickory and yellow poplar. On bottomland sites, a typical hardwood

forest is dominated by river birch, sycamore, sweet gum and red maple. The quality of the hardwood present today on upland sites is generally fair to poor, as quality hardwoods require very productive soils.

Table 13: Forest Types		
Forest Type Group	Acres	Percentage
Loblolly Pine	51,887	34%
Oak-Pine	23,280	15%
Oak - Hickory	63,838	42%
Bottomland Hardwood	10,195	7%
Non-stocked	1,456	1%
Total	150,656	100%

Forest products in Spotsylvania County today include pulpwood, grade lumber (both pine and hardwood), railroad ties, and some veneer. Of course, firewood, fence posts and associated products are produced on a small scale. Some timber harvesters, however, have begun chipping low quality and un-merchantable products created during the timber harvest (such as tree tops) into a mulch-like material, where it is used as fuel at large mills and plants.

The trend of forestry in Spotsylvania is like that elsewhere in eastern Virginia. Timber harvesting in general is tied closely to both the economy and to the housing market. Acres harvested statewide were down in 2009, however, they have recovered to more typical numbers today. Total acres reforested, after a timber harvest have maintained a steady trend over the past few years. Spotsylvania County ranks 36th statewide in timber harvesting for total average annual harvest value, from 2005 to 2015.

One notable trend over the past thirty years is the absence of fire. While no one would argue that wildfires are good, a prescribed fire does have benefits when handled properly. Due to the high population in Spotsylvania County, the use of prescribed fire as a management tool has been increasingly difficult to use, due to the issues associated with smoke management. Additionally, in rural Virginia periodic wildfires, although dangerous, did have an effect on the forest over time. Certain tree species such as sweetgum, red maple and others, typically were killed off by fire, whereas most species of oak were able to survive and even thrive. Periodic wildfires often gave way to a higher composition of oaks in Virginia forests, which in turn were more marketable. Fire now largely precluded from the forestland, many hardwood forests now are comprised more heavily of sweetgum, red maple, and less of the oaks.

While portions of the western and southern sections of the county are still somewhat rural, Spotsylvania County today is largely made up of suburban areas. Many county residents commute to Northern Virginia or Washington, D.C., for high-paying jobs. Other people are moving to Spotsylvania from those areas because of the relatively lower cost of living. As a result of this shift from rural to suburban, the urban and community forests have become increasingly important to homeowners, and new housing developments are being built with “green spaces” for their residents to enjoy. These people also see the value in protecting forested areas so that all will be able to enjoy the many benefits forests provide.

Forest Industry

Currently, there are two operating, commercial sawmills within Spotsylvania County, however, there are at least two smaller portable mills in existence, and likely others. Additionally, there is a wood preservative plant and a planing mill, neither of which uses raw logs in their processes. The wood preservative plant treats finished lumber with an approved chemical for use in exterior construction, such as decks, playground equipment, etc. The planing mill receives large cants, and re-saws them into pallet parts.

Much of the timber harvested in Spotsylvania County is hauled to primary processing facilities outside of the county, and in some cases, outside of Virginia.

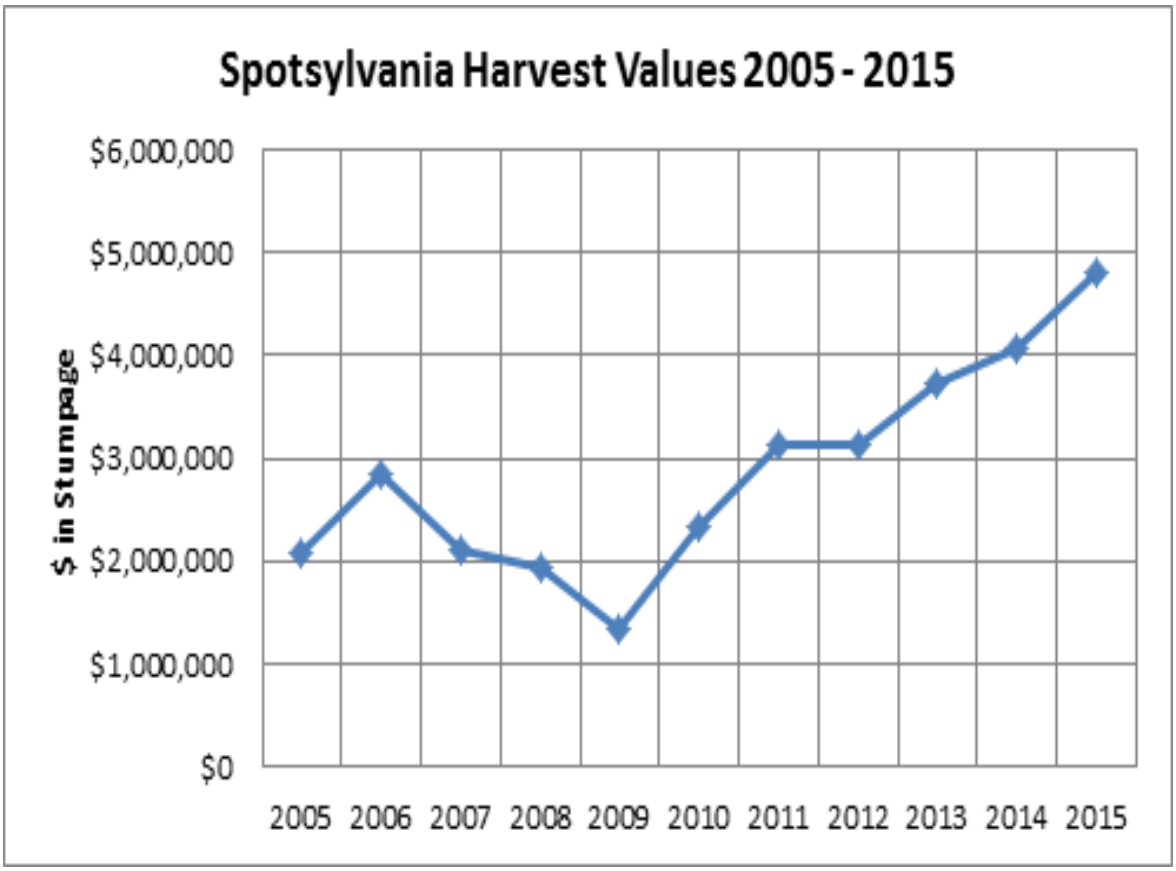


Exhibit 3: Harvest Values '05-'15

The "annual harvest value" is in fact the value of the timber harvested in the County, for a given year. The term generally used to describe timber removed from a given site is 'stumpage'. In order to determine this number, harvest volume (the amount of timber harvested) is needed, as well as value (price paid for what was harvested). Therefore, this data is derived from a combination of two sources. The County harvest volumes come from the forest products tax information and the values are based on average stumpage values that are collected each year from local consultants and sources like Timber Mart - South. See Exhibit 3, 4 and Table 14, 15.

Table 14: Virginia Department of Forestry: Spotsylvania County Timber Value and Supply					
	2015	2010	2009	2008	2007
Pine (MBF)	22,034	6,217	2,265	6,173	7,646
Pine (cords)	18,370	19,177	12,353	21,568	19,227
Value: Pine	$3,764,702	$1,342,075	$602,479	$1,307,209	$1,493,002.34
Hardwood (MBF)	5,614	5,050	4,774.14	4,474	4,944
Hardwood (cords)	8,429	12,189	8,263.29	11,756	9,824
Value: Hardwood	$1,016,219	$981,331	$740,899	$624,608	$614,755
Total Value	$4,795,099	$2,323,406	$1,343,378	$1,931,817	$2,107,757

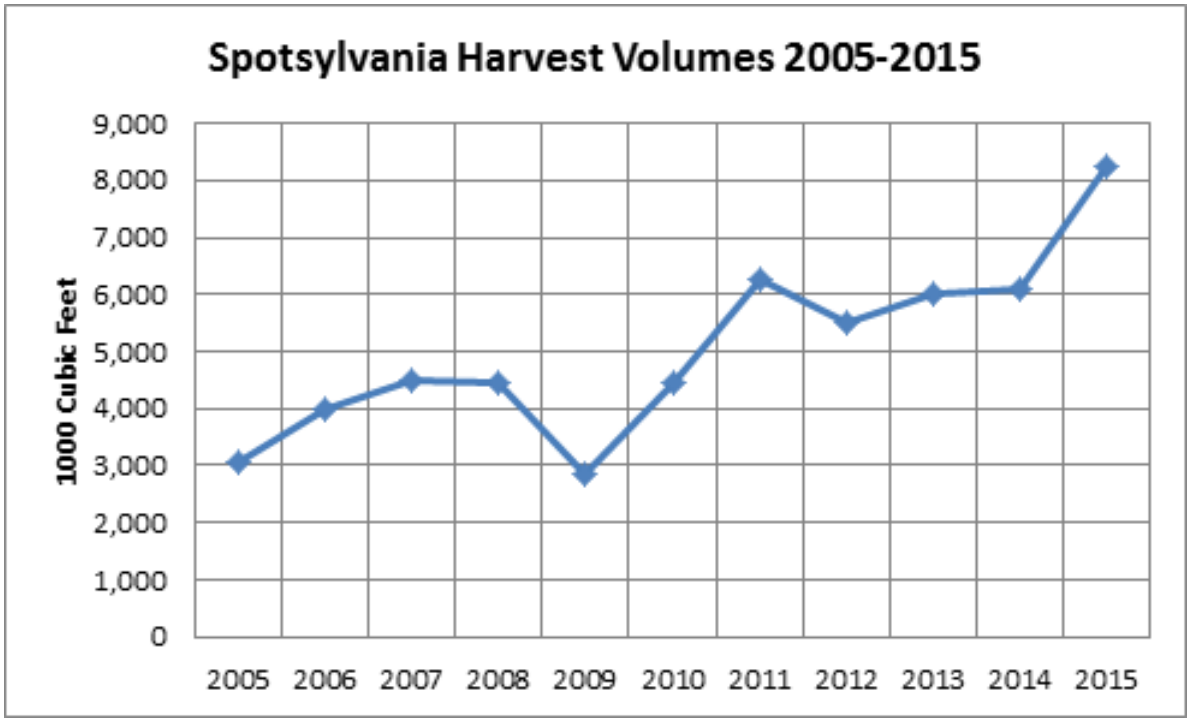


Exhibit 4: Harvest Volumes

Table 15: USDA Census of Agriculture: Spotsylvania County Woodland Crops					
		2017	**2012**	**2007**	**2002**
Cut Christmas Trees	**Farms**	11	12	11	9
	Acres in Production	99	90	80	96
	Trees Cut	1,371	1,624	2,282	4,170

Forest Conservation Value Map (included within this appendix)

The Virginia Department of Forestry has established a relative Forest Conservation Value (FCV) for all of the forestland in the state. This FCV ranking is based on the level of benefits provided by a particular area of forest in combination with the level of threat the area faces from conversion to another land use, primarily to development. The FCV map divides the state's forestlands into five categories; the Virginia Department of Forestry (VDOF) has identified categories 4 and 5 as having high forest conservation value. While all forests provide a range of benefits and the threat of forest conversion is widespread, the VDOF recommends that these high conservation value forests be given priority in land conservation efforts such as donated conservation easements, PDR programs, or Ag-Forestal Districts.

In the GIS analysis used to develop the FCV rankings, the forest benefits that were measured included water quality protection, natural habitat, the extent of contiguous forest cover, and the potential forest economic productivity. Threat to conversion was based on the likelihood that the area would change from rural land to a more developed use. This was determined based on road density, county population projections, and 30-year projections of housing density.

In developing the FCV map, the following datasets were used to calculate forest benefits utilizing a weighted overlay model. The model also included forest conversion threat as described above.

1. Streams, shorelines, and floodplain forests and forested wetlands
2. Forests in headwaters and on steep slopes
3. Forests protecting drinking water supplies
4. Large contiguous blocks of forest; and
5. Sustainable, managed working forests - based on woodland soil productivity, forest types, and economic value of timber
6. Areas of high terrestrial integrity – takes into account stream buffers, road fragmentation, and impervious surfaces
7. Areas of high aquatic integrity – incorporates number of species and species richness

An important forestland conservation tool that Spotsylvania County has utilized over the past few years is Forest Land Use Taxation. By offering a tax reduction to landowners who have a minimum of 20 forested acres when they take the simple step of working with forestry professionals to identify their forestry resources and developing a plan for managing them, many people can afford to hold onto their land. This reduces the amount of forest fragmentation and land use conversion and maintains the county's green spaces which might otherwise be lost to commercial and residential development.

Forested parcels greater than 20 acres in size have been identified as being profitable for both the landowner and the timber harvesting contractor who has set costs involved with relocating their operations from project to project.

Sustainable Practices

Wise usage of wood and wood by-products to reduce additional tonnage to the county landfill should be a goal of the county. There are already practices in use such as incorporating woody debris into fertilizer and grinding mulch to be used by the public in landscaping projects. Composting of leaf collections and small pruning residues is an age-old practice that can create rich potting soil. Larger branches and small diameter damaged trees can be chipped to create material to be used on park trails. These measures, along with other recycling strategies, can go a long way towards extending the duration of current landfill space.

PRODUCTION OF FOOD AND FIBER

The Census is conducted by the United States Department of Agriculture (USDA) National Agricultural Statistics Service (NASS). The Census of Agriculture, conducted only once every five years, is the only source of consistent and comprehensive agricultural data for every state and county in the nation. United States law (Title 7 USC 2204(g) Public Law 105-113), requires all those who receive a Census of Agriculture report form to respond even if they did not operate a farm or ranch in 2017. The Census of Agriculture is a complete count of U.S. farms and ranches and the people who operate them. Even small plots of land - whether rural or urban - growing fruit, vegetables or some food animals count if $1,000 or more of such products were raised and sold, or normally would have been sold, during the Census year. It looks at farms, value of land, market value of agricultural production, farm practices, expenditures, and other factors that affect the way farmers and ranchers do business. The information is used by town planners, policy makers, agribusinesses and others to help make important growth-generating decisions.

Presently, the results of the 2017 Census are the most recent available. The prior update occurred in 2012. The attached County profile from the 2017 Census of Agriculture (Insert Sheets A, B) summarizes and reflects Spotsylvania County's production of food and fiber and notes trends since 2012. See Tables 16 through 19 for additional insights.

As of the 2017 census, Spotsylvania County had 338 farms. Total farms are down 8% since 2012. This has corresponded with a 1% decrease in total farm acreage within the County while the average size of remaining farms has shown an increase in size. Between 2002 and 2012, County-wide land in farms decreased from 56,346 acres to 42,191 acres, a decrease of approximately twenty-five (25%) percent. As of 2017, total acreage is now 41,674 acres. Recognizing an established downward trend in farms and total farm acres the County has emphasized maintenance and protection of prime agricultural soils and productive farmlands through expansion of the County's Agricultural and Forestal Land Use Designation. Regardless of agricultural trends ongoing there is interest in protecting the historic farm and forest character of the County and associated agricultural based economy outside of the Primary Development Boundary. Protection of prime agricultural soils (a finite resource) recognizes the importance of maintaining the land inventory for future generations to assure the acreage is there to support food and fiber production. This effort supports promotes the concept of domestically produced locally sourced agricultural crops and regional or super-regional supply chains within a smaller geographical footprint.

As part of the 2020 Comprehensive Plan update process, the Agricultural/ Forestal District Review Committee was solicited to provide insights into the history, economics, strengths and challenges facing local farm operators. The purpose of the committee is to advise the Planning Commission and the Board of Supervisors and assist in creating, reviewing, modifying, continuing or terminating Agricultural and Forestal districts within the County. In particular, the committee shall render expert advice as to the nature of farming and agricultural and forestal resources within the district and their relation to the entire County. Spotsylvania County agriculture faces a number of challenges that result from both local and national issues. The Spotsylvania County Agricultural- Forestal Commission has identified the following as having a negative effect on agricultural operations within the County:

- Local climate and soils conditions are not ideal for high production crop yields in many areas. Seasonal rain and drought cycles provide agricultural challenges paired with shallow soils and soil nutrient deficiencies compared to other agricultural regions in the Country;
- Aging farmer populations with an insufficient stream of younger generations pursuing farming. (For reference, see Table 16 for USDA Census of Agriculture Data for Statewide and County figures)
- Ability to offset expenses associated with owning and operating a farm locally are challenged by climate and soil conditions for crop yields paired with profitability concerns resulting from restricted pricing and resulting low profit margins for raw direct from farm produce.
- Sale of agricultural acres to development interests in areas where demand is high can be more economically advantageous for local farm operators, especially those who may seek to downsize or prepare to retire.
- Farm supplies are not readily available within the region. Often time's necessary supplies must be sourced from distant places. A limited number of farm equipment manufacturers exist and tend to operate far reaching international supply chains.

Table 16: 2017 Primary Farm Operator Age Characteristics (USDA Census of Agriculture)		
	Virginia (Statewide)	**Spotsylvania County**
	2017	**2017**
Under 25 Years	1,086	20
25 to 34 Years	4,344	24
35 to 44 Years	7,152	48
45 to 54 Years	12,238	97
55 to 64 Years	19,760	169
65 to 74 Years	16,812	133
75 Years and Over	9,202	99
Historical Average Age of Primary Farm Operator (USDA Census of Agriculture)		
	Virginia (Statewide)	**Spotsylvania County**
2017	58.5	60
2012	59.5	60.2
2007	58.2	59.4

Table 17: USDA Census of Agriculture- Spotsylvania County Farms							
		Virginia (Statewide)		Spotsylvania County			
		2017	2012	2017	2012	2007	2002
Number of Farms		43,225	46,030	338	369	359	369
Land in Farms		7,797,979	8,302,444	41,674 acres	42,191 acres	52,230 acres	56,346 acres
Average Size of Farm		180	180	123 acres	114 acres	145 acres	153 acres
Estimated Market Value of Land and Buildings	Per Farm	834,254	776,719	695,020	700,861	738,592	532,446
	Per Acre	4,624	4,306	5,637	6,130	5,077	4,288
Estimated Market Value of all Machinery and Equipment	Total	3,723,234,000	3,339,696,000	23,674,000	31,591,000	N/A	N/A
	Average Per Farm	86,136	72,561	70,042	85,613	61,026	36,238
Market Value of Products Sold	Total (Crops, Livestock)	3,960,501,000	3,753,287,000	9,011,000	10,996,000	8,218,000	5,937,000
	Average Per Farm	91,625	81,540	26,661	29,800	22,893	16,090
Total Cropland	Farms	32,091	34,525	240	249	278	315
	Acres	3,084,067	2,990,561	16,725	18,715	23,773	27,442
Harvested Cropland	Farms	28,783	31,041	192	227	235	248
	Acres	2,613,010	2,618,291	13,735	16,296	18,355	17,936

Table 18: USDA Census of Agriculture: Spotsylvania County Livestock and Poultry					
		2017	2012	2007	2002
Cattle and Calves Inventory	Farms	122	136	149	158
	Number	8,435	8,615	12,062	9,140
Beef Cows	Farms	115	122	134	147
	Number	4,041	4,075	5,501	4,149
Milk Cows	Farms	6	11	8	10
	Number	11	522	599	884
Cattle and Calves Sold	Farms	85	111	125	121
	Number	6,606	3,956	4,662	3,566
Hogs and Pigs Inventory	Farms	35	19	15	10
	Number	755	554	313	506
Hogs and Pigs Sold	Farms	18	13	12	9
	Number	852	1,385	781	1,353
Sheep and Lambs Inventory	Farms	13	19	10	12
	Number	66	363	129	366
Broilers and other meat-type chickens sold	Farms	6	9	-	5
	Number	778	195	-	228
Layers Inventory	Farms	62	74	51	41
	Number	2,102	2,184	2,014	1,624
Horses and Ponies	Farms	135	141	125	129
	Number	963	1,369	1,043	948
Goats, all	Farms	39	29	25	8
	Number	579	691	321	(D)
(D) - Data withheld to prevent the disclosure of data for individual farms.					

Table 19: USDA Census of Agriculture: Spotsylvania County Selected Crops Harvested					
		2017	2012	2007	2002
Corn for Grain	Farms	12	20	28	20
	Acres	1,042	1,881	3,314	3,132
	Bushels	123,863	142,048	193,088	128,690
Corn for Silage or Greenchop	Farms	6	7	17	11
	Acres	404	655	1,262	1,162
	Tons	8,080	8,957	14,446	10,955
Wheat for Grain, All	Farms	11	12	18	15
	Acres	602	707	796	487
	Bushels	31,742	37,593	46,236	27,273
Winter Wheat for Grain	Farms	11	12	18	15
	Acres	602	707	796	487
	Bushels	31,742	37,593	46,236	27,273
Oats for Grain	Farms	-	-	3	3
	Acres	-	-	48	50
	Bushels	-	-	2,400	3,240
Barley for Grain	Farms	3	10	13	14
	Acres	204	426	698	882
	Bushels	12,305	30,878	54,762	59,031
Sorghum for Grain	Farms	2	-	-	1
	Acres	(D)	-	-	(D)
	Bushels	(D)	-	-	(D)
Sorghum for Silage or Greenchop	Farms	2	1	4	-
	Acres	(D)	(D)	221	-
	Tons	(D)	(D)	1,402	-
Soybeans for Beans	Farms	30	22	20	18
	Acres	3,237	3,228	2,914	1,954
	Bushels	177,020	138,591	65,885	34,649
Forage	Farms	144	188	203	216
	Acres	8,315	9,621	9,910	11,082
	Tons, dry	16,624	18,815	16,720	18,284
Vegetables harvested for sale	Farms	16	11	9	8
	Acres	146	62	41	60
Land in Orchards	Farms	17	10	9	10
	Acres	107	78	34	62
(D) - Data withheld to prevent the disclosure of data for individual farms.					

Commercial Fisheries and Aquaculture

There were no aquaculture producers noted in the 2017 or 2012 Census of Agriculture for Spotsylvania County. Per the Spotsylvania County Environmental Codes staff, as of 2019, there remain no aquaculture or commercial fishing operations within the County.

The Spotsylvania County Zoning office in conjunction with Virginia Tech are exploring the possibility of establishing a freshwater mussel farm in the Loriella Park area. On September 26, 2017 the Spotsylvania County Board of Supervisors approved a request to submit a grant application to the Chesapeake Bay Restoration Fund for an education and restoration project that would result in Virginia's first freshwater mussel farm. The initial early phase grant funds pursued would support exploration and design efforts needed to create plans to submit to the US Army Corp and Department of Environmental Quality for necessary permits for construction. The concept is envisioned to establish a resource for the propagation of freshwater mussels that will ultimately be used to repopulate streams and creeks that have had a significant reduction in active native mussels in the ecosystem. Repopulation of deficient streams and creeks are expected to positively contribute to water quality. In addition to significant natural resource benefits it is expected this resource will also provide a significant education and outreach resource, attracting K-12 students, collegiate academia, development community, state, federal and local government representatives.

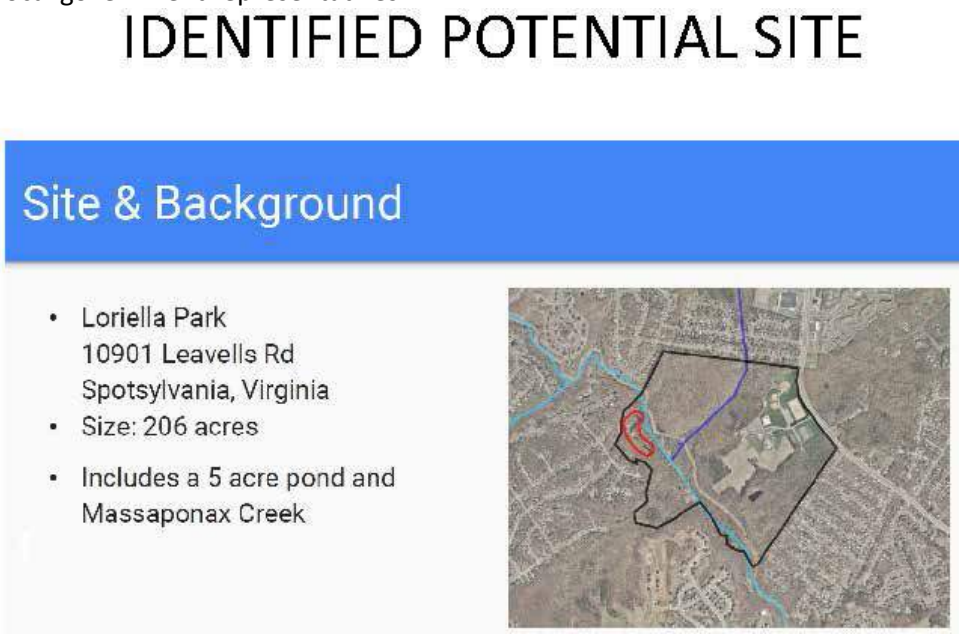


Image 6: Potential location for freshwater mussel farm

Land Use Suitability

The suite of ConservationVision Conservation Planning map layers presented through the Virginia Department of Conservation and Recreation's Natural Heritage Data Explorer provide great insight and guidance for land use planning, especially in areas not targeted for growth and development. For Spotsylvania County, roughly 80% of the County land area falls outside of the Primary Development Boundary limits. As described in the Future Land Use Element of the Comprehensive Plan, these areas

outside of the Primary Development Boundary are intended for rural character preservation, farms, forestlands, open space, agricultural viability, rural residential.

As part of this Comprehensive Plan update, land use designations outside of the Primary Development Area were reviewed considering the insights provided by the ConservationVision map layers, with a focus on promotion of, preservation and protection of agriculture, forestry, and ecological core areas. These land use insights were used to better align agricultural-forestal land use designations with the numerous variables considered as part of ConservationVision's modeling that include but are not limited to soils, proximity to markets (economic development), watershed integrity, connectivity. Areas of high value are finite and as such have been recognized for their value for agriculture, forestry, and ecological purposes. Aside from by-right potential, proposed large scale land use changes that would compromise or reduce the agricultural, forestal, or ecological use and potential of such areas should be discouraged. The resulting land use designations outside of the Primary Development Boundary put greater emphasis on finite resource protection of high value agriculture, forestry, and ecological areas in exchange for fewer total acres identified as rural residential that may come via rural residential rezoning, or other proposed land use change of notable size. Production of food, fiber, forest within the County has been emphasized as part of the land use update. These areas are ideal candidates for inclusion within the County land use taxation program (provided they meet program parameters), inclusion within the agricultural/forestal district, open space/conservation easement upon active agricultural or forestry lands aimed at maintaining such uses, or sensitive environmental areas.

Agricultural Suitability Model (See Map)

As part of the land use analysis, County staff mapped areas identified within the Agricultural Suitability Model considered high suitability, very high suitability, and outstanding suitability for agriculture. Per the Virginia Department of Conservation and Recreation's Natural Heritage Data Explorer, the Virginia Agricultural Model is a raster dataset that quantifies the relative suitability of lands for agricultural activity. Agricultural value is assessed primarily based on inherent soil suitability, but also accounts for current land cover as well as travel time between agricultural producers and consumers. Model values range from 0 (unsuitable for agriculture) to 100 (optimal).

From the output, staff was able to identify core areas outside of the Primary Development Boundary that would be best suited for the Future Land Use Agricultural-Forestal designation. Staff recognized in many areas, those outputs of highest value tended to "hug" road corridors. In order to identify more comprehensive core areas, the agricultural soils map was created, seeking to identify areas of prime farmland, and farmland of statewide significance. These areas are spread throughout much of the County and when paired with areas of high agricultural suitability (considering numerous factors in model), are intended to identify priority outside of the Primary Development Boundary for agriculture and agricultural soils protection.

Using AgrValue data as presented by DCR's NHDE, findings of the Agricultural Suitability Model have been presented in map form for reference.

Agricultural Soils (See Map)

Per DCR's Natural Heritage Data Explorer, the dataset is a compilation of soil map unit polygons and associated attributes used to develop the Virginia ConservationVision Agricultural Model. It was

developed by staff at the Virginia Natural Heritage Program, using data extracted from the gSSURGO geodatabase for Virginia. The gSSURGO dataset (gSSURGO_VA.gdb) was retrieved from the Geospatial Data Gateway in May 2015.The gSSURGO dataset is a digital soil survey and generally is the most detailed level of soil geographic data developed by the National Cooperative Soil Survey. The information was prepared by digitizing maps, by compiling information onto a planimetric correct base and digitizing, or by revising digitized maps using remotely sensed and other information. This dataset consists of georeferenced digital map data and computerized attribute data. The map data are in a state-wide extent format and include a detailed, field verified inventory of soils and miscellaneous areas that normally occur in a repeatable pattern on the landscape and that can be cartographically shown at the scale mapped. The soil map units are linked to attributes in the National Soil Information System relational database, which gives the proportionate extent of the component soils and their properties.

DCR NHDE Soil Survey Staff used USDA NRCS Soil Survey data to provide the agricultural/farmland soils classifications. Utilizing their data, Agricultural Soils have been presented in map form for reference.

Forest Conservation Value (See Map)

The Forest Conservation Value (FCV) model is a tool designed by the Virginia Department of Forestry (VDOF) to strategically identify the highest priority forestland for conservation in Virginia. The intent is to maximize the efficiency of limited resources by focusing conservation efforts on the highest quality, most productive, and most vulnerable forestland statewide.

The original FCV model was developed in 2013 by the Virginia Department of Forestry (VDOF). Since that time, a number of factors necessitated an update to the 2013 model. The agency has sharpened its focus and priorities through a strategic planning effort completed in 2017. In 2017, VDOF's Forestland Conservation Program team implemented a new conservation ranking and prioritization system designed to identify the highest priority projects to accept on a quarterly basis throughout each year; the FCV is a key component of this ranking system. The FCV is further intended to contribute to the Virginia ConservationVision, the suite of GIS models maintained by the Virginia Department of Conservation and Recreation (DCR) to inform a cohesive, statewide strategy for land conservation. As this multitude of needs were identified and as new data has become available, VDOF has taken the opportunity to create an up to date, improved FCV model to help inform both internal and statewide conservation efforts throughout the Commonwealth.

In order to provide a spatial representation of the relative value of Virginia's forests, six key components were established in the model:

1. Forested Blocks
2. Forest Management Potential
3. Connectivity
4. Watershed Integrity
5. Threat of Conversion
6. Significant Forest Communities and Diminished Tree Species

Six data input layers were created based on these components and were ultimately combined to create the final FCV model. A brief summary of each of these components and the methodology is provided here for the purpose of the initial review process. More complete detail on the background for

selection, methodology, and limitations of each component will be available in the final summary report.

Utilizing the Forest Conservation Values model, staff has mapped forestlands classified as Very High, Outstanding Value for reference.

Ecological Cores (See Map)

Per Virginia DCR, The Virginia Natural Landscape Assessment (VaNLA) is a landscape-scale GIS analysis that has identified, prioritized, and linked important lands to form natural land networks throughout Virginia. Using land cover data derived from satellite imagery, the VaNLA identified large, unfragmented cores, which are patches of natural land with at least 100 acres of interior cover. Cores provide habitat for a wide range of species, from interior-dependent forest species to habitat generalists, as well as for species that utilize marsh and maritime habitats. The cores layer represents cores as polygons that are symbolized by Ecological Integrity scores, calculated from an Ecological Composite Model (ECM). Maintaining vital natural landscapes is essential for basic ecosystem services such as cleaning our air and filtering our water. Natural lands also harbor thousands of species of animals and plants and contain libraries of genetic information from which we derive new foods, materials, and medicinal compounds. These parts of the landscape also provide us with recreational opportunities and open space resources. But these qualities are represented differently across the cores and habitat fragments that constitute the natural landscape. To assess their unique values, each core and habitat fragment has been assigned an Ecological Integrity score that rates the relative contribution of that area to ecosystem services such as wildlife and plant habitat, biodiversity conservation, open space, recreation, water resources protection, erosion control, sediment retention, protection from storm and flood damage, crop pollination, and carbon sequestration. In general, larger, more biologically diverse areas are given higher scores. Scores are enhanced if the core or habitat fragment is part of a larger complex of natural lands. Scores also are increased for those cores and habitat fragments that contribute to water quality enhancement.

Ecological cores of Very High and Outstanding Value have been mapped for reference and lend insight into land use recommendations and conservation planning efforts.

George Washington Regional Commission (GWRC) Green Infrastructure Plan

In October 2008 the GWRC received a Virginia Coastal Zone Management Program Grant to focus on developing a regional green infrastructure dataset and develop a plan. Over the next two years the GWRC conducted a number of studies and the proposed plan was vetted with public meetings, presentations to the local planning commissions and other stakeholders.

In 2011 the GWRC adopted the PD 16 Regional Green Infrastructure Plan (GI Plan), which identified important high value environmental core areas, contributing core areas, and connected these core areas, creating a web of priority open space. The recommendations of the plan called for an increase in tree canopy; a target of 14,300 acres of new conservation easements; support for the Chesapeake Bay Watershed Implementation Plans (WIPs); enhanced data layer capabilities; new tree preservation ordinances; and outreach to stakeholders. The GI Plan was forwarded to the local governments as a matter of information with no Call for Action.

Revisiting the 2011 GWRC Green Infrastructure Plan (2017)

The central focus of this study was to assess the local impact and level of implementation of the 2011 George Washington Regional Commission ("GWRC") Regional Green Infrastructure Plan. While formally "adopted" by GWRC, the Regional Green Infrastructure Plan was referred to the local governments for consideration. No specific policies, actions, regulations or ordinances directly emerged from this plan. During the period since 2011, development has significantly infringed on priority green infrastructure resulting in further fragmentation of the green infrastructure network and forest cover. The 2017 report tracks development of notable ecological areas as "lost acreage" between the years 2009 and 2016. That data is presented below (Table 20) as an excerpt from the 2017 report:

Table 20: Tracking Inventory of Notable Ecological Areas

2009-2016 Building Acreage Loses by Locality

Locality	Total Land Area (Acres)	2008 - 2016 Development Impact (Lost Acreage)				
		Hi-Value Eco-Cores	Contributing Eco-Cores	Eco-Corridors	Total GI Footprint	Percent Loss Since 2008
Caroline	343,596.80	-5.98	-37.79	-4.97	-48.73	-0.02%
King George	114,969.60	-82.30	-217.23	-168.32	-467.85	-0.88%
Spotsylvania	256,960.00	-295.02	-1,025.89	-54.21	-1,375.12	-1.18%
Stafford	172,134.40	-523.41	-1,224.30	-78.71	-1,826.42	-2.12%
Fredericksburg	6,720.00	0.00	-39.27	0.00	-39.27	-4.10%
GWRC Total	**894,380.80**	**-906.70**	**-2,544.48**	**-306.21**	**-3,757.38**	**-0.81%**

There were three objectives associated with this project: 1) To ascertain where each locality stood in implementing their respective parts of the 2011 Regional Green Infrastructure Plan developed for the local governments in the George Washington Regional Commission (GWRC) region and the impacts that development has had on the network during this timeframe; 2) Examine the current impediments for better and more rapid implementation of the Regional Green Infrastructure (GI) Plan; and 3) put forth recommendations for future implementation strategies for the GI Plan. This report and the associated reports (Appendices) represent the culmination of over a year of research that was conducted during this project upon which the Findings and Conclusions are based.

The report notes that *the only quantified goal of the 2011 Plan was to encourage greater use of conservation easements, a private voluntary method of conserving open space. Of the 14,300 acre goal only 6,400 acres have come under conservation easement in the Region since 2011.*

Since the 2017 report update, significant additional acres have been placed in conservation by the Virginia Department of Game and Inland Fisheries within Spotsylvania County via the Oakley Wildlife Management Area (4,459 acres).

As part of this Comprehensive Plan update, the efforts of the Green Infrastructure Plan are recognized. In conjunction with the ConservationVision Conservation Planning map layers identified prior, greater emphasis and parity between land use recommendations and natural resources, including green infrastructure, is envisioned in the Comprehensive Plan, especially as it relates to the Agricultural and

Forestal Land Use and Open Space Land Use. These resources are overwhelmingly located outside of the Primary Development Boundary and are subject to competing land interests for silviculture (tree cover that is removed at large scale on occasion outside of local processes), agriculture, rural residential development (less common well outside of the Primary Development Boundary), recently renewable energy facilities, and purely conserved undisturbed acreage. Conserved lands remain encouraged in these land use designations whose geographic area has expanded greatly since the last Comprehensive Plan update. This Comprehensive Plan update has strengthened language in support of voluntary conservation efforts based on land use designation.

LAND CONSERVATION

In 1970, Virginia's population was about 4.6 million. It had grown by more than 50 percent to 7.1 million by the year 2000, and to 8 slightly over million by the 2010 US Census. The US Census population estimate for 2019 was 8,535,519. Consistent with population growth in Virginia, Spotsylvania County has seen a great deal of growth over the last twenty years. The County population in 1990 was 57,403. By 2000, the population had grown to 90,395 and within the next 10 years grew another 35% to a population of 122,397 by the 2010 US Census. The US Census County population estimate for 2019 is 136,215. While such growth is certainly impressive – even enviable – population expansion and corresponding development growth require more land and, as the saying goes, "They're not making any more of it."

This growth necessitates careful and intelligent planning. There are lands in Virginia that have witnessed some of America's greatest human triumphs and tragedies. Our open spaces, farms, award-winning parks, battlefields and other historic places attract visitors from around the world. Similarly, Virginia's beautiful natural habitats – some types of which are found nowhere else – provide sanctuary for many exceptional plants and animals. Such astonishing natural and cultural resources come as well with an extraordinary responsibility. Land conservation is a big part of that responsibility.

The public benefits from such protection because it assures the availability of land for agriculture, forests, recreation and open space. It protects our natural resources and maintains and enhances air and water quality. Land conservation also preserves historical, architectural and archaeological heritage.

And conserving land doesn't mean it can't be touched. For example, land in conservation or open space easements can typically still be used normally, such as for timber harvesting, farming, residency, etc. The easement simply protects the property's unique characteristics – prime soils, wetlands, endangered species habitat, and so forth. There are a variety of tools and levels of land conservation that can be employed. Some, like conservation easements can result in the conservation of parcels of land in perpetuity, while others, like the Comprehensive Plan and Water and Sewer Master Plan can have the effect of conserving land from the effects of urban and suburban sprawl.

Virginia ConservationVision

Virginia ConservationVision has been developed and maintained by the Virginia Department of Conservation and Recreation (DCR). As per DCR, the Virginia ConservationVision is helping guide effective conservation by providing tools that help both government and private organizations identify resource protection areas and that, at the local level, help planners manage growth in a balanced way.

The Virginia ConservationVision is helping the Virginia Land Conservation Foundation to prioritize conservation targets.

DCR describes the Initiative as a suite of broadly applicable tools for guiding strategic conservation decisions. ConservationVision, originally developed as the *Virginia Conservation Lands Needs Assessment,* is maintained using GIS (Geographic Information System) analyses to model and map land conservation priorities in Virginia based on a variety of datasets from private, local, state and federal agencies. The models facilitate conservation by helping target conservation efforts, and by guiding comprehensive planning (Green Infrastructure). They are available on Natural Heritage Data Explorer, LandScope Virginia and LandScope Chesapeake, and DCR's website. ConservationVision allows the manipulation of issue-specific data sets that can be weighted and overlaid to reflect the needs and concerns of a variety of conservation partners - issues like:

- unfragmented natural habitats
- natural heritage resources
- outdoor recreation
- prime agricultural lands
- cultural and historic resources
- sustainable forestry
- water quality improvement
- drinking water protection

Virginia ConservationVision consists of: green infrastructure model; VA Natural landscape assessment; cultural model; development vulnerability model; forest economics model; recreation model; watershed model; agricultural model.

As a development review tool, County staff and local decision makers can utilize the various ConservationVision models to make better informed decisions regarding the prospect of development impacts in areas where valuable natural resources are likely to occur. Such models can and have resulted in requests for additional information to mitigate potential impacts where models identify potential conflicts. Additionally, models can help better inform land use and public service decisions as part of County Comprehensive Plan creation, review, and update processes whereby helping guide informed planning efforts.

Virginia Treasures Initiative

Launched as a Major Conservation Initiative in 2015 by Governor Terry McAuliffe, the Virginia Treasures Initiative was introduced as a new strategy for conserving land and expanding access to public outdoor recreation.

As per the Virginia Department of Conservation and Recreation, The Virginia Treasures initiative focuses on quality rather than just quantity. The program stresses safeguarding significant sites and assets rather than just the numbers. The idea is to preserve, protect and highlight Virginia's most important ecological, cultural, scenic and recreational assets as well as its special lands.

The conservation of working farms, forests, waterways and open space will continue. Most of this effort will be accomplished through conservation easements, which preserve land and improve the health of

waterways, including that of the Chesapeake Bay. Particular attention will be paid to land with rare and endangered species and habitat.

The initiative also aims to identify and expand public access to the great outdoors through playgrounds, boat ramps, scenic byways, public gardens and so on. By increasing public access to and appreciation for Virginia's outdoor treasures, public support for conserving, protecting and maintaining Virginia's natural resources will likewise grow.

Virginia Treasures will be the scorecard by which the McAuliffe administration measures success at protecting land, water and recreational space. The goal is to identify, conserve and protect at least 1,000 treasures by the end of the governor's term. The program was wildly successful and 1,337 treasures were registered over four years as per the Virginia Department of Conservation and Recreation. Having met and exceeded the goal, DCR discontinued accepting additional Virginia Treasure applications.

A land protection treasure is one permanent, fee-simple conservation or open-space easement, or an amendment of an existing easement that permanently protects significant resources. Significant resource protection is measured by means of 14 metrics; a treasure must protect at least one metric.

- Cultural or historical assets
- Agricultural land
- Local agricultural and forest districts
- Forest land
- Virginia Natural Landscape Assessment
- Natural Heritage Conservation Sites
- Wetlands
- Forest land with high water quality value
- Riparian buffers
- Recreation land
- Land near protected land
- Land near scenic rivers, scenic byways, the Appalachian Trail or the Potomac National Scenic Trail
- Virginia Outdoors Foundation special project areas
- The Nature Conservancy Focus Areas

A recreational treasure is a one that provides new public access to a natural, cultural or scenic outdoor recreation resource. These are projects that help the public by enhancing outdoor recreation and foster stewardship of natural and cultural resources. Emphasis is on ventures that meet the public's most needed outdoor recreational offerings. Treasures are added when they are opened to the public. To be eligible, recreational or cultural treasures must be owned by the federal, state or local government or, if privately owned, accessible to the public.

An asset must consist of at least one of the following:

New facilities

- Trails
- Water access

- New park facilities
- Gardens and arboretums
- Playgrounds and natural play areas
- Historic rehabilitation
- Newly restored habitat for wildlife viewing

Special designations

- Historic or cultural sites that receive state or national register designation and provide public access
- Trails special recognition, such as national trail designations
- Scenic river and scenic byway
- Scenic viewshed
- Recreational use agreement

A treasure is *not*

- An event or program
- A management or maintenance function (e.g., stocking a lake with fish, bush-hogging an existing viewshed, painting a building, dredging a boat ramp or conducting a routine prescribed burn)
- Ball fields, golf courses, sports facilities, zip lines… i.e., facilities in which the primary focus is not on natural or cultural resources

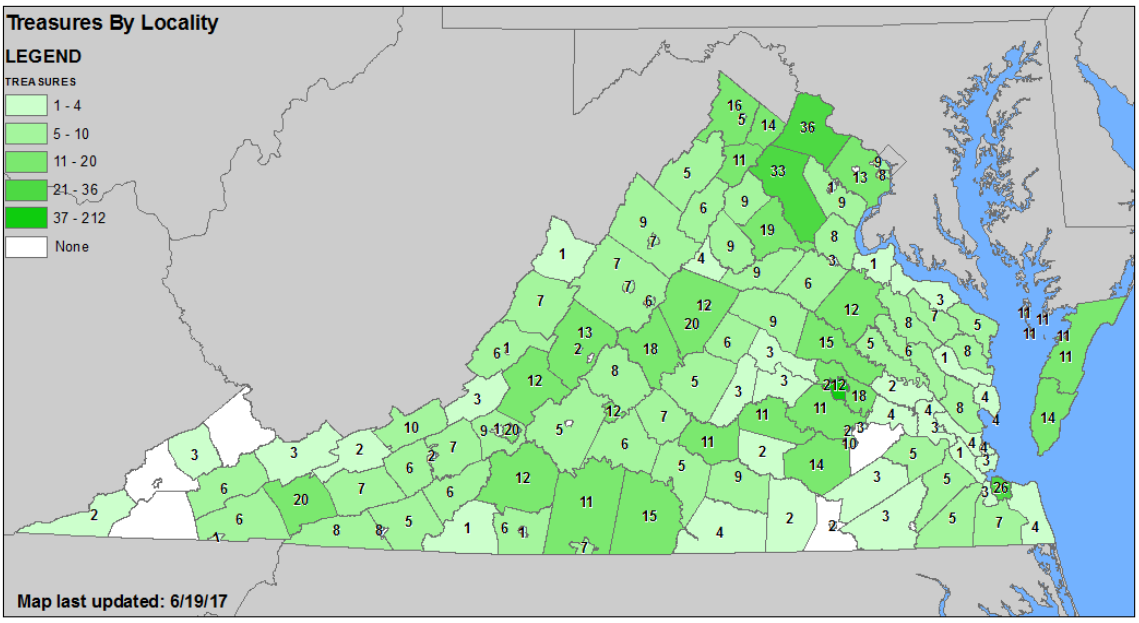


Exhibit 5: Virginia Treasures Inventory (Source: Virginia Dept. Conservation and Recreation)

Spotsylvania County has six (6) recognized Virginia Treasures sites. The sites are summarized in Table 21 below based on information provided by the Virginia Department of Conservation and Recreation.

Table 21

VIRGINIA TREASURES IN SPOTSYLVANIA COUNTY IN 2017		
Site	**Locality**	**Type**
Civil War Trust Holding	Spotsylvania	Land Conservation
Civil War Trust Holding	Spotsylvania	Land Conservation
Conservation Easement: Spotsylvania County	Spotsylvania	Land Conservation
Conservation Easement: VA-DHR	Spotsylvania	Land Conservation
Fredericksburg and Spotsylvania Addition	Spotsylvania	Land Conservation
Kronenwetter Tract, Chancellorsville Battlefield	Spotsylvania	VA-DHR Designation

Source: Virginia Department of Conservation and Recreation

Zoning Ordinance

The regulations set forth in the Spotsylvania Zoning Ordinance are adopted for purposes that include but are not limited to: provide for the preservation of agricultural and forested lands and other lands of significance for the protection of the natural environment; protect surface water and groundwater, especially within areas designated as Chesapeake Bay Preservation Area Overlay Districts, in accordance with requirements of the Virginia Chesapeake Bay Preservation Act; and protect against destruction of, or encroachment upon historic areas.

A number of zoning districts within Spotsylvania County have been established to protect and maintain the rural character of the County and to protect and enhance the agricultural economy, while also providing for low density residential development in a rural setting. The Rural and Agricultural Districts have been established to achieve that purpose to varying intensities. The zoning ordinance employs open space requirements, minimum lot size requirements, maximum densities and lot yield. Within Agricultural, Rural, and some Residential districts, the zoning ordinance includes the ability for cluster subdivision, a means to achieve smaller lots in exchange for greater open space.

Comprehensive Plan

The Comprehensive Plan is a guide designed to encourage the most appropriate use of land, water and resources within the County consistent with the interests of the citizens. The Comprehensive Plan sets forth goals, objectives, policies and implementation techniques that will guide the development activity within the County and promote, preserve and protect the health, safety, and general welfare of its citizens. The Comprehensive Plan acknowledges the importance of historic and natural resource protection and has established development districts and future land use categories intended to promote the continuance of the rural farm and forestal character in many areas of the County, whereby reducing the effects of urban and suburban sprawl.

The County Primary Development Boundary as depicted within the Comprehensive Plan Future Land Use Map has been established as the area where public utility supported higher intensity growth and development is supported. Spotsylvania County's Primary Development Boundary encompasses approximately 72 square miles, or roughly 18% of the County's total land area, leaving 82% of the County's total land outside of the areas intended for growth and more intense development. These

remaining areas are generally envisioned as large lot rural residential, agricultural, and open space areas.

The County recognizes that lands of outstanding value to produce food or fiber, environmental stewardship, cultural and historic resource protection, are often times location specific and always finite. Certain locations are more favorable for growth and urbanization than others. Consideration of finite resources of conservation value when looking at the prospect of Primary Development District boundary expansion and land use recommendations are vital to the protection of natural resources. As part of this Comprehensive Plan update, an emphasis has been placed on the preservation and protection of natural resources within the Future Land Use Map where the open space land use category has been expanded to include mapped wetland and resource protection areas throughout the County, including the Primary Development Boundary. Protection of these environmental corridors complement efforts to establish recreational greenway trails and protect vital habitat corridors through developed areas. The Virginia Department of Conservation and Recreation's Natural Heritage Data Explorer includes map layers identifying lands of high conservation value for agriculture, forestry, and ecological cores. As part of this Comprehensive Plan update, land use designations and descriptions outside of the Primary Development Boundary are more considerate to the promotion and protection of forest, farmlands and ecological core areas. The County Agricultural and Forestal Land Use designation now aligns with areas designated as highly suitable for such uses based on inherent soil suitability, current land use cover, travel time between agricultural producers and consumers, forest management potential, watershed integrity, among others.

Water and Sewer Master Plan

The Water and Sewer Master Plan is intended to complement and facilitate implementation of the Comprehensive Plan. After considering the County's intended Primary Development Boundary along with the future land use vision, the Master Plan defines specific capital water and sewer projects that must be implemented to help facilitate the intended growth areas consistent with the Comprehensive Plan. Development intensity and development demands tend to be higher in areas where public water and sewer facilities are available. In other areas, outside of intended growth areas or outside of the County's Primary Development Boundary for instance, where the rural and agricultural character and economy are intended to be sustained, public water and sewer are not planned. As a result, the tendency for urban and/ or suburban sprawl is inhibited and the larger lot agricultural and forestal tracts of land tend to be maintained, and the "urban heat island" effects and impervious surface areas are confined to a smaller area of impact.

The last update to the Water and Sewer Master Plan occurred in 2002 coinciding with the 2002 Comprehensive Plan. The Spotsylvania County Utilities Department is in the process of updating the Water and Sewer Master Plan as of this Comprehensive Plan update. An updated Water and Sewer Master Plan is under development and expected to be adopted within the planning period.

The Water and Sewer Master Plan is available for review online as part of the County Utilities/ Public Works' Guidelines, Codes and Policies **HERE**.

Parks, Conservation Lands and Easements

There are Federal, State, and County Parks, conservation lands owned or in easement within Spotsylvania County. These areas preserve and protect open space and environmental features with benefits including but not limited to: passive or active recreation, habitat protection, historic resource preservation and interpretation, impervious surface minimization, protection of rural character, tree preservation, soil stabilization, water quality and stormwater.

Spotsylvania County has a number of conservation easement holders for historic and natural resources including the Central Virginia Battlefields Trust, whose easements include but are not limited to Pelham's Corner and the Stonewall Jackson amputation site, an 81-acre parcel along Rt. 3 affiliated with the Chancellorsville Battlefield. The Virginia Department of Conservation and Recreation, Virginia Department of Forestry, Virginia Department of Historic Resources, The Nature Conservancy and the Virginia Outdoors Foundation have conservation easements within the County.

Conservation easements preserve farmland, forestland, historic, natural and recreational areas by restricting intensive uses, such as development and mining, which would alter the conservation values of the land. Each easement is tailored to reflect the conservation values of the property and is recorded at the County Clerk of the Court office as a permanent part of the property records. Such easements do not grant public access to a landowner's property.

Conservation lands and easements are tracked by the Virginia Institute of Marine Science's (VIMS) Center for Coastal Resources Management. The VIMS Comprehensive Map Viewer for Spotsylvania County can be found **HERE**. The County's future land use map also seeks to track conserved lands and reflects them as open space areas.

Federally managed by the National Park Service, The Fredericksburg and Spotsylvania National Military Park, including the Wilderness, Chancellorsville, and Spotsylvania Courthouse Battlefields, and portions of the Fredericksburg Battlefield cover roughly 7,300 acres in land owned, and protected by easement. Since the Battlefield Parks are considered passive parks, they act as both historic and natural conservation sites.

Table 22: National Park Service Inventory

National Military Parks	Total Acreage Owned	Passive Acreage Owned	Total Acreage (With Easements)	Interpretive Trails (Miles)
Chancellorsville Battlefield	1,840.3	1,840.3	2,712.4	6.8
Fredericksburg Battlefield	1,230.4	1,230.4	1,341.3	5.6
Spotsylvania Battlefield	1,327.8	1,327.8	1,394.9	5.9
Wilderness Battlefield	1,810.1	1,810.1	1,846.6	3.9
Salem Church	3.2	3.2	3.2	-
TOTAL:	6,211.8	6,211.8	7,298.4	22.2

Additional Civil War battlefield lands have been preserved by the Civil War Trust as well as the Central Virginia Battlefields Trust. The Civil War Trust manages an additional 415.91 acres of preserved, publicly accessible lands traversed by 5.52 miles of interpretive trails (3.64 miles at Chancellorsville and 1.88 miles at Slaughter Pen Farm (part of the Fredericksburg Battlefield) off Tidewater Trail in the northeast of the County.

The Central Virginia Battlefields Trust has 369.45 acres in ownership with an additional 8.63 acres in easement. Easement acreage is not readily open for public access except by organized tour or with granted permission of landowners. Harris Farm (1.74 acres) and Pelham's Corner (4.5 acres) are always open to the public and include interpretive wayside exhibits, monument at Harris Farm, and cannon at the Pelham's site. The Central Virginia Battlefields Trust stress that the remaining acreage is not generally open to the public except for special tours operated by the CVBT, NPS, or others with permission. CVBT manages no interpretive trails.

Lake Anna State Park is roughly 2,800 acres in size, offering both active and passive recreational opportunities with many acres left in their natural state. As per the Virginia Department of Conservation and Recreation, the land in Lake Anna State Park used to be known as "Gold Hill" and contained the Goodwin Gold Mine. Gold was first discovered in 1829 with mining reaching its peak in the 1880s. In 1971, Lake Anna was created to serve as a water coolant for Virginia Power's nuclear plant. In 1972, work began on the acquisition and development of a water-oriented state park. Lake Anna State Park opened in 1983.

The park has a beach on one of Virginia's most popular lakes, a fishing pond accessible to children and the disabled, a bathhouse-concessions complex and a boat launch. Overnight stays are made possible by camping, six camping cabins, two six-bedroom lodges and 10 two-bedroom cabins. Seven cabins and the lodges have views of the lake. With more than 15 miles of trails, the park offers many hiking, biking and horseback riding options. Visitor center exhibits trace the history of the area's gold mining and highlight the park's natural features. Nature and gold panning programs are popular, and the park offers guided tours of the Goodwin Gold Mine.

More information about Lake Anna State Park can be found **HERE**.

In 2019, 535.5 acres of accessible County parkland is operated by the Parks and Recreation Department. The County also owns a future District Park size 65 acre site known as the Hilldrup Tract that is not presently developed or accessible as a usable park. Within the planning period, staff expects additional public access parks acreage to be made accessible at Keswick Park (36 Acres Community Park Scale and amenities) and the Fortunes Landing fifteen (15) acre Special Use Park fronting the Ni Reservoir. These new park acres, when activated, will add an additional 131 acres to the inventory for a total parkland inventory of 651.5 acres. Park sites with amenities include: Arritt Park; Chewning Park; Cosner Park; Harrison Road Park; Hunting Run Recreation Area (at Hunting Run Reservoir); Lee Hill Park; Loriella Park; Marshall Park; Marshall Center/ Legion Fields Park; Mary Lee Carter Park; Ni River Recreation Area (at Ni Reservoir); Patriot Park; Virginia Central Trail. Future County Park sites not yet developed or early in development and planning include: Belmont Park (CIP projected FY '21); Hilldrup Tract- Ni River Park (CIP projected FY '23); The "Echo" at Fortune's Landing (via proffer); Keswick (via proffer).

Additional park acreage may be warranted for consideration in the area of Massaponax/ Lee Hill area as per County Parks and Recreation. No specific location has been identified as of this Comprehensive Plan update.

More information about County Parks and their amenities can be found **HERE**.

In 2017, the Virginia Department of Game and Inland Fisheries (VDGIF) acquired the approximately 2,911 acre Oakley Forest Wildlife Management Area (WMA) located on the west side of Catharpin Road within the Livingston Voting District. VDGIF is actively looking to enhance site access and develop a WMA Comprehensive Management Plan. The plan will be developed in compliance with the purpose for which the property was acquired consistent with an awarded grant request submitted to the U.S. Fish and Wildlife Service for funding through the Wildlife and Sport Fish Restoration program.

As per VDGIF's successful application, the objective/purpose of this land acquisition job is to acquire, in fee title, the 2,911+-acre Oakley Forest Tract located in Spotsylvania County, Virginia. Once acquired, the property will become part of DGIF's statewide WMA network, and will be will be managed to promote a diversity of healthy and vigorous habitats and wildlife populations while providing public access and opportunities for hunting, fishing, recreational shooting, and other wildlife-oriented recreation that will compliment and be compatible with habitat and population management goals. Existing habitats will be maintained and enhanced utilizing commonly accepted land management practices with strict adherence to Virginia and Forest Management BMPs.

Expected Results and Benefit:

Acquisition of the Oakley Forest tract will increase DGIF's ability to:

- Meet the goal of maintaining, creating, or enhancing a variety of high quality habitats that ensures landscapes support healthy and diverse populations of game and nongame wildlife at optimum levels, and helps DGIF move toward management plans directed at improving wildlife habitat at an ecoregion/landscape scale;
- Protect and enhance breeding, nesting, foraging, migrating, and wintering habitat for numerous game and non-game bird and mammal species statewide.;
- Address conservation challenges that cross jurisdictional boundaries, such as habitat fragmentation, wildlife disease, and climate change, enabling improved opportunities for conservation planning at an ecologically appropriate scale (e.g., watersheds, landscapes, ecoregions) rather than smaller scales (e.g., single land management units).
- Protect property, removing any remaining threat of residential and commercial development and associated infrastructure, and inappropriate agriculture and forestry activities;
- Increase forest habitat diversity and various stages of early successional habitats essential to the health and benefit of diverse bird and mammal populations;
- Provide water quality benefits to the Chesapeake Bay through the maintenance of wetland nutrient and sediment filtering capacity by removing the threat of potential development and incompatible farming and forestry practices;
- Preserve and enhance riparian and wetland habitats to help reduce non-point source pollution, improve water quality, and protect spawning, nursery, or foraging habitats for important aquatic species.

- Increase public lands for wildlife-based recreation opportunities (hunting, shooting, fishing, trapping, recreational shooting, wildlife viewing) consistent with maintaining and enhancing wildlife habitat and populations.
- Provide potential opportunity to utilize purchased land and new WMAs to develop safe, accessible, and environmental friendly public firearms and archery range facilities in areas of high demand that will complement and be compatible with population and habitat management goals.
- Provide additional opportunity to utilize WMAs as educational resources to further public knowledge and understanding of science-based habitat management practices.
- Provide a model and impetus for additional preservation, conservation, and restoration of other public and private lands.
- Continue to build enduring conservation partnerships seeking shared conservation outcomes to position Virginia to better leverage resources and support for ensuring landscapes capable of sustaining diverse and sustainable populations of fish, wildlife, and plants.

The VDGIF has created a webpage devoted to the Oakley Forest WMA that can be found **HERE**. As of 2020, VDGIF reports the Oakley Forest WMA has risen to 4,459 acres in size.

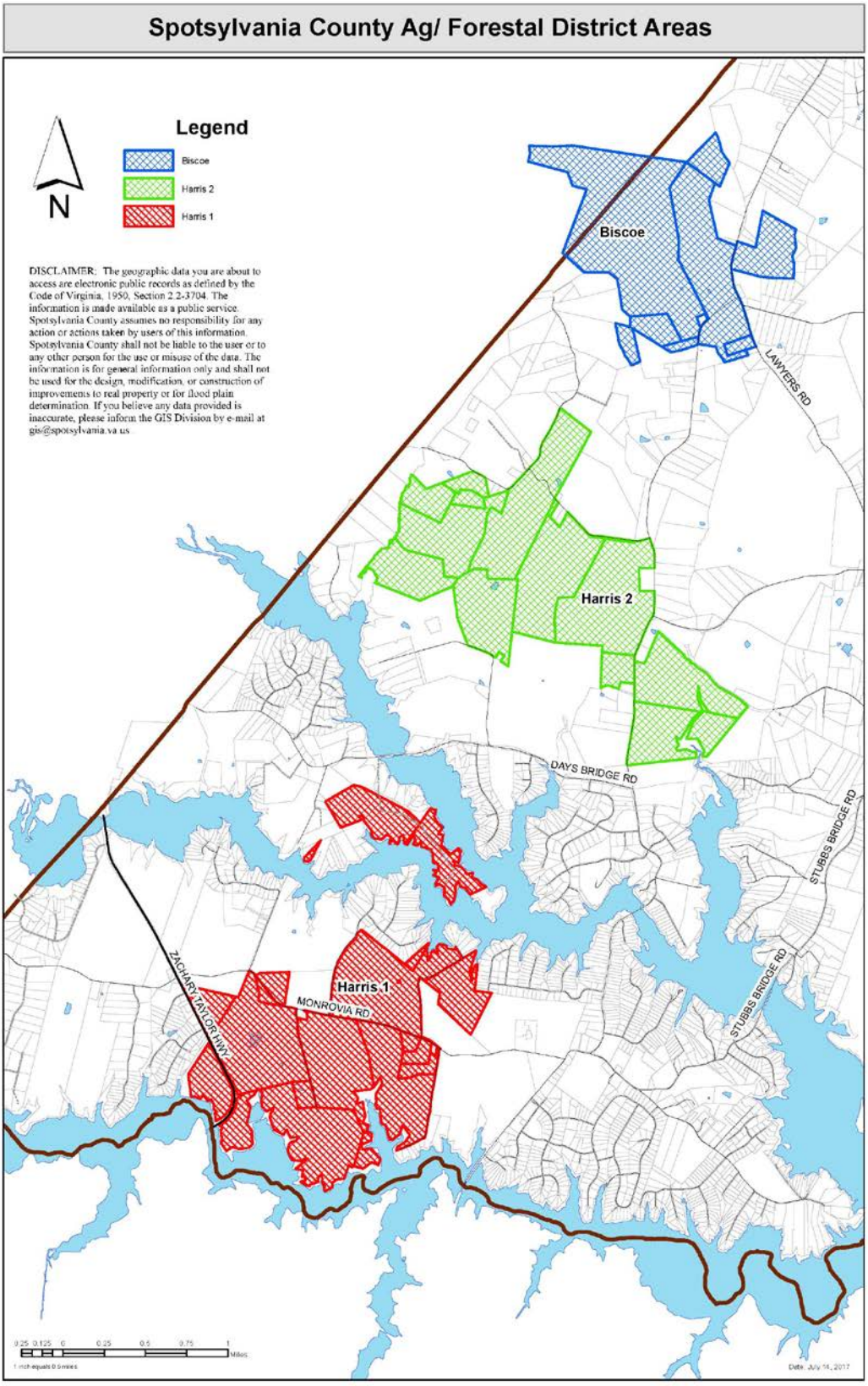
Agricultural/ Forestal District

The purpose of Agricultural/Forestal Districts is to encourage the preservation, development and improvement of the appropriate lands in the County for the production of agricultural and forestal products by providing a mechanism for the creation and administration of agricultural and forestal districts of statewide significance. The Board of Supervisors finds that agricultural and forestal lands are valued natural and ecological resources which provide essential open spaces for clean air sheds, watershed protection, wildlife habitat, as well as aesthetic value in our community. It is the purpose of these Districts to provide a means to protect and enhance agricultural and forestal land as a viable segment of the County's economy and as an economic and environmental resource of major importance.

The Agricultural/Forestal District Review Committee has been established to administer the County's Agricultural/ Forestal Disticts. In particular, the committee is charged with rendering expert advice as to the nature of farming and agricultural and forestal resources within the district and their relation to the entire County. The committee advises the Planning Commission and the Board of Supervisors and assist in creating, reviewing, modifying, continuing or terminating Agricultural and Forestal districts within the County. Agricultural/forestal districts in the County are reviewed every 10 years, at which time they must be renewed, and hearing applications for new districts as they come up.

As of 2020 within Spotsylvania County there are 2,883 acres that are in the Agricultural/Forestal District divided amongst three (3) separate tracts. Geographically they are in the southwestern portion of the County and have been recognized within the County future land use map as part of the Agricultural and Forestal Land Use. Exhibit 6 below shows the extent of the current Agricultural/Forestal District designations. It is good to note that the agricultural/forestal districts complement the agricultural and forestal land use designation in the land use element but they are separate designations; not on in the same.

Exhibit 6: Agricultural/Forestal District



Purchase of Development Rights

The purposes of the Purchase of Development Rights (PDR) program include, but are not limited to: establishing a program to facilitate County acquisition of conservation easements voluntarily offered by owners to serve as one means of preserving the County's character and resources; preserving farm and forest land and to protect and enhance family farms and the economic viability of the agricultural and forestal sectors of the local economy; conserving and protecting water resources and environmentally sensitive lands, waters and other natural resources; conserving and protecting biodiversity and wildlife and aquatic habitat; assisting in shaping the character and direction of the development of the community; Improving the quality of life for the inhabitants of the County; and promoting recreation and tourism through the preservation of scenic and historical resources.

The Spotsylvania Code Chapter 17A sets the regulatory framework for the program. Priority properties are established via ranking system that include a number of features that are complementary to the purpose of the program including: soil productivity; farmland capability; development factors; number of potential family conveyances; Comprehensive Plan consistency; Farm size (acreage); Protected land contiguous to site; Existing approved soil conservation plan; ownership; contribution to continued viability of Agricultural Community; other special conditions as defined.

As of 2018, two properties have been accepted into the Purchase of Development rights program representing approximately 116 acres in total.

The PDR program is administered by the Agricultural/ Forestal District Review Committee who review prospective PDR applications. Enrollment opportunities for the program are closed presently. The program has not been active since 2014.

Land Use Program

The Land Use Program is administered by the County Commissioner of Revenue's office. The purpose of the Land Use Program is to further the public interest by encouraging the preservation of land, to conserve and protect the County's natural resources, to protect safe water supplies, and to promote orderly land use planning and development. The Land Use Program is a **tax deferral**, not a discount. The assessment of the land is based on the use value and not the fair market value. The tax deferral amount will be repaid with interest if the use of the land changes.

Four categories that qualify for the Land Use Program:

Agricultural Use:
When devoted to the bona fide production for commercial sale of plants and animals or plant and animal products useful to man under uniform standards prescribed by the Virginia Commissioner of Agriculture and Consumer Services, or when devoted to and meeting the requirements and qualifications for payments or other compensation pursuant to a soil conservation program under an agreement with an agency of the federal government. Requiring 5 acres minimum in agricultural use.

Virginia State Code requires a minimum of five (5) contiguous (unimproved or more) acres. One acre is excluded for a house-site (if dwelling exists) or a proposed house-site. The remaining five acres or more may qualify for Land Use taxation.

AND

The property must have a five (5) year previous history of continuous farming or horticultural activity before qualifying on the sixth year. If land is left vacant for one year or more, the farm history must begin again for five (5) continuous years.

AND

The farm must produce either 1/2 of the county average in crops or meet the minimum animal requirements. The entire farm must be qualified with adequate livestock: One mature cow, five goats, five sheep, or five swine, one hundred chickens, and/or sixty-six turkeys per every five acres for twelve (12) months. Horses can qualify the land only if they are being used for breeding or a boarding business.

Horticultural Use:
When devoted to the bona fide production for sale of fruits of all kinds, including grapes, nuts and berries, vegetables, nursery and floral products under uniform standards prescribed by the Virginia Commissioner of Agriculture and Consumer Services, or when devoted to and meeting the requirements and qualifications for payments or other compensation pursuant to a soil conservation program under an agreement with an agency of the federal government. Requiring 5 acres minimum.

Forest Use:
When devoted to tree growth in such quantity and so spaced and maintained as to constitute a forest area under standards prescribed by the Virginia State Forester. Requiring 20 acres minimum in forest use.

Open Space:
When so used as to be provided or preserved for park or recreational purposes, conservation of land or other natural resources, floodways, historic or scenic purposes, or assisting in the shaping of the character, direction, and timing of community development or for the public interest sand consistent with the local land use plan under uniform standards prescribed by the Director of the Virginia Department of Conservation and Recreation. Requires 5 acres minimum in Open Space use unless the local ordinance specifies otherwise.

DRAFT

GEOLOGY AND MINERAL RESOURCES OF SPOTSYLVANIA COUNTY, VIRGINIA

Legend

Primary_Co

- N/A
- clay
- copper
- gold
- granite
- gravel
- iron
- sand and gravel
- sandstone
- zinc
- Active_Mines
- Towns
- Interstate_Highway
- Primary_Roads

Spotsylvania_Geology

SYMBOL

- water
- al
- QTu
- Qt
- Qsh
- Qcc
- QTw
- Tb1
- Tc
- psg
- msg
- Tl
- Kp
- &Mf
- Sf
- SOe
- OZI
- OZII
- OZIII
- gn
- vo
- O|pg
- O|u
- Oq
- Oqq
- |cv
- |ta
- |g
- |Zh
- PzYgr
- PzYpm
- Ya
- Ymd

Paytes
Spotsylvania Courthouse
Brokenburg
Five Mile Fork

Data Sources:

Geology: Virginia Division of Mineral Resources (DMR), 2003, Publication 174, Digital Representation of the 1993 Geologic Map of Virginia, scale 1:500,000.
Active Mine Locations: Virginia Division of Mineral Mining, scale 1:24,000.
Mineral Occurrences: DGMR Mineral Resources of Virginia database, scale 1:24,000.

Virginia Department of Mines, Minerals, and Energy
Division of Geology and Mineral Resources
Charlottesville, VA
15 April 2013

N

Geologic data and mineral resource locations presented on this map are based on current information in the records of the VA Department of Mines, Minerals, and Energy (DMME). The locations and extent of many of the historic mine sites have been confirmed by field investigations, yet for others, the locations may be approximate and subject to change. DMME is continuing to modify the datasets included on this map, and the user is responsible for ensuring that they have the most current information. This map is designed for use at the designated scale and should not be enlarged or used for making site-specific decisions. The user should be aware of possible errors in scale, resolution, and positional accuracy. Distribution of this map is intended for informational purposes and should not be considered authoritative for navigation, engineering, legal, or other site-specific uses.

DRAFT

Steep Slopes

DRAFT

CULPEPER COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

ORANGE COUNTY

CAROLINE COUNTY

LOUISA COUNTY

HANOVER COUNTY

Legend

Major Waterbody

Slope

- 0 - 5%
- 5 - 15%
- 15 - 30%
- 30 - 45%
- 45 - 60%
- 60 - 100%
- Not rated or not available

N

W E

S

5 Miles

Data Source: Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at https://websoilsurvey.sc.egov.usda.gov/.

Note the presentation of steep slopes data here reflects extent based on the County Boundary and GIS lines as they existed prior to the April 2021 County Boundary update. The extent will reflect the latest County boundary when data from the external source is updated to the new boundary.

DRAFT

Hydric Soils

DRAFT

CULPEPER COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

ORANGE COUNTY

CAROLINE COUNTY

LOUISA COUNTY

HANOVER COUNTY

N

W E

S

5 Miles

Legend

Major Waterbody

Hydric Soils Rating

- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Data Source: Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at https://websoilsurvey.sc.egov.usda.gov/.

Note the presentation of hydric soils data here reflects extent based on the County Boundary and GIS lines as they existed prior to the April 2021 County Boundary update. The extent will reflect the latest County boundary when data from the external source is updated to the new boundary.

DRAFT

Erodibility (K Factor- Whole Soil)

DRAFT

CULPEPER COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

ORANGE COUNTY

LOUISA COUNTY

HANOVER COUNTY

N

W E

S

5 Miles

Legend

Major Waterbody

K Factor, Whole Soil

- .02
- .05
- .10
- .15
- .17
- .20
- .24
- .28
- .32
- .37
- .43
- .49
- .55
- .64
- Not rated or not available

Data Source: Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at https://websoilsurvey.sc.egov.usda.gov/.

Note the presentation of erodible soils data here reflects extent based on the County Boundary and GIS lines as they existed prior to the April 2021 County Boundary update. The extent will reflect the latest County boundary when data from the external source is updated to the new boundary.

DRAFT

Septic Suitability

DRAFT

CULPEPER COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

ORANGE COUNTY

LOUISA COUNTY

CAROLINE COUNTY

HANOVER COUNTY

Legend

Major Waterbody

Septic Suitability

- Very limited
- Somewhat limited
- Not rated or not available

N

W E

S

5 Miles

Data Source: Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at https://websoilsurvey.sc.egov.usda.gov/.

Note the presentation of septic suitability data here reflects extent based on the County Boundary and GIS lines as they existed prior to the April 2021 County Boundary update. The extent will reflect the latest County boundary when data from the external source is updated to the new boundary.

DRAFT

Depth to Water Table (cm)

DRAFT

CULPEPER COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

ORANGE COUNTY

CAROLINE COUNTY

LOUISA COUNTY

HANOVER COUNTY

Legend

Major Waterbody

Depth to Water Table

- 0 - 25 cm
- 25 - 50 cm
- 50 - 100 cm
- 100 - 150 cm
- 150 - 200 cm
- > 200 cm

N

W E

S

5 Miles

Data Source: Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at https://websoilsurvey.sc.egov.usda.gov/.

Note the presentation of steep slopes data here reflects extent based on the County Boundary and GIS lines as they existed prior to the April 2021 County Boundary update. The extent will reflect the latest County boundary when data from the external source is updated to the new boundary.

DRAFT

Soils Drainage

DRAFT

CULPEPER COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

ORANGE COUNTY

CAROLINE COUNTY

LOUISA COUNTY

HANOVER COUNTY

Legend

Major Waterbody

Drainage Class (Natural)

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- Not rated or not available

N

W E

S

5 Miles

Data Source: Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at https://websoilsurvey.sc.egov.usda.gov/.

Note the presentation of soils drainage data here reflects extent based on the County Boundary and GIS lines as they existed prior to the April 2021 County Boundary update. The extent will reflect the latest County boundary when data from the external source is updated to the new boundary.

DRAFT

Virginia Natural Heritage Date Explorer Agricultural Model

DRAFT

CULPEPER COUNTY

ORANGE COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

LOUISA COUNTY

HANOVER COUNTY

CAROLINE COUNTY

Legend

- Primary Development Boundary
- Major Waterbody

Agricultural Suitability Model

- Low Suitability
- Moderate Suitability
- High Suitability
- Very High Suitability
- Outstanding Suitability

N

W E

S

Data Source: Virginia Department of Conservation and Recreation This dataset has been clipped to the Spotsylvania County Boundary for use by the Planning Department for the Comprehensive Plan Update (Sept 2019). For full dataset please see the AgrValue or the Virginia Natural Heritage Data Explorer.

DRAFT

Virginia Natural Heritage Data Explorer Agricultural Soils

DRAFT

CULPEPER COUNTY

ORANGE COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

LOUISA COUNTY

HANOVER COUNTY

CAROLINE COUNTY

Legend

- Primary Development Boundary
- Major Waterbody

Agricultural Soils

Farmland Classification (Score)

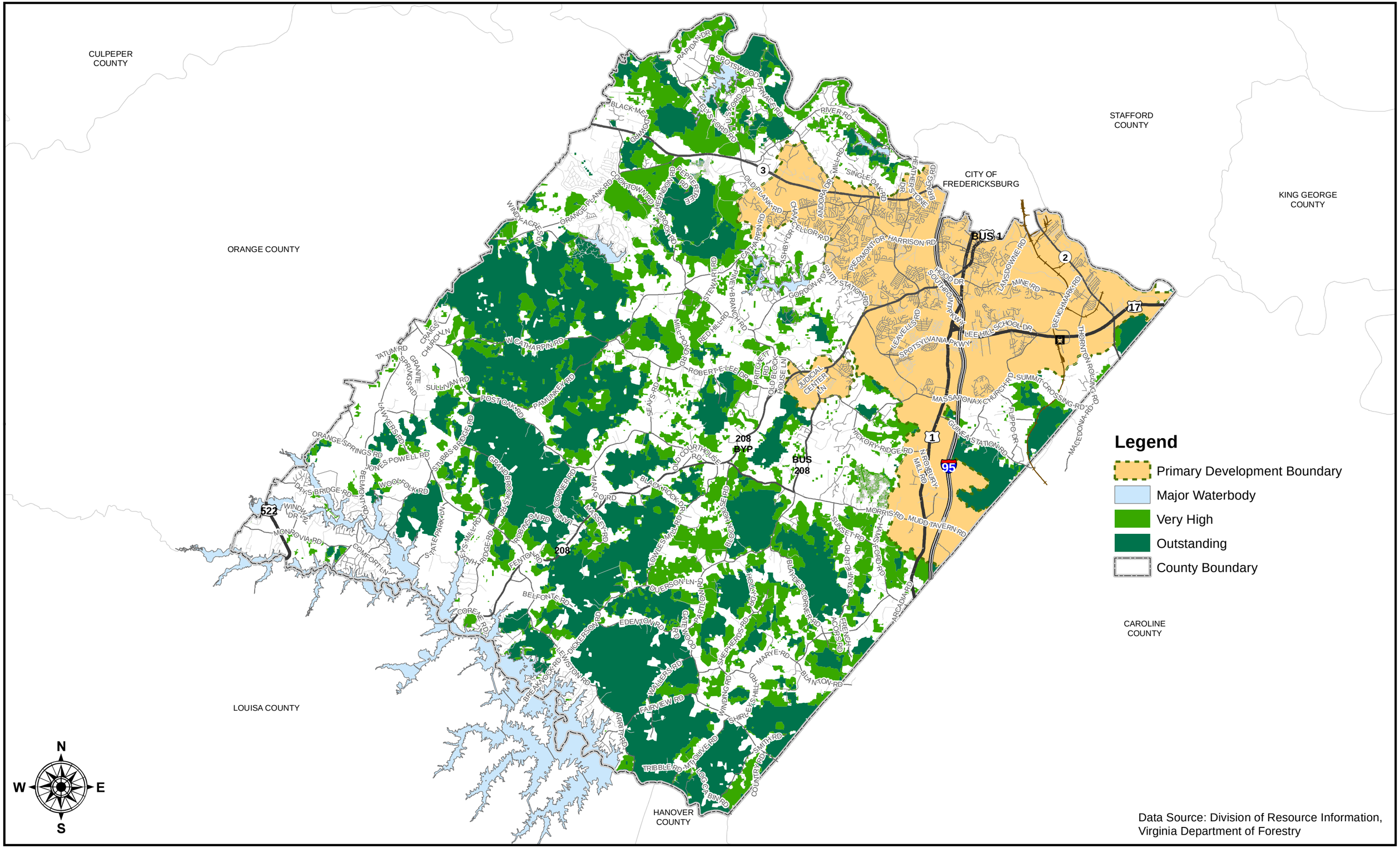
- Farmland of statewide importance (80)
- Prime farmland (100)
- County Boundary

Data Source: Kirsten Hazler and Tracy Tien, Virginia Natural Heritage Program. Soil Survey Staff. Gridded Soil Survey Geographic (gSSURGO) Database for Virginia. United States Department of Agriculture, Natural Resources Conservation Service. Available online at http://datagateway.nrcs.usda.gov/. 20141024 (FY2015 official release).

DRAFT

Virginia Department of Forestry Forest Conservation Value

DRAFT



Data Source: Division of Resource Information, Virginia Department of Forestry

DRAFT

Virginia Department of Conservation and Recreation Ecological Cores

DRAFT

CULPEPER COUNTY

ORANGE COUNTY

STAFFORD COUNTY

KING GEORGE COUNTY

CITY OF FREDERICKSBURG

CAROLINE COUNTY

LOUISA COUNTY

HANOVER COUNTY

Legend

- Primary Development Boundary
- Major Waterbody

Ecological Cores

- C1: Outstanding
- C2: Very High

N W E S

Data Source: Virginia Department of Conservation and Recreation, Division of Natural Heritage

APPENDIX A

LAND USE - FORT A.P. HILL APPROACH FAN MAP
&
JOINT LAND USE STUDY (JLUS)

7.0 Spotsylvania County

7.1 Community Profile

Spotsylvania County is approximately equidistant from Richmond and Washington, D.C. and is one of the fastest growing counties in Virginia. The County's location along Interstate 95 (I-95), proximity to major urban centers and a high quality of life contribute to the area's growth and popularity. Based on U.S. Census Bureau data, the county experienced a growth rate of 113% between 1990 and 2010 and by 2010 maintained a population of 122,397. Population estimates as of July 1, 2012 are 125,684.[1] The Weldon Cooper Center for Public Service's population projections suggest that the County will add 101,520 residents or grow by 83 percent between 2010 and 2030. This projection assumes an average growth rate of approximately 3 percent per year, similar to a historic rate of approximately 3 percent between 2000 and 2010. [2]

A large portion of the county's growth is located along the I-95 and U.S. Route 1 corridors and although suburban style development has increased in the past decade, the county's 407 square miles are primarily rural and agricultural with rolling hills and forests. Fort A.P. Hill is located southeast of Spotsylvania County. Even though the county does not share a border with the installation, aviation operations associated with training do impact Spotsylvania County.

7.2 Current Tools and Programs

7.2.1 Comprehensive Plan and Future Land Use

The Spotsylvania County Comprehensive Plan, adopted in 2013, includes a Future Land Use Map to guide land development. The plan outlines several objectives, including:

- Plan for the orderly development of the County.
- Promote a diverse and vibrant economic base.
- Maximize the use of existing infrastructure and public facilities to ensure the most efficient operation of facilities and the provision of services.
- Accommodate projected residential growth in a manner that is fiscally responsible.
- Strive for safe and affordable housing for people of all ages.
- Ensure land use policies recognize and accommodate anticipated population increases.
- Encourage a community service sector and a commercial base that meets the needs of the citizens and businesses in Spotsylvania County.

[1] Spotsylvania County, Virginia, Comprehensive Plan, Adopted November 2013, Chapter 1: Introduction and Vision.
[2] Spotsylvania County, Virginia, Comprehensive Plan, Adopted November 2013, Chapter 1: Introduction and Vision.

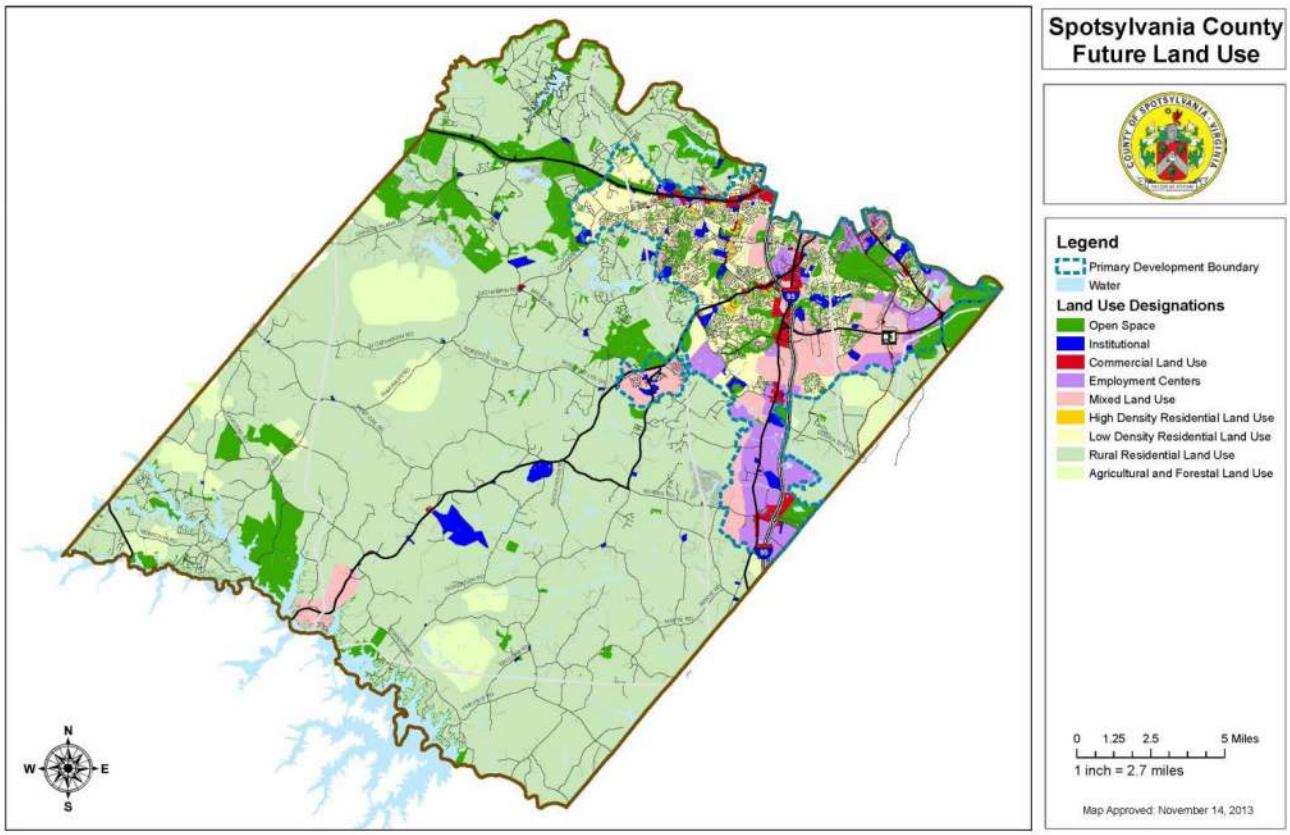


Figure 7.1 Spotsylvania County Future Land Use Map
Source: Spotsylvania County Comprehensive Plan, 2013

Spotsylvania County has a primary development boundary, which defines a public water and sewer service area, that aligns with the county's growth strategy. Spotsylvania's growth areas are concentrated around the City of Fredericksburg and along I-95. The primary development boundary is intended to contain development within the primary development district and preserve rural and agricultural lands.

The land in Spotsylvania that is two to three miles from Fort A.P. Hill falls both within and outside of the primary development boundary. Some of this area is under the Fort A.P. Hill Tier I and Tier II approach fans (see Chapter 8 for operational descriptions of Fort A.P. Hill); therefore, the future land use plan recommends a policy to "provide Fort A.P. Hill an opportunity to comment on rezoning proposals within the Fort A.P, Hill Approach Fan"[3] and recommends that rezoning proposals including residential development include "proffered commitments to noise attenuation, real estate disclosures, and/or other measures recommended by Fort A.P. Hill."[4]

[3] Spotsylvania County, Virginia, Comprehensive Plan, Adopted November 2013, Amended February 22, 2011, Chapter 2: Future Land Use Element.
[4] ibid.

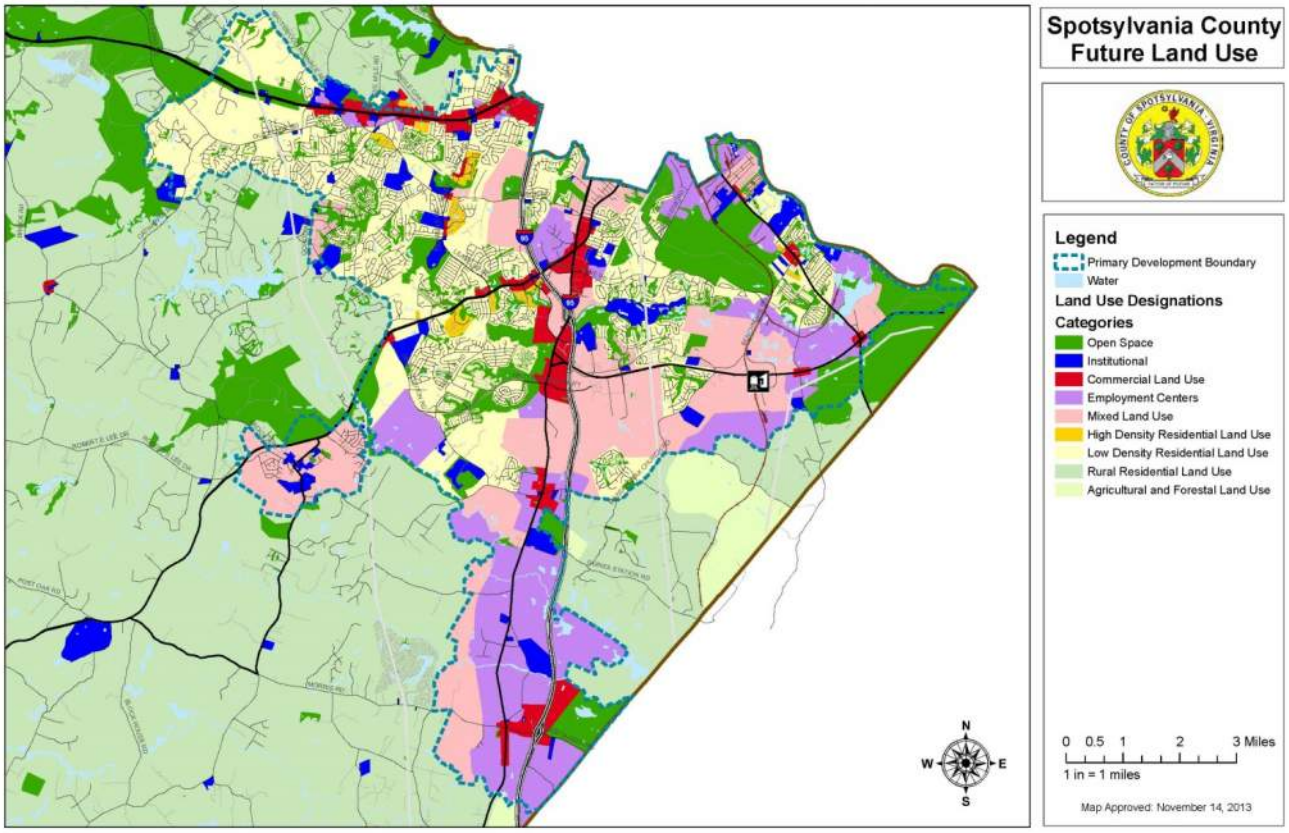


Figure 7.2 Northeast Focus Area - Spotsylvania County Future Land Use Map
Source: Spotsylvania County Comprehensive Plan, 2013

The land closest to Fort A.P. Hill lies outside of the Primary Development Boundary and is designated as rural residential, open space, and agricultural and forestal land uses. The rural residential district is intended to conserve rural character while also accommodating large lot residential and cluster developments. The open space land use includes conserved lands and park and recreation facilities. The agricultural and forestal land use includes active agricultural land. Land within the primary development boundary, located in the northeastern portion of Spotsylvania County, is intended to be developed in a series of mixed-use communities and include significant employment centers. The county is actively encouraging a mix of residential, commercial, and office development, including a transit-oriented development within this district. Generally, northeast of these areas is a significant concentration of suburban residential developments. The future land use plan outlined in the Comprehensive Plan calls for mixed-use and employment center land uses in the portion of the primary development district that is closest to Fort A.P. Hill. According to the Comprehensive Plan, the mixed land use category is defined as permitting "traditional neighborhood; higher density residential; commercial uses (retail and office); light industrial; educational facilities; recreation facilities and compatible public and other civic facilities."[5] The employment center category includes office, industrial and commercial land uses.

[5] ibid.

7.2.2 Zoning

The county land closest to Fort A.P. Hill is currently zoned for mixed use (MU), commercial (C-3), industrial (I-1 and I-2), and rural (RU) land uses (See Figure 7.3). The MU district allows for a mix of uses in a compact, walkable community. The C-3 district permits general commerce activity. The I-1 district permits light industrial uses and the I-2 district permits medium and heavy industrial uses. The RU district permits agriculture, single-family detached (one dwelling unit per three acres), wildlife sanctuaries, public uses, parks, places of worship, and schools. Zoning within the primary development district, including those areas within the installation's approach fan, is likely to change over the next several years to align with the future land use plan.

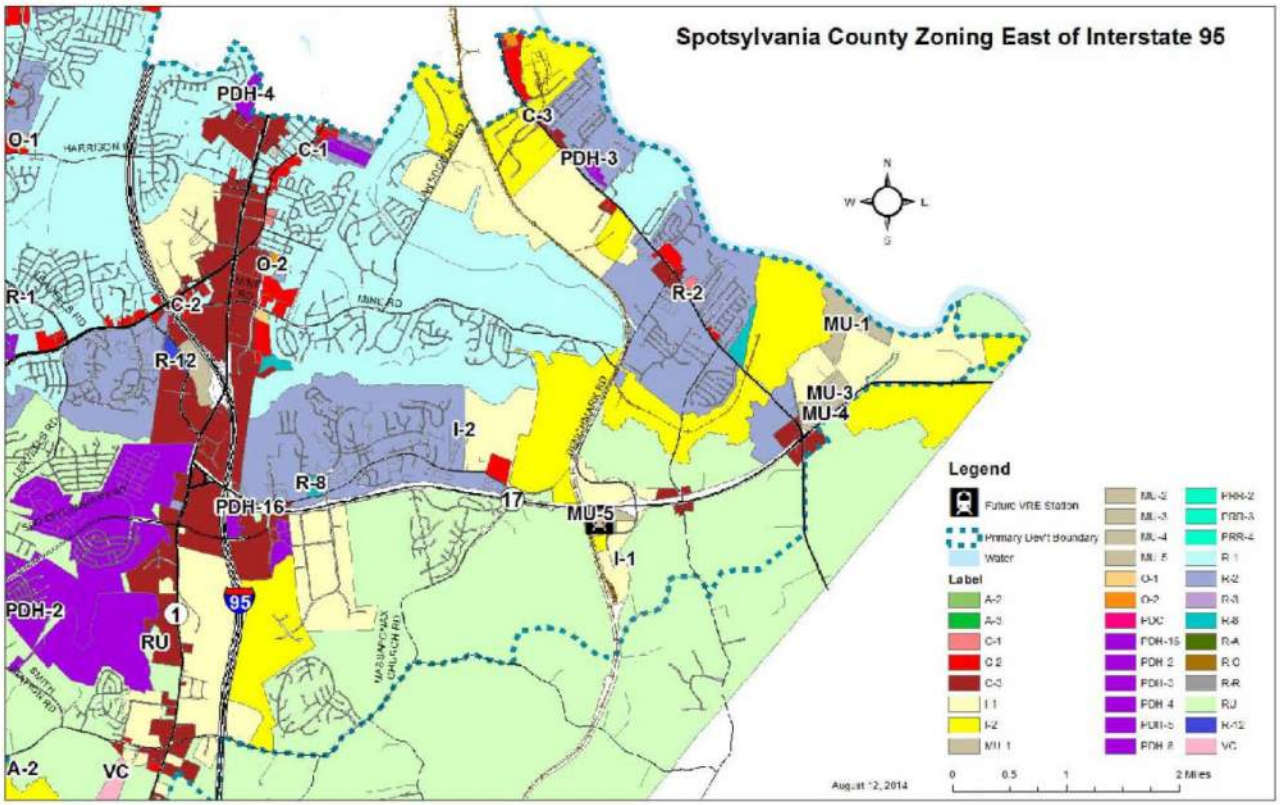


Figure 7.3 Northeast Focus Area - Spotsylvania County Zoning
Source: Spotsylvania County, August 2014

7.2.3 Infrastructure Plans

Spotsylvania County has several infrastructure plans near Fort A.P. Hill to encourage growth within its primary settlement district. The county has already extended water and sewer service along Route 2 and U.S. Route 17 to the undeveloped land within the primary development boundary. At this time, the county does not plan to extend water and sewer infrastructure further toward Fort A.P. Hill due to topography constraints which would require cost-prohibitive pumping.[6]

[6] Interview with Spotsylvania County, October 23, 2012.

Several transportation projects are underway or planned to alleviate congestion and extend transit as identified in the 2040 Long Range Transportation Plan (LRTP) prepared by FAMPO and GWRC. Two projects on the LRTP short-list of critical transportation projects are in Spotsylvania County near Fort A.P. Hill: widening Route 2 from the Spotsylvania-Fredericksburg border to the intersection with U.S. Route 17 and widening U.S. Route 17 from I-95 to the Spotsylvania-Caroline County border. The Route 2 widening project is unfunded and listed for funding in the 2036-2040 cycle. The U.S. Route 17 widening project is unfunded and listed for funding in the 2026-2030 cycle.

In addition to the roadway expansions, new transit service is coming to Spotsylvania County. The Virginia Railway Express is constructing a new station within the Crossroads Station development south of Route 17. This station will be completed in 2015 and will fall under the Tier I approach fan.

7.3 Challenges and Opportunities

7.3.1 Challenges

- **Aircraft Noise.** A wide range of aviation training occurs at Fort A.P. Hill, including fixed wing and rotary aircraft operations. The Assault Landing Zone (ALZ) facility, which is located in the northwestern portion of the installation, has two associated approach (take-off and landing) fans that correspond to approximate noise zones and altitudes of fixed wing aircraft that use the ALZ (See Chapter 8.0, Fort A. P. Hill). Approaches to the ALZ can range from 300 to 1,000 feet above ground level and the majority of takeoffs and landings occur to the northwest of the ALZ, over Spotsylvania County. Once in flight, aircraft often follow racetrack patterns that extend slightly into Spotsylvania County. The fans were developed by the installation in absence of official noise contours since the number of flights is not high enough to warrant contours. The inner-most fan (closest to the installation) represents altitudes less than 1,700 feet above ground level (AGL) and noise levels approaching 80 dBA. The outer fan represents altitudes between 1,700 and 3,500 feet AGL and noise levels below 80 dBA. While average noise levels in the fan areas are anticipated to be below typical airfields, there is a potential for individual overflights to generate undesirable noise levels on current and future development. Aviation noise complaints have been documented in and around the fan areas of Spotsylvania County. In addition, rotary aircraft routes exist around the perimeter of the installation and are in close proximity to the county boundary.

- **Aircraft Training Routes Overlap with County Investment Priorities** Spotsylvania County has identified growth areas and infrastructure investment priorities along the U.S. Route 17 and Route 2 corridors that are located in relatively close proximity to training areas on Fort A.P. Hill. This area of the county has been the recipient of utility and roadway infrastructure improvements geared toward supporting higher density mixed use development and recent re-zonings in the area have been consistent with the county's growth goals for the area. The northern approach fan for the ALZ covers a portion of the county's growth area as shown in Figure 7.4.

- **Fort A.P. Hill Night-time Operations Require Dark Skies.** Fort A.P. Hill conducts night-time training operations that utilize night vision equipment. The success of night-time operational activities is dependent upon dark conditions that are affected by ambient light levels. Night vision training occurs at the Laser Range near U.S. Route 17 and at the ALZ and Drop Zone. As Spotsylvania County grows, the installation is concerned that new development within the county's growth area may generate night-time illumination that will compromise the installation's ability to implement its night-time training operations.

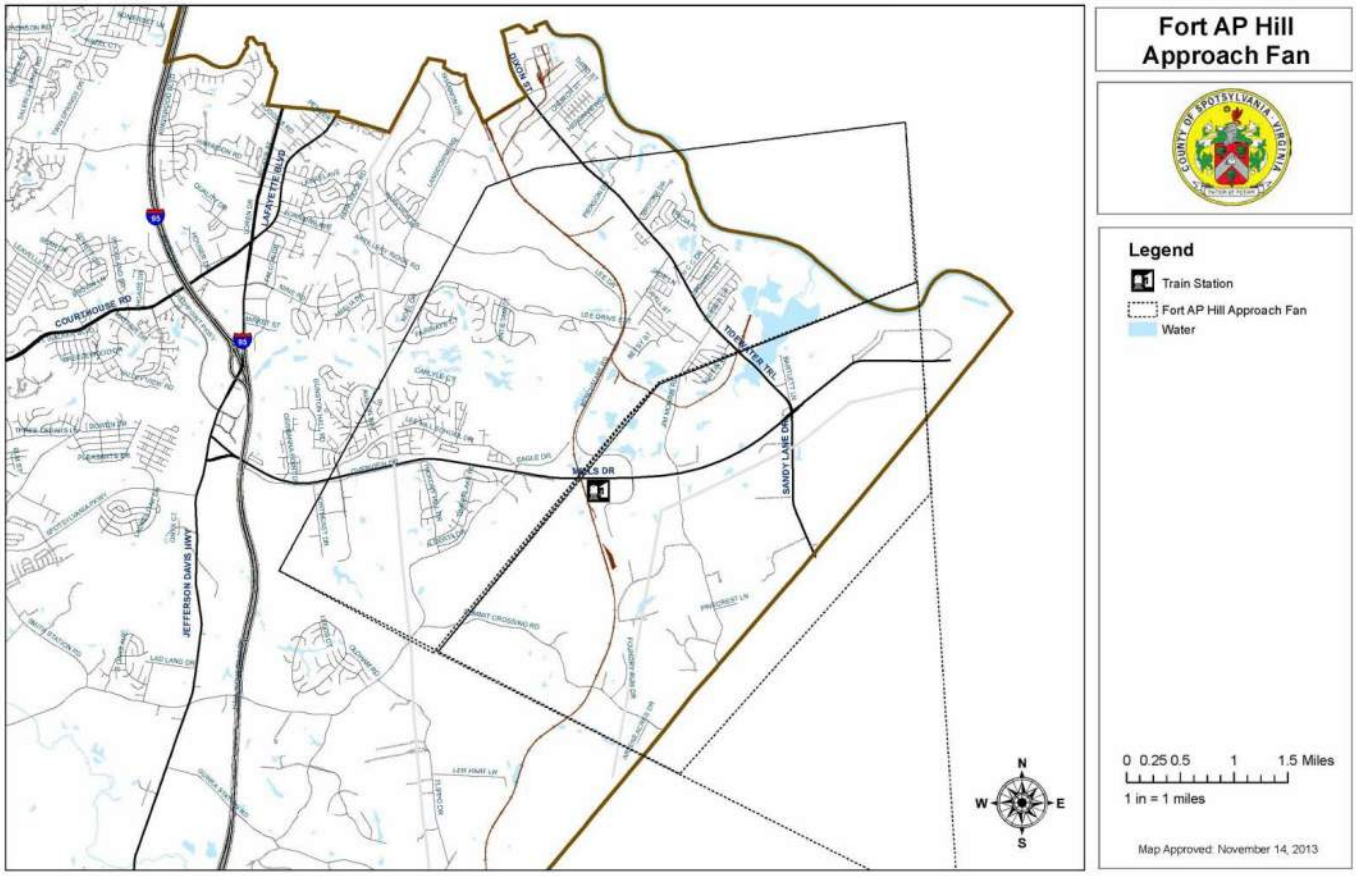


Figure 7.4 Fort A.P. Hill Approach Fan
Source: Spotsylvania County Comprehensive Plan, 2013, Appendix

7.3.2 Opportunities

- **Integration of the Fort A.P. Hill Operational Area Into Planning Policy.** Spotsylvania County has already recognized the installation's operations in its future plans by recognizing and including the installation's Approach Fans in the county's Comprehensive Plan. The fans are part of a larger operational area (see Chapter 8.0, Fort A.P. Hill) in which Fort A.P. Hill conducts training.

- **Coordinated Development Reviews.** Spotsylvania County and Fort A.P. Hill have established effective procedures for communication. For example, the county provides the installation an opportunity to comment on proposed re-zonings within the approach fans. Continued open dialogue will help develop mutually beneficial outcomes for the county and the installation.

- **Reduce Noise Impacts.** Proffered commitments to noise attenuation, real estate disclosures, and/or other measures recommended by Fort A.P. Hill as part of rezoning applications could help mitigate against future noise complaints in the county's growth area. The installation has expressed concerns about increased residential density in Spotsylvania County that could lead to an increase in noise complaints and pressure to modify training operations. The county has had success in obtaining lighting controls and sound attenuation for recent rezoning applications and is actively working with the installation on these issues to minimize the impacts of development on its mission.

- **Develop a Dark Skies Ordinance.** Adoption of a county-wide dark skies ordinance would put in place lighting controls and requirements on new development county-wide and would help alleviate the installation's concerns about increased light pollution. Fort A.P. Hill should work with the county to ensure adequate lighting requirements and standards are captured in the ordinance.

7.4 Recommendations

Based on feedback received from Spotsylvania County, this section establishes a set of recommended actions for the county to consider that could strengthen coordination between the county and the installation. The recommendations are organized into the categories described below.

- **Coordination** – to facilitate coordination between Spotsylvania County and Fort A.P. Hill.
- **Communication** – to improve the dissemination of locality and military operational information.
- **Economic Development** – to foster economic development opportunities in Spotsylvania County.
- **Utilities** – to evaluate opportunities for improved broadband services around Fort A.P. Hill.
- **Community Development/Planning** – to reduce noise and vibration impacts on residents.

Each recommendation includes action steps, a timeframe, rough order magnitude of costs and staffing requirements.

- **Timeframe**. Identifies when the proposed recommendation should be initiated using one of three timeframe categories:
    - **Immediate (highest priority)** Now
    - **Short-term (high priority)** Less than one year
    - **Mid-term (moderate priority)** Between one and four years
    - **Long-term (lower priority)** More than four years
- **Order of Magnitude Cost.** Provides a high level, Rough Order-of-Magnitude (ROM) cost impact for local jurisdictions and the installation to implement the strategy. Costs do not consider efforts undertaken by other parties beyond the JLUS partners.
    - **$** = < $100,000
    - **$$** = $100,000 - $300,000
    - **$$$** = > $300,000
- Potential Staffing Requirements. Provides an estimate of the potential required staff involvement and staff time of local jurisdictions and/or Fort A.P. Hill to implement the recommendation. Staffing requirements do not include efforts conducted by other parties.
    - **L** = minimum
    - **M**= moderate
    - **H** = high

Table 7.1 Spotsylvania County JLUS Recommendations

Recommendation			Action Steps	Timeframe	Cost	Staffing
Coordination	1.1	Through an executed MOU, work with the other JLUS partners to establish the Fort A.P. Hill Executive Steering Committee (ESC) including local elected officials and the Fort A.P. Hill Garrison Commander to discuss community, installation and other compatibility issues on a regular scheduled basis and to coordinate and collaborate on the following: • Capital improvement and infrastructure planning • Comprehensive plan and other planning document updates • Long range planning for newly proposed missions and on-base facilities, recognizing mission-related operational security requirements exist • Environmental studies related to air and water quality impacts • Pursuit of joint funding for studies The ESC should include a Working Committee at the planning director level that will form subcommittees as necessary to explore specific issues and opportunities.	• Agree upon key communication procedures contained in the draft MOU and identify primary internal points of contact to produce and receive notices. • Identify appropriate secondary partners for participation in the MOU. • Sign the MOU. • Define issues to review and information to share. • Exchange information about upcoming infrastructure studies and plans. • Modify planning processes to include opportunity for installation/community input early on - before development of alternatives and as part of benefits/impacts review. • Involve utilities and public works personnel in discussions. • Explore ways to include the installation in any sub committees that are formed for plan updates (i.e. transportation, utilities, etc.). • Fort A.P. Hill to hold regular meetings/briefings with locality representatives during plan/project developments.	Immediate	-	-
	1.2	Continue to solicit input from Fort A.P. Hill as part of a technical review process on development related submittals and text amendments within the Fort A.P. Hill influence area.	• Formalize Fort A.P. Hill as a technical review committee member or similar status and define consultation. procedures to obtain installation input • Seek input from the installation on all development related proposals and text amendments and consider the input in decision-making processes. • Fort A.P. Hill provides written input on development related proposals and text amendments.	Short-term	$	M
Communication	2.1	Issue Fire Warning Orders (through Caroline Alert and other media and social network venues) of training activities that are non-routine and have the potential to be louder than normal, as well as controlled burn activities, including the proposed time and duration of aviation and ordnance operations.	• Fort A.P. Hill Public Affairs Officer (PAO) to define multiple media and social network outlets for alerts, including ESC and Installation Command Council (ICC). • Develop template for alerts defining information elements. • Localities to include warnings on websites and social media venues. • Seek feedback on effectiveness of alerts from localities and public (during surveys or other planning processes).	Short-term	$	M

Recommendation			Action Steps	Timeframe	Cost	Staffing
	2.2	Re-structure and expand the ICC to include local businesses, residents, installation employees, non-profits, etc., to serve as a citizen group designed to promote positive community and installation relations and to help organize and sponsor events and activities and support economic development.	• ESC to evaluate ICC membership and redefine membership to accomplish intent of strategy. • Hold ICC meeting. • Establish leadership and purpose of ICC and carry out activities.	Mid-term	$	L
	2.3	Update locality websites to recognize the installation, its mission, its location, links to the installation web page, contact information for key personnel, and fire warning orders. Update installation website to include more information about operations, training, noise impacts and complaint procedures, avoidance areas and key points of contact.	• Update community websites with links to Fort A.P. Hill key personnel contact information, fire warning orders, and noise reporting procedures. • Update installation website with locality links, fire warning orders, property claims process, noise impacts and complaint procedures and contacts, and avoidance areas.	Mid-term	$$	M
Economic Development	3.1	Support Fort A.P. Hill's pursuit of establishing Washington-Baltimore-Northern Virginia General Schedule (GS) pay grades for all personnel stationed at the installation.	• Fort A.P. Hill to pursue pay grade issue with the U.S. Office of Management and Budget. • Localities to write letters of support.	Short-term	$	M
	3.2	Using manning/training personnel data from the installation updated on a bi-annual basis, pursue commercial and retail uses off base that support on base employees and local visitors, tourists and residents.	• Fort A.P. Hill to establish a recurring data collection process to document training personnel numbers of partner groups and rotational units. • Provide data to ESC on bi-annual basis.	Short-term	$	M
Utilities	4.1	Coordinate extension of broadband / telecommunication services to better serve the communities around the installation.	• Develop a ESC subcommittee to focus on broadband issues and to coordinate services.	Long-term	$$	M
Community Development / Planning	5.1	Support real estate disclosure for prospective buyers or renters as part of real estate transactions for properties within the influence area and as part of subdivision plats.	• ESC to work with Fredericksburg Area Association of Realtors (FAAR) to develop a basic disclosure statement for the influence area and an amended point of sale document that includes disclosure. • Support FAAR in their pursuit of enabling legislation for noise disclosure. • Consider incorporating a statement on subdivision plats regarding proximity to installation and potential for noise.	Mid-term	$$	M
	5.2	Encourage sound attenuation for new construction of residences, schools, hospitals, nursing homes, churches and other buildings with public gathering spaces.	• Utilize the proffer system or special use permit requirements to achieve higher sound attenuation standards. • Consider the development of model sound attenuation standards for new construction. • Incorporate attenuation practices into standard subdivision and plan review processes.	Mid-term	$$	M

Recommendation			Action Steps	Timeframe	Cost	Staffing
	5.3	Consider developing a model 'Dark Skies' Ordinance that sets forth specific requirements for lighting. Consider applying the ordinance county and town-wide for all six JLUS communities. Incorporate input from Fort A.P. Hill.	• Localities to develop dark skies ordinance (using input from the installation). • Incorporate lighting best practices into standard subdivision and plan review processes. • Provide information to utility providers regarding requirements.	Mid-term	$$	M
	5.4	Develop a voluntary sound attenuation and lighting retrofit program for existing noise sensitive uses and high-demand lighting uses (such as sports complexes). Investigate federal or state funds to offset potential retrofit costs.	• ESC to jointly conduct a feasibility study for a residential sound and lighting retrofit program. • Identify potential retrofit candidates. • Research funding sources.	Long-term	$$	M

DRAFT

Fort AP Hill Approach Fan

COUNTY OF SPOTSYLVANIA · VIRGINIA
PATIOR UT POTIAR

Legend

- Train Station
- Fort AP Hill Approach Fan
- Water

0 0.25 0.5 1 1.5 Miles

1 in = 1 miles

Map Approved: November 14, 2013

N
W E
S

APPENDIX B

(FOR REFERENCE ONLY) *
TRANSPORTATION EXHIBIT - PROJECT PRIORITIZATION TABLES

*These tables are included as an exhibit for reference only. They are not intended to be static and are subject to change outside of the Comprehensive Plan over time.

APPENDIX B: TRANSPORTATION EXHIBIT - PROJECT PRIORITIZATION TABLES DRAFT

Projects within the Primary Development Boundary Prioritization Methodology

No#	Project	Congestion (30 points)					Safety (30 points)				Environment (16 Points)		Public Support (8 points)		Implementation (8 Points)			Smart Growth (8 Points)		Total Score
		Existing LoS	Future LoS	Continuity & Connectivity	Service to Major Centers	Freight Use	Safety	Crash Rate	Bike / Ped.Safety	Security	Natural Environment	Neighborhood	Existing Plans	Other Support	Funding	Project Ready	Agency Cooperation	Smart Growth	Intermodal	
	Funded Projects or in the CIP																			
1	Mudd Tavern Bridge over I-95(606)	7	7	7	4	5	18	6	4	2	4	4	4	4	3	4	1	4	4	**92**
2	Rte.17 Bridge Replacement & Widening to Germanna/Hospital	5	7	7	4	3	18	6	4	2	4	4	4	4	3	4	1	4	4	**88**
3	Mudd Tavern Rd.(606)-Jeff. Davis Road to E. of I-95 Bridge	5	7	7	4	5	18	0	4	2	4	4	4	4	3	4	1	4	4	**84**
4	Exit 126 Off-Ramp & Intersection Turn Lane Improvements	7	7	7	4	5	9	6	1	2	4	4	4	4	3	4	1	4	4	**80**
5	Andora Drive & Old Plank Road Roundabout	5	5	6	0	0	18	3	1	0	4	8	4	4	2	3	0	4	0	**67**
6	Chancellor Road & Old Plank Road Roundabout	5	5	5	0	0	18	3	1	0	4	8	4	3	2	3	0	4	0	**65**
7	Route 3 Operational Improvements	5	5	1	2	3	12	6	1	0	4	4	4	3	2	3	1	1	3	**60**
	Funding Pending																			
8	Tidewater Trail (2/17) - City Line to Church Street	5	7	6	4	5	18	6	4	2	4	4	4	4	3	2	1	4	4	**87**
9	Harrison Road at Salem Church Road	5	7	7	4	3	18	6	4	2	4	4	4	4	3	2	1	4	3	**85**
10	US-1 at Rte. 208 / Lafayette Blvd. Intersection	5	7	7	4	5	18	6	1	2	4	4	4	4	3	2	1	4	3	**84**
11	Germanna Pt. Extension-Cotter Road to Spotsylvania Ave.	5	5	7	4	3	12	3	4	2	0	4	4	3	3	2	1	4	4	**70**
	Unfunded Projects																			
12	Jeff. Davis Hwy.(1)-Massaponax Church to Spotsy. Pkwy.	0	5	7	4	5	12	6	4	2	4	8	4	4	2	4	1	4	1	**77**
13	Tidewater Trail (2) & Lee Hill Drive / Joseph Mills Drive	2	5	4	2	3	18	6	4	2	4	8	4	3	2	3	1	1	3	**75**
14	Jeff. Davis Hwy.(1)-Spotsy. Pkwy. To Harrison Road	2	2	7	4	5	12	6	4	2	4	8	4	4	2	2	1	4	1	**74**
15	US-1 & Hood Drive / Mine Road	5	7	4	2	3	18	6	0	2	4	8	2	2	3	3	1	1	3	**74**
16	Tidewater Trail (2) & Shannon Park / Mansfield Drive	0	7	4	2	3	18	6	4	2	4	8	3	3	2	3	1	1	3	**74**
17	Tidewater Trail(2) & Lansdowne Road	2	7	4	2	3	18	3	4	2	4	8	4	3	2	3	1	1	3	**74**
18	Hood Drive(636)-Courthouse Rd. to Jefferson Davis	2	5	1	4	3	18	6	4	0	4	8	2	4	3	3	1	4	1	**73**
19	Tidewater Trail(2)-Benchmark Road to Lansdowne Road	5	5	4	4	3	12	6	4	0	4	8	3	2	2	2	1	4	4	**73**
20	Harrison Road(620)-Plank Road to Gordon Road	2	5	4	4	3	18	6	4	0	4	4	4	4	3	2	1	1	3	**72**
21	Lafayette Blvd.(Bus. 1)-County Line to Jefferson Davis	2	5	4	4	3	18	6	4	0	4	4	4	2	3	1	1	4	3	**72**
22	Courthouse Road-Jefferson Davis Hwy. to Smith Station	2	5	7	4	3	12	6	4	2	4	4	4	4	2	1	1	4	3	**72**
23	Mills Drive(17)-Germanna Pt. to Massaponax Church Rd.	0	2	7	4	5	15	6	4	0	4	4	4	2	2	2	1	4	4	**70**
24	US 1 & Market Street / Denny's Entrance	0	5	4	2	3	18	6	1	2	4	8	2	2	3	3	1	1	3	**68**
25	US 17 & Germanna Point Drive / Hospital Boulevard	2	5	1	2	3	18	6	1	2	4	8	2	2	3	3	1	1	3	**67**
26	Harrison Road(620)-Salem Church to Jefferson Davis Hwy.	2	2	4	4	3	12	6	4	0	4	8	4	4	2	3	1	1	3	**67**
27	Courthouse Road (208) & Hood Dive / Houser Drive	5	7	1	2	3	18	0	1	2	4	8	2	2	3	3	1	1	3	**66**
28	Courthouse Road (208) & Southpoint Pkwy. / Rollingwood Drive	2	5	1	2	3	18	6	0	2	4	8	2	2	3	3	1	1	3	**66**
29	Mills Drive(17)-Massaponax Church Road to County Line	0	0	7	4	5	12	3	4	2	4	8	3	2	3	2	1	4	1	**65**
30	Jefferson Davis Hwy.-Harrison Road to County Line	0	0	7	4	3	12	6	4	2	4	8	4	2	2	1	0	4	1	**64**
31	Lafayette Blvd.(Bus. 1) & Falcon Drive / Mall Drive	2	5	1	2	3	18	0	4	0	4	8	1	2	3	3	1	1	3	**61**
32	Harrison Road(620)-Jefferson Davis Hwy. to Lafayette	2	5	1	2	3	12	6	4	0	4	8	3	4	2	2	1	1	1	**61**
33	Gordon Road(627)-Smith Station to Harrison Road	2	5	7	2	3	9	6	4	0	4	8	3	1	2	2	1	1	1	**61**
34	Market Street & Spotsylvania Avenue	2	5	1	2	3	18	3	0	0	4	8	1	2	3	3	1	1	3	**60**
35	Tidewater Trail(2)-Jim Morris Road to Benchmark Road	0	2	4	4	3	9	6	4	2	4	4	4	2	2	2	1	4	3	**60**
36	Tidewater Trail(2)-Mills Drive to Jim Morris Road	0	2	4	4	3	9	6	4	2	4	4	4	2	2	2	1	4	3	**60**
37	Mine Road(636)-Jefferson Davis Hwy. to Lansdowne Road	2	5	4	2	3	9	6	4	0	4	4	3	2	3	2	0	4	3	**60**
38	Plank Road(3)-Harrison Rd. to Spotsylvania/Orange Co. Line	0	2	4	4	5	9	3	4	2	4	4	4	2	3	2	1	1	4	**58**
39	Old Plank Road-Catharpin Road to Gordon Road	2	2	4	2	3	18	6	4	0	4	4	2	1	1	1	1	1	1	**57**
40	Minr Road & Spotsylvania Avenue / Falcon Drive	2	2	1	2	3	18	3	0	0	4	8	1	2	3	3	1	1	3	**57**
41	US 17 & Tidewater Trail (2)	0	7	4	2	3	18	0	1	0	4	4	2	1	2	3	1	1	3	**56**
42	Lansdowne Road(638)-Mine Road to County Line	0	5	7	4	5	9	6	4	0	4	4	2	2	1	1	0	1	0	**55**
43	Massaponax Church(608)-Courthouse to Smith Station	2	5	1	1	3	12	6	4	0	4	8	3	2	1	1	0	1	1	**55**
44	Massaponax Church(608)-Jeff. Davis Hwy. to Mills Drive	0	2	4	4	5	12	6	1	0	4	8	3	2	1	1	1	1	0	**55**
45	Route 17 Relocated-Mills Drive to Jefferson Davis Hwy.	0	0	7	4	5	18	0	4	2	4	4	1	2	2	0	0	1	0	**54**
46	Massaponax Church(608)-Smith Station to Jeff. Davis Hwy.	0	0	4	4	3	12	6	1	2	4	8	3	2	1	1	0	1	1	**53**
47	Smith Station628)-Gordon Road to Massaponax Church	2	5	4	1	3	9	6	4	0	4	4	4	2	1	1	1	1	0	**52**

**** The future LoS reflects the LoS without improvements***

APPENDIX B: TRANSPORTATION EXHIBIT - PROJECT PRIORITIZATION TABLES DRAFT

	Projects within the Primary Development Boundary Prioritization Methodology																			
No#	**Project**	**Congestion (30 points)**					**Safety (30 points)**				**Environment (16 Points)**		**Public Support (8 points)**		**Implementation (8 Points)**			**Smart Growth (8 Points)**		**Total Score**
		Existing LoS	Future LoS	Continuity & Connectivity	Service to Major Centers	Freight Use	Safety	Crash Rate	Bike / Ped Safety	Security	Natural Environment	Neighborhood	Existing Plans	Other Support	Funding	Project Ready	Agency Cooperation	Smart Growth	Intermodal	
	Unfunded Projects																			
48	Piedmont Drive(673)-Smith Station Road to Harrison Rd.	2	5	1	1	3	18	6	1	0	4	4	2	1	1	1	0	1	0	**51**
49	Leavells Road(639)-Courthouse Road to Smith Station	0	0	1	0	3	18	6	4	0	4	4	3	2	2	1	1	1	1	**51**
50	Rollingwood Dr. Extended(711)-Harrison Rd. to Rollinwood	0	0	7	4	3	18	0	1	0	4	4	2	1	2	2	0	1	1	**50**
51	Tidewater Trail (2) & Benchmark Road / Commerical Drive	0	2	1	1	3	18	0	1	0	4	4	3	1	2	3	1	1	3	**48**
53	Lee Hill School Drive(635)-Germanna Pt. to Eagle Dr.	0	2	1	2	3	12	6	4	0	4	4	3	2	1	1	0	1	1	**47**
54	Mine Road(636)-Lansdowne Road to Benchmark Road	0	0	4	2	3	6	6	4	2	4	4	4	1	2	1	0	1	1	**45**
55	Guinea Station Extension(607)-Massaponax Church to Rt. 1	0	2	1	2	3	18	0	4	0	4	4	2	1	2	1	0	1	0	**45**
56	Brock Road(613)-Courthouse Road to Gordon Road	0	2	1	2	3	12	0	1	2	4	4	3	2	1	0	0	1	1	**39**
57	Market Street Extension-Hood Drive to Jefferson Davis Hwy	0	0	1	2	3	6	0	4	2	0	8	3	2	3	0	1	1	1	**37**
58	Massaponax Church Extension(608)-Lake Anna Pkwy to 208	0	0	7	2	3	6	0	1	0	4	4	2	2	2	2	0	1	0	**36**
59	Shannon Drive - Belman Connector Road	0	0	4	4	5	0	0	1	0	4	4	2	1	2	2	0	1	0	**30**
	New Projects for the Thouroughfare Plan (Unranked)																			
1	Chancellor Road Extension - Old Plank Road - Plank Road																			

**** The future LoS reflects the LoS without improvements***

APPENDIX B: TRANSPORTATION EXHIBIT - PROJECT PRIORITIZATION TABLES DRAFT

Highway Projects Outside of the Primary Development Boundary Prioritization Methodology

No#	Project	Congestion (30 points)					Safety (30 points)				Environment (16 Points)		Public Support (8 points)		Implementation (8 Points)			Smart Growth (8 Points)		Total Score
		Existing LoS	Future LoS	Continuity & Connectivity	Service to Major Centers	Freight Use	Safety	Crash Rate	Bike / Ped Safety	Security	Natural Environment	Neighborhood	Existing Plans	Other Support	Funding	Project Ready	Agency Cooperation	Smart Growth	Intermodal	
	Funded Projects or in the CIP																			
1	Bloomsbury Road Improvement	0	2	1	0	0	18	0	1	0	4	4	3	4	2	4	0	4	0	**47**
	Funding Pending																			
	N/A- No Projects at this time																			
	Unfunded Projects																			
2	Lake Anna Parkway(208)-Post Oak/Morris to S. of R.E. Lee	2	0	7	4	3	15	3	4	2	4	4	3	2	3	2	1	1	0	**60**
3	Courthouse Road(208)-Post Oak Road to Louisa Co. Line	0	2	4	2	3	15	3	4	2	4	8	3	1	2	0	1	4	1	**59**
4	Elys Ford/Old Plank(610)-Spotswood Furnace to Catharpin	0	2	4	4	3	15	0	4	0	8	8	1	1	2	2	0	4	0	**58**
5	Gordon Road(627)-Brock Road to Smith Station Road	0	2	4	1	3	18	6	1	0	4	4	4	1	1	1	1	1	0	**52**
6	Robert E. Lee Dr.(608)-Cartharpin Rd. to Lake Anna Pkwy.	0	5	4	0	3	12	6	4	0	4	4	4	1	1	1	0	1	0	**50**
7	Courthoue Road(208)-Post Oak/Morris to Lake Anna Pkwy.	0	2	4	4	3	15	0	1	2	4	4	2	1	2	2	1	1	1	**49**
8	Courthouse Road(208)-past R. E. Lee Drive to Massey Farm	0	0	4	2	3	15	3	1	2	4	4	3	1	2	1	0	1	0	**46**
9	Monrovia/Stubbs Bridge Rd.-County Line to Post Oak Road	2	5	4	2	3	9	0	1	0	4	4	2	1	2	2	0	4	0	**45**
10	Post Oak Road(606)-Lake Anna Pkwy. to W. Catharpin Rd.	0	0	4	0	3	15	6	1	0	4	4	2	2	1	1	0	1	0	**44**
11	Partlow Road(738)-Spotsy. Co. Line to Courthouse Road	0	2	1	0	3	12	6	4	0	4	4	2	1	1	1	0	1	1	**43**
12	Brock Road(613)- Courthouse Road to Gordon Road	0	2	1	2	3	15	3	4	0	4	4	2	1	1	0	0	1	0	**43**
13	Jones Powell Road-Belmont Road to Lawyers Road	0	0	1	0	3	12	6	4	0	4	4	2	2	2	1	0	1	0	**42**
14	Catharpin Road(612)-W. Catharpin Road to Piney Branch	0	2	1	0	3	15	6	1	0	4	4	1	1	1	1	0	1	0	**41**
15	Catharpin Road(612)-Piney Branch to Old Plank Road	0	2	1	0	3	15	6	1	0	4	4	1	1	1	1	0	1	0	**41**
16	Lawyers (601) & Stubbs Bridge Road (612) Roundabout	0	0	1	0	3	18	3	1	0	4	4	2	1	1	1	0	1	0	**40**
17	Lawyers Road-Courthouse to Jones Powell Road	0	0	1	0	3	15	3	1	0	4	4	2	1	1	1	0	1	0	**37**
18	Marye Road(605)-Partlow Road to Arcadia Road	0	2	1	0	3	9	3	4	0	4	4	1	1	1	2	0	1	0	**36**
19	W. Catharpin Road(608)-County Line to Pumunkey Road	0	2	1	0	3	9	3	4	0	4	4	1	1	1	1	0	1	0	**35**
20	Lewiston Road(601)-Fairview Road to Courthouse Road	0	2	1	0	3	9	3	4	0	4	4	1	1	1	1	0	1	0	**35**
21	Fairview Road(622)-Lewiston Road to Parlow Road	0	2	1	0	3	9	3	4	0	4	4	1	1	1	1	0	1	0	**35**
22	Lawyers Road (601) & Lake Anna Park Ent. Lane improvements	0	0	4	2	3	9	3	1	0	4	4	1	1	1	0	0	1	0	**34**
23	Pamunkey Road(612)-W. Catharpin Rd. to Post Oak Road	0	2	1	0	3	9	0	4	0	4	4	1	1	1	0	0	1	0	**31**
	New Projects for the Thouroughfare Plan (Unranked)																			
1	Spotsylvania Parkway Extension - Smith Station Road to Gordon Road																			

APPENDIX C

HISTORIC RESOURCES

HISTORIC RESOURCES

The following Historic Resources appendix resources have been studied and documented to satisfy Virginia State Code Sec. 15.2-2224, Surveys and studies to be made in preparation of plan; implementation of plan. Additionally, the information is an educational resource for the community, offering valuable insights into environmental and land use planning within Spotsylvania County.

HISTORY OF SPOTSYLVANIA COUNTY

A timeless sense of self, place and community are at the center of life. Spotsylvania's heritage supports this truth as the foundation for present and future change. A preservation plan, therefore, includes a summary of character defining history. The following time periods have been established by the Virginia Department of Historic Resources for use in cultural resource documentation.

Pre Historic Native American, Late Woodland Period, Pre 1607

Before European settlement, present day Spotsylvania County was home to the Siouan tribes. While these Native Americans were dominantly nomadic, there tended to be an ethnic division of land among them. The Fall Line marked the boundary between the Coastal Algonquians and the Piedmont Siouan-speakers at the end of the Late Woodland period. The land between the North Anna and Rappahannock Rivers, principally roamed by the Manahoacs, formed the region that later became Spotsylvania County.

Settlement to Society, 1607-1750

Forts and friendly Indian settlements were established as the first colonists arrived from Europe. Alexander Spotswood was appointed Lieutenant Governor to the Colony of Virginia in 1710, and playing a significant role in westward expansion. Importing German immigrants, mainly indentured servants, he devised a settlement based on iron ore discoveries along the Rapidan River, and founded the County of Spotsylvania in 1721. The first permanent settlement in 1725 was called Germanna. Spotswood's Tubal Furnace site was one of the first sources of iron discovered and mined in the colonies. It continued to be a success throughout the colonial period as well as a foundation for future growth.

In 1729 The Spotsylvania County Court petitioned the Assembly to authorize the construction of a road from an ironwork site at Fredericksville to the Rappahannock River. This road, approximately following part of modern State Route 208, became a major transportation route and opened opportunities for settlement.

Religion also played a large role in the organization of settlement in the County. St. George's was established as the official parish and undertook the process of dividing land into parcels. By 1731 a second parish was created, eventually resulting in the re-districting of lands to the west and creating Orange County. The County Court moved from Germanna to the new town site of Fredericksburg.

Within the following decade Spotsylvania experienced the largest population increase of the colonial period. Tobacco became the thriving industry and center of activity, bringing in an influx of servants. However, there remains little evidence of a slave population during this period. The cost of welfare increased, causing eventual problems.

Colony to Nation, 1750-1789

Combined with the outbreak of small pox in 1748, drought and poor tobacco crops caused an economic depression in the 1750s. The first "poor house" was created. Tensions over church meeting locations resulted in another division of St. George's Parish along the Po River. In 1769, Berkeley Parish and St. George's Parish divided Spotsylvania County directly in half. This division added stress as the County continued to pay an increasing welfare cost from a lower tax base.

The canal, Plank Road, and the narrow gauge railway were unsuccessful attempts to establish competitive transport links westward.

Debate over the location of the courthouse divided the County along town and county lines. Although separate, both town and county moved toward freedom from religious and political scrutiny of the Royal Crown. The war for the nation's independence was fought and won. In 1778 the Assembly passed an act which permitted the relocation of the county seat to the geographic center of Spotsylvania. The first court session was held in 1781. In 1782, Fredericksburg became its own political entity with a separate district court established in 1789.

Early National Period, 1789-1830

The time between the writing of the Constitution and the Civil War proved to be prosperous for Spotsylvania County. With its close ties to Fredericksburg, so too came close associations with many important historical figures such as George Washington, Revolutionary War generals Hugh Mercer and George Weedon, naval war hero John Paul Jones, and future U.S. president James Monroe. Due to plentiful and fertile farmland, agriculture was the main occupation in Spotsylvania during this period, something which is still evidenced today.

Spotsylvania County prospered industrially in this era as well. Governor Spotswood's early network of roads for the transportation of iron and his importation of skilled iron workers established a self-sufficient iron empire that set in motion the rise of America's iron and steel industry. Spotswood's furnace remained important throughout the early 19th century and in 1842 it was acquired by the United States Government for a cannon foundry which proved useful in the Mexican-American War.

Antebellum Period, 1830-1860

During this period of growth throughout the Union, Spotsylvania continued to emerge slowly despite the increase in population and profits generated by the tobacco and mining industries. The early decades of the Antebellum Period were the zenith of the plantation system.

Increase in production prompted the Commonwealth of Virginia to construct a transportation network for better access to the markets, finally succeeding in opening the West and Southwest to settlement. Spotsylvania was no longer one of the leading producers of iron and lead, but the ~~county~~ County began to extract gold from local mines.

Spotsylvania County should be noted for its role in African American history. During the years before the Civil War, African Americans worked as slaves and occasionally as free men and women, making them an important factor in the area's development. They were employed in various occupations, including farm and plantation work, domestic service, and skilled trades (such as blacksmiths, carpenters, coopers, and

needle workers). They also worked in the iron, construction, and shipping industry on the Rappahannock River, as well as in their own businesses. By the first half of the 19th century, Spotsylvania's population had reached about 11,000, over 50% of which were African American.

Expansion of the school system was limited, with no public schools established as of 1837. In 1846 the Commonwealth required that the courts appoint a public school superintendent and commissioners. By 1860 each county was to create at least three public schools. But the Civil War intervened and Spotsylvania did not act on the law until the 1870s.

The Civil War, 1861-1865

While Spotsylvania County is rich in history from all eras, it is best known for its role in the Civil War. Situated between two capitals, the County became a bloody stage. Four major battles were fought in the County: Fredericksburg, Chancellorsville, The Wilderness, and Spotsylvania Court House. Today, core areas of those battlefields are preserved within the Fredericksburg and Spotsylvania National Military Park system, the second largest battlefield park in the world.

- Fredericksburg - December 11-13, 1862
  Union General Ambrose Burnside attempted to break Confederate General Robert E. Lee's lines along a ridge behind Fredericksburg. Although the Sunken Road in Fredericksburg is well-known as the site of a bloody one-sided repulse, the battle was actually decided in the Confederate's favor in fields south of the city in Spotsylvania County.

- Chancellorsville - April 27- May 6, 1863
  General Lee's greatest victory took place at Chancellorsville. Outflanked by Burnside's successor, "Fighting Joe" Hooker, Lee sent Stonewall Jackson on a flanking maneuver of his own. The result was another Confederate victory, but at a heavy price, as Jackson was mortally wounded by his own men.

- The Wilderness - May 5-6, 1864
  A new Union commander, Ulysses S. Grant, struck at Lee in Spotsylvania County in the Spring of 1864 in The Wilderness. Two days of bloody combat brought stalemate and the decision of Grant to try to get between Lee and Richmond at the crossroads town of Spotsylvania Court House.

- Spotsylvania Court House - May 8-21, 1864
  The Union Army lost the race to Spotsylvania Court House. Undeterred, Grant continued to slam his great army against Confederate entrenchments. The bluecoats won initial success in a May 12 attack, but it degenerated into another costly deadlock at the "Bloody Angle". When further attacks failed, Grant once again side-stepped Lee and departed Spotsylvania County.

Reconstruction and Growth, 1865-1917

While prior to the Civil War Spotsylvania County was a farming society with plantations and slave homes, following the Emancipation Act the immense number of freed slaves required housing and infrastructure. The number of African Americans decreased, and only ten percent of the white population remained. Yet there were still almost 5,000 freedmen needing home, land and sustenance.

This proved to be a consistent trend, with an enormous increase in small, bungalow type housing occurring in the last decade of the 19th century.

African American schools also emerged. The first school for blacks began classes in November, 1867. The first African American high school was built by a local carpenter in 1909, and in 1913 the first class in the Snell Training School started.

The beginning of the 20th century saw commercial construction becoming more prominent. Commercial growth began even before the automobile arrived, driven by mining coal and mineral resources. Zinc, gold, lead and silver mining in the first quarter of the 1900s provided a period of wealth.

World War I to World War II, 1917-1945

While the mining industries benefited from the expanded railroad system, the next decade saw improvements on road systems. The predecessor of Route 1, the Richmond-Washington Highway, was begun in 1918. Often muddy, as it was a gravel roadway, it was paved over in 1927. The number of registered cars was doubling almost every decade, establishing a base for hotels, food, gasoline stations and entertainment.

Federal and state government programs began to expand and sponsor public works programs that improved highways and constructed parks, encouraging growth and affecting the landscape of Virginia and its historic resources. Despite the development and growth potential, the population of the county did not increase at a tremendous rate and housing began to decline.

World War II to the Present

Spotsylvania County's population began to experience tremendous population growth beginning in 1945. The need to move products for commerce and war requirements initiated new transportation planning. Suburbanization and highway systems allowed people to live at great distances from where they worked. By 1955, the state had more urban than rural dwellers.

The County saw much of its development in the 20th century as a result of its proximity to the cities of Richmond and Washington D.C., which were growing at such a rate that their suburbs spread as far north and south as Spotsylvania. The first subdivision ordinance was created in 1961. The completion of ~~highway I-95~~Interstate 95 (I-95) in the 1960's, the extension of the Virginia Railway Express to Fredericksburg in the 1990's, expanding military installations, and new business parks have been significant factors in making Spotsylvania one of the fastest growing counties in Virginia.

Today, much of the Primary ~~Settlement~~ Development and Transition areas have been developed or are intended for development as high density and mixed use locations purposely close to I-95 and the ~~city~~ City of Fredericksburg. In the midst of this change some historic places and/ or structures have been lost, but Spotsylvania has still managed to retain rural and agricultural character over much of its land.

History continues to be made as time goes by. As new eras emerge the Comprehensive Plan should be updated to look back and document significant historical events that occur in more recent times.

PAST AND PRESENT PRESERVATION EFFORTS IN SPOTSYLVANIA COUNTY

Tracing its history back to 1721, Spotsylvania County has contributed to the historical assets of the Commonwealth of Virginia. Within the planning period, Spotsylvania County will celebrate its 300th anniversary (1721 to 2021). In recognition of the many natural habitats, archaeological sites, historical landscapes and structures of historical and architectural significance there have been many efforts made at the private, local, state and federal level to protect these non-renewable resources. In addition, Spotsylvania County benefits from a substantial base of completed surveys on which it can build its current historic preservation efforts.

Efforts by Private Groups

As Spotsylvania's population continues to grow, the County increasingly is dealing with the threat of development encroachment upon significant historic and/ or cultural resources. Perhaps most in danger is the County's open space and its vast Civil War resources. In recent years, these problems have been recognized not only within the community, but also highlighted by national organizations.

In the 1960s the Spotsylvania Historical Association, Inc. (SHA) spearheaded a drive to get information from property owners about their historic properties. It was an informal attempt but the collection of files became the basis for the "Handbook of Historic Sites in Spotsylvania County," finished in 1987 by an Ad Hoc committee. It was first called "The Red Book" due to the color of the large binder that held the pages. Both phases of the County architectural survey, completed in 1996 and 2000, included many properties listed in the 1987 Red Book.

While the County has long taken pride in its significant history, it is only more recently that private groups have paid serious attention to preservation efforts, as development pressures have increased. In 1998, the Chancellorsville Battlefield was named to the National Trust for Historic Preservation's list of the *11 Most Endangered Historic Places*. The Trust focused on the battlefield's placement among one of the nation's major transportation routes and the repercussions of a proposed rezoning which would compromise the integrity of the historic site. In 2005, the County was recognized in several other national publications, including another National Trust most endangered list as part of a historic corridor called *The Journey Through Hallowed Ground*, which follows US Route 15 from Pennsylvania through Virginia. In addition, the National Park Service designated the Chancellorsville site a *Priority 1 Endangered Civil War Battlefield* and the Civil War Preservation Trust (CWPT) named the entire county to their annual *History Under Siege Report*. These recent and numerous designations reveal that the fight to preserve Spotsylvania's history has reached a new level as the County makes decisions to deal with the pressure from growth and development.

As a result of their concentration within the Region, numerous private preservation efforts center around the preservation of the County's Civil War battlefields. A regional organization formed in 1996 by local citizens, Central Virginia Battlefields Trust (CVBT), has a national as well as local membership base. Their goals are to purchase and preserve Civil War battlefield sites outside the Fredericksburg and Spotsylvania National Military Park (FSNMP) boundary. ~~As of April, 2013, the CVBT reports they have preserved over 1000 acres in Spotsylvania & Orange Counties and Fredericksburg.~~ Within Spotsylvania County, in 2020 the CVBT reported approximately 461 acres in ownership with an additional 8.6 aces in easement.

In 2018, the Civil War Trust (formerly the Civil War Preservation Trust) reported management of approximately 416 acres.

The Friends of Wilderness Battlefield's purpose is to assist the FSNMP in its efforts to preserve the Wilderness Battlefield in Spotsylvania and Orange Counties. One specific success for the group has been the restoration of Ellwood (1790). In 2003 the group, in partnership with FSNMP, began a two year long fund-raising campaign to support the restoration of this historic house which was prominent in the Battle of the Wilderness.

While seeing historic "Salem Church" lost in a sea of traffic and commercial development on Rt. 3 west is considered a failure by preservationists, local groups have had several outstanding accomplishments in their fight against the destruction of Spotsylvania's history. Possibly the most important successes in the past several years has been that of preserving over 200 acres north of Plank Road, near Lick Run and the "First Day" fighting of the Battle of Chancellorsville and 205 acres of Slaughter Pen Farm on Tidewater Trail.

Most of Spotsylvania County's private preservation groups or historical societies have been formed in the past ~~ten to~~ twenty to thirty years, as development has started to move at a faster pace. These organizations focus on grassroots preservation advocacy that include citizen education, donations of easements and protection of cultural resources for citizens and tourists.

The Spotsylvania Preservation Foundation, Inc. (SPFI) for example, founded in 1988 by a group of historic home owners, was created in order "to preserve and protect historic resources through education, advocacy and community involvement." The group believed that the establishment of a Historic Ordinance and Architectural Review Board was critical to preservation efforts. Members also wanted to become advocates for sensitive land use decisions to prevent the degradation of historic resources. The group contributed to the restoration of the "Spotsylvania Jail" (1855) located in the Spotsylvania Court House Historic District. SPFI disbanded in the mid-2000s.

A developer led effort to study and seek Virginia Landmarks Register and National Register of Historic Places designation for the Bowman Center, also referred to as the Spotsylvania County Industrial Park, and Sylvania Plant Historic District was successful in late 2019 and early 2020. Monument Development of Richmond, Virginia led the effort. A Virginia Landmarks Register designation was applied in December, 2019. This was followed by National Register listing in February, 2020. The historic designation helps recognize the historic importance of the site while potentially benefitting efforts to rehabilitate the site with tax credits made eligible by inclusion in the historic register.

Local and State Government Actions

In October 1987, the Board of Supervisors of Spotsylvania County approved a historic district ordinance as enabled by the Code of Virginia. In order to carry out the provisions of this section, an architectural review board known as the Historic Preservation Commission was created. The Commission's role is to encourage the sensitive rehabilitation of the historic structures within this district through a design review process. Reviews are mandated for proposed development or alterations to properties within historic districts. Certificates of Appropriateness are issued when such activities preserve historic character. The Preservation Commission has since designated eight historic sites and districts for protection: Fredericksburg and Spotsylvania National Military Park, Rapidan Dam Canal of the

Rappahannock Navigation, Tubal Furnace Archaeological Site, Spotsylvania Court House Historic District, St. Julien, Prospect Hill, Massaponax Church, and La Vista.

The National Register of Historic Places designates one Historic District within Spotsylvania County. On September 8, 1983 the Spotsylvania Courthouse District was accepted in the National Register after much discussion by the Board of Supervisors. This area encompasses 101 acres, and 25 buildings. Architecture, engineering and event themes are cited as being historically significant to the district. Federal and Greek Revival designs are the predominant architecture styles within this area which historically functioned for a variety of uses including: commerce/trade, domestic, government, and religion.

In December 1995, the Virginia Department of Historic Resources (VDHR), in conjunction with Spotsylvania County contracted with EHT Traceries, Inc., an architectural history and historic preservation firm, to conduct a Historical Architectural Survey of Spotsylvania County, Virginia. The Project was funded jointly by Virginia and the County under the terms of the Historic Preservation Fund Matching Grant Program. The area in the County's 'primary settlement district', the area slated for dense growth, was surveyed first. The final compilation of data documented 124 properties to the Reconnaissance Level and 12 properties to an Intensive Level. The survey was continued, as recommended, in a second phase conducted between October 1999 and December 2000 by the architectural and historic preservation firm of EHT Traceries, Inc. under the direction of the VDHR and the Spotsylvania County Planning Department. The project was fully completed in February 2001, encompassing the survey and/or documentation of 152 historic properties. In March of 2005 a Cost Share Survey was awarded from the Department of Historic Resources for Archaeological Resources and an archaeological predictive model was developed.

On August 18, 2003 Spotsylvania County was certified as a Certified Local Government (CLG). In June of 2013, Spotsylvania was one of thirty-one CLGs in Virginia. The CLG program was created by the National Historic Preservation Act of 1966, as amended in 1980, and establishes a partnership between local governments, the federal historic preservation program, and the Virginia Department of Historic Resources (DHR). The program allows DHR, as the State Historic Preservation Office, to recommend for certification local governments that have put key elements of a sound local preservation program in place in their communities. Designation as a CLG gives a local government a way to participate more formally in the state and national historic preservation programs. General requirements for certification are identified in the federal program; specific requirements for the Virginia program have been established by DHR.

Goals of the Virginia CLG program are threefold:

- Promote viable communities through preservation
- Recognize and reward communities with sound local preservation programs
- Establish credentials of quality for local preservation programs

Spotsylvania County was named a "Preserve America Community" in 2005 (www.preserveamerica.org). In June of 2013, Spotsylvania is one of twenty-three other Virginia communities recognized in the program for its efforts to preserve cultural resources and history. The program boosts heritage tourism and fosters an appreciation for local resources while aiding community revitalization. Grants are available, road signs are erected and the Preserve America logo is used for publicity.

In 2009, The Spotsylvania County Department of Economic Development and Tourism, (through the support of a Preserve America Grant from the National Park Service) commissioned Rivanna Archeological Service of Charlottesville, Virginia to conduct a comprehensive study of the County for the purpose of documenting a general history, with an emphasis on its African American history. Their final product was presented in March, 2010 and formed the basis of The African American Heritage Trail. More information can be found **HERE**.

Federal Government Actions

On the federal level, past and current preservation efforts are largely limited to Civil War resources and monitored through the National Park Service. The Fredericksburg and Spotsylvania areas were home to some of the bloodiest battles that occurred, and this hallowed land possesses a great deal of significant Civil War history. There are two main efforts overseen by the National Park Service in Spotsylvania County.

The first of these efforts, the Fredericksburg and Spotsylvania National Military Park (FSNMP), encompasses the battlefields of Fredericksburg, Spotsylvania, Chancellorsville, and Wilderness. The FSNMP's headquarters are located at the historic Chatham estate, which served as the Union headquarters and a hospital during the battle of Fredericksburg. Efforts to organize a national park on the site of these historic battles first ensued in the late nineteenth century by a dedicated group of local residents who were backed by Civil War veterans. The residents felt that a national park showcasing the area's Civil War history would be a sound economic investment as it would draw tourists to the area. Congress repeatedly denied the citizens' request until legislation authorized the park in 1927. The acquisition of land began in the early 1930s. As of June, 2013, the Park encompasses 8480.83 acres in federal ownership and easements in all 5 jurisdictions including Spotsylvania, Stafford, Caroline, Orange County, and the City of Fredericksburg. The National Park Service continues to work with the Civil War Trust and the Central Virginia Battlefields Trust to protect lands within the park's legislated boundary.

Each of the battlefields offers a variety of information accessible to the public. Tools for self-guided tours are available, educational programs are held throughout the year, and special lectures are also given. The preservation efforts of the FSNMP focus directly on the landscape preservation of the protected land within the Fredericksburg, Spotsylvania, and Chancellorsville battlefields, and the several contributing buildings also acquired by the National Park Service. These are the Old Salem Church, which served as an infirmary for both the North and South; the Stonewall Jackson Shrine, which is the plantation office where Jackson died, and the previously recognized Chatham Manor.

The second federal preservation effort that the FSNMP participated in is through a grant issued in 1994 by the American Battlefield Protection Program, a subsidiary of the National Park Service. This grant allowed for the creation of the Related Lands Database, the first of its kind in the United States. The grant generated funds for a survey in areas of the county that lie outside of the existing National Military Park Boundaries, but may have significance to the Civil War. The database was developed by the FSNMP Cultural Resource Manager, Noel G. Harrison.

The database was an exciting new tool initially intended for use in rezoning and development procedures in the county. However, the Army Corps of Engineers in conjunction with the Virginia Department of Historic Resources has been able to utilize the database, and over 800 acres have been conserved using it as a tool in wetlands conservation. As administrators of the Clean Water Act, the Army Corps of Engineers is responsible for wetlands conservation, which is subject to the National

Historic Preservation Act of 1966. This act has allowed for the formulation of the land mitigation process, which requires developers or landowners to mitigate damage to historic resources by "setting aside core historic resources and ensuring their perpetual protection." Thus the Related Lands Database has been successful for a variety of reasons: it has been a useful tool in formulating mitigation, developers have preserved lands that would have been otherwise not identified as historic resources, viewsheds along park boundaries are more protected, and some lands at risk outside the park boundaries are now secure.

In 2019, hard copies of the Related Lands Database were scanned and are now also available electronically. Spotsylvania County GIS has digitized the Database as a GIS layer for mapping interpretation purposes, consistent with Historic Resources Policies and Strategies.

Spotsylvania County Landmarks Listed in the Virginia Landmarks Register and the National Register of Historic Places (www.nps.gov/history/nr)

- Rapidan Dam Canal of the Rappahannock Navigation
- Saint Julien
- Andrew's Tavern
- Fredericksburg and Spotsylvania County Memorial National Military Park
- Prospect Hill
- Tubal Furnace Archaeological Site
- Spotsylvania Court House Historic District
- Stirling
- Massaponax Baptist Church
- Kenmore Woods
- Fairview
- La Vue
- La Vista
- Bloomsbury Farm
- Oakley
- Walnut Grove
- Spotsylvania County Industrial Park/Sylvania Plant Historic District/Bowman Center, added to the Virginia Landmarks Register in December, 2019; National Register of Historic Places in February, 2020.

Additional Historic Resource Documentation and Recognition

In addition to existing Virginia and National Register designated historic sites within Spotsylvania County, there are a number of additional historic resources of significance, some of which are potentially eligible for such formal designations. Periodically the County conducts historic, cultural and archaeological resource surveys to document important historical resources throughout the County. The results of those surveys are maintained by the Planning office.

The Virginia Department of Historic Resources also maintains records and determines whether resources are potentially eligible for Virginia or National historical register designations. For more information regarding the Virginia Department of Historic Resources, visit: http://www.dhr.virginia.gov/.

Virginia Cultural Resource Information System (V-CRIS)

The Virginia Cultural Resource Information System (V-CRIS) provides online access to extensive database of information in the Virginia Department of Historic Resources (DHR) Archives including documented architectural and archeological resources.

Within the V-CRIS, as per the Virginia Department of Historic Resources (DHR), The V-CRIS data provided in the mapping system is a point or polygon representation of archaeological or architectural resources that are documented by the Virginia Department of Historic Resources. At this time, not all resources that have been surveyed at the reconnaissance or intensive level have been digitized. This information has been gathered over many years and the representation depicted is based on the field observation date and may not reflect current ground conditions. The map is for general illustration purposes and is not intended for engineering, legal or other site-specific uses.

As a development review tool, County staff and local decision makers are able to utilize the V-CRIS to make better informed decisions regarding the prospect of development impacts in areas where historic resources, whether architectural or archaeological, are or are likely to occur. Such models can and have resulted in requests for additional information in an effort to mitigate potential negative impacts upon historic resources where V-CRIS identifies potential conflicts. Additionally, V-CRIS can help better inform land use decisions as part of the County Comprehensive Plan creation, review, and update processes whereby helping guide informed planning efforts.

The V-CRIS can be found **HERE**

APPENDIX D

NATURAL RESOURCES

NATURAL RESOURCES APPENDIX

The following Natural Resources appendix resources have been studied and documented to satisfy Virginia State Code Sec. 15.2-2224, Surveys and studies to be made in preparation of plan; implementation of plan, Sec. ~~15-2.2223.2~~ 15.2-2223.2, Comprehensive plan to include coastal resource management guidance, and ~~4VAC50-90, Part V., Comprehensive Plan Criteria of the Chesapeake Bay Preservation Area Designation and Management regulations~~ 9VAC25-830-170, Comprehensive Plans, per the Chesapeake Bay Preservation Area Designation and Management Regulations. Additionally, the information is an educational resource for the community, offering valuable insights into environmental resources. It is also a critical resource for ~~and~~ land use planning within Spotsylvania County.

PHYSIOGRAPHY

Spotsylvania County's total land area is approximately 407 square miles. The land surface is generally rolling and slopes gradually in a southeasterly direction to an irregular north/south line following the Interstate 95 corridor, where it drops slowly to a low flat plain. Elevations range from a high of about 450 feet above sea level in the western section of the ~~county~~ County to sea level in the northeastern area along the Rappahannock River.

The most significant landform issue is the split of the county into two physiographic provinces; the Atlantic Coastal Plain and the Piedmont Plateau. The area of transition between the provinces, known as the fall line, marks the boundary between the free flowing rivers to the west and tidal to the east.

CLIMATE HAZARDS

Regional Hazard Mitigation Plan

The George Washington Regional Commission (GWRC) and its member localities in collaboration with The Berkley Group, led an effort to update the Regional Hazard Mitigation Plan in 2017.

Hazard Mitigation is the sum of the many actions that can be taken at the local and regional level in setting goals, developing strategies, and outlining tasks and schedules to reduce or eliminate long-term risk to human life and property from a variety of natural hazards. In preparing this plan, the GWRC and its member localities including: City of Fredericksburg; Caroline County; King George County; Spotsylvania County; Stafford County; Town of Bowling Green; Town of Port Royal, have identified natural hazards that pose a potential threat; determined the likely impacts of those hazards; assessed vulnerability to the studied hazards, as well as the Region's current capability to address those hazards; set mitigation goals; and determined and prioritized appropriate strategies that can lessen the potential impacts of hazard events.

The Plan serves two roles within the George Washington Region. First, it identifies natural hazards that pose a threat to the safety, health, and economy of the Region, as well as steps that can be taken to reduce the impact of these natural hazards in the future and helping communities get "back on their feet" and back to normal lives as quickly and easily as possible. The community can reduce both the impact and cost of natural disasters by being prepared in advance rather than acting only after disaster

has struck. The Plan contains a comprehensive assessment of natural hazards, including assessing the types of hazards, their risk to the region and localities, documentation of historic incidents, and identification of mitigation action strategies to help proactively plan for and address such incidents if and when they occur.

Second, the Plan ensures the Region's compliance with the Disaster Mitigation Act (DMA) of 2000, which requires that local governments develop natural hazard mitigation plans in order to qualify for both pre-disaster and post-disaster grant opportunities. The Disaster Mitigation Act of 2000 establishes the legal basis for this plan, and for the Federal government's overall nationwide efforts to reduce the cost of disasters in the United States. This act establishes the Pre-Disaster Mitigation Program (PDM), as well as new requirements for the post-disaster Hazard Mitigation Grant Program (HMGP), both serving to give greater responsibility for hazard mitigation planning to local governments. DMA 2000 requires local governments to develop natural hazard mitigation plans in order to qualify for both pre-disaster PDM grants and post-disaster HMGP grants. The Act requires that these plans demonstrate "a jurisdiction's commitment to reduce risk from natural hazards, serving as a guide for decision makers as they commit resources to reducing the effects of natural hazards", and must be updated every 5 years. The prior Regional Hazard Mitigation Plan update occurred in 2012, with Spotsylvania County Board of Supervisors endorsement of that plan having occurred on September 11, 2012.

Each of the Hazard Mitigation Plan chapters were reviewed and updated for 2017 to reflect currently available information and up to date local mitigation strategies. Changes include updates to the hazards that have occurred, review and revision of current capabilities, review and update of the previous plan's mitigation strategies, as well as reconsideration of locality specific and overall regional mitigation goals and strategies.

The updated 2017 Hazard Mitigation Plan was approved by the Federal Emergency Management Agency (FEMA) on September 25, 2017 and locally endorsed by resolution of the Spotsylvania County Board of Supervisors on October 10, 2017. The Hazard Mitigation Plan is expected to be updated again within the Comprehensive Plan planning period. The latest version of the approved Hazard Mitigation Plan is incorporated by reference into the Comprehensive Plan.

For more information about natural hazards and local mitigation strategies, the 2017 Regional Hazard Mitigation Plan is available online **HERE**.

Radon

As per the Virginia Department of Health, Radon is a naturally occurring, radioactive gas that you can't see, taste or smell. It is produced by the breakdown of uranium in soil, rock and water. Radon is usually most concentrated in the lowest level of the home. Radon may also be present in well water and can be released into the air in your home when water is used for showering and other household uses. Radon entering homes through water may be a small risk compared to radon entering though the soil. High levels of radon have been found in all 50 states.

Indoor radon is the second leading cause of lung cancer after smoking. Radon causes an estimated 7,000 to 30,000 lung cancer deaths each year. A combination of smoking and high levels of radon in your house increases your risk. Radon enters homes most commonly through:

- cracks in foundations;
- openings around sump pumps and drains;
- construction joints;
- cracks in walls;
- crawl spaces; and
- in some cases from well water.

An increased risk of lung cancer is the only known health effect associated with exposures to elevated radon levels. When radon decays within your lungs it releases energy that can damage lung tissue and lead to lung cancer over the course of your lifetime. Not everyone exposed to elevated levels of radon will develop lung cancer.

Your chances of getting lung cancer from radon depend mostly on:

- How much radon is in your home.
- The amount of time you spend in your home
- Whether you are a smoker or have ever smoked.

The EPA Radon risk map was released in 1994 (see Exhibit 1 below). Spotsylvania County is considered to be at HIGH risk (e.g Zone 1) for indoor radon levels. Considering potential concerns related to radon risk, the EPA recommends that all homes and apartments below the third floor be tested.

Radon test data is available from professional testers and several different vendors of radon test kits. There are many factors that can influence radon levels in a particular home that the only way to know for sure is to test. Houses next door to each other can have very different levels. If Radon is significant enough to warrant mitigation, a soil gas collection system using passive piping can be installed. Proper installation of such a system is thought to reduce the indoor radon level in the home by 50%.

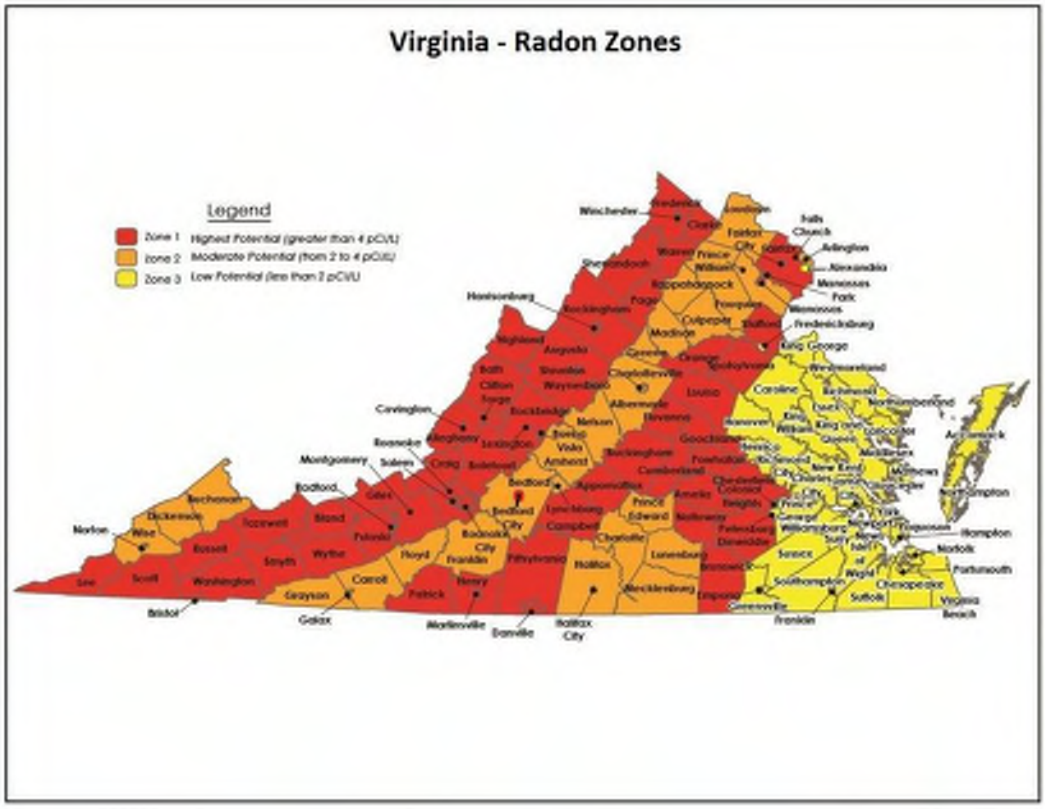


Exhibit 1: Virginia-wide Radon Zones

For more information concerning Radon and the Virginia Department of Health's Indoor Radon Program, **CLICK HERE.** Additionally, the United States Environmental Protection Agency has information available, **HERE.**

LIGHT POLLUTION

Light pollution results from atmospheric illumination caused by man- made lighting sources such as outdoor lighting fixtures that are not exclusively downward directed below a horizontal plane. The impacts of light pollution have been linked to negative health effects on humans and wildlife including birds and nocturnal animals. Light pollution inevitably leads to negative impacts the ability to star gaze and impacts areas intended to remain in their historically rural or agricultural character. In many ways outdoor lighting that beams out into outer space or anywhere above a horizontal plane is essentially viewed as inefficient or wasteful lighting because it doesn't serve a viable purpose when it comes to illuminating buildings or parking areas.

Beyond these impacts, light pollution has also been identified as problematic for flight operations associated with airports and military bases. Much of the northeast corner of Spotsylvania County falls within the Fort AP Hill approach fan, established for aerial approach to the base. Base representatives worked with County staff to provide input in the development of this proposed amendment. The 2014 Fort AP Hill Joint Land Use Study (JLUS) supported the Spotsylvania County outdoor lighting ordinance in consideration of light pollution impacts. As per the JLUS:

Fort A.P. Hill conducts night-time training operations that utilize night vision equipment. The success of night-time operational activities is dependent upon dark conditions that are affected by ambient light levels. Night vision training occurs at the Laser Range near U.S. Route 17 and at the ALZ and Drop Zone. As Spotsylvania County grows, the installation is concerned that new development within the county's growth area may generate night-time illumination that will compromise the installation's ability to implement its night-time training operations.

Adoption of a county-wide dark skies ordinance would put in place lighting controls and requirements on new development county-wide and would help alleviate the installation's concerns about increased light pollution. Fort A.P. Hill should work with the county to ensure adequate lighting requirements and standards are captured in the ordinance.

In order to reduce the impacts of light pollution and protect a clear night sky the County had an established a goal in both the 2008 and 2013 Comprehensive Plans to promote "dark-sky" or "night-sky" friendly lighting. Due to amendments to the Comprehensive Plan considering state legislation related to proffers, the Spotsylvania County Board of Supervisors approved amendments to the County Outdoor Lighting ordinance on September 13, 2016 in order to shift what had been a County goal to an ordinance format where consistent, measurable and enforceable outcomes can be assured. "Dark sky" or "night sky" lighting is used to represent outdoor lighting that is downward focused below a horizontal plane similar to the graphic below. The result minimizes the likelihood of illuminating the atmosphere above whereby the effect is the inability to see stars at night.

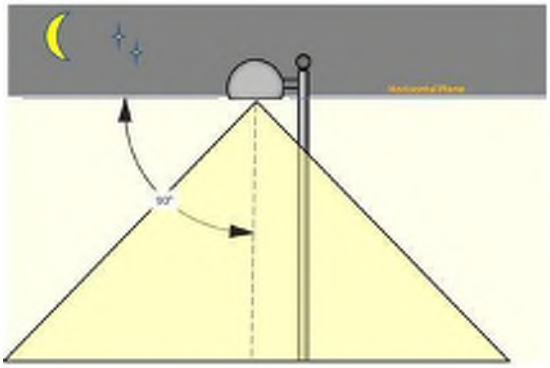


Exhibit 2: Downward directed lighting

The resulting outdoor lighting ordinance is meant to be simple and enforceable by the zoning enforcement office. The language, located in the Spotsylvania County Code Sec. 23-5.12 was developed with the assistance of lighting industry representatives, the zoning office and Fort AP Hill, and the Spotsylvania County Planning Commission. Staff wanted to ensure the ordinance was respectful of modern and emerging technologies and was therefore worded to accommodate flexibility.

PHYSICAL CONSTRAINTS TO DEVELOPMENT

A variety of factors can physically constrain or inhibit the extent of development feasible in a location. Naturally occurring constraints could include presence of wetlands, steep slopes, acid sulfate soils, septic suitability, groundwater availability, hydric soils, additional soils or underlying geological conditions. Established conservation lands in easement or ownership and regulatory protections such as the river protection overlay district, reservoir protection overlay district, floodplain overlay district, resource protection areas, zoning limitations and open space requirements, stormwater management infrastructure, limits of available public water and sewer all have the potential to physically constrain the extent of development. Many of these factors are explored in more detail in the pages that follow. The County GIS system includes map data on many of the aforementioned constraints and makes them available online **HERE**. Additionally, County GIS is developing a more extensive suite of soils related information for public access in the form of a new web application online to become accessible through the Spotsylvania Geohub site **HERE**.

GEOLOGY

The geology of the ~~county~~ County is generally comprised of precambrian, cambrian, and paleozoic formations. The principal geologic units found within the county are indicated below in order of the youngest to the oldest:

Table 1: Geology	
System	**Unit**
Tertiary (Miocene, Eocene)	Calvert and Aquia Formations
Lowe Cretaceous	Patuxent Formation
Paleozoic and precambrian formations of uncertain age/relationship	Petersburg Granite
Formation of uncertain age	Granite, Granite Gneiss, Hornblende Gabbro, Metamorphosed Sedimentary Rocks, Quartz Diorite, and Metamorphosed Volcanic and Sedimentary Rocks

The Piedmont Plateau geology is dominated by granite gneiss, schist, and granite rocks, generally of the paleozoic and precambrian age. Small intrusive dikes of horneblende gabbro and similar rocks are also present.

Coastal Plain geology is dominated by patuxent, aquia, and calvert formations, and can be characterized by its veneer of sand, gravel and clay deposits.

Geology and Groundwater

The character and position of rocks and rocky formations control the collection, storage, transmission quality and yield of groundwater. Since groundwater is contained in and controlled by rocks, each rock formation or unit is profiled below with respect to groundwater potential.

Coastal Plain Province

In the Coastal Plain, the average well yields 11 gallons of water per minute at a 50-foot depth. Some yield as much as 50 to 60 gallons per minute. Many of the deeper wells produce water that contains objectionable minerals. To the southeast of the City of Fredericksburg, patuxent formations are found. Patuxent formations are the most prolific aquifers, yielding 20 to 50 gallons per minute from deep wells. There are no true aquifer recharge areas within the county; however, silty clay sediments within the Coastal Plain provide the most permeability and promise of recharge to artesian aquifers by means of vertical seepage.

Calvert Formation

This formation occurs within the southeastern portion of the Coastal Plain area and generally consists of green clay, and very fine white sand. The calvert formation is not an important aquifer although it does serve as a form of barrier confining water to the deep water-bearing sands.

Aquia Formation

This formation principally consists of fine-grained sands and moderate amounts of clay. No wells are known to produce from this formation within the county. The aquia formation is exposed above the patuxent formation.

Patuxent Formation

This formation occurs within the eastern most portion of the Coastal Plain area of the county and consists of white sand with lesser amounts of coarse gravel present. Clay lenses are common throughout the formation. The sands and gravel of the patuxent formation are the most prolific aquifers within Spotsylvania County. Wells, which have tapped water-bearing zones of the patuxent, which usually locate at a depth of 100 to 400 feet, have produced between 20 and 50 gallons per minute.

Piedmont Province

Within the Piedmont, small supplies of water are available near the surface where weathering has partially decomposed the rocks. Below the weathered zone, water occurs in fractures and along contacts between different rock types. Average wells extend to depths of 50 to 250 feet and yield from 5 to 15 gallons of water per minute, with some of the better wells yielding approximately 40 gallons per minute; this type of yield is suitable for domestic residential uses but little else. Most wells are shallow, as there is very little change of increasing well yields by drilling more than a few hundred feet due to the decrease in size and number of fractures in the rocks. In addition, objectionable minerals tend to increase with added depth.

Petersburg Granite

The Petersburg granite unit occurs within the northeastern portion of the Piedmont area of Spotsylvania County and is well exposed in the vicinity of the Rappahannock River. It is a coarse to fine grained pink granite intruded by fine-grained blue granite. Small supplies of water sufficient for domestic use are available from the weathered zone of these rocks where fractures are encountered, with yields greater than 20 gallons per minute possible.

Granite Gneiss Unit

The granite gneiss unit occurs within the southeastern portion of the Piedmont area of Spotsylvania County and consists of a gray medium to fine-grained granite gneiss with intrusions of light gray granite. Small to moderate supplies of water have been produced from these rocks. Yields ranging from 1.5 to 62 gallons per minute were produced from wells at Indian Acres. The depths of these wells range from 128 to 525 feet.

Granite

The granite unit occurs within the central and far western portion of the Piedmont area of Spotsylvania County and is primarily composed of gray biolite granite and quartz menozite. Small supplies of water have been produced from this unit with yields ranging from a few gallons per minute to 15 gallons per minute.

Horneblende Gabbro - Quartz Diorite

These units occur at several isolated locations as small elliptical bodies intruding the older rocks. Blue quartz is predominant in the quartz diorite, and the horneblende gabbro is composed chiefly of horneblende and other dark-colored minerals. These geologic units are poor sources of water with small accumulations of water occurring along the contact zones between these rocks and the surrounding formations.

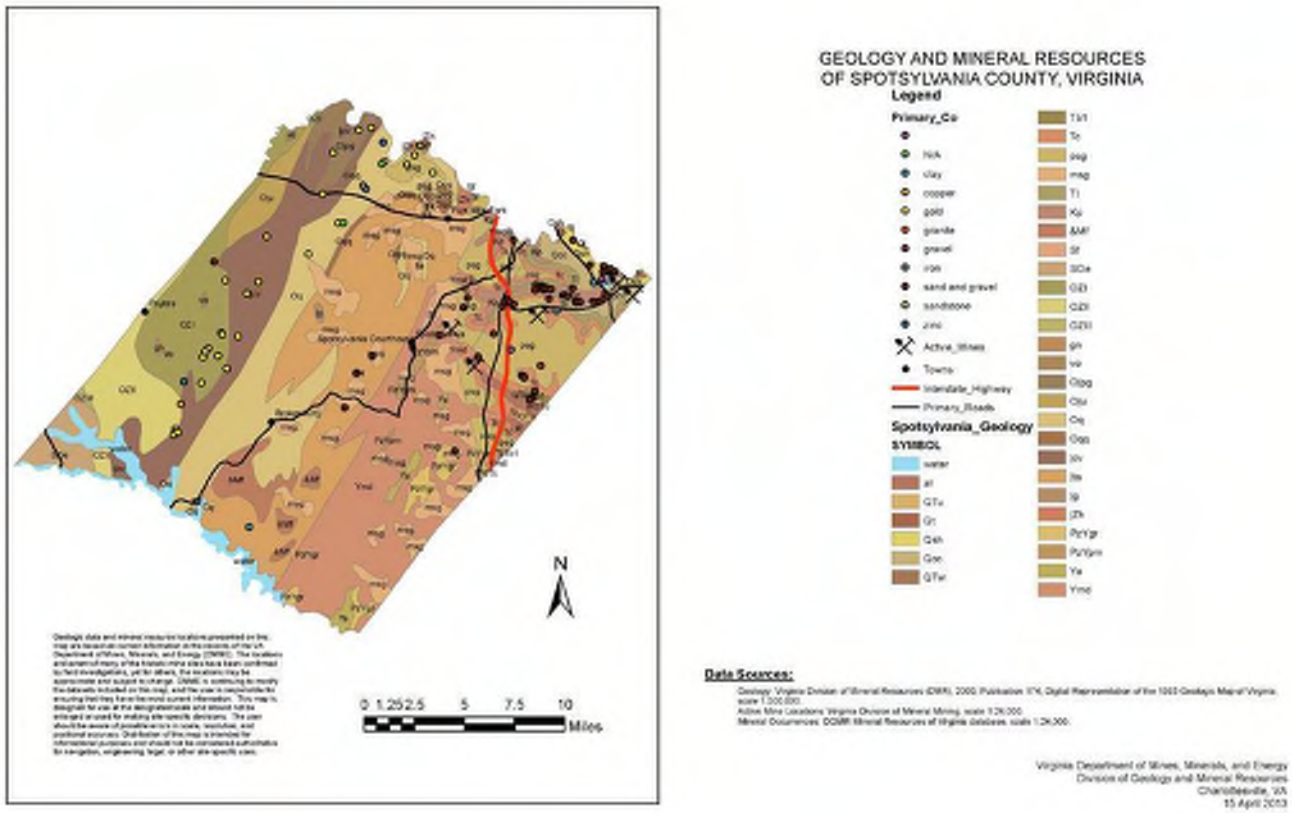
Metamorphosed Sedimentary Rocks

These rocks occur in the north/south belts within the western portion of the Piedmont area of Spotsylvania County and consist of a combination of schists, phyllites, gneisses and quartzites interlayed with igneous rocks. Rocks included in this unit have been fairly good sources of water in most areas. The chance of obtaining substantial groundwater yields depends much on encountering fractured zones within the crystalline rocks. Yields range from a few gallons per minute to over 100 gallons per minute in a few cases. A number of wells constructed for domestic uses in the county have averaged over 30 gallons per minute.

Metamorphosed Volcanic and Sedimentary Rocks

These rocks occur in north/south belts within the western portion of the Piedmont area of the county and consist of quartzites, phyllites, gneisses and schists. Most wells developed in these rocks produce less than 20 gallons per minute although a few wells have produced higher yields. Insufficient groundwater is a problem for the majority of the county for purposes other than low density residential uses. As the drain on groundwater supplies grows more severe and as intensity of use increases, less water will remain in the aquifers. In the future, reductions in residential densities may be necessary to guard against over-taxing of aquifers. The amount of impervious cover of aquifers and recharge areas associated with development further reduces the quantity of groundwater. The requirements for groundwater supply regulate the density of residential development and the extent of commercial/ industrial expansion into areas not served by a central water supply system.

~~GEOLOGY AND MINERAL RESOURCES MAP OF SPOTSYLVANIA COUNTY, VIRGINIA~~



~~*Geology and Mineral Resources Map Unit Descriptions Source: Division of Mineral Resources, 2003, Digital Representation of the 1993 Geologic Map of Virginia, – Expanded Explanation: Publication 174)*~~

Spotsylvania County straddles the Fall Line, a geologic zone where the sediments of the coastal plain lap up onto the metamorphic and igneous rocks of the piedmont.

Piedmont Rocks: Igneous Rocks of the Western Piedmont

OCpg *plagiogranite tonalite* (Pavlides, 1990).

Includes leucocratic to mesocratic plagioclase- and quartz-rich metamorphosed intrusive rocks containing little or no potassium feldspar. Plagioclase is variably altered to epidote, white mica, and chlorite. Quartz, generally blue, forms granoblastic aggregates that locally have cores of coarse-grained quartz with wavy extinction. Garnet is present locally. Hornblende, generally a minor constituent, is particularly abundant in the southwest portion of the pluton. Many of the plagiogranitic rocks have undergone cataclasis and are protomylonitic to mylonitic.

Piedmont Rocks: Stratified Rocks of the Western Piedmont

Mine Run complex (OZI, OZII, OZIII; Pavlides, 1989; 1990)

OZI *mélange zone I* (Pavlides, 1989).

Fine-grained schist and phyllite matrix encloses coarse-grained metasandstone beds locally; contains exotic blocks of mafic and felsic metavolcanic rocks (vo) similar to metavolcanic rocks of the Chopawamsic Formation (Ccv). Blocks of blastomylonitic tonalite and granodiorite gneiss (gn) are present locally.

OZII *mélange zone II* (Pavlides, 1989).

Schist and phyllite matrix is more complexly deformed than the matrix of mélange zone I; contains metavolcanic blocks (vo) similar to Chopawamsic Formation rocks (Ccv), in addition to granitoid blocks of altered tonalite and granodiorite (gr); intruded by the Ellisville biotite granodiorite (SOe).

OZIII *mélange zone III* (Pavlides, 1989).

Phyllite and schist matrix contains abundant euhedral magnetite; many matrix rocks are highly deformed on a mesoscopic and microscopic scale. Mafic exotic blocks (mf) include amphibolite, ultramafic rocks, serpentinite, and talc; many mafic and ultramafic blocks are composite. Biotite gneiss blocks (gn) are also present. Metavolcanic olistoliths (vo) are rare.

Geophysical signature: Strong positive magnetic anomaly. This unit is intruded by the Ellisville biotite granodiorite (SOe).

OCu *metasedimentary rocks, undivided* (Pavlides, 1990).

Gray to green phyllite, gray to white metasiltstone and fine-grained quartzite, fine-grained mica schist, green slate and phyllite, and sparse granule quartzite and graywacke; may be coeval in part with Old Mill Branch Metasiltstone Member of the Popes Head Formation (OCpo).

SOe *Ellisville biotite granodiorite* (Pavlides, 1990).

Mesocratic, coarse- to medium-grained, equigranular to porphyritic, massive to strongly foliated granodiorite. Mineralogy: quartz + plagioclase + potassium feldspar + biotite; accessories include epidote, allanite, titanite, and apatite. Porphyritic rocks contain potassium feldspar megacrysts up to 1.5 cm across; myrmekite commonly occurs adjacent to potassium feldspar. Brownish-green, strongly pleochroic biotite is associated with, and in places poikilitically encloses epidote, allanite, titanite, and apatite. Subhedral epidote locally encloses euhedral titanite. Pleochroic green amphibole and muscovite are minor constituents locally. The Ellisville has been dated at 440±8 Ma (Rb-Sr whole rock; Pavlides and others, 1982).

Rocks of the Central Virginia Volcanic-Plutonic Belt

PMf *Falmouth Intrusive Suite* (Pavlides, 1980).

Fine grained to pegmatitic granite, quartz monzonite, granodiorite, and tonalite; consists of dikes, sills and small plutons. Mineralogy: plagioclase + quartz + microcline + biotite + muscovite + hornblende ± garnet + epidote + apatite + titanite + opaque minerals; myrmekite common. The unit has been dated at 300-325 Ma (U-Pb zircon and Rb-Sr whole-rock; Pavlides and others, 1982). These rocks intrude the Ta River Metamorphic Suite (Cta), Falls Run Granite Gneiss (Sf), Holly Corners Gneiss (CZh), Quantico Formation (Oq) and porphyroblastic garnet-biotite gneiss (Ym; Po River Metamorphic Suite of Pavlides, 1980).

Sf *Falls Run Granite Gneiss* (Pavlides, 1980).

Pink to white, coarse-grained, strongly-foliated hornblende-biotite granite to monzonite gneiss. Mineralogy: microcline + plagioclase + quartz + biotite + muscovite ± hornblende; apatite, epidote, titanite, and magnetite-ilmenite are accessories; myrmekite is common. The Falls Run has been dated at 410 Ma (U-Pb zircon and Rb-Sr whole-rock; Pavlides and others, 1982); the gneiss intrudes Ta River Metamorphic Suite **(**Cta) and the Holly Corners Gneiss (CZh).

Quantico Formation (Oq, Oqq; Pavlides, 1980)

Oq *slate and porphyroblastic schist.*

Gray to black, graphitic, pyritic phyllite and slate (northern Piedmont); metamorphic grade increases to the southwest to produce porphyroblastic staurolite-, kyanite-, and garnet-biotite-muscovite schists. Locally the unit contains felsic metatuff, metagraywacke, and micaceous quartzite interbeds; thickness has been estimated at as much as 3000 feet (Pavlides, 1980). Mineralogy: quartz + muscovite + biotite ± garnet ± staurolite ± kyanite + opaque minerals; chlorite is a common secondary mineral. Geophysical signature: strike-elongated positive linear magnetic and radiometric anomalies. The unit was originally named Quantico Slate by Darton (1894), and modified to Quantico Formation by Pavlides (1980). An Ordovician age for the Quantico is indicated by fossils collected by Watson and Powell (1911) and more recently by Pavlides and others (1980). The Quantico unconformably overlies older units in the northeastern Piedmont, and is correlated with the Arvonia Formation to the southwest.

Oqq *micaceous quartzite.*

Light-gray, fine- to medium-grained quartzite and quartzose muscovite schist. Mineralogy: quartz + muscovite + plagioclase ± microcline. This lithology occurs as thin discontinuous lenses at the base of the Quantico; thin diopsidic calcsilicate layers are also found locally in the lower part of the Quantico (Pavlides, 1980).

Ccv *Chopawamsic Formation, undivided*, (Pavlides, 1981).

Includes laterally discontinuous lenses and tongues of metamorphosed felsic, intermediate, and mafic volcanic flows and volcanoclastic rocks, with interlayered quartzite, quartzose greywacke, schist, and phyllite. Volcanic flows are locally highly vesicular; fragmental breccia and tuff are common. Felsic flows are typically light-gray aphanitic rocks with phenocrysts of quartz and feldspar; intermediate flows are dark-green amphibole-bearing rocks with fine-grained quartz-feldspar matrix; greenstone metabasalts contain blue green amphibole, chlorite, albitic plagioclase, and quartz. Geophysical signature: linear strike-elongate pattern of elevated magnetic anomalies.

The Chopawamsic is correlated with the James Run Formation in Maryland; the James Run has been dated at 570 to 530 Ma (U-Pb zircon; Tilton and others 1970). The Chopawamsic is unconformably overlain by the Late Ordovician Arvonia and Quantico Formations. Pavlides (1981 and subsequent works) has made the interpretation on the basis of geologic and geochemical data that the Chopawamsic and related plutons represent an ancient island-arc sequence.

Cta *Ta River Metamorphic Suite, (undivided)*.

Layered sequence consists dominantly of greenish-gray to black, medium- to coarse-grained, poorly to well-lineated, massive to well-layered amphibolite and amphibole-bearing gneiss and schist; includes interlayered ferruginous quartzite, and minor biotite gneiss, felsic volcanic rocks,

gabbro and granite. Amphibolitic rocks commonly contain quartz-epidote lenses and veins. Proportion of biotite gneiss and schist increases from northeast to southwest along strike, as does grade of regional metamorphism. Mineralogy: (hornblende, tremolite-actinolite, and cummingtonite) + quartz + calcic oligoclase ± epidote ± biotite ± garnet. Geophysical signature: linear positive and negative magnetic and radiometric anomalies.

Pavlides (1981) correlated the Ta River with the Chopawamsic and James Run Formations, and considered the Ta to be a more oceanward facies of a Chopawamsic island arc sequence, on the basis of geologic and geochemical factors. The Quantico Formation generally overlies the boundary between the Chopawamsic and the Ta, obscuring the contact relationships.

Cg *amphibole metagabbro*.

Dark-greenish-gray, coarse-grained, massive, hornblende metagabbro. Mineralogy: plagioclase + hornblende + biotite + clinopyroxene + quartz; relict olivine and myrmekitic intergrowths of quartz in other minerals are characteristic. Geophysical signature: small circular areas marked by positive magnetic anomalies. Metagabbro intrudes Ta River Metamorphic Suite.

CZh *Holly Corner Gneiss* (Pavlides, 1980; 1990).

Dark- gray to black, fine- to medium-grained, strongly-foliated hornblende-biotite-rich gneiss. Mineralogy: hornblende + plagioclase + biotite + quartz + titanite; accessory minerals include zircon, epidote, microcline, chlorite; trace amounts of apatite, calcite, muscovite, and opaque minerals are present. Myrmekitic intergrowths are common.

Rocks of the Eastern Piedmont

PzYgr *granite gneiss* (Pavlides, 1990).

Fine- to medium-grained, light-gray to white granite to tonalite gneiss; composed of biotite, oligoclase, quartz, and porphyroblastic microcline, with accessory muscovite, epidote, titanite, and magnetite; hornblende occurs locally within diffuse compositional layering. Inclusions of biotite gneiss and amphibolite are present locally. Unit occurs as irregular lenticular to tabular masses within porphyroblastic biotite gneiss (Ymd).

PzYpm *quartzofeldspathic gneiss* (Bobyarchick and others, 1981).

Light-gray, fine- to coarse-grained, foliated, layered muscovite-bearing quartzofeldspathic gneiss; contains inter-calated quartz-muscovite schist. Mineralogy: quartz + plagioclase + microcline + garnet + muscovite + biotite.

Ya *amphibolite, amphibole gneiss, and schist*.

Melanocratic, fine- to coarse-grained, weakly to strongly foliated, irregularly layered amphibole-rich gneiss and schist. Mineralogy: hornblende + clinopyroxene + plagioclase + magnetite + biotite ± scapolite ± garnet ± quartz ± epidote. Geophysical signature: narrow, strike-elongate, positive magnetic anomaly. Lenses and layers of amphibolite and amphibole gneiss are interlayered with porphyroblastic garnet-biotite gneiss (Ymd). The mafic rocks constitute 50 percent or more of the section in a zone about 0.62 mile wide surrounding outcrop areas of State Farm gneiss (Ysf); farther away from the State Farm contact, lenses and layers of amphibolite and amphibole gneiss are more widely scattered, but are laterally persistent and outline map-scale structures (Marr, 1985). Amphibolite and interlayered biotite gneiss adjacent to the State Farm gneiss were named the Sabot amphibolite by Poland (1976), who

characterized the formation as a tabular sheet 0.7 to 1.0 km thick. He and Goodwin (1970) interpreted these amphibolites as metamorphosed mafic volcanic or pyroclastic rocks. Glover and others (1989 and references therein) report a low-angle regional discordance between the base of the Sabot and the compositional layering in the underlying State Farm Gneiss.

Ymd *porphyroblastic garnet-biotite gneiss.*

Heterogeneous layered sequence is dominantly garnetiferous biotite gneiss and porphyroblastic gneiss, migmatitic in part, with subordinate interlayered amphibolite and amphibole gneiss (Ya), pelitic-composition gneiss, calcsilicate gneiss, biotite-hornblende-quartz-plagioclase gneiss, and garnetiferous leucogneiss. These lithologies contain amphibolite-facies metamorphic mineral assemblages consistent with rock chemistry. Farrar (1984) reports relict granulite-facies assemblages in some rocks. This unit underlies a wide area that surrounds the State Farm antiform (Poland, 1976; Reilly, 1980; Farrar, 1984) and two subsidiary antiforms to the northeast; the unit includes the Maidens gneiss and portions of the Sabot amphibolite of Poland (1976), the eastern gneiss complex and Boscobel granodiorite gneiss of Bobyarchick (1976), and the Po River Metamorphic Suite of Pavlides (1980). Poland (1976) and Reilly (1980) proposed that the Maidens gneiss and Sabot amphibolite were a Late Precambrian- to Early Paleozoic-age volcanic-sedimentary cover sequence unconformably overlying the State Farm gneiss. Farrar (1984) interpreted relict granulite-facies mineral assemblages to have equilibrated during Grenville-age regional metamorphism; this contributed to his conclusion that the Sabot and Maidens, in addition to the State Farm, are Grenville or pre-Grenville in age. Porphyroblastic garnet-biotite gneiss (Ymd) is intruded by rocks of the Carboniferous-age Falmouth Intrusive Suite (Pavlides, 1980).

Coastal Plain

al *alluvium (Holocene).*

Fine to coarse gravelly sand and sandy gravel, silt, and clay, light- to medium-gray and yellowish-gray. Deposited mainly in channel, point-bar, and flood plain environments; includes sandy deposits of narrow estuarine beaches, and mud, muddy sand, and peat in swamps and in fresh- and brackish-water marshes bordering tidewater rivers. Grades into colluvium along steeper valley walls at margins of unit. Mostly Holocene but, locally, includes low-lying Pleistocene (?) terrace deposits. As much as 80 feet thick along major streams.

QTu *Quaternary and Tertiary deposits*, undifferentiated.

Tabb through Windsor Formations and alluvial/tidal prism deposits.

Qt *Tabb Formation, undifferentiated* (upper Pleistocene, Johnson, 1976).

Sand, silt, and peat of coast-parallel plains seaward of the Suffolk and Harpersville scarps, includes coeval terrace deposits along major river valleys west to Fall Line. Subdivided into three members (Johnson, 1976).

Qsh *Shirley Formation* (middle Pleistocene, Johnson and Berquist, 1989).

Light- to dark-gray, bluish-gray and brown sand, gravel, silt, clay, and peat. Constitutes surficial deposits of riverine terraces and relict bay mouth barriers and bay flood plains (altitude 35-45 feet) inset below depositional surfaces of the Chuckatuck Formation (Johnson and Peebles, 1984). Upper part of unit is truncated on the east by the Suffolk and Harpersville scarps; locally,

lower part occurs east and west of scarps. Fluvial-estuarine facies comprises (1) a lower pebble to boulder sand overlain by (2) fine to coarse sand interbedded with peat and clayey silt rich in organic material, including *in-situ* tree stumps and leaves and seeds of cypress, oak, and hickory, which grades upward to (3) medium- to thick-bedded, clayey and sandy silt and silty clay. Marginal-matrix facies in lower James River and lowermost Rappahannock River areas is silty, fine-grained sand and sandy silt containing *Crassostrea virginica*, *Mulinia*, *Noetia*, *Mercenaria*, and other mollusks. *Astrangia* from lower Rappahannock River area has yielded a uranium-series age of 184,000 ± 20,000 yrs B.P. (Mixon and others, 1982). Thickness is 0 to 80 feet.

Qcc *Charles City Formation* (lower Pleistocene (?), Johnson and Berquist, 1989).

Light- to medium-gray and light-to dark-yellowish and reddish-brown sand, silt, and clay composing surficial deposits of riverine terraces and coast-parallel plains at altitudes of 70 to 80 feet. Unit is adjacent to, and inset below, the Windsor Formation and older deposits. Bay or shallow-shelf facies of the Charles City (Johnson and Peebles, 1984), present beneath flat to gently seaward-sloping plain in Suffolk area, includes a thin, basal, gravelly sand grading upward into fine- to medium-grained sand and an uppermost clayey and sandy silt; lower and middle parts of unit contain clay-lined, sand-filled burrows. Fluvial-estuarine facies in terrace remnants along major rivers consists of cross-bedded gravelly sand and clayey silt. Thickness is 0 to 55 feet, or more.

QTw *Windsor Formation* (lower Pleistocene or upper Pliocene, Coch, 1968).

Gray and yellowish- to reddish-brown sand, gravel, silt, and clay. Constitutes surficial deposits of extensive plain (altitude 85-95 feet.) seaward of Surry scarp and of coeval, fluvial-estuarine terraces west of scarp. Fining-upward sequence beneath plain consists of a basal pebbly sand grading upward into cross-bedded, quartzose sand and massive, clayey silt and silty clay; lower and upper parts of sequence were deposited, respectively, in shallow-marine or open-bay and restricted-bay or lagoonal environments. In terraces west of Surry scarp, fluvial-estuarine deposits comprise muddy, coarse, trough cross-bedded sand and gravel grading upward to sandy silt and clay. Thickness is 0 to 40 feet.

Tb1/Tb2 *Bacons Castle Formation* (upper Pliocene, Coch, 1965).

Gray, yellowish-orange, and reddish-brown sand, gravel, silt, and clay; constitutes surficial deposits of high plain extending from Richmond, eastward to the Surry scarp. Unit is subdivided into two members: Tb1, massive to thick-bedded pebble and cobble gravel grading upward into cross-bedded, pebbly sand and sandy and clayey silt, and Tb2, predominantly thin-bedded and laminated clayey silt and silty fine-grained sand. Tb2 is characterized by flaser, wavy, and lenticular bedding and rare to common clay-lined burrows including *Ophiomorpha nodosa*. Thickness is 0 to 70 feet.

Tc *Chesapeake Group* (upper Pliocene to lower Miocene, Darton, 1891).

Fine-to coarse-grained, quartzose sand, silt, and clay; variably shelly and diatomaceous, deposited mainly in shallow, inner- and middle-shelf waters. Ages of units based on studies of foraminiferal, nannofossil, diatom, and molluscan assemblages in Virginia and adjacent states (Andrews, 1988; Gibson, 1983; Gibson and others, 1980; Poag, 1989; Ward and Blackwelder, 1980; Ward and Krafft, 1984). Includes the following formations, from youngest to oldest:

Chowan River Formation (upper Pliocene, Blackwelder, 1981).

Gray to dusky blue-green sand, fine- to medium-grained, clayey and silty, commonly very shelly; grades laterally into laminated, silty clay and upward into cross-bedded, biofragmental sand, clayey silt, and silty clay. Discontinuous pebbly to bouldery sand at very irregular base of unit. Mollusks include *Glycymeris hummi*, *Noetia carolinensis*, and *Carolinapecten eboreus bertiensis*. Thickness is 0 to 50 feet. Recognized only in southeasternmost Virginia and North Carolina.

Yorktown Formation (lower upper Pliocene to lower Pliocene, Clark and Miller, 1906).

Bluish-gray and brownish-yellow sand, fine- to coarse-grained, in part glauconitic and phosphatic, commonly very shelly, interbedded with sandy and silty blue-gray clay. In lower York and James River basins, unit includes cross-bedded shell hash. Mollusks include *Glycymeris subovata*, *Chesapecten jeffersonius*, *Chesapecten madisonius*, *Mercenaria tridacnoides*, *Panopea reflexa*. Coarse-grained sand and gravel facies of the Yorktown in up dip areas is mapped separately as unit psg. Thickness is 0 to 150 feet.

Eastover Formation (upper Miocene, Ward and Black-welder, 1980).

Dark-gray to bluish-gray, muddy sand, very fine to fine, micaceous, interbedded with sandy silt and clay. Lower part of unit is dominantly medium- to very-thin-bedded and laminated silt and clay interbedded with very-fine sand, lenticular and wavy bedding common; upper part is mainly very-fine- to fine-grained sand containing abundant clay laminae. Typical mollusks include *Chesapecten middlesexensis*, *Marvacrassatella surryensis*, *Glossus fraterna*. Thickness is 0 to 270 feet.

St. Marys Formation (upper and middle Miocene, Shattuck, 1902).

Bluish- to pinkish-gray, muddy, very-fine sand and sandy clay-silt, locally abundantly shelly. *Chesapecten santamaria*, *Buccinofusus parilis*, and *Ecphora gardnerae* are characteristic mollusks. Occurs northeast of Mattaponi River. Thickness is 0 to 40 feet.

Choptank Formation (middle Miocene, Shattuck, 1902).

Olive-gray sand, fine to very-fine, clayey and silty, shelly, and diatomaceous clay-silt; commonly forms fining-upward sequences. Mollusks include *Chesapecten nefrens*, *Mercenaria cuneata*, *Ecphora meganae*. Thickness is 0 to 50 feet.

Calvert Formation (middle and lower Miocene, Shattuck, 1902).

Commonly consists of 2 to 7 fining-upward sequences. Each sequence includes a light- to dark-olive-gray basal sand, very fine to fine, clayey and silty, very sparsely to abundantly shelly; grades upward to sandy, diatomaceous clay-silt and diatomite. Typical mollusks include *Chesapecten coccymelus*, *Crassatella melinus*, *Ecphora tricostata*. hickness is 0 to 600 feet.

psg *Pliocene sand and gravel*.

Interbedded yellowish-orange to reddish-brown gravelly sand, sandy gravel, and fine to coarse sand, poorly to well-sorted, cross-bedded in part, includes lesser amounts of clay and silt in thin to medium beds. Commonly caps drainage divides (altitude 250-170 feet) in western part of Coastal Plain. Lower part of unit, showing flaser and lenticular bedding and containing rare to abundant *Ophiomorpha nodosa*, represents deposition in marginal-marine environments and is, in part, a near-shore equivalent of the more down dip, marine facies of the Yorktown Formation. In the northern part of the Coastal Plain, the more poorly sorted and less cleanly washed upper part of unit, which lacks fossils, comprises fluvial-deltaic sediments that

prograded eastward across the shelf during a regressive phase of the Yorktown. To the south, the upper part of unit is massively bedded clayey sand in places containing heavy mineral concentrations that average 8 percent or more; the sands are near shore, beach and dune origin; interstitial clay was derived, in part, from *in-situ* weathering of feldspar sand. Thickness is 0 to 50 feet.

msg *Miocene sand and gravel.*

Fine- to coarse-grained sand, sandy gravel, silt, and clay, gray to light-yellowish-gray, commonly oxidized to yellowish-orange and yellowish-brown; pebbles and cobbles are deeply etched. Commonly caps interfluves at northwestern edge of Coastal Plain and constitutes thin Coastal Plain outliers in easternmost Piedmont where deposits directly overlie weathered crystalline rocks. In part, may represent a fluvial to marginal-marine facies of the Choptank Formation. Thickness is 0 to 30 feet.

Tl *Lower Tertiary deposits* (Oligocene, Eocene, and Paleocene).

Mostly fine- to coarse-grained glauconitic quartz sand and clay-silt, shelly in part; includes lesser amounts of sandy limestone and limey sand. In outcrop, unit comprises the Pamunkey Group (Brightseat, Aquia, Marlboro, Nanjemoy, and Piney Point Formations) and the Old Church Formation. In subsurface, unit includes Eocene and Oligocene strata not included in the Pamunkey and Old Church. Ages of formational units based on foraminiferal, nannofossil, dinocyst, pollen, and molluscan studies (Frederiksen, 1979; Gibson and others, 1980; Gibson and Bybell, 1984; Edwards, 1984, 1989; Edwards and others, 1984; Poag, 1989; Ward, 1985; Ward and Krafft, 1984). Stratigraphic sections vary widely, comprising one or more of the following formations:

Old Church Formation (Ward, 1985) and unnamed glauconitic sands (upper Oligocene).

In inner and middle Coastal Plain, unit is 0 to 5 feet of olive-gray, fine- to coarse-grained, shelly, very sparsely glauconitic quartz sand of the Old Church Formation; typical fossils include *Anomia ruffini*, *Lucina sp*., and *Mercenaria capax*. In subsurface of outer Coastal Plain, unit includes about 45 feet of dark-olive-gray to greenish-black glauconite sand with lesser amounts of quartz; sand has olive-brown clay-silt matrix.

Lower Oligocene beds.

Olive-gray to grayish-olive sand, very-fine-grained, clayey and silty, micaceous, glauconitic; coarsens upward to a very-fine- to fine-grained sand. Unit is 0 to 50 feet thick; identified only in subsurface of Eastern Shore area (Exmore, core hole, R. B. Mixon and D. S. Powars, personal communication).

Chickahominy Formation (upper Eocene, Cushman and Cederstrom, 1945).

Predominantly olive-gray clayey silt and silty clay, very compact, glauconitic, micaceous, contains abundant finely crystalline iron sulfide. Coarsens downward to a very-fine- to fine-grained sand, pebbles at base. Rare fragmental shell, microfossils very abundant. Thickness is 0 to 100 feet; present in subsurface of southeastern Virginia.

Piney Point Formation (middle Eocene, Otton, 1955).

Olive-gray and grayish-olive-green, glauconitic quartz sand, medium-to coarse-grained, poorly sorted, contains scattered quartz pebbles, interbedded with carbonate-cemented sand and moldic limestone. Unit is characterized by large, calcitic shells of the oyster *Cubitostrea*

sellaeformis, a middle Eocene marker. Aragonitic mollusks are generally leached, leaving only molds and casts. Thickness is 0 to 60 feet.

Nanjemoy Formation (lower Eocene, Clark and Martin, 1901).

Dark-olive-gray, greenish-gray, and olive-black glauconitic quartz sand, fine- to coarse-grained, very clayey and silty, intensely burrowed, sparsely to abundantly shelly, interbedded with sandy clay-silt. Sand in upper part of unit is less clayey, very micaceous, and contains scattered quartz pebbles. Typical mollusks include *Venericardia potapacoensis*, *Venericardia ascia*, and *Macrocallista subimpressa*. Unit is 0 to 140 feet thick.

Marlboro Clay (lower Eocene (?) and upper Paleocene, Clark and Martin, 1901).

Light-gray, pinkish-gray, and reddish-brown kaolinitic clay, massively bedded to laminated, interbedded with lesser amounts of laminated and ripple cross-laminated silt and very-fine-grained sand. Contains rare molds of small mollusks and arenaceous foraminifera. Thickness is 0 to 30 feet.

Aquia Formation (upper Paleocene, Clark and Martin, 1901).

Light- to dark-olive gray, glauconitic quartz sand, fine- to coarse-grained, clayey and silty, thick- to massively bedded, sparsely to abundantly shelly. Lower part of unit is more poorly sorted and more calcareous than upper part and contains a few thin to medium beds of olive-gray, white, and pale greenish-yellow limestone. Upper part of unit is moderately well sorted and characterized by thin beds of the large, high-spired gastropod *Turritella mortoni*. Other common mollusks include *Cucullaea gigantea*, *Ostrea sinuosa*, and *Crassatellites alaeformis*. Thickness is 0 to 130 feet.

Brightseat Formation (lower Paleocene, Bennett and Collins, 1952).

Olive-gray to olive-black, micaceous quartz sand, fine- to very fine-grained, clayey and silty, variably glauconitic. Thickness is 0 to 20 feet.

Kp *Potomac Formation* (Lower and Upper(?) Cretaceous, McGee, 1886).

Light-gray to pinkish- and greenish-gray quartzo-feldspathic sand, fine- to coarse-grained, pebbly, poorly sorted, commonly thick-bedded and trough cross-bedded. Sand is interbedded with gray to green, massive to thick-bedded sandy clay and silt, commonly mottled red or reddish-brown. Includes lesser amounts of clay-clast conglomerate and thin-bedded to laminated, carbonaceous clay and silt. In the inner Coastal Plain, unit was deposited mainly in fluvial-deltaic environments, intertongues eastward with thin glauconitic sands of shallow-shelf origin. Spore and pollen assemblages and leaf impressions of ferns and cycads indicate an Early Cretaceous age (Doyle and Robbins, 1977). In some down dip areas, uppermost part of unit may be of earliest Late Cretaceous age. Thickness ranges from a featheredge at western limit of outcrop to more than 3500 feet in subsurface of outermost Coastal Plain.

MINERAL RESOURCES AND INDUSTRIES

As part of this Comprehensive Plan update, County Planning efforts as they relate to Natural Resources have been enhanced to gain a better understanding of available mineral resources and opportunities they present, their value and location. Proactively considering such resources as part of land use planning and economic development efforts expand upon the planning scope and vision established in prior Comprehensive Plans. Land use planning and project approvals that conflict with the fixed geographic location of valued mineral resources effectively degrades the value of such resource potential due to lack of consideration, dismissing the potential economic, technological, social impacts value of available raw materials. The absence of planning to consider subgrade resources when land use and development above grade are planned and approved "leaves mineral resources on the table" unable to be utilized, trapped below a land use vision that my conflict or may not have considered the subgrade resources present.

Efforts to plan with a larger emphasis, accommodation and consideration of mineral resources can put the County in an advantageous leadership position early on as efforts are made to enhance sourcing of raw materials from domestic locations, and the opportunities and growth of economic value associated with increased demands from emerging and future technologies.

The Virginia Department of Mines, Minerals, and Energy Division of Geology and Mineral Resources (DMME) have provided insights into Mining, Mineral Resources and Industries within Spotsylvania County, as follows:

The availability of mineral resources within Spotsylvania County limits offer exceptional opportunities. The County overlaps two geologic provinces, each containing a diversity of mineral resources that can supply basic construction materials well into the future. A map of Spotsylvania County's Geology and Mineral Resources can be found within this Appendix for reference.

Most of Spotsylvania County is in the Piedmont province and is under-laid by igneous and metamorphic rocks. The easternmost portion of the ~~county~~ County is in the Coastal Plain province and is predominantly underlain by sand, gravel and clay strata that are deposited on the rocks similar to those in the Piedmont portion.

In addition, and as a consequence of the geologic diversity, there are many other potential growth opportunities with deposits of industrial clays, natural agricultural supplements, and metallic resources. Perhaps most economically advantageous and considerate of new and emerging technologies and industries the presence of "critical elements" such as graphite, tantalum, niobium, rare earth elements, among others, will be key materials for energy production and storage in the future. Federal and State resource analysts (Including representatives of the Virginia Department of Mines, Minerals and Energy) recognize the urgent need to identify new domestic resources to reduce the present reliance on foreign imports to supply these materials. Per DMME, "we are really just beginning to do these assessments and Spotsylvania looks as promising as any County in Virginia."

The positive aspects of jobs creation and economic growth opportunities that local mining operations provide are often overshadowed by the negative perceptions of unmitigated surface disturbance, noise, environmental contamination, etc. Much of the negative perception is based on antiquated mining practices and legacy sites.

~~**Current Production**~~

~~The mining industry in Spotsylvania County presently includes five locations conducted under mineral permits mine issued by the Virginia Department of Mines, Minerals, and Energy, Division of Mineral Mining. In 2012, only three were producing: The Luck Stone Corporation's Spotsylvania granite quarry, Bardon Incorporated's sand and gravel pit, and the Kent Brothers' gravel pit. Vulcan Construction Materials holds a permit for a sand and gravel pit at New Post, Luck Stone has a permit for a granite quarry at Massaponax, but neither of these produced in 2012. The total area included under the permits is about 1,409.5 acres. Granite is quarried and crushed for roadstone and other construction purposes; Sand and gravel was produced and processed for concrete aggregate, masonry sand, road material, and other purposes.~~

~~During 2012, the latest year for which production data is available, the three active mining operations produced 1,121,180 short tons of granite, gravel, and sand and gravel valued at $14.5 million. The mines employed a total of 27 workers in 2012, not including independent contractors. Wages accounted for $1.5 million.~~

Summary of Mineral Resources and Mining Industries in Spotsylvania County, Virginia

The DMME regulates five mine permits with active mineral mining operations in Spotsylvania County (See Table 2). The total land acreage under permit is about 983 acres. Three of the permitted mines produce sand and gravel for construction aggregate. The mines are located in sedimentary strata mapped as the Quaternary age Charles City Formation (Qcc) and unnamed units of Neogene age (Nsg). The other two permitted operations quarry granitic rocks for crushed stone and also produce manufactured sand that is a by-product of rock crushing.

MINERAL RESOURCES AND INDUSTRIES IN SPOTSYLVANIA COUNTY, VIRGINIA
TABLE 2: Active Mining Operations in 2016

A	B	C	D	E	F	G	H	I	J	K
COMPANY NAME	PERMIT ID	MINE NAME	MINE TYPE	COMMODITY/PRODUCT	ORIGINAL PERMIT DATE	PERMIT ACRES	DISTURBED ACRES	RECLAIMED ACRES	LONGITUDE	LATITUDE
LUCK STONE CORPORATION	08203AC	SPOTSYLVANIA PLANT	QUARRY	GRANITE / CRUSHED STONE	5/24/2002	385.6	326.9	0.0	-77.55083	38.21111
KENT BROTHERS LLC	13413AB	THE PITT	OPEN PIT	GRAVEL	8/19/1997	10.2	10.2	0.3	-77.47192	38.21951
VULCAN CONSTRUCTION MATERIALS LP	90294AC	NEW POST S&G	QUARRY	SAND AND GRAVEL	1/22/2004	50.7	50.7	3.4	-77.39779	38.24142
LUCK STONE CORPORATION	90440AA	MASSAPONAX PLANT	QUARRY	GRANITE / CRUSHED STONE	7/17/2002	228.6	139.4	0.0	-77.53059	38.18405
BARDON, INC	90468AB	FULKS PIT	OPEN PIT	SAND AND GRAVEL	2/16/2012	306.4	169.3	0.0	-77.36420	38.23237

Data Sources:
Columns A-K: Virginia Department of Mines, Minerals, and Energy - Division of Mineral Mining
Note1: Latitude (N) and Longitude (W) in decimal degrees: North American Datum 1983 (NAD 83)
Prepared by:
Virginia Department of Mines, Minerals, and Energy - Division of Geology and Mineral Resources
Date of this report:
9/7/2017

In 2016, mines in the County produced a total of about 1.6 million short tons of aggregate with an estimated value of $23.8 million (See Table 3). The value of mineral mine products has increased by almost 22 percent from 2014 when the total value was estimated to be about $19.6 million (Table 3). Employment in the mines has been relatively steady since 2014 (See Table 4). There were a total of 37 workers directly employed by the mining companies in 2016 earning approximately $2 million in wages (Table 4). Independent contractors and service providers employed by the mines are not included in the employment and wage information.

MINERAL RESOURCES AND INDUSTRIES IN SPOTSYLVANIA COUNTY, VIRGINIA
TABLE 3: Summary of Annual Production Reported by Mining Operations and Estimated Value, 2014-2016

A	B	C	D	E	F	G	H
COMPANY NAME	PERMIT ID	MINE NAME	MINE TYPE	COMMODITY/PRODUCT	YEAR	TONNAGE (short tons)	MINERAL VALUE (x $1000)
LUCK STONE CORPORATION	08203AC	SPOTSYLVANIA PLANT	QUARRY	GRANITE / CRUSHED STONE	2016	1,228,341	
KENT BROTHERS LLC	13413AB	THE PITT	OPEN PIT	GRAVEL	2016	1,071	
VULCAN CONSTRUCTION MATERIALS LP	90294AC	NEW POST S&G	QUARRY	SAND AND GRAVEL	2016	0	
LUCK STONE CORPORATION	90440AA	MASSAPONAX PLANT	QUARRY	GRANITE / CRUSHED STONE	2016	0	
BARDON, INC.	90468AB	FULKS PIT	OPEN PIT	SAND AND GRAVEL	2016	407,864	
SPOTSYLVANIA TOTAL					**2016**	**1,637,276**	**$23,770**
LUCK STONE CORPORATION	08203AC	SPOTSYLVANIA PLANT	QUARRY	GRANITE / CRUSHED STONE	2015	1,045,994	
KENT BROTHERS LLC	13413AB	THE PITT	OPEN PIT	GRAVEL	2015	27,362	
VULCAN CONSTRUCTION MATERIALS LP	90294AC	NEW POST S&G	QUARRY	SAND AND GRAVEL	2015	0	
LUCK STONE CORPORATION	90440AA	MASSAPONAX PLANT	QUARRY	GRANITE / CRUSHED STONE	2015	0	
BARDON, INC.	90468AB	FULKS PIT	OPEN PIT	SAND AND GRAVEL	2015	427,809	
SPOTSYLVANIA TOTAL					**2015**	**1,501,165**	**$20,299**
LUCK STONE CORPORATION	08203AC	SPOTSYLVANIA PLANT	QUARRY	GRANITE / CRUSHED STONE	2014	885,469	
KENT BROTHERS LLC	13413AB	THE PITT	OPEN PIT	GRAVEL	2014	134,342	
VULCAN CONSTRUCTION MATERIALS LP	90294AC	NEW POST S&G	QUARRY	SAND AND GRAVEL	2014	0	
LUCK STONE CORPORATION	90440AA	MASSAPONAX PLANT	QUARRY	GRANITE / CRUSHED STONE	2014	0	
BARDON, INC.	90468AB	FULKS PIT	OPEN PIT	SAND AND GRAVEL	2014	527,988	
SPOTSYLVANIA TOTAL					**2014**	**1,547,799**	**$19,552**

Data Sources:
Columns A-G: Virginia Department of Mines, Minerals, and Energy - Division of Mineral Mining
Column H: The Virginia Division of Geology and Mineral Resources estimated the mineral value using reported tonnage data and commodity unit average values for Virginia published annually in USGS Minerals Yearbook (http://minerals.usgs.gov/minerals/pubs/commodity), and USGS Mineral Industry Surveys (http://minerals.usgs.gov/minerals/pubs/commodity/mis.html). Unit values are subject to revision and may not be available for all commodities.
Prepared by:
Virginia Department of Mines, Minerals, and Energy - Division of Geology and Mineral Resources
Date of this report:
9/7/2017

MINERAL RESOURCES AND INDUSTRIES IN SPOTSYLVANIA COUNTY, VIRGINIA
TABLE 4: Summary of Workers, Hours, and Wages for Mining Operations, 2014-2016

A	B	C	D	E	F	G	H	I	J
			PRODUCTION		OFFICE		TOTAL		
COMPANY NAME	PERMIT ID	YEAR	WORKERS	HOURS	WORKERS	HOURS	WORKERS	HOURS	WAGES (x $1000)
LUCK STONE CORPORATION	08203AC	2016	23	54,810	0	0	23	54,810	
KENT BROTHERS LLC	13413AB	2016	1	1,120	1	10	2	1,130	
VULCAN CONSTRUCTION MATERIALS LP	90294AC	2016	0	0	0	0	0	0	
LUCK STONE CORPORATION	90440AA	2016	0	0	0	0	0	0	
BARDON, INC.	90468AB	2016	8	11,853	4	5,815	12	17,668	
SPOTSYLVANIA TOTAL		**2016**	**32**	**67,783**	**5**	**5,825**	**37**	**73,608**	**$1,977**
LUCK STONE CORPORATION	08203AC	2015	22	53,117	0	0	22	53,117	
KENT BROTHERS LLC	13413AB	2015	0	0	0	0	0	0	
VULCAN CONSTRUCTION MATERIALS LP	90294AC	2015	0	0	0	0	0	0	
LUCK STONE CORPORATION	90440AA	2015	0	0	0	0	0	0	
BARDON, INC.	90468AB	2015	9	11,413	4	5,537	13	16,950	
SPOTSYLVANIA TOTAL		**2015**	**31**	**64,530**	**4**	**5,537**	**35**	**70,067**	**$1,977**
LUCK STONE CORPORATION	08203AC	2014	22	49,565	0	0	22	49,565	
KENT BROTHERS LLC	13413AB	2014	2	1,535	1	40	3	1,575	
VULCAN CONSTRUCTION MATERIALS LP	90294AC	2014	0	0	0	0	0	0	
LUCK STONE CORPORATION	90440AA	2014	0	0	0	0	0	0	
BARDON, INC.	90468AB	2014	7	15790	2	3616	9	19,406	
SPOTSYLVANIA TOTAL		**2014**	**31**	**66,890**	**3**	**3,656**	**34**	**70,546**	**$1,924**

Data Sources:
Columns A-J: Virginia Department of Mines, Minerals, and Energy - Division of Mineral Mining
Note 1: In accordance with 45.1-161.292:35(E) of the Mineral Mine Safety Laws of Virginia, wage data has been withheld (W) to protect confidential information reported by individual permit holders. The annual wage data shown is aggregated for all permits.
Note 2: Number of employees, hours, and wages reported by independent contractors working on the listed permits is not included.
Prepared by:
Virginia Department of Mines, Minerals, and Energy - Division of Geology and Mineral Resources
Date of this report:
9/7/2017

Per DMME, Spotsylvania County occupies portions of two geologic provinces with a wide variety of mineral and energy resources utilized in the past and present, and potentially available for development

in the future. In the northeastern quarter of the County, unconsolidated sediments are part of Virginia's Coastal Plain while the remainder of the County is underlain by crystalline rocks of the Piedmont province. The eastern half of the County contains sand and gravel, clay and granite resources used for construction aggregate. Sand and gravel deposits occur along Massaponax Creek within the Potomac Formation (Kp), and in the middle of the county hosted in the Ta River Metamorphic Suite (Ta). The central and western portions of the County are within the Piedmont physiographic province. Here, northeast-trending bands of rocks mapped as the Mine Run Complex and the Chopawamsic Formation (Ccv) host gold, copper, iron and zinc deposits (See Table 5). Mining and exploration of these metallic deposits dates back to the early 1800s; the first occurrence of lode gold in Virginia was reported in 1806 at the Whitehall mine located near Shady Grove Church (Watson 1907). This and other important historic gold mines including the Goodwyn and Mitchell mines are located in Virginia's gold-pyrite belt (Lonsdale, 1927).

Geologic maps of Spotsylvania County are available in reports from the U.S. Geological Survey (USGS) including mapping at 1:100,000 scale (Mixon et al., 2000) and portions of the county at 1:24,000 scale (Bobyarchick, et al., 1981; Weir, et al., 1985). These reports are available for free download on the USGS website, **HERE**.

MINERAL RESOURCES AND INDUSTRIES IN SPOTSYLVANIA COUNTY, VIRGINIA

TABLE 5: Summary of Historic Mineral Extraction and Processing Sites and Mineral Occurrences.

A	B	C	D	E	F	G	H
POINT ID	QUADRANGLE NAME	PRIMARY COMMODITY	LATITUDE	LONGITUDE	LOCATION TYPE	LOCATION NAME	SITE REFERENCE(S)
169B-101	Guinea	sand and gravel	38.23077	-77.49989	pit		
169B-102	Guinea	sand and gravel	38.22878	-77.49791	pit		
169B-103	Guinea	sand and gravel	38.22729	-77.49387	pit		
169B-104	Guinea	sand and gravel	38.24096	-77.47316	pit		
169B-105	Guinea	sand and gravel	38.24097	-77.47314	pit		
169B-106	Guinea	sand and gravel	38.23706	-77.47412	pit		
169B-107	Guinea	sand and gravel	38.23998	-77.46848	pit		
169B-108	Guinea	sand and gravel	38.23835	-77.46756	pit		
169B-109	Guinea	sand and gravel	38.23930	-77.46507	pit		
169B-110	Guinea	sand and gravel	38.23711	-77.46629	pit		
169B-111	Guinea	sand and gravel	38.23805	-77.46349	pit		
169B-112	Guinea	sand and gravel	38.23762	-77.45953	pit		
169B-113	Guinea	sand and gravel	38.23082	-77.46152	pit		
169B-201	Guinea	clay	38.24184	-77.42049	sample with potential use		
169B-202	Guinea	clay	38.22206	-77.45483	sample with potential use		
169B-203	Guinea	sand and gravel	38.23310	-77.44881	pit	K. & K. Partnership	
169B-204	Guinea	sand and gravel	38.23315	-77.44672	pit		
169B-205	Guinea	sand and gravel	38.23235	-77.44442	pit		
169B-206	Guinea	sand and gravel	38.22858	-77.43734	pit		
169B-207	Guinea	sand and gravel	38.22761	-77.43670	pit		
169B-208	Guinea	sand and gravel	38.22777	-77.43313	pit		
169B-209	Guinea	sand and gravel	38.22616	-77.42136	pit		
169B-210	Guinea	sand and gravel	38.23603	-77.43995	pit		
169B-301	Guinea	sand and gravel	38.22794	-77.41618	pit		
169B-302	Guinea	sand and gravel	38.22688	-77.41241	pit		
169B-303	Guinea	sand and gravel	38.23376	-77.41001	pit	Haney & Adair Trucking	
169B-304	Guinea	sand and gravel	38.24949	-77.40483	pit		
169B-305	Guinea	sand and gravel	38.24910	-77.40016	pit		
169B-306	Guinea		38.24397	-77.41228			
169B-307	Guinea	sand and gravel	38.24959	-77.41145	pit	Tarmac - Mid Atlantic, New Post Plant	
169B-308	Guinea	sand and gravel	38.24967	-77.40678	pit	Tarmac - Mid Atlantic, New Post Plant	
169B-401	Guinea	gravel	38.18251	-77.47044	pit	Franconia Gravel Company	
169B-402	Guinea	sand and gravel	38.17567	-77.48824	pit		
169B-403	Guinea	sand and gravel	38.17509	-77.48601	pit		
169B-404	Guinea	sand and gravel	38.17401	-77.48601	pit		
169B-405	Guinea		38.19466	-77.49735	processing plant	Exposaic Industries, Inc. of Virginia	
169B-701	Guinea	sand and gravel	38.16429	-77.47621	pit		
169B-702	Guinea	sand and gravel	38.15950	-77.47832	pit		
169B-703	Guinea	sand and gravel	38.15799	-77.48118	pit		
169B-801	Guinea	sand and gravel	38.13213	-77.45660	pit		
169B-802	Guinea	sand and gravel	38.13709	-77.45085	pit	Caroline S. & G.	
169B-803	Guinea	sand and gravel	38.14107	-77.44312	pit	L. S. Sorber	
169B-804	Guinea	sand and gravel	38.12766	-77.43402	pit		
169B-805	Guinea	sand and gravel	38.12609	-77.43346	pit		
170A-301	Spotsylvania	sand and gravel	38.23268	-77.53632	pit	W. L. Hicks	
170A-302	Spotsylvania	sand and gravel	38.22589	-77.54002	pit	Leavells Shop Corporation	
170A-303	Spotsylvania	sand and gravel	38.22596	-77.50430	pit	CAD Association; Ltd. Partners	
170A-401	Spotsylvania	sand and gravel	38.19196	-77.62457	pit	J. S. Shelton Trucking Company	
170A-501	Spotsylvania	gravel	38.20592	-77.56253	crushed stone quarry	Martin Marietta Aggregates	
170A-601	Spotsylvania	sand and gravel	38.18987	-77.52782	pit	Dickerson Brothers	
170A-602	Spotsylvania	sand and gravel	38.20627	-77.51274	pit	W. L. Hicks	
170B-101	Brokenburg	gold	38.23912	-77.73834	shaft	Whitehall	Sweet et al (1989), Sweet and Trimble (1983), Credner (1868), Cline (1921), Sweet (1980), Sweet (1971), Luttrell (1966), Watson (1907), Hotchkiss (1881), Silliman (1837)
170B-101	Brokenburg	gold	38.23913	-77.73840	shaft	Whitehall	
170B-102	Brokenburg	gold	38.24738	-77.72768	prospect pit	Randolph	Sweet and Trimble (1983), Cline et al (1921), Sweet (1980), Luttrell (1966), Pardee and Park (1948)
170B-102	Brokenburg	gold	38.24739	-77.72776	prospect	Randolph	
170B-401	Brokenburg	gold	38.20810	-77.74726	prospect pit	Powell's	Sweet and Trimble (1983), Sweet (1980)
170B-401	Brokenburg	gold	38.20813	-77.74731	prospect	Powell's	
170B-601	Brokenburg	sand and gravel	38.17986	-77.63953	pit	Marion S. Copes, Jr., Inc.	
170B-901	Brokenburg	sand and gravel	38.15519	-77.65089	pit	Bishop & Settle Construction Company, Inc.	
170C-401	Lake Anna East	clay	38.07015	-77.74046	sample with potential use		
170D-201	Ladysmith	sand and gravel	38.12220	-77.55094	pit	Stanley Construction Company	
171A-301	Belmont	gold	38.24897	-77.75796	prospect pit	Beazely	Sweet and Trimble (1983), Cline et al (1921), Sweet (1980), Luttrell (1966)

MINERAL RESOURCES AND INDUSTRIES IN SPOTSYLVANIA COUNTY, VIRGINIA

TABLE 5: Summary of Historic Mineral Extraction and Processing Sites and Mineral Occurrences

A POINT ID	B QUADRANGLE NAME	C PRIMARY COMMODITY	D LATITUDE	E LONGITUDE	F LOCATION TYPE	G LOCATION NAME	H SITE REFERENCE(S)
171A-301	Belmont	gold	38.24898	-77.75791	prospect	Beazely	Sweet et al (1989), Sweet and Trimble (1983), Sweet et al (1989), Cline et al (1921), Sweet (1980), Luttrell (1966)
171A-302	Belmont	gold	38.21101	-77.76265	open pit	Roney	
171A-302	Belmont	gold	38.21102	-77.76259	quarry	Roney	
171A-303	Belmont	gold	38.20967	-77.76167	quarry	Roney	
171A-303	Belmont	gold	38.20969	-77.76174	open pit	Roney	Sweet et al (1989), Sweet and Trimble (1983), Sweet et al (1989), Cline et al (1921), Sweet (1980), Luttrell (1966)
171A-501	Belmont	zinc	38.17607	-77.79765	shaft	Valzinco	Sweet et al (1989), Pavlides et al (1982), Grosh (1949), Poole (1974), Luttrell (1966)
171A-501	Belmont	zinc	38.17607	-77.79768	shaft	Valzinco	
171A-601	Belmont	gold	38.19998	-77.77483	prospect pit	Rawlings	Sweet and Trimble (1983), Cline et al (1921)
171A-601	Belmont	gold	38.19999	-77.77480	prospect	Rawlings	
171A-602	Belmont	gold	38.19770	-77.77744	open pit	New Grindstone	Sweet et al (1989), Sweet (1980), Sweet and Trimble (1983), Cline et al (1921), McCaskey (1911), McCaskey (1912)
171A-602	Belmont	gold	38.19771	-77.77739	quarry	New Grindstone	
171A-603	Belmont	gold	38.19421	-77.76582	quarry	Grindstone (Hill)	Sweet et al (1989), Sweet and Trimble (1983), Cline et al (1921), Luttrell (1966), McCaskey (1911), McCaskey (1912), Sweet (1980)
171A-603	Belmont	gold	38.19421	-77.76589	open pit	Grindstone (Hill)	
171A-604	Belmont	gold	38.19358	-77.77985	prospect	Prospect B	
171A-604	Belmont	gold	38.19361	-77.77988	prospect pit	prospect pit B	Sweet and Trimble (1983)
171A-605	Belmont	gold	38.18490	-77.75812	prospect	Johnston's	
171A-605	Belmont	gold	38.18499	-77.75817	prospect pit	Johnston's	Sweet and Trimble (1983), Sweet (1980)
171A-606	Belmont	gold	38.17499	-77.78159	prospect	Mitchell	
171A-606	Belmont	gold	38.17508	-77.78165	open pit	Mitchell	Sweet and Trimble (1983), Cline et al (1921), Sweet (1980), Pardee and Park (1948), Watson (1907)
171A-801	Belmont	copper	38.15994	-77.80093	prospect pit	Marva	Sweet et al (1989), Cline et al (1921), Luttrell (1966)
171A-801	Belmont	copper	38.15996	-77.80096	prospect	Marva	
171A-802	Belmont	gold	38.14203	-77.80634	quarry	Stajar's (Starrs)	
171A-802	Belmont	gold	38.14208	-77.80638	open pit	Stajar's (Starrs)	Sweet and Trimble (1983), Morrill (1972), Sweet (1980)
171A-803	Belmont	gold	38.13956	-77.80659	quarry	Goodwyn	
171A-803	Belmont	gold	38.13957	-77.80661	open pit	Goodwyn	Sweet and Trimble (1983), Cline et al (1921), Sweet (1980), Luttrell (1966), Watson (1907), Hotchkiss (1881)
171A-804	Belmont	gold	38.13784	-77.80807	open pit	Goodwyn	Sweet and Trimble (1983), Cline et al (1921), Sweet (1980), Luttrell (1966), Watson (1907), Hotchkiss (1881)
171A-804	Belmont	gold	38.13784	-77.80810	quarry	Goodwyn	
171A-805	Belmont	gold	38.13942	-77.80394	quarry	Knapp	
171A-805	Belmont	gold	38.13946	-77.80399	open pit	Knapp	Sweet and Trimble (1983), Sweet (1980), Anonymous (1884)
171D-301	Lake Anna West	N/A	38.08945	-77.78703	furnace	Fredericksville Iron Furnace (Gov. Spotswood)	NONE
171D-301	Lake Anna West	iron	38.08946	-77.78700	furnace	Fredericksville Iron Furnace	
182C-701	Fredericksburg	sand and gravel	38.27409	-77.49319	pit	Alfred Ventura	
182C-702	Fredericksburg	sandstone	38.29143	-77.47935	dimension stone quarry	Aquia Sandstone	
182C-703	Fredericksburg	gravel	38.28685	-77.47842	pit	W. C. Spratt, Inc.	
182C-805	Fredericksburg	sand and gravel	38.27275	-77.43842	pit	Massaponax Sand & Gravel	
182C-806	Fredericksburg	sand and gravel	38.25462	-77.42331	pit	Massaponax Sand & Gravel	
182C-901	Fredericksburg	sand and gravel	38.25361	-77.41068	pit	Tarmac - New Post Plant	
182C-902	Fredericksburg	sand and gravel	38.25076	-77.40730	pit	Tarmac - New Post Plant	
182C-903	Fredericksburg	sand and gravel	38.25132	-77.40436	pit	Tarmac - New Post Plant	
183C-301	Chancellorsville	gold	38.33963	-77.65681	prospect pit	Hunting Run	Sweet (1980), Sweet and Trimble (1983), Lonsdale (1927)
183C-302	Chancellorsville	gold	38.35560	-77.63282	prospect pit	Brinton	Sweet (1980), Sweet and Trimble (1983), Lonsdale (1927), Pardee and Park (1948)
183C-501	Chancellorsville	gold	38.30978	-77.66712	prospect pit	prospect pit A	Sweet (1980), Sweet and Trimble (1983)
183C-601	Chancellorsville	iron	38.31291	-77.62734	open pit	unknown	NONE
183C-602	Chancellorsville	iron	38.31534	-77.63002	open pit	unknown	NONE
183C-701	Chancellorsville	gold	38.27992	-77.71914	prospect pit	Marsden	Sweet (1980), Sweet and Trimble (1983), Cline et al (1921), Luttrell (1966)

MINERAL RESOURCES AND INDUSTRIES IN SPOTSYLVANIA COUNTY, VIRGINIA
TABLE 5: Summary of Historic Mineral Extraction and Processing Sites and Mineral Occurrences

A POINT ID	B QUADRANGLE NAME	C PRIMARY COMMODITY	D LATITUDE	E LONGITUDE	F LOCATION TYPE	G LOCATION NAME	H SITE REFERENCE(S)
183C-801	Chancellorsville	gold	38.28666	-77.68121	prospect pit	Quaker	Sweet (1980), Sweet and Trimble (1983), Pardee and Park (1948), Cline et al (1921), Luttrell (1966)
183C-901	Chancellorsville	gold	38.28869	-77.65311	prospect pit	Furnace	Sweet (1980), Sweet and Trimble (1983)
183C-902	Chancellorsville	N/A	38.28864	-77.64860	furnace	Catherine Furnace	NONE
183D-114	Salem Church	gold	38.35710	-77.62146	shaft	United States	Sweet et al (1989), Sweet (1980), Sweet and Trimble (1983), Maury (1837), Pardee and Park (1948), Lonsdale (1927), Silliman (1837), Watson (1907), Park (1936), Credner (1868), Luttrell (1966)
183D-115	Salem Church	zinc	38.34650	-77.61070	prospect pit	Pruitt #4	Sweet et al (1989), Luttrell (1966)
183D-202	Salem Church	gold	38.34322	-77.57607	open pit	Ramsey	Sweet (1980), Sweet and Trimble (1983), Lonsdale (1927), Cline, Watson and Wright (1921), Luttrell (1966)
183D-203	Salem Church	gold	38.33687	-77.58204	open pit	Bell	Sweet (1980), Sweet and Trimble (1983), Lonsdale (1927), Luttrell (1966), Conley (1978)
183D-401	Salem Church	gold	38.33250	-77.60983	open pit	Gardiner	Sweet (1980), Sweet and Trimble (1983), Lonsdale (1927), Luttrell (1966), Credner (1868)
183D-402	Salem Church	gold	38.32975	-77.58910	open pit	Smith	Sweet (1980), Sweet and Trimble (1983), Lonsdale (1927), Luttrell (1966)
183D-403	Salem Church	N/A	38.33078	-77.61211	furnace	Spotswood	NONE
183D-501	Salem Church	gold	38.32374	-77.56561	open pit	Mott	Sweet (1980), Sweet and Trimble (1983), Credner (1868), Luttrell (1966)
183D-601	Salem Church	granite	38.32496	-77.50449	quarry	Fredericksburg Stone Co.	
183D-602	Salem Church	granite	38.32421	-77.50023	quarry	Fredericksburg Stone Co.	
184D-901	Mine Run	sand and gravel	38.26245	-77.76789	pit	Michie Contracting Company	

Data Source:
Columns A-H: If Point ID (column A) is "###(A-D)-###": Virginia Department of Mines, Minerals, and Energy - Division of Geology and Mineral Resources MRV;
If Point ID (column A) is "10######": U.S. Geological Survey Mineral Resources Data System (MRDS).
Note1: Latitude (N) and Longitude (W) in decimal degrees; North American Datum 1983 (NAD 83)
Prepared by:
Virginia Department of Mines, Minerals and Energy - Division of Geology and Mineral Resources
Date of this report:
4/8/2013

Past Production

In the past granite was quarried for crushed stone or dimension stone at a number of sites along the Rappahannock River, west of Fredericksburg and also along the Hazel River, south of Fredericksburg, and near Chancellorsville. Sandstone has been quarried in the Fredericksburg area for use as dimension stone. Following are some of the major inactive stone quarries and sand & gravel pits in the County:

-Alum Springs Quarry, Hazel Run, Fredericksburg (1815)
-Aquia Sandstone Quarry, Hazel Run, Fredericksburg (early 1800s)
-Willis Hill Quarry, Hazel Run, Fredericksburg (early 1800s)
-Battlefield Granite Company, 2.5 miles NW of Fredericksburg (1893-1896)
-Cartright and Davis, NW of Fredericksburg (1899-1912)
-Battlefield Granite Corporation, NW of Fredericksburg (1914-1919)
-Fredericksburg Stone Company, NW of Fredericksburg (1958-1975)
-Haney and Adair Trucking-SE of Fredericksburg (1973-1975)
-Leavells Shop Corporation, SW of Fredericksburg (1970s)
-Alfred Ventura, south Fredericksburg (1975-1976)
-Franconia Gravel Corporation, S of Fredericksburg (1975-1982)
-Massaponax Sand and Gravel Corporation, SE of Fredericksburg (1919-1990)

Mica has been mined from the Edenton mine, located in the southwestern part of the County, about a mile northeast of the North Anna River. Kyanite is found in schists in the western part of the County, and glauconitic or greensand marl is found in the eastern part of the County. Monazite, a phosphate of the rare earths, occurs in saprolite over granitic rocks near Post Oak and Five Mile Fork.

Since its discovery in 1806 within the County, ~~Gold was discovered in Spotsylvania County in 1806, just northwest of Shady Grove Church, and~~ gold mining and prospecting were carried on intermittently from about forty-one sites in the northern and western parts of the County. Reported gold production from Spotsylvania County is as much as 105,300 ounces with the bulk of the production from the Whitehall, Marshall (exact ~~–~~location unknown), and the United States mines. At the Valzinco mine, located near Porters, lead and zinc ore, with some copper mineralization was mined ~~–~~by the Bertha Mineral Co. (1909-1912), the Virginia Lead and Zinc Corp., (1914-1918), and by the Panaminas Co. from 1942-1945; 500,000 pounds of lead and 1,250,000 pounds of zinc were produced during these periods. There is also reported by-product production of gold at this mine in the 1940s. Iron ore was mined from gossans in western Spotsylvania County for use in local iron furnaces. Pyrite occurrences have been prospected in the vicinity of Chancellorsville.

Clay materials were formerly extracted for use in the manufacture of brick at Fredericksburg. Three samples of clay materials were tested and found suitable as raw materials for the manufacture of brick. These samples include a sample of Tertiary clay, 5 miles south of Fredericksburg; a sample of Tertiary clay, 3.5 miles southeast of Fredericksburg, and a sample of clay residuum over granitic rocks, located near Lewistown in the southeastern part of the County.

~~REFERENCES~~References

~~Building Stone~~

~~Harrison, N., 1986, Fredericksburg's Battlefield Granite: Virginia Minerals, v. 32, n. 3.~~

~~Sweet, P.C., 1990, Present and future dimension stone industry in Virginia, in: Zupan A.W., and Maybin, A.H. (eds), Proceedings of the 24th Forum on the Geology of Industrial Minerals, May 2-5, 1988, Greenville, South Carolina, p. 129-135.~~

~~Webb, H.W., and Sweet, P.C., 1992, Interesting uses of stone in Virginia – Part I: Virginia Minerals, v. 38, No 4.~~

~~Clay~~

~~Calver, J.L., Hamlin, H.P., and Wood, R.S., 1961, Analyses of clay, shale, and related materials – northern counties: Virginia Division of Mineral Resources Mineral Resources Report 2, p. 170-182.~~

~~Sweet, P.C., 1982, Virginia clay material resources: Virginia Division of Mineral Resources Publication 36, p. 112-113.~~

~~Sweet, P.C., 1986, Clay-material samples collected 1981-1984, Virginia Division of Mineral Resources Publication 68.~~

~~Copper~~

~~Luttrell, G.W., 1966, Base- and precious-metal and related ore deposits of Virginia: Virginia Division of Mineral Resources Mineral Resources Report 7, 167 p.~~

General – mineral production

Gilmer, A.K., Enomoto, C.B., Lovett, J.A., and Spears, D.B., 2005, Mineral and fossil fuel production in Virginia (1999-2003): Virginia Division of Mineral Resources Open-File Report 05-04.

Glauconitic marl

Clark, W.B., Miller, B.L., Berry, E.W., and Watson, T.L., 1912, Physiography and geology of the Coastal Plain Province of Virginia: Virginia Geological Survey Bulletin 4, p. 90-95, 248-249.

Gold

Lonsdale, J.T., 1927, Geology of the Gold-Pyrite Belt of the northeastern Piedmont Virginia: Virginia Geological Survey Bulletin 30, p. 84-85.

Luttrell, G.W., 1966, Base- and precious-metal and related ore deposits of Virginia: Virginia Division of Mineral Resources Mineral Resources Report 7, 167 p.

Sweet, P.C., 1971, Gold mines and prospects in Virginia: Virginia Minerals, v. 17, n. 3

Sweet, P. C., 1982, Gold occurrences in Virginia, an update: Virginia Division of Mineral Resources Virginia Minerals v. 28, n. 4, p. 33-41.

Sweet, P. C., and Trimble, D., 1983, Virginia gold resource data: Virginia Division of Mineral Resources Publication 45, p. 183-192.

Watson, T.L., 1907, Mineral resources of Virginia: The Virginia Jamestown Exposition Commission, J.P. Bell Company, Lynchburg, Virginia, p. 553-554.

Granite

Steidtmann, E., 1945, Commercial granites and other crystalline rocks of Virginia: Virginia Geological Survey Bulletin 64, p. 41.

Iron

Watson, T.L., 1907, Mineral resources of Virginia: The Virginia Jamestown Exposition Commission, J.P. Bell Company, Lynchburg, Virginia.

Lead

Luttrell, G.W., 1966, Base- and precious-metal and related ore deposits of Virginia: Virginia Division of Mineral Resources Mineral Resources Report 7, 167 p.

Mica

Brown, W.R., 1962, Mica and feldspar deposits of Virginia: Virginia Division of Mineral Resources Mineral Resources Report 3.

Pyrite

Lonsdale, J.T., 1927, Geology of the Gold-Pyrite Belt of the northeastern Piedmont Virginia: Virginia Geological Survey Bulletin 30, p. 9-10, 89-90.

Poole, J.L., 1973, Iron sulfide mines in Virginia: Virginia Division of Mineral Resources Virginia Minerals v.

~~19, n. 3, p. 29-33.~~

~~**Sandstone**~~

~~Watson, T.L., 1907, Mineral resources of Virginia: The Virginia Jamestown Exposition Commission, J.P. Bell Company, Lynchburg, Virginia.~~

~~**Zinc**~~

~~Luttrell, G.W., 1966, Base- and precious-metal and related ore deposits of Virginia: Virginia Division of Mineral Resources Mineral Resources Report 7, 167 p.~~

Following is a list of references and resources for Spotsylvania County mineral resources, which includes both references cited above as well as additional sources of information. Most references can be obtained by contacting DGMR at 434-951-6341 or by visiting the Virginia Department of Mines, Minerals and Energy website.

Building Stone

Harrison, N., 1986, Fredericksburg's Battlefield Granite: Virginia Division of Mineral Resources Virginia Minerals, v. 32, n. 3. Available via the Virginia Department of Mines Minerals and Energy **HERE**.

Sweet, P.C., 1990, Present and future dimension stone industry in Virginia, in: Zupan A.W., and Maybin, A.H. (eds), Proceedings of the 24th Forum on the Geology of Industrial Minerals, May 2-5, 1988, Greenville, South Carolina, p. 129-135.

Webb, H.W., and Sweet, P.C., 1992, Interesting uses of stone in Virginia – Part I: Virginia Division of Mineral Resources Virginia Minerals, v. 38, No 4. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Clay

Calver, J.L., Hamlin, H.P., and Wood, R.S., 1961, Analyses of clay, shale, and related materials – northern counties: Virginia Division of Mineral Resources Mineral Resources Report 2, p. 170-182. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Sweet, P.C., 1982, Virginia clay material resources: Virginia Division of Mineral Resources Publication 36, p. 112-113. Available via the Virginia Department of Mines, Minerals and Energy **HERE.**

Sweet, P.C., 1986, Clay-material samples collected 1981-1984, Virginia Division of Mineral Resources Publication 68. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Copper

Luttrell, G.W., 1966, Base- and precious-metal and related ore deposits of Virginia: Virginia Division of Mineral Resources Mineral Resources Report 7, p. 167 Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

General – mineral production

Gilmer, A.K., Enomoto, C.B., Lovett, J.A., and Spears, D.B., 2005, Mineral and fossil fuel production in Virginia (1999-2003): Virginia Division of Mineral Resources Open-File Report 05-04. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Geology

Bobyarchick, A.R., Pavlides, Louis, and Weir, Karen, 1981, Piedmont geology of the Ladysmith and Lake Anna East quadrangles, and vicinity, U.S. Geological Survey Miscellaneous Investigations Series Map I-1282.

Mixon, R.B., Louis Pavlides, D.S. Powars, A.J. Froelich, R.E. Weems, J.S. Schindler, W.L. Newell, L.E. Edwards, and L.W. Ward, 2000, Geologic map of the Fredericksburg 30' X 60' quadrangle, Virginia and Maryland: U.S. Geological Survey Geologic Investigations Series Map I-2607.

Wier, K. and Pavlides, Louis, 1985, Piedmont geology of the Spotsylvania quadrangle, Spotsylvania County, Virginia: U.S. Geological Survey Geologic Investigations Series Map I-1568.

Glauconitic marl

Clark, W.B., Miller, B.L., Berry, E.W., and Watson, T.L., 1912, Physiography and geology of the Coastal Plain Province of Virginia: Virginia Geological Survey Bulletin 4, p. 90-95, 248-249. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Gold

Lonsdale, J.T., 1927, Geology of the Gold-Pyrite Belt of the northeastern Piedmont Virginia: Virginia Geological Survey Bulletin 30, p. 84-85. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Luttrell, G.W., 1966, Base- and precious-metal and related ore deposits of Virginia: Virginia Division of Mineral Resources Mineral Resources Report 7, p. 167. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Sweet, P.C., 1971, Gold mines and prospects in Virginia: Virginia Division of Mineral Resources Virginia Minerals, v. 17, n. 3. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Sweet, P. C., 1982, Gold occurrences in Virginia, an update: Virginia Division of Mineral Resources Virginia Minerals v. 28, n. 4, p. 33-41. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Sweet, P. C., and Trimble, D., 1983, Virginia gold resource data: Virginia Division of Mineral Resources Publication 45, p. 183-192. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Watson, T.L., 1907, Mineral resources of Virginia: The Virginia Jamestown Exposition Commission, J.P. Bell Company, Lynchburg, Virginia, p. 553-554. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Granite

Steidtmann, E., 1945, Commercial granites and other crystalline rocks of Virginia: Virginia Geological Survey Bulletin 64, p. 41. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Iron

Watson, T.L., 1907, Mineral resources of Virginia: The Virginia Jamestown Exposition Commission, J.P. Bell Company, Lynchburg, Virginia. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Lead

Luttrell, G.W., 1966, Base- and precious-metal and related ore deposits of Virginia: Virginia Division of Mineral Resources Mineral Resources Report 7, p. 167. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Mica

Brown, W.R., 1962, Mica and feldspar deposits of Virginia: Virginia Division of Mineral Resources Mineral Resources Report 3. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Pyrite

Lonsdale, J.T., 1927, Geology of the Gold-Pyrite Belt of the northeastern Piedmont Virginia: Virginia Geological Survey Bulletin 30, p. 9-10, 89-90. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Poole, J.L., 1973, Iron sulfide mines in Virginia: Virginia Division of Mineral Resources Virginia Minerals v. 19, n. 3, p. 29-33. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Sandstone

Watson, T.L., 1907, Mineral resources of Virginia: The Virginia Jamestown Exposition Commission, J.P. Bell Company, Lynchburg, Virginia. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

Zinc

Luttrell, G.W., 1966, Base- and precious-metal and related ore deposits of Virginia: Virginia Division of Mineral Resources Mineral Resources Report 7, p. 167. Available via the Virginia Department of Mines, Minerals and Energy **HERE**.

SOILS

Soils are a basic resource consisting of air, water, mineral and organic matter. Arranged in layers called horizons, these natural formations are termed soil profiles or classifications. The composition of a soil profile is determined by various factors such as parent material, relief, climate and vegetation. Classification of soils is important for determining the best uses and development constraints of an area.

Due to its varied physiography, Spotsylvania County is one of the most diverse soil communities in Virginia. Approximately 42 soil classifications have been mapped in the ~~county~~ County by the United States Department of Agriculture, Soil Conservation Service (SCS). These maps, along with suitability charts, are published in the Soil Survey of Spotsylvania County Virginia, which was completed in 1985.

The soil survey is the ~~county's~~ County's best source of information concerning soil locations and development constraints. However, the field data only apply to a depth of five or six feet and do not eliminate the need for on-site investigations. In addition, it is common for great differences in soil properties to occur within short distances. Also, some of the survey fieldwork may be outdated, particularly data on septic limitations. In spite of the above precautions, the soil survey remains highly useful for general planning purposes. Pertinent characteristics for water quality planning, including presence of hydric soils, septic limitations, depth of water table, shrink/swell potential, degree of slope, and ~~erodibility~~ erodability/ permeability are indicated for each classification and quantified by acreage. This data enables planners to make broad, ~~countywide~~ County-wide assessments of soil conditions and limitations, providing insight into land use and development prospects and limitations.

The Spotsylvania County Geographical Information Systems (GIS) Department graphically depicts County soils as a map layer as part of the Interactive Web Based GIS located **HERE**. Soils data is produced and distributed by the Natural Resources Conservation Service (NRCS) Soil Survey Geographic Database (SSURGO). NRCS provides web based access to current soil surveys that are searchable by location at their Web Soil Survey site **HERE**.

Overview of Soil Conditions

By and large, most of Spotsylvania's soils are conducive to development. Because of the ~~county's~~ County's rolling topography, it possesses an abundance of broad upland terraces, convex ridgetops and well drained lands. Both the Piedmont and Coastal Plain areas are dissected by well-established drainageways, which keeps the water table low and reduces the problems with ponding, flooding and saturated soil. Some central portions of the ~~county~~ County, however, are only moderately well drained by the smaller streams prevalent in that area. In addition, limitations to development can result from underlying rock formations and steep slopes found along some of larger streams and river terraces.

In certain sensitive areas, ~~county~~ County soils exhibit a number of characteristics, which can limit development or add significantly to development costs. The major limitations are discussed in each subsection below~~.~~:

Steep Slopes (See Map)

The topography of Spotsylvania County is generally rolling hills of the piedmont and flat coastal plains. ~~However, there are areas where fairly steep slopes that exist as the result of erosion of streams over time. The steepest slopes in Spotsylvania County are along the Rapidan and Rappahannock Rivers in the northern portion of the County and along Massaponax Creek in the northeastern portion. The Steep Slopes map shows the areas of the County where steep slopes are prevalent.~~

~~The soil survey provides additional data on soils associated with steep topography. Soils classifications are often divided into phases based on certain characteristics, including degree of slope. For example, Louisburg sandy loam, 25 to 50 percent slopes, is one of several phases in the Louisburg series.~~

~~In Spotsylvania, eight (8) soil classifications are divided into steep phases (15% - 60%), as shown on the Soils Map. Roughly 9% (23,877 acres) of the county's soils are moderately sloped (15% - 25%), while an additional 3.7% (9,725 acres) of county soils exceed 25% in slope. Typically, the steeper lands are found adjacent to the county's larger streams and rivers. More precise locations of steep soils can be determined through the detailed map units in the soil survey.~~

Steep slopes, including those in excess of 40% are most prevalent in the northern and northeastern portions of the County. Steep slope areas tend to provide the greatest risk of slope and streambank erosion threats within the County. Steep slope areas benefit from retaining natural vegetation with root systems providing soil stabilization. Erosive threats upon steep slopes can be linked to soil type, gravity, drainage velocity over steep surfaces (wash-out effect). Typically, steepest slopes are found adjacent to the County's larger streams and rivers. The Rapidan, Rappahannock, Massaponax Creek corridors and their tributaries contain the majority of the County's steepest slopes. Utilizing USDA Natural Resources Conservation Service (NRCS) mapping data, the County has included a Steep Slopes map for reference.

Per NRCS in reference to the map data, slope gradient is the difference in elevation between two points, expressed as a percentage of the distance between those points. The slope gradient is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Shrink-Swell Soils

Shrink/swell soils are those that shrink when dry and swell when wet. While uncommon in Spotsylvania, shrink/swell soils can result in severe and costly damage to roads, building foundations, and other structures. Most soil classifications within the ~~county~~ County are characterized as having a low to moderate shrink/swell potential (98%). The only soils noted for high shrink/swell characteristics are Orange-Iredell loams. These particular soils are estimated to comprise only 1.3% (3,427 acres) of the ~~county's~~ County's total land area. Local shrink/swell soils are believed to be scattered in small, isolated locations within the ~~county~~ County, usually on broad convex ridgetops or side slopes. ~~These locations are depicted on the Shrink-Swell Soils Map, with more precise locations~~ Precision determinations of shrink-swell soils presence is determined by ~~determined through the~~ detailed map units in the soil survey or through soil testing.

Hydric Soils (See Map)

Hydric soils are those that are sufficiently wet to support the growth and regeneration of hydrophytic vegetation. Since various state and federal laws safeguard wetlands, development activity on hydric soils is generally discouraged. Usually, the inherent wetness of hydric soils discourages development interest.

In certain instances, hydric soils may be exempt from wetland regulations, if they have been drained or converted to agricultural use (prior conversions). However, where hydric soils remain undisturbed and support wetland vegetation, development is usually prohibited or costly mitigation measures are required (e.g. construction of replacement/artificial wetlands).

The United States Environmental Protection Agency Soil Survey Geographic database (SSURGO) classifies the following levels of hydric soils status concerning hydric rating: "Hydric" means that all components listed for a given map unit are rated as being hydric. "Predominantly hydric" means components that comprise 66 to 99 percent of the map unit are rated as hydric. "Partially hydric" means components that comprise 33 to 66 percent of the map unit are rated as hydric. "Predominantly non-hydric" means components that comprise up to 33 percent of the map unit are rated as hydric. "Non-hydric" means that none of the components are rated as hydric. The assumption here is that all components of the map unit are rated as hydric or non-hydric in the underlying database.

Five (5) classifications within the ~~county~~ County are considered hydric: Aqults, Cartecay, Fluvaquents/ Udifluvents, Partlow and Toddstav soils. In total, about ~~15~~16% of Spotsylvania's soils (~~39,710~~ 44,463 acres) are defined as partially or predominantly hydric. If undrained, areas of hydric soils are saturated, flooded or ponded for a significant duration of the year. The water table for hydric soil generally lies just above (+12") or slightly below the surface (-36").

In Spotsylvania, hydric soils are coincident with the ~~county's~~ County's drainageways, floodplains and stream bottomlands and are depicted on the Hydric Soils Map. In a few cases, hydric soils may be found along stream terraces, toe slopes, and in upland depressions. More precise locations of hydric soils can be determined through the detailed map units in the soil survey. Many non-hydric soils in the county also contain "inclusions" of hydric soils, which can account for up to 20% of the dominant soil classification. Therefore, there may be small, isolated wetlands scattered in non-hydric areas of the ~~county~~County.

Hydric Soils are mapped based on a hydric rating, or a percentage of a map unit that meets the criteria for hydric soils. Hydric rating is further explained by the USDA **HERE**. Utilizing USDA Natural Resources Conservation Service (NRCS) Soil Survey mapping data, the County has included a Steep Slopes map for reference within this Appendix.

Per NRCS in reference to the map data, this rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor non-hydric components in the higher positions on the landform, and map units that are made up dominantly of non-hydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit. The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components. Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation. The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or non-hydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) has made available a guide entitled Field Indicators of Hydric Soils in the United States as a helpful resource for onsite identification. The guide can be found **HERE**.

Erodibility/Permeability (See Map)

Soil erosion is the process whereby rock and soil particles are detached from their original location by wind and water, and transported or deposited to a new site. Soil is considered highly erodible if it is easily detached or relocated. The water quality problems associated with erosion are considerable, particularly uncontrolled sediment originating from construction sites, stream embankments (slopes) and agricultural fields. Mitigating sources of erosion through best management practices is a key focus of the Chesapeake Bay legislation.

Uncontrolled sedimentation can have a number of adverse consequences, particularly when transported to receiving waters. Sediments can screen sunlight to aquatic habitats and spur algae growth (via organic sediments). Coarse soil particles can clog drainage ditches and accelerate channel scouring, while eroded fine silt can smother aquatic organisms and hinder their reproduction. A related area of concern is that many pollutants adhere themselves directly to soil particles. Urban and agricultural erosion can contain a variety of pollutants, such as petroleum products, phosphates, heavy metals, pesticides and bacteria. As a result, erosion is now considered to be the largest source of water pollution in the United States.

Soil that is highly permeable is that which allows liquid to be rapidly transmitted or percolated when the soil is saturated. This rapid rate of transmission can be downward or in slight lateral direction. Highly permeable soils can present a water quality hazard since pollutants may be transferred directly into the water supply before being adequately filtered. The use of on-site septic systems and underground storage tanks should be avoided in areas of highly permeable soils. The rapid movement of effluent through the soil diminishes its natural filtration ability, which can lead to the contamination of groundwater or nearby shallow wells. ~~These soils are depicted on the Highly Erodible Soils Map.~~

Utilizing USDA Natural Resources Conservation Service (NRCS) Soil Survey mapping data, the County has included a Erodibility (K Factor-Whole Soils) map for reference in this Appendix. Per NRCS in reference to the map data, Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

"Erosion factor Kw (whole soil)" indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

~~Technical data on erosion can be found in Table 14 of the soil survey.~~ The permeability and erodibility of Spotsylvania's soils have also been mapped in digital form as part of the VirGIS database. The VirGIS database defines highly erodible soils as those with an erodibility index (EI) equal to or greater than eight (8). Highly permeable soils are those having a permeability equal to or greater than six inches (6") of water movement per hour to a depth of 72". Based on the VirGIS criteria, significant portions of the ~~county~~ County were found to be either highly erodible, highly permeable, or both.

~~The VirGIS analysis of county soils reveals numerous limitations to on-site septic system use. Altogether, on-site disposal methods are used by over half (59%) of all the occupied housing units in the county. In addition, 429 housing units in the county use some other means of sewerage disposal, including pit privies and direct discharges. Graywater discharges (kitchen/laundry wastewater) for the 325 housing units lacking complete plumbing also represent a water quality hazard.~~

Although no hard figures are available, health officials acknowledge that instances of substandard plumbing may be found in areas with permeable soils, thus exacerbating water quality problems. The following discussion provides a more in-depth look at septic suitability issues and protection policies in the ~~county~~County.

Septic Suitability Factors (See Map)

Spotsylvania County has deferred to the Virginia Department of ~~health's~~ Health's (VDH) regulations for the design and approval of onsite sewage systems. National technological advances in sewage treatment and disposal and supporting regulatory changes in Virginia have allowed alternative treatment and disposal designs to overcome many previously insurmountable site and soil limitations. VDH regulations governing design, construction, installation, and the operation and maintenance for conventional and alternative residential sewage systems and private water wells are available **HERE**. ~~at: (http://www.vdh.virginia.gov/EnvironmentalHealth/Onsite/).~~

As stated earlier, Spotsylvania is one of the most diverse soil communities in Virginia. Great differences in soil properties occur within short distances. The ability of a site to accommodate onsite sewage septic systems is dependent on several performance-related factors. These include size of lot, slope, depth of the soil, percolation rate, filtering characteristics, susceptibility to ponding/wetness, depth of the water table, and depth to bedrock or restrictive horizons.

Site features and soil properties limit the use of septic systems in various ways. Generally, septic systems perform best when there is deep, unsaturated soil material beneath the absorption field. This allows for efficient filtering and disposal of effluent waste. The ability of a soil to absorb and treat effluent will be restricted if there is a high water table, poor permeability, or a minimal depth to bedrock. Likewise, site difficulties with bedrock or a cemented pan can interfere with installation. Finally, groundwater can be polluted if there is hillside seepage, a high water table, fractured bedrock, or highly permeable soils (sand/gravel) below the absorption area.

Since each factor above can vary over short distances, each lot or parcel must be evaluated to determine whether it can support the proposed development, and if it can, what the size, design and location of the septic system should be. On-site evaluations, therefore, are the only definitive means of determining septic suitability for a particular parcel.

The purpose of a site evaluation is to understand the soil system and the hydrology of the site, to predict wastewater flow through the soil and into subsurface materials, and to preliminarily design a subsurface absorption system that complements the soil system and the hydrology of the site. The evaluation process is intended to allow the collection and documentation of sufficient information to determine the potential for a site to support a subsurface absorption system. A site evaluation follows a systematic approach that includes the description of surface characteristics, the interpretation of those characteristics for use in a subsurface absorption system, and the documentation of all results. The process of data collection, evaluation, and design is often repeated several times for each system. During each repetition, new information is obtained and a new design is tried until a design is developed that provides the best match with the site conditions. The comprehensive site evaluation requires considerable expertise by the evaluator. The evaluator must have substantial knowledge about soil science, geology, subsurface absorption system design, and environmental health. In Virginia, evaluators are licensed as Onsite Soil Evaluators (OSE) through the Department of Professional and Occupations Regulation (DPOR http://dpor.virginia.gov/). These certified professionals assist applicants in determining the suitability of sites for onsite sewage systems. In cases where alternative technology is required, the OSE may work in coordination with a licensed professional engineer to develop a suitable design for a system to fit lot conditions.

Generalized information on soil types and septic suitability criteria can be found ~~in the Soil Survey. Although published in 1985, major fieldwork was gathered well prior to strengthened state laws governing on-site septic systems. Hence, the survey's performance criteria are oriented primarily towards accomplishing effluent disposal. Potential groundwater threats were not taken fully into account at that time. In spite of these recognized shortcomings, the survey remains a valuable source of information in assessing some aspects of septic suitability. The survey is available online at http://websoilsurvey.nrcs.usda.gov.~~ utilizing USDA Natural Resources Conservation Service (NRCS) Soil Survey mapping data. Per NRCS in reference to their map data, septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on soil

properties that affect absorption of the effluent, construction and maintenance of the system, and public health. For reference, a septic suitability map has been included in this Appendix.

General Septic Limitations

~~Most major fieldwork for the county's soil survey was conducted in the late 1970's. Hence, it predates the latest environmental standards and regulatory codes pertaining to septic suitability. Nevertheless,~~ The USDA Natural Resources Conservation Service (NRCS) Soil Survey ~~the soil survey~~ provides a helpful, generalized view of septic limitations within the ~~county~~ County.

There are county-wide septic limitations of varying degrees. The majority of the County is classified as having either very limited or somewhat limited septic tank suitability.~~More than half of the county's soils (51%) have severe limitations for septic systems. Moderate limitations characterize 46% of the county's soils, while slight limitations represent 2.5%. Since septic suitability criteria have become more stringent in recent years,~~ With technological advances and emergence of alternative systems over the years, ~~have kept pace,~~some of the issues regarding septic suitability in the County can, and have been overcome. ~~so these figures probably overstate the degree of septic limitations in the county.~~

Although Spotsylvania possesses an abundance of elevated, well-drained soils, other site factors limit the use of septic systems. Typical suitability problems in the local area include slow perk rates, shallow depth of bedrock, wetness, and steep slopes. Again, ~~T~~technology can overcome some of these limitations.

Depth ~~of~~ to Water Table (See Map)

Soils with a shallow depth to water table can pose additional constraints to development. Wet soils may readily compact under the weight of structures and settle at different rates. This can result in foundation cracks and loss of structural integrity. Costly engineering work, which is often required to successfully build on such soils, adds to the overall cost of development. In addition, the potential for wet basements, ponding and other drainage problems can reduce the desirability of such lands for development.

Approximately one-third ~~(33%)~~ of the ~~county's~~ County's soils ~~(88,600 acres)~~ have a shallow depth to water table. This figure includes soils with a water table depth of less than 18" ~~(11%)~~; and those soils with a water table ranging between 18" - 36" of the surface. ~~(22%)~~.

Areas with a ~~high~~ shallow depth to water table generally coincide with other sensitive features in the ~~county~~ County, such as floodplains, stream corridors and ~~drainageways~~ drainage ways. Upland areas of the ~~county~~ County may also have ~~high~~ shallow depth to water tables, such as depressions or broad terraces that are distant from sizeable ~~drainageways~~ drainage ways. More precise locations of shallow water tables can be determined through the detailed map units in the soil survey. It is good to note that the water table tends to vary throughout the year with seasonal changes and precipitation patterns.

Depth to Water Table mapping is made available by the USDA NRCS and can be accessed **HERE**. ~~The Spotsylvania County GIS office is in process of establishing an external link to the NRCS data so that it may be viewable in the future as part of the County GIS system.~~ Utilizing USDA Natural Resources Conservation Service (NRCS) Soil Survey mapping data, the County has included a Depth to Water Table Map for reference within this Appendix.

In reference to the data depicted in the aforementioned map, per NRCS, "Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table. This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Soil Drainage

Seven classes of natural soil drainage are recognized by the United States Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS), including: excessively drained; somewhat excessively drained; well drained; moderately well drained; somewhat poorly drained; poorly drained; very poorly drained. These classes are defined in the "Soil Survey Manual" that can be found at the USDA's NRCS website **HERE**. The majority of Spotsylvania County has been classified with well drained soils. Such soils are prevalent within areas that have historically supported agricultural and forestry operations. Much of the well-drained soils areas fall within areas designated with Rural, Agricultural-Forestal, and Open Space land uses outside of the County's Primary Development Boundary. Poorly drained soils primarily appear in the northeastern and eastern portions of the County, including within large portions of the Primary Development Boundary. Poorly drained soils tend to be catchment areas for water within low lying areas, along stream or river corridors where wetlands, resource protection areas, water bodies are present throughout the County. The County's Primary Development Area contains the greatest concentration of moderately well drained soils as per the NRCS rating.

According to the NRCS, natural soil drainage (or drainage capacity) refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil.

Soil Drainage Capacity mapping is made available by the USDA NRCS and can be accessed **HERE**. Utilizing USDA Natural Resources Conservation Service (NRCS) Soil Survey mapping data, the County has included a Soils Drainage Map for reference within this Appendix.

Groundwater Recharge Areas

Groundwater is accumulated water under the earth's surface. Sometimes groundwater is close to the surface; sometimes it is very deep, held in underground aquifers. Groundwater can surface—or discharge—through natural means, such as in a spring, or with human help, such as in a pumped well.

Groundwater is replenished—or recharged—through surface water seeping from streams or lakes into the ground or through precipitation percolating into the ground. For the groundwater table to stay at the same level, the amount of recharge must equal the amount of discharge.

Aquifers represent a geological unit, which can store and supply significant quantities of groundwater. Aquifer recharge is a function of groundwater recharge rates. Groundwater recharge represents the net amount of water that infiltrates the soil matrix to a point below the root zone of vegetation.

Groundwater recharge necessarily accounts for the loss of gross precipitation due to evapotranspiration (physical and biological uptake), consumption, and surface runoff. These losses are determined by impervious cover, slope, and soil properties affecting percolation. The quantity of groundwater making it into the aquifer is based on the geology and aquifer pumping rates, but is less well modeled than groundwater recharge. Factors such as karst geology in sedimentary formations and fractured trap rock affect the transport of groundwater into aquifers.

Urbanization, and drought poses a threat to our groundwater supply in several ways. Urban development increases the amount of impervious (nonporous) surface in a watershed. Impervious surface inhibits groundwater recharge because precipitation cannot penetrate the surface and runoff may be diverted elsewhere through storm sewer systems. In drought situations, consumption outweighs the rate of replenishment, further stressing the availability of groundwater.

Urbanization also increases the amount of pollution in our environment. If soil is contaminated or surface runoff is polluted, the quality of the groundwater will be affected. Polluted groundwater and/or a diminished supply of groundwater are of particular concern where groundwater is the major source for drinking and irrigation water. This is especially important for areas reliant on private well and septic systems. In Spotsylvania County, roughly ~~84~~82% of the County's total land area is located outside of the County's Primary Development Boundary (where public water and sewer is provided), and therefore reliant on private well and septic systems. Well and septic lots still exist within the Primary Development Boundary also. This is most prevalent in areas where utility infrastructure has not yet caught up to past Primary Development Boundary expansions and older housing stock where public utility connection had not been available historically and a retrofit would be necessary to convert service.

Citizens can help protect groundwater supplies by:

- Don't pour toxic or hazardous waste down the drain, into a toilet, on the ground, or into storm drains.
- Properly dispose of litter and pet waste.
- Don't dump anything into a sinkhole.
- Don't use or store fertilizers, pesticides, gasoline or any toxic materials near a well.
- Pump out septic tanks regularly.
- Use porous material such as flagstone, gravel, stone, or interlocking pavers rather than asphalt or concrete.
- Conserve water in your home and landscape.

In areas where development is prevalent or likely to occur in the future, negative impacts upon groundwater recharge areas can be reduced by reducing the amount of impervious surfaces in exchange for additional green space/ open space and use of pervious paving or concrete materials that allow precipitation to percolate into the soils rather than diverted away through stormwater drainage systems.

Contaminated Soils

The United States Environmental Protection Agency (EPA) Superfund program is responsible for cleaning up some of the nation's most contaminated land and responding to environmental emergencies, oil spills and natural disasters. To protect public health and the environment, the Superfund program

focuses on making a visible and lasting difference in communities, ensuring that people can live and work in healthy, vibrant places. You can learn more about the Superfund Program **HERE**.

The EPA manages one Superfund Site within Spotsylvania County. Contaminants result from a wood preservation operation that operated onsite between 1937 and 1988 in the area of Benchmark Road and the Massaponax Creek Floodplain. The site was initially listed on the National Priorities list in 1986. Site remediation is ongoing. More information about the history of the site and efforts to cleanup contaminants can be found **HERE**.

Storage Tank Related Contaminants

The Virginia Department of Environmental Quality (DEQ) implements the Underground Storage Tank (UST) program under Article 9 of State Water Control Law. Article 9, first enacted in 1987, enables DEQ to receive UST notifications, receive federal grant funds, develop regulations, conduct cleanups, and provide overall supervision of UST activities in the state. The technical requirements for USTs are included in Virginia regulation 9 VAC 25-580 et seq. entitled "Underground Storage Tanks: Technical Standards and Corrective Action Requirements."

The financial responsibility requirements for USTs are found in Virginia Regulation 9 VAC 25-590 et seq. entitled "Virginia Petroleum Underground Storage Tanks Financial Responsibility Requirements Regulation." State housing law Section 36-99.6 provides for local code officials to permit and inspect UST installations, upgrades, repairs, and closures statewide in support of the program. In Virginia there were some 75,000 USTs (19,000 active) at 25,000 facilities with some 3,000 owners. VA-DEQ maintains the notification records for USTs and receives annual federal grant funding to support the program. In general, after December 22, 1998 all regulated USTs must have spill containment provisions at the fill pipe; overfill devices to alert the owner when overfills may occur; corrosion protection on both tank and product lines; release detection on both tank and product lines; and, financial responsibility.

Refer to Virginia DEQ for more information regarding Underground Storage Tanks **HERE**.

Article 11 of the State Water Control Law addresses Above Ground Storage Tanks (ASTs). The Virginia State Water Control Board in 1998 adopted the regulation, 9 VAC 25-91-10 et seq., which consolidated three repealed regulations, that is, (i) Oil Discharge Contingency Plans and Administrative Fees, 9 VAC 25-90-10 et seq. (ii) Facility and Aboveground Storage Tank Registration Requirements), 9 VAC 25-130-10 et seq., and (iii) Aboveground Storage Tanks Pollution Prevention Requirements, 9 VAC 25-140-10 et seq.

The AST regulations were revised on November 1, 2015. The AST regulations were revised primarily to incorporate new performance standards for certain aboveground storage tanks located in the City of Fairfax as mandated by the 2011 General Assembly. Other changes align Virginia's regulatory requirements with federal requirements and current industry standards.

Refer to the Virginia DEQ for more information regarding Aboveground Storage Tanks **HERE**.

Leaking Storage tanks pose contamination risk to soil health and groundwater. The Virginia DEQ maintains locality specific lists of pollution complaint cases that includes both regulated and non-

regulated USTs and ASTs. The Virginia DEQ categorizes cases as "open" or "closed". Spring, 2018 data received from the Virginia DEQ for Spotsylvania County note 9 cases in "open" status and 214 cases that have been "closed" with closure dates covering a period of time between 2018 and the late 1980s. Of 9 "open" cases, 2 are considered regulated tanks (i.e. gas stations) while the remaining 7 are non-regulated tanks (i.e. home heating oil releases).

POTABLE WATER

Spotsylvania County has four surface water sources for its public supply. The Ni River Water Treatment Plant draws water from the Ni Reservoir. Our second and third water sources are for the Motts Water Treatment Plant, which draws water from the Motts Run Reservoir and from the Rappahannock River. Our fourth source is the Hunting Run Reservoir, which can release water into the Rapidan River. This water flows into the Rappahannock River and is withdrawn at the Motts Run intake. Combined, as of 2017, Spotsylvania County treatment facilities provide roughly 3.7 billion gallons of clean drinking water every year. The Spotsylvania County Utilities/Public Works Department manages the public water system and continually monitors water quality. Annual water quality reports are made publicly available and can be found **HERE**.

As Spotsylvania's population grows and water demands increase, it is becoming increasingly important to manage not only the water supply and treatment, but also the demand on an ongoing basis. The Board of Supervisors authorized the Director of Utilities/Public Works to establish a comprehensive Green Initiative and Water Conservation Program under Chapter 22 - Section 22- 140 of the Spotsylvania County Code as a proactive approach to demand management. The ultimate goal of water conservation is not to prevent water use, but to maximize efficiency and the benefit from each gallon used. More information regarding the Water Conservation Initiative can be found **HERE**.

The County's Primary Development Boundary is a major factor in establishing the County's long term development potential, sustainable investment in public infrastructure, and future land use vision. As noted in the Future Land Use Chapter, a major aim of any Comprehensive Planning process is ensuring that the provision of community facilities and public services is phased with demand. One of the most effective tools for directing the timing and location of new development is the establishment of a Primary Development Boundary to define the area within which public water and sewer utilities will be provided. This Boundary effectively creates an "urban growth boundary" like area as land within the boundary; supported by public water and sewer, is intended to develop with higher residential densities and more intensive non-residential uses than outside of the boundary. By maintaining a Primary Development Boundary, the County encourages the most efficient use of the land and focusing growth while preserving the rural character and agricultural viability of those portions of the County outside the boundary and slowing "urban sprawl" and the resulting loss of agricultural, forestal, rural acreage.

WATER RESERVOIRS

In Spotsylvania County, publicly accessible water reservoirs provide a source of potable water for residents or a cooling function for the generation of power. They also provide natural resource preservation, natural habitat preservation, recreational opportunities for fishing and electric motor

boating. Significant sources of potable water within Spotsylvania County include the Ni Reservoir, Motts Run Reservoir (serving the City of Fredericksburg), and Hunting Run Reservoir. Considering existing capacity and factoring for growth, the County Utilities Department estimates no additional water source capacity expansion will be necessary to serve Spotsylvania County citizens utilizing public water until the year 2050. Lake Anna chiefly serves as a water supply to cooling purposes associated with the North Anna Power Station and has become a destination for water recreation as well. They have been summarized below.

Reservoirs are protected locally within the Reservoir Protection Overlay District, created for the purpose of protecting and promoting the public health, safety and welfare by preserving existing and potential public drinking water supply reservoir sites and protecting them from the danger if water pollution. Regulations within such districts are established to prevent water quality degradation due to pollutant runoff from septic fields, construction sites, lawns or material storage areas and to reduce sediment loadings that shorten reservoir life.

Ni Reservoir

The Ni Reservoir is a 411-acre Spotsylvania County water supply reservoir located near Chancellorsville. Angler success is very good at this impoundment for largemouth bass in the 15" size range and the potential exists for an occasional trophy fish. There are also bluegill, redear sunfish, chain pickerel, white perch, and crappie available in good numbers for anglers to pursue.

The VDGIF released a Management report concerning the status of the fishery at the Ni Reservoir in 2003. That report can be found **HERE**. The Spotsylvania County Department of Parks and Recreation manages recreational access to the reservoir. Information regarding accessibility, amenities, and regulations can be found **HERE**.

Motts Run Reservoir

Motts Run is a ~~city~~ City of Fredericksburg water supply reservoir located in Spotsylvania County. It is a steep-sided, 160-acre lake that is normally quiet and receives light fishing pressure. The shoreline is undeveloped, making it one of the more scenic lakes in Northern Virginia. Motts Run Reservoir is also open for public access, operated by the City of Fredericksburg.

Hunting Run Reservoir

Hunting Run Reservoir is a 420-acre water supply reservoir owned and operated by Spotsylvania County. The lake was stocked by the Virginia Department of Game and Inland Fisheries (VDGIF) and opened to fishing by Spotsylvania County in fall, 2007. There is one access point near the upper end of the lake off Ely's Ford Road. The lake has an excellent largemouth bass population that is currently "bass heavy" or "predator heavy", and size structure has recently shifted downward. The combination of the lake reaching full pool in 2009 (productivity surge) combined with additional planned forage stockings and highly encouraged angler harvest of bass below the slot should allow the population to realize its trophy potential.

The VDGIF released a Management report concerning the status of the fishery at Hunting Run Reservoir in 2015. That report can be found **HERE**. The Spotsylvania County Department of Parks and Recreation

manages recreational access to the reservoir. Information regarding accessibility, amenities, and regulations can be found **HERE**.

Lake Anna

~~Lake Anna was created in 1972 by Virginia Power to provide condenser cooling water for the North Anna Power Station. Since its impoundment, the lake has developed into a multi-use reservoir serving not only the needs of the power company, but also providing opportunities for boating, fishing, skiing, wind surfing, as well as extensive residential, business, and commercial development. These opportunities around the lake provide an economic benefit to the local economy, and are dependent on the water quality of the lake to support and maintain the recreational setting.~~

Lake Anna is a 13,000 acre reservoir in the rolling fields and forested triangle formed by the Cities of Charlottesville, Fredericksburg, and Richmond, Virginia. The lake was created by Virginia Electric and Power Company in 1972 to provide cooling water for the North Anna Power Station. Lake Anna was formed by damming the North Anna River, one of the principal tributaries of the Pamunkey and York Rivers. The Power Station and Lake is now controlled by Dominion Energy.

The lake's 200+ miles of shoreline are dotted with houses, marinas, campgrounds and a large state park. Lake Anna and its watershed lie astride three counties of Central Virginia with a rich history and diversified environment. Louisa County on the south side of Lake Anna encompasses over 50% of the watershed. Orange County to the northwest of Lake Anna is the smallest county in both area and population, and comprises about 25% of the watershed. Spotsylvania County to the north of Lake Anna contains only 20% of the lake watershed, but is the most populous and rapidly growing of the three counties.

In addition to its cooling function, the Lake has become a recreational destination for boating, fishing, water skiing, wind surfing, as well as residential, business, and commercial development. These opportunities around the lake provide an economic benefit to the local economy, and are dependent on the water quality of the lake to support and maintain the recreational setting. Lake Anna is one of Virginia's premier fishing waters, hosting a fish population of striped bass, largemouth bass, perch, crappies, catfish, and bluegill, and is the site of numerous bass tournaments. The lake is served by over half a dozen marinas and several public boat launching sites which charge a small fee for launching services.

Ever growing popularity for use of the lake as a recreational resource has increased concerns within the last few years about user safety and conflicting interests on the water and shoreline burdened by increasing recreational craft traffic traversing the lake surface. Increased recreational craft traffic upon the Lake has also led to lakeshore erosion issues resulting from wake action impacting the shoreline.

Lake Anna has also been identified with a number of water impairments as noted in the following pages considering the Water Quality Assessment Integrated Report. Harmful algae bloom warnings (for the species Cylindrospermopsis) were recently issued in August, 2018 for the Pamunkey and North Anna Branches of Lake Anna in Orange, Louisa and Spotsylvania County. As per the Virginia Department of Health, Algae blooms can occur when warm water and nutrients combine to make conditions favorable for algae growth. These conditions have occurred recently with the significantly warmer temperatures and sunny weather, which occurred after high amounts of rainfall over the last month. Discolored water or scums that are green or blueish-green should be avoided as they are more likely to contain toxins.

The Virginia Department of Health and the Virginia Harmful Algal Bloom Task Force, which includes the Virginia Department of Health, Virginia Department of Environmental Quality, and the Old Dominion Phytoplankton lab, will continue to monitor water quality at Lake Anna. The advisories will be lifted following a minimum of two consecutive weeks of acceptable levels for algal cell counts and/or toxin concentration.

For everyone's safety, the lake is patrolled by the Department of Game and Inland Fisheries' game wardens, County sheriff's offices, a Coast Guard Auxiliary flotilla, and three local flotillas.

The Virginia Department of Environmental Quality (DEQ) coordinates with the Lake Anna Citizen Association (LACA) to perform water quality monitoring of Lake Anna on a yearly basis. Overall, the main body of the lake meets the water quality standards for ~~the recreation (bacteria) and~~ aquatic life (dissolved oxygen, pH, temperature, nutrients) uses. Lake Anna does not support ~~the~~ fish consumption ~~use however~~. The entire lake is listed with a PCB impairment, due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. There is also a portion of the main lake that is also listed with mercury impairment, based upon fish tissue data. As per the most recent water quality study dated April, 2018, overall most Lake readings are over acceptable bacteria readings for E.Coli with issues most prevalent in the west end (Orange County, Spotsylvania County, Louisa County) and southwest side of the lake (Louisa County).

The LACA makes the latest water quality status updates available online **HERE**.

Dominion Energy provides details regarding lake levels, water temperatures, and the overall functionality of the lake in its cooling function. That information can be found online **HERE**.

Dam Break Inundation Zones

The Spotsylvania ~~utilities~~ Utilities ~~department~~ Department ~~has been engaged in the study~~ have completed mapping of County ~~dam~~ Dam Bbreak ~~i~~inundation ~~zones~~ Zones for existing dams at the Hunting Run Reservoir, Ni Reservoir, and Motts Run Reservoir. These dams were put in place in the creation of local water supply reservoirs.

The Inundation Zone is the area that encompasses the affected downstream features should a dam break regardless of the current condition of the dam. The Dam Break Inundation Zone is determined using a computer model simulated dam break prepared by a professional engineer. The potentially impacted features such as homes, roads, commercial buildings, etc. dictate and result in the Hazard Classification designations. Dam Break Inundation Zone Computer Modeling and Mapping is required by the Virginia Department of Conservation and Recreation for all regulated dams for Hazard Classification (Exception for dams determined to be Special Criteria Low Hazard).

Private owners of regulated dams are required to provide the Inundation Zone Mapping to the local County ~~of~~ or City authority for inclusion into municipal mapping. In Spotsylvania County, the dams at Lake Anna and Fawn Lake are examples. Their inundation zones have been studied and pictured in local mapping. Other private dams within the County have yet to be mapped. As part of the 2017 Regional Hazard Mitigation Plan, Spotsylvania County has established a goal to assure mapping of all dam break inundation zones including the private dams, are completed by 2025.

Staff is also requesting dam break information from adjacent localities to determine whether any of their inundation zones may impact Spotsylvania County in any way. Stafford County's Lake Mooney (formerly Rocky Pen Run Reservoir) along the Rappahannock River is one example. The Keaton Run Dam in Orange County is one example where the inundation area does include parts of northwest Spotsylvania County. Mapping has been secured for that inundation area and is included for reference within the County mapping system.

~~The~~ A computer model simulated dam break can be used for an Incremental Damage Analysis to determine if the minimum required spillway capacity could be lowered without increasing the hazard downstream to people or facilities. If the owner of a dam elects to have this work done, it must be done by a professional engineer.

All development as defined by the Code of Virginia, located within a mapped Dam Break Inundation Zone is subject to review by the Virginia Department of Conservation and Recreation to make a determination of the potential impacts of the proposed development on spillway design flood standards required for the dam. In order to be consistent with the Code of Virginia, on December 13, 2016 the Spotsylvania County Board of Supervisors approved an amendment to the Zoning Ordinance, specifically Chapter 23, Article 7, to add Division 2A- Dam Break Inundation Zones. As part of County development review procedures, proposed developments are to be checked to determine whether they fall within a mapped dam break inundation zone. Projects located within dam break inundation zones are then routed to the Department of Conservation and Recreation for review, subject to the Dam Safety Act, Article 2, Chapter 6, Title [10.1], §§ 10.1-604, 10.1-605, 10.1-606 et seq., of the Code of Virginia. The Department of Conservation and Recreation is responsible for administration of the Virginia Dam Safety Act.

The Spotsylvania County Geographical Information Systems (GIS) Department graphically depicts the limits of mapped Dam Break Inundation Zones as a map layer online as part of the Interactive Web Based GIS located **HERE**.

WETLANDS

Wetlands are a valuable natural resource. They reduce floodwater damage by storing the floodwater for slow release, serve as groundwater discharge and recharge areas, improve water quality, and provide food and habitat for fish and wildlife. In addition, wetlands can be recreational and aesthetic resources. Two major legislative acts protect wetlands from alteration, destruction or potential misuse: The Clean Water Act of 1972 as amended, and the Chesapeake Bay Preservation Act of 1988.

Wetlands are defined as transitional lands between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is covered with shallow water. Wetlands must have the following three attributes: 1) at least periodically the land supports hydrophilic vegetation; 2) the substrate is predominantly undrained hydric soils; 3) the substrate is non-soil and is saturated with water or covered with water at some time during the growing season. This means that lands flooded at least a week at a time with supporting aquatic vegetation are generally considered to be wetlands.

The Spotsylvania County Geographical Information Systems (GIS) Department graphically depicts County wetlands as a map layer as part of the Interactive Web Based GIS located **HERE**. Wetlands data is produced and distributed by the National Wetlands Inventory (NWI).

Presence of Water

The physical nature of wetlands varies from place to place as well as season to season. As a result, the extent of wetness required to identify a wetland area may be a source of confusion to the untrained. Certain kinds of wetlands may have standing water on them throughout the year while others have water on the surface for a short period of time or not at all.

Wetland Vegetation

Wetland vegetation is characterized by hydrophytes. According to the National Audubon Society, hydrophytes are a special group of plants that can tolerate various degrees of flooding, or live in frequently saturated areas. It is a rather large group. There are whole scores of different kinds of wetland plants. These hydrophytes are distinctive in that they can only live in the conditions that wetlands provide. Thus they are good indicators of wetlands, and are used to delineate wetlands. An example of a hydrophyte would be a water lily.

Hydric Soils

Wetland soils are different from their upland counterparts. The presence of water affects the soil development. They are usually a gray color and have mottles (uneven spots or blotches) present. The technical definition says that hydric soils are soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part.

Significance of Wetlands

Water Quality Control

- chemical and organic waste processing
- nutrient removal and transformation
- sediment retention

Due to their position between upland and deep water, wetlands can intercept surface water runoff from land and filter floodwaters. The way wetlands remove pollutants from the water supply has to do with the biotic life they support. Aquatic organisms such as algae and bacteria take up minerals and breakdown organic matter.

If sewerage is added upstream, the organic level will have been considerably reduced by the time the water has traveled several miles. Wetlands and wetland plants are nutrient traps and really help reduce air and water pollution problems. Runoff from development areas is a big source of wetland contamination. Runoff from agricultural areas tends to contain high levels of nitrogen and phosphorous, the two major chemicals of fertilizers. Runoff from urban sites is usually polluting the water with dangerous chemicals and/or domestic sewage. But wetlands are very efficient at removing this waste from the environment.

Flood Control

- hydrologic cycle
- water storage

Wetland soils act like a living sponge and soak up the rain, letting it enter the ground water system. The wetland also acts as a temporary storage basin or depression, wetlands are a perfect place for excess flood water to go. Wetlands lower flood crests and lessen the danger of flash floods downstream, therefore reducing the likelihood of flood damage. They "protect crops in agricultural areas as well as protecting roads, buildings, and human health and safety".

Groundwater Recharge

- critical groundwater recharge areas
- groundwater discharge

With growing urban development there are becoming significantly fewer areas available for groundwater recharge. It is increasingly important to conserve wetlands to keep some of these areas open. Wetlands are also important for groundwater discharge. Wetlands release the water they store slowly to provide long-term base-flow to streams and lakes. They also provide a steady source of moisture for the local climate.

Erosion Control

- sediment stabilization
- shoreline buffer
- wave attenuation
- current velocity
- storms
- ice

Wetlands on the shores and banks of rivers, ponds and beaches do many things to prevent erosion. Wetland plants growing on the banks stabilize the shore material. Their roots bind the soil and make it harder to erode. Wetlands along the shores and banks also prevent erosion by reducing the force of the moving water. The wetland's presence causes friction of the wave or current movement, lessening its power to erode.

Fish and Wildlife Diversity and Abundance

- habitats for rare and endangered species
- habitats for waterfowl and other birds
- fish spawning and nursery grounds
- home to many species of plants
- biodiversity

A large number of animals and plant types require wetland habitats for survival. Many of these organisms live primarily in wetlands, like the wood duck, muskrat, cattail, and swamp rose. Other types, like the peregrine falcon and white tail deer, don't directly reside in wetlands, but they rely on them for survival. The wetlands provide food, water, and cover for these animals - all essentials for living. Many of the organisms that need wetlands to survive are endangered species. "More than one-third of the nation's threatened and endangered species live only in wetlands and nearly one-half of these species use wetlands in some point in their lives". Acre for acre swamps often equal rain forests in biological diversity.

Food Chain Support

- detritus

Wetlands can be regarded as the farmlands of the aquatic environment since great volumes of food (plant material) are produced by them annually. The wetland food chain starts with detritus, which is "dead leaves and stems that break down in the water to form small particles of organic matter". Small aquatic invertebrates and forager fish eat the detritus. Then larger predatory fish hunt and eat these invertebrates and forager fish. Finally, man catches and eats the larger predator fish.

Recreation

- nature observation
- education
- hunting and fishing

There is a substantial tourist trade in wetlands every year. "More than one-half of adults in the US hunt, fish, birdwatch, or photograph wildlife. Wetlands are usually very beautiful places in their own right. They are good places to enjoy nature through hiking, boating and other recreational activities. One can get a first-hand look at ecological processes, such as energy flow, recycling, and limited carrying capacity. Wetlands are essentially "living museums" or "outdoor laboratories" important for their educational qualities. Wetlands also support a large trade of recreational fishing and hunting.

Natural Products for Human Use

- seafood harvesting
- fish
- shellfish
- timber production

- peat moss mining
- fur trapping

Humans have harvested many things from natural wetlands. Seafood is a very important product strongly tied to wetlands. According to the National Oceanic and Atmospheric Administration (NOAA) Annual Commercial Landing Statistics, U.S. commercial fishermen landed ~~8.2~~9.9 billion pounds of seafood in ~~2010~~2017 (up 3.6% from 2016), valued at $~~4.5~~5.4 billion, an increase of ~~200~~ 2.1% ~~million pounds and more than $600 million in value over 2009~~from the prior year. ~~By 2011, U.S. commercial fishermen saw further increase, landing approximately 9.9 billion pounds of seafood, valued at $5.3 billion.~~

According to the Commercial Landing Statistics, Virginia's commercial fishermen landed approximately ~~494~~ 338 million pounds of seafood in ~~2011~~2017, valued at about $~~191~~ 188 million~~, up from $184 million in 2010~~.

The collection of U.S. commercial fisheries landings data is a joint state and federal responsibility. The cooperative State-Federal fishery data collection systems obtain landings data from state-mandated fishery or mollusk trip-tickets, landing weighout reports provided by seafood dealers, federal logbooks of fishery catch and effort, and shipboard and portside interview and biological sampling of catches. State fishery agencies are usually the primary collectors of landings data, but in some states NOAA Fisheries and state personnel cooperatively collect the data. Survey methodology differs by state, but NOAA Fisheries makes supplemental surveys to ensure that the data from different states and years are comparable.

Statistics for each state represent a census of the volume and value of finfish and shellfish landed and sold at the dock rather than an expanded estimate of landings based on sampling data. Principal landing statistics that are collected consists of the pounds and ex-vessel dollar value of landings identified by species, year, month, state, county, port, water and fishing gear. Most states get their landings data from seafood dealers who submit monthly reports of the weight and value of landings by vessel. Increasingly, however, states are switching to mandatory trip-tickets to gather landings data. At the conclusion of every fishing trip, seafood dealers and fishermen indicate their landings by species on trip-tickets and may be required to record other data such as fishing effort and area fished.

Managed Wetlands

In managed wetlands, the water level is actively managed for a specific purpose.

- rice paddies
- cranberry bogs
- blueberry crops
- catfish farms
- storm-water management facilities
- wildlife refuges
- duck hunting clubs

Five Major Classifications and Characteristics of Wetlands

A classification system was established and adopted by the US Fish and Wildlife Service on December 12, 1977. This classification system was established due to the increased recognition of the value of wetlands and the need for more defined, reliable classification information that could be accepted

universally amongst all other government agencies. This system allows for better inventory, evaluation, and management of wetland areas. This system defines five major classifications of wetlands: Marine (oceanic), Estuarine (tidal), Riverine (river), Lacustrine (lake), and Palustrine (marsh or swamp). Marine and estuarine habitats include coastal wetlands such as tidal marches and mangrove swamps. Lacustrine, riverine, and palustrine wetlands represent freshwater systems and account for 90% of the nation's wetland inventory. Lacustrine wetlands are associated with lakes, riverine wetlands are found along rivers and streams, and palustrine wetlands include marshes, swamps and bogs.

Marine System

This system consists of the open ocean overlying the continental shelf. Marine habitats are exposed to the waves and currents of the open ocean and the characteristics of the water are determined by the ebb and flow of the oceanic tides. Salinities exceed 30%. An example of a marine system wetland is a mangrove swamp.

Estuarine System

This system consists of deep water tidal habitats and adjacent tidal wetlands that are usually semi-enclosed by land but have sporadic access to the ocean water that is usually diluted by freshwater runoff from the land. This system includes both estuaries and lagoons. Examples are the Chesapeake Bay and Chincoteague Bay, and the Lower Rappahannock below its fall line.

Riverine System

This system includes all wetlands and deeper habitats contained within a channel except for habitats with water containing ocean derived salts in excess of .5%. The riverine system is bound on the landward side by upland, by the channel bank (including natural and man-made levees), or by wetland dominated by trees, shrubs, mosses or lichens. The water is usually, but not always, flowing in this type of system. The Upper Rappahannock and the Ni and Po Rivers are categorized as this type of system.

Lacustrine System

This system includes wetlands and deep water habitats with the following characteristics: situated within a topographic depression or a dammed river channel, may lack trees, shrubs, mosses or lichens, and the total area may exceed 20 acres. The waters may be tidal or non-tidal. This system includes permanently flooded lakes and reservoirs (Lake Superior), intermittent lakes, and tidal lakes (Grand Lake, Louisiana). Within Spotsylvania County, this system includes Lake Anna, the Ni and Motts Run Reservoirs, and other ponds throughout the county.

Palustrine System

This system groups the tidal and non-tidal vegetated wetlands traditionally called by names such as marsh, swamp, bog and fen that are found throughout the United States. It also includes the small, shallow, permanent or intermittent water bodies often called ponds. Palustrine systems may also occur as islands in lakes or rivers, in isolated catchments, or on slopes. In Virginia, this system includes the Great Dismal Swamp.

WATERSHEDS

There are three main watersheds that drain Spotsylvania County, dividing the County into north, central, and south. The Spotsylvania County Geographical Information Systems (GIS) Department graphically depicts County watersheds and sub-watersheds as map layers as part of the Interactive Web Based GIS located **HERE**.

Descriptions of the watersheds are as follows:

Rappahannock Watershed

According to the Virginia Department of Environmental Quality (DEQ), The Rappahannock River Basin drains an area of 2,715 square miles, approximately 6% of the Commonwealth's total area, and is 184 miles in length, varying in width from 20 to 50 miles. The Basin is bordered by the Potomac-Shenandoah River Basin to the north, and the York River Basin and Chesapeake Bay/Small Coastal Basin to the south and east.

The northern portion of ~~the~~ Spotsylvania County is drained by the Rappahannock River watershed, a Major Chesapeake Bay watershed whose Spotsylvania County tributaries include Massaponax Creek, Deep Run, Hazel Run, Motts Run, Mine Run, Hunting Run, and Wilderness Run.

Potentially the most valuable natural resource in the area, the Rappahannock River has considerable scenic, recreational, and historical attributes. In the past, the River served as an important transportation corridor. Today, it is considered a promising source of water for domestic and industrial consumption. The Rappahannock River is the cleanest major tributary flowing into the Chesapeake Bay, and the maintenance of that distinction is essential to efforts to restore Virginia's estuary. The protection of this resource should be of paramount importance to localities along the River.

~~Spotsylvania County borders on two separate and distinct sections of the Rappahannock River. Above the fall line, the river is a free flowing fresh water stream winding its way through high-forested bluffs. Development that has occurred above the fall line has posed no immediate threat to the river, in part due to the fact that much of the shoreline is owned by the City of Fredericksburg, thereby establishing an effective, though narrow, buffer. The river below the fall line is tidal and its shores have seen greater development of many types: industrial, residential, recreational, and agricultural. Below the fall line are also located a number of wastewater treatment facilities, two of them in Spotsylvania County. Because the two sections of the Rappahannock River are so different, actions to protect the river will be different for each. In addition to the Rappahannock, there are many valuable resources along the County's networks of streams. Stream corridors are relatively undeveloped because of the presence of floodplains and steep slopes. In addition, these areas are often wooded, making them excellent buffers for filtering out impurities in water moving toward a stream, and good wildlife corridors.~~

Spotsylvania County borders on two separate and distinct sections of the Rappahannock River. Above the fall line, the river is a free flowing fresh water stream winding its way through high-forested bluffs. Development that has occurred above the fall line has posed no immediate threat to the river, in part due to the fact that much of the shoreline is owned by the City of Fredericksburg and remains is a natural state, thereby establishing an effective, though thin, buffer. Within Spotsylvania County, lands adjacent to the Fredericksburg easement are located outside of the County Primary Development

Boundary and the County land use vision and existing zoning in these areas are characteristic of large lot rural residential, forestry, and agricultural uses. Intense development pressure has not been supported, directed, or occurred in close proximity to the Rappahannock River above the fall line. The County zoning ordinance includes a River Protection Overlay District meant to further assure water resource protection of the Rappahannock River above the fall line. The River Protection Overlay District is intended to promote the public health, safety, and welfare through the protection of valuable river resources that provide or may provide drinking water and recreational opportunities. Regulations within such districts are established to prevent water quality degradation due to pollutant runoff from septic fields, construction-sites, or material storage areas. Requirements associated with the River Protection Overlay District can be found in Section 23-7.4. of the County Zoning ordinance.

The river below the fall line is tidal and its shores have seen greater development of many types: industrial, residential, recreational, and agricultural. Below the fall line are also located a number of wastewater treatment facilities, two of them in Spotsylvania County, and another in Stafford County. Because the two sections of the Rappahannock River are so different, actions to protect the river will be different for each. In addition to the Rappahannock, there are many valuable resources along the County's networks of streams. Stream corridors are relatively undeveloped because of the presence of floodplains and steep slopes. Wetland, Floodplain Overlay Districts, the River Protection Overlay District, and Resource Protection Areas are in place to further protect these vital environmentally sensitive resources. In addition, these areas are often wooded, making them excellent buffers for filtering out impurities in water moving toward a stream, and good wildlife corridors.

The Code of Virginia, § 62.1-69.27. Commission purposes and mission, establishes the purpose and mission of the Rappahannock River Basin Commission:

> *The Commission's purposes and mission shall be to provide guidance for the stewardship and enhancement of the water quality and natural resources of the Rappahannock River Basin. The Commission shall be a forum in which local governments and citizens can discuss issues affecting the Basin's water quality and quantity and other natural resources. Through promoting communication, coordination and education, and by suggesting appropriate solutions to identified problems, the Commission shall promote activities by local, state and federal governments, and by individuals, that foster resource stewardship for the environmental and economic health of the Basin.*

The Friends of the Rappahannock (FOR) was founded in 1985 as a non-profit, grassroots conservation organization whose mission includes the protection and restoration of the Rappahannock River through advocacy, active restoration, and community education. Their efforts are invaluable to responsible river stewardship with positive benefits resulting in the Rappahannock watershed. Friends of the Rappahannock, including their Rappahannock River Report Card can be found **HERE**.

In 2019, the University of Maryland Center for Environmental Science Chesapeake Bay Report Card downgraded their water quality score for the Rappahannock River from a C grade to a D with the most notable loss resulting from degraded aquatic habitat. 2018 high rainfall totals paired with “extreme heat” in 2019 were identified as the source of the downgrade. These are macro level factors associated with the overall climate and not representative of any specific localized direct impacts. To help guard

against such impacts the Friends of the Rappahannock notes "Cleaning up the Rappahannock means making it more resilient". Per FOR:

> *To restore the Rappahannock River to a healthier condition, we must understand what makes a river system resilient. In a resilient river system, forests and wetlands along streams and shorelines form a protective barrier that reduces erosion, absorbs pollutants, shades the water and encourages groundwater infiltration. Robust populations of filter feeders like oysters and mussels digest pollutants and suspended particles, keeping the water clear, while abundant aquatic grasses create oxygen and provide habitat for fish and other wildlife. The river system works together to maintain stability and balance, which defends it against adverse conditions like high rainfall and heat.*

Mattaponi Watershed

A minor watershed whose tributaries include the Matta River, Po River, and Ni Rivers drain the center portion of Spotsylvania County. The Mattaponi drains into the York River watershed, a major Chesapeake Bay watershed, whose tributaries include York River, Pamunkey River, Mattaponi River.

Lake Anna Watershed

Lake Anna Watershed, whose tributaries include the North Anna River, Plentiful Creek, Northeast Creek and a portion of Terry's Run and Foremost Run drains the southern portion of the County. The Lake Anna watershed drains into the larger York River Major watershed. The Lake Anna watershed is that portion of the landscape that collects and provides the water flow to maintain water levels in the lake. Comprising three hundred and forty-two (342) square miles, or 218,860 acres in portions of the three (3) counties that border the lake: Louisa (57.4%), Orange (22.3%) and Spotsylvania (20.3%).

The watershed is approximately twenty-eight (28) miles long extending from the main dam on the eastern edge of the watershed to the edges of Gordonsville and Orange on the western edge. At the widest point the water shed is approximately eighteen (18) miles wide extending from Louisa on the southern boundary to the intersection of Routes 522 and 20 on the north.

STREAM, RIVER CORRIDORS AND SHORELINES

Virginia Scenic River Program

Virginia Scenic Rivers Program's intent is to identify, designate and help protect rivers and streams that possess outstanding scenic, recreational, historic and natural characteristics of statewide significance for future generations. The program's enabling legislation is the Virginia Scenic Rivers Act of 1970, §10.1-400. This program is managed by the state and should not be confused with the Federal Department of the Interior's Wild and Scenic Rivers Program. One of the program's strengths is the partnership forged between citizens, local governments and the state. This partnership begins in the evaluation phase and continues through and after the designation process.

The Rappahannock River, extending from its headwaters near Chester Gap to Ferry Farm is a designated Virginia Scenic River. Managed by the Virginia Department of Conservation and Recreation (DCR), the Virginia Scenic Rivers Program's intent is to identify, designate and help protect rivers and streams that

possess outstanding scenic, recreational, historic and natural characteristics of statewide significance for future generations. ~~This program is managed by the state and should not be confused with the federal Department of the Interior's Wild and Scenic Rivers Program. One of the program's strengths is the partnership forged between citizens, local governments and the state. This partnership begins in the evaluation phase and continues through and after the designation process.~~

Scenic river designations result from initiatives from partnerships of local groups, local governments, state agencies and the Virginia General Assembly. In addition to existing designated state scenic rivers, other river segments have been deemed worthy of further study. ~~See *Virginia Outdoors Plan Chapter VII-F Scenic Rivers* (PDF), pages 152-160, for more detail.~~ The Virginia Outdoors Plan Mapper can be consulted **HERE** to locate and view additional segments.

~~Scenic river designations result from initiatives from partnerships of local groups, local governments, state agencies and the Virginia General Assembly. In addition to existing designated state scenic rivers, other river segments have been deemed worthy of further study. See *Virginia Outdoors Plan Chapter VII-F Scenic Rivers* (PDF), pages 152-160, for more detail.~~

~~The program's focus is on enhancing the conservation of scenic rivers and their corridors. State and federal agencies must take into consideration how projects and programs affect state scenic rivers. DCR is ready to help localities develop planning tools for their use in enhancing the conservation and protection of scenic river corridors. Ultimately, the locality decides what to institute.~~

~~The program's enabling legislation is the Virginia Scenic Rivers Act of 1970, §10.1-400.~~

Public and Private Access to Waterfront Areas

The six Chesapeake watershed States and the District of Columbia have all noted a high need for additional access in their State-wide Comprehensive Outdoor Recreation Plans (SCORPS), public access plans, and boating infrastructure plans. In Virginia's current SCORP; Department of Conservation and Recreation's Virginia Outdoors Plan (dated 2018), ~~for example, the highest ranked outdoor recreation need is for better public access to the state's waters.~~ Visiting natural areas (Rank 1); sunbathing/ relaxing on a beach (Rank 6); viewing the water (Rank 7); swimming/ beach/lake/river (open water) (Rank 8); freshwater fishing (Rank 10) rank amongst the top ten (10) recreational activities by participation. Statewide, access to Natural areas and water trails have been identified as two of the seven most needed outdoor recreation opportunities based on the 2017 Virginia Outdoors Demand Survey. The Virginia Outdoors Plan can be found **HERE**.

~~Throughout the six-state Bay region, water-based recreation—including fishing, all types of boating, swimming, and beach use—are among the top twelve activities based on the percent of the population participating in each activity. Wildlife observation and enjoying a water-related view from observation decks or the water's edge are also highly desirable.~~

The Strategy for Protecting and Restoring the Chesapeake Bay Watershed was released in May 2010, in response to Executive Order 13508 (Chesapeake Bay Protection and Restoration). This strategy includes a key goal to "Conserve Land and Increase Public Access." The basis for this goal lies in the long-standing public demand for greater access to the water in the Chesapeake Bay watershed, a 64,000 square-mile watershed with nearly 18 million residents. Specifically the goal seeks to *Expand public access to the Chesapeake Bay and its tributaries through existing and new local, state and federal parks, refuges,*

reserves, trails and partner sites., ~~t~~The strategy aims to increase public access to the Bay and its tributaries by adding 300 new public access sites by 2025. According to Chesapeake Progress that helps federal, public, and internal oversight groups track the Chesapeake Bay Program's progress towards the goals and outcomes of the Chesapeake Bay Watershed Agreement, between 2010 and 2017, 153 boat ramps, fishing piers and other public access sites were opened on and around the Chesapeake Bay. This marks a 51 percent achievement of the goal to add 300 new access sites to the watershed by 2025 and brings the total number of access sites in the region to 1,292. ~~The basis for this goal lies in the long-standing public demand for greater access to the water in the Chesapeake Bay watershed, a 64,000 square-mile watershed with 17 million residents.~~

Consistent with the past public access planning efforts of the Chesapeake Bay Program, all tidal streams and bays with boating opportunities are included in the planning area. The plan covers "fifth-order streams" and higher. Stream order is a system for classifying streams and rivers based on a scale of 1 to 12, with first-order streams being the smallest and twelfth-order the largest. Typically, first- through third-order streams are small headwater tributaries. The Amazon River for example;~~,~~ the largest river in the world, is a twelfth-order stream. Within the Chesapeake watershed, the lower Susquehanna and lower Potomac are seventh-order streams; the Shenandoah River, a tributary of the Potomac, is a sixth-order stream; the York River is also a sixth-order stream, while one of its tributaries, the Pamunkey River, is a fifth-order stream. Fifth-order streams are large enough to offer canoe/kayak use during at least some part of the year.

~~About one third of existing public access sites throughout the Chesapeake watershed offer multiple types of recreational experiences. Specifically, 303 of the 1,150 existing public access sites offer two types of access, 95 sites offer three types of access, and five sites offer all four types of recreational access. The remaining 747 sites offer a single type of recreational access.~~

~~There are 699 existing public access sites that offer boating access (42 percent of total sites), 614 sites that offer fishing access, 267 sites that offer viewing access, and 78 sites that offer swimming access. It is worth noting that wildlife viewing and swimming occur at many sites not specifically designed for these uses.~~

The cost of developing the different types of access varies depending on the type of facility planned, the location, and characteristics of the proposed site. The most variable factor is the price of the land to be acquired for the access site. In some cases, the land is already in public ownership; in other cases, the land will have to be purchased. The cost of land in tidal areas of ~~the state~~ Virginia is dependent on its characteristics. Well-drained land above the floodplain, which is suitable for development of septic drain fields, has a higher value than low, poorly-drained land. Also, land fronting on deep water has a higher value than land adjacent to shallow waters to be suitable for boating. Lands that suffer from severe erosion generally cost less than stable or accreting lands.

Locally, along the Rappahannock River, existing access includes ~~local and federal~~ parks that front on the river in the ~~city~~ City of Fredericksburg such as the City dock where the Captain John Smith Blueway Trail has a starting or termination point. The site also includes a boat launch and waterside walkway for fishing and water views. Further upstream, a canoe and kayak launch site has been provided in the Downtown Fredericksburg area in Riverfront Park off Sophia Street. A canoe/ kayak launch, fishing and riverfront views are offered at the City's Old Mill Park, accessed via Caroline Street. ~~Access is limited to a number of points along the Fredericksburg riverfront.~~ The City of Fredericksburg has jurisdiction over the Rappahannock Riverfront throughout the City and within Spotsylvania County to the west of the City

line where the overwhelming majority of the Rappahannock riverfront is in City ownership. The Virginia Department of Game and Inland Fisheries has established an access point on the Rappahannock Motts Landing (Route 618) in Spotsylvania County (City of Fredericksburg jurisdiction). Another access point is located on the Rapidan River at Elys Ford (Route 610) in Spotsylvania County about 14 miles upstream of Motts Landing. Access may also be gained via several non- established points. Descriptions of a variety of public access points, user groups, routes and fishing opportunities can be found at the Virginia Department of Game and Inland Fisheries website **HERE**.

The Friends of the Rappahannock, based on Fall Hill Avenue within the City of Fredericksburg promotes advocacy, education, river protection and restoration efforts throughout the Rappahannock River Corridor. Their efforts also include promotion of river access for recreational uses, offering organized kayak outings, etc. along the river. More information regarding the Friends of the Rappahannock can be found **HERE**.

The Spotsylvania County riverfront is limited to points east of the City along the Tidal portion of the Rappahannock River. East of the City of Fredericksburg there is presently no formalized public access to the river in Spotsylvania County. The Spotsylvania riverfront at present tends to be comprised of naturally forested slopes descending down to the waters edge. Extensive historic wooden bulkheads in varying conditions of decay line the river on both the Spotsylvania and Stafford shorelines. The image below is an one example (See Image 1): ~~The Chesapeake Bay Watershed Public Access Plan identifies a potential future boat launch access site near the confluence of the Rapidan and Rappahannock Rivers, a location within the City of Fredericksburg Rappahannock River easement.~~

Image 1: River Shoreline

This ~~is~~ portion of the Rappahannock River is considered a Category 2 site, requiring additional planning and review, prior to development. The Plan acknowledges that the identification of potential access sites is not a closed or static process. New opportunities for access will continue to be identified over time by citizens, non-governmental organizations, and local, state, and federal government.

The Rappahannock River east of ~~the city~~Fredericksburg in Spotsylvania County has been recognized locally as a potential public access site, offering citizens additional public access opportunities along the Rappahannock River, to provide boating, bank fishing, picnicking, and other recreational uses. This section of the river could be easily accessible by vehicles off Route 17. One potential location worthy of

consideration for public water access, historic interpretation and parkland is the historic Franklin's Crossing area (a significant Civil War era site) within the County owned land inventory (See Image 2 below). The site is located adjacent to a developed industrial area (known as The Bowman Center) targeted for mixed use development, infill, and historic building revitalization for a variety of attractions, employer spaces, and residential opportunities. This site is in close proximity to the Route 17 Corridor, City of Fredericksburg, East Coast Greenway and planned Deep Run Recreational Trail systems and would be a positive complement to expanded public access goals. The Public Facilities Chapter of the Comprehensive Plan Public Facilities Element has identified this area as a recommended site for implementation of the Planned Deep Run Spur, a trail head, a riverside park with provision of river access and historic interpretation. The Deep Run Spur and trail head are also included within the Trailways Master Plan, located in Chapter 3A of the Transportation Element.

Image 2: Rappahannock Riverfront

Since 2013, additional private access sites beneficial to residents of their associated private development projects have been envisioned east of the City along the Rappahannock River. The New Post mixed use project is one example with docks and waterside access under construction as of the Summer, 2018. A picture of the site is below (See Image 3):

Image 3: New Post Waterfront Access

The Department of Health has a number of regulations that could impact existing or proposed public access sites.

- Local health department inspectors must approve any construction that requires development of a septic field to treat wastewater.

- The Bureau of Shellfish Sanitation is concerned about the public's health related to the consumption of oysters. Shore development, including marinas, are continually evaluated to determine effects of water quality and impacts on shellfish beds.
- The Division of Waste Water Engineering requires the development of adequate sanitary facilities in all new marinas, including pump out capability for boats.

The Virginia Department of Conservation and Recreation provides a map resource for water access points (boating) and water trails as part of its Virginia Outdoors Plan Mapper, accessible **HERE.** The resource does not include County reservoirs.

Shoreline access structures along the Rapidan and Rappahannock Rivers are also tracked by the Virginia Institute of Marine Science's (VIMS) Center for Coastal Resources Management. Shoreline access structures and additional shoreline conditions layers are available and can be searched by locality. The VIMS Comprehensive Map Viewer for Spotsylvania County can be found **HERE**.

Additional public water accesses for water recreation and fishing are available in the County at water reservoirs, including Ni Reservoir, Hunting Run Reservoir, Motts Reservoir (City of Fredericksburg owned and operated). Provision for water access also exists at Lake Anna where a number of private docks and marinas are located. Provision for public access can be found at Lake Anna State Park, operated by the Virginia Department of Conservation and Recreation. Reservoirs are addressed above in the Water Reservoirs Section and additionally have been acknowledged Parks and Recreation amenities noted in the Public Facilities Element of the Comprehensive Plan for Parks and Recreation.

Shoreline and Streambank Erosion

The Virginia Institute of Marine Science's Center for Coastal Resources Management provides locality specific map viewers that depict a number of shoreline condition analysis' and preferred shoreline BMPs along the Rappahannock and Rapidan River corridors. As noted above concerning provision of public and private access to waterfront areas, Spotsylvania County's jurisdiction along the riverfront is chiefly limited to the Rappahannock River, east of the City of Fredericksburg. As per VIMS, this section of the Rappahannock River, approximately 8 miles, is chiefly forested in its riparian areas. As per the VIMS River System Pie Charts, over 34% of the Rappahannock River east of Fredericksburg (within Spotsylvania County) has a forest land use/ land cover. The Forest land use/land cover is followed by Agriculture (approximately 21%), Residential (approximately 19%), and grasslands (approximately 12%). Commercial, Industrial and paved land uses make up the remaining 15% of the riparian area. VIMS notes approximately 120 feet of wholly bare banks along this section of the Rappahannock River. The majority of the shoreline has full coverage. Partial bank coverage is chiefly noted along the riverbank associated with the Fredericksburg Country Club. Defended shorelines in this area include bulkheads (.03 miles) and riprap (.02 miles) shoreline stabilization. Of nearly 7.78 miles, only .06 miles have been classified as defended shoreline.

VIMS has identified a number of preferred shoreline BMPs along the Rappahannock River east of Fredericksburg. These improvements are included within the VIMS Comprehensive Map Viewer and based on mapped location, include guidance to either:

(1) Remove existing bulkheads and failed revetments, if present. Construct new revetment as far landward as possible; grading the bank if possible and including vegetation buffers where possible. If grading is not possible, construct or repair existing revetment in the

same alignment; only consider a bulkhead if previously present and the site is limited by navigation. Enhance sand beach/dune, and/or vegetated wetlands present. Consider a shoreline enhancement project. In high energy settings where shoreline extends more than 200 feet see option for Offshore Breakwater with Beach Nourishment.

(2) Remove existing shoreline structure if present; grade bank if necessary and install a non-structural living shoreline which may include riparian buffer planting along the bank, and/or marsh plants, coir logs, or oyster reefs along the shoreline. Best choice for low energy environments.

(3) Highly Modified Areas: Management options for this shoreline may be limited due to the presence of highly developed upland (e.g. commercial wharfs) or infrastructure directly adjacent to the shoreline (e.g. road) and will depend on the need for and limitations posed by navigation access and erosion control. Seek expert advice on the design of your project.

Like the County's Rappahannock River frontage west of the City of Fredericksburg, much of the County's Rapidan River frontage is also in ownership by the City of Fredericksburg. There are also a number of privately owned and Homeowners Association parcels along the Rapidan River. For both the Rapidan River and Rappahannock River west of the City of Fredericksburg, VIMS notes total shoreline coverage for nearly the entire length of the Rivers along the Spotsylvania County frontage. Partial bank coverage is noted adjacent to the City of Fredericksburg line and in proximity to the City of Fredericksburg's Motts Reservoir outflow at Mine Run. The Mine Run site, owned by the City of Fredericksburg, includes a public water access site with associated parking. Its good to note that Resource Protection Area's (RPA) have been mapped along both the full extent of the Rapidan and Rappahannock Rivers as a shoreline protection measure. The Rappahannock River basin (including the Rapidan River) is also under environmental stewardship of the Friends of the Rappahannock and the Rappahannock River Basin Commission.

The VIMS Comprehensive Map Viewer for Spotsylvania County can be found **HERE**.

Elsewhere in the County, County Environmental Codes Division says no other shoreline or streambank erosion issues have been identified, referencing the George Washington Regional Commission and Friends of the Rappahannock as sources.

EXISTING PROTECTION POLICIES: WATER RELATED RESOURCES

Legislation and Programs

Federal

The Clean Water Act calls for "maintaining and restoring the chemical, physical and biological integrity of our nation's waters." It covers every aspect of water-related topics in the United States. The part that pertains to wetlands is regulated by the U.S. Army Corps of Engineers (Corps) under Section 404, which regulates what you can build on or fill in a wetland with; it covers every kind of wetland, whether it's salt or freshwater, public land or private. The use of fill or dredged materials constitutes a pollutant, and is regulated by the Corps. The purpose of this legislation is that if there is a more efficient way to achieve the desired results, the permit will be denied. The Corps can only issue permits that are not contrary to the public interest. In addition, the Corps can only permit the least environmentally damaging practicable alternative.

The permits are approved by the Corps, who evaluate the applications based on the recommendations of the Environmental Protection Agency (EPA). The EPA sets the standards for review and the Corps complies. The EPA can veto a permit issued by the corps if it feels that the permit has been issued erroneously, but it rarely does. Both agencies share the authority to decide what constitutes a wetland, and other governmental agencies (like the Fish and Wildlife Service and the National Marine Fisheries Service) also provide input. As a result, definitions quite frequently either overlap or leave gaps, and there can be much dispute throughout the permit review process. However, the vast majority of Corps permits are general permits and have all environmental documentation provided by and approved by the agencies in advance.

To review a permit, the Corps performs an environmental assessment of the area and first determines whether jurisdictional streams and/or wetlands are present on a property. Subsequently, the impact of the proposed activity in jurisdictional areas is determined. If there is a way to achieve less impact to the aquatic environment, the Corps will make the appropriate recommendations and ask the applicant to amend the application.

To improve the efficiency of the federal review process, the Corps has developed several general permits to include nationwide permits, regional permits and programmatic permits for activities on similar scope and minimal adverse impacts to the aquatic environment. For common requests, most nationwide permits are easily verified by the Corps. However, Department of the Army permits (individual permits) are issued or denied based on a public interest review on a case-by-case basis. For instance, nationwide permits can be granted for small-scale activities like riprap, bulkheads, and dredge and/or fill projects involving less than 25 cubic yards of fill. Several nationwide permits require notification procedures and may not be easily verified if federally listed endangered or threatened species are involved or if historic properties that are listed or eligible for listing in the National Register of Historic Places.

Enforcement of these regulations can be difficult, as compliance is largely voluntary. If someone decides to forego the permit process, it is possible the infraction will go completely undetected. In most cases, the Corps depends on the public for surveillance of unauthorized activities. Perpetrators may face penalties that include suspension, revocation of permits, fines, civil or criminal prosecution, and enforced mitigation processes.

One form of wetland mitigation is the process of "wetland banking"; that is, the Corps will allow the altering of a wetland if other wetlands are created to compensate for the loss of the wetlands. Mitigation operates on a ratio basis. In the Norfolk District the mitigation ratios are as follows: 2:1 mitigation for the loss of forested wetlands, 1.5:1 for the loss of scrub/shrub wetlands and 1:1 for the loss of emergent wetlands. For example, if a builder proposes to fill five acres of forested wetlands then he would need to provide 10-acres of forested wetlands somewhere else. This is generally done in one of two ways: an artificial wetland is constructed, or the builder will purchase 10-acres of wetland credits from an approved wetland mitigation bank.

State

Chesapeake Bay Act

The Commonwealth of Virginia adopted the Chesapeake Bay Preservation Act in September 1989 to partially fulfill provisions of an interstate regional agreement made in 1984 between the states of Virginia, Maryland, Pennsylvania and Washington, D. C. The Bay Act mandates all Tidewater Virginia localities to establish programs, plans and ordinances to protect and improve Bay water quality. Spotsylvania is one of the 89 jurisdictions affected by the Bay Act. All of these communities border tidal waters, such as the Rappahannock River, Chesapeake Bay, or their tributaries; and have a considerable, cumulative impact on water quality.

The Bay Act legislation requires localities to establish programs to ensure compliance with the established goals set forth in the Bay Act. The initial program included a comprehensive inventory of the environmental characteristics of the locality, the identification of environmentally sensitive areas and their designation as such in officially adopted protection districts comprised of Resource Protection Area, Resource Management Areas and Intensely Developed Areas. The second component of the program includes adoption of performance criteria for guiding site development, and the provision of non-point source pollution standards to protect state water quality.

After preliminary environmental inventories were conducted, a designation was made of the Resource Protection Areas (RPAs) and the Resource Management Areas (RMAs). In 1992, the County adopted criteria for land use development in these areas. RPA's and RMA's are described in greater detail in pages that follow.

Tidal Wetlands Act of 1972

The enactment of the Tidal Wetlands Act of 1972 gave the Virginia Marine Resources Commission (VMRC) the responsibility for issuing *tidal* wetlands permits under Chapters 12 and 13 of Title 28.2 of the Code of Virginia and authorizing localities to adopt their own wetlands zoning ordinances. This means that each locality has the option of imposing ~~their own~~ local restrictions on top of those outlined at the federal and state level. At the state level, the Department of Environmental Quality (DEQ) and the VMRC further oversee the use of the Clean Water Act.

In the absence of a local wetland board, the VMRC is responsible for administering the permitting process. If there is a local board, the responsibility of issuing permits rests with them, and they do so based on guidelines set by the VMRC and the Virginia Institute of Marine Sciences (VIMS).

Virginia Water Protection Permit Program (DEQ)

The Department of Environmental Quality (DEQ) Virginia Water Protection permit (VWPP) program serves as Virginia's Section 401 certification program for federal Section 404 permits issued under the authority of the Clean Water Act and the Commonwealth's non-tidal wetlands program under the State Water Control Law, independent of 401 certification.

DEQ VWPP program strives to protect state waters, which are defined by State Water Control Law (62.1-44.3) and VWP program regulations (9VAC 25-210) as *all water, on the surface and under the ground, wholly or partially within or bordering the Commonwealth or within its jurisdiction, including wetlands,* through the issuance of a VWP permit or the certification of US Army Corps nationwide permits (NWP) or regional permits (RP). Permits issued by the VWP permit program protect state waters by ensuring no net loss of wetland acreage and function through mitigation requirement similar to the Corps outlined above and by avoidance and minimization of the wetland impacts to the maximum extent practicable. However, some activities are excluded, as detailed in Virginia Administrative Code 9 VAC 25-210-60, from requiring any type of VWP permit due to provisions in the law.

VWPP program conducts compliance inspections on mitigation and construction sites in order to ensure compliance with regulations and permit conditions and also investigates reports of alleged unpermitted activities in wetlands and initiates enforcement actions if alleged violations of law or regulation are found. Responses to alleged noncompliance and unpermitted impacts can result in various levels of resolution and can range from no action to referral to enforcement and potential penalties.

Final 2016 305(b)/303(d) Water Quality Assessment Integrated Report

~~Many of the rivers and streams comprising the County's watersheds have been monitored and assessed by the Virginia Department of Environmental Quality (DEQ), and a few have been included in Total Maximum Daily Load (TMDL) studies, included in the DEQ's 305(b)/303(d) Water Quality Assessment Integrated Report. This Integrated Report (IR) pulls together the surface water data collected in Virginia and compares the information to the established water quality standards. The report provides details for those waterbodies that do not meet one or more of the water quality standards, including the TMDL development status. After a waterbody has been identified as impaired, a TMDL (Total Maximum Daily Load) is developed to identify the sources and determine the reductions of those sources needed for a waterbody to meet the water quality standards.~~

~~The report satisfies the requirements of the U.S. Clean Water Act sections 305(b) and 303(d) and the Virginia Water Quality Monitoring, Information and Restoration Act. The goals of Virginia's water quality assessment program are to determine whether waters meet water quality standards, and to establish a schedule to restore waters with impaired water quality.~~

~~Water quality standards designate uses for waters. There are six designated uses for surface waters in Virginia:~~

- ~~aquatic life~~

- ~~fish consumption~~
- ~~public water supplies (where applicable)~~
- ~~recreation (swimming)~~
- ~~shellfishing~~
- ~~wildlife~~

~~Additionally, several subcategories of aquatic life use have been adopted for the Chesapeake Bay and its tidal tributaries. The standards define the water quality needed to support each of these uses. If a water body contains more contamination than allowed by water quality standards, it will not support one or more of its designated uses. Such waters have "impaired" water quality. In most cases, a cleanup plan (called a "total maximum daily load") must be developed and implemented to restore impaired waters.~~

The Virginia Department of Environmental Quality (DEQ) released the Final 2016 305(b)/303(d) Water Quality Assessment Integrated Report (Integrated Report) on April 2, 2018. The 2016 Integrated Report is a summary of the water quality conditions in Virginia from January 1, 2009, through December 31, 2014.

This biennial report satisfies the requirements of the U.S. Clean Water Act sections 305(b) and 303(d) and the Virginia Water Quality Monitoring, Information and Restoration Act. The goals of Virginia's water quality assessment program are to determine whether waters meet water quality standards, and to establish a schedule to restore waters with impaired water quality.

Water quality standards designate uses for waters. There are six designated uses for surface waters in Virginia:

- aquatic life
- fish consumption
- public water supplies (where applicable)
- recreation (swimming)
- shellfishing
- wildlife

Additionally, several subcategories of aquatic life use have been adopted for the Chesapeake Bay and its tidal tributaries. The standards define the water quality needed to support each of these uses. If a water body contains more contamination than allowed by water quality standards, it will not support one or more of its designated uses. Such waters have "impaired" water quality. In most cases, a cleanup plan (called a "total maximum daily load") must be developed and implemented to restore impaired waters.

Section 303(d) of the Clean Water Act (CWA) and the United States Environmental Protection Agency's Water Quality Planning and Management Regulations (40 CFR Part 130) require states to develop total maximum daily loads (TMDLs) for water bodies that are exceeding water quality standards. The TMDL process establishes the allowable loadings of pollutants for a water body based on the relationship between pollution sources and in-stream water quality conditions.

On December 29, 2010, the U.S. Environmental Protection Agency established the Chesapeake Bay Total Maximum Daily Load (TMDL). The TMDL is a historic and comprehensive "pollution diet" to restore clean water in the Chesapeake Bay and the region's streams, creeks, and rivers.

A number of elements are in place to ensure that all pollution control measures needed to fully restore the Bay and its tidal rivers are in place by 2025. Practices will also be in place by 2017 to meet 60 percent of the necessary pollution reductions. Actions are being taken across six states and the District of Columbia to reduce nitrogen, phosphorus and sediment loads to meet the clean water goals of the Bay TMDL.

The Virginia DEQ has made the Final 2016 305(b)/303(d) Water Quality Assessment Integrated Report available online at the link **HERE**.

~~The table~~Table 6 below provided by the Virginia Department of Environmental Quality contains information for the listed impaired streams in the Final ~~2010~~ 2016 Water Quality Integrated Report (IR). The information is organized by waterbody, with the waterbody type identified. The specific segments of the waterbody that are listed in the ~~2010~~ 2016 IR are given, as well as a description of where the segment begins and ends. The impaired designated use is listed, along with the cause~~ and a link to the TMDL report if one has been completed.~~.

There are a couple of things about this information that should be noted:

1. Some portions of an identified segment may fall outside of the Spotsylvania County boundary.
2. The impairment information is from the Final ~~2010~~ 2016 IR. ~~There are some changes to this information in the Draft 2012 IR.~~ Compared to a similar Table presented within the 2013 Spotsylvania Comprehensive Plan based on the Final 2010 IR ~~They may~~there are ~~be~~ some segments that ~~are~~ were identified previously ~~here~~ that are no longer listed as impaired. Additionally, there are some new impaired segments now listed that were not identified previously.~~, or there may be new impaired segments listed.~~
3. Those aquatic life impairments that are suspected to be caused by natural conditions will undergo investigation to determine if the causes of the impairment are from natural conditions or from anthropogenic sources. Depending on the result of this study, a TMDL may not be needed.

Table ~~26~~: Impaired Resources

Waterbody Name	Waterbody Type	Segment ID	Location	Impaired Designated Use	Cause	TMDL	Report Link
Rapidan River	River	VAN-E18R_RAP03A02 VAN-E18R_RAP02A02 VAN-E18R_RAP01A02	Segment begins at the confluence with Wilderness Run, rivermile 7.78, and continues downstream until the confluence with the Rappahannock River.	Fish Consumption	Mercury in Fish Tissue	No	
		VAN-E18R_RAP03A02	Segment begins at the confluence with Wilderness Run, rivermile 7.78, and continues downstream until the confluence with Middle Run.	Recreation	Escherichia coli	Yes	Bacteria TMDL for the Rapidan River Basin
Wilderness Run	River	VAN-E18R_WIL01A08	Segment begins at the confluence of North Wilderness Run and South Wilderness Run and continues downstream until the confluence with the Rapidan River.	Recreation	Escherichia coli	Yes	Bacteria TMDL for the Rapidan River Basin
Hazel Run	River	VAN-E20R_HAL01A00	Segment begins at the Route 95 crossing and continues downstream until the confluence with the Rappahannock River.	Fish Consumption	PCBs	No	
				Recreation	Escherichia coli	Yes	Bacteria TMDL for the Tidal Freshwater Rappahannock River Watershed
Massaponax Creek	River	VAN-E20R_MAP02A02	Segment begins at the confluence with an unnamed tributary to Massaponax Creek, just upstream of Route 1, and continues downstream until the confluence with another unnamed tributary, approximately 0.25 rivermile upstream of Ruffins Pond.	Aquatic Life	pH	No	
		VAN-E20R_MAP04A02 VAN-E20R_MAP03A02 VAN-E20R_MAP02A02	Segment begins at the confluence with an unnamed tributary, approximately 1.1 rivermiles downstream from Route 673, and continues downstream until the confluence with another unnamed tributary, approximately 0.25 rivermile upstream of Ruffins Pond.	Recreation	Escherichia coli	Yes	Bacteria TMDL for the Tidal Freshwater Rappahannock River Watershed
Motts Run Reservoir	Reservoir	VAN-E19L_MOT02A02 VAN-E19L_MOT01A02	Entire Motts Run Reservoir waterbody	Fish Consumption	Mercury in Fish Tissue	No	
Rappahannock River	Estuarine	VAN-E20E_RPP03A02 VAN-E20E_RPP02A02 VAN-E20E_RPP01A02	Segment begins at the fall line at Route 1 and continues downstream until the outlet of waterbody VAN-E20E.	Fish Consumption	PCBs	No	
				Recreation	Escherichia coli	Yes	Bacteria TMDL for the Tidal Freshwater Rappahannock River Watershed
Plentiful Creek	River	VAN-F07R_PLT01A00	Segment begins at the confluence with an unnamed tributary to Plentiful Creek, upstream from the Route 601 bridge, and continues downstream until the confluence with Lake Anna.	Recreation	Escherichia coli	Yes	Bacteria TMDL for York River Basin
Terrys Run	River	VAN-F07R_TRY03A08	Segment begins at the headwaters of Terrys Run and continues downstream until the confluence with Horsepen Branch.	Recreation	Escherichia coli	Yes	Bacteria TMDL for York River Basin
				Fish Consumption	PCBs	No	
Music Branch	River	VAN-F09R_MUS01A06	Segment begins at the headwaters of Music Branch and continues downstream until the confluence with Northeast Creek.	Recreation	Escherichia coli	Yes	Bacteria TMDL for the Pamunkey River Basin
Northeast Creek	River	VAN-F09R_NST03A08	Segment begins at the confluence with an unnamed tributary to Northeast Creek, at rivermile 9.39, and continues downstream until the confluence with another unnamed tributary to Northeast Creek, approximately 0.67 rivermiles upstream from Route 622.	Recreation	Escherichia coli	Yes	Bacteria TMDL for the Pamunkey River Basin
		VAN-F09R_NST01A08	Segment begins at the confluence with an unnamed tributary to Northeast Creek and continues downstream until the confluence with the North Anna River.	Recreation	Escherichia coli	No	*TMDL Currently Under Development*
		VAN-F09R_NST04A08 VAN-F09R_NST03A08	Segment begins at the confluence of Knights Branch with Music Branch, forming Northeast Creek, and continues downstream until the confluence with another unnamed tributary to Northeast Creek, approximately 0.67 rivermiles upstream from Route 622.	Aquatic Life	Dissolved Oxygen	No	*Suspected Natural Conditions*
		VAN-F09R_NST04A08 AND VAN-F09R_NST02A98	Segment begins at the confluence of Knights Branch with Music Branch, forming Northeast Creek, and continues downstream until the confluence with an unnamed tributary to Northeast Creek, approximately 2.28 rivermiles downstream from Route 208. AND Segment begins at the confluence with an unnamed tributary to Northeast Creek, approximately 0.67 rivermiles upstream from Route 622, and continues downstream until the confluence with another unnamed tributary to Northeast Creek.	Aquatic Life	pH	No	
Brock Run	River	VAN-F15R_BRK01A06	Segment begins at the confluence with Wash Branch and continues downstream until the confluence with the Ni River.	Recreation	Escherichia coli	No	
Ni River	River	VAN-F15R_NIR01A00	Segment begins at the confluence of an unnamed tributary to the Ni River, approximately 0.95 rivermiles downstream from the Route 608 bridge, and continues downstream until the confluence with the Po River, forming the Poni River.	Aquatic Life	Benthic-Macroinvertebrate Bioassessments	No	
Glady Run	River	VAN-F16R_GDY01A10	Segments begins at the headwaters of Glady Run and continues downstream until the confluence with the Po River.	Recreation	Escherichia coli	No	
Po River	River	VAN-F16R_POR01A10	Segment begins at an unnamed tributary to the Po River and continues downstream until the confluence with the Ni River, forming the Poni River.	Recreation	Escherichia coli	No	
Matta River	River	VAN-F18R_MTA01A00	Segment begins at the confluence with an unnamed tributary to the Matta River, approximately 0.5 rivermile upstream from the Route 646 bridge, and continues downstream until the confluence with the Poni River, forming the Mattaponi River.	Recreation	Escherichia coli	No	
		VAN-F18R_MTA02A04	Segment begins at the confluence of the Mat River and the Ta River and continues downstream until the confluence with an unnamed tributary to the Matta River, approximately 0.5 rivermile upstream from Route 646.	Aquatic Life	Benthic-Macroinvertebrate Bioassessments	No	
Ta River	River	VAN-F18R_TAR01A00	Segment begins at the confluence with Bluff Run, approximately 0.7 rivermile upstream from Route 738, and continues downstream until the confluence with the Mat River, forming the Matta River.	Aquatic Life	Dissolved Oxygen	No	*Suspected Natural Conditions*
					pH	No	
Ni River Reservoir	Reservoir	VAN-F15L_PNB01A02 VAN-F15L_NIR02A02 VAN-F15L_NIR01A02	Entire Ni River Reservoir waterbody	Fish Consumption	Mercury in Fish Tissue	No	
Lake Anna	Reservoir	VAN-F07L_TRY01A04 AND VAN-F07L_NAR01A02	Segment includes the Terrys Run arm of Lake Anna. AND Segment includes the lower portion of Lake Anna, beginning near the northern end of the Route 690 bridge, and continues downstream until the dam.	Fish Consumption	Mercury in Fish Tissue	No	
		VAN-F07L_TRY01A04 VAN-F07L_PMC02A02 VAN-F07L_PMC01A04 VAN-F07L_PLT01A04 VAN-F07L_NAR04A06 VAN-F07L_NAR03A02 VAN-F07L_NAR02A02 VAN-F07L_NAR01A02	Entire Lake Anna waterbody	Fish Consumption	PCBs	No	

Virginia Department of Environmental Quality 2016 Impaired Waters (Category 4 & 5)

Waterbody Name	Waterbody Type	Segment ID	Location	Impaired Designated Use	Cause/VA Category	Cycle First Listed	TMDL Schedule	Size
Rapidan River	River	VAN-E10R_RAP01A02	Segment begins at the confluence with Hunting Run, at rivermile 1.35, and continues downstream until the confluence with the Rappahannock River	Fish Consumption	Mercury in Fish Tissue/ 5A	2010	2022	1.24 Miles
		VAN-E18R_RAP02A02	Segment begins at the confluence with Mollie Run, rivermile 5.10, and continues downstream until the confluence with Hunting Run	Fish Consumption	Mercury in Fish Tissue/ 5A	2010	2022	3.62 Miles
		VAN-E10R_RAP03A02	Segment begins at the confluence with Wilderness Run, rivermile 7.70, and continues downstream until the confluence with Mollie Run	Fish Consumption	Mercury in Fish Tissue/ 5A	2010	2022	2.50 Miles
Wilderness Run	River	VAN-E18R_WIL01A08	Segment begins at the confluence of North Wilderness Run and South Wilderness Run and continues downstream until the confluence with the Rapidan River	Recreation	Escherichia coli/ 4A	2008	2020	5.56 Miles
Hazel Run	River	VAN-E20R_HAL01A08	Segment begins at the Route 96 crossing and continues downstream until the confluence with the Rappahannock River	Fish Consumption	PCB in Fish Tissue/ 5A	2006	2018	4.72 Miles
		VAN-E20R_HAL01A10	Segment begins at the Route 95 crossing and continues downstream until the confluence with the Rappahannock River.	Recreation	Escherichia coli/ 4A	2004	2016	4.72 Miles
		VAN-E20R_HAL01A08	Segment begins at the Route 95 crossing and continues downstream until the confluence with the Rappahannock River.	Aquatic Life	Benthic-Macroinvertebrate Bioassessments/ 5A	2012	2024	4.72 Miles
Hazel Run Unnamed Tributary	River	VAN-E20R_XHH01A10	Segment begins at the headwaters of the unnamed tributary, and continues downstream to the confluence with Hazel Run	Recreation	Escherichia coli/ 4A	2014	2026	1.53 Miles
Massaponax Creek	River	VAN-E20R_MAP03A02	Segment begins at the confluence with an unnamed tributary to Massaponax Creek, approximately 0.25 rivermile upstream from the Route 639 bridge, and continues downstream until the confluence with another unnamed tributary, just upstream from Route 1.	Recreation	Escherichia coli/ 4A	2010	2022	1.67 Miles
		VAN-E20R_MAP04A02	Segment begins at the confluence with an unnamed tributary, approximately 1.1 rivermiles downstream from Route 673, and continues downstream until the confluence with another unnamed tributary, approximately 0.25 rivermile upstream from Route 639.	Recreation	Escherichia coli/ 4A	2008	2020	2.17 Miles
		VAN-E20R_MAP05B12	Segment begins at the confluence with an unnamed tributary to Massaponax Creek, just upstream of Route 1, and continues downstream until the confluence with another unnamed tributary, at rivermile 2.68.	Aquatic Life	pH/ 6A	2008	2018	5.19 Miles
		VAN-E20R_MAP05B10	Segment begins at the confluence with an unnamed tributary to Massaponax Creek, just upstream of Route 1, and continues downstream until the confluence with another unnamed tributary, at rivermile 2.68.	Recreation	Escherichia coli/ 4A	2004	2016	5.19 Miles
Massaponax Creek Unnamed Tributary	River	VAN-E20R_XFE01A02	Segment begins where XEN joins XFE and continues downstream until the confluence with Massaponax Creek at rivermile 3.06	Aquatic Life	pH/ 6A	2016	2028	1.27 Miles
Motts Run Reservoir	Reservoir	VAN-E19L_MOT01A02	Segment includes the lower half of Motts Run Reservoir, beginning at rivermile 0.8 and continuing downstream until the dam at rivermile	Fish Consumption	Mercury in Fish Tissue/ 5A	2006	2020	62.88 Acres
		VAN-E19L_MOT02A02	Segment includes the upper half of Motts Run Reservoir, beginning at the upper end of the reservoir and continuing downstream until rivermile 0.8	Fish Consumption	Mercury in Fish Tissue/ 5A	2008	2020	78.29 Acres
Mine Run	River	VAN-E19R_MIN01A10	Segment begins at the headwaters of Mine Run and continues downstream to the upper end of the Motts Run Reservoir	Recreation	Escherichia coli/ 5A	2014	2026	4.01 Miles
Deep Run	River	VAN-E20R_DEP03A02	Segment begins at the headwaters of Deep Run, and continues downstream to the confluence with an unnamed tributary at rivermile 2.13, downstream of Route 638.	Aquatic Life	pH/ 6A	2012	2024	1.66 Miles
Rappahannock River	Estuarine	VAN-E20E_RPP01A02	Segment begins at the confluence with Massaponax Creek and continues downstream until the outlet of waterbody VAN-E20E. This segment represents the upper reach of VAN-E21E_RPP05A02. Portion of CBP segment RPPTF	Recreation	Escherichia coli/ 4A	2006	2018	0.18 Sq. Miles
		VAN-E20E_RPP02A02	Segment begins at the confluence with Deep Run and continues downstream until the confluence with Massaponax Creek. Portion of CBP segment RPPTF	Recreation	Escherichia coli/ 4A	2002	2010	0.23 Sq. Miles
		VAN-E20E_RPP03A02	Segment begins at the tidal line at Route 1 and continues downstream until the confluence with Deep Run. Portion of CBP segment RPPTF	Recreation	Escherichia coli/ 4A	2002	2010	0.21 Sq. Miles
		VAN-E20E_RPP01A02	Segment begins at the confluence with Massaponax Creek and continues downstream until the outlet of waterbody VAN-E20E. This segment represents the upper reach of VAN-E21E_RPP05A02. Portion of CBP segment RPPTF	Fish Consumption	PCB in Fish Tissue/ 5A	2004	2016	0.18 Sq. Miles
		VAN-E20E_RPP02A02	Segment begins at the confluence with Deep Run and continues downstream until the confluence with Massaponax Creek. Portion of CBP segment RPPTF.	Fish Consumption	PCB in Fish Tissue/ 5A	2004	2016	0.23 Sq. Miles
		VAN-E20E_RPP03A02	Segment begins at the tidal line at Route 1 and continues downstream until the confluence with Deep Run. Portion of CBP segment RPPTF.	Fish Consumption	PCB in Fish Tissue/ 5A	2004	2016	
Plentiful Creek	River	VAN-F07R_PLT01A06	Segment begins at the confluence with an unnamed tributary to Plentiful Creek, upstream from the Route 601 bridge, and continues downstream until the confluence with Lake Anna	Recreation	Escherichia coli/ 4A	1998	2006	3.30 Miles
Terrys Run	River	VAN-F07R_TRY03A08	Segment begins at the headwaters of Terrys Run and continues downstream until the confluence with Horsepen Branch	Recreation	Escherichia coli/ 4A	2010	2022	4.36 Miles
		VAN-F07R_TRY03A08	Segment begins at the headwaters of Terrys Run and continues downstream until the confluence with Horsepen Branch.	Fish Consumption	PCB in Fish Tissue/ 5A	2006	2018	4.36 Miles

Virginia Department of Environmental Quality 2016 Impaired Waters (Category 4 & 5)								
Music Branch	River	VAN-F09R_MUS01A06	Segment begins at the headwaters of Music Branch and continues downstream until the confluence with Northeast Creek	Recreation	Escherichia coli/ 4A	2008	2020	3.56 Miles
Northeast Creek	River	VAN-F09R_NES03A09	Segment begins at the confluence with an unnamed tributary to Northeast Creek, at rivermile 9.39, and continues downstream until the confluence with another unnamed tributary to Northeast Creek, approximately 0.67 rivermiles upstream from Route 622	Recreation	Escherichia coli/ 4A	2006	2018	6.36 Miles
		VAN-F09R_NES04A09	Segment begins at the confluence of Knights Branch with Music Branch, forming Northeast Creek, and continues downstream until the confluence with an unnamed tributary to Northeast Creek, approximately 2.26 rivermiles downstream from Route 208	Recreation	Escherichia coli/ 4A	2012	2024	3.52
Northeast Creek Unnamed Tributary	River	VAN-F09R_XIA01A08	Segment begins at the headwaters of an unnamed tributary to Northeast Creek and continues downstream until the confluence with Northeast Creek, approximately 0.46 rivermiles upstream from the Route 208 crossing.	Recreation	Escherichia coli/ 4A	2016	2028	3.90 Miles
Brock Run	River	VAN-F15R_BRND1A06	Segment begins at the confluence with Wash Branch and continues downstream until the confluence with the Ni River	Recreation	Escherichia coli/ 4A	2006	2020	2.56 Miles
		VAN-F15R_BRKD1A06	Segment begins at the confluence with Aunt Sarah Spring Creek and continues downstream until the confluence with the Ni River.	Aquatic Life	Dissolved Oxygen/ 5A	2012	2024	2.56 Miles
		VAN-F15R_BRND1B12	Segment begins at the headwaters of Brock Run, and continues downstream to the confluence with Aunt Sarah Spring Creek.	Aquatic Life	pH/ 5A	2014	2026	3.21 Miles
Lewis Run	River	VAN-F15R_LWS01A12	Segment begins at the outlet of Cool Spring Lake, and continues downstream to the confluence with the Ni River	Aquatic Life	Dissolved Oxygen/ 5A	2012	2024	1.46 Miles
Ni River	River	VAN-F15R_NIR01A00	Segment begins at the confluence of an unnamed tributary to the Ni River, approximately 0.95 rivermiles downstream from the Route 608 bridge, and continues downstream until the confluence with the Po River, forming the Poni River	Aquatic Life	Benthic-Macroinvertebrate Bioassessments/ 5A	2010	2022	5.58 Miles
Glady Run	River	VAN-F16R_GLY01A10	Segments begins at the headwaters of Glady Run and continues downstream until the confluence with the Po River	Recreation	Escherichia coli/ 4A	2010	2022	9.90 Miles
Po River	River	VAN-F16R_POR01A10	Segment begins at an unnamed tributary to the Po River and continues downstream until the confluence with the Ni River, forming the Poni River	Recreation	Escherichia coli/ 4A	2010	2022	7.21 Miles
Matta River	River	VAN-F18R_MTA01A00	Segment begins at the confluence with an unnamed tributary to the Matta River, approximately 0.5 rivermile upstream from the Route 646 bridge, and continues downstream until the confluence with the Poni River, forming the Mattaponi River.	Recreation	Escherichia coli/ 4A	2004	2016	11.89 Miles
		VAN-F18R_MTA02A04	Segment begins at the confluence of the Mat River and the Ta River and continues downstream until the confluence with an unnamed tributary to the Matta River, approximately 0.5 rivermile upstream from Route 646.	Aquatic Life	Benthic-Macroinvertebrate Bioassessments/ 5A	2008	2020	1.24 Miles
North Anna River	River	VAP-T08R_NAR01A00	From Bull Run to the Doswell PWS intake approximately 0.5 mi upstream of the Rte. 30 bridge.	Recreation	Escherichia coli/ 4A	2016	2028	1.73 Miles
Ta River	River	VAN-F18R_TAR01A00	Segment begins at the confluence with Bluff Run, approximately 0.7 rivermile upstream from Route 738, and continues downstream until the confluence with the Mat River, forming the Matta River.	Aquatic Life	Dissolved Oxygen/ 5C	2016	2032	3.76 Miles
		VAN-F18R_TAR01A00	Segment begins at the confluence with Bluff Run, approximately 0.7 rivermile upstream from Route 738, and continues downstream until the confluence with the Mat River, forming the Matta River.	Aquatic Life	pH/ 5C	2009	2022	3.76 Miles
Mat River	River	VAN-F18R_MAT01A12	Segment begins at the confluence with an unnamed tributary, at rivermile 2.14, and continues downstream to the confluence with the Ta River to form the Matta River.	Recreation	Escherichia coli/ 4A	2014	3026	2.30 Miles
Cool Spring Lake Unnamed Tributary	River	VAN-F15R_XJM01A12	Segment begins at the headwaters of the unnamed tributary, and continues downstream to the inlet of Cool Spring Lake	Aquatic Life	pH/ 5A	2016	2028	1.29 Miles
Cool Spring Lake Unnamed Tributary	River	VAN-F15R_XJM01A12	Segment begins at the headwaters of the unnamed tributary, and continues downstream to the inlet of Cool Spring Lake.	Aquatic Life	Dissolved Oxygen/ 5A	2012	2024	1.29 Miles
Lake Anna	Reservoir	VAN-F07L_TRY01A04 AND VAN-F07L_NAR01A02	Segment includes the Terrys Run arm of Lake Anna. AND Segment includes the lower portion of Lake Anna, beginning near the northern end of the Route 690 bridge, and continues downstream until the dam.	Fish Consumption	Mercury in Fish Tissue/ 5A	2010	2022	1563.4 Acres
Lake Anna	Reservoir	VAN-F07L_TRY01A04	Segment includes the Terrys Run arm of Lake Anna.	Fish Consumption	PCB in Fish Tissue/ 5A	2006	2018	4.36 Miles
		VAN-F07L_TRY01A04	Segment includes the Terrys Run arm of Lake Anna.	Fish Consumption	PCB in Water Column	2010	2022	431.09 Acres
		VAN-F07L_PMK02A02	Segment includes the Pamunkey Creek Arm of Lake Anna from the beginning of the inundated waters of Pamunkey Creek downstream to the confluence with the Terry's Run arm of the lake.	Fish Consumption	PCB in Fish Tissue/ 5A	2006	2018	471.89 Acres
		VAN-F07L_PMK01A04	Segment includes the Pamunkey Creek arm of Lake Anna beginning at the confluence with the Terrys Run arm of the lake and continuing downstream until the confluence with the North Anna River at The Splits	Fish Consumption	PCB in Fish Tissue/ 5A	2006	2018	602.74 Acres
		VAN-F07L_PMK01A04	Segment includes the Pamunkey Creek arm of Lake Anna beginning at the confluence with the Terrys Run arm of the lake and continuing downstream until the confluence with the North Anna River at The Splits.	Fish Consumption	PCB in Water Column	2010	2022	602.74 Acres
		VAN-F07L_PLT01A04	Segment includes the Plentiful Creek arm of Lake Anna.	Fish Consumption	PCB in Fish Tissue/ 5A	2006	2018	109.04 Acres
		VAN-F07L_NAR03A06	segment includes the upper portion North Anna River of Lake Anna beginning at the start of the inundated waters of the North Anna River downstream until the boundary of the F06 watershed	Fish Consumption	PCB in Fish Tissue/ 5A	2006	2018	1422.31 Acres
		VAN-F07L_NAR03A02	Segment includes the upper portion North Anna River portion of Lake Anna, beginning at the boundary of F07, and continues downstream until the start of the lacustrine waters of Lake Anna (0.7 miles upstream from 8-NAR044.68)	Fish Consumption	PCB in Fish Tissue/ 5A	2006	2018	1141.85 Acres
		VAN-F07L_NAR02A02	Segment begins at the start of the lacustrine waters of Lake Anna (0.7 miles upstream from 8-NAR044.68), and continues downstream until the northern end of the Route 690 bridge.	Fish Consumption	PCB in Fish Tissue/ 5A	2006	2018	3035.38 Acres
		VAN-F07L_NAR01A02	Segment includes the lower portion of Lake Anna (lacustrine), beginning near the northern end of the Route 690 bridge, and continues downstream until the dam.	Fish Consumption	PCB in Fish Tissue/ 5A	2002	2014	1563.36

Chesapeake Bay TMDL Phase I Watershed Implementation Plan

The Phase I Watershed Implementation Plan (WIP) was developed by the Commonwealth of Virginia as required by the U.S. Environmental Protection Agency (EPA) as an implementation plan for the Chesapeake Bay Total Maximum Daily Load (TMDL).

The Chesapeake Bay TMDL WIP can become a continuation of work begun with Virginia's Tributary Strategies in 2005. In Spotsylvania, those strategies included the York River Tributary Strategy and the Rappahannock River Tributary Strategy.

The Chesapeake Bay TMDL Phase I Watershed Implementation Plan charts out actions necessary to achieve the Chesapeake Bay TMDL allocations by the year 2025. It incorporates the principles of adaptive management so that the success or failures of actions can be evaluated and adjustments to programs and strategies are made. The plan incorporates the experience of tributary strategy development along with new knowledge and new tools.

The WIP acknowledges shortcomings in available data or in our ability to analyze data where this is an issue. The actions proposed will be based on the best available science and data, but we expect the base of knowledge and information to expand and to make adjustments accordingly in consultation with affected stakeholders and the Environmental Protection Agency (EPA). Virginia is also bound by the provisions of state law that require cost evaluations along with a benefit analysis for implementation plans. Adjustments to this plan will be considered based on cost effectiveness and other key factors.

Although the Chesapeake Bay TMDL is often discussed and thought of conceptually as a single TMDL, it is comprised of 92 segments. Virginia contributes drainage to 39 segments within the watershed. All 39 segments are listed as impaired for excessive nutrients and sediments.

The WIP contains pollution loads allocated or assigned to different source sectors of nitrogen, phosphorus and suspended solids. These sectors include wastewater treatment plants, agriculture, forest, urban stormwater, onsite/septic and air sources that contribute to the nutrient and sediment (also referred to as total suspended solids or "TSS") problems of the Chesapeake Bay. The plan also provides broad strategies proposed to meet those allocations. In accordance with federal expectations, those strategies and contingencies included in the plan are intended to meet reasonable assurance requirements for the Chesapeake Bay TMDL. However, we acknowledge that this is a plan and does not confer any additional budgetary, regulatory or legal authority to governmental agencies. Any programs or strategies that are not currently authorized by state law or regulation may be pursued through the legislative process or through the Virginia Administrative Process Act.

Considering the WIP, Virginia Soil and Water ~~c~~Conservation Districts, Regions, and localities have developed strategies aimed at improving TMDL's by sector through a number of measures including implementation, capacity building, or new Best Management Practice (BMP) approach.

The Virginia Total Maximum Daily Load (TMDL) program is a process to improve water quality and restore impaired waters in Virginia. Specifically, TMDL is the maximum amount of pollutant that a water body can assimilate without surpassing the state water quality standards for protection of the five beneficial uses: drinking water, recreational (i.e., primary contact/swimming), fishing, shellfishing, and aquatic life. If the water body surpasses the water quality criteria during an assessment period, Section 303(d) of the Clean Water Act (CWA) and the United States Environmental Protection Agency's (USEPA)

Water Quality Management and Planning Regulation (40 CFR Part 130) both require states to develop a TMDL for each pollutant.

Beaver Creek, Mountain Run, Pamunkey Creek, Plentiful Creek, and Terrys Run were initially placed on the Commonwealth of Virginia's Section 303(d) List of Impaired Waters in 1998 for exceeding of the bacteria standard. Goldmine Creek was initially placed on the list in 2004 for exceeding of the bacteria standard. After these listings, a TMDL study was conducted in 2005 to identify bacteria sources in the watersheds and set limits on the amount of bacteria these rivers can tolerate and still maintain support of the Recreational Use.

A TMDL Implementation Plan (IP) was developed to reduce bacteria levels to attain water quality standards allowing delisting of the impaired waters from the Section 303(d) List. The TMDL IP describes control measures, which can include the use of better treatment technology and the installation of best management practices (BMPs), to be implemented in a staged process. Local support and successful completion of the implementation plan will enable restoration of the impaired water while enhancing the value of this important resource for the Commonwealth. Opportunities for Louisa, Orange, and Spotsylvania Counties, local agencies, and watershed residents to obtain funding will improve with an approved IP.

Approved TMDL Reports

Virginia's goal is that all streams attain the appropriate beneficial uses. These beneficial uses are described by the following use goals:

- drinking water use
- primary contact/swimming use
- fishing use
- shellfishing use
- aquatic life use

These uses are protected by application of the state's numeric and narrative water quality criteria. When the beneficial uses are not being met, the state must take steps to ensure that water quality is restored. One very important step in restoring water quality in the impaired streams is the development of TMDLs. A TMDL Study identifies sources of pollution and reductions needed from the identified pollutants to attain water quality standards. Pollution from point sources such as residential, municipal, or industrial discharges and non-point sources such as residential, urban, or agricultural runoff are included in the TMDL study. Table 7 below includes approved TMDL studies applicable to Spotsylvania County. For reference, hyperlinks to the approved studies have been provided within the Final Report column.

Table 7: Approved TMDL Reports- Spotsylvania, County							
TMDL Project	**Basin**	**City/County**	**Pollutant(s)**	**Final Report**	**EPA approval date**	**SWCB approval date**	**Comments**
Tidal Freshwater Rappahannock River Watershed	Rappahannock River	Caroline, King George, Spotsylvania, Stafford	E. Coli	**Final Report**	5/5/2008	4/28/2009	N/A
Mattaponi River Watershed	York River	Caroline, King and Queen, Orange, Spotsylvania	E. Coli	**Final Report**	7/19/2016	6/27/2016	N/A
Pamunkey River and Tributaries	York River	Caroline, Hanover, King William, Louisa, New Kent, Spotsylvania	E. Coli	**Final Report**	4/27/2015	12/11/2014	This project replaces the Pamunkey River & Northeast, Monquin, & Black creeks equations and modifies the 4 South Anna River segments & Taylors Creek from the Pamunkey River Basin project. It also replaces the Mechumps Creek & the Matadequin Creek projects.
Terrys Run, Pamunkey Creek, Beaver Creek, Mountain Run, Gold Mine Creek, Plentiful Creek	York River	Louisa, Orange, Spotsylvania	E. Coli	**Final Report**	11/4/2005	9/27/2006	N/A

TMDL Prioritization

The Virginia DEQ is implementing the national 303(d) Program Vision which calls for the prioritization of impaired waters for TMDL or TMDL alternative development over a six year window (currently 2016-2022). EPA announced the 303(d) Program Vision in December, 2013, making this 2016-2022 priority window the first phase of the Vision. While the national 303(d) Program Vision involves prioritizing impaired waters for TMDL or TMDL alternative development, DEQ took this opportunity to also prioritize impaired waters that require a stressor analysis report or a natural conditions report.

In the summer of 2015, DEQ released a 2016-2022 draft list of prioritized impaired waters. This draft list was public noticed for a 30-day public comment period that started on July 27th, 2015. One comment was received during this public comment period that did not result in any changes to the priorities list. The final list of prioritized impaired waters was established following public comment period. Soon thereafter in early winter of 2015-2016, EPA announced that these priorities lists could be revised. This opportunity to revise the priorities list was due to challenges incurred by states throughout this first prioritization process, in addition to the fact that EPA was now allowing TMDL revisions to be included as priorities for the first time. DEQ revised the list of prioritized impaired waters and public noticed it for public comment from April 4th, 2016 to May 4th, 2016 with no comments received. In 2018, EPA provided states the opportunity to adjust their priorities lists to adapt to changes in program resources. This revised list was public noticed for public comment on April 2nd, 2018. The revised 2016-2022 TMDL program list of prioritized impaired waters specific to Spotsylvania County can be found below in Table 8.

Table 8:

TMDL Program List of Prioritized Impaired Waters for 2016-2022

City/County	Water Name	Impaired Use	Impaired Cause	Assessment Unit ID	Size	Units	Water Body Type	Formal Priority	Report Type
Spotsylvania	Brock Run	Recreational	E. coli	VAN-F15R_BRK01A06	2.57	Miles	River/Stream	Yes	TMDL
	Glady Run	Recreational	E. coli	VAN-F16R_GDY01A10	9.31	Miles	River/Stream	Yes	TMDL
	Po River	Recreational	E. coli	VAN-F16R_POR01A10	7.21	Miles	River/Stream	Yes	TMDL
	Mat River	Recreational	E. coli	VAN-F18R_MAT01A12	2.30	Miles	River/Stream	Yes	TMDL
	Matta River	Recreational	E. coli	VAN-F18R_MTA01A00	11.89	Miles	River/Stream	Yes	TMDL

Chesapeake Bay TMDL Phase II Watershed Implementation Plan

Per the Environmental Protection Agency, there are three phases of WIPs developed by the Bay jurisdictions. Phase I and Phase II WIPs were developed and submitted to EPA in 2010 and 2012, respectively. Both Phase I and Phase II WIPs describe actions and controls to be implemented by 2017 and 2025 to achieve applicable water quality standards. The Phase II WIPs build on the initial Phase I WIPs by providing more specific local actions.

Chesapeake Bay TMDL Phase III Watershed Implementation Plan

Virginia's Final Phase III WIP can be found HERE.

Virginia Marine Resources Commission

A joint permit application process for authorization of work in the waters of the Commonwealth of Virginia is available from Local Wetlands Boards, the Virginia Marine Resources Commission, the Virginia State Water Control Board, the Tennessee Valley Authority, and the U.S. Army Corps of Engineers. The Virginia Marine Resources Commission functions as the clearinghouse for the joint permit application.

The Virginia Marine Resources Commission permit program is authorized by Title 62.1, Waters of the State, Ports and Harbors, Section 62.1, Authority Required for Use of Subaqueous Beds, and Chapter 2.1, Wetlands. These laws require permits for the use of state-owned bottomlands and tidal wetlands.

Comprehensive Coastal Resource Management for Tidewater Virginia Localities

For consistency with the Code of Virginia § 15.2-2223.2. Comprehensive plan to include coastal resource management guidance, Spotsylvania County has incorporated the following coastal resource guidance, provided by the Virginia Institute of Marine Science (VIMS) into the Comprehensive Plan:

~~The following c~~Coastal resource guidance~~, provided by the Virginia Institute of Marine Science (VIMS)~~ applies to the tidal extent of the Rappahannock River. The County is working to create its own shoreline and eco environment document to address the non-tidal tributaries, streams, creeks and rivers. County environmental staff is currently working with Caroline County on researching non-tidal tributaries, creeks, streams and river shoreline restoration and preservation that will address our common watersheds and will be easily adaptable for the entire county.

Issue Statement

Coastal ecosystems reside at the interface between the land and the water, and are naturally very complex. They perform a vast array of functions that encompass biological, chemical and physical processes. Humans derive benefits from coastal ecosystems such as habitat, water quality, and shoreline stabilization.

For example, coastal wetlands absorb nutrients that drain off the upland. This is an important filtering process that improves water quality in the adjacent receiving waters. Humans benefit from having good water quality; therefore, the wetland is providing a service in that capacity.

Beaches and dunes are another component of the coastal ecosystem valued by humans. Although typically regarded for their recreational value, beaches and dunes also provide a number of other important direct and indirect services. Beaches and dunes provide habitat, foraging and nesting areas for shore birds, turtles, and crustaceans, among other organisms. They also act as the first line of defense to incoming high energy storm waves and therefore provide an important function protecting uplands from erosion and structural loss.

The science behind coastal ecosystem resource management has revealed that traditional resource management practices limit the ability of the coastal ecosystem to perform many of these essential functions. The loss of these services has already been noted throughout coastal communities in Virginia as a result of development in coastal zone areas, coupled with common erosion control practices. Beaches and dunes are diminishing due to a reduction in a natural sediment supply. Wetlands are

drowning in place as sea level rises and barriers to inland migration have been created by construction of bulkheads and revetments. There is great concern by scientists at the Virginia Institute of Marine Science and on the part of the Commonwealth of Virginia that the continued armoring of shorelines and construction within the coastal areas will threaten the long-term sustainability of coastal ecosystems under current and projected sea level rise.

In the 1980s, interest arose in the use of planted wetlands to provide natural shoreline erosion control. Today, a full spectrum of living shoreline design options is available to address the various energy settings and erosion problems found. Depending on the site characteristics, they range from marsh plantings to the use of rock sills in combination with beach nourishment. Studies have found that these approaches minimize impacts to the natural coastal ecosystems while successfully combating shoreline erosion.

Research continues to reinforce the principle that an integrated approach for managing tidal shorelines enhances coastal resources. Therefore, adoption of new guidance and shoreline best management practices for coastal communities is now necessary to insure that functions performed by coastal ecosystems will be preserved and the benefits derived by humans from coastal ecosystems will be maintained into the future.

Policy Statement

In 2011, the Virginia Assembly passed legislation to amend §28.2-1100 and §28.2-104.1 of the Code of Virginia and added section §15.2-2223.2, to codify a new directive for shoreline management in Tidewater Virginia. In accordance with section §15.2-2223.2, all local governments shall include in the next revision of their comprehensive plan beginning in 2013, guidance prepared by the Virginia Institute of Marine Science (VIMS) regarding coastal resource management and, more specifically, guidance for the appropriate selection of living shoreline management practices. The legislation establishes the policy that living shorelines are the preferred alternative for stabilizing eroding shorelines. Adoption of the VIMS shoreline guidance will help communicate to stakeholders, including private and public property owners, contractors, and developers the Commonwealth's preference for a living shorelines approach wherever possible.

This guidance, known as Comprehensive Coastal Resource Management Plans, is being prepared by VIMS for localities within the Tidewater region of Virginia. It explicitly outlines where and what new shoreline best management practices should be considered where coastal modifications are necessary to reduce shoreline erosion and protect our fragile coastal ecosystems. This guidance will include a full spectrum of appropriate management options which can be used by local governments for site-specific application and consideration of cumulative shoreline impacts. The guidance applies a decision-tree method using a based resource mapping database that will be updated from time to time, and a digital geographic information system model created by VIMS.

~~**Chesapeake Bay TMDL Phase I Watershed Implementation Plan**~~

~~The Phase I Watershed Implementation Plan (WIP) was developed by the Commonwealth of Virginia as required by the U.S. Environmental Protection Agency (EPA) as an implementation plan for the Chesapeake Bay Total Maximum Daily Load (TMDL).~~

The Chesapeake Bay TMDL WIP can become a continuation of work begun with Virginia's Tributary Strategies in 2005. In Spotsylvania, those strategies included the York River Tributary Strategy and the Rappahannock River Tributary Strategy.

The Chesapeake Bay TMDL Phase I Watershed Implementation Plan charts out actions necessary to achieve the Chesapeake Bay TMDL allocations between now and 2025 with the greatest emphasis on actions planned between now and 2017. It incorporates the principles of adaptive management so that the success or failures of actions can be evaluated and adjustments to programs and strategies are made. The plan incorporates the experience of tributary strategy development along with new knowledge and new tools.

The WIP acknowledges shortcomings in available data or in our ability to analyze data where this is an issue. The actions proposed will be based on the best available science and data, but we expect the base of knowledge and information to expand and to make adjustments accordingly in consultation with affected stakeholders and the Environmental Protection Agency (EPA). Virginia is also bound by the provisions of state law that require cost evaluations along with a benefit analysis for implementation plans. Adjustments to this plan will be considered based on cost effectiveness and other key factors.

Although the Chesapeake Bay TMDL is often discussed and thought of conceptually as a single TMDL, it is comprised of 92 segments. Virginia contributes drainage to 39 segments within the watershed. All 39 segments are listed as impaired for excessive nutrients and sediments.

The WIP contains pollution loads allocated or assigned to different source sectors of nitrogen, phosphorus and suspended solids. These sectors include wastewater treatment plants, agriculture, forest, urban stormwater, onsite/septic and air sources that contribute to the nutrient and sediment (also referred to as total suspended solids or "TSS") problems of the Chesapeake Bay. The plan also provides broad strategies proposed to meet those allocations. In accordance with federal expectations, those strategies and contingencies included in the plan are intended to meet reasonable assurance requirements for the Chesapeake Bay TMDL. However, we acknowledge that this is a plan and does not confer any additional budgetary, regulatory or legal authority to governmental agencies. Any programs or strategies that are not currently authorized by state law or regulation may be pursued through the legislative process or through the Virginia Administrative Process Act.

Considering the WIP, Virginia Soil and Water conservation Districts, Regions, and localities have developed strategies aimed at improving TMDL's by sector through a number of measures including implementation, capacity building, or new Best Management Practice (BMP) approach.

Upper York River Basin Watershed Implementation Plan

The Virginia Total Maximum Daily Load (TMDL) program is a process to improve water quality and restore impaired waters in Virginia. Specifically, TMDL is the maximum amount of pollutant that a water body can assimilate without surpassing the state water quality standards for protection of the five beneficial uses: drinking water, recreational (i.e., primary contact/swimming), fishing, shellfishing, and aquatic life. If the water body surpasses the water quality criteria during an assessment period, Section 303(d) of the Clean Water Act (CWA) and the United States Environmental Protection Agency's (USEPA) Water Quality Management and Planning Regulation (40 CFR Part 130) both require states to develop a TMDL for each pollutant.

~~Beaver Creek, Mountain Run, Pamunkey Creek, Plentiful Creek, and Terrys Run were initially placed on the Commonwealth of Virginia's Section 303(d) List of Impaired Waters in 1998 for exceeding of the bacteria standard. Goldmine Creek was initially placed on the list in 2004 for exceeding of the bacteria standard. After these listings, a TMDL study was conducted in 2005 to identify bacteria sources in the watersheds and set limits on the amount of bacteria these rivers can tolerate and still maintain support of the Recreational Use.~~

~~A TMDL Implementation Plan (IP) was developed to reduce bacteria levels to attain water quality standards allowing delisting of the impaired waters from the Section 303(d) List. The TMDL IP describes control measures, which can include the use of better treatment technology and the installation of best management practices (BMPs), to be implemented in a staged process. Local support and successful completion of the implementation plan will enable restoration of the impaired water while enhancing the value of this important resource for the Commonwealth. Opportunities for Louisa, Orange, and Spotsylvania Counties, local agencies, and watershed residents to obtain funding will improve with an approved IP.~~

Health District

The Rappahannock Health District (VDH) provides environmental health services in Spotsylvania County. The Spotsylvania Office has ~~three~~ two (~~3~~2) Environmental Health Specialists assigned in the onsite program and ~~two~~ four (~~4~~2) in food protection. The Specialists also have responsibilities in rabies control, nuisance complaint and abatement, emergency preparedness and other duties as assigned.

Local environmental offices are tasked with managing the records for onsite systems in that locality. They review and issue approval for construction permits for well and septic systems, inspection reports, and provide quality assurance for private sector permits and approvals. In Spotsylvania County, most construction permits are prepared by OSE or PE's working in coordination with an OSE.

At present, the County enforces the Chesapeake Bay Act which specifies minimum pump out requirements and reserve area requirement for new onsite systems, and has adopted the minimum state sanitary regulations as promulgated by the Health Department. Those regulations establish minimum standards for septic system capacity, minimum separation distance between drainfields and the water table, minimum setbacks to wells and from impounded and natural waterways.

By law, local governments have the authority to adopt ordinances or regulations that are more stringent than State Health Department Regulations. The County has the option to further strengthen or tailor the State Code to meet its local site and soil performance conditions. Neighboring jurisdictions have customized their sanitary codes in various ways to protect sensitive resources.

Chesapeake Bay Septic Pump-Out Program

The septic pump-out program is a required element of the County's Chesapeake Bay Preservation Act (CBPA) program and at the state-level, the program is administered by the Virginia Department of Environmental Quality (DEQ) Office of Watershed and Local Government Assistance Programs. The DEQ Office of Watershed and Local Government Assistance Programs (Section 9 VAC 10-20-120.7), in conjunction with the Spotsylvania County Chesapeake Bay Ordinance (Section 6A-10(B) (1)), requires private Septic tanks to be pumped out or inspected every five (5) years.

The Spotsylvania County Code Compliance Environmental Engineering group administers the program within the County. Regular pumping or inspection of septic tanks extends the life of septic systems and ensures environmental protection of our natural resources.

The Chesapeake Bay Septic Tank Pump-Out Program is a State Mandated Program; there are no provisions for exceptions to this mandate. Everyone with a septic tank must comply. Whether the home is a summer lake home, weekend home, or has a reduced number of occupants, the property must still have the septic tank pumped out.

As an alternative to the mandatory pump-out, the owner has the option of having a plastic filter installed and maintained in the outflow pipe from the septic tank to filter the solid material from the effluent while sustaining adequate flow to the drainfield to permit normal use of the septic system. Owners with systems with such a filter will need to submit the filter documents to the County. Plastic filters require regular maintenance to keep them from clogging and backing sewage into a home. Routine maintenance typically includes the removal and proper disposal of non-biodegradable solids from the filter and then hosing down the filter over your septic tank to return the filtered solids to the tank for additional treatment. While not mandatory, the Virginia Department of Health still recommends that systems with plastic filters pump have their septic tanks pumped regularly to maintain peak system performance and extend the life of the drainfield. Such a filter shall satisfy standards established in the Sewage Handling and Disposal Regulations (12 VAC 5-610) administered by the Virginia Department of Health.

Local Zoning and Ordinances

Local governments have a major role to play in maintaining the health of the Chesapeake Bay environment. Through the judicial administration of zoning laws and subdivision and land use ordinances, local governments influence how land will be used and how and where development will take place. The zoning of land uses ensures that land is protected from incompatible uses and ~~that~~ development activities follow the intent of the local comprehensive plan. Careful administration of these land use controls provides local governments with the tools they need to manage growth and to keep it within the carrying capacity of the local infrastructure. Local zoning, subdivision, and site plan review ordinances should be consulted in developing public access sites. These tools may also be used to protect good public access resources.

To better understand the problem one must remember that in the past the Rappahannock and York R~~r~~ivers both were noted for their aquaculture and recreational uses including commercial/recreational fishing and swimming. These activities have been drastically curtailed due to the increasing degradation of the water quality within these 2 rivers that ultimately flow to the Chesapeake Bay. Several factors related to land use and their associated land disturbances have impacted our watersheds through the years.

The identified contributing activities in the past were focused on urbanization, farming, timbering & gold mining however they have recently been redefined to focus on sediment transport and introduced pollutant loads such as fertilizer, etc.

There is not one factor, entity or use that needs to be considered but all of them in their entirety must be focused on to slow the water down through quantity control measures and to stop the continuing deterioration of water quality from introduced pollutant loads. Storm events do not discern as to the development, farm, forest or mine nor a specific use or practice being performed. The stormwater runoff flows regardless the ~~does~~ use of the land that is devoid of vegetation to move the water and its

associated sediment quickly. The stormwater runoff will also pick up the unused portions of all pollutant loads such as fertilizer (nitrogen & phosphorous) that is being introduced to the ground and relocate it in the creeks, streams, rivers and ultimately the bay.

To help better understand the activities that must be monitored, they break down into the following two (2) sections to be considered

1. Land disturbance; these are activities that are related to the actual removal of the vegetative ground cover's root system which have traditionally been through development, farming, silviculture & mining within the commonwealth.
2. Pollutant loads such as ~~F~~fertilization for example (nitrogen & phosphorous); these are activities that have been closely related to pet waste, fertilizing lawns and agricultural crops/activities. Other potential pollutant load sources are petroleum based products, metals and other elements that are usually introduced through friction or maintenance of daily routines.

When considering the many factors that have impacted the water quality of the Commonwealth's waters the highest items of concern are phosphorous and nitrogen ~~one item must be considered~~ as the ~~a major~~ primary contributing players. For water quality, ~~The~~ the amount of water flow from impervious surfaces need to be reduced through practices that will allow the water to re-infiltrate into the soil to recharge the groundwater aquifers as it was doing before any land disturbance activity occurred. The introduction of low impact development (LID) techniques by means of infiltration facilities, landscaping and vegetative buffer will help to achieve this goal and promote both ~~a~~ better water quantity and quality of stormwater runoff.

Other ~~significant~~ potential sources of pollution may include~~s~~ industrial discharges and the discharges from municipal sewage treatment plants (STPs)~~., of which there are six along the river.~~ If improperly maintained or treated, ~~the~~ discharges from the wastewater plant can introduce chlorine, bacteria, and nutrients into the receiving waters, with the potential to cause harmful environmental effects.

In late July 2020 the Spotsylvania County Laboratory Services Environmental Compliance Manager was able to confirm that the Massaponax Wastewater Plant has one effluent outfall along the Rappahannock River, east of the City of Fredericksburg. The effluent travels through a cascade aerator prior to surface discharge into the Rappahannock River. Additionally, the County has two other Wastewater Plants. The FMC Wastewater Plant effluent discharges into the Rappahannock in proximity to the Bowman Center/FMC/Sylvania Plant through one submerged outfall. The Thornburg Wastewater Plant discharges through one effluent outfall into an unnamed tributary that leads to the Po River. DEQ approves all designs and conducts site inspections at each location routinely. Authorization to discharge for all of the Wastewater Plants is in accordance with the effluent limitations and monitoring requirements outlined in the permits issued by DEQ.

As part of the permitting process, DEQ takes into account potential waterway risks and builds in the necessary protections into the permit. DEQ writes the permits for each plant based on permit renewal data, continuous monitoring data, Virginia Environmental Laboratory Accreditation Program (VELAP) certified laboratory data, technical inspections, and the conditions in and around the waterway that the plants discharge into. There are no documented concerns with any of the discharges that exist or that need to be mitigated. No known potential waterway risks exist with any of the plants. All plants operate within compliance with their permits and are in good standing with DEQ.

The condition of water in impoundment (reservoirs) that feed into River systems are also a consideration. As of the July, 2020 update from the Environmental Compliance Manager there are no documented DEQ related water quality and pollutant concerns for County reservoirs or downstream rivers. There are no known natural or man-made concerns with County reservoirs. The County monitors the flow-rate out of the reservoirs among additional flows at reservoirs and water treatment plants that are monitored (includes flows going in and out of the reservoirs as well as the instream flow by measurements to ensure they do not withdrawal too much water and stay within compliance with their permits) in order to stay in compliance with County permits.

Reservoir water is released according to our permits and designed in a way that ensures scouring downstream is as minimal as possible. The reservoirs are continuously monitored to optimize water quality. However, water pollution monitoring would be mandated by the State. The County does not have any mandated reservoir testing for water pollution required by the State. As part of the EPA's Fourth Unregulated Contaminant Monitoring Rule, the source water from all reservoirs were tested for Haloacetic Acid Indicators that included Total Organic Carbon and Bromide. This rule affected all Public Water Systems in the United States and will be used to create future regulations.

Resource Protection Area (RPA)

As described by the Virginia Department of Environmental Quality (DEQ), the Chesapeake Bay Preservation Act and regulations require that a vegetated buffer no less than 100 feet wide be located adjacent to and landward of all tidal shores, tidal wetlands, non-tidal wetlands connected by surface flow and contiguous to tidal wetlands or along water bodies with perennial flow. These features, including the 100-foot buffer, comprise the Resource Protection Area (RPA), and serve a direct water quality function by removing excess sediment, nutrients, and potentially harmful or toxic substances from groundwater and surface water entering the Chesapeake Bay and its tributaries. Buffers also help to absorb periodic flood surges, and supply thermal protection, food, and cover to fish and other wildlife, stabilize stream-banks, and provide recreation and aesthetic values.

Generally, vegetation in the 100-foot buffer must be preserved on lots that include an RPA, and established where it does not exist. The regulations permit a property owner to modify the buffer by removing vegetation for several reasons:

- To provide for reasonable sight lines
- The construction of access paths
- General woodlot management
- Shoreline erosion control projects

~~Resource Protection Areas are buffer areas consistent with the Bay Act and include tidal shores, tidal wetlands, non-tidal wetlands and tributary streams, and a 100-foot wide buffer area located adjacent to and landward of the aforementioned features and along both sides of any tributary stream. This buffer area acts to filter run-off from developed areas, to provide natural stabilization of soils from forces of tidal and upland erosion, and to provide a setback which protect dwellings from erosion, wave action, and flooding.~~ The total amount of land designated as RPAs in Spotsylvania County is estimated to be 12,800 acres, or roughly 5% of the county's total land area. Development in the RPA is limited to water-dependent facilities and redevelopment. In the RPA, a 100-foot buffer of vegetation that is effective in limiting runoff, preventing erosion, and filtering non-point source pollution from runoff must be retained if already present, or established if it does not exist. Clearing in the RPA is limited to what is

necessary to provide for reasonable views of the water, and for general woodland management purposes. Cleared vegetation must be replaced with other vegetation is equally effective in protecting water quality.

The Spotsylvania County Geographical Information Systems (GIS) Department graphically depicts the limits of RPA as a map layer online as part of the Interactive Web Based GIS located **HERE**.

Resource Management Area (RMA)

In Spotsylvania County all land outside of the designated RPA is designated as a Resource Management Area. The RMA is protected by the County's Chesapeake Bay Preservation Ordinance (CBPO) and the County Design Standards Manual through the establishment of standards which apply to all development and redevelopment activities.

Resource Management Areas are intended as buffer areas outside of the RPAs wherein environmental factors are still significant to warrant water quality protection. These include areas where development impacts should be mitigated through the implementation or application of design guidelines and performance criteria. These areas include floodplains, highly erodible soils (including steep slopes), highly permeable soils, hydric soils, and isolated non-tidal wetlands not included in the RPA.

The CBPO and Design Standards require that no more land should be disturbed than is necessary to provide for the desired use or development. On-site impervious cover must be minimized, indigenous vegetation should be preserved, on-site sewage disposal systems not requiring a VPDES permit must be pumped at least once every five years, an on-site 100% reserve sewage disposal site must be provided, stormwater runoff must be controlled with the use of best management practices, and on lands where agricultural activity is taking place a Chesapeake Bay Conservation Plan is required.

Reservoir Protection Overlay District

The Reservoir Protection Overlay District is established in the Spotsylvania County Zoning Ordinance. As per Spotsylvania County Code Sec. 23-7.5.1(a), Reservoir ~~protection~~ Protection ~~overlay~~ Overlay ~~districts~~ Districts are created for the purpose of protecting and promoting the health, safety and welfare by preserving the existing and potential public drinking water supply reservoir sites and protecting them from water pollution. Regulations within such districts are established to prevent water quality degradation due to pollutant runoff from septic fields, construction sites, lawns, agricultural lands or material storage areas and to reduce sediment loadings that shorten reservoir life. This district is in addition to and overlays all other zoning districts where it is applied, so that any parcel lying in such an overlay district shall also lie in one or more zoning district. The minimum lot size for any residential use where such lot is contiguous to a reservoir site is five acres for lots to be served by private septic systems and two acres for lots to be served by public sewer.

The Spotsylvania County Geographical Information Systems (GIS) Department graphically depicts the limits of the Reservoir Protection Overlay District information available as a map layer online as part of the Interactive Web Based GIS located **HERE**.

River Protection Overlay District

The River Protection Overlay District is established in the Spotsylvania County Zoning Ordinance and is focused on areas in proximity to the Rappahannock River extending from the Fredericksburg (City) line to Orange County. As per Spotsylvania County Code Sec. 23-7.4.1(a), River ~~protection~~ Protection ~~overlay~~ Overlay ~~districts~~ Districts are created for the purpose~~s~~ of promoting the public health, safety and welfare through the protection of valuable river resources that provide or may provide drinking water and recreational opportunities. Regulations within such districts are established to prevent water quality degradation due to pollutant runoff from septic fields, construction sites, or material storage areas. This ~~district~~ District is in addition to and overlays all other zoning districts where it is applied. The effect is to create a new district that has the characteristics and limitations of the ~~overlay~~ Overlay ~~district~~District.

The minimum lot size for a single-family dwelling in ~~river~~ River ~~protection~~ Protection ~~overlay~~ Overlay ~~districts~~ Districts is five acres for lots to be served by private septic systems. Lots to be served by public water and sewer, or public well and public sewer are subject to the lot size requirements of the underlying zoning district, which in most cases is two acres within subdivision and one acre outside of subdivision.

In addition to any use limitations in the underlying zoning districts, the following use limitations apply in the River Protection Overlay District:

- The placement of septic fields within the one-hundred-year floodplain is prohibited.
- Before the issuance of a land-disturbing permit for any activity that will disturb more than ten thousand (10,000) square feet of land, a site plan for the control ~~or~~ of erosion and sediment runoff must be submitted to and approved by the department of utility construction and erosion control (single-family dwellings outside of subdivisions are exempt from this requirement).
- The aboveground storage of hazardous liquid materials, including fuel oil, pesticides, herbicides, etc., in bulk greater than one thousand (1,000) gallons without approved containment structures is prohibited.

The Spotsylvania County Geographical Information Systems (GIS) Department graphically depicts the limits of the River Protection Overlay District information available as a map layer online as part of the Interactive Web Based GIS located **HERE**.

Floodplains

~~The Floodplains map shows the level of the 100-year floodplain in Spotsylvania County.~~ One hundred-year floodplains are defined as areas with a one percent chance of being flooded in any given year. In order to qualify for flood insurance, the Federal Emergency Management Agency (FEMA) requirements prohibit development within the floodway (water channel) and strongly discourage development in the adjacent 100-year floodway fringe.

With enhanced analytical tools to more properly map floodplain areas, FEMA, its mapping partner, working with Spotsylvania County are in the process of updating the County Flood Insurance Rate Map

(FIRM). The result of the updated FIRM maps will lend greater insights into areas subject to flooding and the extent of flooding likely to occur. This update is expected to result in changes to the regulatory floodplain boundaries, resulting in areas removed from prior floodplain designations while others are added.

The County GIS office updated the County floodplain information and has made it publicly available in July, 2018 via Web Based GIS **HERE**.

Floodplain Overlay District

The Floodplain Overlay District is established in the Spotsylvania County Zoning Ordinance. As per Spotsylvania County Code Sec. 23-7.2.1, the Floodplain Overlay District was created to prevent the loss of property and life, the creation of health and safety hazards, the disruption of commerce and governmental services, the extraordinary and unnecessary expenditure of public funds for floor protection and relief, and the impairment of the tax base.

The Spotsylvania County Geographical Information Systems (GIS) Department graphically depicts the limits of the Floodplain Overlay District information available as a map layer online as part of the Interactive Web Based GIS located **HERE**.

Massaponax Creek Watershed Plan

The Friends of the Rappahannock (FOR), in partnership with Spotsylvania County received a Small Watersheds Program Grant from the Alliance for the Chesapeake Bay to develop and implement a water quality management plan for the Massaponax Creek watershed. The "Rapid Watershed Planning Handbook" will be used for this planning effort. The goal of this plan is to assist the County in preserving water quality and riparian corridors within the context of continued economic development. The Plan serves to guide the development of the County's regional stormwater plan, and well as future Comprehensive Plan revisions. Additionally, this project will use the planning process as a means to:

- Educate County staff, elected officials and citizens on the importance of watershed/ resource based planning:
- Reduce nutrient and toxics loads by specifying state-if-the-art stormwater management and site design practices;
- Demonstrate and model effective watershed planning to other localities; and ~~Cultivate~~ cultivate an informed and active grassroots constituency of FOR in the water-shed, increasing their capacity to advocate locally for water quality protection.

FLORA AND FAUNA

Spotsylvania Natural Heritage Resources

The Virginia Department of Conservation and Recreation's mission is to "Conserve, protect, enhance and advocate wise use of the Commonwealth's unique natural, historical, recreational, scenic and cultural resources."

Spotsylvania County has historically reached out to the Virginia Department of Conservation and Recreation considering Natural Resources. Concerning the identification and protection of flora and fauna, the Department of Conservation and Recreation is a chief source of information to determine via predictive models whether proposed development may threaten a Natural Heritage Resource and warrant additional study, resource avoidance, or additional support for conservation efforts. The Department of Conservation and Recreation's Natural Heritage Division has provided the following County Profile information regarding Natural Heritage Resources applicable to Spotsylvania County:

Natural heritage resources as defined by the Virginia Department of Conservation and Recreation – Division of Natural Heritage (DCR) are the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations such as caves and karst features. Spotsylvania County is currently home to twenty-nine distinct types of natural heritage resources with 48 total occurrences throughout the county (Natural Heritage Resources). In addition, DCR has identified twenty-five terrestrial and aquatic conservation sites (Conservation Sites) as areas necessary for their survival. The Natural Heritage Resources and Conservation Sites can be found on the following pages in Exhibit Map (See Exhibit 3) and Table format (See Table 9-10).

DCR identifies and protects natural heritage resources statewide and maintains a comprehensive database of all documented occurrences of natural heritage resources in Virginia. DCR has developed conservation sites that contain known populations of natural heritage resources and include adjacent or surrounding habitat vital for their protection. Conservation sites do not represent protected lands. See Table 10 for existing conservation sites in Spotsylvania County. They are recommended for protection and stewardship because of the natural heritage resources and habitat they support but are not currently under any official protection designation. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites can be used to screen development projects for potential impacts to natural heritage resources, aid local and regional planning, identify targets for acquisitions and easements and guide priorities for restoration activities.

An example of a conservation site in Spotsylvania County is Lake Anna Uplands Conservation Site. In addition to multiple rare species and habitat types found here, the site/ecosystem is critically important because of the geographic location adjacent to Lake Anna. Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. Lake Anna Uplands Conservation Site has been given a biodiversity significance ranking of B5, which represents a site of general significance. The natural heritage resources associated with this conservation site are:

Red milkweed (Image 4)	*Asclepias rubra*,	G4G5/S2/NL/NL
Ten-angle pipewort (Image 5)	*Eriocaulon decangulare*,	G5/S2/NL/NL
Piedmont / Central Appalachian Mixed Oak / Heath Forest		G5/S5/NL/NL

Image 4: Red Milkweed (Asclepias rubra, G4G5/S2/NL/NL)

Red milkweed, a state rare perennial herb, inhabits wet pine savannas, sandhill seeps, seepage swamps (Weakley, in prep.). It has also been documented in such disturbed areas as powerline rights-of-way (TNC, 1996). This species produces dull red to lavender flowers from June through July (Radford et al., 1968). Like many wetland species, this species has suffered a loss of habitat due to conversion and/or draining of wetlands. In addition, this plant has declined as a result of active fire suppression, which has eliminated significant herbaceous-dominated wetlands (DCR, 1989). Red milkweed is currently known from 29 locations in Virginia's coastal plain and piedmont regions, of which 4 occurrences are historic.

Ten-angle pipewort a state rare plant, inhabits bogs, savannas and low pinelands and blooms from June through October (Radford et. al., 1968). This plant is currently known from 14 locations throughout Virginia and known historically at 3 locations.

Image 5: Ten-angle pipewort (Eriocaulon decangulare, G5/S2/NL/NL)

The Piedmont / Central Appalachian Mixed Oak / Heath Forest community is a matrix forest of dry, infertile uplands of the Mid-Atlantic region. In Virginia, it is most common in the Piedmont, but also occurs in the inner (western) part of the Coastal Plain and at low-elevations (mostly toe slopes and valley floors) of the mountains. This unit is distinct among Virginia's oak/heath forests in its occurrence on low-elevation, rolling to sub-level, usually non-rocky terrain. The vegetation is a closed to very open oak forest with mixed and variable canopy dominance by white, black, scarlet, and chestnut oaks. Various pine spp., including Virginia, shortleaf, eastern white, and pitch pines are frequent overstory associates, particularly following fire or logging disturbances. Southern red oak, post oak, pignut hickory, and mockernut hickory are infrequent canopy trees. Black gum, downy serviceberry and, in the southern part of the range, sourwood attain exceptional abundance and stature in these forests, dominating the sub-canopy layers and occasionally reaching the overstory. Red maple and sassafras are other common understory trees. In typical stands, the shrub layer is dominated by deciduous ericaceous species such as blueberries and black huckleberry. Herbaceous species are sparse, and species-richness is low.

The Piedmont / Central Appalachian Mixed Oak / Heath Forest community evolved in pre-settlement habitats that were subject to frequent fires, and all the dominant species are at least somewhat dependent on fire for successful reproduction. Although still fairly common, many stands of this community type have been altered by repeated logging or completely destroyed by conversion of sites to silvicultural loblolly pine. Because of widespread fire exclusion, poor recruitment of oaks and invasion by red maple, beech, and other fire-intolerant trees are characteristic of remaining stands.

Potential Threats to Natural Heritage Resources:

The great threat to this area and its bird species is the ongoing conversion of habitat to residential and commercial development. Interest in the area from developers and potential homeowners has led to a rise in land valuations and subdivision of privately-owned land for development. Alteration of the local hydrology by land disturbance can change or eliminate habitat and diminish water quality. Fragmentation of forests and the introduction of invasives, both flora and fauna, can have a direct effect

on the survival of many native plants. Threats to the Natural Communities are incompatible development, and recreational activities, invasive species; incompatible agricultural and forestry.

Spotsylvania County
Natural Heritage Conservation Sites

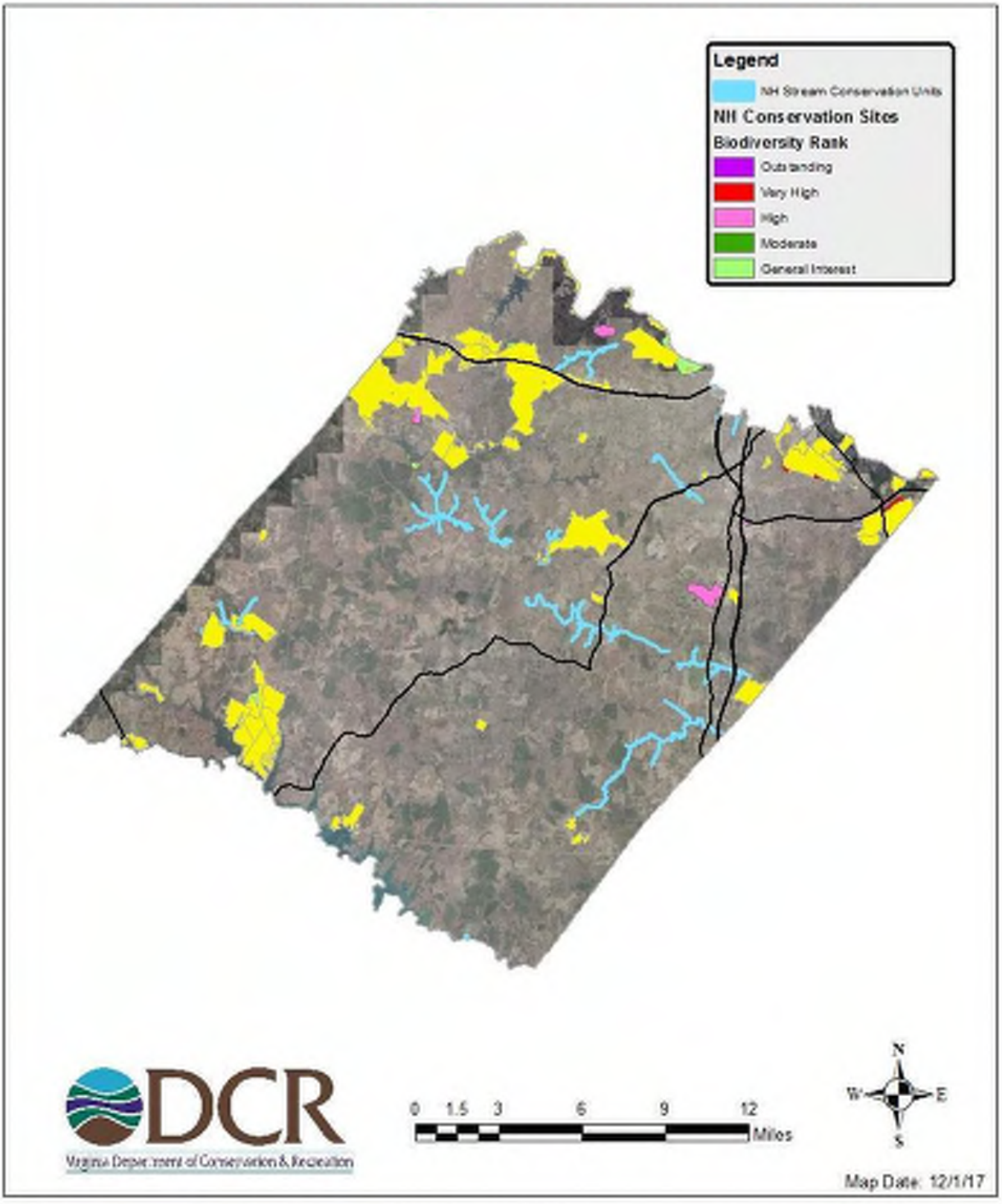


Table 9: Spotsylvania County - Natural Heritage Resources DRAFT

Group Name	Scientific Name	Common Name	Last Observed	Global Rank	USFWS - Species of Concern	State Rank	Federal Status	State Status	SCU Element	Conservation Site Name
Vascular Plant	Isotria medeoloides	Small Whorled Pogonia	2006-06-00	G2?		S2	LT	LE		COSNER CORNER EAST
Terrestrial Natural Community	Justicia americana Herbaceous Vegetation	Water-Willow Rocky Bar and Shore	2008-08-26	G4G5		S4				EMBREY HILL
Vascular Plant	Liparis loeselii	Bog twayblade	1997-09-12	G5		S2				FAWN LAKE SOUTH
Terrestrial Natural Community	Acer rubrum - Nyssa sylvatica - Magnolia virginiana / Viburnum nudum / Osmundastrum cinnamomeum - Woodwardia areolata	Coastal Plain / Outer Piedmont Acidic Seepage Swamp	2004-07-19	G3?		S3				HAMILTONS THICKET
Vascular Plant	Asclepias rubra	Red Milkweed	1993-06-12	G4G5		S2				HAMILTONS THICKET
Terrestrial Natural Community	Quercus phellos - Acer rubrum - Liquidambar	Coastal Plain Depression Swamp	2004-05-07	G3		S2				HAMILTONS THICKET
Vascular Plant	Asclepias rubra	Red Milkweed	2016-07-01	G4G5		S2				LAKE ANNA UPLANDS
Vascular Plant	Eriocaulon decangulare var.	Ten-angled pipewort	2016-07-01	G5T5?		S2				LAKE ANNA UPLANDS
Terrestrial Natural Community	Quercus alba - Quercus (coccinea,	Piedmont / Central Appalachian Mixed	2013-09-18	G5		S5				LAKE ANNA UPLANDS
Vascular Plant	Asclepias rubra	Red Milkweed	1992-10-02	G4G5		S2				LITTLE HUNTING RUN

Table 9: Spotsylvania County - Natural Heritage Resources DRAFT

Group Name	Scientific Name	Common Name	Last Observed	Global Rank	USFWS - Species of Concern	State Rank	Federal Status	State Status	SCU Element	Conservation Site Name
Aquatic Natural Community	NP-Lower Rappahannock Second Order Stream	NP-Lower Rappahannock Second Order Stream	2011-01	G2?		S2?			SCU	MASSAPONAX CREEK SCU
Invertebrate Animal	Elliptio lanceolata	Yellow Lance	1994-10-22	G2G3	SOC	S2S3			SCU	MATTA RIVER SCU
Aquatic Natural Community	NP-Mattaponi First Order Stream	NP-Mattaponi First Order Stream	2011-01	G3?		S3?			SCU	MATTA RIVER SCU
Aquatic Natural Community	NP-Mattaponi Fourth Order Stream	NP-Mattaponi Fourth Order Stream	2015-01	G1		S1			SCU	MATTA RIVER SCU
Aquatic Natural Community	NP-Lower Rappahannock Third Order Stream	NP-Lower Rappahannock Third Order Stream	2015-01	G1		S1			SCU	MINE RUN SCU
Terrestrial Natural Community	Quercus (phellos, pagoda, michauxii) / Ilex opaca - Clethra alnifolia / Woodwardia areolata Forest	Non-Riverine Wet Hardwood Forest (Northern Coastal Plain Type)	2009-06-12	G2?		S2				NEW POST FLATWOODS
Terrestrial Natural Community	Acer rubrum - Fraxinus pennsylvanica / Saururus cernuus Forest	Coastal Plain / Piedmont Floodplain Swamp (Green Ash - Red Maple Type)	2012-07-16	G3G4		S3S4				NI RIVER MASSAPONAX FLATWOODS
Terrestrial Natural Community	Quercus (phellos, palustris, michauxii) - Liquidambar styraciflua / Cinna arundinacea Forest	Northern Coastal Plain / Inner Piedmont Mixed Oak Floodplain Swamp	2012-07-16	G3G4		S3?				NI RIVER MASSAPONAX FLATWOODS

Table 9: Spotsylvania County - Natural Heritage Resources DRAFT

Group Name	Scientific Name	Common Name	Last Observed	Global Rank	USFWS - Species of Concern	State Rank	Federal Status	State Status	SCU Element	Conservation Site Name
Terrestrial Natural Community	Quercus phellos - Acer rubrum - Liquidambar styraciflua / Vaccinium (formosum, fuscatum) Forest	Coastal Plain Depression Swamp (Willow Oak - Red Maple - Sweetgum Type)	2012-07-16	G3		S2				NI RIVER MASSAPONAX FLATWOODS
Vascular Plant	Isotria medeoloides	Small Whorled Pogonia	2006-06-15	G2?		S2	LT	LE		NI RIVER TRIBUTARY SLOPES
Aquatic Natural Community	NP-Pamunkey Fifth Order Stream	NP-Pamunkey Fifth Order Stream	2011-01	G1G2		S1S2			SCU	NORTH ANNA RIVER BELOW RT 601 SCU
Terrestrial Natural Community	Acer rubrum - Nyssa sylvatica - Magnolia virginiana / Viburnum nudum / Osmundastrum cinnamomeum - Woodwardia areolata Forest	Coastal Plain / Outer Piedmont Acidic Seepage Swamp	2004-06-15	G3?		S3				PICKETTS CIRCLE
Aquatic Natural Community	NP-Pamunkey Second Order Stream	NP-Pamunkey Second Order Stream	2011-01	G3		S3			SCU	PLENTIFUL CREEK SCU
Invertebrate Animal	Alasmidonta heterodon	Dwarf Wedgemussel	2008-06-12	G1G2		S1	LE	LE	SCU	PO RIVER - ANDREWS BRIDGE SCU
Invertebrate Animal	Elliptio lanceolata	Yellow Lance	1995-07-26	G2G3	SOC	S2S3			SCU	PO RIVER - ANDREWS BRIDGE SCU
Aquatic Natural Community	NP-Mattaponi Fourth Order Stream	NP-Mattaponi Fourth Order Stream	2015-01	G1		S1			SCU	PO RIVER - ANDREWS BRIDGE SCU
Invertebrate Animal	Lampsilis radiata	Eastern Lampmussel	1989-09-04	G5		S2S3			SCU	PO RIVER - STANARDS MILL SCU
Invertebrate Animal	Alasmidonta heterodon	Dwarf Wedgemussel	2000-06-09	G1G2		S1	LE	LE	SCU	PO RIVER - WRIGHTS POND - PILTZER CREEK SCU
Invertebrate Animal	Elliptio roanokensis	Roanoke Slabshell	2000-06-09	G3		S2			SCU	PO RIVER - WRIGHTS POND - PILTZER CREEK SCU

Table 9: Spotsylvania County - Natural Heritage Resources DRAFT

Group Name	Scientific Name	Common Name	Last Observed	Global Rank	USFWS - Species of Concern	State Rank	Federal Status	State Status	SCU Element	Conservation Site Name
Invertebrate Animal	Alasmidonta heterodon	Dwarf Wedgemussel	2012-08-28	G1G2		S1	LE	LE	SCU	PO RIVER AT CORBIN BRIDGE SCU
Aquatic Natural Community	NP-Mattaponi First Order Stream	NP-Mattaponi First Order Stream	2011-01	G3?		S3?			SCU	PO RIVER AT RT 613 SCU
Invertebrate Animal	Alasmidonta heterodon	Dwarf Wedgemussel	1994-09-12	G1G2		S1	LE	LE	SCU	RAPPAHANNOCK RIVER - ROCKY PEN RUN SCU
Terrestrial Natural Community	Acer rubrum - Nyssa sylvatica - Magnolia virginiana / Viburnum nudum / Osmundastrum cinnamomeum - Woodwardia areolata Forest	Coastal Plain / Outer Piedmont Acidic Seepage Swamp	2005-05-17	G3?		S3				SOUTH FREDERICKSBURG
Terrestrial Natural Community	Quercus (phellos, pagoda, michauxii) / Ilex opaca - Clethra alnifolia / Woodwardia areolata Forest	Non-Riverine Wet Hardwood Forest (Northern Coastal Plain Type)	2005-05-31	G2?		S2				SOUTH FREDERICKSBURG
Vascular Plant	Isotria medeoloides	Small Whorled Pogonia	1999-06-23	G2?		S2	LT	LE		UPPER MINE RUN TRIBUTARY
Invertebrate Animal	Alasmidonta heterodon	Dwarf Wedgemussel	1925-08-18	G1G2		S1	LE	LE	SCU	
Vascular Plant	Asclepias rubra	Red Milkweed	1990-07-21	G4G5		S2				
Invertebrate Animal	Callophrys irus	Frosted Elfin	1993-04-21	G3		S2?				
Vascular Plant	Eriocaulon decangulare var. decangulare	Ten-angled pipewort	1995-07-27	G5T5?		S2				
Invertebrate Animal	Lasmigona subviridis	Green Floater	1927-10-07	G3		S2		LT	SCU	

Table 9: Spotsylvania County - Natural Heritage Resources DRAFT

Group Name	Scientific Name	Common Name	Last Observed	Global Rank	USFWS - Species of Concern	State Rank	Federal Status	State Status	SCU Element	Conservation Site Name
Aquatic Natural Community	NP-Rapidan-Upper Rappahannock Second Order Stream	NP-Rapidan-Upper Rappahannock Second Order Stream	2011-01	G2G3		S2S3			SCU	
Vascular Plant	Quercus prinoides	Dwarf Chinquapin Oak	1977-07-24	G5		S1				
Vascular Plant	Quercus prinoides	Dwarf Chinquapin Oak	2001-05-31	G5		S1				
Vascular Plant	Ranunculus ambigens	Water-plantain crowfoot	1977-07-31	G4		S1				
Vascular Plant	Saccharum coarctatum	Compressed plumegrass	1972-10-08	G5?		S1				
Vascular Plant	Sarracenia purpurea	Northern pitcher plant	1986-08-20	G5		S2				
Invertebrate Animal	Sigara depressa	Virginia Piedmont Water Boatman	1969-07-03	G1G2	SOC	S1S2		LE	PSCU	
Invertebrate Animal	Stylurus laurae	Laura's Clubtail	1967	G4		S2			SCU	

Table 10: Spotsylvania County - Conservation Sites

DRAFT

Conservation Site Name	Biodiversity Rank	Legal Status	Conservation Site Type
Cosner Corner East	B3	FL	Conservation Site
Embrey Hill	B5	NL	Conservation Site
Fawn Lake South	B5	NL	Conservation Site
Hamiltons Thicket	B3	NL	Conservation Site
Hazel Run Rt 1 to Rt 2 SCU	B3	NL	SCU
L ake Anna Uplands	B5	NL	Conservation Site
Little Hunting Run	B5	NL	Conservation Site
Massaponax Creek SCU	B3	NL	SCU
Matta River SCU	B2	NL	SCU
Mine Run SCU	B2	NL	SCU
New Post Flatwoods	B2	NL	Conservation Site
Ni River Massaponax Flatwoods	B3	NL	Conservation Site
Ni River Tributary Slopes	B3	FL	Conservation Site
North Anna River Below Rt 601 SCU	B2	NL	SCU
Picketts Circle	B4	NL	Conservation Site
Plentiful Creek SCU	B4	NL	SCU
Po River - Andrews Bridge SCU	B2	FL	SCU
Po River - Standards Mill SCU	B5	NL	SCU
Po River - Wrights Pond - Piltzer Creek SCU	B2	FL	SCU
Po River at Corbin Bridge SCU	B2	FL	SCU
Po River at Rt 613 SCU	B4	NL	SCU
Rappahannock River - Rocky Pen Run SCU	B2	FL	SCU
Snow Creek Ravine	B4	NL	Conservation Site
South Fredericksburg	B2	NL	Conservation Site
Upper Mine Run Tributary	B3	FL	Conservation Site

Exhibit 3: Conservation Sites

Literature Cited

Department of Conservation and Recreation. 1989. A Natural Heritage Resources Inventory and Biological Assessment of the Elko Tract, Henrico County, Virginia. Prepared by the Department of Conservation and Recreation's Division of Natural Heritage. 7 November 1989.

Fleming, G.P., K.D. Patterson, and K. Taverna. 2017. The Natural Communities of Virginia: a Classification of Ecological Community Groups and Community Types. Third approximation. Version 3.0. Virginia Department of Conservation and Recreation, Division of Natural Heritage, Richmond, VA. http://www.dcr.virginia.gov/natural-heritage/natural-communities/ [Accessed: *December 6, 2017*]

Harvill, A.M., Jr. T.R. Bradley, C.E. Stevens, T.F. Wieboldt, D.M.E. Ware, and D.W. Ogle. 1986. Atlas of the Virginia Flora, 2nd ed. Virginia Botanical Associates, Farmville, VA.

Radford, Albert E., Harry E. Ahles, and C. Ritchie Bell. 1968. Manual of the Vascular Flora of the Carolinas. The University of North Carolina Press, Chapel Hill.

Radford, A.E., H.A. Ahles, C.R. Bell. 1968. Manual of the Vascular Flora of the Carolinas. University of North Carolina Press, Chapel Hill. p. 266.

The Nature Conservancy. 1996. Biological and Conservation Data System. Arlington, Virginia, USA.

Weakley, A.S. In prep. *Flora of the Carolina's and Virginia*. The Nature Conservancy, Southeastern Regional Office.

Definitions of Abbreviations Used on Natural Heritage Resource Lists of the Virginia Department of Conservation and Recreation

Natural Heritage State Ranks

The following ranks are used by the Virginia Department of Conservation and Recreation to set protection priorities for natural heritage resources. Natural Heritage Resources, or "NHR's," are rare plant and animal species, rare and exemplary natural communities, and significant geologic features. The criterion for ranking NHR's is the number of populations or occurrences, i.e. the number of known distinct localities; the number of individuals in existence at each locality or, if a highly mobile organism (e.g., sea turtles, many birds, and butterflies), the total number of individuals; the quality of the occurrences, the number of protected occurrences; and threats.

S1 - Critically imperiled in the state because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation from the state. Typically 5 or fewer populations or occurrences, or very few remaining individuals (<1000).

S2 - Imperiled in the state because of rarity or because of some factor(s) making it very vulnerable to extirpation from the state. Typically 6 to 20 populations or occurrences or few remaining individuals (1,000 to 3,000).

S3 - Vulnerable in the state either because rare and uncommon, or found only in a restricted range (even if abundant at some locations), or because of other factors making it vulnerable to extirpation. Typically having 21 to 100 populations or occurrences (1,000 to 3,000 individuals).

S4 - Apparently secure; Uncommon but not rare, and usually widespread in the state. Possible cause of long-term concern. Usually having >100 populations or occurrences and more than 10,000 individuals.

S5 - Secure; Common, widespread and abundant in the state. Essentially ineradicable under present conditions, typically having considerably more than 100 populations or occurrences and more than 10,000 individuals.

S#B - Breeding status of an animal within the state

S#N - Non-breeding status of animal within the state. Usually applied to winter resident species.

S#? - Inexact or uncertain numeric rank.

SH - Possibly extirpated (Historical). Historically known from the state, but not verified for an extended period, usually > 15 years; this rank is used primarily when inventory has been attempted recently.

S#S# - Range rank; A numeric range rank, (e.g. S2S3) is used to indicate the range of uncertainty about the exact status of the element. Ranges cannot skip more than one rank.

SU - Unrankable; Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.

SNR - Unranked; state rank not yet assessed.

SX - Presumed extirpated from the state. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.

SNA - A conservation status rank is not applicable because the element is not a suitable target for conservation activities.

Natural Heritage Global Ranks are similar, but refer to a species' rarity throughout its total range. Global ranks are denoted with a "G" followed by a character. Note GX means the element is presumed extinct throughout its range. A "Q" in a rank indicates that a taxonomic question concerning that species exists. Ranks for subspecies are denoted with a "T". The global and state ranks combined (e.g. G2/S1) give an instant grasp of a species' known rarity. These ranks should not be interpreted as legal designations.

FEDERAL LEGAL STATUS
The Division of Natural Heritage uses the standard abbreviations for Federal endangerment developed by the U.S. Fish and Wildlife Service, Division of Endangered Species and Habitat Conservation.

LE - Listed Endangered
LT - Listed Threatened
PE - Proposed Endangered
PT - Proposed Threatened
C - Candidate (formerly C1 - Candidate category 1)
E(S/A) - treat as endangered because of similarity of appearance
T(S/A) - treat as threatened because of similarity of appearance
SOC - Species of Concern species that merit special concern (not a regulatory category)
NL – no federal legal status

STATE LEGAL STATUS
The Division of Natural Heritage uses similar abbreviations for State endangerment.

LE - Listed Endangered
PE - Proposed Endangered
SC - Special Concern - animals that merit special concern according to VDGIF (not a regulatory category)
LT - Listed Threatened

PT - Proposed Threatened
C - Candidate
NL - no state legal status

For information on the laws pertaining to threatened or endangered species, please contact:

U.S. Fish and Wildlife Service for all FEDERALLY listed species;
Department of Agriculture and Consumer Services, Plant Protection Bureau for STATE listed plants and insects
Department of Game and Inland Fisheries for all other STATE listed animals

Conservation Sites Ranking

Brank is a rating of the significance of the conservation site based on presence and number of natural heritage resources; on a scale of 1-5, 1 being most significant. Sites are also coded to reflect the presence/absence of federally/state listed species:

Conservation Site Ranks	Legal Status of Site
B1 – Outstanding significance	FL – Federally listed species present
B2 – Very High significance	SL – State listed species present
B3 – High significance	NL – No listed species present
B4 – Moderate significance	
B5 – Of general Biodiversity significance	

~~Natural heritage resources as defined by the Virginia Department of Conservation and Recreation – Division of Natural Heritage (DCR) are the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations such as caves and karst features. Spotsylvania is currently home to 24 distinct types of natural heritage resources with 37 total occurrences throughout the county (Table I: Natural Heritage Resources). In addition, DCR has identified 22 terrestrial and aquatic conservation sites as areas necessary for their survival.~~

~~DCR identifies and protects natural heritage resources statewide and maintains a comprehensive database of all documented occurrences of natural heritage resources in Virginia. DCR has developed conservation sites that contain known populations of natural heritage resources and include adjacent or surrounding habitat vital for their protection. Conservation sites do not represent protected lands. They are recommended for protection and stewardship because of the natural heritage resources and habitat they support, but are not currently under any official protection designation. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites can be used to screen development projects for potential impacts to natural heritage resources, aid local and regional planning, identify targets for acquisitions and easements and guide priorities for restoration activities.~~

~~An example of a conservation site in Spotsylvania County is Hamilton's Thicket Conservation Site. In addition to multiple rare species and habitat types found here, the site/ecosystem are critically important because of the geographic location. Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. Hamilton's Thicket Conservation Site has been given a biodiversity significance ranking of B3, which represents a site of high significance.~~

~~The natural heritage resources associated with this conservation site are:~~

~~Coastal Plain / Outer Piedmont Acidic Seepage Swamp – G3/S3/NL/NL~~
~~Coastal Plain Depression Wetland G3?/S2/NL/NL~~

~~*Coastal Plain / Outer Piedmont Acidic Seepage Swamp*~~
~~*©2006, DCR-DNH, Gary P. Fleming*~~

~~The Coastal Plain / Outer Piedmont Acidic Seepage Swamp (*Acer rubrum – Nyssa sylvatica – Magnolia virginiana – Viburnum nudum – Osmunda cinnamomea – Woodwardia areolata* Forest,), is an acidic groundwater saturated swamp forest that ranges from southeastern New York and New Jersey to southeastern Virginia, primarily on the Coastal Plain. In Virginia, it occurs mostly in the inner (western) portion of the Coastal Plain and the extreme eastern portion of the Piedmont. This community occurs in nutrient poor soils in stream headwaters, where abundant groundwater is discharged in springs and seeps. The soil typically consists of muck or shallow peat over sandy mineral soil, with Sphagnum-covered hummocks and pools of standing water also present. The vegetation is a closed-canopy forest with red maple (*Acer rubrum*) and black gum (*Nyssa sylvatica*) typically dominant. Characteristic understory trees and shrubs include sweetbay magnolia (*Magnolia virginiana*), possum-haw (*Viburnum nudum*), and sweet pepperbush (*Clethra alnifolia*). The herbaceous flora is usually rich in sedges and ferns, especially cinnamon fern (*Osmunda cinnamomea*) and netted chain fern (*Woodwardia areolata*). Skunk-cabbage (*Symplocarpus foetidus*) forms large colonies early the growing season in many stands. This uncommon wetland habitat is vulnerable to alteration or destruction by beavers and various anthropogenic activities including hydrologic modifications (NatureServe, 2010).~~

~~*Coastal Plain Depression Wetland*~~
~~*©2001 DCR-DNH, Gary P. Fleming*~~

The Coastal Plain Depression Wetland is a seasonally flooded forest of shallow seasonal ponds and other, more irregular basin depressions of the Chesapeake Bay region. The habitat is flooded up to 50 cm deep during the winter and spring, but typically draws down early in the summer. The substrate is characterized by mineral soils, generally acidic, gleyed to mottled, sandy or clay loams. Characteristic tree species include red maple (*Acer rubrum*), sweet gum (*Liquidambar styraciflua*), and black gum (*Nyssa sylvatica*), which are nearly constant in the canopy. Mature stands, however, usually contain willow oak (Quercus phellos) as an overstory dominant or co-dominant. Associates include American holly (*Ilex opaca*), southern magnolia (*Magnolia virginiana*), swamp tupelo (*Nyssa biflora*), sassafras (*Sassafras albidum*),pin oak (*Quercus palustris*), and loblolly pine (*Pinus taeda*. The shrub layer is characterized by fetterbush (*Leucothoe racemosa*), highbush blueberries (*Vaccinium formosum* and *V. fuscatum*), sweet pepperbush (*Clethra alnifolia*), winterberry (*Ilex verticillata*), and swamp azalea (*Rhododendron viscosum)*. Roundleaf greenbriar (*Smilax rotundifolia*) is a particularly characteristic vine. Herbs characteristic of these communities are well adapted to periods of submersion and are generally sparse.

This community type has been greatly reduced since European settlement by draining and clearing for agricultural conversion. Ongoing threats include ditching, damage from timber harvests, ATV incursions, and adjacent agriculture with insufficient buffers to protect from pesticide and fertilizer use. Since this community depends on groundwater hydrology, depletion of the water table is a serious threat in developed areas. (NatureServe, June 5, 2012)

Potential Threats to Natural Heritage Resources:

The single greatest threat to natural heritage resources is the ongoing conversion of habitat to residential and commercial development. Forest removal, and increased impervious surfaces can influence water quality, and aquatic natural communities. Alteration of the local hydrology by land disturbance can change or eliminate terrestrial habitat. Fragmentation of forests and the introduction of invasives, both flora and fauna, can have a direct effect on the survival of many native plants and the resources that rely upon them for survival. Threats to the Natural Communities include incompatible development, and recreational activities, invasive species; and incompatible agricultural and forestry practices.

Spotsylvania County
Natural Heritage Conservation Sites

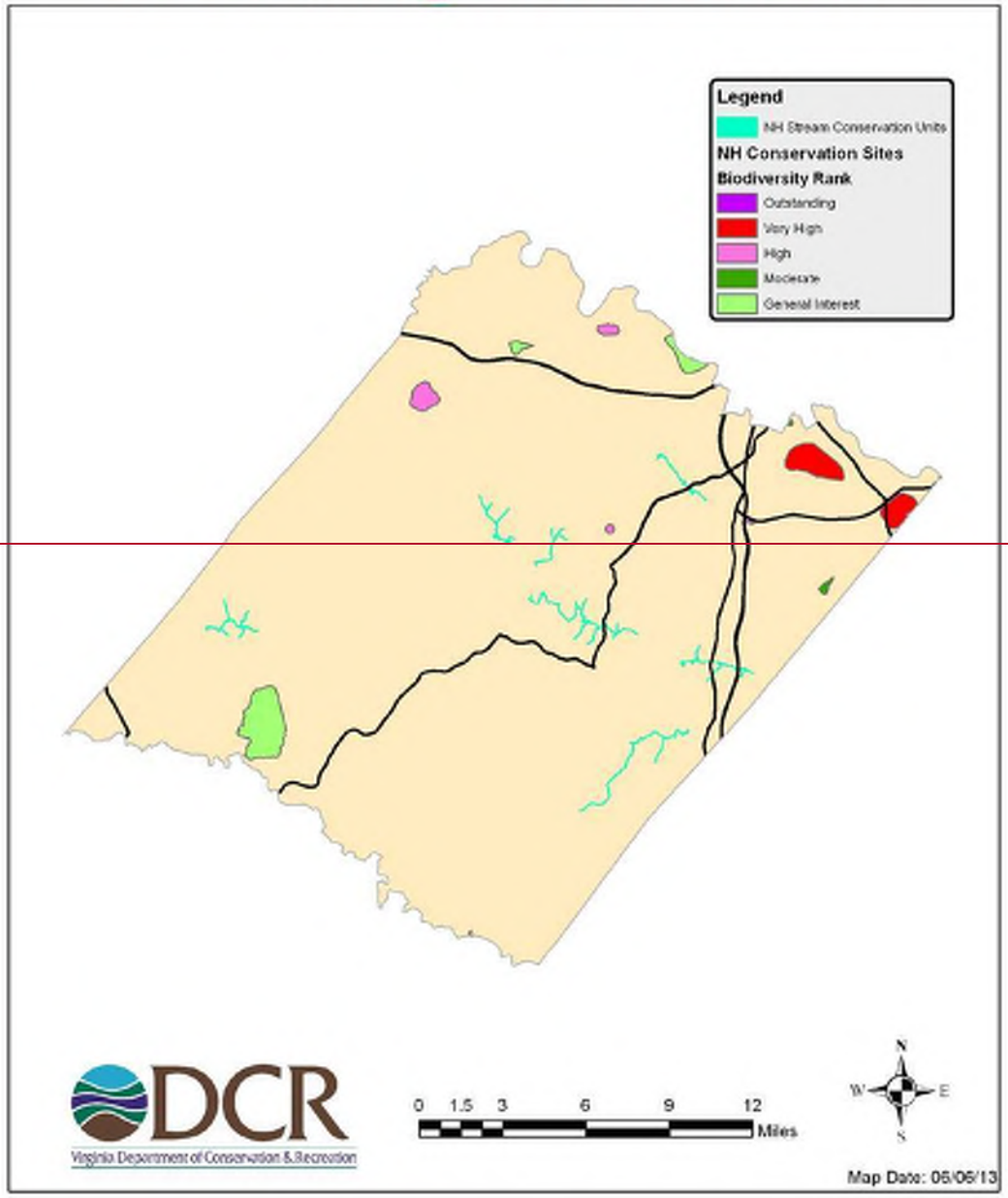


Table 3:

Natural Heritage Resources and Conservation sites

Group Name	Scientific Name	Common Name	Ecological Group	Last Observed	First Observed	Global Rank	FWS_ Species of Concern	State Rank	Federal Status	State Status	Conservation Site Name
Vascular Plant	Sphagnum cuspidatum	Cuspidate Peatmoss		1993-04-21	1993-04-21	G5		S2			SUMMIT RAILROAD TRACKS
Terrestrial Natural Community	Acer rubrum - Nyssa sylvatica - Magnolia virginiana / Viburnum nudum / Osmundastrum cinnamomeum - Woodwardia areolata Forest	Coastal Plain / Outer Piedmont Acidic Seepage Swamp	Coastal Plain / Piedmont Acidic Seepage Swamp	2004-07-19	2004-07-06	G3?		S1			HARRISONS THICKET
Terrestrial Natural Community	Acer rubrum - Nyssa sylvatica - Magnolia virginiana / Viburnum nudum / Osmundastrum cinnamomeum - Woodwardia areolata Forest	Coastal Plain / Outer Piedmont Acidic Seepage Swamp	Coastal Plain / Piedmont Acidic Seepage Swamp	2004-06-12	2004-06-03	G3?		S1			HARRISONS THICKET
Terrestrial Natural Community	Acer rubrum - Nyssa sylvatica - Magnolia virginiana / Viburnum nudum / Osmundastrum cinnamomeum - Woodwardia areolata Forest	Coastal Plain / Outer Piedmont Acidic Seepage Swamp	Coastal Plain / Piedmont Acidic Seepage Swamp	2005-06-17	2005-06-01	G3?		S1			SOUTH FREDERICKSBURG
Terrestrial Natural Community	Quercus phellos - Acer rubrum - Liquidambar styraciflua / Clethra alnifolia (Formerly Taxodium) Forest	Coastal Plain Depressional Swamp (Willow Oak - Red Maple - Sweetgum Type)	Coastal Plain Depression Wetland	2004-06-07	2004-06-06	G3		S2			HARRISONS THICKET
Vascular Plant	Saccharum contortum	Compressed plumegrass		1972-10-00	1972-10-00	G5?		S1?			
Vascular Plant	Quercus prinoides	Dwarf Chinkapin Oak		1977-07-28	1977-	G5		S3			
Vascular Plant	Quercus prinoides	Dwarf Chinkapin Oak		2001-07-31	1977-07-28	G5		S1			
Invertebrate Animal	Alasmidonta heterodon	Dwarf Wedgemussel		1925-08-18	1925-	G1G2		S1	LE	LE	
Invertebrate Animal	Alasmidonta heterodon	Dwarf Wedgemussel		1994-06-13	1994-06-07	G1G2		S1	LE	LE	RAPPAHANNOCK RIVER - ROCKY RUN SCU
Invertebrate Animal	Alasmidonta heterodon	Dwarf Wedgemussel		2008-06-12	1992-03-06	G1G2		S1	LE	LE	PO RIVER - ANDREWS BRIDGE SCU
Invertebrate Animal	Alasmidonta heterodon	Dwarf Wedgemussel		1999-06-09	1999-03-15	G1G2		S1	LE	LE	PO RIVER - WIGGINGTONS POND - HEDGE CREEK SCU
Invertebrate Animal	Elliptio fisheriana	Eastern Lampmussel		1989-09-06	1989-	G3		S2S3			PO RIVER - STANDARDS MILL SCU
Invertebrate Animal	Callophrys irus	Frosted Elfin		1993-04-21	1993-04-20	G3		S2?			
Invertebrate Animal	Lasmigona subviridis	Green Floater		1934-10-00	1931-	G2		S2		LT	
Invertebrate Animal	Sigelus lunai	Luna's Clubtail		1967	1967	G4		S2			
Terrestrial Natural Community	Quercus (alba, pagoda, michauxii) Fraxinus - Carpinus caroliniana / Woodwardia areolata Forest	Tidal-Riverine Wet Hardwood Forest (Non-Riverine Hardwood / Swamp (Northern Coastal Plain Type)		2005-05-31	2001-03-19	G3?		S1			SOUTH FREDERICKSBURG
Terrestrial Natural Community	Quercus (alba, pagoda, michauxii) Fraxinus - Carpinus caroliniana / Woodwardia areolata Forest	Tidal-Riverine Wet Hardwood Forest (Non-Riverine Hardwood / Swamp (Northern Coastal Plain Type)		2007-06-12	2008-05-23	G3?		S1			NEW POST HEADWOODS
Vascular Plant	Sarracenia purpurea	Northern pitcher plant		1986-08-20	1986-	G5		S1			

Prepared by DCR-DNH on 1/8/2013

Literature Cited

NatureServe. 2010. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available http://www.natureserve.org/explorer. (Accessed: March 19, 2012).

NatureServe. 2012. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available http://www.natureserve.org/explorer. (Accessed: June 5, 2012)

Natural Heritage Resources Definitions

Definitions of Abbreviations Used on Natural Heritage Resource Lists of the Virginia Department of Conservation and Recreation

Natural Heritage State Ranks

The following ranks are used by the Virginia Department of Conservation and Recreation to set protection priorities for natural heritage resources. Natural Heritage Resources, or "NHR's," are rare plant and animal species, rare and exemplary natural communities, and significant geologic features. The criterion for ranking NHR's is the number of populations or occurrences, i.e. the number of known distinct localities; the number of individuals in existence at each locality or, if a highly mobile organism (e.g., sea turtles, many birds, and butterflies), the total number of individuals; the quality of the occurrences, the number of protected occurrences; and threats.

S1 - Critically imperiled in the state because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation from the state. Typically 5 or fewer populations or occurrences, or very few remaining individuals (<1000).

S2 - Imperiled in the state because of rarity or because of some factor(s) making it very vulnerable to extirpation from the state. Typically 6 to 20 populations or occurrences or few remaining individuals (1,000 to 3,000).

S3 - Vulnerable in the state either because rare and uncommon, or found only in a restricted range (even if abundant at some locations), or because of other factors making it vulnerable to extirpation. Typically having 21 to 100 populations or occurrences (1,000 to 3,000 individuals).

S4 - Apparently secure; Uncommon but not rare, and usually widespread in the state. Possible cause of long-term concern. Usually having >100 populations or occurrences and more than 10,000 individuals.

S5 - Secure; Common, widespread and abundant in the state. Essentially ineradicable under present conditions, typically having considerably more than 100 populations or occurrences and more than 10,000 individuals.

S#B - Breeding status of an animal within the state

S#N - Non-breeding status of animal within the state. Usually applied to winter resident species.

S#? - Inexact or uncertain numeric rank.

SH - Possibly extirpated (Historical). Historically known from the state, but not verified for an extended period, usually > 15 years; this rank is used primarily when inventory has been attempted recently.

S#S# - Range rank; A numeric range rank, (e.g. S2S3) is used to indicate the range of uncertainty about the exact status of the element. Ranges cannot skip more than one rank.

SU - Unrankable; Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.

SNR - Unranked; state rank not yet assessed.

SX - Presumed extirpated from the state. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.

SNA - A conservation status rank is not applicable because the element is not a suitable target for conservation activities.

Natural Heritage Global Ranks are similar, but refer to a species' rarity throughout its total range. Global ranks are denoted with a "G" followed by a character. Note GX means the element is presumed extinct throughout its range. A "Q" in a rank indicates that a taxonomic question concerning that species exists. Ranks for subspecies are denoted with a "T". The global and state ranks combined (e.g. G2/S1) give an instant grasp of a species' known rarity. These ranks should not be interpreted as legal designations.

FEDERAL LEGAL STATUS

The Division of Natural Heritage uses the standard abbreviations for Federal endangerment developed by the U.S. Fish and Wildlife Service, Division of Endangered Species and Habitat Conservation.

LE - Listed Endangered
LT - Listed Threatened
PE - Proposed Endangered
PT - Proposed Threatened
C - Candidate (formerly C1 - Candidate category 1)
E(S/A) - treat as endangered because of similarity of appearance
T(S/A) - treat as threatened because of similarity of appearance
SOC - Species of Concern species that merit special concern (not a regulatory category)
NL – no federal legal status

STATE LEGAL STATUS
The Division of Natural Heritage uses similar abbreviations for State endangerment.

LE - Listed Endangered
PE - Proposed Endangered
SC - Special Concern - animals that merit special concern according to VDGIF (not a regulatory category)
LT - Listed Threatened
PT - Proposed Threatened
C - Candidate
NL - no state legal status

For information on the laws pertaining to threatened or endangered species, please contact:

U.S. Fish and Wildlife Service for all FEDERALLY listed species;
Department of Agriculture and Consumer Services, Plant Protection Bureau for STATE listed plants and insects
Department of Game and Inland Fisheries for all other STATE listed animals

Conservation Sites Ranking
Brank is a rating of the significance of the conservation site based on presence and number of natural heritage resources; on a scale of 1-5, 1 being most significant. Sites are also coded to reflect the presence/absence of federally/state listed species:

Conservation Site Ranks	Legal Status of Site
B1 – Outstanding significance	FL – Federally listed species present
B2 – Very High significance	SL – State listed species present
B3 – High significance	NL – No listed species present
B4 – Moderate significance	
B5 – Of general Biodiversity significance	

Natural Heritage Data Explorer (NHDE)

The Virginia Department of Conservation and Recreation describes (NHDE) as an ArcGIS Server based interactive mapping application that anyone can use to map the conservation status and conservation values of lands. The NHDE is a combination of three tools used to access Natural Heritage, Conservation Lands, and conservation planning data and information, and used to obtain Environmental Review services.

As a development review tool, County staff and local decision makers are able to utilize the NHDE to make better informed decisions regarding the prospect of development impacts in areas where natural heritage resources are, or are likely to occur. Such models can and have resulted in requests for additional information in an effort to mitigate potential impacts upon threatened or endangered species and their habitats where models identify potential conflicts. Additionally, models can help better inform land use and public service decisions as part of the County Comprehensive Plan creation, review, and update processes whereby helping guide informed planning efforts.

The NHDE can be found **HERE**

2015 Virginia Wildlife Action Plan

As per the Virginia Department of Game and Inland Fisheries, the 2015 Wildlife Action Plan (Plan) was written to offer strategies for rising to the challenges of the 21st century. The Plan describes opportunities to maintain and improve our natural habitats, allowing us to conserve wildlife in ways that benefit people. It details efforts to restore our rivers, maintain our forests, and prevent species from declining to the point where federal protections are imposed. Practical actions based on the best available science describe how we help our wildlife and our human communities adapt to changing conditions. Most importantly, the Plan demonstrates that some of our most critical conservation issues can be addressed in a cost-effective way using proven techniques and technologies.

The updated 2015 Action Plan identifies 883 species that are in decline statewide. Habitat loss is the single greatest challenge impacting these species. The Plan identifies strategies to conserve and restore these species through conservation efforts. In addition to a statewide overview, the Action Plan describes strategies for 21 multi-county planning regions which are roughly consistent with Virginia's Planning District Commissions. Spotsylvania County is located within the George Washington Region Chapter of the Plan. Within the George Washington Region, 76 of the statewide 883 species are believed to either occur or have occurred. For each planning region, the Action Plan identifies the local wildlife priorities, the habitats those species rely upon, threats impacting these species and habitats, and conservation actions that can be taken to address those threats. The Plan identifies: priority places for either conservation or restoration within each planning region, programs working to address threats or define best management practices, and data that could be used to document and evaluate the success of conservation actions. Within Spotsylvania County, those areas identified where Top Tier Species of Greatest Conservation Needs have the greatest density include: northwestern; central; south-central; southeastern Spotsylvania County. These are areas of the County that historically have had fewer development pressures where agriculture, forestry, and large lot rural residential land uses prevail and are supported by the County Future Land Use vision, outside of the Primary Development Boundary. Finally, the updated Action Plan describes climate trends that have been projected for Virginia and identifies actions that can be taken to conserve wildlife under changing climatic conditions.

The 2015 Wildlife Action Plan is made available online by the Virginia Department of Game and Inland Fisheries Here.

Virginia Fish and Wildlife Information Service (VaFWIS)

The Virginia Fish and Wildlife Information Service (VaFWIS) complements the Wildlife Action Plan and provides an interactive mapping service to help identify a number of geographic based natural resources overlays including: designated trout waters; anadromous fish waters; designated waters for threatened and endangered species; bald eagle nest sites, concentration areas and roosts; Wildlife Action Plan Tier I and II observations (approximate locations within 2 miles); predicted habitat for Wildlife Action Plan Tier I and II Species.

As a development review tool, County staff and local decision makers are able to utilize the VaFWIS to make better informed decisions regarding the prospect of development impacts in areas where Tier I and II species and their habitats are or are likely to occur. Such models can and have resulted in requests for additional information in an effort to mitigate potential impacts where areas of potential conflict exists. Additionally, VaFWIS can help better inform land use and public service decisions as part of County Comprehensive Plan creation, review, and update processes whereby helping guide informed planning efforts.

The VaFWIS can be found **HERE**.

U.S. Fish and Wildlife Service Information for Planning and Consultation (IPaC)

The U.S. Fish and Wildlife Service IPaC service assists in the environmental review process by identifying species and resources that may be impacted by activities at a specific location. Like the VaFWIS and NHDE services referenced previously, IPaC offers an easy to use mapping system to help geo-locate resources to consider as part of the development review process.

As a development review tool, County staff and local decision makers can utilize the IPaC service to make better informed decisions regarding the prospect of development impacts in areas where endangered species, critical habitat, migratory birds or other natural resources are, or are likely to occur. Such models can and have resulted in requests for additional information in an effort to mitigate potential impacts where areas of potential conflict exists. Additionally, IPaC can help better inform land use and public service decisions as part of County Comprehensive Plan creation, review, and update processes whereby helping guide informed planning efforts.

The IPaC service can be found **HERE**.

FORESTRY

The Virginia Department of Forestry's mission is to "protect and develop healthy, sustainable forest resources for Virginians". As per the Virginia Department of Forestry, their Vision envisions a healthy, abundant, forest resource providing economic and environmental benefits to the Commonwealth on a sustained basis. We see a resource whose scenic beauty enhances natural surroundings and whose protected environment supports clean water and wildlife. We further see a diverse forest resource as a part of natural ecosystems. We envision the economic benefits of forest industry to be in balance with the environmental values of the resource.

Spotsylvania County has historically reached out to the Virginia Department of Forestry to seek updated Spotsylvania County forestry profile information as part of the Comprehensive Plan update process, as follows:

County Profile

Forestry in Spotsylvania County, as it is most anywhere, is dictated largely by its soils, its historical uses and management techniques, local demands and the natural forest cover present. Historically, Spotsylvania County was rich in minerals as well as in agricultural and forestal resources. The County seal, with an image of three trees, reflects the importance of forestry to the local economy.

During colonial times, a great deal of effort was spent in mining iron ore, gold, silver and other minerals from the soils of this county. The county was named after colonial Lt. Gov. Alexander Spotswood (1676-1740), who, among other things, was responsible for establishing iron furnaces and foundries in the area. As these resources were being mined, productive timberland was harvested to provide firewood to operate the furnaces used to melt these minerals into a usable form.

During the Civil War, four major battles and countless minor battles and skirmishes were fought in the area, earning Spotsylvania the title "Crossroads of the Civil War." Civil War-era photos show the vast amount of open land during this time period; the timber had been cleared to provide firewood for the numerous furnaces in the county, as well as to make way for crop fields. The northwest area of the county is called "Wilderness," where large areas of dense shrub land made the area nearly impossible to travel through. The "Wilderness" shrubs grew in the poor soils that resulted from forest clearing and the removal of raw materials.

Both the mining operations and the land clearing combined with poor agricultural practices have left Spotsylvania with depleted topsoils. Additionally, certain areas of the county have poorly drained soils that may be the result of a 'plow pan' or 'hard pan' layer, developed during agricultural tillage. Once bountiful regions had now been reduced to marginal productivity, at best. Although marginal for agriculture, the soils were good for pine plantations, predominately Loblolly pine (Pinus taeda).

Once the Civil War ended, with much of the pre-war workforce no longer available, much of the cleared land throughout the county reverted back to forest land. A considerable amount of the hardwoods (oak, hickory, poplar, etc.) existing in the county today is a result of the forest succession that began after the Civil War ended.

After the turn of the 20th century, and most of the 1900s, forestry and forest products were an important part of the economy of Spotsylvania County. Numerous portable sawmills, permanent

sawmills and timber harvesters operated in the area, providing a livelihood for many families. The operations were responsible for harvesting the hardwoods, milling the product on site in the forest, and shipping only the final product (in the form of rough lumber) out of the forest. This process usually focused on trees of merchantable size, species and quality, and left un-merchantable trees uncut. Primary products for this era included grade lumber and railroad ties, among others. This method of harvesting timber was common for several reasons: harvesting timber was very labor intensive, so crews only focused on what was profitable, and there was generally little to no market value for smaller or poorly formed trees. However, in some cases, this left the forest devoid of any market value, often for decades after the harvest.

Prior to the 1950's, it was commonplace for a landowner to sell the standing timber and land together as a unit, or once the timber had been harvested, sell the land for a very low cost. The value of the land was in the forest, and with the forest having been harvested, the landowner would then be required to pay taxes on the property until the forest matured again, possibly taking many decades. In some cases, the landowner was unwilling to carry that long. Clearing the land for agriculture was generally not an option because it was often not suited for farming. However, due to the differences of agriculture and farming, land that was substandard for agriculture often grows pines very well.

Beginning in the 1960's and 1970's, paper companies, such as WestVaCo, Continental Can, Bear Island, Chesapeake and other smaller, locally owned sawmills would purchase these lands for the expressed purpose of growing pines for fiber production.

Eventually, clear cutting as a method of timber harvesting was used more frequently, primarily due to the marketability of previously un-merchantable wood, such as hardwood pulpwood, as well as the onset of mechanized harvesting (which reduced the amount of manual labor required in the harvesting process). Clear cutting made it possible for the forest landowner to reforest using planted pine; the pine plantation was thereby developed.

As a result of Interstate 95 being built during the early 1960s, and the fact that Spotsylvania lies mid-way between Washington, D.C., and Richmond, the population of Spotsylvania began to grow. Prior to that, much of the timberland in the county was owned in large tract sizes by paper and pulp companies, sawmills and other timber producers as a relatively inexpensive commodity. As the population of Spotsylvania increased, however, so did the value of the land. Developers and builders were able to buy land to subdivide, further increasing the price of real estate. This once rural county has now become suburbanized, with large tracts of land being broken into smaller and smaller pieces, contributing to forest fragmentation.

Table 11: Forestry Land in Spotsylvania County	
Land Use	Acres
Total Area of Spotsylvania County	252,499
Commercial Timberland	143,374
Total Area of Forestland	150,656
Nonforest Area	89,439
Water	12,403
% of Spotsylvania County in Forest	60%

Table 12: Forest Lands Ownership		
Ownership	Acres	Percentage
Area of Forestland all classes	150,656	100%
National Park	1,456	1%
State	8,709	6%
County	5,826	4%
Private Ownership	134,665	89%

Currently, there are still a large number of loblolly pine plantations of considerable size being managed here in the County. However, many of the paper and pulp companies have sold their holdings here in the County; some of which has gone to landowners with forest management goals, while other tracts have been converted into housing developments. Converting a pine plantation into a housing development presents two important issues:

1. It creates a fire hazard for the homes of that community (due to the highly flammable nature of loblolly pine) and;

2. The larger forest, now subdivided, is now much more difficult to manage. Due to the difficulty in managing this stand, often the forest becomes overcrowded, stressed, and susceptible to insects and diseases. Trees killed by insects and diseases (often this occurs in areas of several acres or more) become a fire hazard and have no market value whatsoever.

Bearing this history in mind, and its influences on the forests of today, the soils of Spotsylvania County are by and large well suited for Loblolly and Shortleaf pine. Pines can be grown in a higher quality and in a shorter amount of time than hardwoods. In Spotsylvania, on upland sites, a typical hardwood forest is dominated by white oak, red oak, hickory and yellow poplar. On bottomland sites, a typical hardwood forest is dominated by river birch, sycamore, sweet gum and red maple. The quality of the hardwood present today on upland sites is generally fair to poor, as quality hardwoods require very productive soils.

Table 13: Forest Types		
Forest Type Group	Acres	Percentage
Loblolly Pine	51,887	34%
Oak-Pine	23,280	15%
Oak - Hickory	63,838	42%
Bottomland Hardwood	10,195	7%
Non-stocked	1,456	1%
Total	150,656	100%

Forest products in Spotsylvania County today include pulpwood, grade lumber (both pine and hardwood), railroad ties, and some veneer. Of course, firewood, fence posts and associated products are produced on a small scale. Some timber harvesters, however, have begun chipping low quality and un-merchantable products created during the timber harvest (such as tree tops) into a mulch-like material, where it is used as fuel at large mills and plants.

The trend of forestry in Spotsylvania is like that elsewhere in eastern Virginia. Timber harvesting in general is tied closely to both the economy and to the housing market. Acres harvested statewide were down in 2009, however, they have recovered to more typical numbers today. Total acres reforested, after a timber harvest have maintained a steady trend over the past few years. Spotsylvania County ranks 36th statewide in timber harvesting for total average annual harvest value, from 2005 to 2015.

One notable trend over the past thirty years is the absence of fire. While no one would argue that wildfires are good, a prescribed fire does have benefits when handled properly. Due to the high population in Spotsylvania County, the use of prescribed fire as a management tool has been increasingly difficult to use, due to the issues associated with smoke management. Additionally, in rural Virginia periodic wildfires, although dangerous, did have an effect on the forest over time. Certain tree species such as sweetgum, red maple and others, typically were killed off by fire, whereas most species of oak were able to survive and even thrive. Periodic wildfires often gave way to a higher composition of oaks in Virginia forests, which in turn were more marketable. Fire now largely precluded from the forestland, many hardwood forests now are comprised more heavily of sweetgum, red maple, and less of the oaks.

While portions of the western and southern sections of the county are still somewhat rural, Spotsylvania County today is largely made up of suburban areas. Many county residents commute to Northern Virginia or Washington, D.C., for high-paying jobs. Other people are moving to Spotsylvania from those areas because of the relatively lower cost of living. As a result of this shift from rural to suburban, the urban and community forests have become increasingly important to homeowners, and new housing developments are being built with “green spaces” for their residents to enjoy. These people also see the value in protecting forested areas so that all will be able to enjoy the many benefits forests provide.

Forest Industry

Currently, there are two operating, commercial sawmills within Spotsylvania County, however, there are at least two smaller portable mills in existence, and likely others. Additionally, there is a wood preservative plant and a planing mill, neither of which uses raw logs in their processes. The wood preservative plant treats finished lumber with an approved chemical for use in exterior construction, such as decks, playground equipment, etc. The planing mill receives large cants, and re-saws them into pallet parts.

Much of the timber harvested in Spotsylvania County is hauled to primary processing facilities outside of the county, and in some cases, outside of Virginia.

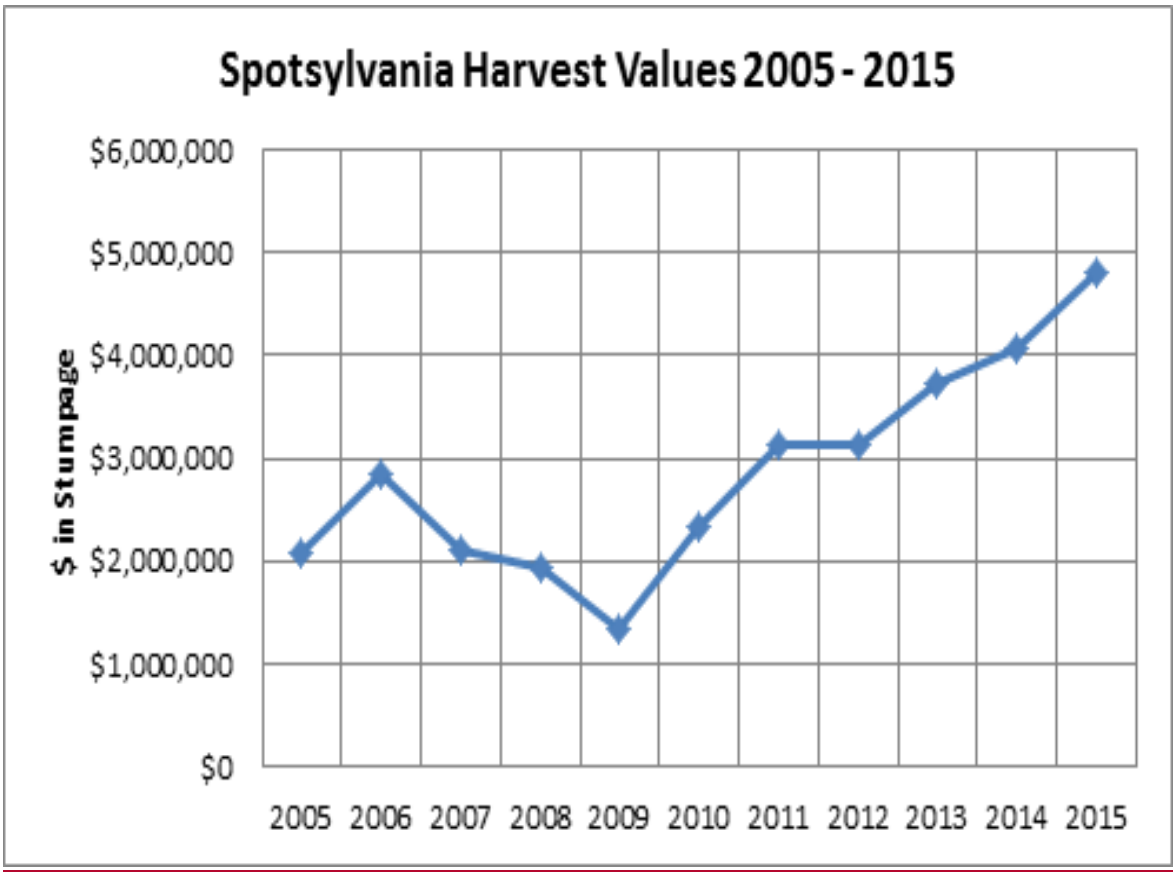


Exhibit 3: Harvest Values '05-'15

The "annual harvest value" is in fact the value of the timber harvested in the County, for a given year. The term generally used to describe timber removed from a given site is 'stumpage'. In order to determine this number, harvest volume (the amount of timber harvested) is needed, as well as value (price paid for what was harvested). Therefore, this data is derived from a combination of two sources. The County harvest volumes come from the forest products tax information and the values are based on average stumpage values that are collected each year from local consultants and sources like Timber Mart - South. See Exhibit 3,4 and Table 14, 15.

Table 14: Virginia Department of Forestry: Spotsylvania County Timber Value and Supply					
	2015	2010	2009	2008	2007
Pine (MBF)	22,034	6,217	2,265	6,173	7,646
Pine (cords)	18,370	19,177	12,353	21,568	19,227
Value: Pine	$3,764,702	$1,342,075	$602,479	$1,307,209	$1,493,002.34
Hardwood (MBF)	5,614	5,050	4,774.14	4,474	4,944
Hardwood (cords)	8,429	12,189	8,263.29	11,756	9,824
Value: Hardwood	$1,016,219	$981,331	$740,899	$624,608	$614,755
Total Value	$4,795,099	$2,323,406	$1,343,378	$1,931,817	$2,107,757

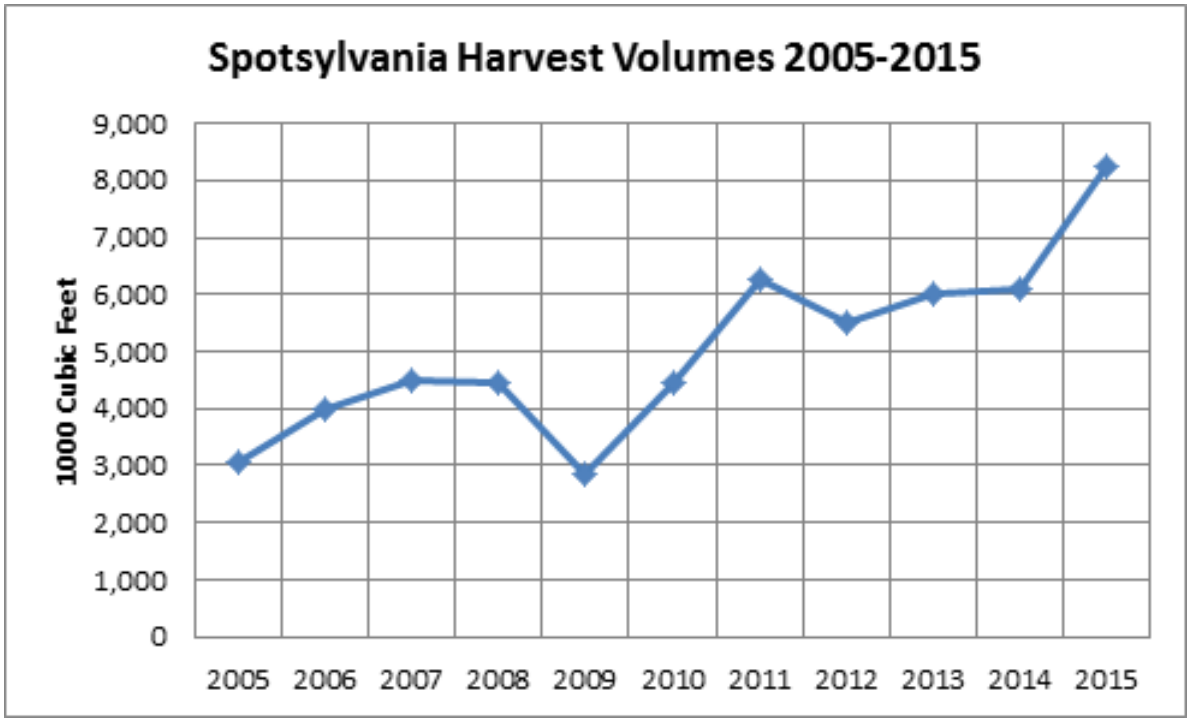


Exhibit 4 : Harvest Volumes

Table 15: USDA Census of Agriculture: Spotsylvania County Woodland Crops					
		2017	2012	2007	2002
Cut Christmas Trees	Farms	11	12	11	9
	Acres in Production	99	90	80	96
	Trees Cut	1,371	1,624	2,282	4,170

Forest Conservation Value Map (included within this appendix)

The Virginia Department of Forestry has established a relative Forest Conservation Value (FCV) for all of the forestland in the state. This FCV ranking is based on the level of benefits provided by a particular area of forest in combination with the level of threat the area faces from conversion to another land use, primarily to development. The FCV map divides the state's forestlands into five categories; the Virginia Department of Forestry (VDOF) has identified categories 4 and 5 as having high forest conservation value. While all forests provide a range of benefits and the threat of forest conversion is widespread, the VDOF recommends that these high conservation value forests be given priority in land conservation efforts such as donated conservation easements, PDR programs, or Ag-Forestal Districts.

In the GIS analysis used to develop the FCV rankings, the forest benefits that were measured included water quality protection, natural habitat, the extent of contiguous forest cover, and the potential forest economic productivity. Threat to conversion was based on the likelihood that the area would change from rural land to a more developed use. This was determined based on road density, county population projections, and 30-year projections of housing density.

In developing the FCV map, the following datasets were used to calculate forest benefits utilizing a weighted overlay model. The model also included forest conversion threat as described above.

1. Streams, shorelines, and floodplain forests and forested wetlands
2. Forests in headwaters and on steep slopes
3. Forests protecting drinking water supplies
4. Large contiguous blocks of forest; and
5. Sustainable, managed working forests - based on woodland soil productivity, forest types, and economic value of timber
6. Areas of high terrestrial integrity – takes into account stream buffers, road fragmentation, and impervious surfaces
7. Areas of high aquatic integrity – incorporates number of species and species richness

An important forestland conservation tool that Spotsylvania County has utilized over the past few years is Forest Land Use Taxation. By offering a tax reduction to landowners who have a minimum of 20 forested acres when they take the simple step of working with forestry professionals to identify their forestry resources and developing a plan for managing them, many people can afford to hold onto their land. This reduces the amount of forest fragmentation and land use conversion and maintains the

county's green spaces which might otherwise be lost to commercial and residential development. Forested parcels greater than 20 acres in size have been identified as being profitable for both the landowner and the timber harvesting contractor who has set costs involved with relocating their operations from project to project.

Sustainable Practices

Wise usage of wood and wood by-products to reduce additional tonnage to the county landfill should be a goal of the county. There are already practices in use such as incorporating woody debris into fertilizer and grinding mulch to be used by the public in landscaping projects. Composting of leaf collections and small pruning residues is an age-old practice that can create rich potting soil. Larger branches and small diameter damaged trees can be chipped to create material to be used on park trails. These measures, along with other recycling strategies, can go a long way towards extending the duration of current landfill space.

~~Forestry in Spotsylvania County, as it is most anywhere, is dictated largely by its soils, its historical uses and management techniques, local demands and the natural forest cover present. Historically, Spotsylvania County was rich in minerals as well as in agricultural and forestal resources. The county seal, with an image of three trees, reflects the importance of forestry to the local economy.~~

~~During colonial times, a great deal of effort was spent in mining iron ore, gold, silver and other minerals from the soils of this county. The county was named after colonial Lt. Gov. Alexander Spotswood (1676-1740), who, among other things, was responsible for establishing iron furnaces and foundries in the area. As these resources were being mined, productive timberland was harvested to provide firewood to operate the furnaces used to melt these minerals into a usable form.~~

~~During the Civil War, four major battles and countless minor battles and skirmishes were fought in the area, earning Spotsylvania the title "Crossroads of the Civil War." Civil War-era photos show the vast amount of open land during this time period; the timber had been cleared to provide firewood for the numerous furnaces in the county, as well as to make way for crop fields. The northwest area of the county is called "Wilderness," where large areas of dense shrub land made the area nearly impossible to travel through. The "Wilderness" shrubs grew in the poor soils that resulted from forest clearing and the removal of raw materials.~~

~~Both the mining operations and the land clearing, combined with poor agricultural practices have left Spotsylvania with depleted topsoils. Additionally, certain areas of the county have poorly drained soils that may be the result of a 'plow pan' or 'hard pan' layer, developed during agricultural tillage. Once bountiful regions had now been reduced to marginal productivity, at best. Although marginal for agriculture, the soils were good for pine plantations, predominately Loblolly pine (Pinus taeda).~~

~~Once the Civil War ended, with the majority of the pre-war workforce no longer available, much of the cleared land throughout the county reverted back to forest land. A considerable amount of the hardwoods (oak, hickory, poplar, etc.) existing in the county today is a result of the forest succession that began after the Civil War ended.~~

~~After the turn of the 20th century, and most of the 1900s, forestry and forest products were an important part of the economy of Spotsylvania County. Numerous portable sawmills, permanent sawmills and timber harvesters operated in the area, providing a livelihood for many families. The operations were responsible for harvesting the hardwoods, milling the product on site in the forest, and~~

shipping only the final product (in the form of rough lumber) out of the forest. This process usually focused on trees of merchantable size, species and quality, and left unmerchantable trees uncut. Primary products for this era included grade lumber and railroad ties, among others. This method of harvesting timber was common for several reasons: harvesting timber was very labor intensive, so crews only focused on what was profitable, and there was generally little to no market value for smaller or poorly formed trees. However, in some cases, this left the forest devoid of any market value, often for decades after the harvest.

Prior to the 1950's, it was commonplace for a landowner to sell the standing timber and land together as a unit, or once the timber had been harvested, sell the land for a very low cost. The value of the land was in the forest, and with the forest having been harvested, the landowner would then be required to pay taxes on the property until the forest matured again, possibly taking many decades. In some cases, the landowner was unwilling to carry that long. Clearing the land for agriculture was generally not an option because it was often not suited for farming. However, due to the differences of agriculture and farming, land that was substandard for agriculture often grows pines very well.

Beginning in the 1960's and 1970's, paper companies, such as WestVaCo, Continental Can, Bear Island, Chesapeake and other smaller, locally owned sawmills would purchase these lands for the expressed purpose of growing pines for fiber production.

Eventually, clear cutting as a method of timber harvesting was used more frequently, primarily due to the marketability of previously un-merchantable wood, such as hardwood pulpwood, as well as the onset of mechanized harvesting (which reduced the amount of manual labor required in the harvesting process). Clear cutting made it possible for the forest landowner to reforest using planted pine; the pine plantation was thereby developed.

As a result of Interstate 95 being built during the early 1960s, and the fact that Spotsylvania lies mid-way between Washington, D.C., and Richmond, the population of Spotsylvania began to grow. Prior to that, much of the timberland in the county was owned in large tract sizes by paper and pulp companies, sawmills and other timber producers as a relatively inexpensive commodity. As the population of Spotsylvania increased, however, so did the value of the land. Developers and builders were able to buy land to subdivide, further increasing the price of real estate. This once rural county has now become suburbanized, with large tracts of land being broken into smaller and smaller pieces, contributing to forest fragmentation.

Currently, there are still a large number of loblolly pine plantations of considerable size being managed here in the county. However, many of the paper and pulp companies have sold their holdings here in the county; some of which has gone to landowners with forest management goals, while other tracts have been converted into housing developments. Converting a pine plantation into a housing development presents two important issues:

1. It creates a fire hazard for the homes of that community (due to the highly flammable nature of loblolly pine) and;

2. The larger forest, now subdivided, is now much more difficult to manage. Due to the difficulty in managing this stand, often the forest becomes overcrowded, stressed, and susceptible to insects and diseases. Trees killed by insects and diseases (often this occurs in areas of several acres or more) become a fire hazard, and have no market value whatsoever.

Bearing this history in mind, and its influences on the forests of today, the soils of Spotsylvania County are by and large well suited for Loblolly and Shortleaf pine. Pines can be grown in a higher quality and in a shorter amount of time than hardwoods. In Spotsylvania, on upland sites, a typical hardwood forest is dominated by white oak, red oak, hickory and yellow poplar. On bottomland sites, a typical hardwood forest is dominated by river birch, sycamore, sweet gum and red maple. The quality of the hardwood present today on upland sites is generally fair to poor, as quality hardwoods require very productive soils.

Forest products in Spotsylvania County today include pulpwood, grade lumber (both pine and hardwood), railroad ties, and some veneer. Of course, firewood, fence posts and associated products are produced on a small scale. Some timber harvesters, however, have begun chipping low quality and unmerchantable products created during the timber harvest (such as tree tops) into a mulch like material, where it is used as fuel at large mills and plants.

The trend of forestry in Spotsylvania is similar to that elsewhere in eastern Virginia. Timber harvesting in general is tied closely to both the economy and to the housing market. Acres harvested statewide were down in 2009, however, they have recovered to more typical numbers today. Total acres reforested, after a timber harvest have maintained a steady trend over the past few years. Spotsylvania County ranks 44th statewide in timber harvesting for total average annual harvest value, from 2000 to 2011.

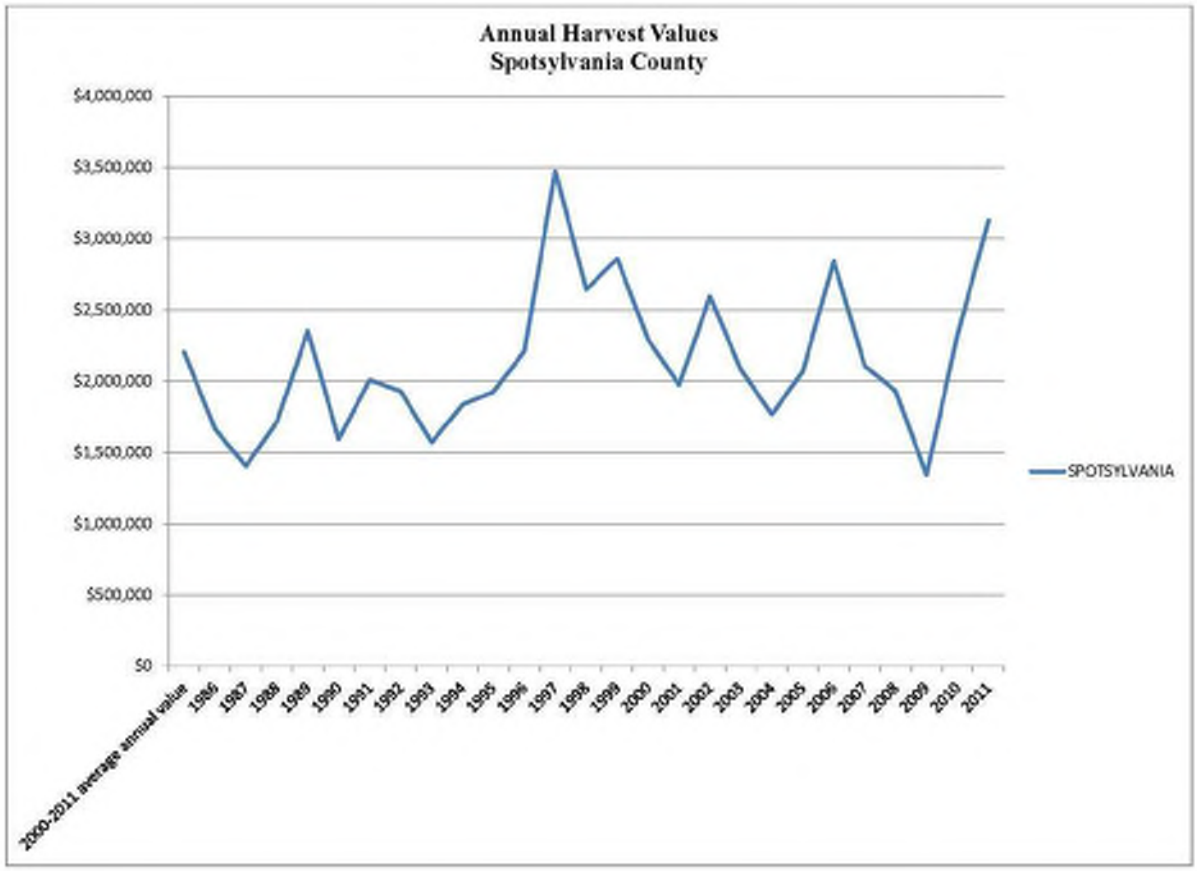
One notable trend over the past thirty years is the absence of fire. While no one would argue that wildfires are good, a prescribed fire does have benefits when handled properly. Due to the high population in Spotsylvania County, the use of prescribed fire as a management tool has been increasingly difficult to use, due to the problems associated with smoke. Additionally, in rural Virginia periodic wildfires, although dangerous, did have an affect the forest over time. Certain tree species such as sweetgum, red maple and others, typically were killed off by fire, whereas most species of oak were able to survive and even thrive. Periodic wildfires often gave way to a higher composition of oaks in Virginia forests, which in turn were more marketable. Fire now largely precluded from the forestland, many hardwood forests now are comprised more heavily of sweetgum, red maple, and less of the oaks.

While portions of the western and southern sections of the county are still somewhat rural, Spotsylvania County today is largely made up of suburban areas. Many county residents commute to Northern Virginia or Washington, D.C., for high-paying jobs. Other people are moving to Spotsylvania from those areas because of the relatively lower cost of living. As a result of this shift from rural to suburban, the urban and community forests have become increasingly important to homeowners, and new housing developments are being built with “green spaces” for their residents to enjoy. These people also see the value in protecting forested areas so that all will be able to enjoy the many benefits forests provide.

Forest Industry

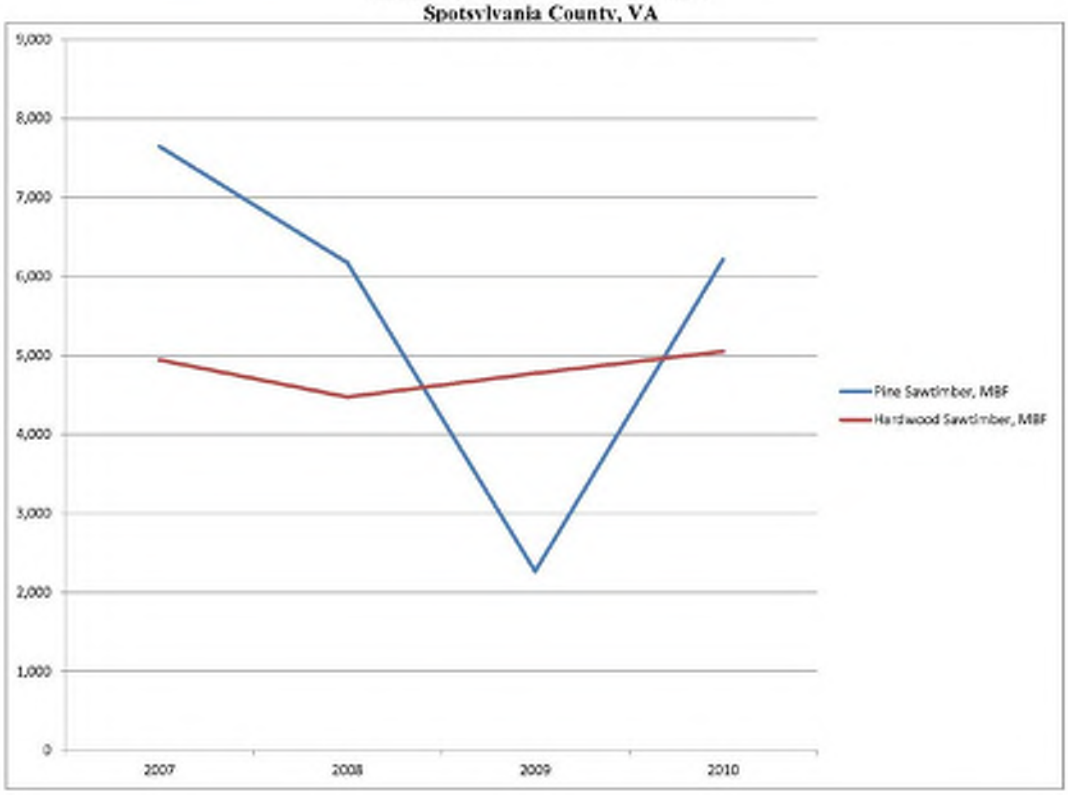
Currently, there are two operating, commercial sawmills within Spotsylvania County, however, there are at least two smaller portable mills in existence, and likely others. Additionally, there is a wood preservative plant and a planing mill, neither of which uses raw logs in their processes. The wood preservative plant treats finished lumber with an approved chemical for use in exterior construction, such as decks, playground equipment, etc. The planing mill receives large cants, and re-saws them into pallet parts.

~~Much of the timber harvested in Spotsylvania County is hauled to primary processing facilities outside of the county, and in some cases, outside of Virginia.~~



~~The "annual harvest value" is in fact the value of the timber harvested in the county, for a given year. The term generally used to describe timber removed from a given site is 'stumpage'. In order to determine this number, harvest volume (the amount of timber harvested) is needed, as well as value (price paid for what was harvested). Therefore, this data is derived from a combination of two sources. The county harvest volumes come from the forest products tax information and the values are based on average stumpage values that are collected each year from local consultants and sources like Timber Mart South.~~

Annual Harvest Volumes, Sawtimber
Spotsylvania County, VA



Annual Harvest Volumes, Pulpwood
Spotsylvania County, VA

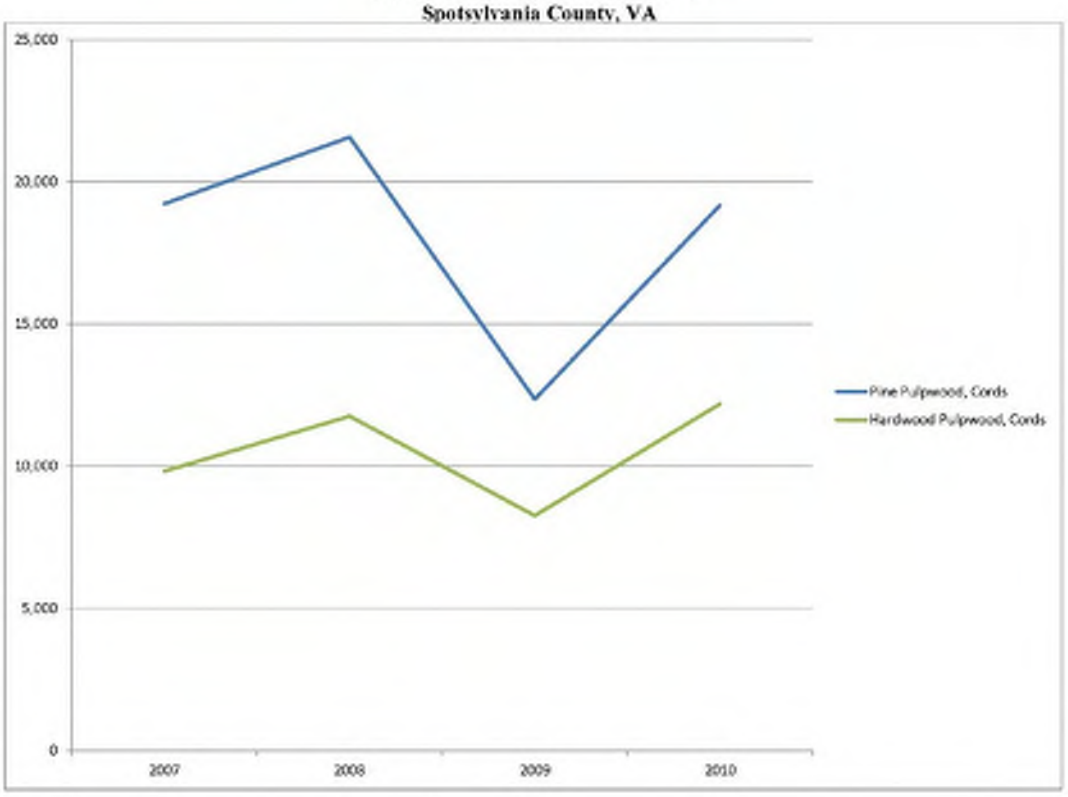


Table 4: Virginia Department of Forestry: Spotsylvania County Timber Value and Supply					
		2010	2009	2008	2007
Pine (MBF)		6,217	2,265	6,173	7,646
Pine (cords)		19,177	12,353	21,568	19,227
Value: Pine		$1,342,075	$602,479	$1,307,209	$1,493,002.34
Hardwood (MBF)		5,050	4,774.14	4,474	4,944
Hardwood (cords)		12,189	8,263.29	11,756	9,824
Value: Hardwood		$981,331	$740,899	$624,608	$614,755
Total Value		$2,323,406	$1,343,378	$1,931,817	$2,107,757

Table 5: USDA Census of Agriculture: Spotsylvania County Woodland Crops					
			2007	2002	% change
Cut Christmas Trees	Farms		11	9	22
	Acres in Production		80	96	-17
	Trees Cut		2,282	4,170	-45

Forest Conservation Value Map

The Virginia Department of Forestry has established a relative Forest Conservation Value (FCV) for all of the forestland in the state. This FCV ranking is based on the level of benefits provided by a particular area of forest in combination with the level of threat the area faces from conversion to another land use, primarily to development. The FCV map divides the state's forestlands into five categories, the Virginia Department of Forestry (VDOF) has identified categories 4 and 5 as having high forest conservation value. While all forests provide a range of benefits and the threat of forest conversion is widespread, the VDOF recommends that these high conservation value forests be given priority in land conservation efforts such as donated conservation easements, PDR programs, or Ag-Forestal Districts.

In the GIS analysis used to develop the FCV rankings, the forest benefits that were measured included water quality protection, natural habitat, the extent of contiguous forest cover, and the potential forest economic productivity. Threat to conversion was based on the likelihood that the area would change

~~from rural land to a more developed use. This was determined based on road density, county population projections, and 30-year projections of housing density.~~

~~In developing the FCV map, the following datasets were used to calculate forest benefits utilizing a weighted overlay model. The model also included forest conversion threat as described above.~~

1. ~~Streams, shorelines, and floodplain forests and forested wetlands~~
1. ~~Forests in headwaters and on steep slopes~~
2. ~~Forests protecting drinking water supplies~~
3. ~~Large contiguous blocks of forest; and~~
4. ~~Sustainable, managed working forests - based on woodland soil productivity, forest types, and economic value of timber~~
5. ~~Areas of high terrestrial integrity – takes into account stream buffers, road fragmentation, and impervious surfaces~~
6. ~~Areas of high aquatic integrity – incorporates number of species and species richness~~

PRODUCTION OF FOOD AND FIBER

The Census is conducted by the United States Department of Agriculture (USDA) National Agricultural Statistics Service (NASS). The Census of Agriculture, conducted only once every five years, is the only source of consistent and comprehensive agricultural data for every state and county in the nation. United States law (Title 7 USC 2204(g) Public Law 105-113), requires all those who receive a Census of Agriculture report form to respond even if they did not operate a farm or ranch in 2017. ~~The Census is conducted by the United States Department of Agriculture (USDA) National Agricultural Statistics Service.~~ The Census of Agriculture is a complete count of U.S. farms and ranches and the people who operate them. Even small plots of land - whether rural or urban - growing fruit, vegetables or some food animals count if $1,000 or more of such products were raised and sold, or normally would have been sold, during the Census year. It looks at farms, value of land, market value of agricultural production, farm practices, expenditures, and other factors that affect the way farmers and ranchers do business. The information is used by town planners, policy makers, agribusinesses and others to help make important growth-generating decisions.

~~Report forms for the 2012 Census of Agriculture were mailed to farm and ranch operators in late December 2012 to collect data for the 2012 calendar year. Completed forms were due by February 4, 2013. Additional mailings were sent around February 14 and March 20 to farmers and ranchers who have not responded.~~

~~The USDA National Agricultural Statistics Service will release Census data, in both electronic and print formats, beginning in February 2014. Detailed reports will be published for all counties, states and the nation. Updates to food and fiber production data will be reflected in future updates of the Comprehensive Plan as the information comes available.~~

Presently, the ~~Until~~ results of the ~~2012~~ 2017 Census are ~~released, the 2007 Census results are~~ the most recent available. The prior update occurred in 2012. The attached County profile from the 2017 Census of Agriculture (Insert Sheets A, B) ~~following tables, looking at 2007 and 2002 data,~~ summarizes and

reflects Spotsylvania County's production of food and fiber and notes trends since 2012. See Tables 16 through 19 for additional insights.

DRAFT

2017 CENSUS OF AGRICULTURE *County Profile*

Spotsylvania County
Virginia

Total and Per Farm Overview, 2017 and change since 2012

	2017	% change since 2012
Number of farms	338	-8
Land in farms (acres)	41,674	-1
Average size of farm (acres)	123	+8
Total	($)	
Market value of products sold	9,011,000	-18
Government payments	199,000	-40
Farm-related income	3,028,000	+19
Total farm production expenses	11,275,000	-23
Net cash farm income	963,000	+211
Per farm average	($)	
Market value of products sold	26,661	-11
Government payments (average per farm receiving)	6,859	+22
Farm-related income	25,025	+31
Total farm production expenses	33,359	-16
Net cash farm income	2,850	+221

(Z) Percent of state agriculture sales

Share of Sales by Type (%)

Crops	48
Livestock, poultry, and products	52

Land in Farms by Use (%) [a]

Cropland	40
Pastureland	25
Woodland	30
Other	5

Acres irrigated: 96

(Z)% of land in farms

Land Use Practices (% of farms)

No till	17
Reduced till	5
Intensive till	1
Cover crop	15

Farms by Value of Sales

	Number	Percent of Total [a]
Less than $2,500	176	52
$2,500 to $4,999	34	10
$5,000 to $9,999	33	10
$10,000 to $24,999	31	9
$25,000 to $49,999	16	5
$50,000 to $99,999	21	6
$100,000 or more	27	8

Farms by Size

	Number	Percent of Total [a]
1 to 9 acres	35	10
10 to 49 acres	159	47
50 to 179 acres	94	28
180 to 499 acres	28	8
500 to 999 acres	13	4
1,000 + acres	9	3

USDA
United States Department of Agriculture
National Agricultural Statistics Service
www.nass.usda.gov/AgCensus

2017 CENSUS OF AGRICULTURE *County Profile*

Market Value of Agricultural Products Sold

	Sales ($1,000)	Rank in State [b]	Counties Producing Item	Rank in U.S. [b]	Counties Producing Item
Total	**9,011**	**75**	**98**	**2,709**	**3,077**
Crops	**4,369**	**65**	**97**	**2,424**	**3,073**
Grains, oilseeds, dry beans, dry peas	2,438	50	96	1,877	2,916
Tobacco	-	-	25	-	323
Cotton and cottonseed	-	-	11	-	647
Vegetables, melons, potatoes, sweet potatoes	528	32	97	947	2,821
Fruits, tree nuts, berries	565	22	95	625	2,748
Nursery, greenhouse, floriculture, sod	408	50	93	1,101	2,601
Cultivated Christmas trees, short rotation woody crops	34	25	58	423	1,384
Other crops and hay	397	72	97	2,421	3,040
Livestock, poultry, and products	**4,642**	**61**	**98**	**2,471**	**3,073**
Poultry and eggs	46	49	97	1,274	3,007
Cattle and calves	3,297	45	97	1,932	3,055
Milk from cows	(D)	45	59	(D)	1,892
Hogs and pigs	58	30	89	1,051	2,856
Sheep, goats, wool, mohair, milk	87	34	94	1,383	2,984
Horses, ponies, mules, burros, donkeys	640	11	94	330	2,970
Aquaculture	-	-	49	-	1,251
Other animals and animal products	(D)	(D)	93	(D)	2,878

Total Producers [c] 590

Sex	
Male	378
Female	212
Age	
<35	44
35 – 64	314
65 and older	232
Race	
American Indian/Alaska Native	7
Asian	12
Black or African American	35
Native Hawaiian/Pacific Islander	-
White	516
More than one race	20
Other characteristics	
Hispanic, Latino, Spanish origin	5
With military service	99
New and beginning farmers	163

Percent of farms that:

Have internet access	77
Farm organically	1
Sell directly to consumers	7
Hire farm labor	25
Are family farms	99

Top Crops in Acres [d]

Forage (hay/haylage), all	8,315
Soybeans for beans	3,237
Corn for grain	1,042
Wheat for grain, all	602
Corn for silage or greenchop	404

Livestock Inventory (Dec 31, 2017)

Broilers and other meat-type chickens	124
Cattle and calves	8,435
Goats	579
Hogs and pigs	755
Horses and ponies	963
Layers	2,102
Pullets	507
Sheep and lambs	66
Turkeys	119

See 2017 Census of Agriculture, U.S. Summary and State Data, for complete footnotes, explanations, definitions, commodity descriptions, and methodology.
[a] May not add to 100% due to rounding. [b] Among counties whose rank can be displayed. [c] Data collected for a maximum of four producers per farm.
[d] Crop commodity names may be shortened; see full names at www.nass.usda.gov/go/cropnames.pdf. [e] Position below the line does not indicate rank.
(D) Withheld to avoid disclosing data for individual operations. (NA) Not available. (Z) Less than half of the unit shown. (-) Represents zero.

USDA is an equal opportunity provider, employer, and lender.

As of the 2017 census, Spotsylvania County had 338 farms. Total farms are down 8% since 2012. This has corresponded with a 1% decrease in total farm acreage within the County while the average size of remaining farms has shown an increase in size. Between 2002 and 2012, County-wide land in farms decreased from 56,346 acres to 42,191 acres, a decrease of approximately twenty-five (25%) percent. As of 2017, total acreage is now 41,674 acres. –Recognizing an established downward trend in farms and total farm acres the County has emphasized maintenance and protection of prime agricultural soils and productive farmlands through expansion of the County's Agricultural and Forestal Land Use Designation. Regardless of agricultural trends ongoing there is interest in protecting the historic farm and forest character of the County and associated agricultural based economy outside of the Primary Development Boundary. Protection of prime agricultural soils (a finite resource) recognizes the importance of maintaining the land inventory for future generations to assure the acreage is there to support food and fiber production. This effort supports promotes the concept of domestically produced locally sourced agricultural crops and regional or super-regional supply chains within a smaller geographical footprint.

As part of the 2020 Comprehensive Plan update process, the Agricultural/ Forestal District Review Committee was solicited to provide insights into the history, economics, strengths and challenges facing local farm operators. The purpose of the committee is to advise the Planning Commission and the Board of Supervisors and assist in creating, reviewing, modifying, continuing or terminating Agricultural and Forestal districts within the County. In particular, the committee shall render expert advice as to the nature of farming and agricultural and forestal resources within the district and their relation to the entire County. Spotsylvania County agriculture faces a number of challenges that result from both local and national issues. The Spotsylvania County Agricultural- Forestal Commission has identified the following as having a negative effect on agricultural operations within the County:

- Local climate and soils conditions are not ideal for high production crop yields in many areas. Seasonal rain and drought cycles provide agricultural challenges paired with shallow soils and soil nutrient deficiencies compared to other agricultural regions in the Country;
- Aging farmer populations with an insufficient stream of younger generations pursuing farming. (For reference, see Table 16 for USDA Census of Agriculture Data for Statewide and County figures)
- Ability to offset expenses associated with owning and operating a farm locally are challenged by climate and soil conditions for crop yields paired with profitability concerns resulting from restricted pricing and resulting low profit margins for raw direct from farm produce.
- Sale of agricultural acres to development interests in areas where demand is high can be more economically advantageous for local farm operators, especially those who may seek to downsize or prepare to retire.
- Farm supplies are not readily available within the region. Often time's necessary supplies must be sourced from distant places. A limited number of farm equipment manufacturers exist and tend to operate far reaching international supply chains.

Table 16: 2017 Primary Farm Operator Age Characteristics (USDA Census of Agriculture)		
	Virginia (Statewide)	Spotsylvania County
	2017	2017
Under 25 Years	1,086	20
25 to 34 Years	4,344	24
35 to 44 Years	7,152	48
45 to 54 Years	12,238	97
55 to 64 Years	19,760	169
65 to 74 Years	16,812	133
75 Years and Over	9,202	99
Historical Average Age of Primary Farm Operator (USDA Census of Agriculture)		
	Virginia (Statewide)	Spotsylvania County
2017	58.5	60
2012	59.5	60.2
2007	58.2	59.4

Table ~~6~~17: USDA Census of Agriculture~~:~~ Spotsylvania County Farms								
		Virginia (Statewide)		Spotsylvania County				
		2017	2012	2017	2012	2007	2002	~~% change~~
Number of Farms		43,225	46,030	338	369	359	369	~~-3~~
Land in Farms		7,797,979	8,302,444	41,674 acres	42,191 acres	52,230 acres	56,346 acres	~~-7~~
Average Size of Farm		180	180	123 acres	114 acres	145 acres	153 acres	~~-5~~
Estimated Market Value of Land and Buildings	Per Farm	834,254	776,719	695,020	700,861	738,592	532,446	
	Per Acre	4,624	4,306	5,637	6,130	5,077	4,288	
Estimated Market Value of all Machinery and Equipment	Total	3,723,234,000	3,339,696,000	23,674,000	31,591,000	N/A	N/A	
	Average Per Farm	86,136	72,561	70,042	85,613	61,026	36,238	
Market Value of Products Sold	Total (Crops, Livestock)	3,960,501,000	3,753,287,000	9,011,000	10,996,000	8,218,000	5,937,000	
	Average Per Farm	91,625	81,540	26,661	29,800	22,893	16,090	
Total Cropland	Farms	32,091	34,525	240	249	278	315	~~-12~~
	Acres	3,084,067	2,990,561	16,725	18,715	23,773	27,442	~~-13~~
Harvested Cropland	Farms	28,783	31,041	192	227	235	248	~~-5~~
	Acres	2,613,010	2,618,291	13,735	16,296	18,355	17,936	~~2~~

Table ~~7~~18: USDA Census of Agriculture: Spotsylvania County Livestock and Poultry						
		2017	2012	2007	2002	~~% change~~
Cattle and Calves Inventory	Farms	122	136	149	158	~~-6~~
	Number	8,435	8,615	12,062	9,140	~~31~~
Beef Cows	Farms	115	122	134	147	~~-9~~
	Number	4,041	4,075	5,501	4,149	~~32~~
Milk Cows	Farms	6	11	8	10	~~-20~~
	Number	11	522	599	884	~~-32~~
Cattle and Calves Sold	Farms	85	111	125	121	~~3~~
	Number	6,606	3,956	4,662	3,566	~~31~~
Hogs and Pigs Inventory	Farms	35	19	15	10	~~50~~
	Number	755	554	313	506	~~-38~~
Hogs and Pigs Sold	Farms	18	13	12	9	~~33~~
	Number	852	1,385	781	1,353	~~-42~~
Sheep and Lambs Inventory	Farms	13	19	10	12	~~-17~~
	Number	66	363	129	366	~~-65~~
Broilers and other meat-type chickens sold	Farms	6	9	-	5	~~-100~~
	Number	778	195	-	228	~~-100~~
Layers Inventory	Farms	62	74	51	41	~~24~~
	Number	2,102	2,184	2,014	1,624	~~24~~
Horses and Ponies	Farms	135	141	125	129	~~-3~~
	Number	963	1,369	1,043	948	~~10~~
Goats, all	Farms	39	29	25	8	~~213~~
	Number	579	691	321	(D)	~~-~~
(D) - Data withheld to prevent the disclosure of data for individual farms.						

Table ~~8~~19: USDA Census of Agriculture: Spotsylvania County Selected Crops Harvested						
		2017	2012	2007	2002	~~% change~~
Corn for Grain	Farms	12	20	28	20	~~40~~
	Acres	1,042	1,881	3,314	3,132	~~6~~
	Bushels	123,863	142,048	193,088	128,690	~~50~~
Corn for Silage or Greenchop	Farms	6	7	17	11	~~55~~
	Acres	404	655	1,262	1,162	~~9~~
	Tons	8,080	8,957	14,446	10,955	~~32~~
Wheat for Grain, All	Farms	11	12	18	15	~~20~~
	Acres	602	707	796	487	~~63~~
	Bushels	31,742	37,593	46,236	27,273	~~70~~
Winter Wheat for Grain	Farms	11	12	18	15	~~20~~
	Acres	602	707	796	487	~~63~~
	Bushels	31,742	37,593	46,236	27,273	~~70~~
Oats for Grain	Farms	-	-	3	3	~~0~~
	Acres	-	-	48	50	~~-4~~
	Bushels	-	-	2,400	3,240	~~-26~~
Barley for Grain	Farms	3	10	13	14	~~-7~~
	Acres	204	426	698	882	~~-21~~
	Bushels	12,305	30,878	54,762	59,031	~~-7~~
Sorghum for Grain	Farms	2	-	-	1	~~-100~~
	Acres	(D)	-	-	(D)	~~-~~
	Bushels	(D)	-	-	(D)	~~-~~
Sorghum for Silage or Greenchop	Farms	2	1	4	-	~~-~~
	Acres	(D)	(D)	221	-	~~-~~
	Tons	(D)	(D)	1,402	-	~~-~~
Soybeans for Beans	Farms	30	22	20	18	~~11~~
	Acres	3,237	3,228	2,914	1,954	~~49~~
	Bushels	177,020	138,591	65,885	34,649	~~90~~
Forage	Farms	144	188	203	216	~~-6~~
	Acres	8,315	9,621	9,910	11,082	~~-11~~
	Tons, dry	16,624	18,815	16,720	18,284	~~-9~~
Vegetables harvested for sale	Farms	16	11	9	8	~~13~~
	Acres	146	62	41	60	~~-32~~
Land in Orchards	Farms	17	10	9	10	~~-10~~
	Acres	107	78	34	62	~~-45~~
(D) - Data withheld to prevent the disclosure of data for individual farms.						

~~Based on the 2007 Census, top crop items reported in Spotsylvania County, based on acreage farmed, were forage (land used for all hay and haylage, grass silage, and greenchop), corn, soybeans, and wheat. All of the top crops saw an increase in production from the 2002 census to the 2007 census with the~~

~~exception of forage crops that saw an approximately eleven (11) percent decline from 11,082 acres to 9,910 acres.~~

~~The County's chief livestock inventory items include cattle, layers (category includes table-egg type layers, hatching layers for meat types, and hatching layers for table egg types), horses and ponies, and goats.~~

~~**Nursery Crops**~~

~~Looking at the 2002 and 2007 Census of Agriculture, Spotsylvania County does not have many farming operations devoted to the production of Nursery, Greenhouse, Floriculture, Aquaculture, Sod, Mushrooms, Vegetable Seeds, and Propagative Materials Grown for Sale. The County's 2007 Census value of sales by commodity group of Nursery, greenhouse, floriculture, and sod ranked 69th, of 98 Counties in Virginia, 94 comparables with production. There were no aquaculture producers counted~~.

Commercial Fisheries and Aquaculture

There were no aquaculture producers noted in the 2017 or 2012 Census of Agriculture for Spotsylvania County. Per the Spotsylvania County Environmental Codes staff, as of 2019, there remain no aquaculture or commercial fishing operations within the County.

The Spotsylvania County Zoning office in conjunction with Virginia Tech are exploring the possibility of establishing a freshwater mussel farm in the Loriella Park area. On September 26, 2017 the Spotsylvania County Board of Supervisors approved a request to submit a grant application to the Chesapeake Bay Restoration Fund for an education and restoration project that would result in Virginia's first freshwater mussel farm. The initial early phase grant funds pursued would support exploration and design efforts needed to create plans to submit to the US Army Corp and Department of Environmental Quality for necessary permits for construction. The concept is envisioned to establish a resource for the propagation of freshwater mussels that will ultimately be used to repopulate streams and creeks that have had a significant reduction in active native mussels in the ecosystem. Repopulation of deficient streams and creeks are expected to positively contribute to water quality. In addition to significant natural resource benefits it is expected this resource will also provide a significant education and outreach resource, attracting K-12 students, collegiate academia, development community, state, federal and local government representatives.

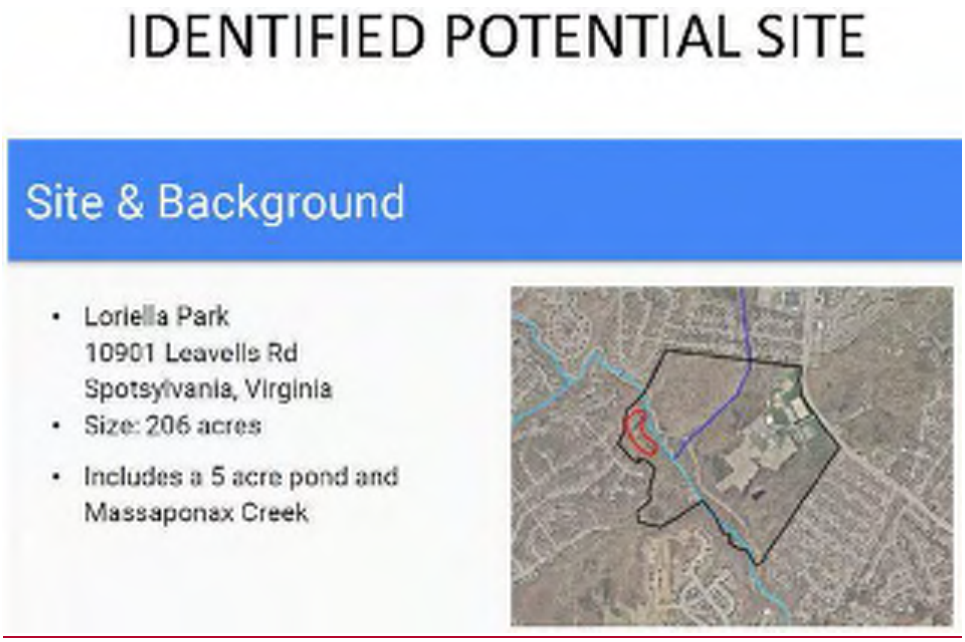


Image 6: Potential location for freshwater mussel farm

Land Use Suitability

The suite of ConservationVision Conservation Planning map layers presented through the Virginia Department of Conservation and Recreation's Natural Heritage Data Explorer provide great insight and guidance for land use planning, especially in areas not targeted for growth and development. For Spotsylvania County, roughly 80% of the County land area falls outside of the Primary Development Boundary limits. As described in the Future Land Use Element of the Comprehensive Plan, these areas outside of the Primary Development Boundary are intended for rural character preservation, farms, forestlands, open space, agricultural viability, rural residential.

As part of this Comprehensive Plan update, land use designations outside of the Primary Development Area were reviewed considering the insights provided by the ConservationVision map layers, with a focus on promotion of, preservation and protection of agriculture, forestry, and ecological core areas. These land use insights were used to better align agricultural-forestal land use designations with the numerous variables considered as part of ConservationVision's modeling that include but are not limited to soils, proximity to markets (economic development), watershed integrity, connectivity. Areas of high value are finite and as such have been recognized for their value for agriculture, forestry, and ecological purposes. Aside from by-right potential, proposed large scale land use changes that would compromise or reduce the agricultural, forestal, or ecological use and potential of such areas should be discouraged. The resulting land use designations outside of the Primary Development Boundary put greater emphasis on finite resource protection of high value agriculture, forestry, and ecological areas in exchange for fewer total acres identified as rural residential that may come via rural residential rezoning, or other proposed land use change of notable size. Production of food, fiber, forest within the County has been emphasized as part of the land use update. These areas are ideal candidates for inclusion within the County land use taxation program (provided they meet program parameters), inclusion within the agricultural/forestal district, open space/conservation easement upon active agricultural or forestry lands aimed at maintaining such uses, or sensitive environmental areas.

Agricultural Suitability Model (See Map)

As part of the land use analysis, County staff mapped areas identified within the Agricultural Suitability Model considered high suitability, very high suitability, and outstanding suitability for agriculture. Per the Virginia Department of Conservation and Recreation's Natural Heritage Data Explorer, the Virginia Agricultural Model is a raster dataset that quantifies the relative suitability of lands for agricultural activity. Agricultural value is assessed primarily based on inherent soil suitability, but also accounts for current land cover as well as travel time between agricultural producers and consumers. Model values range from 0 (unsuitable for agriculture) to 100 (optimal).

From the output, staff was able to identify core areas outside of the Primary Development Boundary that would be best suited for the Future Land Use Agricultural-Forestal designation. Staff recognized in many areas, those outputs of highest value tended to "hug" road corridors. In order to identify more comprehensive core areas, the agricultural soils map was created, seeking to identify areas of prime farmland, and farmland of statewide significance. These areas are spread throughout much of the County and when paired with areas of high agricultural suitability (considering numerous factors in model), are intended to identify priority outside of the Primary Development Boundary for agriculture and agricultural soils protection.

Using AgrValue data as presented by DCR's NHDE, findings of the Agricultural Suitability Model have been presented in map form for reference.

Agricultural Soils (See Map)

Per DCR's Natural Heritage Data Explorer, the dataset is a compilation of soil map unit polygons and associated attributes used to develop the Virginia ConservationVision Agricultural Model. It was developed by staff at the Virginia Natural Heritage Program, using data extracted from the gSSURGO geodatabase for Virginia. The gSSURGO dataset (gSSURGO_VA.gdb) was retrieved from the Geospatial Data Gateway in May 2015.The gSSURGO dataset is a digital soil survey and generally is the most detailed level of soil geographic data developed by the National Cooperative Soil Survey. The information was prepared by digitizing maps, by compiling information onto a planimetric correct base and digitizing, or by revising digitized maps using remotely sensed and other information. This dataset consists of georeferenced digital map data and computerized attribute data. The map data are in a state-wide extent format and include a detailed, field verified inventory of soils and miscellaneous areas that normally occur in a repeatable pattern on the landscape and that can be cartographically shown at the scale mapped. The soil map units are linked to attributes in the National Soil Information System relational database, which gives the proportionate extent of the component soils and their properties.

DCR NHDE Soil Survey Staff used USDA NRCS Soil Survey data to provide the agricultural/farmland soils classifications. Utilizing their data, Agricultural Soils have been presented in map form for reference.

Forest Conservation Value (See Map)

The Forest Conservation Value (FCV) model is a tool designed by the Virginia Department of Forestry (VDOF) to strategically identify the highest priority forestland for conservation in Virginia. The intent is to maximize the efficiency of limited resources by focusing conservation efforts on the highest quality, most productive, and most vulnerable forestland statewide.

The original FCV model was developed in 2013 by the Virginia Department of Forestry (VDOF). Since that time, a number of factors necessitated an update to the 2013 model. The agency has sharpened its focus and priorities through a strategic planning effort completed in 2017. In 2017, VDOF's Forestland Conservation Program team implemented a new conservation ranking and prioritization system designed to identify the highest priority projects to accept on a quarterly basis throughout each year; the FCV is a key component of this ranking system. The FCV is further intended to contribute to the Virginia ConservationVision, the suite of GIS models maintained by the Virginia Department of Conservation and Recreation (DCR) to inform a cohesive, statewide strategy for land conservation. As this multitude of needs were identified and as new data has become available, VDOF has taken the opportunity to create an up to date, improved FCV model to help inform both internal and statewide conservation efforts throughout the Commonwealth.

In order to provide a spatial representation of the relative value of Virginia's forests, six key components were established in the model:

1. Forested Blocks
2. Forest Management Potential
3. Connectivity
4. Watershed Integrity
5. Threat of Conversion
6. Significant Forest Communities and Diminished Tree Species

Six data input layers were created based on these components and were ultimately combined to create the final FCV model. A brief summary of each of these components and the methodology is provided here for the purpose of the initial review process. More complete detail on the background for selection, methodology, and limitations of each component will be available in the final summary report.

Utilizing the Forest Conservation Values model, staff has mapped forestlands classified as Very High, Outstanding Value for reference.

Ecological Cores (See Map)

Per Virginia DCR, The Virginia Natural Landscape Assessment (VaNLA) is a landscape-scale GIS analysis that has identified, prioritized, and linked important lands to form natural land networks throughout Virginia. Using land cover data derived from satellite imagery, the VaNLA identified large, unfragmented cores, which are patches of natural land with at least 100 acres of interior cover. Cores provide habitat for a wide range of species, from interior-dependent forest species to habitat generalists, as well as for species that utilize marsh and maritime habitats. The cores layer represents cores as polygons that are symbolized by Ecological Integrity scores, calculated from an Ecological Composite Model (ECM). Maintaining vital natural landscapes is essential for basic ecosystem services such as cleaning our air and filtering our water. Natural lands also harbor thousands of species of animals and plants and contain libraries of genetic information from which we derive new foods, materials, and medicinal compounds. These parts of the landscape also provide us with recreational opportunities and open space resources. But these qualities are represented differently across the cores and habitat fragments that constitute the natural landscape. To assess their unique values, each core and habitat fragment has been assigned an Ecological Integrity score that rates the relative contribution of that area to ecosystem services such

as wildlife and plant habitat, biodiversity conservation, open space, recreation, water resources protection, erosion control, sediment retention, protection from storm and flood damage, crop pollination, and carbon sequestration. In general, larger, more biologically diverse areas are given higher scores. Scores are enhanced if the core or habitat fragment is part of a larger complex of natural lands. Scores also are increased for those cores and habitat fragments that contribute to water quality enhancement.

Ecological cores of Very High and Outstanding Value have been mapped for reference and lend insight into land use recommendations and conservation planning efforts.

George Washington Regional Commission (GWRC) Green Infrastructure Plan

In October 2008 the GWRC received a Virginia Coastal Zone Management Program Grant to focus on developing a regional green infrastructure dataset and develop a plan. Over the next two years the GWRC conducted a number of studies and the proposed plan was vetted with public meetings, presentations to the local planning commissions and other stakeholders.

In 2011 the GWRC adopted the PD 16 Regional Green Infrastructure Plan (GI Plan), which identified important high value environmental core areas, contributing core areas, and connected these core areas, creating a web of priority open space. The recommendations of the plan called for an increase in tree canopy; a target of 14,300 acres of new conservation easements; support for the Chesapeake Bay Watershed Implementation Plans (WIPs); enhanced data layer capabilities; new tree preservation ordinances; and outreach to stakeholders. The GI Plan was forwarded to the local governments as a matter of information with no Call for Action.

Revisiting the 2011 GWRC Green Infrastructure Plan (2017)

The central focus of this study was to assess the local impact and level of implementation of the 2011 George Washington Regional Commission ("GWRC") Regional Green Infrastructure Plan. While formally "adopted" by GWRC, the Regional Green Infrastructure Plan was referred to the local governments for consideration. No specific policies, actions, regulations or ordinances directly emerged from this plan. During the period since 2011, development has significantly infringed on priority green infrastructure resulting in further fragmentation of the green infrastructure network and forest cover. The 2017 report tracks development of notable ecological areas as "lost acreage" between the years 2009 and 2016. That data is presented below (Table 20) as an excerpt from the 2017 report:

Table 20: Tracking Inventory of Notable Ecological Areas

2009-2016 Building Acreage Loses by Locality

Locality	Total Land Area (Acres)	2008 - 2016 Development Impact (Lost Acreage) Hi-Value Eco-Cores	Contributing Eco-Cores	Eco-Corridors	Total GI Footprint	Percent Loss Since 2008
Caroline	343,596.80	-5.98	-37.79	-4.97	-48.73	-0.02%
King George	114,969.60	-82.30	-217.23	-168.32	-467.85	-0.88%
Spotsylvania	256,960.00	-295.02	-1,025.89	-54.21	-1,375.12	-1.18%
Stafford	172,134.40	-523.41	-1,224.30	-78.71	-1,826.42	-2.12%
Fredericksburg	6,720.00	0.00	-39.27	0.00	-39.27	-4.10%
GWRC Total	**894,380.80**	**-906.70**	**-2,544.48**	**-306.21**	**-3,757.38**	**-0.81%**

There were three objectives associated with this project: 1) To ascertain where each locality stood in implementing their respective parts of the 2011 Regional Green Infrastructure Plan developed for the local governments in the George Washington Regional Commission (GWRC) region and the impacts that development has had on the network during this timeframe; 2) Examine the current impediments for better and more rapid implementation of the Regional Green Infrastructure (GI) Plan; and 3) put forth recommendations for future implementation strategies for the GI Plan. This report and the associated reports (Appendices) represent the culmination of over a year of research that was conducted during this project upon which the Findings and Conclusions are based.

The report notes that *the only quantified goal of the 2011 Plan was to encourage greater use of conservation easements, a private voluntary method of conserving open space. Of the 14,300 acre goal only 6,400 acres have come under conservation easement in the Region since 2011.*

Since the 2017 report update, significant additional acres have been placed in conservation by the Virginia Department of Game and Inland Fisheries within Spotsylvania County via the Oakley Wildlife Management Area (4,459 acres).

As part of this Comprehensive Plan update, the efforts of the Green Infrastructure Plan are recognized. In conjunction with the ConservationVision Conservation Planning map layers identified prior, greater emphasis and parity between land use recommendations and natural resources, including green infrastructure, is envisioned in the Comprehensive Plan, especially as it relates to the Agricultural and Forestal Land Use and Open Space Land Use. These resources are overwhelmingly located outside of the Primary Development Boundary and are subject to competing land interests for silviculture (tree cover that is removed at large scale on occasion outside of local processes), agriculture, rural residential development (less common well outside of the Primary Development Boundary), recently renewable energy facilities, and purely conserved undisturbed acreage. Conserved lands remain encouraged in these land use designations whose geographic area has expanded greatly since the last Comprehensive Plan update. This Comprehensive Plan update has strengthened language in support of voluntary conservation efforts based on land use designation.

LAND CONSERVATION

In 1970, Virginia's population was about 4.6 million. It had grown by more than 50 percent to 7.1 million by the year 2000, and to 8 slightly over million by the 2010 US Census. The US Census population estimate for 2019 was 8,535,519. Consistent with population growth in Virginia, Spotsylvania County has seen a great deal of growth over the last twenty years. The County population in 1990 was 57,403. By 2000, the population had grown to 90,395 and within the next 10 years grew another 35% to a population of 122,397 by the 2010 US Census. The US Census County population estimate for 2019 is 136,215. While such growth is certainly impressive – even enviable – ~~more people~~ population expansion and corresponding development growth require more land and, as the saying goes, "They're not making any more of it."

This growth necessitates careful and intelligent planning. There are lands in Virginia that have witnessed some of America's greatest human triumphs and tragedies. Our open spaces, farms, award-winning parks, battlefields and other historic places attract visitors from around the world. Similarly, Virginia's beautiful natural habitats – some types of which are found nowhere else – provide sanctuary for many exceptional plants and animals. Such astonishing natural and cultural resources come as well with an extraordinary responsibility. Land conservation is a big part of that responsibility.

The public benefits from such protection because it assures the availability of land for agriculture, forests, recreation and open space. It protects our natural resources and maintains and enhances air and water quality. Land conservation also preserves historical, architectural and archaeological heritage.

And conserving land doesn't mean it can't be touched. For example, land in conservation or open space easements can typically still be used normally, such as for timber harvesting, farming, residency, etc. The easement simply protects the property's unique characteristics – prime soils, wetlands, endangered species habitat, and so forth. There are a variety of tools and levels of land conservation that can be employed. Some, like conservation easements can result in the conservation of parcels of land in perpetuity, while others, like the Comprehensive Plan and Water and Sewer Master Plan can have the effect of conserving land from the effects of urban and suburban sprawl.

Virginia ConservationVision ~~Lands Needs Assessment (VCLNA)~~

~~The Virginia Conservation Lands Needs Assessment (VCLNA) is helping guide effective conservation by providing tools that help both government and private organizations identify resource protection areas and that, at the local level, help planners manage growth in a balanced way. The VCLNA is helping the Virginia Land Conservation Foundation to prioritize conservation targets.~~

Virginia ConservationVision has been developed and maintained by the Virginia Department of Conservation and Recreation (DCR). As per DCR, the Virginia ConservationVision is helping guide effective conservation by providing tools that help both government and private organizations identify resource protection areas and that, at the local level, help planners manage growth in a balanced way. The Virginia ConservationVision is helping the Virginia Land Conservation Foundation to prioritize conservation targets.

DCR describes the Initiative as a suite of broadly applicable tools for guiding strategic conservation decisions. ConservationVision, originally developed as the *Virginia Conservation Lands Needs*

Assessment, is maintained using GIS (Geographic Information System) analyses to model and map land conservation priorities in Virginia based on a variety of datasets from private, local, state and federal agencies. The models facilitate conservation by helping target conservation efforts, and by guiding comprehensive planning (Green Infrastructure). They are available on Natural Heritage Data Explorer, LandScope Virginia and LandScope Chesapeake, and DCR's website. ConservationVision allows the manipulation of issue-specific data sets that can be weighted and overlaid to reflect the needs and concerns of a variety of conservation partners - issues like:

- unfragmented natural habitats
- natural heritage resources
- outdoor recreation
- prime agricultural lands
- cultural and historic resources
- sustainable forestry
- water quality improvement
- drinking water protection

~~The VCLNA is a flexible, widely applicable tool for integrating and coordinating the needs and strategies of different conservation interests, using GIS (Geographic Information System) to model and map land conservation priorities and actions in Virginia. The VCLNA allows the manipulation of issue-specific data sets that can be weighted and overlaid to reflect the needs and concerns of a variety of conservation partners - issues like:~~

- ~~unfragmented natural habitats~~
- ~~natural heritage resources~~
- ~~outdoor recreation~~
- ~~prime agricultural lands~~
- ~~cultural and historic resources~~
- ~~sustainable forestry~~
- ~~water quality improvement~~
- ~~drinking water protection~~

Virginia ConservationVision consists of: green infrastructure model; VA Natural landscape assessment; cultural model; development vulnerability model; forest economics model; recreation model; watershed model; agricultural model.

As a development review tool, County staff and local decision makers can utilize the various ConservationVision models to make better informed decisions regarding the prospect of development impacts in areas where valuable natural resources are likely to occur. Such models can and have resulted in requests for additional information to mitigate potential impacts where models identify potential conflicts. Additionally, models can help better inform land use and public service decisions as part of County Comprehensive Plan creation, review, and update processes whereby helping guide informed planning efforts.

~~The VCLNA can be utilized as a decision support tool for local and regional agencies and organizations in their efforts to employ green infrastructure principles during their planning processes.~~

~~There are no legal or regulatory requirements associated with Virginia Conservation Lands Needs Assessment, nor should the VCLNA serve as sole justification for any activities. The VCLNA is a rather coarse-scale analysis that, though informative, needs to be considered in conjunction with any number of other factors in guiding conservation actions or any other activities. The Department of Conservation and Recreation is continuing to work on the VCLNA to identify some of these additional decision-guiding factors, but economic, local, and even personal considerations will always be important in decision-making.~~

Virginia Treasures Initiative

Launched as a Major Conservation Initiative in 2015 by Governor Terry McAuliffe, the Virginia Treasures Initiative was introduced as a new strategy for conserving land and expanding access to public outdoor recreation.

As per the Virginia Department of Conservation and Recreation, The Virginia Treasures initiative focuses on quality rather than just quantity. The program stresses safeguarding significant sites and assets rather than just the numbers. The idea is to preserve, protect and highlight Virginia's most important ecological, cultural, scenic and recreational assets as well as its special lands.

The conservation of working farms, forests, waterways and open space will continue. Most of this effort will be accomplished through conservation easements, which preserve land and improve the health of waterways, including that of the Chesapeake Bay. Particular attention will be paid to land with rare and endangered species and habitat.

The initiative also aims to identify and expand public access to the great outdoors through playgrounds, boat ramps, scenic byways, public gardens and so on. By increasing public access to and appreciation for Virginia's outdoor treasures, public support for conserving, protecting and maintaining Virginia's natural resources will likewise grow.

Virginia Treasures will be the scorecard by which the McAuliffe administration measures success at protecting land, water and recreational space. The goal is to identify, conserve and protect at least 1,000 treasures by the end of the governor's term. The program was wildly successful and 1,337 treasures were registered over four years as per the Virginia Department of Conservation and Recreation. Having met and exceeded the goal, DCR discontinued accepting additional Virginia Treasure applications.

A land protection treasure is one permanent, fee-simple conservation or open-space easement, or an amendment of an existing easement that permanently protects significant resources. Significant resource protection is measured by means of 14 metrics; a treasure must protect at least one metric.

- Cultural or historical assets
- Agricultural land
- Local agricultural and forest districts
- Forest land
- Virginia Natural Landscape Assessment
- Natural Heritage Conservation Sites
- Wetlands
- Forest land with high water quality value

- Riparian buffers
- Recreation land
- Land near protected land
- Land near scenic rivers, scenic byways, the Appalachian Trail or the Potomac National Scenic Trail
- Virginia Outdoors Foundation special project areas
- The Nature Conservancy Focus Areas

A recreational treasure is a one that provides new public access to a natural, cultural or scenic outdoor recreation resource. These are projects that help the public by enhancing outdoor recreation and foster stewardship of natural and cultural resources. Emphasis is on ventures that meet the public's most needed outdoor recreational offerings. Treasures are added when they are opened to the public. To be eligible, recreational or cultural treasures must be owned by the federal, state or local government or, if privately owned, accessible to the public.

An asset must consist of at least one of the following:

New facilities

- Trails
- Water access
- New park facilities
- Gardens and arboretums
- Playgrounds and natural play areas
- Historic rehabilitation
- Newly restored habitat for wildlife viewing

Special designations

- Historic or cultural sites that receive state or national register designation and provide public access
- Trails special recognition, such as national trail designations
- Scenic river and scenic byway
- Scenic viewshed
- Recreational use agreement

A treasure is *not*

- An event or program
- A management or maintenance function (e.g., stocking a lake with fish, bush-hogging an existing viewshed, painting a building, dredging a boat ramp or conducting a routine prescribed burn)
- Ball fields, golf courses, sports facilities, zip lines… i.e., facilities in which the primary focus is not on natural or cultural resources

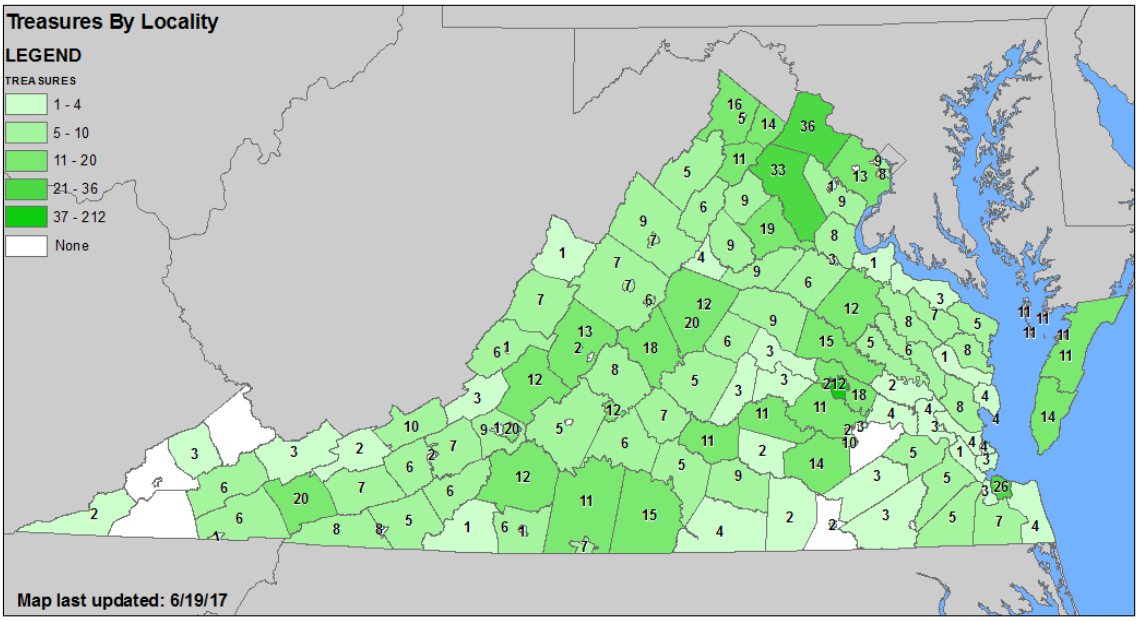


Exhibit 5: Virginia Treasures Inventory (Source: Virginia Dept. Conservation and Recreation)

Spotsylvania County has six (6) recognized Virginia Treasures sites. The sites are summarized in Table 21 below based on information provided by the Virginia Department of Conservation and Recreation.

Table 21

VIRGINIA TREASURES IN SPOTSYLVANIA COUNTY IN 2017		
Site	**Locality**	**Type**
Civil War Trust Holding	Spotsylvania	Land Conservation
Civil War Trust Holding	Spotsylvania	Land Conservation
Conservation Easement: Spotsylvania County	Spotsylvania	Land Conservation
Conservation Easement: VA-DHR	Spotsylvania	Land Conservation
Fredericksburg and Spotsylvania Addition	Spotsylvania	Land Conservation
Kronenwetter Tract, Chancellorsville Battlefield	Spotsylvania	VA-DHR Designation

Source: Virginia Department of Conservation and Recreation

Zoning Ordinance

The regulations set forth in the Spotsylvania Zoning Ordinance are adopted for ~~the~~ purposes that include but are not limited to: provide for the preservation of agricultural and forested lands and other lands of significance for the protection of the natural environment; protect surface water and groundwater, especially within areas designated as Chesapeake Bay Preservation Area Overlay Districts, in accordance with requirements of the Virginia Chesapeake Bay Preservation Act; and protect against destruction of, or encroachment upon historic areas.

A number of zoning districts within Spotsylvania County have been established to protect and maintain the rural character of the ~~c~~County and to protect and enhance the agricultural economy ~~of the county~~, while also providing for low density residential development in a rural setting. The Rural and Agricultural Districts have been established to achieve that purpose to varying intensities. ~~In~~ To complement the ~~intention of the Rural and Agricultural districts especially, the zoning ordinance contains a number of regulations to help achieve the purpose of the ordinance, the conservation portion of which has been outlined above.~~ The zoning ordinance employs open space requirements, minimum lot size requirements, maximum densities and lot yield. Within Agricultural, Rural, and some Residential districts, the zoning ordinance includes the ability for cluster subdivision, a means to achieve smaller lots in exchange for greater open space.

Comprehensive Plan

The Comprehensive Plan is a guide designed to encourage the most appropriate use of land, water and resources within the County consistent with the interests of the citizens. The Comprehensive Plan sets forth goals, objectives, policies and implementation techniques that will guide the development activity within the County and promote, preserve and protect the health, safety, and general welfare of its citizens. The Comprehensive Plan acknowledges the importance of historic and natural resource protection and has established development districts and future land use categories intended to promote the continuance of the rural farm and forestal character in many areas of the County, whereby reducing the effects of urban and suburban sprawl.

The County Primary Development Boundary as depicted within the Comprehensive Plan Future Land Use Map has been established as the area where public utility supported higher intensity growth and development is supported. ~~As of 2012~~, Spotsylvania County's ~~identified growth areas within the~~ Primary Development Boundary ~~include the Primary Settlement District and Jackson Gateway.~~ encompasses ~~This area is~~ approximately ~~66.8~~ 72 square miles ~~in size~~, or roughly ~~16~~ 18% of the County's total land area (approximately 407 square miles), leaving ~~84~~ 82% of the County's total land outside of the areas intended for growth and more intense development. These remaining areas are generally envisioned as large lot rural residential, agricultural, and open space areas.

The County recognizes that lands of outstanding value to produce food or fiber, environmental stewardship, cultural and historic resource protection, are often times location specific and always finite. Certain locations are more favorable for growth and urbanization than others. Consideration of finite resources of conservation value when looking at the prospect of Primary Development District boundary expansion and land use recommendations are vital to the protection of natural resources. As part of this Comprehensive Plan update, an emphasis has been placed on the preservation and protection of natural resources within the Future Land Use Map where the open space land use category has been expanded to include mapped wetland and resource protection areas throughout the County, including the Primary Development Boundary. Protection of these environmental corridors complement efforts to establish recreational greenway trails and protect vital habitat corridors through developed areas. The Virginia Department of Conservation and Recreation's Natural Heritage Data Explorer includes map layers identifying lands of high conservation value for agriculture, forestry, and ecological cores. As part of this Comprehensive Plan update, land use designations and descriptions outside of the Primary Development Boundary are more considerate to the promotion and protection of forest, farmlands and ecological core areas. The County Agricultural and Forestal Land Use designation now aligns with areas designated as highly suitable for such uses based on inherent soil suitability,

current land use cover, travel time between agricultural producers and consumers, forest management potential, watershed integrity, among others.

Water and Sewer Master Plan

The Water and Sewer Master Plan is intended to complement and facilitate implementation of the Comprehensive Plan. After considering the County's intended Primary Development Boundary ~~settlement districts and their intent,~~ along with the future land use vision, the Master Plan defines specific capital water and sewer projects that must be implemented to help facilitate the intended growth areas consistent with the Comprehensive Plan. Development intensity and development demands tend to be higher in areas where public water and sewer facilities are available. In other areas, outside of intended growth areas or outside of the County's ~~primary~~ Primary ~~settlement~~ Development ~~district~~ Boundary for instance, where the rural and agricultural character and economy are intended to be sustained, public water and sewer are not planned. As a result, the tendency for urban and/ or suburban sprawl is inhibited and~~,~~ the larger lot agricultural and forestal tracts of land tend to be maintained, and the "urban heat island" effects and impervious surface areas are ~~kept low~~ confined to a smaller area of impact.

The last update to the Water and Sewer Master Plan occurred in 2002 coinciding with the 2002 Comprehensive Plan. The Spotsylvania County Utilities Department is in the process of updating the Water and Sewer Master Plan as of this Comprehensive Plan update. An updated Water and Sewer Master Plan is under development and expected to be adopted within the planning period.

The Water and Sewer Master Plan is available for review online as part of the County Utilities/ Public Works' Guidelines, Codes and Policies **HERE**.

Parks, Conservation Lands and Easements

There are Federal, State, and County Parks, conservation lands owned or in easement within Spotsylvania County. These areas preserve and protect open space and environmental features with benefits including but not limited to: passive or active recreation, habitat protection, historic resource preservation and interpretation, impervious surface minimization, protection of rural character, tree preservation, soil stabilization, water quality and stormwater.

Spotsylvania County has a number of conservation easement holders for historic and natural resources including the Central Virginia Battlefields Trust, whose easements include but are not limited to Pelham's Corner and the Stonewall Jackson amputation site, an 81-acre parcel along Rt. 3 affiliated with the Chancellorsville Battlefield. The Virginia Department of Conservation and Recreation, Virginia Department of Forestry, Virginia Department of Historic Resources, The Nature Conservancy and the Virginia Outdoors Foundation have conservation easements within the County.

Conservation easements preserve farmland, forestland, historic, natural and recreational areas by restricting intensive uses, such as development and mining, which would alter the conservation values of the land. Each easement is tailored to reflect the conservation values of the property and is recorded at the County Clerk of the Court office as a permanent part of the property records. Such easements do not grant public access to a landowner's property.

Conservation lands and easements are tracked by the Virginia Institute of Marine Science's (VIMS) Center for Coastal Resources Management. The VIMS Comprehensive Map Viewer for Spotsylvania County can be found **HERE**. The County's future land use map also seeks to track conserved lands and reflects them as open space areas.

Federally managed by the National Park Service, The Fredericksburg and Spotsylvania National Military Park, including the Wilderness, Chancellorsville, and Spotsylvania Courthouse Battlefields, and portions of the Fredericksburg Battlefield cover roughly ~~7,200~~7,300 acres in land owned, and protected by easement. ~~total.~~ Since the Battlefield Parks are considered passive parks, they act as both historic and natural conservation sites.

Table 22: National Park Service Inventory

National Military Parks	Total Acreage Owned	Passive Acreage Owned	Total Acreage (With Easements)	Interpretive Trails (Miles)
Chancellorsville Battlefield	1,840.3	1,840.3	2,712.4	6.8
Fredericksburg Battlefield	1,230.4	1,230.4	1,341.3	5.6
Spotsylvania Battlefield	1,327.8	1,327.8	1,394.9	5.9
Wilderness Battlefield	1,810.1	1,810.1	1,846.6	3.9
Salem Church	3.2	3.2	3.2	-
TOTAL:	6,211.8	6,211.8	7,298.4	22.2

Additional Civil War battlefield lands have been preserved by the Civil War Trust as well as the Central Virginia Battlefields Trust. The Civil War Trust manages an additional 415.91 acres of preserved, publicly accessible lands traversed by 5.52 miles of interpretive trails (3.64 miles at Chancellorsville and 1.88 miles at Slaughter Pen Farm (part of the Fredericksburg Battlefield) off Tidewater Trail in the northeast of the County.

The Central Virginia Battlefields Trust has 369.45 acres in ownership with an additional 8.63 acres in easement. Easement acreage is not readily open for public access except by organized tour or with granted permission of landowners. Harris Farm (1.74 acres) and Pelham's Corner (4.5 acres) are always open to the public and include interpretive wayside exhibits, monument at Harris Farm, and cannon at the Pelham's site. The Central Virginia Battlefields Trust stress that the remaining acreage is not generally open to the public except for special tours operated by the CVBT, NPS, or others with permission. CVBT manages no interpretive trails.

Lake Anna State Park is roughly 2,800 acres in size, offering both active and passive recreational opportunities with many acres left in their natural state. As per the Virginia Department of Conservation and Recreation, the land in Lake Anna State Park used to be known as "Gold Hill" and contained the Goodwin Gold Mine. Gold was first discovered in 1829 with mining reaching its peak in the 1880s. In 1971, Lake Anna was created to serve as a water coolant for Virginia Power's nuclear plant. In 1972,

work began on the acquisition and development of a water-oriented state park. Lake Anna State Park opened in 1983.

The park has a beach on one of Virginia's most popular lakes, a fishing pond accessible to children and the disabled, a bathhouse-concessions complex and a boat launch. Overnight stays are made possible by camping, six camping cabins, two six-bedroom lodges and 10 two-bedroom cabins. Seven cabins and the lodges have views of the lake. With more than 15 miles of trails, the park offers many hiking, biking and horseback riding options. Visitor center exhibits trace the history of the area's gold mining and highlight the park's natural features. Nature and gold panning programs are popular, and the park offers guided tours of the Goodwin Gold Mine.

More information about Lake Anna State Park can be found **HERE**.

In 2019, 535.5 acres of accessible County parkland is operated by the Parks and Recreation Department. The County also owns a future District Park size 65 acre site known as the Hilldrup Tract that is not presently developed or accessible as a usable park. Within the planning period, staff expects additional public access parks acreage to be made accessible at Keswick Park (36 Acres Community Park Scale and amenities) and the Fortunes Landing fifteen (15) acre Special Use Park fronting the Ni Reservoir. These new park acres, when activated, will add an additional 131 acres to the inventory for a total parkland inventory of 651.5 acres. ~~At present, there are approximately 600 acres of existing County Park land, of which approximately 32% are considered active recreation. The remainder of the acreage is either passive recreation or not yet developed and activated, either way maintaining a more natural state.~~ Park sites with amenities include: Arritt Park; Chewning Park; Cosner Park; Harrison Road Park; Hunting Run Recreation Area (at Hunting Run Reservoir); Lee Hill Park; Loriella Park; Marshall Park; Marshall Center/ Legion Fields Park; Mary Lee Carter Park; Ni River Recreation Area (at Ni Reservoir); Patriot Park; Virginia Central Trail. Future County Park sites not yet developed or early in development and planning include: Belmont Park (CIP projected FY ’21); Hilldrup Tract- Ni River Park (CIP projected FY ’23); The “Echo” at Fortune’s Landing (via proffer); Keswick (via proffer).

Additional park acreage may be warranted for consideration in the area of Massaponax/ Lee Hill area as per County Parks and Recreation. No specific location has been identified as of this Comprehensive Plan update.

More information about County Parks and their amenities can be found **HERE**.

In 2017, the Virginia Department of Game and Inland Fisheries (VDGIF) acquired the approximately 2,911 acre Oakley Forest Wildlife Management Area (WMA) located on the west side of Catharpin Road within the Livingston Voting District. VDGIF is actively looking to enhance site access and develop a WMA Comprehensive Management Plan. The plan will be developed in compliance with the purpose for which the property was acquired consistent with an awarded grant request submitted to the U.S. Fish and Wildlife Service for funding through the Wildlife and Sport Fish Restoration program.

As per VDGIF’s successful application, the objective/purpose of this land acquisition job is to acquire, in fee title, the 2,911+-acre Oakley Forest Tract located in Spotsylvania County, Virginia. Once acquired, the property will become part of DGIF’s statewide WMA network, and will be will be managed to promote a diversity of healthy and vigorous habitats and wildlife populations while providing public access and

opportunities for hunting, fishing, recreational shooting, and other wildlife-oriented recreation that will compliment and be compatible with habitat and population management goals. Existing habitats will be maintained and enhanced utilizing commonly accepted land management practices with strict adherence to Virginia and Forest Management BMPs.

Expected Results and Benefit:

Acquisition of the Oakley Forest tract will increase DGIF's ability to:

- Meet the goal of maintaining, creating, or enhancing a variety of high quality habitats that ensures landscapes support healthy and diverse populations of game and nongame wildlife at optimum levels, and helps DGIF move toward management plans directed at improving wildlife habitat at an ecoregion/landscape scale;
- Protect and enhance breeding, nesting, foraging, migrating, and wintering habitat for numerous game and non-game bird and mammal species statewide.;
- Address conservation challenges that cross jurisdictional boundaries, such as habitat fragmentation, wildlife disease, and climate change, enabling improved opportunities for conservation planning at an ecologically appropriate scale (e.g., watersheds, landscapes, ecoregions) rather than smaller scales (e.g., single land management units).
- Protect property, removing any remaining threat of residential and commercial development and associated infrastructure, and inappropriate agriculture and forestry activities;
- Increase forest habitat diversity and various stages of early successional habitats essential to the health and benefit of diverse bird and mammal populations;
- Provide water quality benefits to the Chesapeake Bay through the maintenance of wetland nutrient and sediment filtering capacity by removing the threat of potential development and incompatible farming and forestry practices;
- Preserve and enhance riparian and wetland habitats to help reduce non-point source pollution, improve water quality, and protect spawning, nursery, or foraging habitats for important aquatic species.
- Increase public lands for wildlife-based recreation opportunities (hunting, shooting, fishing, trapping, recreational shooting, wildlife viewing) consistent with maintaining and enhancing wildlife habitat and populations.
- Provide potential opportunity to utilize purchased land and new WMAs to develop safe, accessible, and environmental friendly public firearms and archery range facilities in areas of high demand that will complement and be compatible with population and habitat management goals.
- Provide additional opportunity to utilize WMAs as educational resources to further public knowledge and understanding of science-based habitat management practices.
- Provide a model and impetus for additional preservation, conservation, and restoration of other public and private lands.
- Continue to build enduring conservation partnerships seeking shared conservation outcomes to position Virginia to better leverage resources and support for ensuring landscapes capable of sustaining diverse and sustainable populations of fish, wildlife, and plants.

The VDGIF has created a webpage devoted to the Oakley Forest WMA that can be found **HERE**. As of 2020, VDGIF reports the Oakley Forest WMA has risen to 4,459 acres in size.

~~Conservation Easements~~

~~Conservation easements preserve farmland, forestland, and natural and recreational areas by restricting intensive uses, such as development and mining, which would alter the conservation values of the land. Each easement is tailored to reflect the conservation values of the property and is recorded in the local courthouse as a permanent part of the property records. Easements do not grant public access to a landowner's property.~~

~~Spotsylvania County has a number of conservation easement holders for historic and natural resources including the Central Virginia Battlefields Trust, whose easements include but are not limited to Pelham's Corner and the Stonewall Jackson amputation site, an 81 acre parcel along Rt. 3 affiliated with the Chancellorsville Battlefield. The Virginia Department of Conservation and Recreation, Virginia Department of Forestry, Virginia Department of Historic Resources, The Nature Conservancy and the Virginia Outdoors Foundation have conservation easement within the County.~~

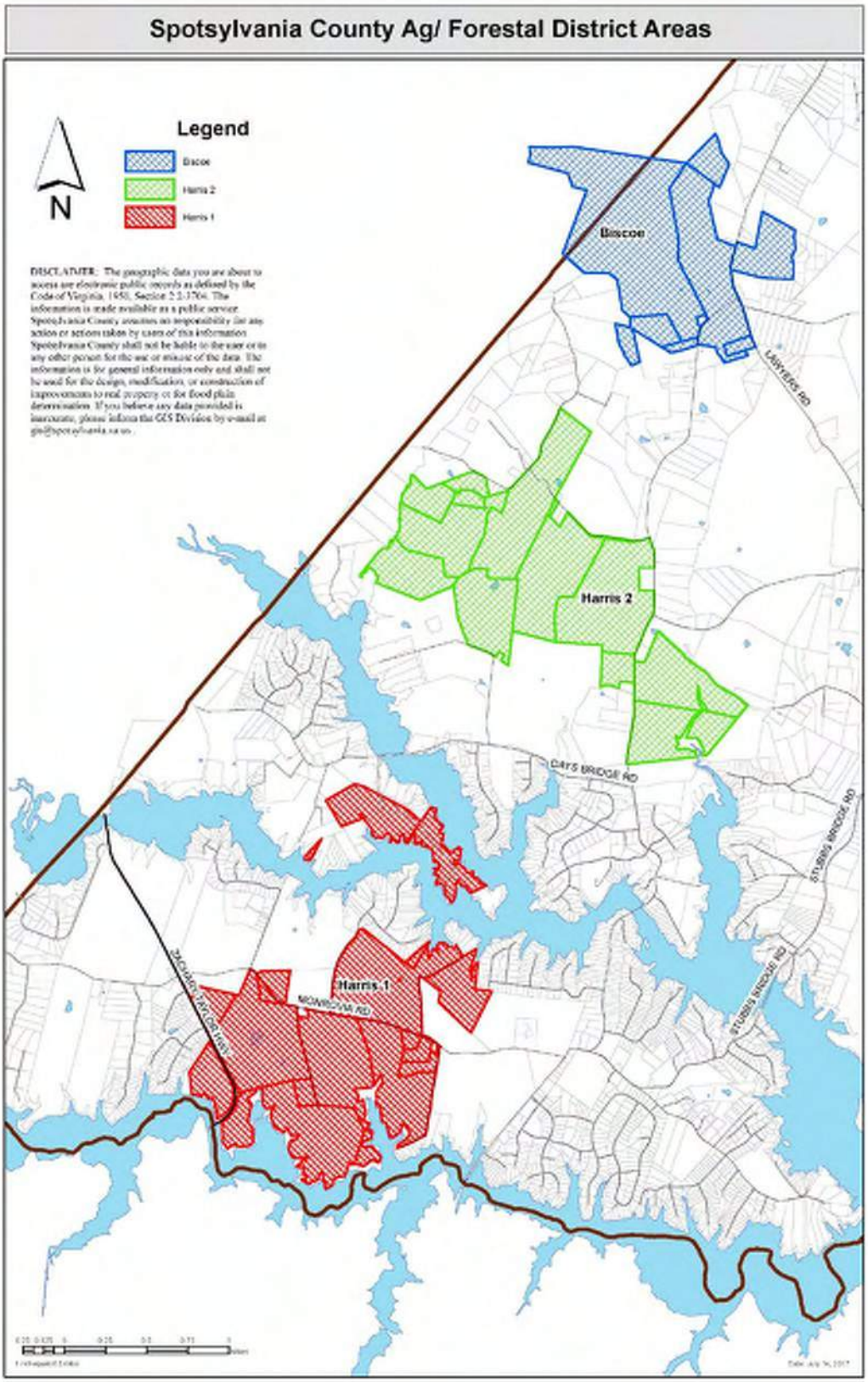
Agricultural/ Forestal District

The purpose of Agricultural/Forestal Districts is to encourage the preservation, development and improvement of the appropriate lands in the ~~county~~ County for the production of agricultural and forestal products by providing a mechanism for the creation and administration of agricultural and forestal districts of statewide significance. The Board of Supervisors finds that agricultural and forestal lands are valued natural and ecological resources which provide essential open spaces for clean air sheds, watershed protection, wildlife habitat, as well as aesthetic value in our community. It is the purpose of these Districts to provide a means to protect and enhance agricultural and forestal land as a viable segment of the ~~county's~~ County's economy and as an economic and environmental resource of major importance.

The Agricultural/Forestal District Review Committee has been established to administer the County's Agricultural/ Forestal Disticts. In particular, the committee is charged with rendering expert advice as to the nature of farming and agricultural and forestal resources within the district and their relation to the entire County. The committee advises the Planning Commission and the Board of Supervisors and assist in creating, reviewing, modifying, continuing or terminating Agricultural and Forestal districts within the County. Agricultural/forestal districts in the County are reviewed every 10 years, at which time they must be renewed, and hearing applications for new districts as they come up.

As of 2020 within Spotsylvania County there are 2,883 acres that are in the Agricultural/Forestal District divided amongst three (3) separate tracts. Geographically they are in the southwestern portion of the County and have been recognized within the County future land use map as part of the Agricultural and Forestal Land Use. Exhibit 6 below shows the extent of the current Agricultural/Forestal District designations. It is good to note that the agricultural/forestal districts complement the agricultural and forestal land use designation in the land use element but they are separate designations; not on in the same.

Exhibit 6: Agricultural/Forestal District



Purchase of Development Rights

The purposes of the Purchase of Development Rights (PDR) program include, but are not limited to: establishing a program to facilitate ~~county~~ County acquisition of conservation easements voluntarily offered by owners to serve as one means of preserving the ~~county's~~ County's character and resources; preserving farm and forest land and to protect and enhance family farms and the economic viability of the agricultural and forestal sectors of the local economy; conserving and protecting water resources and environmentally sensitive lands, waters and other natural resources; conserving and protecting biodiversity and wildlife and aquatic habitat; assisting in shaping the character and direction of the development of the community; Improving the quality of life for the inhabitants of the ~~county~~County; and promoting recreation and tourism through the preservation of scenic and historical resources.

The Spotsylvania Code Chapter 17A sets the regulatory framework for the program. Priority properties are established via ranking system that include a number of features that are complementary to the purpose of the program including: soil productivity; farmland capability; development factors; number of potential family conveyances; Comprehensive Plan consistency; Farm size (acreage); Protected land contiguous to site; Existing approved soil conservation plan; ownership; contribution to continued viability of Agricultural Community; other special conditions as defined.

As of 2018, two properties have been accepted into the Purchase of Development rights program representing approximately 116 acres in total.

The PDR program is administered by the Agricultural/ Forestal District Review Committee who review prospective PDR applications. Enrollment opportunities for the program are closed presently. The program has not been active since 2014.

Land Use Program

The Land Use Program is administered by the County Commissioner of Revenue's office. The purpose of the Land Use Program is to further the public interest by encouraging the preservation of land, to conserve and protect the County's natural resources, to protect safe water supplies, and to promote orderly land use planning and development. The Land Use Program is a **tax deferral**, not a discount. The assessment of the land is based on the use value and not the fair market value. The tax deferral amount will be repaid with interest if the use of the land changes.

Four categories that qualify for the Land Use Program:

Agricultural Use:
When devoted to the bona fide production for commercial sale of plants and animals or plant and animal products useful to man under uniform standards prescribed by the Virginia Commissioner of Agriculture and Consumer Services, or when devoted to and meeting the requirements and qualifications for payments or other compensation pursuant to a soil conservation program under an agreement with an agency of the federal government. Requiring 5 acres minimum in agricultural use.

Virginia State Code requires a minimum of five (5) contiguous (unimproved or more) acres. One acre is excluded for a house-site (if dwelling exists) or a proposed house-site. The remaining five acres or more may qualify for Land Use taxation.

AND

The property must have a five (5) year previous history of continuous farming or horticultural activity before qualifying on the sixth year. If land is left vacant for one year or more, the farm history must begin again for five (5) continuous years.

AND

The farm must produce either 1/2 of the county average in crops or meet the minimum animal requirements. The entire farm must be qualified with adequate livestock: One mature cow, five goats, five sheep, or five swine, one hundred chickens, and/or sixty-six turkeys per every five acres for twelve (12) months. Horses can qualify the land only if they are being used for breeding or a boarding business.

Horticultural Use:
When devoted to the bona fide production for sale of fruits of all kinds, including grapes, nuts and berries, vegetables, nursery and floral products under uniform standards prescribed by the Virginia Commissioner of Agriculture and Consumer Services, or when devoted to and meeting the requirements and qualifications for payments or other compensation pursuant to a soil conservation program under an agreement with an agency of the federal government. Requiring 5 acres minimum.

Forest Use:
When devoted to tree growth in such quantity and so spaced and maintained as to constitute a forest area under standards prescribed by the Virginia State Forester. Requiring 20 acres minimum in forest use.

Open Space:
When so used as to be provided or preserved for park or recreational purposes, conservation of land or other natural resources, floodways, historic or scenic purposes, or assisting in the shaping of the character, direction, and timing of community development or for the public interest sand consistent with the local land use plan under uniform standards prescribed by the Director of the Virginia Department of Conservation and Recreation. Requires 5 acres minimum in Open Space use unless the local ordinance specifies otherwise.

~~IMPLEMENTATION AND FUNDING PROGRAMS~~

~~Natural and Historic Resource Conservation~~

~~The **Virginia Land Conservation Fund (VLCF)** is administered by the Virginia Land Conservation Foundation to conserve certain categories of land. Those categories are: open spaces and parks; natural areas; historic areas; and farmland and forest preservation. The foundation establishes, administers and makes expenditures from the Virginia Land Conservation Fund, which is special, non-reverting money in the state treasury. DCR provides staff and administrative support. An interagency taskforce reviews and recommends grant applications to the VLCF. Grant awards are based on applications for 50 percent or less of total project costs pursuant to specific criteria defined in each category.~~

~~The **Virginia Open Space Lands Preservation Trust Fund (VOSLPTF),** administered by the Virginia Outdoors Foundation helps landowners cover costs of conveying conservation easements and the purchase of all or part of the value of the easements. Conservation easements preserve farmland, forestland, and natural and recreational areas by restricting intensive uses, such as development and~~

mining, which would alter the conservation values of the land. Costs that the fund may reimburse include:

- legal costs
- appraisal and other costs and
- all or part of the easement's value.
- Priority may be given to applicants who seek cost re-reimbursement only, demonstrate financial need, or cover a family-owned or -operated farm.

The **Land and Water Conservation Fund** by the Department of Conservation and Recreation administers a grant-in-aid program for acquisition and development of public outdoor recreation areas and facilities. These grants are for public bodies only. Towns, cities, counties, regional park authorities and state agencies may apply for 50 percent matching fund assistance from the Virginia Outdoors Fund (VOF). When available, these funds are provided through state general fund appropriations and from federal apportionment from the Land and Water Conservation Fund (L&WCF) meant for the acquisition and/or development of outdoor recreation areas. This is a reimbursement program meaning that the sponsoring agency should be capable of financing the project while requesting periodic reimbursement.

The **Federal Farm and Ranch Land Protection Program (FRPP)** provides matching funds to help purchase development rights to keep productive farms in agricultural use. Working through existing programs, the United States Department of Agriculture (USDA) partners with state, tribal or local governments and non-governmental organizations to acquire conservation easements or other interests in land from willing landowners. The USDA provides up to 50 percent of the fair-market value of the conservation easement.

To qualify, farmland must: be privately owned; have a pending offer from a state, tribe or local farmland protection program; and contain significant amounts of prime farmland, historic or archaeological resources, or land that furthers a systematic state or local farmland protection program consistent with FRPP.

The **American Battlefield Protection Program (ABPP)** is a federal program that fosters opportunities for stewardship of historic battlefields through grants and technical assistance that support public and private partners in identifying, evaluating and planning for preservation. The ABPP promotes the preservation of significant historic battlefields associated with wars on American soil. The goals of the program are to: protect battlefields and sites associated with armed conflicts that influenced the course of American history; encourage and assist all Americans in planning for the preservation, management and interpretation of these sites, and; raise awareness of the importance of preserving battlefields and related sites for future generations. The ABPP focuses primarily on land use, cultural resource and site management planning, and public education. DCR is the state governmental sponsor for this National Park Service program.

Civil War Battlefield Acquisition Grants. A portion of Federal Land and Water Conservation Fund (LWCF) monies are made available to help states and communities acquire and preserve threatened Civil War battlefield land. The grants are awarded on to state and local governments. Private, nonprofit organizations can apply for these funds in partnership with a state or local government agency. In Virginia, the designated agency partner is DCR.

LWCF grants are awarded through a competitive process. Each grant requires a dollar-for-dollar non-federal match. Grants are available for the fee simple acquisition of land, or for the acquisition of permanent, protective interests in land as listed by the Civil War Sites Advisory Commission's 1993 *Report on the Nation's Civil War Battlefields*. Greater consideration is given to proposals for acquisition of endangered Priority I or II battlefield lands.

Historic Resources (DHR) Incentives and Grants The Department of Historic Resources runs various programs that offer funding for historic preservation. DHR historic resources incentives and grants, include easements, archaeological threatened sites, local government grants, survey and planning cost-share, rehabilitation tax credits, state grants, and non-state grants.

The **Grassland Reserve Program (GRP)** is a voluntary conservation program by the United States Department of Agriculture (USDA) that emphasizes support for working grazing operations, enhancement of plant and animal biodiversity and protection of grassland under threat of conversion to other uses.

Participants voluntarily limit future development and cropping uses of the land while retaining the right to conduct common grazing practices and operations related to the production of forage and seeding, subject to certain restrictions during nesting seasons of bird species that are in significant decline or are protected under Federal or State law. A grazing management plan is required for participants.

The GRP has multiple enrollment options including a rental contract for 10, 15, or 20 years or enrollment of the land in a conservation easement for an indefinite period of time. GRP applications are accepted anytime and enrollment offers are processed through the Virginia Farm Service Agency (FSA) office. Offers in this program are ranked against other offers, but only statewide.

In addition to improving the environment in multiple ways, those enrolled in GRP receive an annual rental payment for their enrolled acres. FSA also provides cost sharing and other incentives to help offset the costs associated with putting these practices in place.

USDA Farm Service Agency's (FSA) **Emergency Conservation Program (ECP)** provides emergency funding and technical assistance for farmers and ranchers to rehabilitate farmland damaged by natural disasters and for carrying out emergency water conservation measures in periods of severe drought. Funding for ECP is appropriated by Congress.

Public and Private Access to Waterfront Areas

The **Chesapeake Bay National Estuarine Research Reserve System** in Virginia was established to provide representative natural areas for long-term research, monitoring, and education. The primary aim of the research reserve program is to improve scientific understanding of estuarine systems and to provide information to government and the public on the condition of estuarine resources. Although a number of sites have been considered as candidates for inclusion in the system, the early efforts of the program have been focused on the York River drainage. Four sites have been subsequently nominated for inclusion in the system and accepted by the National Oceanic and Atmospheric Administration. The program is administered by the Virginia Institute of Marine Science of the College of William and Mary.

The mission of the Chesapeake Bay Estuarine Research Reserve System is to establish a network of natural research areas which are representative of the diversity of coastal ecosystems found within the

Bay and its tributaries. These reserves will be used for research and long-term monitoring of the condition of the selected sites over time. Estuarine reserves will serve as benchmarks for analyzing long term impacts from changes in climate, air and water quality, sea level and other external factors. These sites may offer the opportunity for natural area access and can serve to protect sensitive natural resources.

The **Land and Water Conservation Fund (LWCF)** Act of 1965 established a federal reimbursement program for the acquisition and/or development of public outdoor recreation areas. Since the LWCF began 45 years ago, Virginia has received more than $76 million in assistance. It has made more than 400 projects possible. The LWCF is a 50-50 percent matching reimbursement program. The grant recipient must be able to fund 100 percent of the project while seeking periodic reimbursements.

The **Recreational Trails Program (RTP)** is a reimbursement grant program for the creation and maintenance of trails and trail facilities. DCR administers the program, which is funded through the Federal Highway Administration (FHWA). Grants may go to registered nonprofit organizations, city governments, county governments or other government entities but must be considered in accord with guidance from the Virginia Recreational Trails Program Advisory Committee. The RTP requires that 30 percent of trail program funds be used for motorized recreational trail uses, 30 percent for non-motorized recreational trails uses, and 40 percent for proposals with the greatest number of compatible recreational purposes and/or those that provide for innovative recreational trail corridor sharing (multiple use trails).

Grants to Localities Program. The Virginia Department of Game and Inland Fisheries announces the availability of grants for fiscal year (FY) 2013 and requests applications. Eligible to receive grants are Virginia localities (Counties, Cities, and Towns). The purposes of the grants are to assist localities in providing public opportunities for boating access facilities for new development or the renovation or improvements to existing public boating access facilities.

Recreational boating is a popular activity and there are approximately 250,000 registered boats in Virginia. Many more boats (canoes/kayaks) that are not registered use existing facilities or are in need of additional sites. This grant program provides up to 75% of the approved project costs to construct or renovate boating access facilities for trailer or non-trailer hand launch facilities.

The **Federal Aid in Sport Fish Restoration Program** arose out of concerns by anglers, boaters, industry and government resource conservation agencies, that permanent, predictable funds were necessary to power state programs for fisheries conservation, boating access and recreational boating safety. Congress adopted such an approach in 1950 with the passage of the Sport Fish Restoration Act (known popularly as the Dingell-Johnson Act). Later amendments to this Act, which greatly expanded its funding base, came in 1984 from Senator Malcolm Wallop and (then Congressman) Senator John Breaux.

The Program is an outstanding example of a "user pays - user benefits," or "user fee" program. In this case, anglers and boaters are the users. Anglers and boaters are responsible for payment of fishing tackle excise taxes, motorboat fuel taxes, and import duties on tackle and boats. These monies, along with other special fuel taxes on small engines, are deposited in the Department of Treasury, and are allocated the year following collection to state fishery agencies for sport fishery restoration, wetlands conservation, boat safety, and boating access and facilities projects. Each project must be evaluated and approved by the U.S. Fish and Wildlife Service (USFWS). The benefits provided by these projects to users complete the cycle between "user pays - user benefits." When the regional Federal Aid office approves a

project, an amount up to 75% of the estimated cost of the project is set aside for the state to be reimbursed from the Sport Fish Restoration Account. The state must first expend the money on the project and is then reimbursed for up to 75% of the cost. The state share must be at least 25% of the cost and must be derived from a non-federal source.

Virginia's apportionment is approximately 6.5 million dollars each year. The first 15.0% of Virginia's allocation must be spent on motor boat access and the remaining funds are split between the Department of Game and Inland Fisheries (63%) and Marine Resources Commission (37%) for freshwater sport fisheries and saltwater sport fisheries projects, respectively. Sport fisheries research and management activities, boating access development and maintenance, aquatic resource education projects, lake construction and maintenance, land acquisition, technical assistance, habitat enhancement, administration/planning, and hatchery construction are all allowable types of projects.

Water Quality

The **Water Quality Improvement Fund (WQIF)** provides water quality improvement grants to local governments, soil and water conservation districts, and individuals for point and nonpoint source pollution prevention, reduction and control programs. This includes riparian open-space and conservation easements. A primary objective of WQIF is to fund grant projects that will reduce the flow of excess nitrogen and phosphorus into Chesapeake Bay and Virginia's southern rivers. Projects can include riparian buffers open-space and conservation easements. The Virginia Department of Conservation and Recreation (DCR) distributes a request for proposal package to solicit grant applications and project proposals for the WQIF. A team of DCR and other agency or local government staff provides technical expertise in the review, scoring, prioritization and selection of grant applications and proposals. Final decisions for project selection are at the discretion of DCR's director.

The **Conservation and Recreation Enhancement Program (CREP)** aims to improve the Virginia's water quality and wildlife habitat by offering rental payments to farmers who voluntarily restore riparian buffers, filter strips and wetlands through the installation of approved conservation practices. State cost-share payments are administered through local Soil and Water Conservation District (SWCD) offices. The state will reimburse up to 25 percent, not to exceed $200 per acre of restored buffer or wetland, of conservation practice costs deemed eligible by the local SWCD. There is also a 25 percent state income tax credit for out-of-pocket expenses, thus further reducing the landowner's cost. Federal reimbursement is made through the Farm Service Agency (FSA) for up to 50 percent of a participant's eligible expenses for implementing best management practices (BMP), such as fencing or alternative watering systems.

Conservation Reserve Program (CRP). USDA Farm Service Agency's (FSA) Conservation Reserve Program (CRP) is a voluntary program available to agricultural producers to help them use environmentally sensitive land for conservation benefits. Producers enrolled in CRP plant long-term, resource-conserving covers to improve the quality of water, control soil erosion, and develop wildlife habitat. In return, FSA provides participants with rental payments and cost-share assistance. Contract duration is between 10 and 15 years.

The **Transition Incentives Program (TIP)** provides up to two additional Conservation Reserve Program (CRP) annual rental payments to a retired or retiring owner or operator of land under an expiring CRP contract if the land is sold or leased to a non-family member beginning or socially disadvantaged farmer

or rancher for the purpose of returning some or all of the land to production using sustainable grazing or crop production methods.

The **Farmable Wetlands Program (FWP)** is a voluntary program to restore up to one million acres of farmable wetlands and associated buffers by improving the land's hydrology and vegetation. Eligible producers in all states can enroll eligible land in the FWP through the Conservation Reserve Program (CRP).

Producers plant long-term, resource-conserving covers to improve the quality of water, control soil erosion and enhance wildlife habitat on land enrolled in CRP. In return, FSA provides participants with rental payments and cost-share assistance. Contract duration is between 10 and 15 years. FWP is designed to prevent degradation of wetland areas, increase sediment trapping efficiencies, improve water quality, prevent soil erosion and provide habitat for waterfowl and other wildlife.

The **Source Water Protection Program**, a joint project by the U.S. Department of Agriculture's (USDA) Farm Service Agency (FSA) and the nonprofit National Rural Water Association (NRWA), is designed to help prevent source water pollution in 33 states through voluntary practices implemented by producers at the local level.

The program has been implemented in the following states: Alabama, Arizona, Arkansas, California, Colorado, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Louisiana, Minnesota, Mississippi, Missouri, Montana, Nevada, New Mexico, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin and Wyoming. The 33 states participating in the Source Water Protection Program were chosen based on objective technical criteria relating to water quality and population.

The program is authorized by Sec. 12400 of the 1985 Farm Bill, as amended. Source water is surface and ground water that is consumed by rural residents. According to the NRWA, ground water is the primary source of drinking water for some 44,000 communities in the United States.

Producers in the aforementioned states are encouraged to participate in the Source Water Protection Program. They can take part in the program by administering voluntary practices on their land and/or by becoming team members responsible for the development of Rural Source Water Protection plans. Citizens from federal, state, local and private entities also can serve on local teams.

The Virginia Agricultural Best Management Practice (BMP) Cost Share (VACS) Program

The Virginia Department of Conservation and Recreation (DCR) administers programs through local Soil and Water Conservation Districts (SWCDs) to improve or maintain water quality in the state's streams, lakes and bays through the installation or implementation of agricultural BMPs. The cost-share program supports using various practices in conservation planning to treat animal waste, cropland, pastureland and forested land. Some are paid for at a flat rate or straight per-acre rate. Others are cost-shared on a percentage basis up to 75 percent. In some cases, USDA also pays a percentage. In fact, the cost-share program's practices can often be funded by a combination of state and federal funds, reducing the landowner s expense to less than 30 percent of the total cost.

Because demand for cost-share assistance is great, districts support the implementation of only those plans which meet local water quality guidelines. Since all requests can't be satisfied, priority ranking of practices must be used to make sure money is distributed and spent wisely.

~~An individual may receive a maximum of $50,000 for cost-share, except for those utilizing livestock exclusion (SL-6) and animal waste (WP-4 and WP-4b) practices, who may receive up to $70,000. In any case, the VACS payment, combined with federal payments, cannot exceed 75 percent of the total eligible costs.~~

~~All practices in the program have been included because of their ability to improve or protect water quality. Many will also increase farm productivity by conserving soil and making wise use of other farm resources.~~

The BMP Tax Credit Program

The Virginia Agricultural BMP Tax Credit Program, which began with the 1998 tax year. The program supports voluntary installation of BMPs that will address Virginia's nonpoint source pollution water quality objectives.

Agricultural producers with an approved conservation plan can take a credit against state income tax of 25 percent of the first $70,000 spent on agricultural BMPs. The amount of the tax credit can't exceed $17,500 or the total state income tax obligation. Starting with tax year 2011, any unusable tax credit - i.e., exceeding the state tax obligation - will be refunded to the taxpayer by the Virginia Department of Taxation.

Agricultural operators' BMPs, if approved, will be inspected by the district after they're installed. Soon after this certification, the operators will receive cost-share payments or a tax credit approval letter from their local Soil and Water Conservation District (SWCD).

Forest Products

As part of the creation of Governor McDonnell's **Agriculture and Forestry Industries Development Fund (AFID)** during the 2012 General Assembly session, the Governor set aside funding to encourage localities to think strategically about how they can better support and integrate agriculture and forestry based industries into their community's overall economic development efforts.

These AFID Planning Grants give local governments the flexibility to undertake the kind of planning, study, or local initiative they think best to grow and support agriculture and forestry-based businesses in their community and region. The planning grant program also provides a greater voice in local economic development to agriculture and forestry stakeholders by requiring that any grant funded program be implemented by a board, committee or working group representing agriculture and/or forestry interests in the affected locality.

The competitive grant program allows political subdivisions to apply for up to $20,000 in matching funds, or up to $35,000 for multi-jurisdictional applications, to undertake efforts that support local agriculture and forestry-based businesses. These efforts might include developing a strategic plan for agriculture and forestry economic development, creating new local policies and zoning ordinances that better support these industries, or funding feasibility studies and predevelopment work for new facilities that bring significant and lasting benefits to the local agriculture and forestry sectors.

The amount of an AFID Planning Grant and the terms under which it is given are determined by the Secretary of Agriculture and Forestry and approved by the Governor. Factors used in determining grant awards and conditions include the project's expected impact on the affected locality's agriculture and forestry related industries, and the extent to which the effort will improve local capacity to support these industries' development beyond the life of the grant.

DRAFT

GEOLOGY AND MINERAL RESOURCES OF SPOTSYLVANIA COUNTY, VIRGINIA

Legend

Primary_Co

- N/A
- clay
- copper
- gold
- granite
- gravel
- iron
- sand and gravel
- sandstone
- zinc
- Active_Mines
- Towns
- Interstate_Highway
- Primary_Roads

Spotsylvania_Geology

SYMBOL

- water
- al
- QTu
- Qt
- Qsh
- Qcc
- QTw
- Tb1
- Tc
- psg
- msg
- Tl
- Kp
- &Mf
- Sf
- SOe
- OZI
- OZII
- OZIII
- gn
- vo
- O|pg
- O|u
- Oq
- Oqq
- |cv
- |ta
- |g
- |Zh
- PzYgr
- PzYpm
- Ya
- Ymd

Paytes
Spotsylvania Courthouse
Five Mile Fork
Brokenburg

Data Sources:

Geology: Virginia Division of Mineral Resources (DMR), 2003, Publication 174, Digital Representation of the 1993 Geologic Map of Virginia, scale 1:500,000.
Active Mine Locations: Virginia Division of Mineral Mining, scale 1:24,000.
Mineral Occurrences: DGMR Mineral Resources of Virginia database, scale 1:24,000.

Virginia Department of Mines, Minerals, and Energy
Division of Geology and Mineral Resources
Charlottesville, VA
15 April 2013

N

Geologic data and mineral resource locations presented on this map are based on current information in the records of the VA Department of Mines, Minerals, and Energy (DMME). The locations and extent of many of the historic mine sites have been confirmed by field investigations, yet for others, the locations may be approximate and subject to change. DMME is continuing to modify the datasets included on this map, and the user is responsible for ensuring that they have the most current information. This map is designed for use at the designated scale and should not be enlarged or used for making site-specific decisions. The user should be aware of possible errors in scale, resolution, and positional accuracy. Distribution of this map is intended for informational purposes and should not be considered authoritative for navigation, engineering, legal, or other site-specific uses.

DRAFT

Steep Slopes

DRAFT

CULPEPER COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

ORANGE COUNTY

CAROLINE COUNTY

LOUISA COUNTY

HANOVER COUNTY

Legend

Major Waterbody

Slope

- 0 - 5%
- 5 - 15%
- 15 - 30%
- 30 - 45%
- 45 - 60%
- 60 - 100%
- Not rated or not available

N

W E

S

5 Miles

Data Source: Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at https://websoilsurvey.sc.egov.usda.gov/.

Note the presentation of steep slopes data here reflects extent based on the County Boundary and GIS lines as they existed prior to the April 2021 County Boundary update. The extent will reflect the latest County boundary when data from the external source is updated to the new boundary.

DRAFT

Hydric Soils

DRAFT

CULPEPER COUNTY

ORANGE COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

CAROLINE COUNTY

LOUISA COUNTY

HANOVER COUNTY

N

W E

S

5 Miles

Legend

Major Waterbody

Hydric Soils Rating

- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Data Source: Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at https://websoilsurvey.sc.egov.usda.gov/.

Note the presentation of hydric soils data here reflects extent based on the County Boundary and GIS lines as they existed prior to the April 2021 County Boundary update. The extent will reflect the latest County boundary when data from the external source is updated to the new boundary.

DRAFT

Erodibility (K Factor- Whole Soil)

DRAFT

CULPEPER COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

ORANGE COUNTY

LOUISA COUNTY

HANOVER COUNTY

N

W E

S

5 Miles

Legend

Major Waterbody

K Factor, Whole Soil

- .02
- .05
- .10
- .15
- .17
- .20
- .24
- .28
- .32
- .37
- .43
- .49
- .55
- .64
- Not rated or not available

Data Source: Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at https://websoilsurvey.sc.egov.usda.gov/.

Note the presentation of erodible soils data here reflects extent based on the County Boundary and GIS lines as they existed prior to the April 2021 County Boundary update. The extent will reflect the latest County boundary when data from the external source is updated to the new boundary.

DRAFT

Septic Suitability

DRAFT

CULPEPER COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

ORANGE COUNTY

CAROLINE COUNTY

LOUISA COUNTY

HANOVER COUNTY

Legend

Major Waterbody

Septic Suitability

- Very limited
- Somewhat limited
- Not rated or not available

N

W E

S

5

Miles

Data Source: Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at https://websoilsurvey.sc.egov.usda.gov/.

Note the presentation of septic suitability data here reflects extent based on the County Boundary and GIS lines as they existed prior to the April 2021 County Boundary update. The extent will reflect the latest County boundary when data from the external source is updated to the new boundary.

DRAFT

Depth to Water Table (cm)

DRAFT

CULPEPER COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

ORANGE COUNTY

CAROLINE COUNTY

LOUISA COUNTY

HANOVER COUNTY

Legend

Major Waterbody

Depth to Water Table

- 0 - 25 cm
- 25 - 50 cm
- 50 - 100 cm
- 100 - 150 cm
- 150 - 200 cm
- > 200 cm

N

W E

S

5 Miles

Data Source: Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at https://websoilsurvey.sc.egov.usda.gov/.

Note the presentation of steep slopes data here reflects extent based on the County Boundary and GIS lines as they existed prior to the April 2021 County Boundary update. The extent will reflect the latest County boundary when data from the external source is updated to the new boundary.

DRAFT

Soils Drainage

DRAFT

CULPEPER COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

ORANGE COUNTY

CAROLINE COUNTY

LOUISA COUNTY

HANOVER COUNTY

Legend

Major Waterbody

Drainage Class (Natural)

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- Not rated or not available

N

W E

S

5 Miles

Data Source: Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at https://websoilsurvey.sc.egov.usda.gov/.

Note the presentation of soils drainage data here reflects extent based on the County Boundary and GIS lines as they existed prior to the April 2021 County Boundary update. The extent will reflect the latest County boundary when data from the external source is updated to the new boundary.

DRAFT

Virginia Natural Heritage Date Explorer Agricultural Model

DRAFT

CULPEPER COUNTY

ORANGE COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

LOUISA COUNTY

HANOVER COUNTY

CAROLINE COUNTY

Legend

- Primary Development Boundary
- Major Waterbody

Agricultural Suitability Model

- Low Suitability
- Moderate Suitability
- High Suitability
- Very High Suitability
- Outstanding Suitability

N
W E
S

Data Source: Virginia Department of Conservation and Recreation This dataset has been clipped to the Spotsylvania County Boundary for use by the Planning Department for the Comprehensive Plan Update (Sept 2019). For full dataset please see the AgrValue or the Virginia Natural Heritage Data Explorer.

Virginia Natural Heritage Data Explorer Agricultural Soils

DRAFT

DRAFT

CULPEPER COUNTY

ORANGE COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

LOUISA COUNTY

HANOVER COUNTY

CAROLINE COUNTY

Legend

- Primary Development Boundary
- Major Waterbody

Agricultural Soils

Farmland Classification (Score)

- Farmland of statewide importance (80)
- Prime farmland (100)
- County Boundary

N

W E

S

Data Source: Kirsten Hazler and Tracy Tien, Virginia Natural Heritage Program. Soil Survey Staff. Gridded Soil Survey Geographic (gSSURGO) Database for Virginia. United States Department of Agriculture, Natural Resources Conservation Service. Available online at http://datagateway.nrcs.usda.gov/. 20141024 (FY2015 official release).

DRAFT

Virginia Department of Forestry Forest Conservation Value

DRAFT

CULPEPER COUNTY

ORANGE COUNTY

LOUISA COUNTY

HANOVER COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

KING GEORGE COUNTY

CAROLINE COUNTY

Legend

- Primary Development Boundary
- Major Waterbody
- Very High
- Outstanding
- County Boundary

N

W E

S

Data Source: Division of Resource Information, Virginia Department of Forestry

DRAFT

Virginia Department of Conservation and Recreation Ecological Cores

DRAFT

CULPEPER COUNTY

ORANGE COUNTY

STAFFORD COUNTY

CITY OF FREDERICKSBURG

KING GEORGE COUNTY

CAROLINE COUNTY

LOUISA COUNTY

HANOVER COUNTY

Legend

Primary Development Boundary

Major Waterbody

Ecological Cores

C1: Outstanding

C2: Very High

N

W E

S

Data Source: Virginia Department of Conservation and Recreation, Division of Natural Heritage

At a meeting of the Spotsylvania County Planning Commission held Wednesday, August 18, 2021 on a motion by _____, seconded by_____ and passed _____, the Planning Commission adopted the following resolution:

RESOLUTION NO. 2021_-__

Approve CPA17-0002
Draft 2021 Comprehensive Plan Update

WHEREAS, the Code of Virginia Sec. 15.2-2230 requires that the Planning Commission review the Comprehensive Plan at least every five (5) years to determine whether updates are needed; and

WHEREAS, on August 2, 2017 the Spotsylvania Planning Commission reviewed the Comprehensive Plan and determined that updates are needed, and had staff draft an update to the Comprehensive Plan; and

WHEREAS, on April 21, 2021 the Spotsylvania Planning Commission reviewed the draft Comprehensive Plan and authorized initiation of public hearings. The proposed updates are as follows:

CPA17-0002, Spotsylvania County Planning Commission: Major update to the Spotsylvania County Comprehensive Plan (Plan) consistent with the Code of Virginia §15.2-2230, 15.2-2223, 15.2-2224, and 9VAC25-830-170. Specifically, this update proposes to amend the 2013 Comprehensive Plan as last updated July 28, 2020, as follows: repeal and replace: Chapter 1 Introduction and Vision; Chapter 2 Future Land Use; Chapter 4 Public Facilities including Sub-Chapters 4A-4H; Chapter 5 Historic Resources; Chapter 6 Natural Resources; and Appendices C-D; and amend and re-ordain: Chapter 3 Transportation, including Sub-Chapter 3A; and Appendices A-B. Proposed Sub-Chapter 4G Parks and Recreation would result in repealing the Spotsylvania County Parks and Recreation Master Plan adopted March 2009, last revised February 2011. Universally, document footers will be updated to note a new adoption date. Additionally, throughout the Plan, there are numerous hyperlinks to electronic mapping resources and referenced plans, studies, resources intended as informational resources.

The proposed update is available for review on the Spotsylvania County Planning Department webpage at www.spotsylvania.va.us/draftdocuments. Details of the proposed update are described below:

Cover Page and Table of Contents

A new cover page is proposed with a new page design that identifies the Comprehensive Plan and will include an adoption date when complete. The acknowledgements page will reflect current and former Planning Commissioners, Board of Supervisors who have participated in the update process, and the County Administrator. The Table of Contents reflects standalone maps located within their respective Chapters as well as Chapter titles, Sub-Chapters, and Appendices.

Chapter 1, Introduction and Vision

The Vision statement has been relocated to follow the Chapter Introduction. Growth rates and projections data have been updated to reflect population related changes. The update also provides data on the local fiscal climate, and land use diversification. Guiding Principles and Policies include revisions concerning fiscal sustainability principles as follows: Maintaining consistency with the Code of Virginia Sec. 15.2-2303.4; seeking to ensure public infrastructure impact mitigations; and promoting study and documentation of significant historic sites, natural resources, and cemeteries. Under agriculture and silviculture as valued components of the County's economy, refer to the Primary Development Boundary (PDB) as the intended limit of public water and sewer service. Update to the major initiatives action plan includes: Continued monitoring of economic, demographic, socio-economic, and housing trends locally; suggestion that the Design Standards Manual be reviewed and updated; reference to the annual financial report as an ongoing task; enhancement of pursuit of transportation funding identification; continued work on regional planning issues; development of special area plans for areas where unique development opportunities exist.

Chapter 2, Land Use

Objectives are expanded to include: protection of historic and environmental resources, rural farms, forest uses, and character; reduction of land-use conflicts; promotion of enhanced proximity and accessibility between places to live, work, recreate, shop. A summary of local economic development and tourism and related initiatives are covered. Supporting maps within this Chapter include: Electric Transmission; PDB; Future Land-Use (County-wide, and PDB Focus); Historically Underutilized Business Zones (HUBZones); Opportunity Zones; Technology Zones; Tourism Zones.

Minor expansions are made to the PDB totaling approximately 275 acres, including: Five Mile Road Area just north of Route 3, incorporating a project-specific stand-alone area located at Barley Woods within the PDB with adjacent lands; New Post area east of Mills Dr adding acreage primarily zoned Industrial 2; small boundary cleanup just north of Summit Crossing Road. Within the PDB, "difficult to serve" areas have been symbolized as areas that may not be readily developable for higher intensity uses requiring public water and sewer services. New policy specifies when a Plan Amendment is warranted. It establishes conditions under which development located outside of the PDB desiring to connect to public water and sewer would submit a Code of Virginia 15.2-2232 review versus when submittal of a Comprehensive Plan Amendment application is warranted. Additionally, exception 1.a clarifies intent to apply to public sewer extensions, and 1.b is added to allow for individual connections of public water and/or sewer outside of the PDB when existing Utility infrastructure is in place to make said connection feasible, as determined by County Utilities.

As part of this update, the Land-Use Categories include:

- Agricultural and Forestal: This land-use designation is greatly expanded. This update seeks to avoid significant losses of agricultural and forestal acreage and to maintain as zoned by-right residential development potential to avoid residential proliferation.
    - Expansions generally as follows: from Orange Plank Rd west of Fawn Lake extending to the Orange County line and south of the Civil War Trail, replacing

Rural Residential designation; from south side of Brock Rd extending between the Spotsylvania Courthouse Battlefield (NPS) and Oakley Wildlife Management Area divided by the Po River Corridor, replacing Rural Residential designation; from south side of Guinea Station Rd corridor and north of the Ni River corridor extending from the Caroline County line westward to Interstate 95, replacing Rural Residential designation; from lands south of Morris Rd and the Oakley Wildlife Management Area extending between the Caroline and Orange County line and southward to the north side of Lewiston Rd and Lawyers Rd except where other land-use designations are depicted, and areas generally to the west of Stubbs Bridge and Belmont Rd approaching the Louisa County line, replacing Rural Residential designation. This expansion area includes but is not limited to all lands within the County's Agricultural/Forestal District program, administered by the County Agricultural/Forestal District Review Committee.

- Residential: includes a subset of residential, land-use designations including: Rural Residential, Low Density Residential, and High Density Residential.
    - Expansions as follows:
        - Low Density Residential include: from north side of Hazel Run, to include Avalon Woods subdivision, replacing Mixed-Use; River Meadows subdivision, replacing Mixed-Use.
- Mixed-Use: revises the Mixed-Use designation by creating three Mixed-Use classification tiers, which include:
    - Mixed-Use Light: envisions a mix of single-family detached and attached residential at densities of 4 to 8 units/acre. Except for the development of commercial corridors as described along higher functional classification roads, most of the land within this tier is envisioned to be a mix of residential uses.
    - Mixed-Use General: envisions a broad mix of commercial, office, and residential development in a horizontal or vertical mixed-use pattern. Residential densities in these areas are envisioned to exceed 8 units/acre and densities of 16 units/acre or more and resulting building scale are appropriate.
    - Mixed-Use Commercial Heavy: envisions a commercial and office "heavy" mixed-use district at a semi-urban or urban scale. Residential development within these areas is intended as a secondary or subordinate use encourages mixes of residential housing for diversification. Densities, except for the Lake Anna area, are intended to exceed 8 units/acre. Urban or semi-urban densities of 16 units/acre or more and resulting building scale are appropriate. At Lake Anna, the land use designation is described differently as a "village center" and mixed-use area with the primary focus on commercial. Residential development in this area is intended as a secondary or subordinate use and envisioned residential densities are lower than mixed-use areas within the PDB due to lack of public water and sewer.
    - Mixed-Use classification tiers expansions are as follows:
        - Mixed-Use Light: Jackson Gateway and Thornburg area to the west of the Route 1 corridor following the PDB edge. The tier change in this area also slightly expands east towards Route 1, south of Morris Rd, replacing Employment Center; area west of Route 1 corridor generally north of the South Oaks subdivision extending north to Lee's Parke; Massaponax Church Rd corridor south of Mills Dr, extending as far as the Cosner

Industrial Park and along the periphery of the northern boundary of the Lancaster Gate Subdivision; areas north of Mills Dr to Germanna Community College, extending from Interstate 95 to Lee Hill School Dr; periphery of north and east sides of Lee Hill Park to approximately Lee Hill School Dr; northeast and northwest corners of Mills Dr and Benchmark Rd intersection; Rappahannock Riverfront area and peripheral portions of the New Post development; southeast corner of Mills Dr at Tidewater Trl, Sandy Ln intersection, replacing Employment Center and Open Space; west of Jefferson Davis Hwy to east of Lafayette Blvd extending from Fredericksburg (City) line to Four Mile Fork; unless otherwise designated, the north and south side of Harrison Rd to the west of Interstate 95 extending adjacent to the east side of the Twin Springs and Carriage Hills subdivisions; area east of Gordon Rd including existing development associated with the Salem Fields development; peripheral areas in the standalone Spotsylvania Courthouse PDB; Smith Station Rd to reflect approved Courtland Park development; Five Mile Road Extended, replacing High Density Residential at Regency Park Villas.

- Mixed-Use General: central core of Spotsylvania Courthouse area; New Post at northeast corner of Mills Dr. and Tidewater Trl; area west of Benchmark Rd extending between the Massaponax Creek corridor and Mills Dr toward Lee Hill School Dr; area south of Mills Dr and east of the RF&P Rail corridor including Crossroads Pkwy; area west of Interstate 95 extending down the east and west side of the Route 1 corridor between Cosners Corner and the Commonwealth Industrial Park to north of Lad Land Dr; Route 1 at Riverstone Dr intersection area to include the east and west side of the Route 1 corridor, replacing Mixed-Use and Employment Center; south side of Harrison Rd to the west of Interstate 95 extending south approximately half way to Rollingwood Dr and west towards Carriage Hills Subdivision.
- Mixed-Use Commercial Core: Thornburg area including areas around the northeast and northwest corners of Route 1 and Morris Rd/Mudd Tavern Rd and then down the west side of the Route 1 corridor to the PDB line, replacing Employment Center; south side of the Cosners Corner retail development and extending along the south side of Mills Dr to the west side of the Cosner Industrial Park and then south of the Spotsylvania Regional Medical Center along the east side of the Interstate 95 corridor; Four Mile Fork area extending down the Route 1 corridor to Exit 126, including Southpoint Pkwy, Market Street, portions of Spotsylvania Avenue, replacing Mixed-Use and Commercial; Spotsylvania Towne Center extending south of Route 3 between Bragg Rd and Interstate 95; area along the south side of the Route 3 corridor between Salem Church Rd and Kennedy Ln extending to General Semmes Rd; Spotsylvania Industrial Park/Bowman Center from City of Fredericksburg line to Rappahannock River, replacing Employment Center; Lake Anna area including east and west side of Route 208 corridor from approximately Lewiston Rd to Louisa County line.

- Commercial: descriptive language is added to include examples of complementary uses such as hotels, personal service establishments, office parks, entertainment facilities, and to promote better connectivity to and accessibility from nearby residential development.
    - Commercial land-use expansions include: along the Route 1 corridor extending southward from north of the PDB to Caroline County, replacing Employment Center and Rural Residential; Route 1 extending north from Four Mile Fork to Fredericksburg (City) line, replacing Mixed-Use; Route 1 at Hickory Ridge Rd intersection, replacing Employment Center; Route 208 corridor between Lewiston Rd to north of Bradley Ln, replacing Rural Residential; Gordon Rd and Brock Rd intersection, replacing Institutional and Rural Residential; Old Plank Rd and Catharpin Rd intersection, replacing Low Density Residential; east side of Bragg Rd from north of Route 1 to Fredericksburg (City) line; Bragg Rd and River Rd intersection; southwest corner of Plank Rd and Andora Dr, replacing Low Density Residential; Mills Dr at Tidewater Trl intersection, replacing Employment Center; east side of Gordon Rd, from Smith Station Elementary to north of Smith Station Rd, replacing Mixed-Use.
- Employment Center: Provision for traditional commercial development such as retail sales establishments within Employment Center areas have been revised for clarity and revises the Employment Center land use by creating two tiers:
    - Employment Center Light: primarily envisioned for light industrial parks, data centers and office parks. Light industrial uses are involved in manufacturing activities that use moderate amounts of partially processed materials to produce items of relatively high value per unit. Processing, assembly or disassembly operations, and warehousing and distribution centers may be appropriate in this land use category. Also, high technology businesses, data centers and "clean" industry are appropriate in this land use. Land-use designation changes reflective of Employment Center Light include all areas designated as Employment Center in the existing land use map except for areas where Employment Center Heavy has been employed. The extent of Employment Center Light has also been expanded to include Cosner Industrial Park and land area to the east, south of Mills Dr, replacing Mixed-Use; Industrial acreage in the area of New Post now part of the proposed PDB; south side of Massaponax Church Rd to Ni River and west of Route 1, replacing Mixed-Use.

    - Employment Center Heavy: described as larger in scale and intensity and may have pollution impacts (noise, odor, etc.) on the surrounding area. Such uses may have emissions or a large degree of outdoor machinery of equipment use as part of normal operations. Examples of heavy industrial uses include, but are not limited to: mining operations; refineries, power plants with emissions; scrap recycling operations; rail yards; and the fabrication and assembly of large items. Areas identified as Employment Center Heavy include along the north side of Mills Dr extending from Benchmark Rd to just west of Tidewater Trail, east and west side of the RF&P Rail corridor in proximity to the VRE Service Yard; in proximity to quarry operations off the Route 1 corridor and Smith Station Rd.
- Open Space: expands the geography of the land use throughout the County to include additional conserved lands established since the last Comprehensive Plan update and to

reflect presence of wetlands and resource protection areas in place. Due to applicability county-wide, this expanded designation replaces a wide array of land-use designations. The land-use has also been expanded at Patriot Park and Harrison Road Park, replacing portions of Institutional designations there.

- Institutional: includes the governmental facilities necessary for the provision of public services and large public service uses such as airports. As such, Institutional land uses have application county-wide, both inside and outside of the PDB and across all land-use categories. As part of the update, uses such as golf courses, places of worship have been reassigned to other nearby land-use designations. The land-use designation was expanded to include a future public works/utilities campus identified in the Public Facilities Chapter, along the west side of Gordon Rd near Smith Station Rd, replacing Rural Residential.
- Historic or Scenic Corridors: a new addition, this includes text descriptions and mapping of existing designated historic or scenic corridors within the County. These designations do not change the underlying land-use designation but emphasize the importance of sensitive site and building design. Historic and scenic corridors include Scenic Byways and Roads and the Civil War Trail.

Newly considered within the Chapter are economic development zones including tourism zones, technology zones, opportunity zones, Historically Underutilized Business Zones (HUBZones). Virginia Business Ready Sites are also considered. Economic Development Zones and Virginia Business-Ready Sites are described within the Chapter and maps and/or tables of their locations have been provided for reference.

Throughout the Chapter, substantive land-use policy amendments applicable to all land uses include: clarifying rezoning impact mitigations refer to public facilities impacts; reducing physical impacts between newly proposed and existing development; encouragement of design renderings or modeling to visualize proposals; added design and transitions guidance related to utility installations; location, size, scale and additional impact mitigation guidance concerning solar energy facilities; fire, rescue and emergency management friendly guidance to promote availability of firefighting water storage for new developments where public water and sewer are not available; avoidance of development within dam break inundation areas; promotion of back-up power generation capacity for critical infrastructure uses; encouragement of uses complementary to mapped economic development zones (provided impact mitigation); accessibility to alternative modes of transportation such as FRED Bus, bicycle or pedestrian paths; viewshed and character integrity protection; provide additional guidance concerning conservation of lands to accommodate planned infrastructure needs of the community; identify zoning district appropriateness to any given land-use based on new Tables of Zoning Districts Complementary to Land-Use Designations.

Substantive land-use policy amendments include:

- Agricultural and Forestal: enhance emphasis on protection of prime agricultural soils and notable agricultural and forestal conservation value; expand emphasis on improvements to rural roads to consider agricultural freight, trailered equipment, to benefit rural uses, citizens, and tourist populations; specify land-use appropriateness for conservation

easements; and promote well and septic capacity analysis when development is proposed.

- Residential: further clarify development transitions between newly proposed development adjacent to existing development; emphasize character integrity and viewshed protection along designated historic and scenic corridors outside of the PDB; remove rural commercial signage size guidance; clarify affordable housing; specify land-use appropriateness for conservation easements in rural residential land-use areas; promote well and septic capacity analysis when development is proposed.

- Mixed Use: promote design guidelines and architectural features; address project transitions considerate of adjacent development patterns; remove language that discourages drive-through uses; promote affordable housing harmoniously designed into mixed price-point developments; connect support for commercial and office developments in the Mixed-Use Light tier to functional classification of road; establish Residential as an intended secondary or subordinate use within the Mixed Use Commercial Heavy tier; promote an additional point of access to the Bowman Center area as supported by the Thoroughfare Plan.

- Employment Center: recommend large Interstate-dependent, distribution facilities be located within three miles of Interstate access; promote sidewalks and path connectivity to include industrial uses; clarify that commercial development should be secondary or subordinate (in total land area and square footage devoted) to the intended uses associated with the Employment Center land-use designation; promote user diversification, economic diversification; and efforts to enhance economic development readiness of sites.

- Open Space: recognize that this designation is appropriate for conservation easements, environmentally sensitive areas, and significant historic resource areas.

Additional subject matter addressed includes Utility, Telecommunications, and Internet infrastructure including recognition of value, location, impact mitigation, and identification of action items to promote expansion of broadband services to rural areas. Also included is a section devoted to housing, addressing housing inventory; residential building activity; multi-family development; occupancy; type of units; student generation; growth rate; housing ratio; and affordability.

Chapter 3, Transportation and Thoroughfare Plan

Proposed amendments are specific to the Thoroughfare Plan and corresponding map and include identification of additional road projects as follows: Shannon Airport access road from Shannon Park Dr to Shannon Airport Cir; Northwest Quadrant connector road as a new concept road between Rt 1 and Hood Dr; I-95 Exit 126 SB On Ramp Improvements resulting in additional left turn from US 1 SB, widen on ramp; Roxbury Mill Rd bridge as a new two-lane bridge with 10-foot shared-use path. Proposed route revisions to road projects already identified within the Thoroughfare Plan include: Guinea Station Rd Extension concept road from Guinea Station Rd, east of Rte 1 to Massaponax Church Rd, incorporating existing road infrastructure associated with River Run Pkwy as an alternative possible alignment in addition to an existing depicted

concept route; expanding Lansdowne Rd Extension from Russo Dr to Main St in the Bowman Center; revise map depiction and Thoroughfare Plan Table description for Market St extension. Plans to further widen Salem Church Rd and Leavells Rd to 6-lanes, extending from Rte 3 to Courthouse Rd are removed. Already depicted in the Thoroughfare Plan map a corresponding Table description is added for entrance improvements at Rte 1 and the planned VA Hospital entrance. Intersection improvement description at Rte 1 and Market St updated. All other Chapter 3 content remains as previously adopted July 28, 2020. For further detail and clarity, an additional Thoroughfare Plan Map is proposed with focus on the Primary Development Boundary. The map depicts the same projects identified within the County-wide Thoroughfare Plan Map.

For additional clarity, within goals and strategies, the draft elaborates on the referenced County Traffic Impact Analysis (TIA) threshold by describing it in Goal 2, Strategy 2.

Chapter 3A, Trailways Master Plan

Proposed amendments are specific to the maps of planned improvements including the Trailways Master Plan, Greenways, and Road-Based Bicycle and Pedestrian improvements. Specific amendments to the aforementioned maps are as follows: change designation of Mudd Tavern Road from the east side of Interstate I-95 bridge to Caroline County line from shoulder improvements to shared-use path; scale back Po River Greenway (off-road) to terminate at Route 1 with future connectivity to previously approved plans along the Route 1 corridor; reflect revised Guinea Station Rd alignment noted in Chapter 3 Transportation amendments to include a shared-use path consistent with Ni River Trail implementation.

Chapter 4, Public Facilities

Updates to the Public Facilities Introduction include adding reference to utilities, solid waste, and general government. A duplicated list of principle needs concerning provision of public facilities is removed. One additional Key Goal appears in the update: to continue to monitor economic, demographic, socio-economic, and housing trends locally to assess service and facility needs. Under Relationship to the Capital Improvement Plan, the update outlines the importance that future public facilities have support in the Plan for Code of Virginia 15.2-2232 compliance and outlines exceptions, and instances related to provision of public utilities or small scale building expansions whose installation will be considered shown in the Comprehensive Plan. Site Adequacy content related to public facility location selection and design purposes elaborates on convenience and safe accessibility to include provision of bicycle and pedestrian friendly improvements. Public facilities maps references are updated to reflect an updated suite of maps in the Chapter.

Chapter 4A, Schools

This update includes a general overview of services and programs, accounts for the inventory of schools, provides current and projected student enrollment figures, notes student generation rates by housing type, provides reference to a 2019 schools demographics study and the Schools Strategic Plan that provide insights into identified recommendations for the school system going forward. An updated schools map is also included, accounting for the schools inventory. Level of service standards for middle school design/build capacity is increased from 940-960 students to 940-1100 students. To address school specific capacity concerns, the Spotsylvania Public

Schools has identified realigned attendance zones and targeted renovation and expansion projects to address capacity issues that exist. Updated recommendations include: realignment of attendance zones; continuing to analyze existing educational environments to determine whether they can be re-purposed to support research-based, best-instructional practices; identification of capital projects including renovation and expansion of Spotsylvania Middle School, improvements at Chancellor High/Middle School, added classroom capacity at Thornburg Middle School, and space reconfiguration for new programming at Spotsylvania High School and Career and Technical Center; considering expansion or enhancement of specialized educational programs and their necessary capital facilities considering potential student demand, market demand for skills (future employment opportunities) and cost to implement. Additional updates for clarification purposes, to provide examples, and to show efforts should be ongoing. For capital projects, the update previews need for an upcoming bond referendum.

Chapter 4B, Fire, Rescue, Emergency Management (FREM)

This update includes a general overview of services and programs, accounts for the inventory of fire and rescue stations, including reference to level of service standards for response time and service areas. A report on station capacity versus call volume is provided. Level of service standards have been reduced from four to three and are based on response times specific to identified fire and rescue stations considerate of the geography and development patterns served. A 1:11,000 ratio of stations per capita standard is removed. The updates to General Recommendations include: coordinate with lead/ support agencies and implement regional and Spotsylvania County-specific mitigation action strategies associated with the current iteration of the George Washington Regional Commission Regional Hazard Mitigation Plan; work with local and regional stakeholders to update the Regional Hazard Mitigation Plan; and explore development of a County Wildland Fire Mitigation Plan in partnership with the Virginia Department of Forestry. Short-term recommendations include: integrate technologies and adopt procedures necessary to measure performance using the Unit Hour Utilization and Assembled Fire Fighting Force metrics; study fire and rescue calls and responses, as well as Unit Hour Utilization to determine whether Level of Service needs dictate the construction of additional stations in some areas, and/or staffing additional fire apparatus and ambulances in existing facilities; build replacement fire and rescue station (FC/RS) 3 in the Partlow area; delete recommendation to build replacement FC/RS 5 on Route 3 and FC/RS 11 in the Mills Drive/Benchmark Rd area; secure land for and build FC/RS 12 in the Jefferson Davis Highway/ Massaponax Church Rd. area; build the Classroom and Logistics Facility at the Rappahannock Regional Training Center to facilitate improved system-wide training and meet logistical storage needs; implement traffic management strategies and technology to facilitate improved response times; continue efforts to update the aid agreement with Culpeper County, resulting in an automatic aid agreement. The updated Chapter removes a short-term goal to secure land for and build a new fire and rescue station to split the call volume handled by Stations #4 and #6. Updates to long term goals include: removing secure property for the replacement of the FC/RS 3 facilities into a new consolidated-use site, now a short-term goal. Updated land acquisition goal includes acquiring land for fire/rescue joint-use sites in order to relieve the burden on existing fire/rescue facilities. Considering level of service standards, new locations are in the Shady Grove, Post Oak, and northwestern Spotsylvania County (north of Route 3). Complementary maps including: Public Safety Facilities; FREM First Response Zones; FREM 5-Mile Response Areas; and FREM Population Density in Service Areas have been added.

Chapter 4C, Sheriff

This update includes removing the short term goal of enclosing the outdoor kennel at the Public Safety Building and identifying a future capital project to expand the existing public safety building to meet space needs. Sheriff's office facility inventory is reflected in an updated Public Safety Facilities Map.

Chapter 4D, Solid Waste Collection and Disposal

This update includes a general overview of services and programs, accounts for the inventory of existing facilities and collections statistics. Lifespan figures for the Livingston landfill are updated. Updates to short-range recommendations include: implementing a County decal program that enables solid waste convenience site staff to effectively identify residents of Spotsylvania County; adopting a policy that restricts commercial disposal to a select number of disposal sites; revising tipping fees and disposal of select items with current market rates; evaluating strategies to make brush and yard waste recycling operations sustainable, in cooperation with the County's composting facility; continuing to implement goals of the Solid Waste Management Plan; reviewing and referencing the Solid Waste Management Plan consistent with the Code of Virginia, replacing a similar long-range recommendation; and updating applicable Chapters (to be determined) of the Plan upon completion of updates to the Solid Waste Management Plan update considering any future needs, opportunities, or recommendations that apply. Updates to long-range recommendations include: monitoring recycling industry trends and markets on an international and national level; updating educational recycling programs and continue to build partnerships with commercial recycling businesses; continuing to develop sustainable solutions for biosolids, yard waste, and brush recycling; evaluating the benefits of managing the solid waste division as an enterprise fund; evaluating the potential to enhance efficiency by expanding the capacity and viable lifespan of the Livingston Landfill through landfill mining. The draft includes a complementary Solid Waste Five Mile Service Areas Map.

Chapter 4E, Water and Sewer

This update includes a general overview of services and programs, service parameters tied to the PDB, and accounts for the inventory of existing facilities. The latest version of the Water and Sewer Master Plan is incorporated by reference. An update to the description of sewers and interceptors removes a reference to design a regional pump station to serve the Jackson Gateway service area. Updates to the Goal, Policy and Strategies section include: clearly specifying the PDB as the area targeted to supply public water infrastructure; adding a goal to support capacity and efficiency enhancements within a growing community; adding a policy to invest infrastructure enhancements in areas intended for growth, and strategically locate new facilities to improve operations and customer service. Strategies include: focusing infrastructure expansion and enhancements to the PDB; discouraging and avoiding potential cost, maintenance, and management risks associated with private utility systems with mass drainfields outside of the PDB; seeking to co-locate the County Utilities and Public Works Department to a new facility to be constructed on TM 21-A-84 located along Gordon Road; identifying need for a new water tower near Massaponax High School; and exploring opportunities to co-locate additional public facilities onsite, including a park site on the remaining acreage.

Chapter 4F, Library Facilities

This update includes a general overview of services and programs and accounts for the inventory of existing facilities. Level-of-Service standards are updated to recommended standards as approved and adopted by the Library of Virginia Board. These address collections, facilities size, and location. The Plan envisions an improved Service Level for collections and facilities from Level E★ Level to EE★★. For collections to achieve Level EE★★ libraries must: comply with all standards of Level E (Essential), and; provide digital resources to supplement those made available by the Library of Virginia to serve community needs; have a preservation policy, if it holds special collections, it reviews at least every three years; and evaluate its collection to determine strengths and weaknesses, allocating resources to address the identified weakness. For facilities-size and location this enhanced standard establishes that the libraries: comply with all standards of Level E; create additional library space based on a standard from current .3 to .7 sq ft per capita; enhance energy efficiency, lighting, waste reduction, and air quality; utilize sustainable construction practices for new or renovated facilities; and adopt site selection guidelines for urban, rural areas with consideration of public transportation where possible.

Chapter 4G, Parks and Recreation

This update is intended to consolidate and replace information and planning recommendations initially approved as part of the standalone 2009 Spotsylvania County Parks and Recreation Master Plan (last amended February 2011). The 2009 Plan would be retired. The update includes: providing a general overview of services and programs, accounting for the inventory of existing facilities, identifying park classification tiers, accounting for non-County operated parks with inventory updates, and inventorying meeting spaces at community centers and libraries. Level-of-service standards are updated. A level-of- service standard for pickleball courts is added requiring per capita 1/15,000. Recommendations updates include referencing the Code of Virginia, §15.2-2232 as basis for supporting future Capital Improvement Plan projects associated with Parks and Recreation. General recommendations include: having sufficient park facilities to meet County Park Standards for current and future demand; providing community, district, and special-use parks that meet a 100% level-of-service standard, including schools; encouraging all new schools and community centers to include provisions for public recreational acres and amenities; co-locate future schools, community centers, and parks to add more recreational opportunities and avoid duplication of recreational facilities. A number of existing recommendations are relocated under the an umbrella recommendation heading that seeks to protect, maintain, and enhance current parks and open space areas, and acquire additional park land and facilities within the County, consistent with adopted level-of-service standards. These sub-recommendations include: acquiring park lands and developing park amenities based on population estimates; providing an annual Capital Improvements Plan submission of needed facilities based on adopted standards and replacement schedules; optimizing existing parks that are not built out by improving or adding new facilities to enhance efficiencies or reduce known level-of-service deficits; emphasizing current utilization of the parks with installation of artificial lighting to enhance and extend the availability of current athletic fields; preserving natural areas, parks, open space area, archaeological and architectural sites and cultural resources in Spotsylvania County; encouraging protection, accessing, and interpretation of significant cultural or historical resources within new or existing park land; maintaining and update a database and/ or mapping project that includes an inventory of all parks, open spaces, nature preserves, historic and cultural sites, park amenities, trail systems; preserve and expand upon existing recreational

trails network within the County by implementing the Spotsylvania Trailways Master Plan consisting of off-road greenway trails and roadside-based trail corridors; encouraging construction of bicycle lanes and/or paths complementary to recreational trailways plan implementation efforts in conjunction with road-widening projects, where appropriate, removing exclusive reference to VDOT; considering additional specialized recreational amenities that do not warrant a specific level-of-service standard based on their uniqueness and fit within the community as well as projected demand; continuing to support development of privately managed and maintained neighborhood parks and recreational amenities that will ultimately serve County residents within their particular developments.

Short-term recommendation updates include: replacing the Harrison Road and Lick Run Community Centers near where formerly located; and locate a new community center in the Partlow Area.

Long-term recommendations include: exploring acquisition and/or development of an indoor aquatic recreation center; developing master plans for the Hilldrup and Belmont Properties (relocated from existing short-term goals); explore the acquisition of land in the Lee Hill/ Massaponax area for a new district park; continuing to implement the County Trailways Plan through various means including Parks and Recreation projects, Transportation projects, private development frontage and amenity improvements with target candidate projects to include trails and trailhead construction as described associated with: Deep Run Trail, Ni River Trail, Virginia Central Trail, East Coast Greenway, and Massaponax Creek.

The update includes a complementary Parks and Recreation Facilities and Needs Map.

Chapter 4H, General Government

The content is wholly new compared to the prior approved Plan. It includes an overview of some of the services represented, population considerations, prior space-needs studies, identification of capital projects needs and recommendations, including: 50,000-60,000 sq.ft. new build in the Spotsylvania Courthouse area for the Department of Social Services and VA Department of Health offices; construction of a joint-use complex along Gordon Road, specifically Tax Map# 21-A-84 for Spotsylvania County Utilities and Public Works; review and update the County's space needs assessment and recommendations for future long-term capital project needs. The update includes a complementary Government Facilities Map.

Chapter 5, Historic Resources

The update provides additional insight into local historic preservation and tourism and provides an overview of some of the major resources involved in historic resource documentation and interpretation. The update acknowledges Spotsylvania County's 300-Year Anniversary. Also included are revisions to historic resource strategies, including: expanding promotion of rural character, scenery, and economy protection with reference to forestry and open space; expanding support for important scenic and historic land preservation efforts, removing reference to the rezoning process; clarifying language supportive of historic preservation efforts related to historic structure rehabilitation as part of development projects, and preservation of scenic byways, roads, and rural character outside the PDB; considering expanding scenic byway designations in the County; supporting historic markers associated with significant persons,

places, and events associated with a project area; promoting living history events to include the County's 300th anniversary.

Chapter 6, Natural Resources

Updates include revisions to content referencing enabling legislation form the Code of Virginia to include 9VAC25-830-170 in addition to additional references carried over into this update from the existing Plan. Reference to corresponding Appendix D is also included in the update. Substantive amendments proposed to Natural Resource Policies and Implementation Strategies include adding strategies to: protect designated open space and agricultural and forestal land for their intended uses; support new approaches to enable landowners to generate revenue from these land uses; promote conservation and/or reforestation within 300 feet of perennial streams, lakes, and reservoirs; support development of a County Wildland Fire Mitigation Plan in partnership with the Virginia Department of Forestry; consider guidance of the latest Regional Hazard Mitigation Plan, and incorporate by reference; continue to pursue development of a fresh-water mussel farm along the Massaponax Creek Corridor. The Plan replaces a stated strategy to initiate a county-wide study to identify and protect aquifer and groundwater recharge areas with language that seeks groundwater hydrology studies for development proposals increasing density or intensity of development reliant on well water. Strategies proposed to be removed include promoting dark sky lighting and alternative water treatment methods. Content summarizing a variety of potentially available natural resource related grants and funding opportunities is removed.

Appendix A

No substantive amendments are proposed. Appendix A Land Use- Fort AP Hill Approach Fan and Joint Land Use Study would be maintained in the update from the existing Comprehensive Plan with only formatting changes to reflect new footer design.

Appendix B

No substantive amendments are proposed. Appendix B Transportation Exhibit was last adopted on July 28, 2020 as part of a Comprehensive Plan amendment package including Chapter 3 and Sub-Chapter 3A. As part of this major Comprehensive Plan-wide update, Appendix B would be re-ordained with only formatting changes to reflect an updated adoption date.

Appendix C

Appendix C Historic Resources provides background survey and study information consistent with the Code of Virginia, specifically § 15.2-2224, Surveys and studies to be made in preparation of plan; implementation of plan. Content of Appendix C includes updates: overview documenting the history of Spotsylvania County; inventory of protected battlefields lands; documenting historic preservation efforts and actions; identification of the County's historic properties identified on the Virginia Landmarks Register and National Register of Historic Places; resource recognition identifying the Virginia Department of Historic Resources Virginia Cultural Resource Information System (V-CRIS) with summary and link.

Appendix D

Appendix D Natural Resources provides background survey and study information consistent with the Code of Virginia, § 15.2-2224, and 9VAC25-830-170 Comprehensive Plans. Within this Appendix updates include: physiography; climate hazards, referencing the 2017 Regional

Hazard Mitigation Plan; radon; light pollution; physical constraints on development with links to complementary County mapping resources; geology; mineral resources and industries (past, present, future); soils with an overview of soil conditions and specific consideration of steep slopes, shrink-swell soils , hydric soils, erodibility/permeability of soils, septic suitability, septic limitations, soil depth to water table, soil drainage, groundwater recharge areas, contaminated soils including storage tank related contamination; potable water; water reservoirs; dam break inundation areas; wetlands overview; watersheds; stream, river corridors and shorelines considering the Virginia Scenic River Program, public and private access to waterfront areas, shoreline and streambank erosion, resource protection policies overview and inventory of known impaired resources; content addressing the requirements of the Code of Virginia § 15.2-2223.2. Plan to include coastal resource management guidance; Chesapeake Bay Septic Pump-out program; consideration of local zoning and ordinances, including identification of resource protection areas, resource management areas, reservoir and river protection overlay districts, floodplains and floodplain overlay district, Massaponax Creek Watershed Plan; Flora and Fauna including Spotsylvania County Natural Heritage Resources and the Natural Heritage Data Explorer resource, 2015 Virginia Wildlife Action Plan, Virginia Fish and Wildlife Information Service (VaFWIS). Additional subject matter explored in the Appendix includes: forestry, including an analysis of in County production and trends and land use consideration of forest conservation value; production of food and fiber including data from the census of agriculture, commercial fisheries and aquaculture; land use suitability models including agricultural suitability, agricultural soils, forest conservation value, ecological cores, consideration of the George Washington Regional Commission Green Infrastructure Plan; land conservation considering various programs and tools such as the land use program, conservation easements, zoning ordinance, Comprehensive Plan support and guidance.

WHEREAS, staff has reviewed the proposed updates to the Draft 2021 Comprehensive Plan and recommends approval thereof, as stated in the Executive Summary dated _____; and

WHEREAS, the Spotsylvania Planning Commission public hearing, duly advertised in a local newspaper for a period of two weeks, was held on Wednesday, August 18, 2021 and concerned citizens were be given an opportunity to be heard on the proposed updates and amendments; and

WHEREAS, the general welfare and good planning and zoning practice are served by approval of the Draft 2021 Comprehensive Plan.

NOW, THEREFORE, BE IT RESOLVED that the Spotsylvania County Planning Commission does hereby recommend to the Board of Supervisors approval of CPA17-0002, the Draft 2021 Comprehensive Plan.

(SEAL) A COPY TESTE: _____

Paulette Mann
Secretary to the Planning Commission

CHAPTER 1 INTRODUCTION AND VISION, COMPREHENSIVE PLAN UPDATE PROCESS GUIDANCE MEETING MINUTES COLLECTION

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES: August 2, 2017

Call to Order: Mr. Newhouse called the meeting to order at 7:00 p.m.

Members Present:	C. Douglas Barnes	Berkeley
	Gregg Newhouse	Chancellor
	Richard Thompson	Courtland
	Michael Medina	Salem
	Howard Smith	Livingston
Member Absent:		
	Mary Lee Carter	Lee Hill
	C. Travis Bullock	Battlefield

Staff Present: Paulette Mann, Planning Commission Secretary
Wanda Parrish, AICP, Director of Planning
Alexandra Spaulding, Senior Assistant County Attorney
Jacob Pastwik, AICP, Planner III
Patrick White, Planner III
Donna Mayfield, Office Technician

Announcements: Ms. Parrish informed the Commission about an upcoming community meeting and advised of upcoming cases and when they would be heard by the Commission. She informed the Commission that she would provide a highlighted result of cases that move on to the Board of Supervisors in the Planning Update. The Dollar General was recently approved and included an amended proffer for a right turn taper. Ms. Parrish stated that the report on cases is now posted and updated on the planning department website page.

Review & Approval of minutes:

Motion and vote: Mr. Thompson made a motion, seconded by Mr. Barnes to approve the minutes of July 5, 2017. The motion passed 4-0-1, with Mr. Smith abstaining due to his absence.

Unfinished Business: None

Worksession(s):

Comprehensive Plan Update

Major Components of Update

<u>Chapter 1 – Introduction and Vision</u>

- Update demographic data and projections
- Review and amend Vision statement, if deemed appropriate
- Review, update, and amend Guiding Principles and Strategies to guide the plan development
- Action Plan update (later in schedule)

Chapter 2 – Land Use

- Review current Primary Development Boundary and determine if any changes are needed to the boundary or policies
- Review the land use categories and determine if they are appropriate and whether any new categories are needed
- Update Future Land Use Map
- Review and update land use policies

Chapter 3 – Transportation & Thoroughfare Plan

- Updates related to the Code of Virginia; local, state, and regional plans that exist or are in process; modes of transportation; and the Travel Demand Model
- Review and update Transportation Impact Analysis policy as necessary
- Review and update transportation policies and strategies
- Review and update the Thoroughfare Plan
    - Prioritized list

Ms. Parrish stated that FAMPO is working on their 2045 plan and we need to be sure we are consistent with their plan. She stated that we will need to take a very good look at our thoroughfare plan and prioritize the list of projects because that helps the Board when they are trying to obtain funding for road projects. She stated that the Transportation Committee did this back in 2014 but it needs to be reviewed again.

Chapter 4 – Public Facilities Plan

- Update existing facility information
- Review and update each facility focusing on levels of service, service areas, and facility standards
    - Public Schools
    - FREM
    - Sheriff
    - Solid Waste Collection & Disposal
    - Water and Sewer Facilities

- Library Facilities
- Parks & Recreation

Ms. Parrish stated that the water/sewer masterplan is occurring and it's important that we have good level of service standards as we evaluate residential rezonings to backup our proffer analysis.

Chapter 5 – Historic Resources

- Updates to background information, as necessary
- Review Goals, Policies, and Strategies and update as necessary

Chapter 6 – Natural Resources

- Updates to background information, as necessary
- Review Goals, Policies, and Strategies and update as necessary

Additional Topics

Ms. Parrish discussed that the Commission may want to consider the following:

New Chapter-

- Economic Development Plan

Ms. Parrish discussed that we look at population but it may be good to look at different demographics and age groups.

Greater Focus on-

- Expanded demographic data and projections related to housing, economic data, labor stats, unemployment, etc.
- Housing
- Broadband
- Emerging industries & development trends
- Revitalization areas
- Specific areas (Thornburg)

Mr. Newhouse inquired what a good link would be between Employment designation and Land use.

Ms. Parrish stated that we need to review what the county is best set up to attract in regard to desirable economic developments such as defense contractors and advanced manufacturing.

Mr. Pastwik stated that the county does have a dilemma sometimes in industrial zoned areas where an advanced manufacturing company is located and then a car metal recycling center wants to locate next door. We need to look at what uses work together harmoniously. Conflict or change in character can be a concern even though both are needed and valuable uses.

Mr. Newhouse stated that the county needs to be careful to not discriminate.

Mr. Barnes stated that the county has an economic develop plan, a strategic plan, HUB zones, etc. He stated that he is hearing that we want to minimize conflicts and there to be a clear understanding. Are we suggesting to not create something new but to merge and link these documents together?

Ms. Parrish stated that is a topic for discussion. She noted that those zones and resources are not documented in our plan. We need to identify what's existing and what else could be out there.

Mr. Barnes inquired what staff's strategy was.

Ms. Parrish stated that Economic Development Department and perhaps the EDA would be a big player in this type of update.

Mr. Pastwik stated that the ultimate goal is to have a shared goal with Economic Development. We understand the importance of shovel ready sites and the concern is that we attract a potential manufacturing and ensuring that our plan meets that shared vision.

Mr. Medina stated that he sees one dilemma in that we have a hurdle in providing demoraphic data in real time. It's usually 10-15 years out.

Ms. Parrish stated that she intends to share a housing study that the Fredericksburg Area Association of Realtors recently put out. She will provide at the next meeting.

Ms. Parrish also discussed Broadband as well as solar farms and that the county has become an area of interest for them. We have been approached already by 4 solar companies.

Also discussed is the large numbers of apartments that have been built here in recent years, as well as revitalization corridors. Ms. Parrish discussed that the road improvements are occurring at Thornburg and a clear vision should be established for that interchange and how the county sees this area developing.

Mr. Newhouse stated that he is most interested in the report from FAAR regarding cell towers and how they have been said to devalue property.

Ms. Parrish stated that they are doing a regional report on apartments as well.

Mr. Smith inquired if these reports take into consideration the impact on public facilities.

Ms. Parrish stated no, that they are not considering impacts on public facilities.

Mr. Barnes suggested that staff create a list of what areas of the comprehensive plan that we don't need to amend or review and why and allow the Commission to react.

Ms. Parrish stated that the biggest thing that needs Planning Commission input to be updated are policies. Many of the technical updates that need to occur can happen at a staff level. Those are primarily statistical updates.

Mr. Thompson stated that the previous Planning Commission worked long and hard on this update and he doesn't see why we can't update the statistical updates by using the existing document and make relative to the present.

Ms. Parrish stated that this is what staff is proposing.

Mr. Thompson stated that he heard the Board of Supervisors may be taking over this update and inquired if that is correct.

Ms. Parrish stated no that they want the Commission to develop a plan on how to move forward, create a timeline and then go to the Board. She stated that he may be thinking of the Strategic Plan that was discussed at the last meeting and the Board seeing them as two separate processes although there is some overlap in the plans. In the end, it was decided that County Administration would be handling the Strategic Plan but staff will keep tabs on the progress for overlap and parallels to the Comprehensive Plan.

Mr. Barnes stated that transportation Virginia is not working and that in order to get good economic development prospects you need good infrastructure.

Public Input

<u>Options for early input</u>

- Voting District meetings sponsored by Planning Commissioner with Board member

Pro – Each Planning Commissioner will be able to represent the opinions of their constituents

Con – Artificial boundary when considering development patterns / land uses

- General meetings at locations convenient to various populations
  Pro – Focus on specific areas (i.e. Lake Anna)

  Con –

Options for specific topic input

- Transportation Chapter and Thoroughfare Plan - Transportation Committee
- Public Facilities – Dept./ Agency Directors
- Focus Meetings
  - Housing (Central Virginia Housing Coalition, Fredericksburg Area Association of Realtors, Fredericksburg Area Builders Association)
  - Economic Development (Economic Development Authority, Fredericksburg Regional Alliance, Fredericksburg Area Chamber of Commerce)

During Planning Commission work sessions

- Public comment periods

Draft Plan Review:

- General meetings at locations convenient to various populations

Staff is also investigating on-line methods of gathering input.

Mr. Thompson stated that if we are talking about updating the plan and bringing it current, doesn't bringing people into this complicate things. He suggested proceeding with correcting the outdated data.

Mr. Smith disagreed and stated that we should have meetings and receive input or it looks like the Commission doesn't care what people have to say. He stated that he doesn't like the idea of district meetings but rather a few general meetings. Since his district is so large, he suggested making one convenient for his district residents.

Mr. Barnes stated that he agrees with Mr. Smith and is in support of general meetings. He suggested that some of the updates should occur and then hold the meetings to allow the people to react to current versus proposed.

Mr. Thompson stated that after further consideration, he would like to change his stand and suggest that general meetings should be held and we should hear what the people have to say.

Mr. Newhouse suggested that we need to convey that this is not a major plan amendment and feels that the general meetings are important but we need to have a clear goal in mind.

Ms. Parrish stated that she understands the Commission would like to hold general meetings and not district specific. Staff will come back with more details by showing what we are and are not proposing needed amendments and meetings should be held in several locations, convenient to all.

There was discussion that the Land Use chapter will represent the whole county and will likely be the most heavily attended meeting. Transportation and roadways typically receive a lot of input.

Ms. Parrish advised that staff will begin working on the Introduction and Land Use Chapters.

New Business: None

Public Comment: None

The meeting adjourned at 7:50 p.m. on a motion by Mr. Thompson, seconded by Mr. Smith. The vote was 5-0.

Paulette L. Mann
Paulette L. Mann

August 16, 2017
Date

PRESENT:	Greg Benton, Livingston District Kevin W. Marshall, Berkeley District Timothy J. McLaughlin, Chancellor District David Ross, Courtland District Gary F. Skinner, Lee Hill District Paul D. Trampe, Salem District Chris Yakabouski, Battlefield District
STAFF PRESENT:	Mark B. Taylor, County Administrator Mark Cole, Deputy County Administrator Karl Holsten, County Attorney Nicole Woodard, Assistant to County Administration

Mr. Benton called the meeting to order at 6:00 p.m. Mr. Ross led the Pledge of Allegiance and Mr. Benton gave the invocation.

APPROVAL OF AGENDA

On a motion by Mr. Marshall and passed unanimously, the Board approved the agenda with the following addition:

- Grant Application Request and Resolution for the FY18 Virginia Department of Emergency Management Homeland Security Grant Program for a Patrol Boat for Lake Anna.

VOTE:

Ayes:	7	Mr. Benton, Mr. Marshall, Mr. McLaughlin, Mr. Ross Mr. Skinner, Dr. Trampe and Mr. Yakabouski
Nays:	0	
Absent:	0	
Abstain:	0	

PUBLIC PRESENTATIONS

The following citizens spoke in opposition or with concerns to the proposed solar farm: Russ Mueller, Michael O'Brier, Ernie Booth, Joanne Booth, Judith Genaille, Irvin Boyles and Kristen Talken-Spaulding.

The following citizens spoke on behalf of the Buckley family regarding the removal of Juan Antonio from their care: John Buckley, Abby Buckley, Britton Brannen, Jeff Wollschlager, Jen Wollschlager, Richard Byrdsong, Johnny Bryan, Ken Gross and Marcia Stevens.

d. School Capital Projects $85,286,546

RESOLVED FURTHER, that the County Administrator is authorized to take all necessary actions to give this resolution effect.

On a motion by Mr. Marshall and passed unanimously, the Board adopted the resolution as follows:

VOTE:

Ayes:	7	Mr. Benton, Mr. Marshall, Mr. McLaughlin, Mr. Ross Mr. Skinner, Dr. Trampe and Mr. Yakabouski
Nays:	0	
Absent:	0	
Abstain:	0	

RESOLUTION NO. 2018-67

BE IT RESOLVED by the Board of Supervisors of the County of Spotsylvania, Virginia, that the following appropriation be, and the same hereby are, made for the fiscal year beginning July 1, 2018, from the funds and for the functions or purposes indicated.

For adjustments to capital projects to align the budget and CIP, to be expended only by order of the Board of Supervisors as follows:

CAPITAL PROJECTS FUND: $105,000
TRANSPORTATION FUND: ($52,500)

The Board recessed at 8:40 p.m. and reconvened at 8:45 p.m.

WORK SESSION

Planning Commission and Board of Supervisors Work Session to Discuss the 2018 Update of the Comprehensive Plan

The Code of Virginia requires that jurisdictions review their Comprehensive Plan every five (5) years and update as necessary. The 2013 update of the Comprehensive Plan resulted in substantial revisions. The 2018 update was proposed to consist of necessary updates and desired enhancements to support the County's Vision as defined in Chapter 1 of the Comprehensive Plan. This joint work session was an opportunity for the Board of Supervisors and Planning Commission to discuss the Plan and provide staff with direction on the update approach, focus areas, and process.

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES: May 2, 2018

Call to Order: Mr. Newhouse called the meeting to order at 7:00 p.m.

Members Present:	Richard Thompson	Courtland
	Michael Medina	Salem
	Howard Smith	Livingston
	Jennifer Maddox	Berkeley
	C. Travis Bullock	Battlefield
	Gregg Newhouse	Chancellor
	Mary Lee Carter	Lee Hill

Staff Present: Wanda Parrish, AICP, Director of Planning
Paulette Mann, Planning Commission Secretary
B. Leon Hughes, AICP, Assistant Director of Planning
Jacob Pastwik, AICP, Planner III
Patrick White, Planner III
Alexandra Spaulding, Senior Assistant County Attorney

Announcements: Ms. Parrish advised of a community meeting scheduled for May 10, 2018. She also informed the Commission that details for the visit to Louisa to tour the Whitehouse solar facility have been firmed up and agendas are at the Commissioner's places. Lastly, she reminded the Commission of the special meeting with the Board of Supervisors on May 22, 2018 at 6 p.m. to discuss the update of the Comprehensive Plan.

Review & Approval of minutes:

Motion and vote: Mr. Thompson made a motion, seconded by Mr. Medina to approve the minutes of March 7, 2018. The motion passed 5-0.

Unfinished Business: None

Public Hearing(s):

Rezoning(s):

R17-0013 Spectrum Partner Investments, LLC (Roseland Townhomes) (Ordinance No. RO17-0013): Request a rezoning of 1.0124 acres from Residential 1 (R-1) to Mixed Use 2 (MU-2) with proffers to allow for the development of 14 townhomes. The properties are located at 212, 214, and 216 Hudgins Road and three additional unaddressed properties. The properties are partially located within the Highway Corridor Overlay District and within the Primary Development Boundary. The properties are identified for Mixed Use development on the Future

Mr. Newhouse inquired about stormwater and how it would be managed.
Mr. Mark King stated that it would be a combination of LID and retention ponds.

Speaking in favor or opposition:

Lee Milstead, Battlefield Voting District: He stated that he is a longtime resident of the county and that he doesn't see how putting 14 townhomes makes sense here. He stated that the townhomes would be looking down on the existing residential homes. Mr. Milstead stated that Hudgins Road is basically a driveway to what used to be a farm and cannot handle the additional traffic. He fears it will affect property values and that an 8 foot screening won't help with 3 story buildings. He also stated that the sidewalk will only be present for one block.

Larry Gayle, Battlefield Voting District: He stated that he has lived here for 50 years and that Hudgins road is a cut-through. He stated that if the Commission and Board vote in favor of the proposal, he will certainly remember at election time.

Mr. Newhouse closed the public hearing.

Mr. Bullock thanked the gentlemen for speaking this evening.

Motion and vote: Mr. Bullock made a motion, seconded by Ms. Carter to approve the rezoning with proffers dated April 9, 2018. The motion passed 7-0.

Discussion Item(s):

Planning Commission Bylaws

Ms. Parrish provided a copy of the draft bylaws to the Commission. She discussed the proposed changes and that they were really just a cleanup of the bylaws.

Motion and vote: Ms. Carter made a motion, seconded by Mr. Thompson to approve the amended bylaws. The motion passed 7-0.

Worksession(s):

Comprehensive Plan Update

Ms. Parrish presented the worksession. The focus of this work session is population growth over time. Understanding the history of population growth and projections into the future are foundational components in developing a comprehensive plan to guides growth and development in the County 20 years into the future.

Looking back significant increases in population began in the 1970s. Between 1970 and 1980 the population in the County more than doubled. Between 1980 and 1990 the growth rate was 66.7%. The next 10 year period from 1990 to 2000 was 57.5% and then it lowered to 35.4%

bringing us to 2010. If the County continues to experience annual growth similar to this last year at 1.24%, the 10 year growth rate from 2010 to 2020 would be 12.3%.
Ms. Parrish displayed a chart showing the growth in housing units since 1990. She asked the Commission to notice that the trend mirrors that of the population growth with a much greater growth rate in the 1990s and 2000s and slowing in this 10 year period.

While the population has increased each year, on a yearly basis the rate of growth has varied. As of July 1, 2017, the estimated population in the County is 133,033 and the growth rate from 2016 was 1.24%. This is the second year of an increased growth rate, but looking back in recent history there were higher annual growth rates in 2011 and 2013. Since 2007 the county has hovered around a 1% annual growth rate. At a recent Planning Commission meeting the question was asked about the "2% growth rate goal" that was adopted in the 2002 Comprehensive Plan but removed in the 2013 update. The impetus for that goal was the high growth rate the County was experiencing at that time.

The Weldon Cooper Center for Public Service provides population projections for Virginia jurisdictions. Their current estimate for Spotsylvania County is less than the Census estimate at 131,549 vs 133,033, a difference of 1,484 people. I believe their 2020 projection is going to prove low. Assuming growth continues at a similar annual growth rate to what we have experienced even using their lower current population we'd reach 136,504 by 2020. Continued increases in population and potentially higher growth rates are supported by the Weldon Cooper Center's Center of Population projections.

Ms. Parrish showed a chart that brings together the past and the future to show 5 year increments of growth through 2045

Ms. Parrish displayed two graphics showing the recent uptick in single family lots created and in residential building permits. Currently there are 14,071 unbuilt approved units. This includes single family detached, single family attached, apartments, and age-restricted all unit types but excludes by-right subdivision of less than 10 lots created from family divisions, annual divisions, and vacant lots in established subdivisions. She also discussed a slide comparing approved units to population projections.

In conclusion she discussed the following:

- Weldon Cooper Center projections are reasonable expectations
- Annual growth rate is expected to trend upward, but not reach levels of early 2000s
- Establishing a growth rate goal is a complex undertaking and difficult to track/achieve
- Instead, suggest focus on goals/policies related to adequate public facilities / Levels of Service

New Business

Mr. Newhouse mentioned the Committees mentioned in the bylaws and that this should be discussed at another time.

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES:	November 6, 2019	
Call to Order:	Ms. Carter called the meeting to order at 7:00 p.m.	
Members Present:	Mary Lee Carter	Lee Hill
	Jennifer Maddox	Berkeley
	C. Travis Bullock	Battlefield *(arrived at 7:05)*
	Richard Thompson	Courtland
	Michael Medina	Salem
Members Absent:	Gregg Newhouse	Chancellor
	Howard Smith	Livingston
Staff Present:	Paulette Mann, Planning Commission Secretary	
	Wanda Parrish, AICP, Director of Planning	
	Alexandra Spaulding, Senior Assistant County Attorney	
	Jacob Pastwik, AICP, Planner III	

Announcements: Ms. Parrish advised the Commissioners that the AT&T tower is now certain for the next meeting. She also informed them that a new public hearing case has been submitted for Aura at Town Center and is scheduled for TRC on November 21, 2019.

Review & Approval of minutes:

Ms. Mann advised the Commission that the minutes would need to be voted at the next meeting due to the fact that Mr. Medina was absent and Mr. Newhouse and Mr. Bullock were no present to approve them.

Unfinished Business: None

Worksession(s):

CPA17-0002 Comprehensive Plan –Historic & Natural Resources Chapters

Mr. Pastwik presented the worksession. On May 22, 2018, Planning Staff provided an overview of the proposed Comprehensive Plan update process at a joint work session attended by the Planning Commission and Board of Supervisors. From a Comprehensive Plan standpoint, staff has found the Historic Resources and Natural Resources Chapters to be effective with little need of major substantive change. Thorough review of the content of both Chapters during the 2013 Comprehensive Plan update process with the aid of the Comprehensive Plan working groups and Planning Commission streamlined the goals and objectives while maintaining efforts to identify significant resources and minimize negative impacts upon them.

Comprehensive Plan Update Status

Ms. Parrish stated that they were going to recap where we are in the process of the Compehensive Plan and that it is now time to begin thinking about reaching out to the commnity. She advised that this is not a pressing item and can revisit at our next meeting since a couple of Commissioners are not present.

Mr. Pastwik presented and walked through all of the chapters that have been presented via worksessions.

Mr. Thompson stated that he wants to make it clear that he doesn't want to see any new chapters added. He said that the previous Commission was able to reduce the overall size and doesn't want to see any unnecessary chapters being added.

Ms. Parrish stated that she understands and stated that the Comprehensive Plan is the Commission's document and that they are driving the bus on the approval of the update.

Mr. Thompson stated that he is not interested adding anything except for what is required by the General Assmebly.

Ms. Carter agreed.

Mr. Medina inquired about the limitations in an open house like setting and how the meeting is recorded.

Ms. Parrish stated that staff could act as scribes and take notes or we could have people come by, ask questions, view maps, etc. and ask them to submit any comments to staff via email or other means. Ms. Mann is checking into the possibility of citizens submitting comments via our new website.

Mr. Medina stated that if we do go this route, he would like to see the solar group have their own meeting as the rest of the plan is equally important and doesn't want that to take over.

There was discussion about potentially having a half day workession.

Ms. Maddox stated that she likes the open house format and that so many people have devices now that they could submit their comments right there at the meeting.

Ms. Parrish stated that we can discuss further at the next meeting. She advised that we will be staying away from the holidays and will not schedule the meetings until 2020.

Public Comment: None

New Business: None

Adjournment:

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES:	November 20, 2019	
Call to Order:	Ms. Carter called the meeting to order at 7:00 p.m.	
Members Present:	Mary Lee Carter	Lee Hill
	Jennifer Maddox	Berkeley
	Richard Thompson	Courtland
	Michael Medina	Salem
	Gregg Newhouse	Chancellor
	C. Travis Bullock	Battlefield
Members Absent:	Howard Smith	Livingston
Staff Present:	Paulette Mann, Planning Commission Secretary	
	Wanda Parrish, AICP, Director of Planning	
	Alexandra Spaulding, Senior Assistant County Attorney	
	Jacob Pastwik, AICP, Planner III	
	David Dameron, CZA, Planner III	
	B. Leon Hughes, AICP, Assistant Director of Planning	

Announcements: Ms. Parrish advised the Commissioners that at this point, no cases are ready for public hearing and depending on the outcome of this meeting, the Commission may want to consider canceling the December 4, 2019 meeting.

Review & Approval of minutes:

October 2, 2019 Minutes

Motion and vote: Mr. Newhouse made a motion, seconded by Mr. Thompson to approve the minutes of October 2, 2019. The motion passed 5-0-1 with Mr. Medina abstaining due to his absence and Mr. Bullock absent.

November 6, 2019 Minutes

Motion and vote: Mr. Newhouse made a motion, seconded by Ms. Carter to approve the minutes of November 6, 2019. The motion passed 6-0.

Unfinished Business: None

CPA17-0002 – Comprehensive Plan (Industrial Acreage & Mussel Farm)

Mr. Newhouse inquired if there will be capacity for the county to have room on the tower.

Mr. Burns stated yes.

Mr. Newhouse stated that he would like to see a map of all existing towers in the county prior to hearing any tower case.

Ms. Carter stated she visited the site and she doesn't believe we are lacking in coverage. She stated that she would like to continue the meeting until December 18, 2019 to allow further time to study the proposal.

Motion and vote: Ms. Carter made a motion, seconded by Mr. Thompson to continue the hearing to December 18, 2019. The motion passed 5-0.

Worksession(s):

Comprehensive Plan Update Status

As discussed last meeting, the public outreach will not occur until after the first of the year. Staff is looking for feedback as to how to proceed with public meetings.

Ms. Parrish advised that the community meetings need to be accessible and convenient to various parts of the county.

At the last meeting there was discussion about different stations for each section of the plan and Ms. Carter stated that she really likes that idea.

Ms. Maddox stated that she likes the idea of holding the meetings at Massaponax High, Riverbend High, and Spotsylvania High School. The three locations would cover a good portion of the County. She also stated that it would be nice to have iPads so that citizens can provide feedback and comments that evening.

Mr. Newhouse inquired how the meetings would be advertised.

Ms. Parrish stated that ads would be placed in the newspaper, social media, cable tv government channel, and the County's website.

Ms. Carter encouraged staff to reach out to Homeowners Associations.

Ms. Maddox also suggested posting flyers.

Mr. Medina inquired about how the format would be.

Ms. Parrish stated that she envisions having a booth or table for each of the chapters with a specialist to speak on each section.

Mr. Medina inquired if we have enough staff to man the booths.

Ms. Parrish stated that we will recruit the appropriate staff members to man each booth.

Mr. Newhouse stated he imagines the FLUM and Transportation stations will be very busy.

Mr. Medina inquired what the limitations are for the Commissioners and Board Members to attend.

Ms. Parrish advised that we could advertise as a meeting to be sure we are compliant with FOIA regulations.

Mr. Newhouse stated that it may be good to find out ahead of time who plans to attend to determine if advertising as a meeting is necessary.

Public Comment:

Jim Brown, Lee Hill District: He stated that he is new to the area and learning how things work. He thanked the Commissioners for their service.

New Business: None

Adjournment:

Motion and vote: Mr. Thompson made a motion, seconded by Mr. Bullock to adjourn. The motion passed 6-0.

The meeting adjourned at 8:10 p.m.

Paulette L. Mann
Paulette L. Mann

December 18, 2019
Date

COUNTY OF SPOTSYLVANIA

BOARD OF SUPERVISORS COMMUNICATION

Date: December 16, 2020

Purpose:

X	BOS Follow-Up	_____	Schedule Notes *
_____	Future BOS Meeting (Date)	X	Information Only *
_____	Emerging Issue	_____	Other: _____

* May be combined

Title: Release of the Draft Comprehensive Plan Geohub website for public review and comment

Summary/Analysis: On May 26, 2020, Spotsylvania GIS staff provided a demonstration of the County's Geohub website to the Board of Supervisors highlighting its functionality and capabilities, including a preview of the Comprehensive Plan website that was under development at the time. County GIS staff have been an integral part of the website development.

A recording of the May 26, 2020 meeting can be found below. The presentation (at approximately minute marker 43) provides good insight into the development and functionality of the site:

Click Here

The County Planning office has completed draft work on the Comprehensive Plan (Plan). County Planning staff working closely with the GIS Division were able to successfully translate the Plan update into an interactive web based format. Staff are happy to report the Draft Plan and corresponding Geohub website; meant to showcase the Draft Plan, is now prepared for release to the public for review and comment.

The Spotsylvania County Planning Department invites interested citizens and community stakeholders to review and comment on the Draft Comprehensive Plan

Update through a new interactive website.

The Comprehensive Plan is a significant non-regulatory document providing guidance and vision on the future of the County within a planning period over the next 20 years. Topics such as transportation, land use, protection of historic and natural resources, public facilities including but not limited to public parks, public safety, schools, solid waste, libraries are covered in the Plan. Starting on Wednesday December 16, 2020 the Draft Comprehensive Plan will be available for review and comment until January 31, 2021. The website includes links to the complete draft Chapters in redline (edit tracking) and clean format and helpful links to content related to the development of specific Chapters. Now is your opportunity to share comments on the County's Draft Comprehensive Plan Update! The interactive website can be accessed online via the Spotsylvania County Government website at www.spotsylvania.va.us, specifically linked in the County News tab/portion of the page titled Draft Comprehensive Plan, or via link on the County Planning Department website at https://www.spotsylvania.va.us/690/Planning. A direct link to the site is Here.

The website may also be accessed via the QR Code below:

The website provides comment boxes for each Chapter and ability to provide comment in interactive maps embedded within the site. The proposed Draft is also available on file at the Planning and Zoning Department, located at 9010 Old Battlefield Blvd, 3rd Floor, Spotsylvania, Virginia 22553, and may be inspected between 8:00 a.m. and 4:30 p.m., Monday through Friday (except when offices are closed for holiday or inclement weather). Additionally, comments may be provided via email to planning@spotsylvania.va.us. Comments should be submitted/received by Sunday January 31, 2021.

In these challenging times due to the coronavirus pandemic we feel making the complete draft available prior to public hearings maximizes review potential of the complete draft from the comfort of one's home or office. Staff believes this web based format actually enhances opportunities to review the Draft Plan compared to traditional community meeting formats that tend to be presentation and overview based and limited to specific times and dates. The website presents the full text of the proposed

Prepared By: Jacob L. Pastwik

Reviewed By: _____

Comprehensive Plan update as well as an abundance of subject specific content and formative details discussed during the update process through work sessions; including meeting minutes, agendas, links to recorded broadcasts.

Staff is working with the County Public Information Officer to coordinate advertisement of the resource. Staff intends to advertise through various means such as social media, newspaper, County cable channel, flyer, County website, Email.

Conclusion/Recommended Action: Information only

Prepared By: Jacob L. Pastwik

Reviewed By: _____

SPOTSYLVANIA COUNTY PLANNING COMMISSION MEETING AGENDA
January 6, 2021 - 7:00 PM

Call to Order

Pledge of Allegiance

Determination of a Quorom

Announcements

- Planning Update

Review and Approval of Minutes

- Review and approval of minutes from November 4, 2020

Unfinished Business

Public Hearings

- R18-0010 Chancellor Ridge/ Old Plank Partners LLC (Chancellor District)

Worksessions

- Release of the Draft Comprehensive Plan Geohub website for public review and comment

Public Comment

New Business

- Resolution to Move Meeting

Adjournment

By Order of the Spotsylvania County Planning Commission: The Planning Commission reserves the right to amend this agenda on the day of the meeting. The Commission encourages the participation of all county citizens. For those with special needs, please notify the Planning Department Office of any accommodation required five days prior to the meeting you wish to attend.

Spotsylvania County
Planning Commission
Executive Summary

Print

Meeting Date:	January 6, 2021
Title:	Release of the Draft Comprehensive Plan Geohub website for public review and comment
Type:	No Action (Information Only)
Agenda Title:	Release of the Draft Comprehensive Plan Geohub website for public review and comment
Recommendation:	N/A- Information Only
Summary:	The County Planning office has completed draft work on the Comprehensive Plan (Plan). County Planning staff working closely with the GIS Division were able to successfully translate the Plan update into an interactive web based format. Staff are happy to report the Draft Plan and corresponding Geohub website; meant to showcase the Draft Plan, is now prepared for release to the public for review and comment. As part of the January 6, 2021 Staff Report to the Planning Commission, staff intends to provide a brief overview of the website in order to showcase its content.

The Spotsylvania County Planning Department invites interested citizens and community stakeholders to review and comment on the Draft Comprehensive Plan Update through a new interactive website.

The Comprehensive Plan is a significant non-regulatory document providing guidance and vision on the future of the County within a planning period over the next 20 years. Topics such as transportation, land use, protection of historic and natural resources, public facilities including but not limited to public parks, public safety, schools, solid waste, libraries are covered in the Plan. Starting on Wednesday December 16, 2020 the Draft Comprehensive Plan will be available for review and comment until January 31, 2021. The website includes links to the complete draft Chapters in redline (edit tracking) and clean format and

helpful links to content related to the development of specific Chapters. Now is your opportunity to share comments on the County's Draft Comprehensive Plan Update! The interactive website can be accessed online via the Spotsylvania County Government website at www.spotsylvania.va.us, specifically linked in the County News tab/portion of the page titled Draft Comprehensive Plan, or via link on the County Planning Department website at https://www.spotsylvania.va.us/690/Planning .

A QR Code will also be made available to access the website.

The website provides comment boxes for each Chapter and ability to provide comment in interactive maps embedded within the site. The proposed Draft is also available on file at the Planning and Zoning Department, located at 9019 Old Battlefield Blvd, 3rd Floor, Spotsylvania, Virginia 22553, and may be inspected between 8:00 a.m. and 4:30 p.m., Monday through Friday (except when offices are closed for holiday or inclement weather). Additionally, comments may be provided via email to planning@spotsylvania.va.us. Comments should be submitted/received by Sunday January 31, 2021.

In these challenging times due to the coronavirus pandemic we feel making the complete draft available prior to public hearings maximizes review potential of the complete draft from the comfort of one's home or office. Staff believes this web based format actually enhances opportunities to review the Draft Plan compared to traditional community meeting formats that tend to be presentation and overview based and limited to specific times and dates. The website presents the full text of the proposed Comprehensive Plan update as well as an abundance of subject specific content and formative details discussed during the update process through work sessions; including meeting minutes, agendas, links to recorded broadcasts.

Staff is working with the County Public Information Officer to coordinate advertisement of the resource. Staff intends to advertise through various means such as social media, newspaper, County cable channel, flyer, County website, Email.

Committee/Commission Summary:

Review Date:	Status:
Financial Impact:	N/A- Information Only
Staff Contacts:	Leon Hughes, Director of Planning and Zoning; Jacob Pastwik, Planner III
Legal Counsel:	N/A
Additional Background/Other Considerations:	
Consequence of Denial/Inaction:	N/A- Information Only

ATTACHMENTS:

Name:	Description:	Type:
No Attachments Available		

Spotsylvania County Planning Commission

Board Room – Holbert Building, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES: April 7, 2021

Call to Order: Ms. Maddox called the meeting to order at 7:00 p.m.

Members Present:	Mary Lee Carter	Lee Hill
	Jennifer Maddox	Berkeley
	Richard Thompson	Courtland
	Dr. Raymond Bell	Salem
	Jacob Lane	Livingston
	C. Travis Bullock	Battlefield (arrived at 7:05)
	Gerald Childress	Chancellor

Staff Present: Paulette Mann, Planning Commission Secretary
B. Leon Hughes, AICP, Director of Planning & Zoning
Alexandra Spaulding, Senior Assistant County Attorney
Kimberly Pomatto, AICP, Deputy County Administrator
Jacob Pastwik, AICP, Planner III
Shannon Fennell, Planner III

Announcements: Mr. Hughes updated the Commission on upcoming cases, what's on the TRC agendas and community meetings.

Review and approval of minutes

Motion and vote: On a motion by Ms. Maddox, seconded by Mr. Thompson, the Commission

VOTE:

Ayes: 7 Dr. Bell, Ms. Carter, Mr. Bullock, Ms. Maddox, Mr. Lane, Mr. Thompson and Mr. Childress
Nays: 0
Absent: 0
Abstain: 0

Discussion Item(s):

CPA17-0002 - Comprehensive Plan Update – Public Comment Review

Mr. Pastwik presented the PowerPoint. He discussed the advertising methods and how comments were solicited. He raised the following discussion items

- Does the Planning Commission support suggestions to reiterate similar goals across Chapters?

The Commission stated that don't see the need for duplication.

- Does the Planning Commission support adding language generally supportive of rooftop solar?

Mr. Thompson expressed that he doesn't feel it necessary to add this to the plan.

Mr. Hughes stated the idea behind adding it shows that we are a community that supports green energy.

The consensus was to leave the language out of the plan.

- Does the Planning Commission wish to adjust the recommended total land area cap for solar energy facilities? At present the draft states 5% of the land area outside of the Primary Development Boundary. An alternative suggestion requests 3% that still leaves room to accommodate a County code identified?

The consensus was to leave the language at 3%.

Mr. Pastwik asked the following related to the Primary Development Boundary.

- Does the Planning Commission wish to re-examine a requested Primary Development Boundary expansion to the east of Massaponax Church Road at this time? Staff notes conditions have not changed from a Planning and Utilities standpoint.

Mr. Thompson stated that he wouldn't want to see an expansion of the boundary until the boundary is completely developed.

Mr. Lane agreed.

- Doe the Planning Commission support higher intensity mixed use designation with greater emphasis on residential development at Lake Anna? This prospect introduces development using a satellite private or public utility system. Mass drainfields may also be consideration. Presently the draft assumes a lower density commercial oriented mixed use area reliant on well and septic systems.

Mr. Lane stated that he wouldn't want high density development at Lake Anna.

Mr. Childress stated that high speed internet is definitely needed at the Lake.

Mr. Lane stated that he would prefer that the lake be for the citizens of the county and not see it grow much.

- Does the Planning Commission wish to explore further expansion of the Primary Development Boundary to connect the Courthouse area to the Route 1 corridor along Massaponax Church Road, Hickory Ridge Road?

The Commission discussed and decided to leave the boundary the same.

Mr. Pastwik raised the following questions related to Land Use:

- Should we reconsider the land use recommendations between the recently approved Springhaven and Regency Crossing projects along Five Mile Road?

There was much discussion about this and Ms. Pomatto stated that staff is simply suggesting the plan reflect what is already there. The owner would still be required to rezone the property.

The Commission agreed to leave it as is.

Mr. Lane stated that it is pretty clear that some of the suggestions were submitted by developers and not citizens. He stated that the comprehensive plan has become gold standard and not a guide.

Mr. Hughes stated the Comprehensive Plan is the vision set forth by the County for the developers to follow. He reminded Mr. Lane that developers are citizens and property owners also.

Mr. Thompson stated that developers are self-serving and only care about their checkbook.

- Now that the Mixed Use designation has changed to a three tier system, would the Planning commission re-explore the designation of an approximately 35-acre site (zoned Rural) on the north side of Smith Station Road across from Courtland Park mixed use development as mixed use light? This is the lowest intensity mixed use designation and would complement the Courtland Park project.

The Commission members were not in support of changed the land use.

- Does the Planning Commission support re-designing roughly 30-acre area near the corner of Route 2/17 across from the New Post development with a mixed use light designation?

Mr. Thompson & Ms. Maddox stated that it is already dense in this area and suggested leaving as is.

Mr. Pastwik thanked the Commission for their input.

Public Comment: None

New Business:

Mr. Lane encouraged the Planning Commissioners to go back and watch the Board's discussion on the camping ordinance. He stated that all of the issues that were mentioned by the Commission were not presented to the Board and he strongly encouraged the Commission to watch prior to the next worksession

Adjournment

Motion and vote: On a motion by Mr. Lane, seconded by Mr. Bullock, a motion was made to adjourn.

VOTE:

Ayes: 7 Dr. Bell, Ms. Carter, Mr. Lane, Mr. Bullock, Ms. Maddox, Mr. Childress, and Mr. Thompson
Nays: 0
Absent: 0
Abstain: 0

The meeting adjourned at 10:00 p.m.

Paulette Mann, Planning Commission Secretary
Approved on April 21, 2021

Spotsylvania County Planning Commission

Board Room – Holbert Building, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES: April 21, 2021

Call to Order: Ms. Maddox called the meeting to order at 7:00 p.m.

Members Present:	Mary Lee Carter	Lee Hill
	Jennifer Maddox	Berkeley
	Richard Thompson	Courtland
	Dr. Raymond Bell	Salem
	Jacob Lane	Livingston
	C. Travis Bullock	Battlefield (arrived at 7:05)
	Gerald Childress	Chancellor

Staff Present:
Paulette Mann, Planning Commission Secretary
B. Leon Hughes, AICP, Director of Planning & Zoning
Alexandra Spaulding, Senior Assistant County Attorney
Kimberly Pomatto, CZA, Deputy Director of Planning & Zoning
Phil Sullivan, Fire Marshal
Shannon Fennell, Planner III
Paul Agnello, AICP, Traffic Engineer
Jacob Pastwik, AICP, Planner III
Wanda Parrish, AICP, Asst. County Administrator - CDG

Announcements: Mr. Hughes updated the Commission on upcoming cases, what's on the TRC agendas and community meetings.

Review and approval of minutes

Motion and vote: On a motion by Ms. Carter seconded by Mr. Thompson, the Commission voted to approve the minutes of April 7, 2021.

VOTE:

Ayes: 7 Dr. Bell, Ms. Carter, Mr. Bullock, Ms. Maddox, Mr. Lane, Mr. Thompson and Mr. Childress
Nays: 0
Absent: 0
Abstain: 0

Public Hearing(s):

R20-0009 Sunshine Lodging LLC (VRE Harrison Road, LLC): Requests a rezoning of two (2) parcels consisting of approximately 2.32 acres from Commercial 2 (C-2) to Commercial 3 (C-3) with proffers for the development of a convenience store and fuel dispensing service. The

Mr. Phil Sullivan discussed the issues that they are seeing while in the field.

Mr. Thompson stated that these types of streets are deliberately designed this way to do away with cars.

Ms. Carter asked about the street width requirement.

Mr. Pastwik stated that Mixed Use uses a different set of numbers.

Mr. Sullivan stated that residents have called FREM with concerns that they may not be able to receive help due to the roads being impassable when people park on the streets.

Mr. Bullock inquired if New Post is one area of concern.

Mr. Sullivan stated yes.

Ms. Carter advised that staff measure the subdivision streets in the Lee's Hill subdivisions.

Motion and vote: On a motion by Ms. Maddox seconded by Mr. Thompson, the Commission voted to initiate the code amendment public hearing.

VOTE:

Ayes: 7 Dr. Bell, Ms. Carter, Mr. Bullock, Ms. Maddox, Mr. Lane, Mr. Thompson and Mr. Childress
Nays: 0
Absent: 0
Abstain: 0

2021 Spotsylvania County Comprehensive Plan Public Hearing Initiation Request

Motion and vote: On a motion by Ms. Maddox seconded by Mr. Thompson, the Commission voted to initiate the Comprehensive Plan Amendment public hearing.

VOTE:

Ayes: 7 Dr. Bell, Ms. Carter, Mr. Bullock, Ms. Maddox, Mr. Lane, Mr. Thompson and Mr. Childress
Nays: 0
Absent: 0
Abstain: 0

Public Comment: None

New Business:

CHAPTER 2 LAND USE MEETING MINUTES COLLECTION

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES: August 15, 2018

Call to Order: Mr. Newhouse called the meeting to order at 7:00 p.m.

Members Present:	Richard Thompson	Courtland
	Howard Smith	Livingston
	Mary Lee Carter	Lee Hill
	Gregg Newhouse	Chancellor
	Jennifer Maddox	Berkeley
	C. Travis Bullock	Battlefield
Members Absent:	Michael Medina	Salem

Staff Present: Wanda Parrish, AICP, Director of Planning
Paulette Mann, Planning Commission Secretary
B. Leon Hughes, AICP, Assistant Director of Planning
Kimberly Pomatto, CZA, Planner III
Alexandra Spaulding, Senior Assistant County Attorney
Patrick White, Planner III
Jacob Pastwik, AICP, Planner III

Announcements: There were no announcements.

Review & Approval of minutes:

Motion and vote: Mr. Thompson made a motion, seconded by Ms. Carter to approve the minutes of July 18, 2018. The motion passed 6-0.

Unfinished Business:

Case(s) to be vote:

Ms. Carter stated that she would recuse herself from the hearing due to a conflict of interest.
Rezoning(s):

R16-0009 Palmers Creek, LLC and Massaponax Land Company, L.L.C. (Ordinance No. RO16-0009): Request a rezoning of approximately 25.13 acres from Commercial 3 (C-3) and Rural (RU) to Mixed Use 5 (MU-5) with proffers to allow for a maximum of 400 multi-family units and a maximum of 40,000 square feet of commercial uses known as Palmers Creek. The property is located on the west side of Jefferson Davis Highway (Route 1) approximately one mile south of the Spotsylvania Parkway (Route 628) and Jefferson Davis Highway (Route 1) intersection. The property is located within the Primary Development Boundary. The property is

Mr. Newhouse inquired about the locked gate and how Fire/Rescue would access the property should they need to do so.

Ms. Pomatto stated that Fire/Rescue would be given the code.

Motion and vote: Mr. Newhouse made a motion, seconded by Mr. Smith to approve the Special Use with staff's proposed conditions. The motion passed 6-0.

Discussion Item(s):

CA18-0005, Authorization to Advertise Subdivision Ordinance Amendments

Ms. Parrish explained that the amendments to the Subdivision Ordinance are required for compliance with the Chesapeake Bay Act. The additions include notes required by the Chesapeake Bay Act related to limitations on development in the Resource Protection Area (RPA), that plats served by on-site sewage systems shall depict primary and 100% reserve drainfields, and that on-site sewage systems require pump out every five (5) years.

Motion and vote: Mr. Newhouse stated that based on public necessity, convenience, the general welfare, good subdivision practices, and compliance with the Virginia Code, I move that the Planning Commission initiate changes to the Spotsylvania County Ordinances found in Chapter 20 amending and adding provisions related to subdivision approval procedures to ensure compliance with the Chesapeake Bay Act. The motion was seconded by Ms. Carter and passed 6-0.

Worksession(s):

Comprehensive Plan Work Session – Future Land Use & The Primary Development Boundary

Ms. Parrish stated that staff will be reviewing the current Future Land Use Map and land use categories with the Planning Commission and be seeking feedback on the Land Use chapter in general. Specific topics of discussion will include:

- Build out of the Primary Development Boundary (PDB)
- Transition areas within the PDB in areas difficult to serve with public water and sewer in the near term
- Property owner requests for amendments to the FLUM and/or PDB
- Changes to the land use categories
- Specific Mixed Land Use and Employment Center designated areas

Mr. White explained that the FLUM is a component of the Comprehensive Plan and provides a long range vision of the County's future development. In every rezoning or special use case, a determination is made regarding whether or not the proposed zoning designation or special use is compatable with the future land use designation of a property.

Future land use designations are organized based on their estimated density. Mixed Use are areas intended to provide retail, employment, enterainment, and housing opportunities. High Density Residential are areas intended to provide denser housing development greater than four units an acre.

There was discussion as whether these types of development are typically water and sewer or well and septic.

Employment Center areas primarily for industiral and office uses. Employement Center areas also accomodates supporting commercial Institutional are presently described as for county facilities, schools, parks, golf courses, churches, and hospitals. Commercial areas are for retail , service, eating establishmentsand office uses. Low Density Residential is for single-family housing at an overall density up to four units per acre. Rural areas consist of farms, forestland, large lot residential, and cluster development at a maximum of 1 unit per 2 acres. Agricultural/Forestal land is just that and open space are areas owned by the County, Commonwealth, Federal owners, or areas intended to be preserved in perpetuity. Staff demonstrated multiple slides showing the percentage breakdown of each land use designation.

Staff then discussed the methodology used to determine what remains developable in the Primary Development Boundary. The Primary Development Boundary makes up about 17 percent of the County and approximately one-third of the PDB remains available for development based on the current model.

Staff Proposes:

- To establish a 'transistional PDB designation' and map the area difficult to serve with that new designation.
- To remove selected parcels north of Route 3 idenditifed as very challenging to serve from the PDB.
- To evaluate and recommend property owner requested expansions of the PDB on a case-by-case basis within this Comprehensive Plan review window. If the expansion is possible, a recommended FLU change may accompany the expansion recommendation.

Several maps were shown and staff informed the Commission that the Utilities department has informed us that some of the parcels within the PDB will be difficult to serve.

Mr. Pastwik stated that the Economic Development Office has identified a number of larger tracts in the Jackson Gateway and Thornburg areas that may serve industries interests. The Jackson Gateway included a great deal of undeveloped land. The Board of Supervisors recently approved a Corridor Enhancement study along Route 1. The Southpoint area is developing as mixed use development with apartments, commercial and visability from I-95. There was dicussion about Tricord's request to change land use from Commercial to Mixed Use near Thornton Rolling Road and questioned whether it makes sense.

Staff dicussed the following observations:

- There are a significant number of undeveloped parcels in the PDB with Mixed Use and Employement Center designations (75%)
    - The Employment Center designation is broadly defined.
    - Mixed Use lacks density limitations
    - Mixed use designation offers support for a wide range of uses and development proposals; tend to be flexible.
    - Mixed use areas are diverse physically and geographically separated but then to lack specific vision as to intended build out.

Mr. Pastwik stated that there are really two approaches here. Set policies which broadly affect all parcels with these designations or develop special area plans for these areas. For example, encourage heavier industrial users to areas where similar land users already exist or would fit, such as along rail corridors, collector or arterial roadways, within X miles of interstate access, etc.

The following should be considered:

- To add more specificty to the Employment Center land use category by adding goals or policies that better guide the locations of commercial, office, and industrial uses.
- To add new language describing how the Mixed use areas are envisioned to develop:
- Density maximums or goals
    - The mixed use area are created from the tapestry of uses within the district
    - Indentification of core areas within mixed use districts to help direct development density and transitions.
    - Other zoning districts than MU are compatible within these districts.

Mr. Smith inquired whether changing the land use designation would affect property value.

Ms. Parrish stated that she would need to check with the assessement office.

Ms. Parrish inquired whether we should leave things as is or would the Commission like to see the new policies discussed during the worksession.

Mr. Newhouse stated that policies concern him and prefers guidelines. He stated that the worksession has been very interesting and he appreciates staff's work on this.

Mr. Smith agreed.

There was discussion about the Primary Development Boundary from ten years ago and where we are now.

There was discussion about the redevelopment along Hudgins Road.

There was discussion about development proposal around Barley Woods at Five Mile Road and that they have been forwarded to the Utilities department for consideration.

Ms. Carter stated that big industry will not come here unless we have the transportation network to support it. She stated that the biggest focus should be transportation.

Mr. Newhouse agreed and stated that we need to have higher paying jobs and determine how we want to grow in the future.

Ms. Parrish stated that she has taken away from the worksession that we want strategies instead of policies and that without objection, staff will begin work on employment centers, mixed-use, and the Primary Development Boundary. She also stated that the Board of Supervisors expressed interest in working directly on transportation and that a worksession is planned at their first meeting in October.

Ms. Parrish stated that Mr. Pastwik has been working on the appendices required byt the Code of Virginia.

Mr. Newhouse inquired if staff knows how well the Ches Bay Act is performing.

Ms. Parrish stated that Mr. Richard Street would be the person to ask.

Finally, staff stated that they've been working on Public Facilities and have reached out to those departments for their feedback and input.

New Business - None

Public Comment:

Nancy McNamara, Livingston District: She raised concerns about erosion and water runoff as well as the decommissioning of the property that would become a wasteland in the future.

David Hammond, Livingston District: He stressed that the SCC has abdicated to Spotsylvania County to set conditions on the proposal. He raised concerns about the aquifer and cadmium and stated that the decisions will fall on Spotsylvania County Officials.

Moya Doss, Livingston District: She displayed a brief powerpoint of another solar facility that caused severe flooding 2 weeks after their ribbon cutting. She stated that it could be much worse here should that happen because of our red clay. She also showed slides of the very small holly trees that are slow growing and would take many years to hide the visual impacts of the solar farm.

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES:	September 18, 2019	
Call to Order:	Mr. Newhouse called the meeting to order at 7:00 p.m.	
Members Present:	Mary Lee Carter	Lee Hill
	Jennifer Maddox	Berkeley
	Michael Medina	Salem
	C. Travis Bullock	Battlefield
	Gregg Newhouse	Chancellor
	Richard Thompson	Courtland
Members Absent:	Howard Smith	Livingston
Staff Present:	Paulette Mann, Planning Commission Secretary	
	B. Leon Hughes, AICP, Assistant Director of Planning	
	Alexandra Spaulding, Senior Assistant County Attorney	
	Jacob Pastwik, AICP, Planner III	
	Jay Cullinan, Fire Chief	
	Kevin Brooks, Director of Parks & Recreation	
	Darrell Holladay, Parks & Recreation Department	

Announcements: Mr. Hughes advised the Commissioners of the items coming up at Technical Review.

Review & Approval of minutes:

Motion and vote: Ms. Carter made a motion, seconded by Mr. Medina to approve the minutes of August 21, 2019. The motion passed 5-0-1, with Mr. Thompson abstaining due to his absence.

Unfinished Business:

CPA17-0002 Comprehensive Plan Follow-up on Transportation & FREM.

Mr. Pastwik stated the item is being presented as an informational item with no formal presentation, a follow-up from a previous worksession and no comments are needed at this point. He stated that he would take any questions that the Commissioners may have.

Mr. Newhouse inquired if the document has been sent to VDOT.

Mr. Pastwik stated that it should be sent to VDOT for review by Friday. He advised that Mr. Cullinan is present for any questions they may have.

Mr. Newhouse stated that he hasn't had much time to review and will do so. He stated that he

Mr. Pastwik stated that ultimately it would be desired to connect to the VCR rail trail with the City of Fredericksburg.

Ms. Carter inquired if Mr. Pastwik is referring to the Spotsylvania Parkway trail also.

The idea is to close the gaps as future development occurs and used Courtland Park as an example.

Mr. Pastwik stated yes, but there are gaps present. One of which is at the corner of Route 1 and Spotsylvania Parkway and the other is located at the corner of Smith Station and Leavells running towards Courtland Park development. He stated that staff is extremely vigilant at looking where we have opportunities to connect.

Mr. Newhouse inquired if the County has adequate ballfields.

Mr. Brooks stated that we meet the needs but teams are now wanting to practice more and more and are always looking for a field that can be utilized.

Mr. Newhouse stated that he's heard from many of his colleagues that they come to Patriot Park that it's a great facility and he feels it a win, win for the County.

Mr. Brooks stated Patriot Park is a great draw for Northern Virginia and Richmond travel teams. He stated that typically it is used Monday-Friday for league play and then used for travel on the weekends. He stated that the Parks & Recreation Department try very hard to work with the libraries for meeting space and they work in cooperation together.

Mr. Thompson inquired if the ballfields at the schools are taken into account.

Mr. Brooks stated yes.

Mr. Medina discussed the trailhead in Breckenridge and inquired if we are missing the microparks.

Mr. Brooks stated that the area cannot really be used for anything because of the rolling terrain.

Mr. Medina suggested it could be graded out. He inquired if there are other micorparks like that.

Mr. Brooks stated no.

Mr. Pastwik thanked the Commission for their feedback.

CPA17-0002 Comprehensive Plan Future Land Use Update

Mr. Pastwik presented the worksession. The Comprehensive Plan Future Land Use Element exists to establish the County-wide vision and guide for development and corresponding land uses and land use intensity considerate of numerous factors including but not limited to: land use

interactions and transitions, transportation systems, population trends, provision of housing, economic development efforts, historic and environmental resources. Maintenance of the Future Land Use Element within the Comprehensive Plan is consistent with the Code of Virginia Sect. 15.2-2223 (attached for reference). As per the existing 2013 Comprehensive Plan (last updated in May, 2018), "Land use designations on the Future Land Use Map do not change a parcel's zoning classification, nor do they impact continuation of existing legal land uses or other uses permitted by existing zoning." The land use element and its corresponding policies are consulted as part of Comprehensive Plan analysis' associated with rezoning and special use permit application reviews involving a public hearing process. The land use element serves as a guide to help determine whether such proposals positively contribute to the established land use vision or may conflict with it.

The Future Land Use Element and corresponding mapped land use designations have their origin in the 2008 Comprehensive Plan. Both were reviewed and updated as part of the 2013 Comprehensive Plan update in conjunction with input from County Citizens, efforts of the Comprehensive Plan Advisory Group, Planning Commission and Board of Supervisors. The County has tracked actively in review and approved rezoning activities going back to March, 2009 (See attached Rezoning Activity map for reference). The rezoning activity map identifies rezoning project sites in relation to the future land use map designations of their surroundings. Overall rezoning activity has been consistent with the corresponding land use designation and their descriptions. Denser development (including mixed use projects) can be found within the Primary Development Boundary, and rural large lot rezoning activity can be found around the periphery of the Primary Development Boundary and in the Lake Anna area. From a Land Use perspective, consistency with land use designation and their intended uses as described has not left all projects without controversy or concern however. Through project review there are efforts made to identify and mitigate impacts as much as possible, however over the course of time it appears there may be added value in providing greater depth and vision concerning land use designations and how they interact with one another physically, especially considering newly proposed development adjacent to existing development and density transitions. Another major concern involves the mixed use areas and how they are intended to develop and their ultimate development mix upon build-out, and how and when various phases and uses will build-out. A number of large mixed use projects have been approved with an extensive array of proposed uses but appear to be one dimensional residential projects, especially during initial phasing. Concerns about overbuilt commercial without adequate "rooftops" to support are a legitimate concern locally. Staff would like to avoid advocating for the construction of commercial space if its inevitably going to be vacant, leading to long term concerns about financial sustainability of such properties, vacancy, abandonment, deferred maintenance, etc. Staff would like to consider introducing a tiered approach for mixed use and employment center areas specifically where primary and subordinate land uses can clearly be identified and envisioned. In this way, residential may be limited as subordinate in intended Commercial and office core areas of mixed use areas, preserving developable acreage for non-residential development. Peripheral mixed use areas, or areas located off main transportation corridors may be best suited for residential as a primary use with commercial subordinate. The City of Richmond draft land use plan includes a table of tiered land uses (attached for reference). Instead of a "broad brush" one size fits all land use designation for

mixed use, the draft Richmond model identifies varying degrees of mixed use and suggests their intended development pattern (uses and intensity). A Spotsylvania County version of this need not carry the level of detail as described in the Richmond example and leave the zoning ordinance to establish building heights, parking, etc. Additionally, staff acknowledges Spotsylvania County is not the City of Richmond and the size and scale of land use descriptions would likely differ. However, a Spotsylvania version could help identify the intended uses and intensity while identifying complementary zoning designations that would "fit" that vision. Upon rezoning, the zoning ordinance and design standards manual would regulate development specifics like height and parking.

Creation of a clearer land use vision is expected to occur with a greater emphasis placed on economic development efforts and opportunities. Planning and Economic Development staff have already started reviewing a variety of areas throughout the County in an effort to ensure land use designations are better positioned "on the pulse" of economic development trends and opportunities. The goal is to reduce land use conflict and loss of land that may be better suited for alternative uses.

Staff has identified a number of considerations for the land use element update, as follows:

- Identify zoning designations that may complement the intent of the corresponding land use designation;
- Provide greater parity between area based land use designations, their intended development, and Economic Development Zones (Tourism Zone, Technology Zone, HUB Zone, Opportunity Zones, etc.);
- Note Virginia scenic byways (River Road, Guinea Station Road) within the County with land use insights and corridor proximate design considerations complementary to those designations;
- Expand open space land use designations to include added conservation lands since last update (ex. DGIF Oakley Plantation) and sensitive wetlands and resource protection areas throughout the County;
- Reduce transitional density conflicts between proposed and existing developments (with similar land uses) via vegetative screening/buffer that can also establish or preserve wildlife corridors throughout the County;
- Clearly acknowledge the importance of utility, internet connectivity, and telecommunications networks throughout the County. In order to effectively provide service coverage, such infrastructure must bridge land use designations;
- Remove dark sky lighting policy. Outdoor lighting is now effectively addressed county-wide through the Zoning ordinance;
- Scale back Institutional Land Use designation to apply only to governmental operations. This designation is not forward looking and reflects existing land uses
    - Institutional land uses such as churches, country clubs, private golf courses are not governmentally owned or managed, land and proposed use can change, difficult to track and comprehensively reflect (place of worship inside a commercial retail strip)
- Consider assigning Agricultural/Forestal Land Use areas to include designated Agricultural/Forestal districts, PDR sites, and areas outside of the PDB identified by the

Virginia Department of Conservation and Recreation's Virginia Agricultural Model, Forest Conservation Values for very high or outstanding value;
    - Aside from by-right potential, proliferation of rural residential subdivisions, development for non-agricultural or forestal uses, or further fragmentation of large rural lots would be discouraged in these areas;
- Consider adding a land use overlay in Rural Residential areas considerate of Ecological Cores of Very High to Outstanding Value identified by the Virginia Natural Landscape Assessment. These areas would be considered valuable candidates for land and environmental conservation efforts, cluster development, preservation of natural areas;
- For all land uses outside of the Primary Development Boundary, establish County policy to secure groundwater hydrology studies for development proposals increasing density or intensity of development via rezoning or special use permit;
- Remove open space preservation percentages identified in agricultural and forestal land use and residential land use policies. The County zoning ordinance establishes open space requirements and cluster provisions are option;
- Add major electric corridors map to the Element consistent with the Code of Virginia;
- Consider Mixed Land Use tiers based on intended intensity (transect-type model) with greater description and visioning detailed for various mixed use areas (Lake Anna vs Thornburg vs Exit 126 vs Lafayette Blvd area infill);
- Provide greater detail regarding infill mixed use areas such as the Lafayette Blvd area;
    - Infill mixed use may entail designating commercial corridors and lower intensity residential areas off the "main drag";
- Consider designating employment center tiers. Presently "broad brush" employment centers range from warehousing and manufacturing facilities, recycling centers, flex space industrial parks to office parks;
- Consider providing greater description of intended uses and intensity within different employment center areas (for instance aside from agriculture, forestry or mining, logistics heavy operations may be more appropriate in close proximity to I-95, Rt 2 & 17 and RF&P Rail versus a site well inland);
- Aside from the Crossroads Mixed Use area paired with the VRE station, protect and promote employment center type development along the rail corridor;
- Protect and promote expansion of industrially zoned acres, especially within employment center designated areas;
- Expand commercial or a commercial and employment center hybrid land use designation to the Caroline County line along the Rt 1 corridor outside of the Primary Development Boundary
- Proactively seek to improve development health, safety, welfare provisions through added goals and strategies;
    - Dry hydrants, water collection cisterns outside the PDB, power generation backup systems for critical facilities, emergency management plans associated with high risk facilities;
    - Discourage development footprints within dam break inundation areas.

The future land use map is an integral part of the future land use element and in addition to identifying land use categories for various areas within the County, it establishes the County

Primary Development Boundary, guiding the provision of public utility (water and sewer) infrastructure reach in the County. Per the existing Comprehensive Plan:

> *Land within the boundary is intended to develop with higher residential densities and more intensive non-residential uses than outside of the boundary. By maintaining the Primary Development Boundary, the County encourages the most efficient use of the land while preserving the rural character and agricultural viability of those portions of the County outside the boundary. This boundary is not permanent and may be adjusted when conditions warrant through the amendment process…*

As part of this update cycle, staff has received a number of requests from citizens and/or landowners seeking Primary Development Boundary expansions to enable eventual provision of public water and sewer service. Such changes inevitably drive up the development potential of such areas for added density or more intensive land uses. Requests received thus far have generally "hugged" the existing Primary Development Boundary, east of Massaponax Church Road. There are additional requests in the Five Mile Road area just north of Route 3. Staff is also looking at opportunities to "clean-up" the existing boundary in the Five Mile Road area where existing development, approved development, zoning designations, and topography are favorable for the expansion of sewer services and the resulting build-out of the area is much more consistent with the character of the PDB than areas outside of it. Staff is still working with the County utilities department to determine areas where expansion may be feasible and will present at a future work session focused on the PDB. Favorable topography and distance to existing infrastructure and the ability to gravity feed sewer from the proposed expansion areas into the existing Primary Development Boundary are expected to be the only scenario where County utility and Planning staff would be supportive of expansion at this time. The effect of any expansion would complement Primary Development Policy 1.a. within the Future Land Use Element that provides the ability via exception to extend utilities beyond the limits of the Primary Development Boundary in cases where topography is favorable and a new pump station would not be required. "Cleaning-up" the boundary in certain areas would effectively eliminate the need for the Policy exception referenced in the Policy. Otherwise staff does not see a strong need to further expand the Primary Development Boundary. In August, 2018 at work session with the Planning Commission, staff found that roughly 1/3rd (13,426 acres) of the existing Primary Development Boundary remained in vacant and/or underdeveloped status. The PDB was last expanded as part of the 2013 Comprehensive Plan update, adding more than 3,000 acres. Per the Planning Department's Future Development analysis spreadsheet, county-wide there is an inventory of over 13,000 approved and yet unbuilt residential units including single family detached, attached, multi-family, age restricted. The vast majority of these future units are located within the Primary Development Boundary. There are significant areas intended for commercial, employment center, and mixed use development that remain undeveloped at this time. The Jackson Gateway area of the County that has historically been intended as an employment hub and economic development driver is still in early stages of development. Simply, the existing Primary Development Boundary is not "bursting at the seams" to warrant any expansion beyond minor expansions that may "clean-up" the boundary and/or have favorable topography.

Staff intends to return to the Planning Commission at a later date to focus on the Primary Development Boundary.

Mr. Thompson stated that he is very interested infill development and should be developed like the others.

Mr. Newhouse thanked staff for their work and stated that as we talk about land use and zoning, it's important to consider the existing character of the neighborhood. He stated that he has concerns about the balance and a person's ability to maintain property value.

Mr. Medina inquired about tree buffer and whether it needs to be in the comprehensive plan in order to change the ordinance.

Mr. Pastwik provided an example with night sky friendly lighting. He stated that because it was advocated in the comprehensive plan that it was then converted into an ordinance amendment for rezonings. The way to get to these goals outlined in our plan is to adopt ordinances. This is not always the case though as it is sometimes best to leave as guiding policy to allow flexibility. Comprehensive goals and objectives do provide for rezoning and SUP comp plan analysis and can be a factor in recommendations.

Mr. Hughes explained that if these items are laid out in our plan, it reduces the negotiation time at TRC and makes it easier and more clear for the development community.

There was discussion about groundwater hydrology studies.

Mr. Hughes stated that a few cases have been submitted where these studies were done.

Mr. Newhouse stated that he is not convinced it is a problem. He also inquired if interparcel connections are a VDOT requirement. He stated that he has an issue with them. He stated that he believes them to degrade the existing community and would like to advance that conversation somehow.

Mr. Pastwik reiterated this is a comprehensive plan item to be requested in cases of residential rezonings to allay community concerns about water supply.

Mr. Hughes stated interparcel connections are a VDOT requirement.

Mr. Medina inquired about Lafayette Blvd and whether staff will meet with the City of Fredericksburg and the other adjacent localities.

Mr. Pastwik stated that staff typically coordinates and meets with our adjacent localities.

He also stated that in meeting with the Economic Development department, they advised that office parks and industrial zoned lands do no always go hand in hand.

The Planning Commission showed support for tiered approach for mixed use and employment center designations.

Mr. Pastwik thanked the Commission for their input.

Public Comment: None

New Business: None

Adjournment:

Motion and vote: Mr. Thompson made a motion, seconded by Mr. Medina to adjourn. The motion passed 7-0.

The meeting adjourned at approximately 8:30 p.m.

Paulette L. Mann
Paulette L. Mann

October 2, 2019
Date

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES:	October 2, 2019	
Call to Order:	Mr. Newhouse called the meeting to order at 7:00 p.m.	
Members Present:	Mary Lee Carter	Lee Hill
	Howard Smith	Livingston
	Jennifer Maddox	Berkeley
	C. Travis Bullock	Battlefield
	Gregg Newhouse	Chancellor
	Richard Thompson	Courtland
Members Absent:	Michael Medina	Salem
Staff Present:	Paulette Mann, Planning Commission Secretary	
	Wanda Parrish, AICP, Director of Planning	
	Alexandra Spaulding, Senior Assistant County Attorney	
	Jacob Pastwik, AICP, Planner III	
	Ben Loveday, PE, Director of Utilities/Public Works	

Announcements: Ms. Parrish advised the Commissioners of the items coming up at Technical Review.

Review & Approval of minutes:

Motion and vote: Mr. Newhouse made a motion, seconded by Mr. Carter to approve the minutes of September 18, 2019. The motion passed 5-0-1, with Mr. Thompson abstaining due to his absence.

Unfinished Business: None

Public Hearing(s):

CA19-0001 Spotsylvania County Board of Supervisors, Ordinance No. 23-178: An amendment of Spotsylvania County Code Chapter 23, Zoning, Article 2, Definitions and Rules of Construction, Sec. 23-2.1.4, Definitions, to amend the definition of Community center to a publicly- or privately-owned and operated facility open to the public where people can meet for, among other things, social, educational, business, or recreational activities. These activities may be conducted by, among others, individuals, businesses, or organizations. Such facilities may be rented and can include on-site kitchens or provide for catered meals. A clubhouse which serves only the members of a condominium association or a property owners' association is not considered a community center. A hotel that has meeting facilities is not considered a community center; and to Article 6, Zoning Districts, to amend Division 3, Agricultural 2 (A-2) District, to

remove Community center as a Permitted Use in Sec. 23-6.3.2 and make a Special Use in Sec. 23-6.3.3, to amend Division 4, Agricultural 3 (A-3) District, to remove Community center as a Permitted Use in Sec. 23-6.4.2 and make a Special Use in Sec. 23-6.4.3, to amend Division 5, Resort Agricultural (RA) District, to remove Community center as a Permitted Use in Sec. 23-6.5.2 and make a Special Use in Sec. 23-6.5.3, to amend Division 6, Residential 1 (R-1) District, to remove Community center as a Permitted Use in Sec. 23-6.6.2 and make a Special Use in Sec. 23-6.6.3, to amend Division 7, Residential 2 (R-2) District, to remove Community center as a Permitted Use in Sec. 23-6.7.2 and make a Special Use in Sec. 23-6.7.3, to amend Division 8, Residential 3 (R-3) District, to remove Community center as a Permitted Use in Sec. 23-6.8.2 and make a Special Use in Sec. 23-6.8.3, to amend Division 9, Residential 8 (R-8) District, to remove Community center as a Permitted Use in Sec. 23-6.9.2 and make a Special Use in Sec. 23-6.9.3, to amend Division 10, Residential 12 (R-12) District, to remove Community center as a Permitted Use in Sec. 23-6.10.2 and make a Special Use in Sec. 23-6.10.3, to amend Division 11, Resort Residential (R-R) District, to remove Community center as a Permitted Use in Sec. 23-6.11.2 and make a Special Use in Sec. 23-6.11.3, to amend Division 17, Commercial 1 (C-1) District, to remove Place of worship as a Special Use in Sec. 23-6.17.3 and make a Permitted Use in Sec. 23-6.17.2, to amend Division 24, Rural (Ru) District, to remove Community center as a Permitted Use in Sec. 23-6.24.2 and make a Special Use in Sec. 23-6.24.3, to amend Division 28, Mixed Use (MU) District, Sec. 23-6.28.5, to remove Community center as a Permitted Use from the MU-1 and MU-2 subdistricts and make a Special Use in those subdistricts.

Mr. Newhouse opened the public hearing.

Ms. Parrish presented the case. The draft amendments proposed modify Chapter 23, Zoning, to remove Community Center as a Permitted Use and make a Special Use in the Agricultural 2, Agricultural 3, Residential 1, Residential 2, Residential 3, Residential 12, Residential Resort, Rural, and Mixed Use 1 and 2 zoning districts; and to amend the Commercial 1 zoning district to remove Place of Worship as a Special Use and make a Permitted Use. The definition of Community Center is also amended to clarify its meaning.

These changes are recommended to ensure compliance with provisions of the Religious Land Use and Institutionalized Persons Act (RLUIPA) by providing consistent zoning treatment between Place of Worship and Community Center, which is a use with similar characteristics.

Staff recommends approval of CA19-0001.

Speaking in favor or opposition: None

Mr. Newhouse closed the public hearing.

Motion and vote: Mr. Newhouse made a motion, seconded by Mr. Smith to approve the code amendment. The motion passed 6-0.

Worksession(s):

CPA17-0002 Comprehensive Plan Public Facilities Water & Sewer Primary Development

Mr. Pastwik presented the workession. The Future Land Use Element (including the Future Land Use Map) is an integral part of the County Comprehensive Plan. County-wide consideration of land uses and the establishment of a land use vision within the Comprehensive Plan is consistent with the Code of Virginia, Sect. 15.2-2232 (attached for reference). In addition to establishing a land use vision it establishes the County Primary Development Boundary, guiding the provision of public utility (water and sewer) infrastructure in the County. The Primary Development Boundary is critical to identifying areas where growth and land use intensity (size and scale) can be directed and establishes a clear geographic area for the County Utilities Department to focus their infrastructure planning efforts, considerate of development and update of the Water and Sewer Master Plan. Per the existing Comprehensive Plan: Land within the boundary is intended to develop with higher residential densities and more intensive non-residential uses than outside of the boundary. By maintaining the Primary Development Boundary, the County encourages the most efficient use of the land while preserving the rural character and agricultural viability of those portions of the County outside the boundary. This boundary is not permanent and may be adjusted when conditions warrant through the amendment process. Complementary to the Primary Development Boundary designation is the Water and Sewer portion of the Public Facilities Element. With the assistance of County Utilities Staff, the Water and Sewer content has been updated in draft. It provides an overview of County Utility service, establishes the Comprehensive Plan link to the Primary Development Boundary, a summary of capital infrastructure in use to provide services, and various goals and strategies with an emphasis on Capital Projects. As noted in prior work sessions focused on the Public Facilities Element, content is chiefly aimed at identification of infrastructure enhancement projects considerate of the Code of Virginia Sect. 15.2-2232 that links Capital projects additions to the Comprehensive Plan. From 15.2-2232: …unless a feature is already shown on the adopted master plan or part thereof or is deemed so under subsection D, no street or connection to an existing street, park or other public area, public building or public structure, public utility facility or public service corporation facility other than a railroad facility or an underground natural gas or underground electric distribution facility of a public utility as defined in subdivision (b) of § 56-265.1 within its certificated service territory, whether publicly or privately owned, shall be constructed, established or authorized, unless and until the general location or approximate location, character, and extent thereof has been submitted to and approved by the commission as being substantially in accord with the adopted comprehensive plan or part thereof. "Difficult to Serve Areas" In an analysis of the County Primary Development Boundary as it exists today, staff has learned of a number of "difficult to serve" areas within the existing boundary that are challenging to provide infrastructure to, especially in the near term. In an effort to avoid "taking something away" by retracting the boundary, staff has proposed highlighting these difficult to serve areas within the Primary Development Boundary to be very clear and transparent concerning added development complexities to do with provision of public utilities. The Existing PDB Difficult to Serve Parcels Map was attached for reference to depict these areas that in reality are not readily developable. County utilities staff can describe complexities associated with these areas. Staff notes that some of the areas depicted as problematic were just recently added to the Primary Development Boundary as part of the 2013 update. Specifically, lands extending between Smith Station Road and the Ni River, and acreage extending between Old Plank Road and Route 3 from the Old Plank and Catharpin Rd intersection to Mclaws Drive. Fortunately, in the case of Smith Station Road, much of this land area is devoted to active mining operations and the Lidl Distribution facility. Remaining "difficult to serve" areas within the Comprehensive Plan have been identified for growth and development (within Development

Districts) back to the 2008 and/or 2002 Comprehensive Plans. Staff would like direction from the Planning Commission concerning "difficult to serve" areas and whether there is interest in pursuing Boundary retraction or simply noting and symbolizing these areas. Development has occurred in such areas however it may not be as "straight forward" as others. Primary Development Boundary Expansion Requests. As part of this update cycle, staff has received a number of requests from citizens and/or landowners seeking Primary Development Boundary expansions to enable eventual provision of public water and sewer service. Such changes inevitably drive up the development potential of such areas for added density or more intensive land uses. Requests received thus far have been attached as Compiled Comp Plan Comments for reference. Requests received thus far have generally "hugged" the existing Primary Development Boundary, east of Massaponax Church Road. There are additional requests in the Five Mile Road area just north of Route 3. Staff is also looking at opportunities to "clean-up" the existing boundary in the Five Mile Road area where existing development, approved development, zoning designations, and topography are favorable for the expansion of sewer services and the resulting build-out of the area is much more consistent with the character of the PDB than areas outside of it. Staff consulted with County Utilities, who analyzed the feasibility of potential PDB expansions to each of the parcels requested. Critical considerations included favorable topography and avoidance of significant infrastructure enhancements (such as construction of a regional pump station, or downstream upgrades to meet additional burdens from new sources) being necessary to serve areas in question. Staff proposes that favorable topography (ability to gravity feed sewer), distance to existing infrastructure, existing zoning and land use character are the primary factors that have been considered to determine whether an expansion is favorable or not. In fact, these factors have led to the only scenario where staff would make a positive recommendation for expansion. The effect of any expansion would complement Comprehensive Plan Primary Development Policy 1.a. within the Future Land Use Element that provides the ability via exception to extend utilities beyond the limits of the Primary Development Boundary in cases where topography is favorable and a new pump station would not be required. "Cleaning-up" the boundary in certain areas would effectively eliminate the need for the Policy exception referenced in the Policy. Otherwise staff does not see a strong need to further expand the Primary Development Boundary. In August, 2018 at work session with the Planning Commission, staff found that roughly 1/3rd (13,426 acres) of the existing Primary Development Boundary remained in vacant and/or underdeveloped status. The PDB was last expanded as part of the 2013 Comprehensive Plan update, adding more than 3,000 acres. Per the Planning Department's Future Development analysis spreadsheet, county-wide there is an inventory of over 13,000 approved and yet unbuilt residential units including single family detached, attached, multi-family, age restricted. The vast majority of these future units are located within the Primary Development Boundary. There are significant areas intended for commercial, employment center, and mixed use development that remain undeveloped at this time. The Jackson Gateway area of the County that has historically been intended as an employment hub and economic development driver is still in its early stages of development. Simply, the existing Primary Development Boundary is not "bursting at the seams" to warrant any expansion beyond minor expansions that may "clean-up" the boundary and/or have favorable topography. Based on feedback received from County Utilities, Planning staff has identified three specific areas where PDB expansion warrants consideration. The total land area considered favorable for expansion is approximately 275 acres, divided amongst the following locations: New Post Area (Tax Map #38-A-26B and Portion of #38-A-26A). Approximately 180-acre expansion. Tax Map #38-A-26A is presently zoned Industrial 2 (with a few exceptions this Zoning designation

is better suited to the Primary Development Boundary). Adjacent Tax Map# 38-A-26B has a mixed zoning of Commercial 3 and Rural (Ru). Prospect of significant expansions beyond this point are limited in the immediate area due to numerous conserved lands in proximity to the site. There are potential growth and expansion opportunities in this area given the major crossroads of Route 2 & 17, existing mixed use development underway, and proximity to the VRE station. Potential economic development opportunities resulting from availability of public water and sewer onsite. County utilities staff has identified this site as one that can feasibly gravity flow to exiting sanitary sewer. Utilities notes infrastructure improvements may be required of the existing system. However, compared to others this site is favorable. See attached Candidate PDB Expansion Area Zoom 1 (Map) for reference. Staff would also like Planning Commission feedback considerate of potential land use designation options for this area if expansion is supported. Five Mile Fork Area (Includes requested Tax Map #12-A-34). Expansion would cover approximately 90 acres (including requested Tax Map #12-A-34). This area is recommended by Planning staff for expansion to "clean up" the existing boundary considerate of favorable topography, existing zoning designations, land uses, proximity to the Route 3 corridor. Staff expanded the Primary Development Boundary analysis to include the area surrounding the property requested for expansion. Due to favorable topography in the area identified, County Policy already enables the potential for utility infrastructure expansion via exception as noted in Comprehensive Plan Primary Development Policy 1, and 1.a. that states: Rezonings outside of the Primary Development Boundary desiring to connect to public sewer and water should submit a Comprehensive Plan amendment Exceptions include instances pursuant to Spotsylvania County Utility Ordinance (Spotsylvania County Code Section 22-282) and upon satisfaction of the Director of Utilities that a development will not require a County maintained sewer pump station. Portions of many of these parcels are already within the Primary Development Boundary. The potential PDB expansion limits would "clean up" the boundary and absorb the current standalone PDB confined to the limits of the Barley Woods Age Restricted development, into the larger PDB. The project specific standalone boundary would "fit" into the larger PDB. Existing zoning and development in this area is already compatible with the intent of the Primary Development Boundary and less characteristic of areas outside of it. Existing developed and/or approved projects within this area include: Regency Park Villas; Regency Park Office Park; Regency Crossing; Harrison Crossing Place. A mix of Commercial 2 (C-2), Residential 8 (R-8), Residential 1 (R-1) zoning comprises the area. These zoning designations are most prevalent and complementary of the Primary Development Boundary. Public water and sewer already serves some of these projects and will serve the recently approved Regency Crossing townhome community (Rezoning Case R18-0007). Again, per County Utilities analysis, this site is one that can feasibly gravity flow to exiting sanitary sewer. Utilities notes infrastructure improvements may be required of the existing system. See attached Candidate PDB Expansion Area Zoom 2 (Map) for reference. Staff would also like Planning Commission feedback considerate of potential land use designation options for this area if expansion is supported. Tax Map #51-A-3A. This is a small expansion (approximately 5 acres) intended to "clean up" the Primary Development Boundary in the area resulting from a property owner request. The property is adjoined on two sides by the Primary Development Boundary already and would likely be eligible for the Comprehensive Plan and Utilities Policy exception noted above in (2). This parcel is small and distant from the nearest utility infrastructure; however, topography has been identified as favorable without need for a pump station. Per utilities, "It would be up to the developer to obtain all easements and pay for the cost of the water and sewer improvements". Conceptually this land could be included within a larger development proposal

that includes some of the larger parcels that surround. As part of larger development plan in conjunction with other parcels, this site becomes more viable from a cost to install utilities standpoint. At present, the parcel in question and the surroundings have a Rural (Ru) Zoning designation. Staff notes a mix of mixed use and employment center designations per the Future Land Use Map in this area for those parcels within the Primary Development Boundary. Some rezoning activity has started within these areas via Summit Crossing Estates (R15-0005) and Cedar Forest (R15-0003) nearby, resulting from zoning change from Rural (Ru) to Planned Development Housing 3 (PDH-3). Staff notes that the Comprehensive Plan generally discourages "hop scotch" type development considerate of infrastructure. For instance, Commercial Land Use Policy states "development should proceed sequentially along and back from major thoroughfares. Development should not isolate an existing land use or development". The Employment Center land use designation has similar language. As development within the Primary Development Boundary proceeds complementary of the future land use element along Massaponax Church Road and Summit Crossing Road, staff expects development viability too will improve. Staff believes this minor expansion simply reflects water and sewer-ability while proactively including eth site for future growth prospects. See attached Candidate PDB Expansion Area Zoom 3 (Map) for reference. Staff would also like Planning Commission feedback considerate of potential land use designation options for this area if expansion is supported. All other Primary Development Boundary expansion requests have not been identified as favorable by Planning staff, resulting from location and topographic concerns and infrastructure planning changes identified by Utilities staff that are no longer favorable to expansion prospects. Those sites identified as not favorable for inclusion within the Primary Development Boundary at this time include: 19-A-21, 50-A-100, 50-A-101, 12-A-43, 12-A-50A. Future Land Use Designation Requests: In addition to a number of Primary Development Boundary requests received, staff has received a few land use designation requests for the Planning Commission to consider. They include: A request to consider scaling back the employment center land use designation between Crossroads Pkwy and Thornton Rolling Road and remove, in its entirety a standalone employment center area extending from Summit Crossing Road to Patriot Lane, crossing the RF&P Rail corridor. Preliminarily staff is supportive of this request, however would suggest the employment center designation remain in proximity to the RF&P rail corridor and that the mixed use designation presently identified on the northeast corner of Route 17 and Benchmark Road be reassigned for an employment center designation. Per our last work session focused on the Future Land Use update, staff has raised concern regarding the loss of industrially zoned acres, potential for heavier industry and where best to locate, and rail proximity. Employing the tiered mixed use concept presented at last work session, it would appear these outlying mixed use areas on the edge of the Primary Development Boundary would be best suited for lower intensity mixed use developments primarily suited for single family detached or attached with secondary commercial/office development opportunities. A request to change land use designation on the northwest portion of Tax Map# 48-A-84 (Fox Point side of Smith Station Road) from low density residential to Mixed Use. Per the request, rationale for changing the land use in this location includes that the property in question is located at a major intersection, across from a large area designated as employment center. The property also surrounds commercial property that exists at the intersection. Per the Comprehensive Plan the low density residential land use designation is described as supporting up to 4 units per acre. Staff understands the location of the site and existing commercial zoning do warrant additional considerations how to best develop the site as a transition between a major intersection and adjacent commercially zoned property, and existing surrounding low density residential off Pella Lane and Smith Station Road.

Considerate of the importance of adjacent lot transitions between existing and proposed development discussed at last work session, conceptually staff would prefer to see any higher density development focused at and around the intersection with a gradual step back in intensity towards the periphery of the parcel. Peripheral parcels would be of a similar land use and density as the existing adjacent lots. The property in question is partly across Smith Station Road from the Courtland Park mixed use project. Inclusion of the requested area would expand mixed use type development in the area with its focus on the intersection of Smith Station Road and Leavells Road. This change will have no impact on the employment center designation nearby or existing industrial zoning there.

There was a brief discussion about what *difficult to serve* means.

Mr. Loveday explained that topography comes into play and it could be the need for larger pump stations. These tend to be cost prohibitive as the developer is responsible for that expansion cost. Sewer tends to be the limiting factor.

Mr. Pastwik inquired whether the Commission would like to see an expansion of the primary development boundary at New Post.

Mr. Thompson stated that he would be the least bit interested in expanding the Primary Development areas but is also leery about taking away from it.

Mr. Pastwik informed the Commission that the Economic Development Department was consulted and that they don't get a sense that they want to retract from the area at New Post.

Mr. Newhouse agreed with Mr. Thompson and stated that he is most concerned about the area on Route 3.

Ms. Maddox stated that she agrees and that she doesn't want to retract from it.

Mr. Pastwik stated that some of proposed expansion areas are more feasible than others. He stated that the three green areas on the map appear to be the more favorable sites totaling approximately 275 acres.

There were concerns raised that the expansion of the New Post site could set us up for a rezoning request and eliminate more industrial zoned land.

Mr. Pastwik stated that the Economic Development office likes water and sewered sites that are ready to go quickly for potential suitors.

Mr. Newhouse stated that he would want to preserve the property as industrial zoning and would be opposed to a residential rezoning request.

The Planning Commissioners agreed.

Mr. Pastwik stated that it expands the PDB 180 acres but because of the topography they are able

to connect.

Ms. Maddox stated that she likes the industrial and that the county cannot afford the residential growth.

Mr. Smith expressed concerns about the expansion and whether we could potentially get residential growth.

Ms. Maddox stated that they would only be able to do so with a rezoning request, by-right, it's rural zoned land and they could only get 10 lots.

Mr. Smith inquired what the concern would be for expansion.

Ms. Parrish agreed with Ms. Maddox that by-right, they would only get 10 units in or out of the primary development boundary.

Mr. Thompson stated that he's concern that if we expand, then we set ourselves up for request after request and questions the true need to expand the PDB.

Ms. Parrish stated that one benefit would be the employment center designation there.

Ms. Maddox stated that she likes it with the employment center designation. She feels it tells a potential company that we (the county) is ready for you to locate here.

Mr. Smith stated that he would support that expansion then. He stated that he just doesn't want to see townhomes or apartments there.

Consensus was to include in the expansion and maintain employment center designation.

There was discussion regarding a small 5-acre parcel, tax map 51-A-3A. The Commission did support expanding the PDB but did not favor a request to change the larger employment center land use to mixed use. It will be included as Employment Center.

The Commission also supported the concept to shift mixed use designation east of Benchmark and North of Route 17 to Employment Center.

The 5-Mile Fork expansion, near the Villas at Harrison Crossing was the next discussion. The expansion to include reflects zoning and uses already present there that complement the Primary Development Boundary. What is already on the ground is what is being proposed here. There would be no change to the land use designation. It would avoid residential or mixed-use design.

Ms. Maddox stated that she wants to make it hard for residential growth to occur there.

There was discussion about a parcel at Smith Station & Leavells Road.

Mr. Thompson stated to leave it alone.

The Commission agreed.

Mr. Newhouse stated that he would really like to see more commercial earlier in the mixed use projects that have been coming before us.

Mr. Pastwik thanked the Commission for their input.

Public Comment: None

New Business: None

Adjournment:

Motion and vote: Mr. Newhouse made a motion, seconded by Ms. Carter to adjourn. The motion passed 760.

The meeting adjourned at approximately 8:00 p.m.

Paulette L. Mann
Paulette L. Mann

November 20, 2019
Date

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES:	November 20, 2019	
Call to Order:	Ms. Carter called the meeting to order at 7:00 p.m.	
Members Present:	Mary Lee Carter	Lee Hill
	Jennifer Maddox	Berkeley
	Richard Thompson	Courtland
	Michael Medina	Salem
	Gregg Newhouse	Chancellor
	C. Travis Bullock	Battlefield
Members Absent:	Howard Smith	Livingston
Staff Present:	Paulette Mann, Planning Commission Secretary	
	Wanda Parrish, AICP, Director of Planning	
	Alexandra Spaulding, Senior Assistant County Attorney	
	Jacob Pastwik, AICP, Planner III	
	David Dameron, CZA, Planner III	
	B. Leon Hughes, AICP, Assistant Director of Planning	

Announcements: Ms. Parrish advised the Commissioners that at this point, no cases are ready for public hearing and depending on the outcome of this meeting, the Commission may want to consider canceling the December 4, 2019 meeting.

Review & Approval of minutes:

October 2, 2019 Minutes

Motion and vote: Mr. Newhouse made a motion, seconded by Mr. Thompson to approve the minutes of October 2, 2019. The motion passed 5-0-1 with Mr. Medina abstaining due to his absence and Mr. Bullock absent.

November 6, 2019 Minutes

Motion and vote: Mr. Newhouse made a motion, seconded by Ms. Carter to approve the minutes of November 6, 2019. The motion passed 6-0.

Unfinished Business: None

CPA17-0002 – Comprehensive Plan (Industrial Acreage & Mussel Farm)

Ms. Parrish stated that information was provided in the packets regarding industrial acreage and mussel farms. Should the Commission have additional questions, please reach out to her or Mr. Pastwik.

Public Hearing(s):

SUP18-0012 – AT&T Mobility (A Tempo LLC): Requests special use permit approval for a 100-foot monopole communication tower with a 6-foot lightning rod, for a total of 106 feet, on a parcel of 7.2 acres zoned Commercial 2 (C-2) District. The property is located approximately 268 feet east of Spotsylvania Avenue (Rt. 1234) and approximately 503 feet south of Mine Road (Rt. 636) to the rear of the shopping center that contains Weis Markets. The property is addressed as 10601 Spotsylvania Avenue and identified as Tax Parcel 36-17-C. The parcel is located in the Primary Development Boundary. The property is designated as Commercial on the Future Land Use Map of the Comprehensive Plan. Tax Parcel 36-17-C. Lee Hill Voting District.

Mr. Newhouse opened the public hearing.

Mr. Dameron presented the case. The proposed telecommunications facility is on a parcel of 7.2 acres currently zoned Commercial 2 (C-2). The proposed tower will be a 100-foot-tall monopole topped by a 6-foot-tall lightning rod for a total height of 106 feet within a 1,430 square foot compound surrounded by a 6' tall chain link fence topped with 12 inches of barbed wire as an anti-climbing device. The perimeter fence will have privacy slats and will be surrounded by Arborvitae and Cyprus Trees. The site will be accessed through the existing road that connects the parcel with Spotsylvania Avenue.

The applicant has stated this height will allow it to locate its antennas at a height of 100' and also allow at least two future carriers to locate antennas at 90' and 80' respectively. The height of the monopole was determined by the applicant to be the lowest possible height that will eliminate current network deficiencies. The applicant has provided a statement of justification for the proposed telecommunications facility which states that a lack of adequate wireless services in the area has resulted in customer complaints and dropped calls and the new tower will add and improve wireless services including broadband allowing residents and commuters to experience better quality and reduced dropped calls. Also, the applicant asserts the facility will further enhance the emergency communications network in the County through the First Responder Network Authority, which was established by Congress to provide reliable public safety networks across the country and dedicated bandwidth for use only by first responders.

The proposed tower site is on a parcel containing a shopping center building and is bordered by parcels containing office and commercial uses directly to the north, south and west. To the east the site is bordered by "The Meadows", an established single-family home subdivision. This location was selected because the applicant determined the site is in a half-mile radius in which a tower would meet their needs. The applicant also noted that only two existing structures in this half-mile radius met the 100-foot height required to meet coverage goals and be potential sites to co-locate AT&T's equipment. These were respectively, the Hampton Inn & Suites and the Lee's Hill Emergency and Outpatient Center. AT&T contacted the owner and/or landlord of each property and the applicant reported neither was interested in entering into a lease agreement.

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES:	June 3, 2020	
Call to Order:	Mr. Newhouse called the meeting to order at 7:00 p.m.	
Members Present:	Mary Lee Carter	Lee Hill *(participated remotely)*
	Jennifer Maddox	Berkeley
	Richard Thompson	Courtland
	Dr. Raymond Bell	Salem
	Jacob Lane	Livingston
	Gregg Newhouse	Chancellor
Members Absent:	C. Travis Bullock	Battlefield
Staff Present:	Paulette Mann, Planning Commission Secretary B. Leon Hughes, AICP, Director of Planning & Zoning Alexandra Spaulding, Senior Assistant County Attorney Jacob Pastwik, AICP, Planner III	

Mr. Newhouse stated that a quorum was present. He advised that he was contacted by Ms. Carter and, that she would not be able to physically attend the Commission meeting today, due to her age and compromised health during the Covid-19 pandemic. Ms. Carter will be participating remotely from 4220 Mine Road, Fredericksburg, Va. 22407. Mr. Newhouse called for approval of Ms. Carter participating remotely in the meeting and the suspension of bylaws which require electronic voting, to be replaced by roll call while Ms. Carter participates in the meeting.

Motion and vote: On a motion by Mr. Thompson, seconded by Mr. Lane to suspend the bylaws allowing Ms. Carter to participate remotely.

VOTE:

Ayes: 6 Dr. Bell, Ms. Carter, Mr. Lane, Mr. Thompson, Mr. Newhouse, Ms. Maddox
Nays: 0
Absent: 1 Mr. Bullock
Abstain: 0

Announcements:

Mr. Hughes announced details regarding the upcoming Commission meeting as well as what is coming up on the TRC agendas and a Community meeting.

Mr. Hughes announced that the R15-0006 case has been postponed to June 17, 2020.

Review & Approval of minutes:

March 20, 2020 Minutes

Motion and vote: On a motion by Mr. Thompson, seconded by Mr. Bell to approve the minutes of May 20, 2020.

VOTE:

Ayes: 6 Dr. Bell, Ms. Carter, Mr. Lane, Mr. Thompson, Mr. Newhouse, Ms. Maddox
Nays: 0
Absent: 1 Mr. Bullock
Abstain: 0

Unfinished Business: None

Worksession(s):

CPA17-0002 – Update to the Comprehensive Plan – Expanded Guidelines for Solar Energy Facilities

Mr. Pastwik presented the case. Staff would like to know if the Planning Commission supports adding expanded guidelines for solar energy facilities into the Comprehensive Plan update process now underway. Alternatively, would the Planning Commission prefer to wait to address the subject as a separate item following Comprehensive Plan adoption (as a future Comprehensive Plan amendment).

Staff is seeking direction from the Planning Commission concerning potential addition of expanded Solar Energy Facility guidelines in the Comprehensive Plan. Past feedback from the Board of Supervisors suggested exploring expanded guidelines. Staff would like to know if the Planning Commission supports adding expanded guidelines for solar energy facilities into the Comprehensive Plan update process now underway. Alternatively, would the Planning Commission prefer to wait to address the subject as a separate item following Comprehensive Plan adoption (as a future Comprehensive Plan amendment).

The additional guidelines are meant to proactively provide additional County guidance and mitigation strategies to the benefit of the surrounding community, resulting in a more harmonious "fit" for such proposals. These guidelines are aimed at the use *solar energy facilities* as defined in Spotsylvania County Code Sect. 23-1.1.4. located in the Rural (Ru), Agriculture 2 (A-2), and Agriculture 3 (A-3) zoning districts whose use specific standards are specified by Spotsylvania County Code Sect. 23-4.5.7(d). They are not intended to apply to installation of rooftop solar panels or ground mounted installations allowed as an accessory use.

Staff notes that direction from the Comprehensive Plan serves as a guide to help determine whether rezoning and special use permit applications (requiring public hearings) are generally consistent with, or inconsistent with, the Comprehensive Plan. Comprehensive Plan Policies are often cited as part of the development review process to enhance and improve proposed projects so that they

may better achieve Comprehensive Plan consistencies. The Comprehensive Plan does not have the regulatory powers that County code does.
Additionally, the Code of Virginia requires that the Planning Commission review solar energy facilities that are not shown on the Comprehensive Plan to determine whether the location, character, and extent of the facility are substantially in accord with the Comprehensive Plan (Code of VA Sec. 15.2-2232). The attached draft provisions are expected to provide more additional County guidance to determine whether a solar energy facility proposal is in substantial accord with location, character, and extent expectations as established by the Comprehensive Plan.

Lastly, this review looks at the prospect of wind farms within the County considering County location and County Code provisions for such a use. A Board of Supervisors inquiry asked staff to investigate the use in relation to rural and agricultural areas.

Solar Energy Facilities

Cognizant of expressed interest to explore limiting the proliferation of acreage devoted to Solar Energy Facilities while weighing the County Comprehensive Plan Vision Statement which states:

"Spotsylvania families will enjoy a community that remembers and respects its place in our nation's history and builds on the principles of our founding fathers to provide freedom and prosperity through limited government, respect for property rights, low taxes and pro-business policies for the 21st Century."

- Staff has looked to develop Solar Energy Facility policies that, with Board of Supervisors support, would limit the total County acreage devoted to solar energy facilities to no more than five (5) percent of the land area located outside of the Primary Development Boundary. The focus on the limiting the total land area outside of the Primary Development Boundary is based on the zoning districts where such facilities are likely to be proposed. Solar Energy Facilities are identified within the Spotsylvania County Zoning Ordinance and require special use permit approval in the Rural (Ru), Agriculture 2 (A-2) and Agriculture 3 (A-3) zoning districts. These zoning districts are complementary to the intent of Rural and Agricultural areas located outside of the Primary Development Boundary and the combination of these districts vastly exceeds any other zoning district in the County in geographic reach and size. As a result, areas outside of the Primary Development Boundary are the expected to be most directly affected by potential solar energy facility applications. Availability of large acreage parcels or collections of parcels and reduced land values are also a driving force behind large scale solar energy facility potential outside of the Primary Development Boundary. As a result, staff felt best to remove the land area within the Primary Development Boundary from the suggested 5% cap calculations. The addition of Primary Development Acres would increase the total allowable acres that would likely result in additional solar acres outside of the Primary Development Boundary. This cap approach would appear to help preserve a diversified rural and agricultural economy and maintenance of rural residential, historic resources, and rural farm and forest character while maintaining the viability of Comprehensive Plan Policies to *"Encourage innovative land uses such as renewable energy generation…"*as established in Comprehensive Plan Introduction and Vision Guiding Principles and Policies A.4.

At present, the County's Primary Development Boundary is approximately 72 square miles in size, or 46,080 acres. As reported on the County webpage the land area of the County is approximately 414 square miles, or 264,960 acres. Subtracting the area of the Primary Development Boundary from total County acres, a Policy cap of five (5) percent would equate to no more than 10,944 project acres devoted to Solar Energy Facilities outside of the Primary Development Boundary. If we consider the sPower projects total project acreage of 6,350 acres, the cap would be supportive of no more than 4,594 additional acres devoted to solar energy facilities within the approximately 218,880 acres located outside of the Primary Development Boundary. Staff believes the cap reasonably accommodates the potential for solar energy facilities within the County while controlling for any real or perceived threat of widespread proliferation of such facilities within "a stones throw" of all areas of the County.

Staff acknowledges that the County's Industrial 2 (I-2) zoning district also enables the potential for solar energy facilities via special use under the use *public utility, heavy* (accommodating electrical generating plants and facilities by definition). The County's current inventory of Industrial 2 zoned lands is overwhelmingly located within the Primary Development Boundary. Total I-2 zoned lands cover 3,171 acres scattered amongst a number of sites. A 2018 Industrial acreage analysis found that roughly 736 I-2 zoned acres remains unconstrained and undeveloped by conservation easements, quarry operations, or environmentally sensitive features (steep slopes, wetlands, resource protection areas) or existing development. Due to fragmentation of developable Industrial 2 zoned sites, the prospect of large-scale solar energy facilities within I-2 districts is limited. The only Industrial 2 zoned site outside of the Primary Development Boundary is located off Post Oak Road, an approximately 80-acre site intended as a sawmill but never developed.

- Beyond the proposed five percent cap guideline, staff has also looked to geographically narrow recommended siting of solar energy facilities to projects located within or partly within one-thousand (1,000) feet of high voltage transmission corridors in the County to promote electric grid proximity and reduce the extent or chance for additional overland transmission corridors traversing the County to reach the grid. The existing high voltage transmission corridors are depicted with County GIS mapping data and within the Comprehensive Plan.

- Proposed Comprehensive Plan guidance would seek to avoid clustering or multiple solar energy facilities focused on one or two areas of the County. In the interest of maintaining rural character, forestry and agriculture as primary uses outside of the Primary Development Area, the draft proposes recommending solar energy facilities be separated from one another by at least two miles.

- One of the most "jarring" impacts to rural character can be the clear cutting of forested lands associated with timbering operations. The County is supportive of forestry operations and they are an integral part of the agricultural and forestal economy. Their presence preserves large open space areas, rural character and reduces development density. The County is also supportive of private property rights and the use of forestry lands for said

purpose. Staff also recognizes site clearing can and does drastically change familiar character and viewsheds, requiring years to re-establish. The impacts of clearing can be amplified when faced with a change of use, resulting in conflict with existing Comprehensive Plan Land Use Policy 9 that states *Renewable energy generation facilities, such as solar, geothermal, or wind, should be sited and designed to minimize detrimental impacts to neighboring properties, uses, and roadways.* With solar energy facilities the prospect of forest re-establishment is vastly limited to expect environmentally sensitive areas and transitional screening areas will be reforested.

Staff has focused in on location specific policies directed at future *solar energy facility* proposals that would proactively seek to preemptively preserve forested buffers. To reduce visual impacts, the draft guideline states that *solar energy facilities are best located on sites with pre-established and/or preserved vegetative and/or forested buffers of enough depth or density to effectively screen the facility as determined by viewshed analysis along public roadways, nearby or adjacent residential properties, significant cultural or historic resources.*

The intent of this guideline looks to ensure more proactive maintenance of the rural character, enhanced construction noise mitigation, forest preservation, reduced immediate viewshed impacts upon nearby property owners, expand distances between the project installation and construction, preserve and protect Resource Protection Areas and stream corridors in advance of solar energy facility construction activities considerate of erosion and sediment control protections. This proposed policy would only apply to the prospect of a solar energy facility. The intent is not to restrict private property rights but establish an expectation that if a landowner and/ or applicant seeks to pursue development of a solar energy facility, certain site conditions are warranted as a mitigating factor for the change in use.

- The draft Comprehensive Plan proposes expanding the agricultural and forestal land use designation to preserve large tracts of agricultural and forestal uses and discourage loss of prime agricultural soils or areas of quality forestry productivity potential. These are recognized finite resources and significantly contribute to efforts to maintain rural, farm, forest character, diversifying the local economy with the production of agricultural food and fiber, inhibit sprawl, environmental benefits. Establishment of solar energy facilities within agricultural and forestal land use designated areas would be discouraged. A draft copy of the land use map (part of an ongoing Comprehensive Plan update) is attached for reference.

- Staff has drafted a Comprehensive Plan policy item that emphasizes support for smaller scale solar energy facilities that generate 150 megawatts or less. Such projects are subject to the Virginia Department of Environmental Quality Permit by Rule regulations, established in the Code of Virginia, 9VAC15-60. As per the Code of Virginia, the regulations apply to "*solar-powered electric generation projects consisting of PV systems and associated facilities with a single interconnection to the electrical grid that are designed for, or capable of, operation at a rated capacity equal to or less than 150 megawatts."* These projects are ultimately less impactful in terms of their geographic scope

and scale of potential impacts. Smaller scale projects from a County resources side are also more manageable to review and develop recommended conditions or mitigation, and to monitor during the construction period. With an interest in addressing total project footprint (scale), staff looked to numerous other solar energy facilities nationwide, consulted studies, and the University of Virginia Weldon Cooper Center Solar Energy Initiative (SEI) to develop a rough proportion ratio of total project acres per megawatt resulting in a recommendation that *Solar energy facilities of no more than 1,800 acres (total project area) are preferred over larger facilities*. Total project area includes open space, transitional screening, resource protection areas, etc. After looking at examples over a wide geography with various topographic conditions, staffs focus looked at Virginia examples that may be more representative of "on the ground" conditions more typical in the region. Per the Virginia Solar Energy Initiative, *DEQ's Permit by Rule data shows that for projects between 5MW and 150MW that received a permit since 2016, the average total project acres per MW was 12.36. (Notices of Intent filed in 2019 average 13.19 acres/MW).* As drafted, staff's recommended preference of projects of no more than 1,800 acres equates to a ratio of 12 acres per 1 MW. This I generally consistent with "real world" examples and appears to be a reasonable ratio.

- Lastly, the draft guidelines recommend staff prompt applicants to *explore opportunities for non-traditional installation methods as an alternative to pile driving such as earth screws or earth anchors that may reduce construction noise, expedite installation or removal (if need be).* The intent is to reduce impacts, especially construction period related impacts as noted in the draft. Some of these alternatives have not yet been widely deployed but staff feel are worthy of consideration.

Staff reached out to the SEI who contacted an array of industry experts and manufacturers. Such alternative installation methods have been utilized elsewhere on the east coast but none were identified within Virginia. A number of operating solar energy companies with operations in Virginia were contacted and per the SEI, *by and large, the feedback I received was that most people are not very familiar with them (or other alternative methods such as earth anchors).* Earth screw manufacturers and installers were also contacted. Per the SEI, *manufacturer/installers claim they* (earth screws) *are faster/cheaper to install/uninstall, but I was unable to answer this reliably, given developers in Virginia's lack of experience with them.*

Staff also inquired about whether such alternative installation technologies were soil or geological condition specific. The SEI found that *industry claims they are feasible in any soil or geologic condition and a geotech report can be forgone, but I have yet to find evidence that this is best practice.* In summary the SEI found *this is a curious technology that may hold promise for use in Virginia*. Feedback received by SEI from Virginia Tech concerning soil science and deployment of alternative installation methods in Spotsylvania County suggests ensuring alternative methods properly consider soils conditions (presence of acid sulfate soils as example) to ensure proper construction method and materials.

To potentially reduce construction impacts and considering facility decommissioning if need be in the future, staff feels this guideline is proactive and forward looking to accommodate

emerging technologies. Staff believes "it doesn't hurt to ask" and inclusion within the Comprehensive Plan helps assure the question is raised during the review and analysis period.

Wind Farms

At present, provision for wind farm power generation developments are limited only to Industrial 2 (I-2) zoned lands, subject to special use permit approval. As noted above in relation to *solar energy facilities*, the County's current inventory of Industrial 2 zoned lands is overwhelmingly located within the Primary Development Boundary. Total I-2 zoned lands cover 3,171 acres scattered amongst several sites. A 2018 Industrial acreage analysis found that roughly 736 I-2 zoned acres remains unconstrained and undeveloped by conservation easements or environmentally sensitive features or existing development. The only Industrial 2 zoned site outside of the Primary Development Boundary is located off Post Oak Road on an approximately 80 acre site intended as a sawmill but never developed. But for brief frontage along Post Oak Road, the Industrial 2 zoned acreage makes up only a portion of a much larger parcel of nearly 900 acres. But for roughly 230 feet of frontage along Post Oak Road, the site is surrounded by Agriculture 3 (A-3) zoned lands. Wind Farms are not accommodated in the A-3 zoning district by-right or by special use. Currently the only potential site where County code provision would entertain the prospect for a wind farm (via special use permit) outside of the Primary Development Boundary is on that 80-acre site. Any other location would require a rezoning and special use permit approvals via project review and public hearing process to establish such a use.

Geographically, Spotsylvania County is not a prime candidate for wind farms. Wind farms are best located in areas with more reliably sustained winds that are prevalent in coastal areas, on mountain top, upon flat prairies where winds are relatively uninhibited by mountain ranges, etc. It is not to say Spotsylvania County does not have wind or windy days but is to say the frequency of fairly sustained winds to operate wind turbines is not conducive to the area. The Appalachian and Blue Ridge Mountains act as a break for weather systems and make the immediate area not ideal for wind farms. Simply, Spotsylvania County is not considered to be within a "wind rich area".

Considering the aforementioned factors, staff has suggested removing reference to wind generation in the attached draft Comprehensive Plan amendment. The amendment helps focus the content of the Comprehensive Plan guidelines on solar energy facilities specifically as they have much greater geographic reach and size potential considering County Code provisions, past interest, and locational viability as exhibited by the recently approved solar project.

Mr. Thompson inquired if the total land mass remaining to allow for a solar facility is 4594.

Mr. Pastwik stated that is correct.

Mr. Thompson stated that what the county has gotten with the sPower development is not what it was cracked up to be.

Mr. Lane stated that it appears that the county was operating under limited guidance at the time and that this will help us in the future.

Mr. Newhouse inquired what the 5% cap is based upon.

Mr. Pastwik stated that in looking at the amount of acreage, the 5% is outside the Primary Development Boundary and is specific to solar facilities as defined by the zoning ordinance. The overreaching question is how much land area the County is willing to devote to this land use.

Mr. Newhouse stated he doesn't want to preclude a farmer from maintaining solar for his farm use.

Mr. Pastwik stated that it is only for rezonings and special use requests and applicable to solar energy facilities as defined by the Code.

Mr. Newhouse stated that he wants to be cautious about how we frame this language and be able to provide clear guidance on buffers.

Mr. Pastwik responded and stated that staff is trying to proactively mitigate citizen's concerns.

Mr. Newhouse expressed concerns about limiting size and suggested larger facilities may be needed to justify the expense as a business model.

Mr. Pastwik reminded the Commission that the sPower facility is the largest east of the Mississippi River. He also reminded the Commission that the recommendation would support up to 1800 acres total for a project.

Mr. Lane thanked Mr. Pastwik for his hard work on the proposed language. He stated that he is all for property rights and that there are other agencies that regulate solar facilities, such as the SCC and DEQ. He also stated that he would prefer to see greater buffers.

There was discussion about environmentally protected lands and how those would be reviewed. Also discussed was protected lands and the loss of potential industrial acres.

Mr. Pastwik stated that it would be the same and they would be condition based.

Dr. Bell agreed with Mr. Lane and thanked staff.

Ms. Carter stated that she also wants to see buffers. She advised that they should locate near high voltage power line areas if possible. She also discussed that staff may want to check into the Clean Air act recently adopted by the General Assembly to see if any of that language would need to be considered.

There was discussion about how this information would be provided.

Mr. Pastwik stated that it would be made available via the newspaper, Cable television station, fliers, website, Public Information Officer, and the new Geohub system as part of the Comprehensive Plan Draft unveiling to the public.

Motion and vote: On a motion by Mr. Lane seconded by Dr. Bell to move this forward to public hearing with the Comprehensive Plan. Staff was also directed to clarify proximity to transmission lines language and screening/buffer language.

VOTE:

Ayes: 6 Dr. Bell, Ms. Carter, Mr. Lane, Mr. Newhouse, Ms. Maddox, Mr. Thompson
Nays: 0
Absent: 1 Mr. Bullock
Abstain: 0

CPA17-0002 Comprehensive Plan Public Facilities Chapter Update – General Government, Sheriff's Element

Mr. Hughes stated that a representative from Fire Rescue was present to answer questions regarding calls for service and stated that he would like to allow Mr. Steve Cooper, Deputy Fire Chief to answer any questions.

Mr. Newhouse stated that the Commission hears frequently the term calls per station. He inquired what the difference is in a call and an incident.

Mr. Cooper stated that the average call per station is 2500. They can be anything from a medical call, smoke detector checks, residential fire, mva's.

Ms. Maddox inquired about when someone calls 911 for medical, how many units respond.

Mr. Cooper stated that two units would respond, an ambulance and a fire engine, so that is 2 calls.

There was discussion about which stations are the busiest.

Mr. Cooper stated that the Four Mile Fork and Salem Church Road stations are the busiest, followed by Crossroads, Courthouse, Thornburg, Route 3, and Salem Fields. The majority of the calls to a station are medical/mva's at about an 80/20 split.

The Commission thanked Mr. Cooper for his time.

Mr. Pastwik presented the worksession. Staff is returning to the Planning Commission with a work session to discuss the final two elements of the Comprehensive Plan Public Facilities Chapter, including General Government and Sheriff. All other Public Facilities Chapter draft content has been vetted through work sessions prior. A summary of the draft amendments is below:

<u>General Government</u>

As outlined in the draft, the General Government portion of the Public Facilities Element seeks to identify capital facility needs for County government operations not associated with operational

Spotsylvania County Planning Commission

Board Room – Holbert Building, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES: April 7, 2021

Call to Order: Ms. Maddox called the meeting to order at 7:00 p.m.

Members Present:	Mary Lee Carter	Lee Hill
	Jennifer Maddox	Berkeley
	Richard Thompson	Courtland
	Dr. Raymond Bell	Salem
	Jacob Lane	Livingston
	C. Travis Bullock	Battlefield (arrived at 7:05)
	Gerald Childress	Chancellor

Staff Present: Paulette Mann, Planning Commission Secretary
B. Leon Hughes, AICP, Director of Planning & Zoning
Alexandra Spaulding, Senior Assistant County Attorney
Kimberly Pomatto, AICP, Deputy County Administrator
Jacob Pastwik, AICP, Planner III
Shannon Fennell, Planner III

Announcements: Mr. Hughes updated the Commission on upcoming cases, what's on the TRC agendas and community meetings.

Review and approval of minutes

Motion and vote: On a motion by Ms. Maddox, seconded by Mr. Thompson, the Commission

VOTE:

Ayes: 7 Dr. Bell, Ms. Carter, Mr. Bullock, Ms. Maddox, Mr. Lane, Mr. Thompson and Mr. Childress
Nays: 0
Absent: 0
Abstain: 0

Discussion Item(s):

CPA17-0002 - Comprehensive Plan Update – Public Comment Review

Mr. Pastwik presented the PowerPoint. He discussed the advertising methods and how comments were solicited. He raised the following discussion items

- Does the Planning Commission support suggestions to reiterate similar goals across Chapters?

The Commission stated that don't see the need for duplication.

- Does the Planning Commission support adding language generally supportive of rooftop solar?

Mr. Thompson expressed that he doesn't feel it necessary to add this to the plan.

Mr. Hughes stated the idea behind adding it shows that we are a community that supports green energy.

The consensus was to leave the language out of the plan.

- Does the Planning Commission wish to adjust the recommended total land area cap for solar energy facilities? At present the draft states 5% of the land area outside of the Primary Development Boundary. An alternative suggestion requests 3% that still leaves room to accommodate a County code identified?

The consensus was to leave the language at 3%.

Mr. Pastwik asked the following related to the Primary Development Boundary.

- Does the Planning Commission wish to re-examine a requested Primary Development Boundary expansion to the east of Massaponax Church Road at this time? Staff notes conditions have not changed from a Planning and Utilities standpoint.

Mr. Thompson stated that he wouldn't want to see an expansion of the boundary until the boundary is completely developed.

Mr. Lane agreed.

- Doe the Planning Commission support higher intensity mixed use designation with greater emphasis on residential development at Lake Anna? This prospect introduces development using a satellite private or public utility system. Mass drainfields may also be consideration. Presently the draft assumes a lower density commercial oriented mixed use area reliant on well and septic systems.

Mr. Lane stated that he wouldn't want high density development at Lake Anna.

Mr. Childress stated that high speed internet is definitely needed at the Lake.

Mr. Lane stated that he would prefer that the lake be for the citizens of the county and not see it grow much.

- Does the Planning Commission wish to explore further expansion of the Primary Development Boundary to connect the Courthouse area to the Route 1 corridor along Massaponax Church Road, Hickory Ridge Road?

The Commission discussed and decided to leave the boundary the same.

Mr. Pastwik raised the following questions related to Land Use:

- Should we reconsider the land use recommendations between the recently approved Springhaven and Regency Crossing projects along Five Mile Road?

There was much discussion about this and Ms. Pomatto stated that staff is simply suggesting the plan reflect what is already there. The owner would still be required to rezone the property.

The Commission agreed to leave it as is.

Mr. Lane stated that it is pretty clear that some of the suggestions were submitted by developers and not citizens. He stated that the comprehensive plan has become gold standard and not a guide.

Mr. Hughes stated the Comprehensive Plan is the vision set forth by the County for the developers to follow. He reminded Mr. Lane that developers are citizens and property owners also.

Mr. Thompson stated that developers are self-serving and only care about their checkbook.

- Now that the Mixed Use designation has changed to a three tier system, would the Planning commission re-explore the designation of an approximately 35-acre site (zoned Rural) on the north side of Smith Station Road across from Courtland Park mixed use development as mixed use light? This is the lowest intensity mixed use designation and would complement the Courtland Park project.

The Commission members were not in support of changed the land use.

- Does the Planning Commission support re-designing roughly 30-acre area near the corner of Route 2/17 across from the New Post development with a mixed use light designation?

Mr. Thompson & Ms. Maddox stated that it is already dense in this area and suggested leaving as is.

Mr. Pastwik thanked the Commission for their input.

Public Comment: None

New Business:

Mr. Lane encouraged the Planning Commissioners to go back and watch the Board's discussion on the camping ordinance. He stated that all of the issues that were mentioned by the Commission were not presented to the Board and he strongly encouraged the Commission to watch prior to the next worksession

Adjournment

Motion and vote: On a motion by Mr. Lane, seconded by Mr. Bullock, a motion was made to adjourn.

VOTE:

Ayes: 7 Dr. Bell, Ms. Carter, Mr. Lane, Mr. Bullock, Ms. Maddox, Mr. Childress, and Mr. Thompson
Nays: 0
Absent: 0
Abstain: 0

The meeting adjourned at 10:00 p.m.

Paulette Mann, Planning Commission Secretary
Approved on April 21, 2021

CHAPTER 3, 3A TRANSPORTATION MEETING MINUTES COLLECTION (INCLUDING MINUTES PRIOR TO AND AFTER JULY 28, 2020 STANDALONE CHAPTER APPROVAL)

PRESENT:	Greg Benton, Livingston District Kevin W. Marshall, Berkeley District Timothy J. McLaughlin, Chancellor District David Ross, Courtland District Gary F. Skinner, Lee Hill District Paul D. Trampe, Salem District Chris Yakabouski, Battlefield District
STAFF PRESENT:	Mark B. Taylor, County Administrator Mark Cole, Deputy County Administrator Karl Holsten, County Attorney Nicole Woodard, Assistant to County Administration

Mr. Benton called the meeting to order at 6:00 p.m. Mr. Ross led the Pledge of Allegiance and Mr. Benton gave the invocation.

APPROVAL OF AGENDA

On a motion by Mr. Marshall and passed unanimously, the Board approved the agenda with the following addition:

- Grant Application Request and Resolution for the FY18 Virginia Department of Emergency Management Homeland Security Grant Program for a Patrol Boat for Lake Anna.

VOTE:

Ayes:	7	Mr. Benton, Mr. Marshall, Mr. McLaughlin, Mr. Ross Mr. Skinner, Dr. Trampe and Mr. Yakabouski
Nays:	0	
Absent:	0	
Abstain:	0	

PUBLIC PRESENTATIONS

The following citizens spoke in opposition or with concerns to the proposed solar farm: Russ Mueller, Michael O'Brier, Ernie Booth, Joanne Booth, Judith Genaille, Irvin Boyles and Kristen Talken-Spaulding.

The following citizens spoke on behalf of the Buckley family regarding the removal of Juan Antonio from their care: John Buckley, Abby Buckley, Britton Brannen, Jeff Wollschlager, Jen Wollschlager, Richard Byrdsong, Johnny Bryan, Ken Gross and Marcia Stevens.

d. School Capital Projects $85,286,546

RESOLVED FURTHER, that the County Administrator is authorized to take all necessary actions to give this resolution effect.

On a motion by Mr. Marshall and passed unanimously, the Board adopted the resolution as follows:

VOTE:

Ayes:	7	Mr. Benton, Mr. Marshall, Mr. McLaughlin, Mr. Ross Mr. Skinner, Dr. Trampe and Mr. Yakabouski
Nays:	0	
Absent:	0	
Abstain:	0	

RESOLUTION NO. 2018-67

BE IT RESOLVED by the Board of Supervisors of the County of Spotsylvania, Virginia, that the following appropriation be, and the same hereby are, made for the fiscal year beginning July 1, 2018, from the funds and for the functions or purposes indicated.

For adjustments to capital projects to align the budget and CIP, to be expended only by order of the Board of Supervisors as follows:

CAPITAL PROJECTS FUND: $105,000
TRANSPORTATION FUND: ($52,500)

The Board recessed at 8:40 p.m. and reconvened at 8:45 p.m.

WORK SESSION

Planning Commission and Board of Supervisors Work Session to Discuss the 2018 Update of the Comprehensive Plan

The Code of Virginia requires that jurisdictions review their Comprehensive Plan every five (5) years and update as necessary. The 2013 update of the Comprehensive Plan resulted in substantial revisions. The 2018 update was proposed to consist of necessary updates and desired enhancements to support the County's Vision as defined in Chapter 1 of the Comprehensive Plan. This joint work session was an opportunity for the Board of Supervisors and Planning Commission to discuss the Plan and provide staff with direction on the update approach, focus areas, and process.

PRESENT:	Greg Benton, Livingston District Kevin W. Marshall, Berkeley District Timothy J. McLaughlin, Chancellor District David Ross, Courtland District Gary F. Skinner, Lee Hill District Paul D. Trampe, Salem District Chris Yakabouski, Battlefield District
STAFF PRESENT:	Mark B. Taylor, County Administrator Mark Cole, Deputy County Administrator Karl Holsten, County Attorney Niki Woodard, Assistant to County Administration

Mr. Benton called the meeting to order at 4:30 p.m. Mr. Benton led the Pledge of Allegiance and gave the invocation.

APPROVAL OF AGENDA

On a motion by Mr. Benton and passed unanimously, the Board approved the agenda with the addition of the following item:

- Revisions to Board Bylaws Regarding Meeting Agenda Order

VOTE:

Ayes:	7	Mr. Benton, Mr. Marshall, Mr. McLaughlin , Mr. Ross Mr. Skinner, Dr. Trampe and Mr. Yakabouski
Nays:	0	
Absent:	0	
Abstain:	0	

PUBLIC PRESENTATIONS

The following individuals spoke with concerns regarding the proposed solar farm: David Hammond, Richard Genaille, Russ Mueller, Vivian Stanley, Michael O'Bier and Alfred King.

APPROVAL OF THE CONSENT AGENDA

The County Administrator read the synopsis as a brief preview of these agenda items for the public.

The following items were pulled for separate consideration:

Mr. Yakabouski welcomed Una-Dyn to the county. He asked staff to look at building and expanding community outreach.

Mr. Ross shared an event at Shannon Airport from 5:30-7:00 pm this Thursday to meet with Senator Rand Paul and Congressman Dave Brat.

Mr. Benton thanked Mr. Loveday for going above and beyond in working with a citizen. Additionally, he said staff was still working through the S Power application and there was still a long ways to go.

VDOT REPORT

Kyle Bates was unable to be present. Mr. Morgan reviewed the October VDOT Report presented to the Board.

Transportation Element of the Comprehensive Plan Work Session

During the May 22, 2018 Joint Planning Commission and Board of Supervisors work session, the Board indicated that it would like to be directly involved in the discussion about the Transportation Chapter of the Plan. In particular, the Board wanted to provide input into the project prioritization process.

The objectives of the work session were:
1. Identify transportation projects on an active working list.
2. Discuss a scoring methodology for prioritizing projects.
3. Discuss a policy for adding projects, removing projects, and re-prioritizing projects on the list.

PRESENATIONS/REPORTS BY STAFF

FY 2018 Preliminary End of Year Financial Report and Recommended Carryover Request

Staff gave a presentation reviewing the County's financial position at the close of FY 2018 and requested the Board's approval of budget adjustments and appropriations related to the recommended carryover request list. Staff from each department were available to address questions concerning carryover requests. A draft carryover listing was reviewed and approved by the Finance Committee at its meeting on September 20. A public hearing was not necessary since the total of the budget adjustment for the recommended carryover requests was less than the legal threshold required for a public hearing.

On a motion by Mr. Ross and passed unanimously, the Board adopted the resolution as follows:

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES:	November 7, 2018	
Call to Order:	Mr. Newhouse called the meeting to order at 7:00 p.m.	
Members Present:	Richard Thompson	Courtland
	Howard Smith	Livingston
	Jennifer Maddox	Berkeley
	Michael Medina	Salem
	Mary Lee Carter	Lee Hill
Members Absent:	C. Travis Bullock	Battlefield
	Gregg Newhouse	Chancellor
Staff Present:	Paulette Mann, Planning Commission Secretary	
	Wanda Parrish, AICP, Director of Planning	
	Kimberly Pomatto, CZA, Planner III	
	Alexandra Spaulding, Senior Assistant County Attorney	
	Jacob Pastwik, AICP, Planner III	
	Leon Hughes, AICP, Asst. Director of Planning	

Announcements: Ms. Parrish advised that there are no other Commission meetings in November beyond this meeting. She informed the Commission that staff is planning to bring the three sPower cases to the Commission on December 5, 2018. She stated that staff is willing to meet with Commission members on the Monday and Tuesday prior to the meeting if they so desire.

Review & Approval of minutes:

Motion and vote: Mr. Thompson made a motion, seconded by Ms. Maddox to approve the minutes of October 17, 2018. The motion passed 5-0.

Unfinished Business: None

Ms. Carter opened the public hearing.

SUP18-0009 DMS Properties, LLC: Requests special use permit approval to allow a contractor's office and shop on approximately 10.10 acres of Agriculture 3 (A-3) zoned property. The property is located at 5730 Jefferson Davis Highway, which is located on the west side of Jefferson Davis Highway (Route 1) approximately 530 feet north of the Arcadia Road (Route 603) and Jefferson Davis Highway (Route 1) intersection. The property is located outside the Primary Development Boundary. The property is identified for Rural Residential development on the Future Land Use Map of the Comprehensive Plan. Tax parcel 76-A-15A. Berkeley Voting District.

Ms. Maddox stated that this development is not far from her home and that a turning lane would not be warranted. She stated that she finds this development to be acceptable and that it will basically be hidden. She advised that she is in full support of small business and would like to see this corridor grow. She stated that the only time this portion of Route 1 is busy is when there is bail out traffic from I95.

Mr. Medina inquired when cases are this close to adjacent counties whether we notify or examine what that county has proposed on their side.

Ms. Parrish stated that yes, planning staff does do this and they are notified if development is within a ½ mile.

Ms. Maddox stated that Route1 in this area is in need of revitalization and there is an opportunity to grow in this area.

Ms. Parrish reviewed the public hearing procedures.

Speaking in favor or opposition:

Roderick Slyke, Berkeley District: He stated that he owns the property directly to the left of the proposed development. He stated that he is in full support of the proposal and that the Route 1 Corridor in this area needs some development. He has no objections to seeing development all the way to the Caroline County line. He stated that the residents in this area work well together and are trying to get development to come that way.

Tom Luper, Berkeley District: He stated that he and his wife live ¼ mile north of this proposal and that they are in full support.

Ms. Carter closed the public hearing.

Motion and vote: Ms. Maddox made a motion, seconded by Mr. Thompson to approve the special use request with staff's recommended conditions. The motion passed 5-0.

Worksession(s):

CPA17-0002: Update to the Comprehensive Plan's Transportation Element Bicycle & Pedestrian Accommodations

Mr. Pastwik presented the worksession. He advised that staff is seeking input from the Planning Commission regarding consolidating the Trailways Master Plan into the Comprehensive Plan. He also is seeking corridor and location based recommendations for bicycle and pedestrian accomodation.

(1) Proposal to shift crucial bicycle and pedestrian elements from the 2011 adopted Trailways Master Plan into the Comprehensive Plan, whereby abandoning a separate standalone plan.

Planning staff in collaboration with County Transportation staff are in the process of reviewing and drafting updates to the Transportation Element of the Comprehensive Plan. One part of that plan includes transportation alternatives offering different modes of transportation with the ultimate goal of providing more choice and reducing demands upon roadways, especially during peak hours. Transportation alternatives tend to focus on things like telecommuting, rail, ridesharing, van pools, mixed-use development (live, work, play concept reducing need to drive long distances for work, etc.), bicycle and pedestrian connectivity, bus/ transit services.

Presently, bicycle and pedestrian connectivity is addressed in the Transportation Element as a transportation alternative but points elsewhere to the standalone Spotsylvania County Trailways Master Plan. Spotsylvania County adopted the Trailways Master Plan in February, 2011 that included plans for both roadside and off road greenway trails. In 2011 the Virginia Chapter of the American Planning Association bestowed the 2011 Outstanding Plan Award- Plan Element upon the Plan. The Plan has historically been a standalone document incorporated by reference within the Comprehensive Plan. As a Plan element in the interest of assuring such a plan does not become outdated or inconsiderate of opportunities that may arise from changes elsewhere within other elements of the Comprehensive Plan, staff is supportive of shifting crucial plan elements into this Comprehensive Plan recognizing its applicability to both Transportation planning (road based) and Parks and Recreation. Staff feels abandoning the standalone plan model in favor of the Comprehensive Plan better positions it for continued monitor, pursuit, and review and update consistent with the 5 year review and update cycle. Otherwise staff has found there tends to be little impetus to update standalone plans that may become outdated or proactively amended to reflect new opportunities or routing alternatives. The revised and updated Plan embedded within the Comprehensive Plan would address sidewalks, and recreational/ commuter trails plan intended to create an interconnected network of trails cognizant of established Parks and Recreation Level of Service Standards and trail deficits expected to grow to 159 miles by the year 2040 based on projected population growth. The goal of this relocation and revision would be to create a hybrid master plan for Bike/Ped establishing vision previously approved in Master Plan with updates focused on reducing potential duplication, identifying road corridors best suited for bike/ped improvements that may complement the rec trails greenway plan (reducing off road trails through the woods) yet achieving same goals. Staff proposes avoiding a wholesale reboot of the Plan and is not presently looking to totally “reinvent the wheel”. Staff proposes a carefully update that would establish a clear County vision for sidewalks and trails that can influence future updates to County Code and Design Standards Manual where issues have been identified related to required frontage improvements. It’s expected this update will also better inform and influence bike/ped related recommendations in case of rezoning and special use permit applications. Maintaining a bicycle and pedestrian plan no matter whether in a standalone document or within the Comprehensive Plan also lends support for grants and road improvement funding requests. Bike/Ped improvements add strength to transportation project applications for funding such as Virginia’s Smart Scale applications. Plans also lend support and basis for VDOT Project Scoping, Highway Safety Improvement Program (HSIP) Projects, County comments on transportation projects managed by others, etc.

(2) Identification of major thoroughfares where bicycle and pedestrian (sidewalks or planned recreational trails) accommodations should be expected in the County.

There has been much debate regarding the best locations and appropriateness of bicycle and pedestrian infrastructure in certain locations throughout the years. Current Design Standards Manual requirements for sidewalks (attached for reference) are primarily based on the zoning/use of land, regardless of location. Over time, staff has found that this approach has resulted in sidewalks being placed in areas where they may not be warranted or result in a fragmented network of sidewalks since they are not corridor based expectation. For the purpose of this Comprehensive Plan update staff is looking to focus mainly on road frontage infrastructure along higher tier roads in the County; a corridor specific approach. This approach would result in bicycle and pedestrian frontage improvement expectations more in line with corridors specifically identified as part of the Comprehensive Plan. Comprehensive Plan direction is expected to help guide future amendments and streamline bicycle and pedestrian improvements requirements located in the design standards manual. Preliminarily staff believes those roads classified as Minor Collector or higher (excluding Interstate and Ramps) as classified by VDOT functional classifications within the Primary Development Boundary warrant sidewalks. A map depicting these recommended roads for inclusion in the Plan is attached as an exhibit. A corresponding list identifying the particular road segments of interest within the Primary Development Boundary or Lake Anna Area (Route 208) has also been attached for reference.

Generally speaking staff does not believe sidewalk infrastructure is warranted for standalone commercially zoned properties with little to no prospect of future connectivity and limited land use support for commercial proliferation outside of the Primary Development Boundary (PDB). The one exception to this staff notes outside the PDB considering land use designation, existing zoning, and existing development patterns along with a precedent of some existing sidewalk/ trail infrastructure extending to the Louisa County line along Courthouse Rd from Bradley Lane area. Staff believes the mixed use area near Courthouse Road and Lake Anna warrants bike/ped considerations. Otherwise road improvements such as shoulder improvements along rural roads such as those identified as part of Thoroughfare Plan rural roads improvements are likely sufficient.

Recreational trails, or a hybrid of sidewalks and trails on opposite roadsides may be warranted in situations where the planned recreational trails (supported by County Parks and Recreation levels of service standards) plan overlaps road corridors. Staff would like to take advantage of road corridors when opportunities exist as opposed to off road recreational trails (also known as greenways). Staff acknowledges that the planned recreational trails system fits within a regional and national system of trails. Respecting that, recreational trail infrastructure along designated corridors does expand beyond the limits of the Primary Development Boundary. The Virginia Central Rail Trail Plan is an example, stretching to the Orange County line.

It is good to note that unless a major road improvement project is undertaken resulting in lengthy improvements along corridors such as road a widening (including bicycle and pedestrian accommodations), bicycle and pedestrian infrastructure will continue to develop in a piecemeal fashion and connectivity will be established over time with project specific frontage

improvements. A corridor specific approach will not prevent piecemeal fragmented sidewalk segments but will better assure infill frontage improvements will make the system whole over time.

With guidance from the Planning Commission resulting from this work session staff hopes to move forward to develop a revised trails and sidewalks plan hybrid map in the spirit of the adopted Trailways Master Plan.

Mr. Thompson inquired if it would change the status of the comprehensive plan.

Mr. Pastwik stated no.

In order to widen a road or add sidewalks you have to acquire property from private property owners and some of the homes along Mine Road are close to the road so it would essentially be taking their whole front yard.

Ms. Carter inquired about Mine Road and how the state appraisal process works and how ROW acquisitions are paid to property owners.

Mr. Pastwik stated that he is unaware of that policy and it's a state level policy question. It has to do with how land is appraised and how monies are offered for property acquisition.
Mr. Thompson stated that he has been through ROW acquisition before and the value of your land is what VDOT tells you the value is.

Mr. Medina stated that the sidewalk to no where issue came up for the Fredericksburg Christian SUP. He stated that he has a real problem with sidewalks to no where. He stated that he would like to see the dedication of the land rather than the requirement that the sidewalk be built to never be connected to from the adjacent properties.

Mr. Pastwik stated that the DSM allows for a trail in lieu of sidewalk.

Mr. Medina stated that he likes the way staff is going and that sidewalks to nowhere drive him nuts.

Ms. Carter stated that roads like Mine Road are heavily constrained.

Ms. Maddox stated that she likes this approach.

The Commission decided that they like this and want to see it move forward.

New Business - None

Public Comment:

David Hammond, Livingston District: He discussed cadmium leaching from the solar panels and the effects that it could have on the residents.

Transportation Committee Meeting Minutes of June 13, 2019

Call to Order:

Doug Morgan called the Transportation Committee to order at 6:15 pm. A quorum was confirmed.

Members Present

Gary Skinner (Lee Hill District Supervisor), Tim McLaughlin (Chancellor District Supervisor), Greg Bell (Lee Hill District Representative), Richard Thompson (Courtland District Representative), Harza Atif (Chancellor District Supervisor)

Others Present

Rick Spurlock (VDOT), Dan Cole (staff), Doug Morgan (staff), Jacob Pastwik (staff), Paul Agnello (FAMPO)

Minutes

The minutes from the March 14th meeting were reviewed. Mr. Agnello noted that he was omitted in "Others Present". A motion to approve the minutes with that change was made by Mr. McLaughlin and seconded by Mr. Thompson. The minutes were approved 5-0 by the Transportation Committee.

Public Comment

None. No members of the public were present.

New Business

By-Laws Review – The committee received a written request at the March meeting from Gregg Newhouse (Planning Commission Representative). Mr. Newhouse requested a change in the meeting times from 6:00 PM to 7:00 PM. There was a brief discussion concerning the change. Mr. McLaughlin made a motion to keep the meetings at 6:00 PM, which was seconded by Mr. Bell and approved 5-0 by the committee members.

Revenue Sharing – A prioritized list of roads projects was distributed. Mr. Morgan suggested that the two unapproved Smart Scale projects; 1) Germanna Pont Connector Road and 2) the northern portion of the Route 2/17B corridor from the Fredericksburg City line to Shannon Airport Circle be considered for Revenue Sharing. Five-million dollars ($5 M) would be placed on one project in the first year of the program and five-million dollars ($5 M) on the other project the second year of the program. Five-million dollars ($5 M) is the maximum matching allocation per project that a locality can apply for. Mr. Morgan pointed out that *"carry over"* funds from previous project savings would not be applicable to cover any potential funding shortfalls on these projects. The State Revenue Sharing program does not allow more than a total of ten-million dollars ($10 M) in combined State and local Revenue Sharing funds to exist on any given project but costs of both projects are expected to exceed ten-million dollars ($10 M). Mr. Skinner brought up the issue of using bond funds to make up the difference needed to fund the projects. Mr. McLaughlin suggested that perhaps the Governor's, Transportation Opportunity Fund could be used. Mr. Cole pointed out that there was a condition that required projects to be *"shovel ready"*. Richard Spurlock also said that identification and approval of funding for this type of grant was not like Revenue Sharing. Mr. Morgan reminded the committee that Lansdowne Road improvements were being funded by the City. Mr. Skinner said; *"Lansdowne Road improvements were the most needed (on the 2/17B corridor) and perhaps the County should fund only the Germanna Point Connector Road"*. Mr. McLaughlin seconded a motion to apply for Revenue Sharing funding for just the Germanna Point Connector Road. The committee voted 5-0 to

apply for Revenue Sharing in both 2021 and 2022 (a maximum of $10 million over both years) to fund only the Germanna Point Connector Road.

Multiuse Trail Application (VCR to Salem Church Road) – Dan Cole presented some history in regard to the trail. *"The trail was originally going to be done under HSIP (Highway Safety Improvement Program). The BOS approved a resolution for the trail and four other projects in October, 2017. VDOT was only able to fund three of the projects in 2017." The HSIP program was changed in 2018 and the remaining projects were no longer eligible or changed. The new VDOT HSIP project will upgrade the Harrison Road & Salem Church Road intersection with pedestrian indications, handicap ramps, and a crosswalk. With the trail application the County would fund a 10' multi-use trail along Salem Church Road from the existing VCR trail to Harrison Road. The length of the trail would be just over 1,000' feet in length and could be built all on County owned property. Conflicts with utilities would be minimized or eliminated completely if the trail were located further to the west of Salem Church Road. Cost is estimated to be $360,000. There are two grant opportunities to fund the project; 1) the Transportation Alternatives (TA) program or 2) the Department of Conservation Recreation (DCR) Program. Both grants require the locality to fund 20% of the project. Based on the estimate the County would be liable for $72,000. However, there is currently $30,000 available to the County in a fund for the Massaponax Creek Trail which could be used to offset some of the cost that the County would be responsible for. The TA preliminary grant application process is due July 1st while the DCR grant application is due on August 1st. In the TA program the locality must administer the project. As a DCR project, DCR would administer the project. Staff will complete the applications for both programs. Staff is looking for approval to move the request forward to the BOS"*. The Transportation Committee voted 5-0 to approve this request. Final applications need to be completed by October 1st.

Comprehensive Plan – Jacob Pastwik showed committee members draft copies of the Comprehensive Plan map, new roads that were in the plan, costs and level-of-service. He explained the effort to maintain parity with the regional plan and changes which were included from the February BOS work session. A couple of roadways were pointed out. The Spotsylvania Parkway extension drew some mixed comments due to concerns on where it might connect to Gordon Road.

Informational Items

VRE – Caroline County FRED Route – Doug Morgan briefed the committee that Caroline County was terminating their route to the VRE. June 24th was identified as the final route date. He is working with FRED to review access to the VRE to include/change existing routes on Tidewater Trail and others to provide coverage in Spotsylvania County.

STARS Route 1 – Market Street/Mine Road Corridor Study - Dan Cole gave a brief explanation about the CMAQ project that was developed by JMT as part of the Route 1/208 Corridor Study. *"Based on the corridor study a CMAQ project was proposed for the Route 1 & Market Street intersection. The project scored well and was funded through the CMAQ program. The main purpose of the project was to eliminate the split phasing on Market Street / Denny's Driveway approaches. The result would permit the side street left turns to move at the same time permitting more green time for Route 1. There were associated changes on Route 1 as well but Mr. Agnello indicated in previous meetings that the project could be tweaked to include any findings that result from the STARS Route 1 – Market Street/Mine Road Corridor Study."* Mr. Skinner wanted to incorporate a change to the Spotsylvania Avenue & Market Street intersection – provision for an additional southbound lane to allow for a left, through and right turn lane. There is a rezoning in the area which could incorporate this change if the developer is agreeable or it could come forward as a project under the STARS study.

Announcements

Richard Spurlock is temporarily filling in for Kyle Bates who has since taken a position with the Culpeper District.

Mr. Morgan announced that there is no meeting scheduled for the month of July. The next meeting would be on August 8th.

A new STARS study is underway on Route 1 from Massaponax Church Road to Caroline County. The study is being conducted by Kittelson & Associates. The kick-off meeting is on Wednesday, June 19th.

Next Meeting

The next meeting is scheduled for August 8th, 2019 at 6:00 PM.

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES: August 7, 2019

Call to Order: Mr. Newhouse called the meeting to order at 7:00 p.m.

Members Present:	Richard Thompson	Courtland
	Howard Smith	Livingston
	Jennifer Maddox	Berkeley
	Michael Medina	Salem
	C. Travis Bullock	Battlefield
	Gregg Newhouse	Chancellor
Members Absent:	Mary Lee Carter	Lee Hill

Staff Present: Paulette Mann, Planning Commission Secretary
Wanda Parrish, AICP, Director of Planning
Shannon Fennell, Planner III
Jacob Pastwik, AICP, Planner III
Doug Morgan, CTM, CZA, Transportation Planner
Daniel Cole, Traffic Engineer
Alexandra Spaulding, Senior Assistant County Attorney
Jason Irby, Deputy Fire Chief

Announcements: Ms. Parrish informed the Commission that the Crucible project has been placed on hold to allow the applicant to reexamine their GDP and project. She stated that staff will be bringing rezoning application, Townes at Point Seanna to the August 21, 2019 for public hearing.

Mr. Smith asked that Mr. Loveday from Utilities be present for that meeting.

Review & Approval of minutes:

Motion and vote: Mr. Thompson made a motion, seconded by Mr. Smith to approve the minutes of July 17, 2019. The motion passed 6-0.

Unfinished Business: None

Public Hearing(s):

R18-0011 Spotsylvania Courthouse Village II, LLC: Requests the rezoning of approximately 3.99 acres from Agricultural 2 (A-2) to Mixed Use 3 (MU-3) with proffers for residential development consistent with the surrounding MU-3 zoned parcels. The proposal for residential development currently consists of both single-family attached and detached dwellings and may include any other residential use types permitted in MU-3, except apartments. The parcel is located

Mr. Smith and Mr. Medina inquired about the ISO rating and if rates are based upon being within 5 miles of a firestation.

Chief Irby stated yes, they are National Standards, not local standards.

Ms. Maddox stated that she is served by the Partlow station and asked for clarification on whether it would be updated or replaced.

Mr. Smith inquired if there are any plans to improve current stations.

Chief Irby stated that there are and that the Partlow station is one of them. He stated that there are two currently included in the CIP and one includes the training center. He explained that they are actively looked for a better location for that station to provide for a better coverage area.

There was discussion about including links associated with the nuclear facility and links provided within the proposed comprehensive plan update.

Mr. Newhouse asked for population overlay be added to the map.

Mr. Pastwik thanked them for their feedback.

Update to the Comprehensive Plan's Transportation Element

Mr. Pastwik presented the worksession. He stated that Doug Morgan and Dan Cole are also present should any questions arise. Planning staff in collaboration with County Transportation professionals have reviewed and proposed updates to the Transportation Element (Chapter 3) of the Comprehensive Plan. The draft amendments are attached in redline markup format to clearly identify where amendments have been proposed. Corresponding new draft maps have also been attached. Due to the Chapter's specialized focus, County Transportation staff will be present during the meeting should technical or operational questions arise. The draft Transportation Element was presented to the Transportation Committee on June 12, 2019.

The Transportation Plan has been reviewed and updated considerate of the Code of Virginia, Section 15.2-2223 (attached for reference) that requires a Transportation Plan be developed as an element of the Comprehensive Plan and address a number of transportation related systems including but not limited to roadways, bicycle and pedestrian accommodation, rail, airports, public transportation, etc. The Transportation Plan must also consider Transportation related information such as the acknowledgement of corridors of statewide significance as outlined in Sect. 15.2-2232 (attached for reference).

The 2013 Transportation Plan had a planning horizon of 2030 and recommended transportation system improvements considering existing conditions and future projected population and traffic impact mitigations necessary by 2030. This update now looks to 2040. County Transportation staff are presently in the process of updating the draft Thoroughfare Plan project list to reflect expected 2040 traffic volumes. Since the last Comprehensive Plan update there have been a number of new roads identified within the Thoroughfare Plan worthy of consideration. The Thoroughfare Plan

Project list and associated map include: Chancellor Road Extension to Route 3; Spotsylvania Pkwy/ Smith Station Extension to Gordon Road; Harrison Road Interchange; Route 606 Service Roads North and South; Market Street Extension; Houser Drive Extension. The Thoroughfare Plan itself has been reformatted to break projects into categories including: New Roads and Extensions; Interstate Projects; Road Widening and other Existing Road Corridor Improvements; Intersection Improvements.

Mr. Pastwik stated that now that we are in 2019, the draft document has been updated to reflect changes in Transportation that have occurred since 2013. This includes removal of now outdated information with more recent information. As part of the staff review of the Transportation Element considering the Code of Virginia, the draft further expands upon and elaborates on the status of rail and air services in the County. These are valuable transportation alternatives to consider. Staff feels prior iterations of the Comprehensive Plan were "light" on those alternatives. With an enhanced focus on Economic Development intended with this Comprehensive Plan update, greater emphasis has been placed on the current state of rail and air and potential opportunities to consider that give insight into development of the Future Land Use Map Economic Development goals. Summaries related to Transportation Alternatives as a whole have been enhanced with this draft to include "real world" reporting on the status of such Alternatives available in the County. Staff also see's value in expanding access to more detailed subject specific information within this iteration of the Comprehensive Plan. A number of new hyperlinks have been proposed to expand the reach and ease of access to information associated with the Transportation Plan. Transportation Plan Goals and Objectives have been generally maintained as part of this update however a number of strategies have been proposed that are aimed at safety, system flow, economic development prospects (considerations related to rail access especially), and identification of priority transportation projects based on scoring to strategically focus efforts to improve the transportation network in the County.

As part of the Comprehensive Plan update process staff has also proposed adding a revised and updated Trailways Master Plan (now in draft) as a Transportation Element sub-Chapter (Chapter 3A). The concept of relocating the 2011 Trailways Master Plan from a standalone plan format to one embedded within the Comprehensive Plan was supported by the Planning Commission when presented as a concept at a prior work session on November 7, 2018 (minutes attached for reference). Planning for bicycle and pedestrian accommodations are also consistent with Transportation Plan requirements as outlined in the Code of Virginia (Section referenced above). The Trailways Master Plan serves dual purposes within the Comprehensive Plan by addressing both road and/or road corridor based improvements (as a Transportation Alternative), as well as identifying greenway systems intended for the purpose of addressing Parks and Recreation Level of Service as established in the draft Parks and Recreation portion of the Public Facilities Element, endorsed by the Parks and Recreation Commission on April 18, 2019. The Trailways Master Plan generally mirrors the network adopted in 2011 but has been updated to reflect road improvement plans associated with an updated Thoroughfare Plan and changes to Greenway routes with the aim of tying more greenway miles to existing planned roadway improvement projects, resulting in less perceived duplication, less intrusive potential property impacts, greater visibility, and exposure to potential commercial spin-off opportunities. Since 2011 a number of conceptual greenway alignments have been able to be more clearly established resulting from development opportunities, road improvement plans, various design and alignment studies. As part of this

update, the draft provides status updates for a number of the planned trailways to highlight various implementation successes since initial Plan adoption. The content of the Plan is meant to "get to the point" and has been streamlined to include a Plan background, descriptions of the scope of the plan, descriptions of the specific greenways and intended user groups, and a map depiction of the network. Road based improvements are linked to the County Thoroughfare Plan improvements and the George Washington Region Bicycle and Pedestrian Plan. Bicycle and Pedestrian Accommodations help project scoring when Transportation funds are applied for. The Draft Chapter 3A and the associated Trailways Master Plan map have been attached.

Mr. Newhouse inquired about the roundabout at Andora.

Mr. Morgan stated that it is still on the books however, no funding has been identified.

Mr. Newhouse inquired about Smart Scale funds and whether we have been successful in getting some of the funding.

Mr. Morgan stated that we have been very successful but the topic before the Commission tonight is not about funding and projects but rather the update to the Comprehensive Plan. He stated that he doesn't want to digress but to stay on topic.

Mr. Newhouse stated that he receives many calls about Andora and would like to have a clear answer to provide the callers.

Mr. Morgan stated that Mr. Newhouse can find the answers to his questions on the County's website within the CIP.

Staff is still working through updates to the Thoroughfare Plan project list, specifically as it relates to forecasting 2040 traffic volumes and level of service. Results of these findings could result in additional recommendations for road improvement projects within the system. Additionally, Planning staff is working with County Utilities analyzing the feasibility of a number of Primary Development expansion requests received from the community. These requests tend to be in close proximity to the existing Primary Development Boundary just north of the Route 3 corridor or to the east of Interstate 95. At this time staff does not foresee significant boundary expansions that would warrant additional change to the Thoroughfare Plan. If expansion areas are approved, the depiction of the Primary Development Boundary would be updated within the Thoroughfare Plan map. A work session focused on the Primary Development Boundary and Future Land Use Element will be held at a future date.

Mr. Smith inquired if there are any proposed improvements to Lawyers Road, Route 601, going to Lake Anna State Park. He stated that 260,000 people visit that park and by noon during the summer, the park closes due to overcapacity and there is no where for people hauling boats and RV's to turn around. No parking signs have been installed, but it is becoming very dangerous with people having to pull into driveways while towing large equipment.

Mr. Morgan stated that he will bring this up to VDOT.

Mr. Smith stated that many of the people that are forced to turn around are out-of-towners that are unfamiliar with the roads.

Mr. Medina stated that inclusion in the comprehensive plan is vital to obtain funding.

Mr. Cole discussed that there is a lot of grant money available but it's important that these items are included in our comprehensive plan so that we move up the list for funding.

Mr. Bullock inquired about Lafayette Blvd and what is proposed for that roadway.

Mr. Pastwik stated that it has been identified as a future four lane road.

Mr. Cole stated that it is being studied but no funding has been set aside for Lafayette Blvd at this time.

Mr. Bullock expressed his frustration with how long this road has been studied and how long the improvements have been necessary.

Mr. Cole explained that it is ranked #20 on the list and #9 out of the unfunded projects. He explained that Smart Scale funding is based on congestion.

Mr. Newhouse inquired about the next steps.

Ms. Parrish stated that the Transportation chapter is at the point where we send the draft document to VDOT for their review to ensure that the edits are consistent with the state transportation plan; VTRANS. This will be done just as soon as Mr. Cole can finish the traffic modeling for 2040.

Mr. Cole stated that he is close to being completed with the project.

Mr. Newhouse stated that he would really like to read the documents for this and have staff come back to them for another worksession. He stated that he believes he will have a lot of questions but advised staff to go ahead and move forward to the VDOT review.

Ms. Parrish encouraged the Commissioners to send specific questions that they may have so staff can focus in on topics to cover. She stated that staff is always willing to meet with Commissioners, two at a time, to answer or address any questions they may have.

Mr. Morgan also advised the Commissioners to feel free to reach out to him with any questions they may have.

Public Comment: None

New Business: None

Adjournment:

Motion and vote: Mr. Smith made a motion, seconded by Mr. Thompson to adjourn. The motion passed 6-0.

The meeting adjourned at approximately 8:20 p.m.

Paulette L. Mann
Paulette L. Mann

August 21, 2019
Date

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES:	September 18, 2019	
Call to Order:	Mr. Newhouse called the meeting to order at 7:00 p.m.	
Members Present:	Mary Lee Carter	Lee Hill
	Jennifer Maddox	Berkeley
	Michael Medina	Salem
	C. Travis Bullock	Battlefield
	Gregg Newhouse	Chancellor
	Richard Thompson	Courtland
Members Absent:	Howard Smith	Livingston
Staff Present:	Paulette Mann, Planning Commission Secretary	
	B. Leon Hughes, AICP, Assistant Director of Planning	
	Alexandra Spaulding, Senior Assistant County Attorney	
	Jacob Pastwik, AICP, Planner III	
	Jay Cullinan, Fire Chief	
	Kevin Brooks, Director of Parks & Recreation	
	Darrell Holladay, Parks & Recreation Department	

Announcements: Mr. Hughes advised the Commissioners of the items coming up at Technical Review.

Review & Approval of minutes:

Motion and vote: Ms. Carter made a motion, seconded by Mr. Medina to approve the minutes of August 21, 2019. The motion passed 5-0-1, with Mr. Thompson abstaining due to his absence.

Unfinished Business:

CPA17-0002 Comprehensive Plan Follow-up on Transportation & FREM.

Mr. Pastwik stated the item is being presented as an informational item with no formal presentation, a follow-up from a previous worksession and no comments are needed at this point. He stated that he would take any questions that the Commissioners may have.

Mr. Newhouse inquired if the document has been sent to VDOT.

Mr. Pastwik stated that it should be sent to VDOT for review by Friday. He advised that Mr. Cullinan is present for any questions they may have.

Mr. Newhouse stated that he hasn't had much time to review and will do so. He stated that he

would email any questions he may have.

Worksession(s):

CPA17-0002 Comprehensive Plan Parks & Recreation Facilities

Mr. Pastwik presented the workession. Planning staff in collaboration with the County Parks and Recreation Department have reviewed and proposed updates to the draft Parks and Recreation Section of the Comprehensive Plan's Public Facilities Element. He stated that Kevin Brooks and Darrell Holladay are also present for questions should Commissioner have them.

As part of this process staff proposes to review, update, and consolidate critical information from the adopted 2009 Spotsylvania County Parks and Recreation Master Plan (updated in 2011 to reference the Trailways Master Plan) into the Parks and Recreation Section of the Comprehensive Plan. The 2009 Plan has been a standalone document without a major update since its adoption. This is a similar proposal to one presented to the Planning Commission on November 7, 2018 at work session where staff proposed consolidating the Trailways Master Plan into the Transportation Element of the Comprehensive Plan. The Planning Commission was supportive of that concept. Like the Transportation Element proposal, staff feels abandoning the standalone and currently outdated 2009 Parks and Recreation Master Plan in favor of the Comprehensive Plan better positions it for continued monitor, implementation, and review and update consistent with the five (5) year update cycle. Rather than maintaining separate plan documents with a variety of goals and different planning periods, staff believes creation of a centralized "one stop shop" Plan for Parks and Recreation is more efficient and easier to follow from an interested stakeholder and/or public standpoint. Otherwise staff has found there tends to be little impetus and limited resources available to update separate standalone plans that may become outdated.

The draft update was presented to the County Parks and Recreation Commission initially on December 20, 2018. Following that meeting staff was able to respond to questions received and make additional edits. Responses to the Parks and Recreation Commissions questions were compiled and have been provided as an attachment here for reference. Staff feels this information may provide more background concerning the draft. With further updates in place the draft was again presented to the Parks and Recreation Commission on April 18, 2019. At that time the Parks and Recreation Commission endorsed the attached draft, sending it forward to the Planning Commission for review.

Substantive updates to the draft have been summarized below:

Existing Parks and Recreation Lands and Facilities Inventory and Activities

Within the draft, staff has proposed adding a new table to track various organized field activities within the most recent fiscal year. This is a gauge to show community usage and demands on some popular Parks and Recreation services (lands and facilities). In fiscal year 2018 there were over 5,000 organized field/ gym rentals through the Parks and Recreation Department including games and practices. Going forward this rental activity for a variety of sports can help gauge growing or declining popularity of certain sports within the County and help guide the County identify where

Transportation Committee Meeting Minutes of March 13, 2020

Call to Order

Mr. Agnello called the meeting to order at 6:10 PM. A quorum was confirmed.

Voting Members Present

Alfred Durante (Lee Hill District Representative), Chris Yakabouski (Battlefield District Representative), John Winkler (Chancellor District Representative), Timothy McLaughlin (Chancellor District Representative), Richard Thompson (Courtland District Representative), Shawn Richey (Salem District Representative)

Others Present

Paul Agnello (staff), Rodney White (staff), Jacob Pastwik (staff), Donna Mayfield (staff)

Minutes

The minutes from February 13, 2020 were reviewed. Mr. Richey made a motion to approve the minutes. Mr. Durante seconded the motion. The February minutes were approved.

Public Comment

Business

Update to Transportation Portion of the Comprehensive Plan - Mr. Agnello gave a brief overview of the Comprehensive Plan Update. An update needs to occur at least once every 5 years to satisfy State Chapter 729 Requirements. Smart Scale requires that projects be included in the Transportation portion of the Comprehensive Plan to be eligible for funding. There is an August 1st deadline for Smart Scale consideration. There are several elements of the Transportation portion of the Comprehensive plan. There are 5 Comprehensive Plan Community Meetings scheduled for this Spring. VDOT is requiring more detail than with past updates. Some Smart Scale Round 4 candidate projects will be added to the Comprehensive Plan. Updates are being made to make the Plan consistent with the latest State plans for the I-95 Corridor. Other highway improvements being added to the Plan are the SW Quadrant of the Outer Connector: Rte 3 to Spotsylvania Pkwy/Rte 1, Chancellor Rd Extension to Rte 3, widening of Massaponax Church Rd to 4 lanes to Brock Rd and Connector Rd near Exit 118. Mr. Pastwik explained the Thoroughfare portion of the Comprehensive Plan is meant to be a County wide view of all of the road improvements. He said the Thoroughfare Plan Map correspond with GIS Map layers that are available online so that you can zoom in and interpret this map on a smaller scale. For more detailed information, there's a corresponding Excel file table that details each project. There are

other maps within the Comprehensive Plan. Mr. Pastwik explained what some of the details of the maps mean.

Draft Thoroughfare Plan - Mr. Pastwick described what the Thoroughfare Map is. It is a County wide view of all the road improvements. There is a corresponding Excel file that shows the costs and details of all the projects. Pertaining to an Outer Connector, Mr. Agnello stated that more studies would need to be done if it is going to be a consideration. He stated that if any project isn't in the Comprehensive Plan, VDOT studies or the project can't be done. If a project is even a consideration, it should be in the Comprehensive Plan. The Outer Connector would take pressure off of Rt. 3 and I-95. Members discussed some different options for an Outer Connector. Potentially, the work can be done in stages.

Draft Trailways Plan - Mr. Pastwick gave a brief overview of the Trailways Plan. He stated it was a standalone plan and not on the same update timeline as the Comprehensive Plan, including Transportation opportunities to pair bike/ped improvements with planned road widening projects. The Trailways Plan dusts off the 2011 Trailways Masterplan which includes Parks and Rec Greenway Plans, which helps address the Parks and Rec level of service standards and aligns the greenways with road improvements. The goal is to abandon the old plan and roll it into the Comprehensive Plan so that it's all consistent and contained in one document. The Draft Comprehensive Plan is almost complete.

Transportation Funding Update - Mr. Agnello gave an update on Mrs. Jewell's Updated Capital Improvement Plan (CIP) handout. He stated that the CIP allocations are for FY2021 – FY2025. Smart Scale goes through FY 2027. That could allow for more leverage funding towards FY2026 – FY2027. He briefly went through the projects that are listed on the handout. On the state side of Transportation Funding, the Governor has a bill that is now in the General Assembly, and if it passes, there could be a significant increase in the gas tax over a period of a couple of years. It could cause gas to go up by a dime. Richmond has gotten approval to have a Regional Transportation Authority which will put us at a disadvantage in the future.

Smart Scale Round 4 Update – Mr. Agnello stated that we received feedback from VDOT and FAMPO on local and regional projects for Smart Scale. Due to this, some changes were made to the projects that we have planned which are underlined below.

Spotsylvania Local Projects:

1. Rte 2/17: Widen 2 to 4 Lanes from City Line to Joseph's Mill Drive/Bowman Center and from 1 to 2 lanes SB to Shannon Airport with Multimodal Improvements ~ $30 Million
2. Rte 2/17: Widen 2 to 4 Lanes from City Line to Shannon Airport (South) with Multimodal Improvements~ $40 Million
3. Harrison Road Shared Use Path: Harrison Road Park to Hazelwild ~ $7 Million (includes TAP project)
    - Announcement on TAP project ($313K) expected on 3/27
4. Rte 1/208: Four Mile Fork Intersection and Rte 1 Revitalization Improvements with Multimodal Improvements ~ $14 Million
5. Rte 1/208: Four Mile Fork Intersection Improvements and Rte 208 Operational Improvements from VDOT Study with Multimodal Improvements $20 Million

Spotsylvania County Planning Commission

Work Session – 5 p.m. Merchants Square Building Conference Room, 9019 Old Battlefield Blvd., Spotsylvania VA 22553
Planning Commission Meeting – 7 p.m. Holbert Building Board Room, 9104 Courthouse Rd., Spotsylvania, VA 22553

MINUTES:	June 17, 2020	
Call to Order:	Mr. Newhouse called the meeting to order at 5:00 p.m.	
Members Present:	Mary Lee Carter	Lee Hill
	Jennifer Maddox	Berkeley
	Richard Thompson	Courtland
	Dr. Raymond Bell	Salem
	Jacob Lane	Livingston
	Gregg Newhouse	Chancellor
Members Absent:	C. Travis Bullock	Battlefield
Staff Present:	Leon Hughes, AICP, Director of Planning & Zoning Alexandra Spaulding, Senior Assistant County Attorney Jacob Pastwik, AICP, Planner III Shannon Fennell, Planner III David Dameron, CZA, Planner III Paul Agnello, Assistant Director for Transportation Planning Ben Loveday, Director of Utilities Donna Mayfield standing in for Paulette Mann, Planning Commission Secretary	

Mr. Newhouse opened the work session at 5:00 p.m. Mr. Newhouse stated that a quorum was present.

Agenda Item(s):

CPA20-0001: Update to the Comprehensive Plan's Transportation Element
Mr. Pastwik presented the case. In August of 2019, the Update, which was 80-90% complete, was presented to the Planning Commission Members. Commissioner Smith requested that improvements to Lawyers Road be added to the Update, which have since been done. There has been a push to pass the Update ahead of the Comprehesive Plan Update due to a Smartscale application deadline that is approaching. A final draft of the Transportation portion is now available with VDOT's approval. Prior to an upcoming public hearing targeted for July 1, 2020, staff is bringing forth the complete draft of the Transportation portion of the Comprehensive Plan to present an overview of the proposed changes and to provide the Planning Commission an advanced look at the draft to be considered. Proposed are updates to the Spotsylvania County Comprehensive Plan consistent with direction from the Code of Virginia § 15.2-2230, § 15.2-2223, and § 15.2-2224. The update also reflects feedback received from the Planning Commission and

Transportation Committee whose minutes are attached for reference. The Public Hearing was authorized to proceed by the Planning Commission on June 3, 2020 and Case number CPA20-0001 was then assigned. Specifically, this update proposes to repeal and replace Chapter 3, Transportation and Thoroughfare Plan, and add Chapter 3A, Trailways Master Plan addressing transportation by bicycle and pedestrian accommodations. Chapter 3, content to be repealed was initially adopted on November 14, 2013, and last updated August 9, 2016. Addition of Chapter 3A is meant to update, retire, replace and consolidate the County's standalone Trailways Master Plan, last approved February 22, 2011 into the Comprehensive Plan. This Comprehensive Plan Transportation Chapter update also includes a revision to Appendix B, specifically repealing an outdated inventory of privately-operated Parks and Recreation amenities and replacement with a Transportation related exhibit, meant as a complement to the text update in Chapter 3. Consistent with the Code of Virginia § 15.2-2223.B.4, the proposed transportation updates to the Comprehensive Plan have been submitted for review to the Virginia Department of Transportation. Following review, VDOT approval of the draft was received by the County on March 25, 2020.

Within this agenda item, staff has provided additional information in memorandum form (attached) detailing proposed changes to Chapter 3, 3A, and Appendix B.

Similar to the rest of the Comprehensive Plan now in draft, staff remains committed to the collection of additional outside comments from the public and intends on including the materials of this transportation update within the larger public feedback solicitation and web based geohub efforts in development now. Should the transportation element be approved as recommended by staff, there will be an ability to further amend the Chapter if warranted when the remainder of the Comprehensive Plan progresses to public hearing in the coming months. The impetus for moving the Transportation portion of the Comprehensive Plan draft ahead of the remaining Comprehensive Plan update (now in draft) is due to upcoming application deadlines for Smartscale transportation funding requests as staff look to pursue funds to complete transportation projects within the County. Smartscale application deadlines in early August make it necessary to navigate the public hearing process on an accelerated timeline. In total, four (4) projects may be submitted into the competitive pool of requests throughout Virginia. Targeted improvements may include: Tidewater Trail widening from the City of Fredericksburg line to Shannon Airport, Rt. 1 and Rt. 208 Intersection improvements, extension of the VCR Trail along Harrison Road from Harrison Road Park to Hazelwild Farm (enhancing future prospects for widening of Harrison Road as planned), Route 1 corridor improvements from Four Mile Fork to Market Street.

Mr. Pastwik opened the floor up for questions. Mr Hughes asked what new projects are in the updated document. Mr. Pastwik stated that everything is consistent with the Code of Virginia, VDOT and the Smartscale scoring processes. He went through the list of new projects. Two major projects are a new access point into the Bowman Center and a connector road between Smith Station Rd. and Gordon Rd.

Ms. Carter asked what the cost is of all of the projects. Mr. Pastwik gave the cost of some of the projects. Ms. Carter asked how the list of projects was prioritized. Mr. Agnello explained that the list was created by the Transportation Committee before the new Transportation staff came on with the county.

Ms. Carter stated that the railroad tracks in the area of Lansdowne, that are owned by the county, are in disrepair. Mr. Agnello stated that the new access into the Bowman Center would aleviate traffic from those railroad tracks.
Mr. Lane asked if the county competes with the state for the Smartscale money. Mr. Agnello explained how Smartscale money is divided for projects and that we have 4 applications with the potential of 8 applications this Smartscale round with help from FAMPO for the addition of another 4 applications. Mr. Pastwik encouraged Members to go to our website for additional information on the update to the Transportation portion of the Comprehensive Plan.

R19-0005 Harrison Road Partners, LLC (Hazel Run Convenience, LLC) Courtland District
Mr. Hughes gave an overview of the case. Applicant requests a rezoning of 3.41 acres, a portion of an approximately 15.52 acre parcel, from Commercial 2 (C-2) to Commercial 3 (C-3) with proffers for a convenience store and fuel dispensing service. The property is located at the intersection of Salem Church Road (Route 639) and Harrison Road (Route 620) on the Northeast quadrant and is identified as 5737 Harrison Road. The property is located in the Primary Settlement Boundary. The property is designated for Commercial and Mixed Land Use Development on the Future Land Use Map of the Comprehensive Plan and is in the Highway Overlay District. Tax parcel 23 (A) 53E(part). Courtland Voting District. Mr. Hughes explained the layout, as well as, where the access points will be for the proposed convenience store. With the Smartscale project that has been approved (with a completion date of 2025), the access on Harrison Rd. will be a right in, right out only.

Mr. Newhouse asked about the level of service. Ms. Fennell stated that the Traffic Analysis isn't complete yet. Mr. Agnello stated that Transportation staff is working on it and will provide it when it is complete.

Mr. Newhouse asked why this can't be a right in, right out with the completion of the convenience store? Mr. Hughes stated that VDOT felt it meets the minimum requirements. Mr. Newhouse said he has serious concerns with left movement in and out of the convenience store.

Ms. Fennell stated that the Smartscale project has already been approved and funded. Mr. Agnello explained what the Smartscale project entailed; widening Harrison Rd. to Salem Church Rd. to 4 lanes east of Salem Church Rd. with an expected completion date of 2025. The candidate Smart Scale project entails widending Harrison Rd. west of Salem Church Rd. from 1 to 2 lanes. Mr. Agnello explained that it's easier to get funding in increments instead of all at once. Mr. Newhouse asked if the Smart Scale project is already designed and right of way obtained. Mr. Hughes stated yes to both. Mr. Agnello stated that if the Smart Scale project is approved, it will extend the VCR trail all the way to Hazel Wild. Mr. Newhouse stated he believes we should stick with the right in, right out for this project.

R19-0010 KW Commercial, LLC (Bonaventure Investments, LLC) Lee Hill District Mr. Hughes gave an overview of the project. The applicant requests a rezoning of one (1) parcel approximately 13.69 acres from Commercial 2 (C-2) and Commercial 3 (C-3) to Mixed Use Low (MU-4) with proffers for an age-restricted residential development consisting of no more than fifty (50) new single family attached dwelling units, one (1) four-story multi-family building with one hundred forty-seven (147) units with a restaurant on the first floor, and ancillary commercial uses

Spotsylvania County Planning Commission

Planning Commission Meeting – 7 p.m. Holbert Building Board Room, 9104 Courthouse Rd., Spotsylvania, VA 22553

MINUTES: July 1, 2020

Call to Order: Mr. Newhouse called the meeting to order at 7:00 p.m.

Members Present:

Mary Lee Carter	Lee Hill *(participated remotely)*
Jennifer Maddox	Berkeley
Richard Thompson	Courtland
Dr. Raymond Bell	Salem
Jacob Lane	Livingston
Gregg Newhouse	Chancellor
C. Travis Bullock	Battlefield

Staff Present:
Leon Hughes, AICP, Director of Planning & Zoning
Alexandra Spaulding, Senior Assistant County Attorney
Jacob Pastwik, AICP, Planner III
Shannon Fennell, Planner III
Paulette Mann, Commission Secretary
Paul Agnello, Assistant Director for Transportation Planning

Mr. Newhouse stated that a quorum was present. He advised that he was contacted by Ms. Carter and, that she would not be able to physically attend the Commission meeting today, due to her age and compromised health during the Covid-19 pandemic. Ms. Carter will be participating remotely from 4220 Mine Road, Fredericksburg, Va. 22407. Mr. Newhouse called for approval of Ms. Carter participating remotely in the meeting and the suspension of bylaws which require electronic voting, to be replaced by roll call while Ms. Carter participates in the meeting.

Motion and vote: On a motion by Mr. Newhouse, seconded by Mr. Thompson to suspend the bylaws allowing Ms. Carter to participate remotely.

VOTE:

Ayes: 7 Dr. Bell, Ms. Carter, Mr. Lane, Mr. Thompson, Mr. Newhouse, Ms. Maddox, and Mr. Bullock
Nays: 0
Absent: 0
Abstain: 0

Mr. Newhouse stated that he understands Mr. liming is running late due to traffic and he would like to entertain an adjustment to the cases.

Motion and vote: On a motion by Mr. Newhouse, seconded by Mr. Thompson to amend the

agenda to hear the second case first, since Mr. Liming was stuck in traffic.

VOTE:

Ayes: 7 Dr. Bell, Ms. Carter, Mr. Lane, Mr. Thompson, Mr. Newhouse, Ms. Maddox, and Mr. Bullock
Nays: 0
Absent: 0
Abstain: 0

Planning Commission Minutes June 17, 2020

Motion and vote: On a motion by Mr. Thompson, seconded by Mr. Bell to approve the minutes of June 17, 2020.

VOTE:

Ayes: 7 Dr. Bell, Ms. Carter, Mr. Lane, Mr. Thompson, Mr. Newhouse, Ms. Maddox, Mr. Bullock
Nays: 0
Absent: 0
Abstain: 0

Announcements: Mr. Hughes briefly discussed the Planning Department report and what cases are forthcoming.

Unfinished Business: None

Public Hearing(s):

Comprehensive Plan Amendment(s):

Mr. Hughes reviewed the public hearing procedures.

Mr. Newhouse opened the public hearing.

CPA20-0001, Spotsylvania County Planning Commission: To update the Spotsylvania County Comprehensive Plan consistent with direction from the Code of Virginia § 15.2-2230, § 15.2-2223, and § 15.2-2224. Specifically, this update proposes to repeal and replace Chapter 3, Transportation and Thoroughfare Plan, and add Chapter 3A, Trailways Master Plan, addressing transportation by bicycle and pedestrian accommodations. Chapter 3 content to be repealed was initially adopted on November 14, 2013, and last updated August 9, 2016. Addition of Chapter 3A is meant to update, replace and consolidate the County's standalone Trailways Master Plan, last approved February 22, 2011, into the Comprehensive Plan. This update also includes a revision to Appendix B, Project Prioritization Tables, specifically repealing an outdated inventory of privately-operated Parks and Recreation amenities and replacement with a Transportation related exhibit, meant as a

complement to the text update in Chapter 3. Consistent with the Code of Virginia § 15.2-2223.B.4, the proposed updates have been submitted for review to the Virginia Department of Transportation. Following review, approval of the update was received by the County on March 25, 2020.

The proposed update is available for review on the Spotsylvania County Planning Department webpage at www.spotsylvania.va.us/draftdocuments. Details of the proposed update are described below:

Chapter 3, Transportation and Thoroughfare Plan

This Chapter update has a planning horizon of 2020-2040, identifies transportation systems improvement projects, initiatives, and establishes policies and strategies related to the transportation systems in Spotsylvania County. The Chapter details/outlines Code of Virginia requirements related to elements that must be included in transportation chapters/elements in Comprehensive Plans and discusses the relationship to other regional and state plans, highlighting Six-Year Improvement Program and the Virginia Transportation Plan (VTrans) projects. Corridor studies and project implementation are described. Transportation related assessment on air quality has been/is being provided. Transportation alternatives, including Transportation Demand Management, Transportation Systems Management, Rail (Passenger and Freight), Motor Freight, Aviation (including airport accessibility enhancement), Commuter Bus, Park and Ride, Vanpool and Ridesharing, High Occupancy Toll, Local Bus, Teleworking/Telecommuting, Intelligent Transportation Systems (ITS), and Bicycle and Pedestrian (with reference to Chapter 3A) options are discussed. Accessibility for Disadvantaged Populations has been considered, giving insight into transportation and land use recommendations to accommodate Disadvantaged Populations. Transportation Analysis Tools, such as Transportation Impact Analysis and the Travel Demand Forecast Model are described as well as the various roadway functional classifications (with corresponding map). Traffic safety improvements and Hurricane Evacuation Routes are identified/considered. Corridors of Statewide Significance, including U.S. Route 17 and I-95, and associated transportation projects are described. Transportation Goals with supportive strategies are established and include:

A. Maintain acceptable Levels of Service on public roads.
B. Ensure that new development does not degrade Levels of Service and mitigates its impact on the transportation network.
C. Promote alternative modes of transportation and multi-modal facilities to more effectively address demands on the transportation network.
D. Plan transportation facilities that are environmentally and aesthetically compatible with the character of the County and minimize adverse effects upon historic and environmental resources.
E. Plan future transportation facilities that are cost-effective and can be implemented in a timely fashion.
F. Prioritize transportation projects for consistent implementation and clear direction for development patterns.
G. Protect the function of Corridors of Statewide Significance and Hurricane Evacuation Routes from unnecessary gridlock created by vehicle abandonment, stranding, excessively long queues and backups, food and water shortages due to power failure at critical facilities.

The Thoroughfare Plan is a list and map of roadway improvement projects that extend to a planning horizon through 2040. The Thoroughfare Plan contains recommendations for intersection improvement projects, road widening projects, new roads, and study-based corridor improvements. Updated right-of-way guidance, existing and projected levels of service, and costs estimates are included in the Thoroughfare Plan project table. Corridors of Statewide Significance are noted in the Thoroughfare Plan. Newly proposed road improvements to the presently adopted Thoroughfare Plan for existing roads include: (A) addition of 2-lane improvement projects for River Rd from Bragg Rd to Motts Run Reservoir entrance; Lawyers Rd between Rt 208 and Stubbs Bridge Rd; Thornton Rolling Rd from Rt 17 to Caroline County line; Church Pond Rd from Massaponax Church Rd to Guinea Station Rd; Orange Plank Rd from Rt 3 to Orange County line; (B) 4-lane divided improvement projects have been identified for: Chancellor Rd between Gordon Rd and Old Plank Rd; Gordon Rd between future Spotsylvania Pkwy extension intersection and Smith Station Rd; (C) 6-lane divided improvement projects have been identified for: Salem Church Rd from Rt 3 to Harrison Rd; Leavells Rd between Harrison Rd and Rt 208; Rt 1 between Spotsylvania Pkwy and Caroline County line; Rt 208 and Rt 208 Bypass (Lake Anna Pkwy) from Smith Station Rd to Brock Rd; (D) an 8-lane improvement has been identified along Rt 3 from Harrison Rd to Andora Dr. Proposed upgrades to road improvements included in the current Thoroughfare Plan are as follows: Courthouse Rd between Partlow Rd and the Rt 208 Bypass is upgraded from a 2-lane improvement to a 3-lane improvement; and the 4-lane divided section for the Rt 208 Bypass (Lake Anna Pkwy) and Rt 208 corridor is recommended to continue beyond its current termination point just south of Robert E Lee Dr to the Louisa County line. Roadway project deletions include removing a completed 4-lane section of Harrison Rd between Old Plank Rd and Rt 3.

All prior new concept facilities (roads) not constructed are included in the update. Additional new concept facilities identified include: (A) Rt 606 service roads north and south of Mudd Tavern Rd bounded by Rt 1 and the I-95 corridor; (B) Market St extension between Rt 1 and Hood Dr; (C) Spotsylvania Pkwy extension between Smith Station Rd and Gordon Rd; (D) Chancellor Rd extension between Old Plank Rd and Rt 3; (E) Chancellor Rd Spur between Chancellor Rd and Gordon Rd; (F) Houser Drive extension between Houser Dr and Industrial Dr; (G) Business Dr extension from Rt 1 to Market St extension; (H) Lansdowne Rd extension from Tidewater Trail to Russo Dr.

All prior new intersection improvement projects not constructed are included in the update. Additional intersection improvements identified include: (A) Tidewater Trail at Benchmark Rd; (B) Rt 17 at Thornton Rolling Rd; (C) Market St at Spotsylvania Ave; (D) Rt 1 at Market St; (E) Rt 1 at Business Dr; (F) Rt 1 at Hood Dr; (G) Future Market St extension at Hood Dr; (H) Rt 208 at Rollingwood Dr; (I) Rt 208 at Rt 1; (J) Rt 1 at Hudgins Rd; (K) Hudgins Rd at Lafayette Blvd; (L) Salem Church Rd at Harrison Rd; (M) Spotsylvania Mall Dr at future intersection; (N) Massaponax Church Rd at Rt 208; (O) Old Plank Rd at Andora Dr; (P) Old Plank Rd at Chancellor Rd; (Q) future Chancellor Rd extension at Rt 3; (R) Gordon Rd at future Spotsylvania Pkwy extension; (S) Smith Station Rd at future Spotsylvania Pkwy extension; (T) Lawyers Rd at Stubbs Bridge Rd; (U) Lawyers Rd at Lake Anna State Park entrance. Freight-related improvements included in the update are: (A) Shannon Drive extension from Belman Rd to the end of Shannon Drive; (B) Tidewater Trail widening from Beulah Salisbury Dr to Rt 17; Intersection improvements at (C) Lansdowne Rd at Shannon Dr; (D) Rt 1 at Hood Dr; (E) Rt 1 at I-95 (Exit

126); (F) Tidewater Trail at Beulah Salisbury Dr; (G) Tidewater Trail at Lansdowne Rd; (H) Tidewater Trail at Joseph Mills Dr; (I) Tidewater Trail at Benchmark Rd; (J) Tidewater Trail at Jim Morris Rd; (K) Tidewater Trail at Rt 17. New Interstate Interchange projects have been identified at Harrison Road and in the area of a planned future Interstate crossing south of Spotsylvania Pkwy. Operational Improvements and Studies added to this iteration of the Thoroughfare Plan include I-95 Corridor Intelligent Transportation Systems and Route 208 operational improvements.

Chapter 3A, Trailways Master Plan

The proposed Transportation Sub-Chapter 3A- Trailways Master (Plan), is intended to replace and update information and planning recommendations initially approved as part of a standalone Plan (approved February 22, 2011). This new iteration of the Plan is consolidated as a Sub-Chapter under Transportation. Updates do not result in significant substantive change to the planning recommendations from the 2011 Plan.

The Plan proposes an integrated system of off-road greenway trails as well as roadway-based improvements to serve multiple, non-motorized, transportation users including bicycle, pedestrian, equestrian, and others, with a focus on creating safer transportation conditions while expanding opportunities for citizens and tourists to enjoy Spotsylvania County's numerous historic, cultural, scenic, recreational, and commercial attractions. The Plan serves to help implement transportation alternatives and seeks to address Parks and Recreation levels-of-service standards. Implementation is expected to promote recreational and historic tourism with direct and peripheral benefits to personal health and economy. The Plan includes an Introduction; Plan History; acknowledgement of other local, state, and national level plans as part of Plan development; Enabling Legislation; identification of the types of recommended facilities to be addressed; the Trailways Plan and Maps identifying the interconnected system of road-based and off-road-based greenway improvements with updates on implementation status since 2011; trail heads; basic design guidelines; goals and objectives.

Changes since the 2011 Plan adoption include enhanced emphasis on pairing off road greenway trails with planned road improvement projects. Such changes have resulted in recommendations to shift portions of the Virginia Central Rail (VCR) Trail to Old Plank and/or Chancellor roads and have identified a VCR Auxiliary Trail extending over I-95 via the Harrison Rd Bridge (as part of a planned future widening project) while maintaining the opportunity to implement the trail along the historic rail bed near I-95. An additional auxiliary trail has been identified to serve the East Coast Greenway (ECG). The ECG Auxiliary Trail would pair with planned Thoroughfare Plan improvements along Thornton Rolling Rd within the confines of the Primary Development Boundary and extend to include the Virginia Railway Express (VRE) Station and connection with a realigned ECG and the existing US 1 Bike Route. Implementation challenges in proximity to the Fredericksburg City and Caroline County line warranted a regional exploration to establish the recommended route. A proposed route includes utilization of Tidewater Trail in combination with planned road improvements as connection to the City of Fredericksburg, and the existing US 1 Bike Route, including Massaponax Church Rd, Church Pond Rd, and Guinea Station Rd as connection to Caroline County.

The prior approved Massaponax Creek Trail has been repositioned to align with future improvements to the Route 17 corridor to the east of Germanna Point Dr. Lastly, a small connector trail has been identified to link the Ni River Trail to the Todds Tavern Spur.

Withheld from the update are descriptions of potential implementation methods and the 2011 Trailways Plan Appendix which is now outdated or unnecessary.

Appendix B
Update to Appendix B includes repealing an outdated inventory of privately-operated Parks and Recreation amenities and replacement with a Transportation related exhibit, meant as a complement to the text update pertaining to Thoroughfare Plan project implementation and prioritization in Chapter 3.

Table of Contents
The Table of Contents has been updated to include: sub-heading Functional Classifications Map under Ch. 3; Sub-Chapter 3-A Trailways Master Plan with sub-headings Trailways Master Plan Map, Road-Based Bicycle and Pedestrian Improvements Map, and Greenways Plan Map; and an updated Appendix B Transportation Priorities Exhibit.

Mr. Pastwik presented the case. He stated that staff recommends approval of CPA20-001, including Chapter 3 Transportation, Sub-Chapter 3A Trailways Master Plan, Appendix B Transportation Priorities Exhibit, and Title and Table of Contents.

Mr. Pastwik explain that the proposal was drafted in collaboration with County Transportation staff, Planning Commission, Board of Supervisors, and the Transportation Committee. It was drafted with consistency with Code of Virginia Sect. 15.2-223, 15.2-224, and 15.2-2232. The update warranted considering 5-year review and update cycle assicated with Comprehensive Plans per 154.2-2230. He explained that VDOt reviewed the draft with approval of the content dated March 25, 2020. The impetus for moving the Transportation portion of the Comprehensive Pan draft ahead of the remaining Comprehensive Plan update is due to upcoming application deadlines for Smartscale transportation funding requests in early August.

Mr. Pastwik explained the following regarding Chapter 3 of the Comprehensive Plan:

- Complete data and reporting update since 2013 adoption, 2016 update;
- Planning period through 2040;
- Details Code of Virginia requirements related to elements that must be included in transportation chapters in Comprehensive Plans;
- Transportation project scoring and prioritization methodology included with reference to Appendix Table for example;
- Discuss the relationship to other regional and state plans, highlighting Six-Year Improvement Program and the Virginia Transportation Plan (VTrans) projects;
- Relevant corridor studies and project implementation are described;
- Assessment on air quality relative to transportation impacts provided;

- Transportation alternatives, including Transportation Demand Management, Transportation Systems Management, Rail (Passenger and Freight), Motor Freight, Aviation (including airport accessibility enhancement), Commuter Bus, Park and Ride, Vanpool and Ridesharing, High Occupancy Toll, Local Bus, Teleworking/Telecommuting, Intelligent Transportation Systems (ITS), and Bicycle and Pedestrian (with reference to Chapter 3A) options are discussed.
- Plan recognizes motor freight related intersection improvement projects identified in the FAMPO 2045 Long Range Transportation Plan. These improvements are Economic Development and Transportation improvement friendly.
- Accessibility for Disadvantaged Populations has been considered with input provided from County Social Services, Healthy Generations Area Agency on Aging, FRED Bus;
- Transportation Analysis Tools, such as Transportation Impact Analysis and the Travel Demand Forecast Model are described as well as the various roadway functional classifications (with corresponding map).
- Traffic safety improvements and Hurricane Evacuation Routes are identified/considered.
- Corridors of Statewide Significance (CoSS), including U.S. Route 17 and I-95, and associated transportation projects are described and mapped.
- The Thoroughfare Plan contains County-wide recommendations for intersection improvement projects, road widening projects, new roads, and study-based corridor improvements. Updated right-of-way guidance, existing and projected levels of service, and costs estimates are included in the Thoroughfare Plan project table. CoSS are also mapped.

Mr. Pastwik reviewed the following Goals & Strategies:

- Maintains existing goals and strategies established in the 2013 Comprehensive Plan with assistance of the Comprehensive Plan Advisory Group
- Proposed additions intended to futher improve transportation systems levels of service, levels of service mitigation, transportation alternatives, transportation projects prioritization, and protection of Corridors of Statewide significance and Hurrican Evacuation Routes.

Mr. Pastwik reviewed Chapter 3A – Trailways Master Plan.

- Sub-Chapter 3A embeds the County Trailways Master Plan (a Transportation Alternative) within the Transportation Element;
- Removes need for a standalone Trailways Plan and centralizes County plans into one document that is reviewed and updated on a five year cycle to stay timely;
- Concept supported by the Planning Commission on November 7, 2018;
- Plan generally consistent with 2011 version but looks to pair planned greenways with planned road improvement projects and remove outdated or unecessary information including the 2011 appendix;

- Hybrid road based and off-road greenway plan;
- Road corridor based bike/ped updated considers updated Thoroughfare Plan road improvements;
- Chapter 3A complements Transportation Alternatives requirements from Code of Virginia as well and is meant to address level of service standards outlined in the Public Facilities Element for Parks and Recreation;
- Transportation Alternatives such as bike/ped improvements paired with road improvement projects result in better project scoring for competitive funding requests;
- Serve as guide to update Design Standards Manual standards to be corridor specific over use/zoning specific;
- Update alleviates some of the concerns raised in the past about the 2011 Plan and results in some practical realignments, specifically:
    - Shift portions of the Virginia Central Rail (VCR) Trail to Old Plank and/or Chancellor Roads as alternative to converting the old rail bed in close proximity to Red Rose Village, Walnut Hills, Enchanted Woods, Stonewall Estates
    - Introduce a VCR Auxiliary Trail extending over I-95 via the Harrison Rd Bridge (as part of a planned future widening project) while maintaining the opportunity to implement the trail along the historic rail bed near I-95 (from BOS Policy question addressed July 9, 2019)
    - The ECG Auxiliary Trail would pair with planned Thoroughfare Plan improvements along Thornton Rolling Rd within the confines of the Primary Development Boundary and extend to include the Virginia Railway Express (VRE) Station and connection with a realigned ECG and the existing US 1 Bike Route.
    - Implementation challenges in proximity to the Fredericksburg City and Caroline County line warranted a regional exploration to establish a revised East Coast Greenway route. A proposed route includes utilization of Tidewater Trail in combination with planned road improvements as connection to the City of Fredericksburg, and the existing US 1 Bike Route, including Massaponax Church Rd, Church Pond Rd, and Guinea Station Rd as connection to Caroline County (Supported by the East Coast Greenway Alliance and Neighboring Localities).
    - The prior approved Massaponax Creek Trail has been repositioned to align with future improvements to the Route 17 corridor to the east of Germanna Point Dr.
    - Make portion of the Spotsylvania Avenue Connector a portion of the Massaponax Creek Greenway
    - Gap closure between Ni River Greenway and Todd's Tavern Spur

There was discussion about Smith Station Road and it being very expensive, that development would have to drive those improvements. Also discussed was whether the roundabout at Andora is funded.

Mr. Agnello stated the timeframe for that project is 2025.

There was discussion about Lafayette Blvd and that two studies are being done. Mr. Agnello stated that if selected, those improvements would occur in 2028-2030.

Ms. Carter stated that Lansdowne cannot handle anymore traffic.

Mr. Pastwik stated that there are a few carryover projects that are still in the plan to include, Lansdowne, Tidewater Trail, Post Oak, and Stubbs Bridge. These ultimately come down to the Board and not all has to be a SmartScale project. There are various funding sources beyond smart scale. The prioritization and support for moving forward transportation initiatives require guidance of the Transportation Committee and direction from the Board of Supervisors.

Mr. Lane stated that he wants it noted that rural areas are just as important.

Mr. Pastwik stated that it is possible that rural roads may also rise to higher priority.

There was discussion about earmarking funding and stacking up the total to fund at a later date.

Mr. Agnello stated that is a possibility.

Speaking in favor or opposition: None

Mr. Newhouse closed the public hearing.

Ms. Mann called for a vote.

VOTE:

Ayes: 7 Dr. Bell, Ms. Carter, Mr. Lane, Mr. Thompson, Mr. Newhouse, Mr. Bullock, Ms. Maddox
Nays: 0
Absent: 0
Abstain: 0

The motion passed 7-0.

At a meeting of the Spotsylvania County Planning Commission held July 1, 2020 on a motion by Mr. Newhouse, seconded by Mr. Bullock and passed 7-0, the Planning Commission adopted the following resolution:

RESOLUTION NO. 2020-01

Approve CPA20-0001
Comprehensive Plan 2020 Transportation Chapter Update

WHEREAS, the Spotsylvania County Comprehensive Plan Transportation Chapter was last reviewed and updated as a whole in 2013 (with specific amendments in 2016); and

WHEREAS, the Code of Virginia Sec. 15.2-2230 requires that the Planning Commission review the Comprehensive Plan to determine whether updates are needed at least every five (5) years; and

WHEREAS, on June 3, 2020 the Spotsylvania Planning Commission determined that updates are needed and developed the Draft 2020 Transportation Chapter and authorized public hearings. The proposed updates are as follows:

Chapter 3, Transportation and Thoroughfare Plan

This Chapter update has a planning horizon of 2020-2040, identifies transportation systems improvement projects, initiatives, and establishes policies and strategies related to the transportation systems in Spotsylvania County. The Chapter details/outlines Code of Virginia requirements related to elements that must be included in transportation chapters/elements in Comprehensive Plans and discusses the relationship to other regional and state plans, highlighting Six-Year Improvement Program and the Virginia Transportation Plan (VTrans) projects. Corridor studies and project implementation are described. Transportation related assessment on air quality has been/is being provided. Transportation alternatives, including Transportation Demand Management, Transportation Systems Management, Rail (Passenger and Freight), Motor Freight, Aviation (including airport accessibility enhancement), Commuter Bus, Park and Ride, Vanpool and Ridesharing, High Occupancy Toll, Local Bus, Teleworking/Telecommuting, Intelligent Transportation Systems (ITS), and Bicycle and Pedestrian (with reference to Chapter 3A) options are discussed. Accessibility for Disadvantaged Populations has been considered, giving insight into transportation and land use recommendations to accommodate Disadvantaged Populations. Transportation Analysis Tools, such as Transportation Impact Analysis and the Travel Demand Forecast Model are described as well as the various roadway functional classifications (with corresponding map). Traffic safety improvements and Hurricane Evacuation Routes are identified/considered. Corridors of Statewide Significance, including U.S. Route 17 and I-95, and associated transportation projects are described. Transportation Goals with supportive strategies are established and include:

A. Maintain acceptable Levels of Service on public roads.
B. Ensure that new development does not degrade Levels of Service and mitigates its impact on the transportation network.
C. Promote alternative modes of transportation and multi-modal facilities to more effectively address demands on the transportation network.
D. Plan transportation facilities that are environmentally and aesthetically compatible with the character of the County and minimize adverse effects upon historic and environmental resources.
E. Plan future transportation facilities that are cost-effective and can be implemented in a timely fashion.
F. Prioritize transportation projects for consistent implementation and clear direction for development patterns.
G. Protect the function of Corridors of Statewide Significance and Hurricane Evacuation Routes from unnecessary gridlock created by vehicle abandonment, stranding, excessively long queues and backups, food and water shortages due to power failure at critical facilities.

The Thoroughfare Plan is a list and map of roadway improvement projects that extend to a planning horizon through 2040. The Thoroughfare Plan contains recommendations for intersection improvement projects, road widening projects, new roads, and study-based corridor improvements. Updated right-of-way guidance, existing and projected levels of service, and costs estimates are included in the Thoroughfare Plan project table. Corridors of Statewide Significance are noted in the Thoroughfare Plan. Newly proposed road improvements to the presently adopted Thoroughfare Plan for existing roads include: (A) addition of 2-lane improvement projects for River Rd from Bragg Rd to Motts Run Reservoir entrance; Lawyers Rd between Rt 208 and Stubbs Bridge Rd; Thornton Rolling Rd from Rt 17 to Caroline County line; Church Pond Rd from Massaponax Church Rd to Guinea Station Rd; Orange Plank Rd from Rt 3 to Orange County line; (B) 4-lane divided improvement projects have been identified for: Chancellor Rd between Gordon Rd and Old Plank Rd; Gordon Rd between future Spotsylvania Pkwy extension intersection and Smith Station Rd; (C) 6-lane divided improvement projects have been identified for: Salem Church Rd from Rt 3 to Harrison Rd; Leavells Rd between Harrison Rd and Rt 208; Rt 1 between Spotsylvania Pkwy and Caroline County line; Rt 208 and Rt 208 Bypass (Lake Anna Pkwy) from Smith Station Rd to Brock Rd; (D) an 8-lane improvement has been identified along Rt 3 from Harrison Rd to Andora Dr. Proposed upgrades to road improvements included in the current Thoroughfare Plan are as follows: Courthouse Rd between Partlow Rd and the Rt 208 Bypass is upgraded from a 2-lane improvement to a 3-lane improvement; and the 4-lane divided section for the Rt 208 Bypass (Lake Anna Pkwy) and Rt 208 corridor is recommended to continue beyond its current termination point just south of Robert E Lee Dr to the Louisa County line. Roadway project deletions include removing a completed 4-lane section of Harrison Rd between Old Plank Rd and Rt 3.

All prior new concept facilities (roads) not constructed are included in the update. Additional new concept facilities identified include: (A) Rt 606 service roads north and south of Mudd Tavern Rd bounded by Rt 1 and the I-95 corridor; (B) Market St extension between Rt 1 and Hood Dr; (C) Spotsylvania Pkwy extension between Smith Station Rd and Gordon Rd; (D) Chancellor Rd extension between Old Plank Rd and Rt 3; (E) Chancellor Rd Spur between Chancellor Rd and Gordon Rd; (F) Houser Drive extension between Houser Dr and Industrial Dr; (G) Business Dr extension from Rt 1 to Market St extension; (H) Lansdowne Rd extension from Tidewater Trail to Russo Dr.

All prior new intersection improvement projects not constructed are included in the update. Additional intersection improvements identified include: (A) Tidewater Trail at Benchmark Rd; (B) Rt 17 at Thornton Rolling Rd; (C) Market St at Spotsylvania Ave; (D) Rt 1 at Market St; (E) Rt 1 at Business Dr; (F) Rt 1 at Hood Dr; (G) Future Market St extension at Hood Dr; (H) Rt 208 at Rollingwood Dr; (I) Rt 208 at Rt 1; (J) Rt 1 at Hudgins Rd; (K) Hudgins Rd at Lafayette Blvd; (L) Salem Church Rd at Harrison Rd; (M) Spotsylvania Mall Dr at future intersection; (N) Massaponax Church Rd at Rt 208; (O) Old Plank Rd at Andora Dr; (P) Old Plank Rd at Chancellor Rd; (Q) future Chancellor Rd extension at Rt 3; (R) Gordon Rd at future Spotsylvania Pkwy extension; (S) Smith Station Rd at future Spotsylvania Pkwy extension; (T) Lawyers Rd at Stubbs Bridge Rd; (U) Lawyers Rd at Lake Anna State Park entrance. Freight-related improvements included in the update are: (A) Shannon Drive extension from Belman Rd to the end of Shannon Drive; (B) Tidewater Trail widening from Beulah Salisbury Dr to Rt 17; Intersection

improvements at (C) Lansdowne Rd at Shannon Dr; (D) Rt 1 at Hood Dr; (E) Rt 1 at I-95 (Exit 126); (F) Tidewater Trail at Beulah Salisbury Dr; (G) Tidewater Trail at Lansdowne Rd; (H) Tidewater Trail at Joseph Mills Dr; (I) Tidewater Trail at Benchmark Rd; (J) Tidewater Trail at Jim Morris Rd; (K) Tidewater Trail at Rt 17. New Interstate Interchange projects have been identified at Harrison Road and in the area of a planned future Interstate crossing south of Spotsylvania Pkwy. Operational Improvements and Studies added to this iteration of the Thoroughfare Plan include I-95 Corridor Intelligent Transportation Systems and Route 208 operational improvements.

Chapter 3A, Trailways Master Plan

The proposed Transportation Sub-Chapter 3A- Trailways Master (Plan), is intended to replace and update information and planning recommendations initially approved as part of a standalone Plan (approved February 22, 2011). This new iteration of the Plan is consolidated as a Sub-Chapter under Transportation. Updates do not result in significant substantive change to the planning recommendations from the 2011 Plan.

The Plan proposes an integrated system of off-road greenway trails as well as roadway-based improvements to serve multiple, non-motorized, transportation users including bicycle, pedestrian, equestrian, and others, with a focus on creating safer transportation conditions while expanding opportunities for citizens and tourists to enjoy Spotsylvania County's numerous historic, cultural, scenic, recreational, and commercial attractions. The Plan serves to help implement transportation alternatives and seeks to address Parks and Recreation levels-of-service standards. Implementation is expected to promote recreational and historic tourism with direct and peripheral benefits to personal health and economy. The Plan includes an Introduction; Plan History; acknowledgement of other local, state, and national level plans as part of Plan development; Enabling Legislation; identification of the types of recommended facilities to be addressed; the Trailways Plan and Maps identifying the interconnected system of road-based and off-road-based greenway improvements with updates on implementation status since 2011; trail heads; basic design guidelines; goals and objectives.

Changes since the 2011 Plan adoption include enhanced emphasis on pairing off road greenway trails with planned road improvement projects. Such changes have resulted in recommendations to shift portions of the Virginia Central Rail (VCR) Trail to Old Plank and/or Chancellor roads and have identified a VCR Auxiliary Trail extending over I-95 via the Harrison Rd Bridge (as part of a planned future widening project) while maintaining the opportunity to implement the trail along the historic rail bed near I-95. An additional auxiliary trail has been identified to serve the East Coast Greenway (ECG). The ECG Auxiliary Trail would pair with planned Thoroughfare Plan improvements along Thornton Rolling Rd within the confines of the Primary Development Boundary and extend to include the Virginia Railway Express (VRE) Station and connection with a realigned ECG and the existing US 1 Bike Route. Implementation challenges in proximity to the Fredericksburg City and Caroline County line warranted a regional exploration to establish the recommended route. A proposed route includes utilization of Tidewater Trail in combination with planned road improvements as connection to the City of Fredericksburg, and the existing US 1 Bike Route, including Massaponax Church Rd, Church Pond Rd, and Guinea Station Rd as connection to Caroline County.

The prior approved Massaponax Creek Trail has been repositioned to align with future improvements to the Route 17 corridor to the east of Germanna Point Dr. Lastly, a small connector trail has been identified to link the Ni River Trail to the Todds Tavern Spur.

Withheld from the update are descriptions of potential implementation methods and the 2011 Trailways Plan Appendix which is now outdated or unnecessary.

Appendix B

Update to Appendix B includes repealing an outdated inventory of privately-operated Parks and Recreation amenities and replacement with a Transportation related exhibit, meant as a complement to the text update pertaining to Thoroughfare Plan project implementation and prioritization in Chapter 3.

Table of Contents

The Table of Contents has been updated to include: sub-heading Functional Classifications Map under Ch. 3; Sub-Chapter 3-A Trailways Master Plan with sub-headings Trailways Master Plan Map, Road-Based Bicycle and Pedestrian Improvements Map, and Greenways Plan Map; and an updated Appendix B Transportation Priorities Exhibit; and

WHEREAS, staff has reviewed the proposed update and recommends approval of the Comprehensive Plan Amendment, as stated in the Executive Summary dated July 1, 2020; and

WHEREAS, the Spotsylvania Planning Commission public hearing, duly advertised in a local newspaper for a period of two weeks, was held on July 1, 2020, and interested citizens were heard; and

WHEREAS, the general welfare and good planning practice are served by approval of the Draft 2020 Transportation Chapter.

NOW, THEREFORE, BE IT RESOLVED that the Spotsylvania County Planning Commission does hereby recommend to the Board of Supervisors approval of CPA20-0001.

Rezoning(s):

R19-0005 Harrison Road Partners, LLC (Hazel Run Convenience, LLC): Requests a rezoning of 3.41 acres, a portion of an approximately 15.52-acre parcel, from Commercial 2 (C-2) to Commercial 3 (C-3) with proffers for a convenience store and fuel dispensing service. The property is located at the intersection of Salem Church Road (Route 639) and Harrison Road (Route 620) on the Northeast quadrant and is identified as 5737 Harrison Road. The property is located in the Primary Settlement Boundary. The property is designated for Commercial and Mixed Land Use Development on the Future Land Use Map of the Comprehensive Plan and is in the Highway Overlay District. Tax parcel 23 (A) 53E(part). Courtland Voting District.

Mr. Newhouse opened the public hearing.

Ms. Fennell presented the case. She advised the Commission that staff recommends approval with the proffers dated March 6, 2020. The site consists of approximately 3.41 acres which is a portion of an approximately 15.52-acre parcel identified as Tax Map number 23(A)53E. The parcel is heavily wooded with 2 vacant single-family dwellings. The parcel is located at the intersection of Salem Church Road (Route 639) and Harrison Road (Route 620) on the Northeast quadrant and is identified as 5737 Harrison Road. The project is located within the County's Primary Development Boundary and the Highway Corridor Overlay District (HCOD). The area of the proposal is designated on the Future Land Use Map in the Comprehensive Plan as appropriate for Commercial and Mixed-use development, which supports the requested. The subject property is currently zoned Commercial 2 (C-2) and is outlined in blue. The project site is bordered on the North by a mixed-use development which includes apartments and single-family dwellings known as the Greens at Salem Run and Salem Run Subdivision, zoned R-2. To the East, the project site is bordered by a vacant 9.5-acre parcel, zoned C-2. To the West across Salem Church Road, the project site is bordered by a 67-acre County owned parcel which houses Harrison Road Park and Chancellor Landfill, zoned R-2. To the South across Harrison Road, is a CVS zoned C-2, dental office zoned C-1, and a single family attached development known as Summerlake at Salem Station zoned R-1. The 15.52 acre parcel was zoned Commercial 2 in 2007. If approved, the proposal will allow for the development of a 24-hour convenience store with fuel dispensing services within the area outlined in yellow and the remainder of the site will require a proffer amendment of the original rezoning for future development.

Ms. Fennell displayed the original GDP that was approved with the 2007 rezoning. The Applicant's GDP depicts a 6,000 square foot convenience store (yellow) with 16 fueling stations (purple), three underground fuel storage tanks, 59 parking spaces, one air machine, bike rack, and a monument sign.

- In addition to the proposed use the project will result in an additional pad site for a future commercial use. (orange)
- The GDP shows the project with three points of access.
    - The first access is a full access and is located on Harrison Road approximately 580 feet east of the intersection of Harrison Road and Salem Church Road and includes: a 100' right turn taper into the site for westbound traffic, a 200' left turn lane with a 100' taper to allow left turns into the site for eastbound traffic, a left turn lane from the site eastbound onto Harrison Road, and a right turn from the site westbound onto Harrison Road. This full access entrance will be modified during construction of the Smart scale project. The entrance radii will be modified, stop bars will be pulled back further into the site, and striping will be updated.
    - The second access is located on Salem Church Road approximately 350 feet north of the intersection of Harrison Road and Salem Church Road and is a right in/right out only which includes: a 250' right turn lane with a 105' taper from the intersection into the site for northbound traffic.
    - The last access is located on Salem Church Road approximately 570 feet north of the intersection of Harrison Road and Salem Church Road and includes: a 30' right-in/

PRESENT:	Barry K. Jett, Livingston District Kevin W. Marshall, Berkeley District Timothy J. McLaughlin, Chancellor District David Ross, Courtland District Gary F. Skinner, Lee Hill District Chris Yakabouski, Battlefield District
ABSENT:	Deborah H. Frazier, Salem District
STAFF PRESENT:	Ed Petrovitch, County Administrator Mark L. Cole, Deputy County Administrator Karl Holsten, County Attorney Aimee R. Mann, Deputy Clerk

Chairman Skinner called the meeting to order at 4:30 p.m. Vice Chairman Marshall led the Pledge of Allegiance and Supervisor Ross gave the invocation.

APPROVAL OF AGENDA

On a motion by Supervisor Ross and passed 6 to 0 with Supervisor Frazier absent, the Board approved the agenda with the following additions:

- Appointment of Sarah Reid to the Rappahannock Area Youth Services & Group Home Commission
- Approval of Resolution Confirming Continuity Authority of County Attorney to Represent the Board and to the Extent Necessary Authorization to Appear in Circuit Court Appeal
- Recommendation to the Circuit Court for the Appointment of Gregory Bell to the Board of Zoning Appeals (Lee Hill District)
- Appointment of Deborah Frazier to the Minority Affairs Committee as a Board Representative

VOTE:

Ayes:	6	Jett, Marshall, McLaughlin, Ross, Skinner, Yakabouski
Nays:	0	
Absent:	1	Frazier
Abstain:	0	

PUBLIC COMMENT ON CONSENT AGENDA

Julie Lasure submitted comments in support of the Rappahannock Electric Cooperative broad band grant application.

Sarah Mernin, Joe Wilson, Thomas Worly, Kim Kincheloe, Dennis O'Cacio, and John Simpson spoke with concerns or in opposition of the proposed reduction in scope of the Route 2092 access north of Route 606.

§ 2. The Spotsylvania County Board of Supervisors' approval and adoption of any conditions does not relieve the applicant and/or subsequent owners from compliance with the provisions of any applicable Spotsylvania County Ordinances, rules, regulations, or adopted standards. To the extent anything in this rezoning is less restrictive than the County's Ordinances, or its rules, regulations, or adopted standards, the lessened restriction shall be void and the County's Ordinances, or its rules, regulations, or adopted standards shall control and be applicable to the rezoning.

§ 3. This ordinance shall be in force and effect upon adoption.

CPA20-0001: Update to the Comprehensive Plan Transportation Chapter

Mr. Pastwik presented.

Chairman Skinner declared the public hearing opened and when no one indicated an intention to speak, closed the public hearing.

On a motion by Chairman Skinner and passed 6 to 0 with Supervisor Frazier absent, the Board adopted the ordinance as follows:

VOTE:

Ayes:	6	Jett, Marshall, McLaughlin, Ross, Skinner, Yakabouski
Nays:	0	
Absent:	1	Frazier
Abstain:	0	

RESOLUTION NO. 2020-86

Approve CPA20-0001
Comprehensive Plan 2020 Transportation Chapter Update

WHEREAS, the Spotsylvania County Comprehensive Plan Transportation Chapter was last reviewed and updated as a whole in 2013 (with specific amendments in 2016); and

WHEREAS, the Code of Virginia Sec. 15.2-2230 requires that the Planning Commission review the Comprehensive Plan to determine whether updates are needed at least every five (5) years; and

WHEREAS, on June 3, 2020 the Spotsylvania Planning Commission determined that updates are needed and developed the Draft 2020 amended Table of Contents, the

Comprehensive Plan Transportation Chapter and Appendix B (collectively CPA20-0001) and authorized public hearings.

WHEREAS, the proposed updates are as follows:

Chapter 3, Transportation and Thoroughfare Plan

This Chapter update has a planning horizon of 2020-2040, identifies transportation systems improvement projects, initiatives, and establishes policies and strategies related to the transportation systems in Spotsylvania County. The Chapter details/outlines Code of Virginia requirements related to elements that must be included in transportation chapters/elements in Comprehensive Plans and discusses the relationship to other regional and state plans, highlighting Six-Year Improvement Program and the Virginia Transportation Plan (VTrans) projects. Corridor studies and project implementation are described. Transportation related assessment on air quality has been/is being provided. Transportation alternatives, including Transportation Demand Management, Transportation Systems Management, Rail (Passenger and Freight), Motor Freight, Aviation (including airport accessibility enhancement), Commuter Bus, Park and Ride, Vanpool and Ridesharing, High Occupancy Toll, Local Bus, Teleworking/Telecommuting, Intelligent Transportation Systems (ITS), and Bicycle and Pedestrian (with reference to Chapter 3A) options are discussed. Accessibility for Disadvantaged Populations has been considered, giving insight into transportation and land use recommendations to accommodate Disadvantaged Populations. Transportation Analysis Tools, such as Transportation Impact Analysis and the Travel Demand Forecast Model are described as well as the various roadway functional classifications (with corresponding map). Traffic safety improvements and Hurricane Evacuation Routes are identified/considered. Corridors of Statewide Significance, including U.S. Route 17 and I-95, and associated transportation projects are described. Transportation Goals with supportive strategies are established and include:

A. Maintain acceptable Levels of Service on public roads.
B. Ensure that new development does not degrade Levels of Service and mitigates its impact on the transportation network.
C. Promote alternative modes of transportation and multi-modal facilities to more effectively address demands on the transportation network.
D. Plan transportation facilities that are environmentally and aesthetically compatible with the character of the County and minimize adverse effects upon historic and environmental resources.
E. Plan future transportation facilities that are cost-effective and can be implemented in a timely fashion.
F. Prioritize transportation projects for consistent implementation and clear direction for development patterns.
G. Protect the function of Corridors of Statewide Significance and Hurricane Evacuation Routes from unnecessary gridlock created by vehicle abandonment, stranding, excessively long queues and backups, food and water shortages due to power failure at critical facilities.

The Thoroughfare Plan is a list and map of roadway improvement projects that extend to a planning horizon through 2040. The Thoroughfare Plan contains recommendations for intersection improvement projects, road widening projects, new roads, and study-based corridor improvements. Updated right-of-way guidance, existing and projected levels of service, and costs estimates are included in the Thoroughfare Plan project table. Corridors of Statewide Significance are noted in the Thoroughfare Plan. Newly proposed road improvements to the presently adopted Thoroughfare Plan for existing roads include: (A) addition of 2-lane improvement projects for River Rd from Bragg Rd to Motts Run Reservoir entrance; Lawyers Rd between Rt 208 and Stubbs Bridge Rd; Thornton Rolling Rd from Rt 17 to Caroline County line; Church Pond Rd from Massaponax Church Rd to Guinea Station Rd; Orange Plank Rd from Rt 3 to Orange County line; (B) 4-lane divided improvement projects have been identified for: Chancellor Rd between Gordon Rd and Old Plank Rd; Gordon Rd between future Spotsylvania Pkwy extension intersection and Smith Station Rd; (C) 6-lane divided improvement projects have been identified for: Salem Church Rd from Rt 3 to Harrison Rd; Leavells Rd between Harrison Rd and Rt 208; Rt 1 between Spotsylvania Pkwy and Caroline County line; Rt 208 and Rt 208 Bypass (Lake Anna Pkwy) from Smith Station Rd to Brock Rd; (D) an 8-lane improvement has been identified along Rt 3 from Harrison Rd to Andora Dr. Proposed upgrades to road improvements included in the current Thoroughfare Plan are as follows: Courthouse Rd between Partlow Rd and the Rt 208 Bypass is upgraded from a 2-lane improvement to a 3-lane improvement; and the 4-lane divided section for the Rt 208 Bypass (Lake Anna Pkwy) and Rt 208 corridor is recommended to continue beyond its current termination point just south of Robert E Lee Dr to the Louisa County line. Roadway project deletions include removing a completed 4-lane section of Harrison Rd between Old Plank Rd and Rt 3.

All prior new concept facilities (roads) not constructed are included in the update. Additional new concept facilities identified include: (A) Rt 606 service roads north and south of Mudd Tavern Rd bounded by Rt 1 and the I-95 corridor; (B) Market St extension between Rt 1 and Hood Dr; (C) Spotsylvania Pkwy extension between Smith Station Rd and Gordon Rd; (D) Chancellor Rd extension between Old Plank Rd and Rt 3; (E) Chancellor Rd Spur between

Chancellor Rd and Gordon Rd; (F) Houser Drive extension between Houser Dr and Industrial Dr; (G) Business Dr extension from Rt 1 to Market St extension; (H) Lansdowne Rd extension from Tidewater Trail to Russo Dr.

All prior new intersection improvement projects not constructed are included in the update. Additional intersection improvements identified include: (A) Tidewater Trail at Benchmark Rd; (B) Rt 17 at Thornton Rolling Rd; (C) Market St at Spotsylvania Ave; (D) Rt 1 at Market St; (E) Rt 1 at Business Dr; (F) Rt 1 at Hood Dr; (G) Future Market St extension at Hood Dr; (H) Rt 208 at Rollingwood Dr; (I) Rt 208 at Rt 1; (J) Rt 1 at Hudgins Rd; (K) Hudgins Rd at Lafayette Blvd; (L) Salem Church Rd at Harrison Rd; (M) Spotsylvania Mall Dr at future intersection; (N) Massaponax Church Rd at Rt 208; (O) Old Plank Rd at Andora Dr; (P) Old Plank Rd at Chancellor Rd; (Q) future Chancellor Rd extension at Rt 3; (R) Gordon Rd at future Spotsylvania Pkwy extension; (S) Smith Station Rd at future Spotsylvania Pkwy extension; (T) Lawyers Rd at Stubbs Bridge Rd; (U) Lawyers Rd at Lake Anna State Park entrance. Freight-related improvements included in the update are: (A) Shannon Drive extension from Belman Rd to the end of Shannon Drive; (B) Tidewater Trail widening from Beulah Salisbury Dr to Rt 17; Intersection improvements at (C) Lansdowne Rd at Shannon Dr; (D) Rt 1 at Hood Dr; (E) Rt 1 at I-95 (Exit 126); (F) Tidewater Trail at Beulah Salisbury Dr; (G) Tidewater Trail at Lansdowne Rd; (H) Tidewater Trail at Joseph Mills Dr; (I) Tidewater Trail at Benchmark Rd; (J) Tidewater Trail at Jim Morris Rd; (K) Tidewater Trail at Rt 17. New Interstate Interchange projects have been identified at Harrison Road and in the area of a planned future Interstate crossing south of Spotsylvania Pkwy. Operational Improvements and Studies added to this iteration of the Thoroughfare Plan include I-95 Corridor Intelligent Transportation Systems and Route 208 operational improvements.

Chapter 3A, Trailways Master Plan

The proposed Transportation Sub-Chapter 3A- Trailways Master (Plan), is intended to replace and update information and planning recommendations initially approved as part of a standalone Plan (approved February 22, 2011). This new iteration of the Plan is consolidated as a Sub-Chapter under Transportation. Updates do not result in significant substantive change to the planning recommendations from the 2011 Plan.

The Plan proposes an integrated system of off-road greenway trails as well as roadway-based improvements to serve multiple, non-motorized, transportation users including bicycle, pedestrian, equestrian, and others, with a focus on creating safer transportation conditions while expanding opportunities for citizens and tourists to enjoy Spotsylvania County's numerous historic, cultural, scenic, recreational, and commercial attractions. The Plan serves to help implement transportation alternatives and seeks to address Parks and Recreation levels-of-service standards. Implementation is expected to promote recreational and historic tourism with direct and peripheral benefits to personal health and economy. The Plan includes an Introduction; Plan History; acknowledgement of other local, state, and national level plans as part of Plan development; Enabling Legislation; identification of the types of recommended facilities to be addressed; the Trailways Plan and Maps identifying the interconnected system of road-based and off-road-based greenway improvements with updates on implementation status since 2011; trail heads; basic design guidelines; goals and objectives.

Changes since the 2011 Plan adoption include enhanced emphasis on pairing off road greenway trails with planned road improvement projects. Such changes have resulted in recommendations to shift portions of the Virginia Central Rail (VCR) Trail to Old Plank and/or Chancellor roads and have identified a VCR Auxiliary Trail extending over I-95 via the Harrison Rd Bridge (as part of a planned future widening project) while maintaining the opportunity to implement the trail along the historic rail bed near I-95. An additional auxiliary trail has been identified to serve the East Coast Greenway (ECG). The ECG Auxiliary Trail would pair with planned Thoroughfare Plan improvements along Thornton Rolling Rd within the confines of the Primary Development Boundary and extend to include the Virginia Railway Express (VRE) Station and connection with a realigned ECG and the existing US 1 Bike Route. Implementation challenges in proximity to the Fredericksburg City and Caroline County line warranted a regional exploration to establish the recommended route. A proposed route includes utilization of Tidewater Trail in combination with planned road improvements as connection to the City of Fredericksburg, and the existing US 1 Bike Route, including Massaponax Church Rd, Church Pond Rd, and Guinea Station Rd as connection to Caroline County.

The prior approved Massaponax Creek Trail has been repositioned to align with future improvements to the Route 17 corridor to the east of Germanna Point Dr. Lastly, a small connector trail has been identified to link the Ni River Trail to the Todds Tavern Spur.

Withheld from the update are descriptions of potential implementation methods and the 2011 Trailways Plan Appendix which is now outdated or unnecessary.

Appendix B

Update to Appendix B includes repealing an outdated inventory of privately-operated Parks and Recreation amenities and replacement with a Transportation related exhibit, meant as a complement to the text update pertaining to Thoroughfare Plan project implementation and prioritization in Chapter 3.

Table of Contents

The Table of Contents has been updated to include: sub-heading Functional Classifications Map under Ch. 3; Sub-Chapter 3-A Trailways Master Plan with sub-headings Trailways Master Plan Map, Road-Based Bicycle and Pedestrian Improvements Map, and Greenways Plan Map; and an updated Appendix B Transportation Priorities Exhibit; and

WHEREAS, staff has reviewed the proposed update and recommends approval of CPA20-0001 as stated in the Executive Summary dated July 28, 2020; and

WHEREAS, the Spotsylvania Planning Commission public hearing, duly advertised in a local newspaper for a period of two weeks, was held on July 1, 2020, and interested citizens were heard; and

WHEREAS, the Spotsylvania County Planning Commission recommended approval of CPA20-0001, with a vote of 7-0; and

WHEREAS, the general welfare and good planning practice are served by approval of the CPA20-0001.

NOW, THEREFORE, BE IT RESOLVED that the Spotsylvania County Board of Supervisors does hereby approve CPA20-0001, and the Table of Contents, the Comprehensive Plan Transportation Chapter and Appendix B are amended and adopted as follows:

Spotsylvania County Transportation Committee

Economic Development Conference Room – Merchant Square, 9019 Old Battlefield Blvd, 3rd Floor, Spotsylvania VA 22553

MINUTES:	March 11, 2021	
Call to Order:	A quorum of 6 or more members was not present and the meeting was unable to be called to order.	
Members Present:	John Winkler	Lisa Phelps (remote)
	Richard Thompson	David Goosman
	David Ross	
Others Present:	Barry Jett	Kyle Bates
	Richard Spurlock	Aviv Goldsmith
Staff Present:	Paulette Mann, Planning Commission Secretary B. Leon Hughes, AICP, Director of Planning & Zoning Paul Agnello, AICP, Traffic Engineer Rodney White, Transportation Planner Bonne Jewell, Asst. County Administrator Jacob Pastwik, AICP, Planner III	

Review and approval of minutes from January 14, 2021

The minutes were unable to be approved due to lack of quorum.

Public Comment: None

Business:

Comprehensive Plan Transportation Update

Mr. Pastwik provided a brief update on the Transportation Chapter of the Comprehensive Plan update. He stated that staff was able to get this section completed ahead of the Smart Scale applications and the announcement of the new VA Medical Center. Mr. Pastwik advised that they will go ahead and have a second look at the thoroughfare plan and will be taking this to the Planning Commission on April 7, 2021. The advertisement for public hearing is presently under review by the County Attorney's office.

Mr. Pastwik discussed the following:

1. Airport access road to use existing light. He stated staff feels this is a good way to route the existing traffic.
2. Lansdowne Road extension from Tidewater Trail to Russo. He stated that this has been proffered to extend all the way to Main Street and would provide a second full access into the Bowman Center.

3. Re-establish Roxbury Mill Bridge.

Mr. Thompson and Mr. Goldsmith both expressed concern that the residents will not like the additional traffic.

There was discussion about the Upper Spotsylvania Redevelopment and that the intersection improvements were part of that rezoning proffer statement.

Discussion ensued about there being a blind spot at the entrance of River Meadows.

Mr. Pastwik briefly discussed improvements to Hood Drive and the N/W connector road. He also discussed Guinea Station Road and that development interest seems to be gearing up in this area. He also discussed the East Coast Greenway initiative from Maine to Florida.

Mr. Agnello stated a lot of development is occurring in the county and discussed the roads that are required by the VA Clinic to be improved.

Mr. Ross discussed a super ramp or diverging diamond interchange at Exit 126 and sees so much "bang for the buck."

Mr. Bates stated that they need to dive into a study and that a lot of the infrastructure is already there, they just need a study to back it up.

Mr. Agnello displayed Exit 126 concepts and the divergent diamond.

Mr. Ross stated it makes sense.

Mr. Agnello stated that the total cost is $235 million for all projects. Staff will begin gearing up for spring of 2022 Smart Scale applications.

There was also discussion about further road widening of Leavell's road and the significant impacts on property owners. Staff proposes removing it.

Mr. Ross agreed.

BUILD Grant

Mr. Agnello discussed the funding opportunities and that it's a national program and we scored high at 89%. He stated that the County can request up to $6.25 million dollars and in theory any PE can request funding from this program. He suggested he believes the County should apply and that the county would be obligated to spend $1.26 million. The consensus was for staff to apply.

FAMPO Funding

Mr. Agnello stated that the VA projects must be completed by 2025. He said that Exit 126 will likely score really well.

Update on Rural Road Priorities

- Macklin Drive - .35 miles long, 11 houses, VDOT Cost = $100,000
- North Rapidan Road – can see Power lines, terribly eroded, culvert exposed
- Twilight Lane - $55,000 estimate

Mr. Agenllo stated that the total amount is $255,000 for the three roads. Board approval would need to happen.

Mr. Ross stated that we have CARES money in out years.

Ms. Jewell reminded them it is one time money.

Mr. Bates urged the Committee to consider what their priorities to be. He reminded them that these are all private roads and the County currently has state maintained roadways that are gravel and need maintenenace. He reminded the Committee that those folks bought homes on a private road, knowing it was a private road.

Ms. Jewell aslo reminded them that a special assessment occurred to pay for half of the road improvements for Todds Tavern Estates. She questioned why treat those residents any differently.

Rural Rustic Priority for Granite Springs Road

There was discussion that VDOT has done some temporary emergency repair work and that we still have $500,000 in funding not yet spent. There is an opportunity to send to the Board in May. Mr. Agnello asked Mr. Spurlock to send the funding spreadsheet to him and that they have made good progress on these rustic roads and will now only have four left to complete.

Smart Scale

Mr. Agnello stated that they county received some very good news that 5 out of 6 projects were selected and we did very, very well. He stated that next month he should have new info on Revenue sharing.

Mr. Bates congratulated staff on a job well done by Mr. Agnello, Mr. White, and Mr. Pastwik.

Mr. Ross also congratulated staff on a job well done.

Adjournment

The meeting adjourned at 8:00 p.m.

Paulette Mann, Commission Secretary

CHAPTER 4, 4A-4H PUBLIC FACILITIES MEETING MINUTES COLLECTION

PUBLIC FACILITIES
CHAPTER 4A- SCHOOLS

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES:	February 19, 2020	
Call to Order:	Mr. Newhouse called the meeting to order at 7:00 p.m.	
Members Present:	Mary Lee Carter	Lee Hill
	Jennifer Maddox	Berkeley
	Richard Thompson	Courtland
	Dr. Raymond Bell	Salem
	Jacob Lane	Livingston
	C. Travis Bullock	Battlefield
	Gregg Newhouse	Chancellor
Staff Present:	Paulette Mann, Planning Commission Secretary	
	B. Leon Hughes, AICP, Director of Planning & Zoning	
	Alexandra Spaulding, Senior Assistant County Attorney	
	Jacob Pastwik, AICP, Planner III	
	David Dameron, Planner III	
	Shannon Fennell, Planner III	

Announcements:

Mr. Hughes announced details regarding two upcoming Commission meetings as well as what is coming up on the Planning Commission & TRC agendas.

Review & Approval of minutes:

February 5, 2020 Minutes

Motion and vote: Ms. Carter made a motion, seconded by Mr. Thompson to approve the minutes of January 15, 2020. The motion passed 7-0.

Unfinished Business:

Mr. Hughes stated that the Planning Commission raised questions regarding the local housing market, specifically the multi-housing market during the January 15, 2020 meeting. Staff has collected reference materials complementary to the request. Mr. Hughes referenced several pages that are of importance. Mr. Hughes referenced the materials compiled by Mr. Pastwik.

Mr. Lane thanked Mr. Pastwik for putting this together. Other Commissioners also thanked him.

Mr. Newhouse stated that he hasn't had time to review but will.

Vote

Worksession(s):

CPA17-0002 Update to the Comprehensive Plan's Public Facilities Chapter for Schools

Mr. Pastwik and Mr. Don Upperco presented the worksession. Mr. Pastwik discussed the following:

- Drafted in collaboration with County Schools Division
- Primary objective is identification of capital projects needs to address level of service/capacity issues;
- Comprehensive Plan identification of capital projects critical for future CIP inclusion per Code of Virginia Sect. 15.2-2232;
- Inventory of existing schools looking at current and future enrollment and building capacity;
- Report grade level based historic and projected enrollment;
- Identify student generation rates by housing type;
- Identify level of service recommended capacity for new schools;
- Revise/update recommendations

Mr. Pastwik discussed the following school's trends of note:

- Comparing the 2019-2020 school year total population to that reported in 2012-2013 (prior Comprehensive Plan update), student enrollment has grown less than 1% (0.89%)
- Capacity issues are specific to certain schools and not the entire School Division
    - Battlefield Middle
    - Chancellor Middle
    - Spotsylvania Middle
    - Massaponax High School
- Considering proffer legislation, capital facilities offsets only applicable in instances of a project proposal resulting in or further exceeding capacity and a CIP project in place at time of application intended to improve school capacity.
- Based on existing and projected enrollment, schools specific capacity concerns best addressed via school renovation and expansion projects or attendance zone realignment
- Provide impetus to explore specialized program expansions such as vocational and technical training;
- 2019 demographic study suggests a Division-wide decrease in students within the Planning period, regardless of prior approved development
- No new school has been targeted to be added to this draft.

Mr. Upperco stated that enrollment is fairly flat and that they believe with realignment, no new schools will be needed for the next ten years. He further discussed that they are taking a very measured approach and that they went through each school with architects to determine how to

repurpose areas of the schools. He discussed how geography in Spotsylvania as well as student distribution make it very difficult to have feeder patterns. Mr. Upperco stated the second study suggested the County redistrict at the high school level. He briefly discussed the complex redistricting that took place last year. When Courtland was renovated, it opened up 300 additional seats and that students were shifted from Massaponax to Courtland, Spotsylvania, and Chancellor. He stated that they anticipate once the census results are in that they do a redistrict of the middle schools in 2020-2021. He discussed how the school purchased the modular units that were at Courtland and have now been moved to Spotsylvania Middle. It made more sense to purchase than to continue to rent them long term.

Mr. Newhouse inquired how areas are repurposed.

Mr. Upperco stated that lockers have been removed to allow for more space. Kids just do not use them any longer. Also, come computer labs have been repurposed. Libraries are also becoming smaller in size.

Mr. Thompson stated that it is commendable that the County isn't just building another school. He likes the idea of repurposing areas that aren't being used the same as they were when the school was originally built.

Ms. Carter commended the school system on the remodel that occurred at Courtland and stated that she would like to see the vocational school expanded as well. She stated that more skilled craftsman, plumbers, and electricians are needed. She also encouraged the County to be looking for land for the next school because it won't be any cheaper in ten years.

Mr. Upperco stated they are looking into that.
Ms. Maddox stated that the needs at the schools have changed so much and we must be prepared to deal with those changes. She stated that it's more than just the building. She mentioned an autism building.

Mr. Upperco stated they are looking into those sorts of things.

Dr. Bell stated that renovation and reassignment is good.

Mr. Upperco stated that the school system is thinking inside and outside the box.

Ms. Carter stated that we don't have crappy schools as one citizen mentioned earlier in the evening.

Mr. Upperco stated he couldn't agree more.

Mr. Lane inquired if elementary and middle school students ride on the same buses.

Mr. Upperco stated no, that does not happen unless a bus breaks down and another bus can pick those students up and deliver them to school.

Mr. Lane inquired if there are other needs.

Mr. Upperco stated that the school division is having a hard time keeping bus drivers. He stated that the school system is looking at giving drivers a raise based on longevity. He stated that they just had a bus driver retire that had been driving for 50 years. 86% of the buses now have air conditioning which is very high in comparison to our neighboring counties.

Mr. Bullock inquired how the county is doing with hiring of teachers and keeping them.

Mr. Upperco stated that the County is doing better than most nationally.

Mr. Pastwik stated that this information and his working with schools has been very beneficial and the Comprehensive Plan is reviewed every 5 years, but if something comes up, a comprehensive plan amendment could occur.

The Commission thanked staff and Mr. Upperco for a very informative worksession

Public Comment: None

New Business:

Mr. Newhouse stated that he would like to move forward with the worksession idea suggested by Mr. Hughes.

The Commissioners agreed that they would like to hold the meeting beginning at 5 p.m on the 3rd Wednesday of each month, ending at 6:30 to allow time to travel to Board room.

Motion and vote: Mr. Newhouse made a motion, seconded by Mr. Thompson to direct staff to amend the bylaws allowing for the standing worksession meeting to occur on the third Wednesday of each month beginning at 5 p.m., lasting 1.5 hours, at the Community Development Conference Room, where public may attend, but will be unable to speak. The motion passed 7-0.

Mr. Lane thanked Mr. Hughes, Ms. Mann, and Ms. Fennell for the orientation that was provided to the new Commissioners and Mr. Jett. He stated that it was very informative and appreciated.

Dr. Bell agreed.

Adjournment:

Motion and vote: Mr. Thompson made a motion, seconded by Mr. Bullock to adjourn. The motion passed 7-0.

The meeting adjourned at 8:45 p.m.

Paulette L. Mann
Paulette L. Mann
March 4, 2020
Date

PUBLIC FACILITIES
CHAPTER 4B- FREM

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES: August 7, 2019

Call to Order: Mr. Newhouse called the meeting to order at 7:00 p.m.

Members Present:	Richard Thompson	Courtland
	Howard Smith	Livingston
	Jennifer Maddox	Berkeley
	Michael Medina	Salem
	C. Travis Bullock	Battlefield
	Gregg Newhouse	Chancellor
Members Absent:	Mary Lee Carter	Lee Hill

Staff Present: Paulette Mann, Planning Commission Secretary
Wanda Parrish, AICP, Director of Planning
Shannon Fennell, Planner III
Jacob Pastwik, AICP, Planner III
Doug Morgan, CTM, CZA, Transportation Planner
Daniel Cole, Traffic Engineer
Alexandra Spaulding, Senior Assistant County Attorney
Jason Irby, Deputy Fire Chief

Announcements: Ms. Parrish informed the Commission that the Crucible project has been placed on hold to allow the applicant to reexamine their GDP and project. She stated that staff will be bringing rezoning application, Townes at Point Seanna to the August 21, 2019 for public hearing.

Mr. Smith asked that Mr. Loveday from Utilities be present for that meeting.

Review & Approval of minutes:

Motion and vote: Mr. Thompson made a motion, seconded by Mr. Smith to approve the minutes of July 17, 2019. The motion passed 6-0.

Unfinished Business: None

Public Hearing(s):

R18-0011 Spotsylvania Courthouse Village II, LLC: Requests the rezoning of approximately 3.99 acres from Agricultural 2 (A-2) to Mixed Use 3 (MU-3) with proffers for residential development consistent with the surrounding MU-3 zoned parcels. The proposal for residential development currently consists of both single-family attached and detached dwellings and may include any other residential use types permitted in MU-3, except apartments. The parcel is located

construction vehicles that are presently using the private road have demolished and broken down the roadway. She stated that the cost shouldn't fall on VDOT to repair the roadway, but the developer. She has concerns about more houses.

Mr. Vakos stated that the uniqueness of MU zoning allows flexibility with the types of units and no unit cap. It is all market driven by what is needed. This request doesn't allow any additional units from the original rezoning but provides them the opportunity for a better layout and planning for the future on the types of units. He agreed that Courthouse Commons Blvd does need some repair and will be taken care of as part of their bond.

Ms. Maddox asked for clarification that no additional houses will occur as part of this rezoning, that it allows for better planning of the development that was already approved with the original rezoning.

Mr. Vakos agreed and stated that is correct.

Mr. Medina inquired about there being no unit cap in Mixed Use.

Ms. Parrish explained that the ordinance does not have a maximum density, the density is constrained by the ordinance standards and the constraints of the land. The development must meet the standards defined by the MU ordinance.

Mr. Newhouse closed the public hearing.

Motion and vote: Ms. Maddox made a motion, seconded by Mr. Smith to recommend approval of the rezoning with proffers. The motion passed 6-0.

Worksession(s):

Update to the Comprehensive Plan's Public Facilities Chapter for Fire, Rescue, and Emergency Management (FREM)

Mr. Pastwik presented the worksession. Planning staff in collaboration with County Fire, Rescue and Emergency Management (FREM) have reviewed and proposed updates to the draft FREM Section of the Comprehensive Plan's Public Facilities Element. The draft amendments were attached in the packets with redline markup format to clearly identify where amendments have been proposed. Jason Irby, Deput Fire Chief with County FREM staff is present during the meeting should technical or operational questions arise.

The draft includes a summary of existing facilities and status of a number of existing services within the County and region. These updates show progress since the last Comprehensive Plan FREM update in 2013.

Considering existing facilities, as part of this update staff has improved depiction of the 5- Mile response zones for existing facilities with use of FireView Software as noted within the Section update. FireView has enabled depiction of response distances based on road miles travelled as

opposed to "as the crow flies" 5-mile buffers around FREM stations. This more accurately depicts underserved areas to help target areas for future service improvements. This improved depiction of response areas has resulted in a reduction in reported county-wide service coverage from 90% of the County to 67% of the County.

Mr. Newhouse stated that he would like to see a map demonstrating the populations served within the each of the fire service areas.

Mr. Thompson inquired whether sPower proffered a firestation.

Ms. Parrish stated a firestation was not part of their approval conditions.

This update also considers and incorporates by reference the George Washington Region Hazard Mitigation Plan (last updated in February, 2018). The Plan is updated on a 5-year cycle with coordination led by the George Washington Regional Commission. The Spotsylvania Board of Supervisors endorsed the current iteration of the Plan in October, 2017. That Plan contains detailed study and recommendations concerning locality specific and regional hazards resulting from flooding, tornadoes, drought, hurricanes, and a variety of other emergencies.

Short term and long term goals are aimed at identifying FREM service and capital facility improvements to improve levels of service. Considerate of the Code of Virginia Sect. 15.2-2232 that links Capital projects additions to the Comprehensive Plan. From 15.2-2232:

…unless a feature is already shown on the adopted master plan or part thereof or is deemed so under subsection D, no street or connection to an existing street, park or other public area, public building or public structure, public utility facility or public service corporation facility other than a railroad facility or an underground natural gas or underground electric distribution facility of a public utility as defined in subdivision (b) of § 56-265.1 within its certificated service territory, whether publicly or privately owned, shall be constructed, established or authorized, unless and until the general location or approximate location, character, and extent thereof has been submitted to and approved by the commission as being substantially in accord with the adopted comprehensive plan or part thereof.

Staff would like to stress that there are a number of additional FREM related goals and objectives aimed at proactively improving the health, safety and welfare of citizens that would be best located within the Future Land Use Chapter of the Comprehensive Plan. Examples include advocacy for dry hydrant installations where water is nearby in rural areas associated with new development or advocating for backup generators or generator quick connects for critical community facilities in emergency situations at such places as fuel dispensing facilities (gas stations) or supermarkets. The backup power generation goal has already been established as a local priority within the Regional Hazard Mitigation Plan that directs it be included within the Comprehensive Plan going forward. Promotion of underground cisterns in rural areas not in proximity to water have also been identified as beneficial. Staff intends to introduce goals to improve FREM conditions within the community by design as part of the Future Land Use update.

Mr. Smith and Mr. Medina inquired about the ISO rating and if rates are based upon being within 5 miles of a firestation.

Chief Irby stated yes, they are National Standards, not local standards.

Ms. Maddox stated that she is served by the Partlow station and asked for clarification on whether it would be updated or replaced.

Mr. Smith inquired if there are any plans to improve current stations.

Chief Irby stated that there are and that the Partlow station is one of them. He stated that there are two currently included in the CIP and one includes the training center. He explained that they are actively looked for a better location for that station to provide for a better coverage area.

There was discussion about including links associated with the nuclear facility and links provided within the proposed comprehensive plan update.

Mr. Newhouse asked for population overlay be added to the map.

Mr. Pastwik thanked them for their feedback.

Update to the Comprehensive Plan's Transportation Element

Mr. Pastwik presented the worksession. He stated that Doug Morgan and Dan Cole are also present should any questions arise. Planning staff in collaboration with County Transportation professionals have reviewed and proposed updates to the Transportation Element (Chapter 3) of the Comprehensive Plan. The draft amendments are attached in redline markup format to clearly identify where amendments have been proposed. Corresponding new draft maps have also been attached. Due to the Chapter's specialized focus, County Transportation staff will be present during the meeting should technical or operational questions arise. The draft Transportation Element was presented to the Transportation Committee on June 12, 2019.

The Transportation Plan has been reviewed and updated considerate of the Code of Virginia, Section 15.2-2223 (attached for reference) that requires a Transportation Plan be developed as an element of the Comprehensive Plan and address a number of transportation related systems including but not limited to roadways, bicycle and pedestrian accommodation, rail, airports, public transportation, etc. The Transportation Plan must also consider Transportation related information such as the acknowledgement of corridors of statewide significance as outlined in Sect. 15.2-2232 (attached for reference).

The 2013 Transportation Plan had a planning horizon of 2030 and recommended transportation system improvements considering existing conditions and future projected population and traffic impact mitigations necessary by 2030. This update now looks to 2040. County Transportation staff are presently in the process of updating the draft Thoroughfare Plan project list to reflect expected 2040 traffic volumes. Since the last Comprehensive Plan update there have been a number of new roads identified within the Thoroughfare Plan worthy of consideration. The Thoroughfare Plan

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES:	September 18, 2019	
Call to Order:	Mr. Newhouse called the meeting to order at 7:00 p.m.	
Members Present:	Mary Lee Carter	Lee Hill
	Jennifer Maddox	Berkeley
	Michael Medina	Salem
	C. Travis Bullock	Battlefield
	Gregg Newhouse	Chancellor
	Richard Thompson	Courtland
Members Absent:	Howard Smith	Livingston
Staff Present:	Paulette Mann, Planning Commission Secretary	
	B. Leon Hughes, AICP, Assistant Director of Planning	
	Alexandra Spaulding, Senior Assistant County Attorney	
	Jacob Pastwik, AICP, Planner III	
	Jay Cullinan, Fire Chief	
	Kevin Brooks, Director of Parks & Recreation	
	Darrell Holladay, Parks & Recreation Department	

Announcements: Mr. Hughes advised the Commissioners of the items coming up at Technical Review.

Review & Approval of minutes:

Motion and vote: Ms. Carter made a motion, seconded by Mr. Medina to approve the minutes of August 21, 2019. The motion passed 5-0-1, with Mr. Thompson abstaining due to his absence.

Unfinished Business:

CPA17-0002 Comprehensive Plan Follow-up on Transportation & FREM.

Mr. Pastwik stated the item is being presented as an informational item with no formal presentation, a follow-up from a previous worksession and no comments are needed at this point. He stated that he would take any questions that the Commissioners may have.

Mr. Newhouse inquired if the document has been sent to VDOT.

Mr. Pastwik stated that it should be sent to VDOT for review by Friday. He advised that Mr. Cullinan is present for any questions they may have.

Mr. Newhouse stated that he hasn't had much time to review and will do so. He stated that he

would email any questions he may have.

Worksession(s):

CPA17-0002 Comprehensive Plan Parks & Recreation Facilities

Mr. Pastwik presented the workession. Planning staff in collaboration with the County Parks and Recreation Department have reviewed and proposed updates to the draft Parks and Recreation Section of the Comprehensive Plan's Public Facilities Element. He stated that Kevin Brooks and Darrell Holladay are also present for questions should Commissioner have them.

As part of this process staff proposes to review, update, and consolidate critical information from the adopted 2009 Spotsylvania County Parks and Recreation Master Plan (updated in 2011 to reference the Trailways Master Plan) into the Parks and Recreation Section of the Comprehensive Plan. The 2009 Plan has been a standalone document without a major update since its adoption. This is a similar proposal to one presented to the Planning Commission on November 7, 2018 at work session where staff proposed consolidating the Trailways Master Plan into the Transportation Element of the Comprehensive Plan. The Planning Commission was supportive of that concept. Like the Transportation Element proposal, staff feels abandoning the standalone and currently outdated 2009 Parks and Recreation Master Plan in favor of the Comprehensive Plan better positions it for continued monitor, implementation, and review and update consistent with the five (5) year update cycle. Rather than maintaining separate plan documents with a variety of goals and different planning periods, staff believes creation of a centralized "one stop shop" Plan for Parks and Recreation is more efficient and easier to follow from an interested stakeholder and/or public standpoint. Otherwise staff has found there tends to be little impetus and limited resources available to update separate standalone plans that may become outdated.

The draft update was presented to the County Parks and Recreation Commission initially on December 20, 2018. Following that meeting staff was able to respond to questions received and make additional edits. Responses to the Parks and Recreation Commissions questions were compiled and have been provided as an attachment here for reference. Staff feels this information may provide more background concerning the draft. With further updates in place the draft was again presented to the Parks and Recreation Commission on April 18, 2019. At that time the Parks and Recreation Commission endorsed the attached draft, sending it forward to the Planning Commission for review.

Substantive updates to the draft have been summarized below:

Existing Parks and Recreation Lands and Facilities Inventory and Activities

Within the draft, staff has proposed adding a new table to track various organized field activities within the most recent fiscal year. This is a gauge to show community usage and demands on some popular Parks and Recreation services (lands and facilities). In fiscal year 2018 there were over 5,000 organized field/ gym rentals through the Parks and Recreation Department including games and practices. Going forward this rental activity for a variety of sports can help gauge growing or declining popularity of certain sports within the County and help guide the County identify where

PUBLIC FACILITIES
CHAPTER 4C- SHERIFF

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES:	June 3, 2020	
Call to Order:	Mr. Newhouse called the meeting to order at 7:00 p.m.	
Members Present:	Mary Lee Carter	Lee Hill *(participated remotely)*
	Jennifer Maddox	Berkeley
	Richard Thompson	Courtland
	Dr. Raymond Bell	Salem
	Jacob Lane	Livingston
	Gregg Newhouse	Chancellor
Members Absent:	C. Travis Bullock	Battlefield
Staff Present:	Paulette Mann, Planning Commission Secretary B. Leon Hughes, AICP, Director of Planning & Zoning Alexandra Spaulding, Senior Assistant County Attorney Jacob Pastwik, AICP, Planner III	

Mr. Newhouse stated that a quorum was present. He advised that he was contacted by Ms. Carter and, that she would not be able to physically attend the Commission meeting today, due to her age and compromised health during the Covid-19 pandemic. Ms. Carter will be participating remotely from 4220 Mine Road, Fredericksburg, Va. 22407. Mr. Newhouse called for approval of Ms. Carter participating remotely in the meeting and the suspension of bylaws which require electronic voting, to be replaced by roll call while Ms. Carter participates in the meeting.

Motion and vote: On a motion by Mr. Thompson, seconded by Mr. Lane to suspend the bylaws allowing Ms. Carter to participate remotely.

VOTE:

Ayes: 6 Dr. Bell, Ms. Carter, Mr. Lane, Mr. Thompson, Mr. Newhouse, Ms. Maddox
Nays: 0
Absent: 1 Mr. Bullock
Abstain: 0

Announcements:

Mr. Hughes announced details regarding the upcoming Commission meeting as well as what is coming up on the TRC agendas and a Community meeting.

Mr. Hughes announced that the R15-0006 case has been postponed to June 17, 2020.

Review & Approval of minutes:

Motion and vote: On a motion by Mr. Lane seconded by Dr. Bell to move this forward to public hearing with the Comprehensive Plan. Staff was also directed to clarify proximity to transmission lines language and screening/buffer language.

VOTE:

Ayes: 6 Dr. Bell, Ms. Carter, Mr. Lane, Mr. Newhouse, Ms. Maddox, Mr. Thompson
Nays: 0
Absent: 1 Mr. Bullock
Abstain: 0

CPA17-0002 Comprehensive Plan Public Facilities Chapter Update – General Government, Sheriff's Element

Mr. Hughes stated that a representative from Fire Rescue was present to answer questions regarding calls for service and stated that he would like to allow Mr. Steve Cooper, Deputy Fire Chief to answer any questions.

Mr. Newhouse stated that the Commission hears frequently the term calls per station. He inquired what the difference is in a call and an incident.

Mr. Cooper stated that the average call per station is 2500. They can be anything from a medical call, smoke detector checks, residential fire, mva's.

Ms. Maddox inquired about when someone calls 911 for medical, how many units respond.

Mr. Cooper stated that two units would respond, an ambulance and a fire engine, so that is 2 calls.

There was discussion about which stations are the busiest.

Mr. Cooper stated that the Four Mile Fork and Salem Church Road stations are the busiest, followed by Crossroads, Courthouse, Thornburg, Route 3, and Salem Fields. The majority of the calls to a station are medical/mva's at about an 80/20 split.

The Commission thanked Mr. Cooper for his time.

Mr. Pastwik presented the worksession. Staff is returning to the Planning Commission with a work session to discuss the final two elements of the Comprehensive Plan Public Facilities Chapter, including General Government and Sheriff. All other Public Facilities Chapter draft content has been vetted through work sessions prior. A summary of the draft amendments is below:

<u>General Government</u>

As outlined in the draft, the General Government portion of the Public Facilities Element seeks to identify capital facility needs for County government operations not associated with operational

needs of the Sheriffs, FREM, Solid Waste, Water and Sewer, Parks and Recreation, Schools that have each been addressed elsewhere within this Chapter. For the purpose of this Chapter, General Government includes but is not limited to governmental services including but not limited to: County Administration, Treasurer, Commissioner of Revenue, County Attorney, Voter Registrar, Cooperative Extension, Community Development, Division of Social Services, Courts, Human Resources, Finance, Information and Computer Services, Public Works and Facilities Management.

As a public facility not presently addressed in the 2013 Comprehensive Plan (as last amended in 2018). the General Government content proposed for the 2020 Comprehensive Plan is new content, an addition to the Public Facilities Chapter. We expect this content to remain in future updates of the Comprehensive Plan going forward, amended as necessary. Recommendations for future General Government projects are aimed at identifying capital facility improvements that should be included in the Comprehensive Plan. This is the primary objective of the Comprehensive Plan Public Facilities Element. Projects have been identified by the Division of Public Works. Warrant for inclusion of a General Government Element within the Public Facilities Chapter is based in the Code of Virginia, specifically Sect. 15.2-2232 that links Capital projects additions to the Comprehensive Plan. From 15.2-2232:

> …unless a feature is already shown on the adopted master plan or part thereof or is deemed so under subsection D, no street or connection to an existing street, park or other public area, public building or public structure, public utility facility or public service corporation facility other than a railroad facility or an underground natural gas or underground electric distribution facility of a public utility as defined in subdivision (b) of § 56-265.1 within its certificated service territory, whether publicly or privately owned, shall be constructed, established or authorized, unless and until the general location or approximate location, character, and extent thereof has been submitted to and approved by the commission as being substantially in accord with the adopted comprehensive plan or part thereof.

Inclusion of identified projects within the Comprehensive Plan sets the required framework of support for them when they are considered for inclusion within the County's Capital Improvements Plan. At this time only two projects have been identified, including: 50,000-60,000 sq.ft. new build in the Spotsylvania Courthouse area for the Department of Social Services and VA Department of Health offices; and, construction of a joint use complex along Gordon Road, specifically Tax Map# 21-A-84 for Spotsylvania County Utilities and Public Works. (Also see Parks and Recreation and Water and Sewer Elements of Public Facilities Chapter concerning this site.). Public works recognizes there is an identified need to review and update the County space needs study going forward as the most recent guidance comes from findings of 2001 and 2013 assessments.

Sheriff

The Spotsylvania County Sheriff's office reviewed the existing Sheriff's office Public Facilities Chapter content of the 2013 Comprehensive Plan (as last updated in 2018). Only a minor amendment to remove a now completed outdoor kennel project at the public safety building was recommended.

Mr. Newhouse inquired when the last space needs study was done.

Mr. Pastwik stated that he believes it was done in 2013.

Mr. Newhouse stated that he recalls reviewing it during the CIP and wonders if there are plans to update.

Mr. Pastwik stated that he believes that is a task that is forthcoming.

Mr. Newhouse thanked Mr. Pastwik for his good work.

There were no other comments.

Public Comment: None

New Business:

Mr. Hughes stated staff is seeking authoriation to advertise the Transportation Element of the Comprehensive Plan, Chapters 3 & 3A.

Motion and vote: On a motion by Mr. Newhouse seconded by Mr. Thompson to move this forward to public hearing and authorize advertisement.

VOTE:

Ayes: 6 Dr. Bell, Ms. Carter, Mr. Lane, Mr. Newhouse, Ms. Maddox, Mr. Thompson
Nays: 0
Absent: 1 Mr. Bullock
Abstain: 0

Adjournment:

Motion and vote: On a motion by Mr. Thompson, seconded by Mr. Lane to adjourn.

VOTE:

Ayes: 6 Dr. Bell, Ms. Carter, Mr. Lane, Mr. Thompson, Mr. Newhouse, Ms. Maddox
Nays: 0
Absent: 1 Mr. Bullock
Abstain: 0

The meeting adjourned at 8:45 p.m.

Paulette L. Mann
Paulette L. Mann

June 17, 2020
Date

PUBLIC FACILITIES
CHAPTER 4D- SOLID WASTE

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES:	October 3, 2018	
Call to Order:	Mr. Newhouse called the meeting to order at 7:00 p.m.	
Members Present:	Richard Thompson	Courtland
	Howard Smith	Livingston
	Mary Lee Carter	Lee Hill
	Gregg Newhouse	Chancellor
	Jennifer Maddox	Berkeley
	C. Travis Bullock	Battlefield
Members Absent:	Michael Medina	Salem
Staff Present:	Paulette Mann, Planning Commission Secretary	
	B. Leon Hughes, AICP, Assistant Director of Planning	
	Kimberly Pomatto, CZA, Planner III	
	Alexandra Spaulding, Senior Assistant County Attorney	
	Jacob Pastwik, AICP, Planner III	
	Ben Loveday, Director of Utilities & Public Works	

Announcements: Mr. Hughes informed the Commission of two upcoming community meetings. Also, he advised of an offer by the Crucible applicant to provide tours if PC members are interested in attending a tour.

Review & Approval of minutes:

Motion and vote: Ms. Carter made a motion, seconded by Mr. Smith to approve the minutes of September 5, 2018. The motion passed 6-0.

Motion and vote: Mr. Thompson made a motion, seconded by Mr. Smith to approve the REVISED minutes of August 15, 2018. The motion passed 5-0-1, with Ms. Carter abstaining.

Unfinished Business: None

Public Hearing(s):

R18-0007 Jean Masten Kelly and Joyce A. Taylor (B-Farms Development, LLC) (Ordinance No. RO18-0007): Request a rezoning of approximately 2.69 acres from Residential 1 (R-1) to Residential 8 (R-8) with proffers to allow for a maximum of 21 single-family attached units known as Regency Crossing Townhomes. The property is located on the east side of Five Mile Road Extended (Route 675) approximately 550 feet north of the Plank Road (Route 3) and Five Mile Road Extended (Rt 675) intersection. A portion of the property is located within the Primary Development Boundary. The property is identified for Commercial development on the

rentals. He also raised concerns about the impact on county services.

Andrea Strohmer, 6238 Autumn Leaf: She stated that at first she was against the proposal but Mr. Garrison has been a stand up developer and has addressed and corrected all of the concerns raised at the community meeting.

Geoff Bamford, 6294 Autumn Leaf: He stated that he will look right across his property at this development and he is 100% behind the proposed project. He believes the townhomes to be an excellent improvement and it is a very well thought out development. Mr. Garrison has made changes and improvements as a result of comments from the neighbors.

Gordon Grimsley, He stated that he has no idea how these units will fit on this property and it will look like the slums of New York.

Mr. Newhouse closed the public hearing.

Mr. Payne stated that he respects the opinion of the neighbors and that Mr. Garrison has worked very hard to make this a better project based on comments received from the neighbors. He stated that this is a very good infill development for this property.

Mr. Smith inquired if there is data about whether rentals are more of a strain on services than homeowners.

Mr. Payne stated that these properties will not be rentals at the price point. He stated that it wouldn't be good for them either to go as rentals.

Ms. Carter inquired about the buffering again.

Mr. Payne stated that they wanted to buffer noise from Route 3 and under R-8; there is no requirement for buffering. They will be keeping the tree line, planting additional trees and providing two fences. We've also written in the covenants the requirements for dog sizes. He also advised that they will be maintaining 52% open space.

Mr. Thompson applauded the applicant for the measures he's taken to address the neighbors' concerns but stated he couldn't support the proposal because of the cost to the taxpayers.

Motion and vote: Mr. Thompson made a motion to deny the rezoning. The motion was not seconded and therefore failed.

Motion and vote: Mr. Newhouse made a motion, seconded by Mr. Smith to approve the rezoning with proffers. The motion passed 5-1 with Mr. Thompson voting no and Mr. Medina absent.

Worksession(s):

Comprehensive Plan Work Session – Solid Waste

Mr. Pastwik presented the worksession. He discussed solid waste collection and disposal and proposed amendments:

- Expand upon details of services offered
- Update references to applicable studies and plans
- Update collection and recycling data to current figures
- Enhance accessibility to complementary resources and information
- Update landfill capacity reporting
- Acknowledge service area covered within level of service criteria and any observed areas outside the standard
- Update short and long term goals for the upcoming planning period

Mr. Pastwik then discussed Solid Waste Generation and Capacity:

- The County Code speicifies that only waste that is both discarded and collected within the County limits may be disposed of at the County's Livingston landfill
- Livingston Landfill estimated reamining capacity exceeeds 50 years (65-70 years)
- Waste stream increase from 40,000 tons annually to 128,000 tons between 2013 and present day
- Compost tonnage has also increased from 23,000 tons to 30,000 tons annually
- Population growth, increased economic activity, and shift of local commercial hausling.away from other disposal sites to the County landfill have contributed to increase volumes.
- County manages 13 convenience centers from household waste and recycling collection .5 mile level of service radius for each generally covers the entire County.

Mr. Pastwik discussed Recycling next:

- County recycling rate estimates range from 31% to 42% and are above State mandated 25%.
- Single stream recycling containers are available at each convenience site.
- Single stream recycling includes mixed paper, plastics, cardboard, aluminum, and glass. In addition to single stream containers, the County also offers opportunities to recycle metal, used motor oil, antifreeze, batteries, applicances, and brush and yard waste.
- The County offers household hazard waste collection twice a year for residential disposal of chemicals, toxic wastes, or hazardous liquid materials. This collection effort is accomplished through third party contract services.

Mr. Pastwik discussed the revised short term goals:

- Adopt a strategy that enables solid waste staff to effectively identify residents of Spotsylvania County using covenience sites for residential use.
- Adopt a policy that restricts commercial disposal to a select number of disposal sites.
- Update tipping fees and disposal of select items with current market rates.

- Evaluate strategies to make brush and yard waste recycling operations sustainable, in cooperation with the County's composting facility.
- Continue to implement goals of the Solid Waste Management Plan that is incorporated by reference wtihin the Comprehensive Plan.
- Enhance data collection on expected refuse and recycling collections resulting from private commercial establishments.

Finally, Mr. Pastwik discussed the Revised Long Term Goals:

- Review and update the 2015 Solid Waste Management Plan consistent with the Code of Virginia
- Update applicable Chapters of the Comprehensive Plan upon completion of the 2020 Solid Waste Management Plan update considering any future needs, opportunities, or recommendations that apply.
- Monitor recycling industry trends and markest on an international and national level. Update educational recycling programs as the industry grows and changes, and continue to build partnerships with commercial recycling businesses.
- Continue developing sustainable solutions for biosolids, yard waste and brush recycling.
- Evaluate the benefits of managing the solid waste division as an enterprise fund.

There was discussion about whether it was good to have more refuse going to our landfills.

Mr. Loveday explained that they become more self-sustaining.

There was discussion about increasing tipping fees as we increase in population and have more economic development.

Mr. Loveday explained that we receive no waste from outside the County and that tip rates let businesses take care of themselves. Some waste is shipped to Richmond or King George and it goes wherever the tipping fee is the lowest.

Mr. Newhouse stated that as he travels around to the different landfills and convenience centers, the attendants are very accomodating, they are well run, and clean.

Ms. Carter inquired about commercial disposal companies.

Mr. Loveday stated that County Waste, for example, has two local transfer stations and they dispose in Spotsylvania. He explained to Ms. Carter that they are under the very same guidelines as the County and are regulated by DEQ.

Ms. Carter inquired about the disposal of old tires.

Mr. Loveday explained that tires are collected and stacked into large semi trucks to be recycled or reused. He stated that it costs $15-$20K per year to manage tires.

Ms. Carter inquired about quantity.

Mr. Loveday stated that they use the honor system and only 6 tires per day can be disposed of but it is difficult to separate commercial tire disposal vs. homeowner/citizen tire disposal.

Worksession – Mixed-Use Zoning District

Mr. Hughes presented the worksession. The Board of Supervisors and Planning Commission have expressed interest in reviewing the Mixed Use Zoning District for potential amendments. Staff has reviewed the code against the Code of Virginia and found that Mixed Use is specifically defined in the Code of Virginia to include two or more uses. The language in the current code is not clear that a Mixed Use project shall have at least two types of uses, so that will require an amendment.

Mr. Hughes explained the purpose and intent of the district and that it is intended to be a flexible approach to development, to include infill and redevelopment, by allowing a variety of interrelated and compatible commercial, office, residential, civic, recreational, and entertainment uses in a pedestrian-oriented neighborhood setting based on, but not limited to the following principles:

- Connectivity of road networks, including new local streets with existing local streets;
- Connected pedestrian networks and ped-friendly road design;
- Reduced front and side yard building setbacks;
- Mixed-use neighborhoods, including mixed housing types; &
- Respects the character of adjacent properties and surrounding neighborhoods.

Mr. Hughes discussed the mixed use intensities for all five sub-districts. He also discussed the following development standards:

- Building Types
- Lot Area and Width
- Building Setbacks & Heights
- Build to Zone
- Open Space

He discussed that the Board of Supervisors may approve alternatives and that the ordinance also defines:

- Parking
- Street Types & Blocks
- Uses & Special Uses

Mr. Hughes discussed that the Mixed Use Zoning District was adopted on September 25, 2012.

PUBLIC FACILITIES
CHAPTER 4E-
WATER/SEWER

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES:	October 2, 2019	
Call to Order:	Mr. Newhouse called the meeting to order at 7:00 p.m.	
Members Present:	Mary Lee Carter	Lee Hill
	Howard Smith	Livingston
	Jennifer Maddox	Berkeley
	C. Travis Bullock	Battlefield
	Gregg Newhouse	Chancellor
	Richard Thompson	Courtland
Members Absent:	Michael Medina	Salem
Staff Present:	Paulette Mann, Planning Commission Secretary	
	Wanda Parrish, AICP, Director of Planning	
	Alexandra Spaulding, Senior Assistant County Attorney	
	Jacob Pastwik, AICP, Planner III	
	Ben Loveday, PE, Director of Utilities/Public Works	

Announcements: Ms. Parrish advised the Commissioners of the items coming up at Technical Review.

Review & Approval of minutes:

Motion and vote: Mr. Newhouse made a motion, seconded by Mr. Carter to approve the minutes of September 18, 2019. The motion passed 5-0-1, with Mr. Thompson abstaining due to his absence.

Unfinished Business: None

Public Hearing(s):

CA19-0001 Spotsylvania County Board of Supervisors, Ordinance No. 23-178: An amendment of Spotsylvania County Code Chapter 23, Zoning, Article 2, Definitions and Rules of Construction, Sec. 23-2.1.4, Definitions, to amend the definition of Community center to a publicly- or privately-owned and operated facility open to the public where people can meet for, among other things, social, educational, business, or recreational activities. These activities may be conducted by, among others, individuals, businesses, or organizations. Such facilities may be rented and can include on-site kitchens or provide for catered meals. A clubhouse which serves only the members of a condominium association or a property owners' association is not considered a community center. A hotel that has meeting facilities is not considered a community center; and to Article 6, Zoning Districts, to amend Division 3, Agricultural 2 (A-2) District, to

remove Community center as a Permitted Use in Sec. 23-6.3.2 and make a Special Use in Sec. 23-6.3.3, to amend Division 4, Agricultural 3 (A-3) District, to remove Community center as a Permitted Use in Sec. 23-6.4.2 and make a Special Use in Sec. 23-6.4.3, to amend Division 5, Resort Agricultural (RA) District, to remove Community center as a Permitted Use in Sec. 23-6.5.2 and make a Special Use in Sec. 23-6.5.3, to amend Division 6, Residential 1 (R-1) District, to remove Community center as a Permitted Use in Sec. 23-6.6.2 and make a Special Use in Sec. 23-6.6.3, to amend Division 7, Residential 2 (R-2) District, to remove Community center as a Permitted Use in Sec. 23-6.7.2 and make a Special Use in Sec. 23-6.7.3, to amend Division 8, Residential 3 (R-3) District, to remove Community center as a Permitted Use in Sec. 23-6.8.2 and make a Special Use in Sec. 23-6.8.3, to amend Division 9, Residential 8 (R-8) District, to remove Community center as a Permitted Use in Sec. 23-6.9.2 and make a Special Use in Sec. 23-6.9.3, to amend Division 10, Residential 12 (R-12) District, to remove Community center as a Permitted Use in Sec. 23-6.10.2 and make a Special Use in Sec. 23-6.10.3, to amend Division 11, Resort Residential (R-R) District, to remove Community center as a Permitted Use in Sec. 23-6.11.2 and make a Special Use in Sec. 23-6.11.3, to amend Division 17, Commercial 1 (C-1) District, to remove Place of worship as a Special Use in Sec. 23-6.17.3 and make a Permitted Use in Sec. 23-6.17.2, to amend Division 24, Rural (Ru) District, to remove Community center as a Permitted Use in Sec. 23-6.24.2 and make a Special Use in Sec. 23-6.24.3, to amend Division 28, Mixed Use (MU) District, Sec. 23-6.28.5, to remove Community center as a Permitted Use from the MU-1 and MU-2 subdistricts and make a Special Use in those subdistricts.

Mr. Newhouse opened the public hearing.

Ms. Parrish presented the case. The draft amendments proposed modify Chapter 23, Zoning, to remove Community Center as a Permitted Use and make a Special Use in the Agricultural 2, Agricultural 3, Residential 1, Residential 2, Residential 3, Residential 12, Residential Resort, Rural, and Mixed Use 1 and 2 zoning districts; and to amend the Commercial 1 zoning district to remove Place of Worship as a Special Use and make a Permitted Use. The definition of Community Center is also amended to clarify its meaning.

These changes are recommended to ensure compliance with provisions of the Religious Land Use and Institutionalized Persons Act (RLUIPA) by providing consistent zoning treatment between Place of Worship and Community Center, which is a use with similar characteristics.

Staff recommends approval of CA19-0001.

Speaking in favor or opposition: None

Mr. Newhouse closed the public hearing.

Motion and vote: Mr. Newhouse made a motion, seconded by Mr. Smith to approve the code amendment. The motion passed 6-0.

Worksession(s):

CPA17-0002 Comprehensive Plan Public Facilities Water & Sewer Primary Development

Mr. Pastwik presented the workession. The Future Land Use Element (including the Future Land Use Map) is an integral part of the County Comprehensive Plan. County-wide consideration of land uses and the establishment of a land use vision within the Comprehensive Plan is consistent with the Code of Virginia, Sect. 15.2-2232 (attached for reference). In addition to establishing a land use vision it establishes the County Primary Development Boundary, guiding the provision of public utility (water and sewer) infrastructure in the County. The Primary Development Boundary is critical to identifying areas where growth and land use intensity (size and scale) can be directed and establishes a clear geographic area for the County Utilities Department to focus their infrastructure planning efforts, considerate of development and update of the Water and Sewer Master Plan. Per the existing Comprehensive Plan: Land within the boundary is intended to develop with higher residential densities and more intensive non-residential uses than outside of the boundary. By maintaining the Primary Development Boundary, the County encourages the most efficient use of the land while preserving the rural character and agricultural viability of those portions of the County outside the boundary. This boundary is not permanent and may be adjusted when conditions warrant through the amendment process. Complementary to the Primary Development Boundary designation is the Water and Sewer portion of the Public Facilities Element. With the assistance of County Utilities Staff, the Water and Sewer content has been updated in draft. It provides an overview of County Utility service, establishes the Comprehensive Plan link to the Primary Development Boundary, a summary of capital infrastructure in use to provide services, and various goals and strategies with an emphasis on Capital Projects. As noted in prior work sessions focused on the Public Facilities Element, content is chiefly aimed at identification of infrastructure enhancement projects considerate of the Code of Virginia Sect. 15.2-2232 that links Capital projects additions to the Comprehensive Plan. From 15.2-2232: …unless a feature is already shown on the adopted master plan or part thereof or is deemed so under subsection D, no street or connection to an existing street, park or other public area, public building or public structure, public utility facility or public service corporation facility other than a railroad facility or an underground natural gas or underground electric distribution facility of a public utility as defined in subdivision (b) of § 56-265.1 within its certificated service territory, whether publicly or privately owned, shall be constructed, established or authorized, unless and until the general location or approximate location, character, and extent thereof has been submitted to and approved by the commission as being substantially in accord with the adopted comprehensive plan or part thereof. "Difficult to Serve Areas" In an analysis of the County Primary Development Boundary as it exists today, staff has learned of a number of "difficult to serve" areas within the existing boundary that are challenging to provide infrastructure to, especially in the near term. In an effort to avoid "taking something away" by retracting the boundary, staff has proposed highlighting these difficult to serve areas within the Primary Development Boundary to be very clear and transparent concerning added development complexities to do with provision of public utilities. The Existing PDB Difficult to Serve Parcels Map was attached for reference to depict these areas that in reality are not readily developable. County utilities staff can describe complexities associated with these areas. Staff notes that some of the areas depicted as problematic were just recently added to the Primary Development Boundary as part of the 2013 update. Specifically, lands extending between Smith Station Road and the Ni River, and acreage extending between Old Plank Road and Route 3 from the Old Plank and Catharpin Rd intersection to Mclaws Drive. Fortunately, in the case of Smith Station Road, much of this land area is devoted to active mining operations and the Lidl Distribution facility. Remaining "difficult to serve" areas within the Comprehensive Plan have been identified for growth and development (within Development

Districts) back to the 2008 and/or 2002 Comprehensive Plans. Staff would like direction from the Planning Commission concerning "difficult to serve" areas and whether there is interest in pursuing Boundary retraction or simply noting and symbolizing these areas. Development has occurred in such areas however it may not be as "straight forward" as others. Primary Development Boundary Expansion Requests. As part of this update cycle, staff has received a number of requests from citizens and/or landowners seeking Primary Development Boundary expansions to enable eventual provision of public water and sewer service. Such changes inevitably drive up the development potential of such areas for added density or more intensive land uses. Requests received thus far have been attached as Compiled Comp Plan Comments for reference. Requests received thus far have generally "hugged" the existing Primary Development Boundary, east of Massaponax Church Road. There are additional requests in the Five Mile Road area just north of Route 3. Staff is also looking at opportunities to "clean-up" the existing boundary in the Five Mile Road area where existing development, approved development, zoning designations, and topography are favorable for the expansion of sewer services and the resulting build-out of the area is much more consistent with the character of the PDB than areas outside of it. Staff consulted with County Utilities, who analyzed the feasibility of potential PDB expansions to each of the parcels requested. Critical considerations included favorable topography and avoidance of significant infrastructure enhancements (such as construction of a regional pump station, or downstream upgrades to meet additional burdens from new sources) being necessary to serve areas in question. Staff proposes that favorable topography (ability to gravity feed sewer), distance to existing infrastructure, existing zoning and land use character are the primary factors that have been considered to determine whether an expansion is favorable or not. In fact, these factors have led to the only scenario where staff would make a positive recommendation for expansion. The effect of any expansion would complement Comprehensive Plan Primary Development Policy 1.a. within the Future Land Use Element that provides the ability via exception to extend utilities beyond the limits of the Primary Development Boundary in cases where topography is favorable and a new pump station would not be required. "Cleaning-up" the boundary in certain areas would effectively eliminate the need for the Policy exception referenced in the Policy. Otherwise staff does not see a strong need to further expand the Primary Development Boundary. In August, 2018 at work session with the Planning Commission, staff found that roughly 1/3rd (13,426 acres) of the existing Primary Development Boundary remained in vacant and/or underdeveloped status. The PDB was last expanded as part of the 2013 Comprehensive Plan update, adding more than 3,000 acres. Per the Planning Department's Future Development analysis spreadsheet, county-wide there is an inventory of over 13,000 approved and yet unbuilt residential units including single family detached, attached, multi-family, age restricted. The vast majority of these future units are located within the Primary Development Boundary. There are significant areas intended for commercial, employment center, and mixed use development that remain undeveloped at this time. The Jackson Gateway area of the County that has historically been intended as an employment hub and economic development driver is still in its early stages of development. Simply, the existing Primary Development Boundary is not "bursting at the seams" to warrant any expansion beyond minor expansions that may "clean-up" the boundary and/or have favorable topography. Based on feedback received from County Utilities, Planning staff has identified three specific areas where PDB expansion warrants consideration. The total land area considered favorable for expansion is approximately 275 acres, divided amongst the following locations: New Post Area (Tax Map #38-A-26B and Portion of #38-A-26A). Approximately 180-acre expansion. Tax Map #38-A-26A is presently zoned Industrial 2 (with a few exceptions this Zoning designation

is better suited to the Primary Development Boundary). Adjacent Tax Map# 38-A-26B has a mixed zoning of Commercial 3 and Rural (Ru). Prospect of significant expansions beyond this point are limited in the immediate area due to numerous conserved lands in proximity to the site. There are potential growth and expansion opportunities in this area given the major crossroads of Route 2 & 17, existing mixed use development underway, and proximity to the VRE station. Potential economic development opportunities resulting from availability of public water and sewer onsite. County utilities staff has identified this site as one that can feasibly gravity flow to exiting sanitary sewer. Utilities notes infrastructure improvements may be required of the existing system. However, compared to others this site is favorable. See attached Candidate PDB Expansion Area Zoom 1 (Map) for reference. Staff would also like Planning Commission feedback considerate of potential land use designation options for this area if expansion is supported. Five Mile Fork Area (Includes requested Tax Map #12-A-34). Expansion would cover approximately 90 acres (including requested Tax Map #12-A-34). This area is recommended by Planning staff for expansion to "clean up" the existing boundary considerate of favorable topography, existing zoning designations, land uses, proximity to the Route 3 corridor. Staff expanded the Primary Development Boundary analysis to include the area surrounding the property requested for expansion. Due to favorable topography in the area identified, County Policy already enables the potential for utility infrastructure expansion via exception as noted in Comprehensive Plan Primary Development Policy 1, and 1.a. that states: Rezonings outside of the Primary Development Boundary desiring to connect to public sewer and water should submit a Comprehensive Plan amendment Exceptions include instances pursuant to Spotsylvania County Utility Ordinance (Spotsylvania County Code Section 22-282) and upon satisfaction of the Director of Utilities that a development will not require a County maintained sewer pump station. Portions of many of these parcels are already within the Primary Development Boundary. The potential PDB expansion limits would "clean up" the boundary and absorb the current standalone PDB confined to the limits of the Barley Woods Age Restricted development, into the larger PDB. The project specific standalone boundary would "fit" into the larger PDB. Existing zoning and development in this area is already compatible with the intent of the Primary Development Boundary and less characteristic of areas outside of it. Existing developed and/or approved projects within this area include: Regency Park Villas; Regency Park Office Park; Regency Crossing; Harrison Crossing Place. A mix of Commercial 2 (C-2), Residential 8 (R-8), Residential 1 (R-1) zoning comprises the area. These zoning designations are most prevalent and complementary of the Primary Development Boundary. Public water and sewer already serves some of these projects and will serve the recently approved Regency Crossing townhome community (Rezoning Case R18-0007). Again, per County Utilities analysis, this site is one that can feasibly gravity flow to exiting sanitary sewer. Utilities notes infrastructure improvements may be required of the existing system. See attached Candidate PDB Expansion Area Zoom 2 (Map) for reference. Staff would also like Planning Commission feedback considerate of potential land use designation options for this area if expansion is supported. Tax Map #51-A-3A. This is a small expansion (approximately 5 acres) intended to "clean up" the Primary Development Boundary in the area resulting from a property owner request. The property is adjoined on two sides by the Primary Development Boundary already and would likely be eligible for the Comprehensive Plan and Utilities Policy exception noted above in (2). This parcel is small and distant from the nearest utility infrastructure; however, topography has been identified as favorable without need for a pump station. Per utilities, "It would be up to the developer to obtain all easements and pay for the cost of the water and sewer improvements". Conceptually this land could be included within a larger development proposal

that includes some of the larger parcels that surround. As part of larger development plan in conjunction with other parcels, this site becomes more viable from a cost to install utilities standpoint. At present, the parcel in question and the surroundings have a Rural (Ru) Zoning designation. Staff notes a mix of mixed use and employment center designations per the Future Land Use Map in this area for those parcels within the Primary Development Boundary. Some rezoning activity has started within these areas via Summit Crossing Estates (R15-0005) and Cedar Forest (R15-0003) nearby, resulting from zoning change from Rural (Ru) to Planned Development Housing 3 (PDH-3). Staff notes that the Comprehensive Plan generally discourages "hop scotch" type development considerate of infrastructure. For instance, Commercial Land Use Policy states "development should proceed sequentially along and back from major thoroughfares. Development should not isolate an existing land use or development". The Employment Center land use designation has similar language. As development within the Primary Development Boundary proceeds complementary of the future land use element along Massaponax Church Road and Summit Crossing Road, staff expects development viability too will improve. Staff believes this minor expansion simply reflects water and sewer-ability while proactively including eth site for future growth prospects. See attached Candidate PDB Expansion Area Zoom 3 (Map) for reference. Staff would also like Planning Commission feedback considerate of potential land use designation options for this area if expansion is supported. All other Primary Development Boundary expansion requests have not been identified as favorable by Planning staff, resulting from location and topographic concerns and infrastructure planning changes identified by Utilities staff that are no longer favorable to expansion prospects. Those sites identified as not favorable for inclusion within the Primary Development Boundary at this time include: 19-A-21, 50-A-100, 50-A-101, 12-A-43, 12-A-50A. Future Land Use Designation Requests: In addition to a number of Primary Development Boundary requests received, staff has received a few land use designation requests for the Planning Commission to consider. They include: A request to consider scaling back the employment center land use designation between Crossroads Pkwy and Thornton Rolling Road and remove, in its entirety a standalone employment center area extending from Summit Crossing Road to Patriot Lane, crossing the RF&P Rail corridor. Preliminarily staff is supportive of this request, however would suggest the employment center designation remain in proximity to the RF&P rail corridor and that the mixed use designation presently identified on the northeast corner of Route 17 and Benchmark Road be reassigned for an employment center designation. Per our last work session focused on the Future Land Use update, staff has raised concern regarding the loss of industrially zoned acres, potential for heavier industry and where best to locate, and rail proximity. Employing the tiered mixed use concept presented at last work session, it would appear these outlying mixed use areas on the edge of the Primary Development Boundary would be best suited for lower intensity mixed use developments primarily suited for single family detached or attached with secondary commercial/office development opportunities. A request to change land use designation on the northwest portion of Tax Map# 48-A-84 (Fox Point side of Smith Station Road) from low density residential to Mixed Use. Per the request, rationale for changing the land use in this location includes that the property in question is located at a major intersection, across from a large area designated as employment center. The property also surrounds commercial property that exists at the intersection. Per the Comprehensive Plan the low density residential land use designation is described as supporting up to 4 units per acre. Staff understands the location of the site and existing commercial zoning do warrant additional considerations how to best develop the site as a transition between a major intersection and adjacent commercially zoned property, and existing surrounding low density residential off Pella Lane and Smith Station Road.

Considerate of the importance of adjacent lot transitions between existing and proposed development discussed at last work session, conceptually staff would prefer to see any higher density development focused at and around the intersection with a gradual step back in intensity towards the periphery of the parcel. Peripheral parcels would be of a similar land use and density as the existing adjacent lots. The property in question is partly across Smith Station Road from the Courtland Park mixed use project. Inclusion of the requested area would expand mixed use type development in the area with its focus on the intersection of Smith Station Road and Leavells Road. This change will have no impact on the employment center designation nearby or existing industrial zoning there.

There was a brief discussion about what *difficult to serve* means.

Mr. Loveday explained that topography comes into play and it could be the need for larger pump stations. These tend to be cost prohibitive as the developer is responsible for that expansion cost. Sewer tends to be the limiting factor.

Mr. Pastwik inquired whether the Commission would like to see an expansion of the primary development boundary at New Post.

Mr. Thompson stated that he would be the least bit interested in expanding the Primary Development areas but is also leery about taking away from it.

Mr. Pastwik informed the Commission that the Economic Development Department was consulted and that they don't get a sense that they want to retract from the area at New Post.

Mr. Newhouse agreed with Mr. Thompson and stated that he is most concerned about the area on Route 3.

Ms. Maddox stated that she agrees and that she doesn't want to retract from it.

Mr. Pastwik stated that some of proposed expansion areas are more feasible than others. He stated that the three green areas on the map appear to be the more favorable sites totaling approximately 275 acres.

There were concerns raised that the expansion of the New Post site could set us up for a rezoning request and eliminate more industrial zoned land.

Mr. Pastwik stated that the Economic Development office likes water and sewered sites that are ready to go quickly for potential suitors.

Mr. Newhouse stated that he would want to preserve the property as industrial zoning and would be opposed to a residential rezoning request.

The Planning Commissioners agreed.

Mr. Pastwik stated that it expands the PDB 180 acres but because of the topography they are able

to connect.

Ms. Maddox stated that she likes the industrial and that the county cannot afford the residential growth.

Mr. Smith expressed concerns about the expansion and whether we could potentially get residential growth.

Ms. Maddox stated that they would only be able to do so with a rezoning request, by-right, it's rural zoned land and they could only get 10 lots.

Mr. Smith inquired what the concern would be for expansion.

Ms. Parrish agreed with Ms. Maddox that by-right, they would only get 10 units in or out of the primary development boundary.

Mr. Thompson stated that he's concern that if we expand, then we set ourselves up for request after request and questions the true need to expand the PDB.

Ms. Parrish stated that one benefit would be the employment center designation there.

Ms. Maddox stated that she likes it with the employment center designation. She feels it tells a potential company that we (the county) is ready for you to locate here.

Mr. Smith stated that he would support that expansion then. He stated that he just doesn't want to see townhomes or apartments there.

Consensus was to include in the expansion and maintain employment center designation.

There was discussion regarding a small 5-acre parcel, tax map 51-A-3A. The Commission did support expanding the PDB but did not favor a request to change the larger employment center land use to mixed use. It will be included as Employment Center.

The Commission also supported the concept to shift mixed use designation east of Benchmark and North of Route 17 to Employment Center.

The 5-Mile Fork expansion, near the Villas at Harrison Crossing was the next discussion. The expansion to include reflects zoning and uses already present there that complement the Primary Development Boundary. What is already on the ground is what is being proposed here. There would be no change to the land use designation. It would avoid residential or mixed-use design.

Ms. Maddox stated that she wants to make it hard for residential growth to occur there.

There was discussion about a parcel at Smith Station & Leavells Road.

Mr. Thompson stated to leave it alone.

The Commission agreed.

Mr. Newhouse stated that he would really like to see more commercial earlier in the mixed use projects that have been coming before us.

Mr. Pastwik thanked the Commission for their input.

Public Comment: None

New Business: None

Adjournment:

Motion and vote: Mr. Newhouse made a motion, seconded by Ms. Carter to adjourn. The motion passed 760.

The meeting adjourned at approximately 8:00 p.m.

Paulette L. Mann
Paulette L. Mann

November 20, 2019
Date

Spotsylvania County Planning Commission

Board Room – Holbert Building, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES: April 7, 2021

Call to Order: Ms. Maddox called the meeting to order at 7:00 p.m.

Members Present:	Mary Lee Carter	Lee Hill
	Jennifer Maddox	Berkeley
	Richard Thompson	Courtland
	Dr. Raymond Bell	Salem
	Jacob Lane	Livingston
	C. Travis Bullock	Battlefield (arrived at 7:05)
	Gerald Childress	Chancellor

Staff Present: Paulette Mann, Planning Commission Secretary
B. Leon Hughes, AICP, Director of Planning & Zoning
Alexandra Spaulding, Senior Assistant County Attorney
Kimberly Pomatto, AICP, Deputy County Administrator
Jacob Pastwik, AICP, Planner III
Shannon Fennell, Planner III

Announcements: Mr. Hughes updated the Commission on upcoming cases, what's on the TRC agendas and community meetings.

Review and approval of minutes

Motion and vote: On a motion by Ms. Maddox, seconded by Mr. Thompson, the Commission

VOTE:

Ayes: 7 Dr. Bell, Ms. Carter, Mr. Bullock, Ms. Maddox, Mr. Lane, Mr. Thompson and Mr. Childress
Nays: 0
Absent: 0
Abstain: 0

Discussion Item(s):

CPA17-0002 - Comprehensive Plan Update – Public Comment Review

Mr. Pastwik presented the PowerPoint. He discussed the advertising methods and how comments were solicited. He raised the following discussion items

- Does the Planning Commission support suggestions to reiterate similar goals across Chapters?

The Commission stated that don't see the need for duplication.

- Does the Planning Commission support adding language generally supportive of rooftop solar?

Mr. Thompson expressed that he doesn't feel it necessary to add this to the plan.

Mr. Hughes stated the idea behind adding it shows that we are a community that supports green energy.

The consensus was to leave the language out of the plan.

- Does the Planning Commission wish to adjust the recommended total land area cap for solar energy facilities? At present the draft states 5% of the land area outside of the Primary Development Boundary. An alternative suggestion requests 3% that still leaves room to accommodate a County code identified?

The consensus was to leave the language at 3%.

Mr. Pastwik asked the following related to the Primary Development Boundary.

- Does the Planning Commission wish to re-examine a requested Primary Development Boundary expansion to the east of Massaponax Church Road at this time? Staff notes conditions have not changed from a Planning and Utilities standpoint.

Mr. Thompson stated that he wouldn't want to see an expansion of the boundary until the boundary is completely developed.

Mr. Lane agreed.

- Doe the Planning Commission support higher intensity mixed use designation with greater emphasis on residential development at Lake Anna? This prospect introduces development using a satellite private or public utility system. Mass drainfields may also be consideration. Presently the draft assumes a lower density commercial oriented mixed use area reliant on well and septic systems.

Mr. Lane stated that he wouldn't want high density development at Lake Anna.

Mr. Childress stated that high speed internet is definitely needed at the Lake.

Mr. Lane stated that he would prefer that the lake be for the citizens of the county and not see it grow much.

- Does the Planning Commission wish to explore further expansion of the Primary Development Boundary to connect the Courthouse area to the Route 1 corridor along Massaponax Church Road, Hickory Ridge Road?

The Commission discussed and decided to leave the boundary the same.

Mr. Pastwik raised the following questions related to Land Use:

- Should we reconsider the land use recommendations between the recently approved Springhaven and Regency Crossing projects along Five Mile Road?

There was much discussion about this and Ms. Pomatto stated that staff is simply suggesting the plan reflect what is already there. The owner would still be required to rezone the property.

The Commission agreed to leave it as is.

Mr. Lane stated that it is pretty clear that some of the suggestions were submitted by developers and not citizens. He stated that the comprehensive plan has become gold standard and not a guide.

Mr. Hughes stated the Comprehensive Plan is the vision set forth by the County for the developers to follow. He reminded Mr. Lane that developers are citizens and property owners also.

Mr. Thompson stated that developers are self-serving and only care about their checkbook.

- Now that the Mixed Use designation has changed to a three tier system, would the Planning commission re-explore the designation of an approximately 35-acre site (zoned Rural) on the north side of Smith Station Road across from Courtland Park mixed use development as mixed use light? This is the lowest intensity mixed use designation and would complement the Courtland Park project.

The Commission members were not in support of changed the land use.

- Does the Planning Commission support re-designing roughly 30-acre area near the corner of Route 2/17 across from the New Post development with a mixed use light designation?

Mr. Thompson & Ms. Maddox stated that it is already dense in this area and suggested leaving as is.

Mr. Pastwik thanked the Commission for their input.

Public Comment: None

New Business:

Mr. Lane encouraged the Planning Commissioners to go back and watch the Board's discussion on the camping ordinance. He stated that all of the issues that were mentioned by the Commission were not presented to the Board and he strongly encouraged the Commission to watch prior to the next worksession

Adjournment

Motion and vote: On a motion by Mr. Lane, seconded by Mr. Bullock, a motion was made to adjourn.

VOTE:

Ayes: 7 Dr. Bell, Ms. Carter, Mr. Lane, Mr. Bullock, Ms. Maddox, Mr. Childress, and Mr. Thompson
Nays: 0
Absent: 0
Abstain: 0

The meeting adjourned at 10:00 p.m.

Paulette Mann, Planning Commission Secretary
Approved on April 21, 2021

Spotsylvania County Planning Commission

Board Room – Holbert Building, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES: May 19, 2021

Call to Order: Ms. Maddox called the meeting to order at 7:00 p.m.

Members Present:	Mary Lee Carter	Lee Hill
	Jennifer Maddox	Berkeley
	Richard Thompson	Courtland
	Dr. Raymond Bell	Salem
	Jacob Lane	Livingston
	Gerald Childress	Chancellor

Staff Present: Paulette Mann, Planning Commission Secretary
B. Leon Hughes, AICP, Director of Planning & Zoning
Alexandra Spaulding, Senior Assistant County Attorney
Kimberly Pomatto, CZA, Deputy Director of Planning & Zoning

Shannon Fennell, Planner III
Wanda Parrish, AICP, Asst. County Administrator - CDG

Announcements: Mr. Hughes updated the Commission on upcoming cases, what's on the TRC agendas and community meetings.

Review and approval of minutes

Motion and vote: On a motion by Ms. Carter seconded by Mr. Thompson, the Commission voted to approve the minutes of April 19, 2021.

VOTE:

Ayes: 7 Dr. Bell, Ms. Carter, Mr. Bullock, Ms. Maddox, Mr. Lane, Mr. Thompson and Mr. Childress
Nays: 0
Absent: 0
Abstain: 0

Unfinished Business:

Comprehensive Plan Public Hearing Authorization Update

The Planning Commission authorized advertisement of the draft updated Comprehensive Plan at the April 21, 2021 meeting. Subsequent to that, some edits have been made to the draft. The majority are de minimis edits, such as updated census estimates and showing the new County line with Orange County on maps. One edit provides more detail related to the new water tank that was

previously the subject of a 2232 review by the Planning Commission. After the Planning Commission reviewed and found the water tank site on property south of Massaponax High School to be substantially in accord with the Comprehensive Plan, additional cultural resources and engineering work has occurred. The result is that the original site to the rear of Massaponax High School again appears to be the preferred location. Archaeological investigation of the site south of the school revealed more extensive historic resources than known at the time of the 2232 review and at least one grave site. This and site characteristics are anticipated to significantly increase in cost of the tank construction at this location.

During the 2232 review, both sites were referenced as candidate sites, but the site south of the school was the one evaluated. The site behind the school is closer to Guinea Station Rd, which is a scenic byway and Civil War Trail, and the historic property, Sterling. There are limited sites that meet the hydrologic needs for the tank and the site behind the school is the best site from an engineering perspective.

To more clearly accommodate the potential to establish the new Massaponax water tower in the best location possible, revised language drafted into the Public Facilities Chapter of the Comprehensive Plan, specifically in Sub-Chapter 4E Water and Sewer. The new draft language is highlighted in yellow for reference in the attached draft revision. Language has been expanded to show Comprehensive Plan support for additional site flexibility and includes specific language to allow for colocation of telecommunications facilities to further support the communication and broadband needs of County citizens. This additional colocation language complements existing goals to promote expansion of telecommunications and broadband in the County and may as a result reduce the need for additional telecommunications towers in the area.

Incorporating this change in the draft Plan will allow for it to be considered as part of the overall update and open to public comment during the public hearing process.

Staff recommends that the Planning Commission authorize advertising the amended language.

Motion and vote: On a motion by Ms. Lane, seconded by Mr. Childress, the Commission voted to authorize advertising the amended language.

VOTE:

Ayes: 7 Dr. Bell, Ms. Carter, Mr. Bullock, Ms. Maddox, Mr. Lane, Mr. Thompson and Mr. Childress
Nays: 0
Absent: 0
Abstain: 0

Review and Approval of Plat

Review and Approval of Plat:

PUBLIC FACILITIES
CHAPTER 4F- LIBRARIES

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES: September 5, 2018

Call to Order: Mr. Newhouse called the meeting to order at 7:00 p.m.

Members Present:		
	Richard Thompson	Courtland
	Howard Smith	Livingston
	Mary Lee Carter	Lee Hill
	Gregg Newhouse	Chancellor
	Jennifer Maddox	Berkeley
	C. Travis Bullock	Battlefield
	Michael Medina	Salem

Staff Present: Wanda Parrish, AICP, Director of Planning
Paulette Mann, Planning Commission Secretary
B. Leon Hughes, AICP, Assistant Director of Planning
Kimberly Pomatto, CZA, Planner III
Alexandra Spaulding, Senior Assistant County Attorney
Patrick White, Planner III

Announcements: There were no announcements.

Review & Approval of minutes:

Motion and vote: Mr. Thompson made a motion, seconded by Ms. Carter to approve the minutes of July 18, 2018. The motion passed 6-0.

Unfinished Business:

Public Hearing(s):

Rezoning(s): R18-0002 Keswick Land Development Corporation, Keswick Senior Apartments, LLC and Keswick Apartments I, LLC (Ordinance No. RO18-0002): Request amendments to the proffers approved with rezoning case R10-0005 Keswick which is a mixed-use development including single family detached, single family attached, multi-family units and a park. The requested amendments would eliminate the Keswick Architectural Guidelines, change the timing of completion of the park and the number and type of recreational fields to be provided within the park. The Keswick development is located on the east side of Lake Anna Parkway (Route 208) approximately one-half mile south of the Lake Anna Parkway/Courthouse Bypass (Route 208) and Brock Road (Route 613) intersection. The property is located within the Primary Development Boundary. The property is identified for Mixed Use development on the Future Land Use Map of the Comprehensive Plan. Tax parcels 47-25-1, 47-25-2, 47-25-3, 47-25-4, 47-25-5, 47-25-6, 47-25-7 and 47-25-8. Berkeley Voting District.

Jerimiah, He stated that there is new technology available and as a member of FABA, he would be happy to contribute to the conversation.

Mr. Newhouse closed the public hearing.

Motion and vote: Mr. Newhouse made a motion, seconded by Ms. Carter to approve the amendment. The motion passed 7-0.

Discussion Item(s):

Worksession(s):

Comprehensive Plan Work Session – Update to the Comprehensive Plan's Public Facilities Chapter for Libraries.

Mr. White presented the worksession**.** He explained that County Planning Staff and staff from the Central Rappahannock Regional Library have been working on an update to the Comprehensive Plans Public Facilities section. Ms. Martha Hutzel, and Ms. Rebecca Purdy are present tonight to assist with your questions. There is no need for a formal vote or action on this item but we welcome your input!

In addition to providing a physical place for physical materials, today's libraries provide electronic resources, on-site services, technologies, and assistance, and an ever growing list of outreach services. The edits within the current clean version reflect efforts of the CRRL and Planning staff to modify the language within the Comprehensive Plan to acknowledge the current Libraries programs available. In addition to the new language, new standards have been added to reflect the changing role of libraries to provide electronic resources. Notably, the workstation and makerspace components. The standards themselves changed little, and the Chapter remains supportive of a new Cosners Corner facility, mobile facilities, and the potential use of existing space.

Table 1 which includes the current status of facilities has been updated. The version displayed has been further updated to add in a count for Workstations, and Makerspaces.

At a glance, using our most recent population project for July 1, 2017, the County remains deficient in library spaces, materials, and makerspaces. The CRRL has embraced their evident demand for workstations, and presently the system is exceeding the standard for electronic workstations. Staff is evaluating the exact service areas using the Rural and Urban drive time standards though our Geographic Information Systems; that information should be ready in the near future.

Director Hutzel with the CRRL to say a few words if she'd like. Otherwise I'll stand by for your suggestions or questions.

Ms. Maddox stated that she would love to have the bookmobile come back.

Ms. Hutzel stated that the bookmobile died at 400-500K miles and that they have two smaller vehicles that have replaced that one. They are libraries on the go that visit assisted living facilities and provide wifi, computers, books and other literacy materials. They have received a grant to purchase another vehicle. She discussed that they are in partnership with Belmont and on Monday nights they typcially have 10-20 people take advantage of that resource. She discussed that the county would love to have another branch in the Massaponax area, which is a long term goal.

Mr. Newhouse discussed how his son does all of his schoolwork on line now with Google Classroom.

Ms. Maddox discussed that she cannot use that because so many of the citizens out in the county don't have high speed internet.

Ms. Hutzel stated that the library at the town center is now open and doing very well.

Mr. Newhouse inquired if she sees more libraries moving that way.

Ms. Hutzel stated that they are good for satellite locations.

New Business - None

Public Comment:

A gentleman spoke about the fact that there is the opportunity to provide technology via microwave technology. The county has suitable topography and many companies may be willing to participate in an investment in this county.

Adjournment:

Motion and vote: Ms. Carter made a motion, seconded by Mr. Thompson to adjourn. The motion passed 6-0.

The meeting adjourned at approximately 9:25 p.m.

_Paulette Mann_____
Paulette Mann

_ October 3, 2018_____
Date

PUBLIC FACILITIES
CHAPTER 4G- PARKS & RECREATION

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES:	November 7, 2018	
Call to Order:	Mr. Newhouse called the meeting to order at 7:00 p.m.	
Members Present:	Richard Thompson	Courtland
	Howard Smith	Livingston
	Jennifer Maddox	Berkeley
	Michael Medina	Salem
	Mary Lee Carter	Lee Hill
Members Absent:	C. Travis Bullock	Battlefield
	Gregg Newhouse	Chancellor
Staff Present:	Paulette Mann, Planning Commission Secretary	
	Wanda Parrish, AICP, Director of Planning	
	Kimberly Pomatto, CZA, Planner III	
	Alexandra Spaulding, Senior Assistant County Attorney	
	Jacob Pastwik, AICP, Planner III	
	Leon Hughes, AICP, Asst. Director of Planning	

Announcements: Ms. Parrish advised that there are no other Commission meetings in November beyond this meeting. She informed the Commission that staff is planning to bring the three sPower cases to the Commission on December 5, 2018. She stated that staff is willing to meet with Commission members on the Monday and Tuesday prior to the meeting if they so desire.

Review & Approval of minutes:

Motion and vote: Mr. Thompson made a motion, seconded by Ms. Maddox to approve the minutes of October 17, 2018. The motion passed 5-0.

Unfinished Business: None

Ms. Carter opened the public hearing.

SUP18-0009 DMS Properties, LLC: Requests special use permit approval to allow a contractor's office and shop on approximately 10.10 acres of Agriculture 3 (A-3) zoned property. The property is located at 5730 Jefferson Davis Highway, which is located on the west side of Jefferson Davis Highway (Route 1) approximately 530 feet north of the Arcadia Road (Route 603) and Jefferson Davis Highway (Route 1) intersection. The property is located outside the Primary Development Boundary. The property is identified for Rural Residential development on the Future Land Use Map of the Comprehensive Plan. Tax parcel 76-A-15A. Berkeley Voting District.

Ms. Maddox stated that this development is not far from her home and that a turning lane would not be warranted. She stated that she finds this development to be acceptable and that it will basically be hidden. She advised that she is in full support of small business and would like to see this corridor grow. She stated that the only time this portion of Route 1 is busy is when there is bail out traffic from I95.

Mr. Medina inquired when cases are this close to adjacent counties whether we notify or examine what that county has proposed on their side.

Ms. Parrish stated that yes, planning staff does do this and they are notified if development is within a ½ mile.

Ms. Maddox stated that Route1 in this area is in need of revitalization and there is an opportunity to grow in this area.

Ms. Parrish reviewed the public hearing procedures.

Speaking in favor or opposition:

Roderick Slyke, Berkeley District: He stated that he owns the property directly to the left of the proposed development. He stated that he is in full support of the proposal and that the Route 1 Corridor in this area needs some development. He has no objections to seeing development all the way to the Caroline County line. He stated that the residents in this area work well together and are trying to get development to come that way.

Tom Luper, Berkeley District: He stated that he and his wife live ¼ mile north of this proposal and that they are in full support.

Ms. Carter closed the public hearing.

Motion and vote: Ms. Maddox made a motion, seconded by Mr. Thompson to approve the special use request with staff's recommended conditions. The motion passed 5-0.

Worksession(s):

CPA17-0002: Update to the Comprehensive Plan's Transportation Element Bicycle & Pedestrian Accommodations

Mr. Pastwik presented the worksession. He advised that staff is seeking input from the Planning Commission regarding consolidating the Trailways Master Plan into the Comprehensive Plan. He also is seeking corridor and location based recommendations for bicycle and pedestrian accomodation.

(1) Proposal to shift crucial bicycle and pedestrian elements from the 2011 adopted Trailways Master Plan into the Comprehensive Plan, whereby abandoning a separate standalone plan.

Planning staff in collaboration with County Transportation staff are in the process of reviewing and drafting updates to the Transportation Element of the Comprehensive Plan. One part of that plan includes transportation alternatives offering different modes of transportation with the ultimate goal of providing more choice and reducing demands upon roadways, especially during peak hours. Transportation alternatives tend to focus on things like telecommuting, rail, ridesharing, van pools, mixed-use development (live, work, play concept reducing need to drive long distances for work, etc.), bicycle and pedestrian connectivity, bus/ transit services.

Presently, bicycle and pedestrian connectivity is addressed in the Transportation Element as a transportation alternative but points elsewhere to the standalone Spotsylvania County Trailways Master Plan. Spotsylvania County adopted the Trailways Master Plan in February, 2011 that included plans for both roadside and off road greenway trails. In 2011 the Virginia Chapter of the American Planning Association bestowed the 2011 Outstanding Plan Award- Plan Element upon the Plan. The Plan has historically been a standalone document incorporated by reference within the Comprehensive Plan. As a Plan element in the interest of assuring such a plan does not become outdated or inconsiderate of opportunities that may arise from changes elsewhere within other elements of the Comprehensive Plan, staff is supportive of shifting crucial plan elements into this Comprehensive Plan recognizing its applicability to both Transportation planning (road based) and Parks and Recreation. Staff feels abandoning the standalone plan model in favor of the Comprehensive Plan better positions it for continued monitor, pursuit, and review and update consistent with the 5 year review and update cycle. Otherwise staff has found there tends to be little impetus to update standalone plans that may become outdated or proactively amended to reflect new opportunities or routing alternatives. The revised and updated Plan embedded within the Comprehensive Plan would address sidewalks, and recreational/ commuter trails plan intended to create an interconnected network of trails cognizant of established Parks and Recreation Level of Service Standards and trail deficits expected to grow to 159 miles by the year 2040 based on projected population growth. The goal of this relocation and revision would be to create a hybrid master plan for Bike/Ped establishing vision previously approved in Master Plan with updates focused on reducing potential duplication, identifying road corridors best suited for bike/ped improvements that may complement the rec trails greenway plan (reducing off road trails through the woods) yet achieving same goals. Staff proposes avoiding a wholesale reboot of the Plan and is not presently looking to totally “reinvent the wheel”. Staff proposes a carefully update that would establish a clear County vision for sidewalks and trails that can influence future updates to County Code and Design Standards Manual where issues have been identified related to required frontage improvements. It’s expected this update will also better inform and influence bike/ped related recommendations in case of rezoning and special use permit applications. Maintaining a bicycle and pedestrian plan no matter whether in a standalone document or within the Comprehensive Plan also lends support for grants and road improvement funding requests. Bike/Ped improvements add strength to transportation project applications for funding such as Virginia’s Smart Scale applications. Plans also lend support and basis for VDOT Project Scoping, Highway Safety Improvement Program (HSIP) Projects, County comments on transportation projects managed by others, etc.

(2) Identification of major thoroughfares where bicycle and pedestrian (sidewalks or planned recreational trails) accommodations should be expected in the County.

There has been much debate regarding the best locations and appropriateness of bicycle and pedestrian infrastructure in certain locations throughout the years. Current Design Standards Manual requirements for sidewalks (attached for reference) are primarily based on the zoning/use of land, regardless of location. Over time, staff has found that this approach has resulted in sidewalks being placed in areas where they may not be warranted or result in a fragmented network of sidewalks since they are not corridor based expectation. For the purpose of this Comprehensive Plan update staff is looking to focus mainly on road frontage infrastructure along higher tier roads in the County; a corridor specific approach. This approach would result in bicycle and pedestrian frontage improvement expectations more in line with corridors specifically identified as part of the Comprehensive Plan. Comprehensive Plan direction is expected to help guide future amendments and streamline bicycle and pedestrian improvements requirements located in the design standards manual. Preliminarily staff believes those roads classified as Minor Collector or higher (excluding Interstate and Ramps) as classified by VDOT functional classifications within the Primary Development Boundary warrant sidewalks. A map depicting these recommended roads for inclusion in the Plan is attached as an exhibit. A corresponding list identifying the particular road segments of interest within the Primary Development Boundary or Lake Anna Area (Route 208) has also been attached for reference.

Generally speaking staff does not believe sidewalk infrastructure is warranted for standalone commercially zoned properties with little to no prospect of future connectivity and limited land use support for commercial proliferation outside of the Primary Development Boundary (PDB). The one exception to this staff notes outside the PDB considering land use designation, existing zoning, and existing development patterns along with a precedent of some existing sidewalk/ trail infrastructure extending to the Louisa County line along Courthouse Rd from Bradley Lane area. Staff believes the mixed use area near Courthouse Road and Lake Anna warrants bike/ped considerations. Otherwise road improvements such as shoulder improvements along rural roads such as those identified as part of Thoroughfare Plan rural roads improvements are likely sufficient.

Recreational trails, or a hybrid of sidewalks and trails on opposite roadsides may be warranted in situations where the planned recreational trails (supported by County Parks and Recreation levels of service standards) plan overlaps road corridors. Staff would like to take advantage of road corridors when opportunities exist as opposed to off road recreational trails (also known as greenways). Staff acknowledges that the planned recreational trails system fits within a regional and national system of trails. Respecting that, recreational trail infrastructure along designated corridors does expand beyond the limits of the Primary Development Boundary. The Virginia Central Rail Trail Plan is an example, stretching to the Orange County line.

It is good to note that unless a major road improvement project is undertaken resulting in lengthy improvements along corridors such as road a widening (including bicycle and pedestrian accommodations), bicycle and pedestrian infrastructure will continue to develop in a piecemeal fashion and connectivity will be established over time with project specific frontage

improvements. A corridor specific approach will not prevent piecemeal fragmented sidewalk segments but will better assure infill frontage improvements will make the system whole over time.

With guidance from the Planning Commission resulting from this work session staff hopes to move forward to develop a revised trails and sidewalks plan hybrid map in the spirit of the adopted Trailways Master Plan.

Mr. Thompson inquired if it would change the status of the comprehensive plan.

Mr. Pastwik stated no.

In order to widen a road or add sidewalks you have to acquire property from private property owners and some of the homes along Mine Road are close to the road so it would essentially be taking their whole front yard.

Ms. Carter inquired about Mine Road and how the state appraisal process works and how ROW acquisitions are paid to property owners.

Mr. Pastwik stated that he is unaware of that policy and it's a state level policy question. It has to do with how land is appraised and how monies are offered for property acquisition.
Mr. Thompson stated that he has been through ROW acquisition before and the value of your land is what VDOT tells you the value is.

Mr. Medina stated that the sidewalk to no where issue came up for the Fredericksburg Christian SUP. He stated that he has a real problem with sidewalks to no where. He stated that he would like to see the dedication of the land rather than the requirement that the sidewalk be built to never be connected to from the adjacent properties.

Mr. Pastwik stated that the DSM allows for a trail in lieu of sidewalk.

Mr. Medina stated that he likes the way staff is going and that sidewalks to nowhere drive him nuts.

Ms. Carter stated that roads like Mine Road are heavily constrained.

Ms. Maddox stated that she likes this approach.

The Commission decided that they like this and want to see it move forward.

New Business - None

Public Comment:

David Hammond, Livingston District: He discussed cadmium leaching from the solar panels and the effects that it could have on the residents.

County of Spotsylvania
Founded 1721

Board of Supervisors
GREG BENTON
KEVN W. MARSHALL
TIMOTHY J. McLAUGHLIN
DAVID ROSS
GARY F. SKINNER
PAUL D. TRAMPE
CHRIS YAKABOUSKI

Parks and Recreation
KEVIN BROOKS, DIRECTOR
Loriella Park
P.O. BOX 28
SPOTSYLVANIA, VIRGINIA 22553
PHONE: (540) 507-7529
FAX: (540) 898-9089
www.spotsylvania.va.us/parksandrec

Service, Integrity, Pride

SPOTSYLVANIA PARKS AND RECREATION COMMISSION

MINUTES

December 20, 2018

Members Present: Jasper Brooks, Vice-Chairman
Benjamin Gearhardt
Michael Lynch
Jack Roberts
Stephen Williams

Members Absent: Jeremy Bullock, Chairman
Donald Holmes

Also present was Kevin Brooks, Director.

The meeting was called to order by Mr. Jasper Brooks, Vice-Chairman.

MINUTES

Mr. Lynch made a motion to approve the October 28, 2018 minutes as presented, seconded by Mr. Gearhardt and approved 5-0.

REPORT OF PARKS AND RECREATION DIRECTOR

Youth Basketball

Practices have begun. There are 152 teams, which is ten (10) less teams than last year. There are 163 less participants than last year. Games are scheduled to begin in January.

NEW BUSINESS

Comprehensive Plan 2019

Mr. Jacob Pastwik, Planner III, made a detailed presentation to the Commission. The Planning staff in collaboration with the County Parks and Recreation Department reviewed and proposed updates to draft Parks and Recreation Section of the Comprehensive Plan's Public Facilities Element. The Commission was provided draft amendments in redline markup format to clearly identify where amendments have been proposed. They were also provided a clean version of the Parks and Recreation section.

Following the presentation, Mr. Stephen Williams, made a presentation expressing his concerns. He stated: Having worked with organizations to define planning processes and plans themselves, I can attest to the difficulty involved in reconciling differing visions and priorities into a sound guide to future actions. I applaud the effort here and believe there should be a chapter in the Comprehensive Plan that serves as the basis for a Parks and Recreation tactical plan. That said, the proposed chapter tries to include too much, and therefore, falls short of the mark.

Mr. Williams provided a memorandum that included detailed questions, comments and concerns.

In summary, Mr. Williams stated the proposed chapter contains unresolved conflicts of guidance and either too vague or too specific objectives. It does not appear that it is fully aligned with the Strategic Plan, and is not well integrated with the Comprehensive Plan as a whole.

Following discussion by the Commission Members, Staff and Mr. Pastwik. Mr. Pastwik stated he would prepare written answers to all of Mr. Williams questions and concerns and attend a future meeting to present them answers.

Baseball/Softball Age Determination Date/League Ages

Mr. Brian Barnes, Recreation Manager, stated that staff would like to recommend keeping the age determination date and age requirements the same for the 2019 Baseball/Softball/T-Ball Season.

Mr. Williams made a motion to approved keeping the age determination date and age requirements the same for the 2019 Baseball/Softball/T-Ball Season, seconded by Mr. Roberts and approved 5-0.

Soccer Age Determination

Mr. Brian Barnes, Recreation Manager, stated that staff would like to recommend keeping the age determination date and age requirements the same for the 2019 Spring Soccer Season.

Mr. Williams made a motion to approved keeping the age determination date and age requirements the same for the 2019 Spring Soccer Season, seconded by Mr. Roberts and approved 5-0.

The Director mentioned that the By-Laws for the Baseball/Softball/T-Ball Season and Spring Soccer Season would be presented at the upcoming February Parks and Recreation Commission Meeting.

Upcoming Activities/Events

The Commission members received a copy of the Winter Play by Play.

ADJOURNMENT

There being no further business or discussion, Mr. Lynch made a motion to adjourn the meeting, seconded by Mr. Robert and approved 5-0.
.

County of Spotsylvania
Founded 1721

Board of Supervisors
GREG BENTON
KEVIN W. MARSHALL
TIMOTHY J. McLAUGHLIN
DAVID ROSS
GARY F. SKINNER
PAUL D. TRAMPE
CHRIS YAKABOUSKI

Parks and Recreation
KEVIN BROOKS, DIRECTOR
Loriella Park
P.O. BOX 28
SPOTSYLVANIA, VIRGINIA 22553
PHONE: (540) 507-7529
FAX: (540) 898-9089
www.spotsylvania.va.us/parksandrec

Service, Integrity, Pride

SPOTSYLVANIA PARKS AND RECREATION COMMISSION

MINUTES

April 18, 2019

Members Present: Jeremy Bullock, Chairman
Jasper Brooks
Benjamin Gearhardt
Michael Lynch

Members Absent: Stephen Williams, Vice-Chairman
Jack Roberts
Donald Holmes

The meeting was called to order by Mr. Jeremy Bullock, Chairman.

MINUTES

Mr. Gearhardt noted that his name was spelled incorrectly on Page 3 – Paragraph 1 - of the February 21, 2019 minutes.

The Director noted that there was an incorrect date on Page 5 – Paragraph 3 under Hunting Run Phase II. The correct date is February 7, 2019.

Mr. Gearhardt made a motion to approve the February 21, 2019 minutes with the noted corrections, seconded by Mr. Brooks and approved 4-0.

REPORT OF PARKS AND RECREATION COMMISSION MEMBERS

Harrison Road Park

Mr. Gearhardt mentioned that Harrison Road Park doesn't drain well. He stated there were potholes, so individuals drive on the grass to avoid them. He asked what could be done about the huge potholes.

Park Regrading and Fence Replacement – Fence replacement work has begun – Legion and Chewning Parks are complete to date. Cosner Park fence replacement is underway. Infield grading portion of this project began on April 16, 2019. An early May completion date is expected for all of the infield grading work. The fencing portion of this CIP is expected to be completed by the end of September 19, 2019.

Mr. Holladay mentioned that the replacement of the floor at the Chancellor Community Center began today. Additional work to be completed at that location include kitchen renovation.

FY2020 Budget

The FY2020 Budget has been approved. A copy of the budget will be provided to the Commission members at the next scheduled meeting.

The Director stated that it was approved for an additional employee due to the addition of Keswick Park.

Comprehensive Plan

The Parks and Recreation Commission was provided for review and endorsement request a draft of the Comprehensive Plan Parks and Recreation Element at its December 20, 2018 meeting. During that meeting, a number of issues were raised and discussed concerning the draft as proposed. Due to the length and content of the issues identified, staff expressed interest in reviewing and addressing each of the comments that were expressed in writing and read aloud during the meeting. The Planning Staff felt the best way to identify potential issues, resolve others, and further explain was to provide a detailed packet of background information to the Commission members for a number of the recommendations suggested, and how the Comprehensive Plan and Comprehensive Plan Update fits into the County processes and the Code of Virginia requirements.

Mr. Jacob Pastwik, Planner III, was in attendance at the meeting to present feedback to the Parks and Recreation Commission. He stated he was here throughout the development of the 2008 – 2009 Parks and Recreation Master Plan as well as the Public Facilities Element of the 2008 Comprehensive Plan, so he does have some historical background which he found to be very helpful.

Mr. Pastwik stated that Mr. Williams had raised some concerns. He stated he wanted to make sure that the Commission members had a chance to see the responses. He mentioned three (3) weeks ago, Planning staff had the opportunity to meet with Mr. Williams. Comments received have resulted in a number of additional amendments to the draft document including suggested clarifications and re-organization of the recommendations portion of the draft.

The Planning staff has acknowledged the suggested edits within the feedback to comments received. Planning staff has also noted that feedback received has helped further improve the draft and a number of amendments have been made since the last Parks and Recreation meeting.

Mr. Pastwik mentioned that a Strategic Plan is not being developed. He said that it would be up to the Commission if they wanted to request it.

Following discussion, the Director read the following statement from Mr. Stephen Williams, Vice-Chairman:

April 2, 2019

During the February 2019 meeting of the Parks and Recreation Commission, the Planning Department (Mr. Jacob Pastwik) presented a draft update of the Parks & Recreation chapter for the Spotsylvania Comprehensive Plan. At that time, I presented my evaluation and comments of the draft copy included in the Commissioner packets for that meeting. Mr. Pastwik requested time to evaluate my comments and provide responses to those comments.

On March 28, I met with Mr. Pastwik, Ms. Wanda Parrish, Mr. Kevin Brooks, and Mr. Darrell Holladay to review the developed responses and resolve any remaining issues.

Mr. Pastwik provided detailed responses, including background material, for each of the original comments. The subsequent discussion centered around application of the Levels of Service standards which result in identifying shortfalls in available park areas and facilities. Needs are one both short and long term, and may already have current opportunities available. We agreed that a full analysis of these elements should be included in the Comprehensive Plan.

One area of discuss ion resulted in the need for additional reorganization of the “General” section listing more specific actions by Parks and Recreation to address shortfalls identified, particularly for the trailways elements listed.

As a result of agreements reached in the meeting, a thorough review of Mr. Pastwik’s responses to my original comments, and a review of the re-drafted revisions to the Parks & Recreation chapter, I am satisfied that the final version of the chapter will be acceptable.

Therefore, I formally recommend adoption of the revised Parks & Recreation chapter for the Comprehensive Plan.

Stephen L. Williams
Vice-Chairman
Parks and Recreation Commission

Following discussion, Mr. Lynch made a motion to adopt and endorse the Parks and Recreation Section of the Chapter 4 of the Public Facilities Plan, seconded by Mr. Brooks and approve 4 – 0.

NEW BUSINESS

Youth Flag Football Age Requirements

Department staff recommended keeping the age requirements for the 2019 Flag Football Season the same as the previous year.

Mr. Gearhardt made a motion to keep the age requirements for the 2019 Flag Football Season the same as the previous year, seconded by Mr. Lynch and approved 4-0.

Youth Cheerleading Age Requirements

Department staff recommended keeping the age requirements for the 2019 Cheerleading Season the same as the previous year.

Mr. Brooks made a motion to keep the age requirements for the 2019 Cheerleading Season the same as the previous year, seconded by Mr. Lynch and approved 4-0.

Youth Fall Soccer Age Requirements

Department staff recommended keeping the age requirements for the 2019 Fall Season the same as the previous year.

Mr. Gearhardt made a motion to keep the age requirements for the 2019 Fall Soccer Season the same as the previous year, seconded by Mr. Lynch and approved 4-0.

Youth Football Ages and Weights

Department staff would like to recommend the following, league name, age and weight requirements for the 2019 Football Season. The proposed changes will hopefully increase participation and league team numbers.

Below are the proposed ages and weights for the 2019 season:

League Name	***Ages***	***Weight Limit***
Junior Varsity League	*ages 8*	*135 and under*
	ages 9	*120 and under*
	ages 10	*115 and under*
Varsity League -	*age 9*	*121 - 140 lbs.*
	ages 10	*116 - 140 lbs.*
	ages 11, 12 and 13	*135 lbs. and under*

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES:	September 18, 2019	
Call to Order:	Mr. Newhouse called the meeting to order at 7:00 p.m.	
Members Present:	Mary Lee Carter	Lee Hill
	Jennifer Maddox	Berkeley
	Michael Medina	Salem
	C. Travis Bullock	Battlefield
	Gregg Newhouse	Chancellor
	Richard Thompson	Courtland
Members Absent:	Howard Smith	Livingston
Staff Present:	Paulette Mann, Planning Commission Secretary	
	B. Leon Hughes, AICP, Assistant Director of Planning	
	Alexandra Spaulding, Senior Assistant County Attorney	
	Jacob Pastwik, AICP, Planner III	
	Jay Cullinan, Fire Chief	
	Kevin Brooks, Director of Parks & Recreation	
	Darrell Holladay, Parks & Recreation Department	

Announcements: Mr. Hughes advised the Commissioners of the items coming up at Technical Review.

Review & Approval of minutes:

Motion and vote: Ms. Carter made a motion, seconded by Mr. Medina to approve the minutes of August 21, 2019. The motion passed 5-0-1, with Mr. Thompson abstaining due to his absence.

Unfinished Business:

CPA17-0002 Comprehensive Plan Follow-up on Transportation & FREM.

Mr. Pastwik stated the item is being presented as an informational item with no formal presentation, a follow-up from a previous worksession and no comments are needed at this point. He stated that he would take any questions that the Commissioners may have.

Mr. Newhouse inquired if the document has been sent to VDOT.

Mr. Pastwik stated that it should be sent to VDOT for review by Friday. He advised that Mr. Cullinan is present for any questions they may have.

Mr. Newhouse stated that he hasn't had much time to review and will do so. He stated that he

would email any questions he may have.

Worksession(s):

CPA17-0002 Comprehensive Plan Parks & Recreation Facilities

Mr. Pastwik presented the workession. Planning staff in collaboration with the County Parks and Recreation Department have reviewed and proposed updates to the draft Parks and Recreation Section of the Comprehensive Plan's Public Facilities Element. He stated that Kevin Brooks and Darrell Holladay are also present for questions should Commissioner have them.

As part of this process staff proposes to review, update, and consolidate critical information from the adopted 2009 Spotsylvania County Parks and Recreation Master Plan (updated in 2011 to reference the Trailways Master Plan) into the Parks and Recreation Section of the Comprehensive Plan. The 2009 Plan has been a standalone document without a major update since its adoption. This is a similar proposal to one presented to the Planning Commission on November 7, 2018 at work session where staff proposed consolidating the Trailways Master Plan into the Transportation Element of the Comprehensive Plan. The Planning Commission was supportive of that concept. Like the Transportation Element proposal, staff feels abandoning the standalone and currently outdated 2009 Parks and Recreation Master Plan in favor of the Comprehensive Plan better positions it for continued monitor, implementation, and review and update consistent with the five (5) year update cycle. Rather than maintaining separate plan documents with a variety of goals and different planning periods, staff believes creation of a centralized "one stop shop" Plan for Parks and Recreation is more efficient and easier to follow from an interested stakeholder and/or public standpoint. Otherwise staff has found there tends to be little impetus and limited resources available to update separate standalone plans that may become outdated.

The draft update was presented to the County Parks and Recreation Commission initially on December 20, 2018. Following that meeting staff was able to respond to questions received and make additional edits. Responses to the Parks and Recreation Commissions questions were compiled and have been provided as an attachment here for reference. Staff feels this information may provide more background concerning the draft. With further updates in place the draft was again presented to the Parks and Recreation Commission on April 18, 2019. At that time the Parks and Recreation Commission endorsed the attached draft, sending it forward to the Planning Commission for review.

Substantive updates to the draft have been summarized below:

Existing Parks and Recreation Lands and Facilities Inventory and Activities

Within the draft, staff has proposed adding a new table to track various organized field activities within the most recent fiscal year. This is a gauge to show community usage and demands on some popular Parks and Recreation services (lands and facilities). In fiscal year 2018 there were over 5,000 organized field/ gym rentals through the Parks and Recreation Department including games and practices. Going forward this rental activity for a variety of sports can help gauge growing or declining popularity of certain sports within the County and help guide the County identify where

community interest and demands are most notable as new or improved park developments are considered.

One of the most crucial elements of the Parks and Recreation Facilities update involves an update of County Parks and Recreation Park Acreage (Lands) and Facilities inventory information from the Parks and Recreation Master Plan within the Comprehensive Plan. This inventory update includes: existing County Park acres (lands) and their facilities (ball fields, tennis and basketball courts, etc.); County School Shared Use Recreational Spaces (land and facilities); community centers (land and facilities); acknowledgement of future County Park sites not yet developed or accessible as public parks; acknowledgement of complementary parks and recreation related facilities not managed by County Parks and Recreation such as HOA open space areas or privately owned and operated recreational facilities; acknowledgement of parklands managed by Federal, State, historic preservation entities. The existing inventory is the basis for determining whether surpluses or deficits exist based on the County's adopted level of service standard based on current and projected future populations. In order to maintain a consistent level of service for County residents, as population grows so too would available parks and recreation services (land and facilities).

In the interest of enhancing the Comprehensive Plan Parks and Recreation Facilities, staff has expanded and infused the draft with additional descriptive language and inventory tables from the 2009 adopted Parks and Recreation Master Plan in order to "paint a clearer picture". Throughout the inventory, Planning staff worked closely with the Parks and Recreation Department to provide a current comprehensive inventory. Planning staff also reached out to Federal and State Agencies, and historic preservation organizations like the Civil War Trust to acknowledge and report on their complementary Parks and Recreation contributions within the County.

Parks and Recreation Level of Service Standards

The existing County Park Acreage (land) and facilities (ball fields, community centers, swimming pools, etc.) inventory noted above was then input into the Levels of Service standards tables and identification of any surpluses or deficits was realized looking at existing populations and future projected populations though 2040. County Parks and Recreation Levels of Service Standards were established as part of the 2008 Comprehensive Plan and the 2009 Parks and Recreation Master Plan. With set levels of service standards, the only variables to change from prior plans are based on current and future populations. In consultation with the Parks and Recreation Department, staff has identified no need to further amend the adopted standards with the exception being proposed removal of the 9-hole golf standard (considered a niche facility), addition of pickle ball courts, and accommodation of specialized or niche facilities. As part of this update, due to increasing popularity of pickle ball, staff has proposed adding a new level of service standard to address pickle ball courts. The draft acknowledges that pickle ball can be added exclusively or by dual purpose courts that can also provide facilities for tennis. There are instances within the County where tennis courts with added paint striping already serve such a dual game purpose. Lesser known or more niche parks facilities that may not be expected or found widely among County Parks such as golf courses, disc golf, skate park, climbing walls, etc. have been acknowledged as part of the Levels of Service standards table but due to their specialization have been found not to warrant specific level of service standards. Instead staff recommends considering warrant for such facilities on a case by case basis considering uniqueness and demand. This approach has gained

favor with the Virginia Department of Conservation and Recreation recently with the development of the Virginia Outdoors Plan as opposed to a strictly level of service based model. Staff feels this is appropriate for specialized or niche Parks and Recreation Facilities.

In order to achieve adopted LOS, an identified deficit serves as warrant and Comprehensive Plan support for future CIP additions. CIP projects also correlate to the calculation of Parks and Recreation related proffers as a means to offset demand increases resulting from development. Proactive identification of capital projects is a key element of the function of the Comprehensive Plan when considering the Code of Virginia Sect. 15.2-2232 (attached for reference). Additionally, identified needs lend support for various other funding sources such as grant applications.

Recommendations

Updated recommendations are based on a 20-year Comprehensive Plan horizon and are based on warrant for need established by the level of service standards based on population over time. Specifically identified short and long term recommended projects are tied to level of service warrants and location based demands or presence of existing infrastructure and opportunities for co-location or expansion. For instance, extension of the existing Virginia Central Rail Trail from its current terminations at Salem Church Road and Gordon Road provides the ability to reduce level of service deficits and expand upon an existing trail system. Cognizant of the Trailways Master Plan, at Salem Church Road a Planning opportunity exists to close the gap between the Spotsylvania VCR Trail and the City of Fredericksburg portion of the trail; could be paired with Harrison Road improvements. This gap closure would greatly enhance the usability and accessibility of that recreational trail in the County. In addition to project specific recommendations there are efforts to achieve efficiencies to achieve two or more goals. Co-location of future schools, community centers, and parks is one example where the Plan seeks to achieve efficiencies as part of the Planning process.

Mr. Thompson inquired if the Parks & Recreation Masterplan would be eliminated.

Mr. Pastwik stated that it would no longer exist as a standalone document.

Mr. Bullock inquired if 51% of the population wanted a golf course, where it would be located.

Mr. Pastwik stated that a demand based warrant for golf courses is not the only determining factor. Detailed study, consideration of other priorities, and ultimate decisions of the Board of Supervisors determine whether such a project will rise to inclusion on the CIP. He stated he would have to defer to the Parks & Recreation staff concerning ultimately where such a facility would be located.

Mr. Newhouse inquired if coordination occurred with the National Park Service.

Mr. Pastwik stated that the federal parks offer something different than county parks. Parks and Recreation acknowledges federal parks and amenities in their inventory.

There was discussion about trailways and that the idea is to ultimately connect all of the trails as development occurs.

Mr. Pastwik stated that ultimately it would be desired to connect to the VCR rail trail with the City of Fredericksburg.

Ms. Carter inquired if Mr. Pastwik is referring to the Spotsylvania Parkway trail also.

The idea is to close the gaps as future development occurs and used Courtland Park as an example.

Mr. Pastwik stated yes, but there are gaps present. One of which is at the corner of Route 1 and Spotsylvania Parkway and the other is located at the corner of Smith Station and Leavells running towards Courtland Park development. He stated that staff is extremely vigilant at looking where we have opportunities to connect.

Mr. Newhouse inquired if the County has adequate ballfields.

Mr. Brooks stated that we meet the needs but teams are now wanting to practice more and more and are always looking for a field that can be utilized.

Mr. Newhouse stated that he's heard from many of his colleagues that they come to Patriot Park that it's a great facility and he feels it a win, win for the County.

Mr. Brooks stated Patriot Park is a great draw for Northern Virginia and Richmond travel teams. He stated that typically it is used Monday-Friday for league play and then used for travel on the weekends. He stated that the Parks & Recreation Department try very hard to work with the libraries for meeting space and they work in cooperation together.

Mr. Thompson inquired if the ballfields at the schools are taken into account.

Mr. Brooks stated yes.

Mr. Medina discussed the trailhead in Breckenridge and inquired if we are missing the microparks.

Mr. Brooks stated that the area cannot really be used for anything because of the rolling terrain.

Mr. Medina suggested it could be graded out. He inquired if there are other micorparks like that.

Mr. Brooks stated no.

Mr. Pastwik thanked the Commission for their feedback.

CPA17-0002 Comprehensive Plan Future Land Use Update

Mr. Pastwik presented the worksession. The Comprehensive Plan Future Land Use Element exists to establish the County-wide vision and guide for development and corresponding land uses and land use intensity considerate of numerous factors including but not limited to: land use

PUBLIC FACILITIES
CHAPTER 4H- GENERAL GOVERNMENT

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES:	June 3, 2020	
Call to Order:	Mr. Newhouse called the meeting to order at 7:00 p.m.	
Members Present:	Mary Lee Carter	Lee Hill *(participated remotely)*
	Jennifer Maddox	Berkeley
	Richard Thompson	Courtland
	Dr. Raymond Bell	Salem
	Jacob Lane	Livingston
	Gregg Newhouse	Chancellor
Members Absent:	C. Travis Bullock	Battlefield
Staff Present:	Paulette Mann, Planning Commission Secretary B. Leon Hughes, AICP, Director of Planning & Zoning Alexandra Spaulding, Senior Assistant County Attorney Jacob Pastwik, AICP, Planner III	

Mr. Newhouse stated that a quorum was present. He advised that he was contacted by Ms. Carter and, that she would not be able to physically attend the Commission meeting today, due to her age and compromised health during the Covid-19 pandemic. Ms. Carter will be participating remotely from 4220 Mine Road, Fredericksburg, Va. 22407. Mr. Newhouse called for approval of Ms. Carter participating remotely in the meeting and the suspension of bylaws which require electronic voting, to be replaced by roll call while Ms. Carter participates in the meeting.

Motion and vote: On a motion by Mr. Thompson, seconded by Mr. Lane to suspend the bylaws allowing Ms. Carter to participate remotely.

VOTE:

Ayes: 6 Dr. Bell, Ms. Carter, Mr. Lane, Mr. Thompson, Mr. Newhouse, Ms. Maddox
Nays: 0
Absent: 1 Mr. Bullock
Abstain: 0

Announcements:

Mr. Hughes announced details regarding the upcoming Commission meeting as well as what is coming up on the TRC agendas and a Community meeting.

Mr. Hughes announced that the R15-0006 case has been postponed to June 17, 2020.

Review & Approval of minutes:

Motion and vote: On a motion by Mr. Lane seconded by Dr. Bell to move this forward to public hearing with the Comprehensive Plan. Staff was also directed to clarify proximity to transmission lines language and screening/buffer language.

VOTE:

Ayes: 6 Dr. Bell, Ms. Carter, Mr. Lane, Mr. Newhouse, Ms. Maddox, Mr. Thompson
Nays: 0
Absent: 1 Mr. Bullock
Abstain: 0

CPA17-0002 Comprehensive Plan Public Facilities Chapter Update – General Government, Sheriff's Element

Mr. Hughes stated that a representative from Fire Rescue was present to answer questions regarding calls for service and stated that he would like to allow Mr. Steve Cooper, Deputy Fire Chief to answer any questions.

Mr. Newhouse stated that the Commission hears frequently the term calls per station. He inquired what the difference is in a call and an incident.

Mr. Cooper stated that the average call per station is 2500. They can be anything from a medical call, smoke detector checks, residential fire, mva's.

Ms. Maddox inquired about when someone calls 911 for medical, how many units respond.

Mr. Cooper stated that two units would respond, an ambulance and a fire engine, so that is 2 calls.

There was discussion about which stations are the busiest.

Mr. Cooper stated that the Four Mile Fork and Salem Church Road stations are the busiest, followed by Crossroads, Courthouse, Thornburg, Route 3, and Salem Fields. The majority of the calls to a station are medical/mva's at about an 80/20 split.

The Commission thanked Mr. Cooper for his time.

Mr. Pastwik presented the worksession. Staff is returning to the Planning Commission with a work session to discuss the final two elements of the Comprehensive Plan Public Facilities Chapter, including General Government and Sheriff. All other Public Facilities Chapter draft content has been vetted through work sessions prior. A summary of the draft amendments is below:

<u>General Government</u>

As outlined in the draft, the General Government portion of the Public Facilities Element seeks to identify capital facility needs for County government operations not associated with operational

needs of the Sheriffs, FREM, Solid Waste, Water and Sewer, Parks and Recreation, Schools that have each been addressed elsewhere within this Chapter. For the purpose of this Chapter, General Government includes but is not limited to governmental services including but not limited to: County Administration, Treasurer, Commissioner of Revenue, County Attorney, Voter Registrar, Cooperative Extension, Community Development, Division of Social Services, Courts, Human Resources, Finance, Information and Computer Services, Public Works and Facilities Management.

As a public facility not presently addressed in the 2013 Comprehensive Plan (as last amended in 2018). the General Government content proposed for the 2020 Comprehensive Plan is new content, an addition to the Public Facilities Chapter. We expect this content to remain in future updates of the Comprehensive Plan going forward, amended as necessary. Recommendations for future General Government projects are aimed at identifying capital facility improvements that should be included in the Comprehensive Plan. This is the primary objective of the Comprehensive Plan Public Facilities Element. Projects have been identified by the Division of Public Works. Warrant for inclusion of a General Government Element within the Public Facilities Chapter is based in the Code of Virginia, specifically Sect. 15.2-2232 that links Capital projects additions to the Comprehensive Plan. From 15.2-2232:

> …unless a feature is already shown on the adopted master plan or part thereof or is deemed so under subsection D, no street or connection to an existing street, park or other public area, public building or public structure, public utility facility or public service corporation facility other than a railroad facility or an underground natural gas or underground electric distribution facility of a public utility as defined in subdivision (b) of § 56-265.1 within its certificated service territory, whether publicly or privately owned, shall be constructed, established or authorized, unless and until the general location or approximate location, character, and extent thereof has been submitted to and approved by the commission as being substantially in accord with the adopted comprehensive plan or part thereof.

Inclusion of identified projects within the Comprehensive Plan sets the required framework of support for them when they are considered for inclusion within the County's Capital Improvements Plan. At this time only two projects have been identified, including: 50,000-60,000 sq.ft. new build in the Spotsylvania Courthouse area for the Department of Social Services and VA Department of Health offices; and, construction of a joint use complex along Gordon Road, specifically Tax Map# 21-A-84 for Spotsylvania County Utilities and Public Works. (Also see Parks and Recreation and Water and Sewer Elements of Public Facilities Chapter concerning this site.). Public works recognizes there is an identified need to review and update the County space needs study going forward as the most recent guidance comes from findings of 2001 and 2013 assessments.

Sheriff

The Spotsylvania County Sheriff's office reviewed the existing Sheriff's office Public Facilities Chapter content of the 2013 Comprehensive Plan (as last updated in 2018). Only a minor amendment to remove a now completed outdoor kennel project at the public safety building was recommended.

CHAPTER 5 HISTORIC RESOURCES MEETING MINUTES COLLECTION

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES:	November 6, 2019	
Call to Order:	Ms. Carter called the meeting to order at 7:00 p.m.	
Members Present:	Mary Lee Carter	Lee Hill
	Jennifer Maddox	Berkeley
	C. Travis Bullock	Battlefield *(arrived at 7:05)*
	Richard Thompson	Courtland
	Michael Medina	Salem
Members Absent:	Gregg Newhouse	Chancellor
	Howard Smith	Livingston
Staff Present:	Paulette Mann, Planning Commission Secretary	
	Wanda Parrish, AICP, Director of Planning	
	Alexandra Spaulding, Senior Assistant County Attorney	
	Jacob Pastwik, AICP, Planner III	

Announcements: Ms. Parrish advised the Commissioners that the AT&T tower is now certain for the next meeting. She also informed them that a new public hearing case has been submitted for Aura at Town Center and is scheduled for TRC on November 21, 2019.

Review & Approval of minutes:

Ms. Mann advised the Commission that the minutes would need to be voted at the next meeting due to the fact that Mr. Medina was absent and Mr. Newhouse and Mr. Bullock were no present to approve them.

Unfinished Business: None

Worksession(s):

CPA17-0002 Comprehensive Plan –Historic & Natural Resources Chapters

Mr. Pastwik presented the worksession. On May 22, 2018, Planning Staff provided an overview of the proposed Comprehensive Plan update process at a joint work session attended by the Planning Commission and Board of Supervisors. From a Comprehensive Plan standpoint, staff has found the Historic Resources and Natural Resources Chapters to be effective with little need of major substantive change. Thorough review of the content of both Chapters during the 2013 Comprehensive Plan update process with the aid of the Comprehensive Plan working groups and Planning Commission streamlined the goals and objectives while maintaining efforts to identify significant resources and minimize negative impacts upon them.

During the May 22, 2018 meeting staff identified need to update background information and review and update the various goals, policies, and strategies within each of the Chapters. The most notable amendments to the historic and natural resources chapters are located within the Appendices of the Comprehensive Plan where background information is presented as a means to comply with the Code of Virginia and provide more comprehensive background data. The Historic and Natural Resources Chapters and their Appendices have been studied, updated and documented to satisfy Virginia State Code Sec. 15.2-2224, Surveys and studies to be made in preparation of plan; implementation of plan, Sec. 15.2-2223.2, Comprehensive plan to include coastal resource management guidance, and 9VAC25-830-170, Comprehensive Plans, per the Chesapeake Bay Preservation Area Designation and Management Regulations. The aforementioned Code of Virginia regulations have been attached for reference. In addition to ensuring the "boxes are checked" for compliance with the Code of Virginia, the content covered within the Appendices provides direction for the Chapter policies and strategies. The Chapters and their appendices are also intended to serve as an educational resource for the community, offering valuable insights into historic and environmental resources and identifying other resources where additional information can be found. Within the Comprehensive Plan the "survey and study" information is a critical resource that helps guide recommendations elsewhere within the document including the land use and offering insights into economic development and tourism opportunities.

The Natural Resources Chapter and its Appendix have been updated with the assistance of the County Chesapeake Bay Division, Code Compliance, and a number of Federal and State level agencies providing direct input or data, including but not limited to: Virginia Department of Mines, Minerals, Energy (DMME), Virginia Department of Conservation and Recreation (DCR), Virginia Department of Health (VDH), Virginia Department of Environmental Quality (DEQ), Virginia Department of Forestry, USDA Natural Resources Conservation Service (NRCS). The Historic Resources Chapter was reviewed and updated with the assistance with the Spotsylvania County office of Economic Development and Tourism, and the Spotsylvania Museum.

Amendments proposed to policies and strategies considered as part of the development review process have been chiefly based on prior discussions with the Planning Commission focused on land use and economic development particularly. The draft also rewords a few items for clarity sake. Where additions have been proposed, staff has looked to identify specific items that have been raised numerous times throughout public hearing processes from concerned citizens such as assuring reduced impacts upon designated scenic byways, water availability and potential impacts of more draws in rural areas. Staff acknowledges there an abundance of environmental protections already in place and enforceable at varying levels of government. The draft does not seek to reiterate that which is already required. The intent is to identify specific items that would add value within the community as projects are proposed and decisions are made. As expressed throughout the Comprehensive Plan *"policies and strategies should be undertaken on behalf of the citizens of the County. The stakeholders in this endeavor- property owners, land developers, local government, preservation groups and special interest groups, and interested citizens- must have viable and creative tools to be good stewards of their [historic, natural] resources".*

Mr. Pastwik provided and overview of substantive changes to natural resources policies and strategies including adding reference to mussel farm implementation along Massaponax creek corridor.

Mr. Thompson inquired who was running the mussel project.

Mr. Pastwik stated that Mr. Street from Environmental Codes is doing so and he believes it to be a joint effort with Virginia Tech.

Mr. Thompson stated that he is curious about the funding.

Ms. Carter and Mr. Thompson expressed their desire to know what the benefit is to the County.

Mr. Pastwik stated that he couldn't speak to that but knows that Mr. Street did a presentation to the Board at one time and can talk to him about providing additional information to the Commission.

There was discussion about tourism and economic development.

Mr. Pastwik stated that the Tourism Department is dedicated to identifying resources and attractions, and helping to promote, preserve, and protect the resources.

Ms. Carter expressed her concern about something that she heard at TRC a few weeks ago. She stated that it was mentioned that there is not a lot of industrial zoned land any longer.

Mr. Thompson brought up the expansion areas for inclusion in the primary development boundary. He wanted to know where the proposals came from.

Mr. Pastwik stated the primary development boundary expansion requests came from citizens and/or landowners. Staff then reached out to Utilities to find out if the areas were feasible for gravity feed sewer. The lines were then drawn based on serviceable areas.

The discussion continued about the hundreds of lost industrial zoned pieces of land.

Ms. Carter stated that she would like an update as to what remains zoned industrial.

Mr. Pastwik stated that he ran a report about this last year and would be happy to supply it as an update. There was mention that superfund is pinching down on the sites in addition to a number of other factors including environmental sensitive areas and easements.

Mr. Medina stated that he has been looking for a piece that would offer three phase power for him to run his machinery.

Mr. Pastwik stated that private forces, such as high asking price also ingibit industrial development.

CHAPTER 6 NATURAL RESOURCES MEETING MINUTES COLLECTION

SPOTSYLVANIA COUNTY
AGRICULTURAL & FORESTAL ADVISORY COMMITTEE

AGENDA

Wednesday, August 9 at 7:30 p.m.

Community Development Conference Room
9019 Old Battlefield Blvd, 3rd Floor
Spotsylvania, VA 22553

7:30 **Call to Order**

Invocation & Pledge

Determination of Quorum

Review and approval of minutes from 02/08/17

New Business:

1. **Vote on Chair and Vice Chair**
2. **Review presentation materials for Fall Membership Meeting of the Spotsylvania County Farm Bureau**
3. **Large scale solar facilities**
4. **Comprehensive Plan Update Discussion**

8:30 **Adjournment**

By Order of the Spotsylvania County Agricultural & Forestal Advisory Committee: The Agricultural & Forestal Advisory Committee reserves the right to amend this agenda on the day of the meeting. The Committee encourages the participation of all county citizens. For those with special needs, please notify the Planning Department Office at (540) 507-7434 of any accommodation required five (5) days prior to the meeting you wish to attend.

Spotsylvania County Agricultural & Forestal Advisory Committee

Merchant Square, 9019 Old Battlefield Blvd., Suite 320, Spotsylvania VA 22553

MINUTES: August 9, 2017

Call to Order:	Mr. Cook called the meeting to order at 7:31 p.m.		
Members Present:	Greg Benton M. R. Fulks	Scott Cook Debbie Williams	Sam Harris
Members Absent:	Angela Chainer	Jan Massey	
Staff Present:	Wanda Parrish, Planning Director Ginger Deale, Committee Secretary Jacob Pastwik, Long Range Planner		
Determination of a Quorum:	A quorum was present.		
Invocation:	Mr. Benton gave the Invocation.		
Pledge of Allegiance:	Mrs. Deale led the Pledge of Allegiance.		

Vote of Chair and Vice Chair:

Mr. Benton made the motion; seconded by Mrs. Williams to nominate Mr. Cook as Chairman of the Agricultural & Forestal Committee. The motion passed 4-0.

Mr. Harris made the motion; seconded by Mrs. Williams to nominate Mr. Benton as Vice Chairman of the Agricultural & Forestal Committee. The motion passed 4-0.

Approval of Minutes:

Mr. Harris made the motion; seconded by Mr. Fulks to approve the minutes of February 8, 2017. The motion passed 5-0.

New Business:

Mrs. Parrish gave an update on doing a presentation on the Agricultural and Forestal district to the Farm Bureau. The Farm Bureau did approve doing a presentation at their Fall membership meeting. That will be on September 12, 2017 at 6:30 pm at the American Legion Building. Mrs. Parrish went over the PowerPoint presentation and the brochures that will be available if people are interested.

Mrs. Parrish asked Mr. Harris if he would help speak at the meeting if there are questions because it may be more beneficial for the public to hear from someone who has property in the Agricultural Forestal District. Mr. Harris responded that he would.

Mrs. Williams stated that the Commissioner's Office could hand out some of the brochures when they are doing the reassessment in 2018.

Mrs. Parrish asked that they look over the PowerPoint presentation and the brochure; if they see anything that they would like to change, clarify or add to please let her know.

Mrs. Parrish opened the discussion on large scale solar facilities. Currently, a company called S – Power who at this time have no locations in Virginia is looking at 3500 acres – forestry land – generally North of West Catharpin and South of Orange Plank Rd. to build a solar farm. Currently they are working to put the properties under contract for a study period. There is nothing in the ordinance currently specifically for this type of industry. Currently; in our ordinance this would be considered Heavy Industrial just like a power plant would be and that would require a rezoning to Industrial 2. Industrial 2 is not appropriate out in the agricultural lands. So we have an ordinance going to the Planning Commission for their review. If they are comfortable with it then they can authorize it to move forward to public hearing. What is does is make larger scale solar a special use in A2 and A3 zoning district. This would give the County the opportunity to put different conditions on the use.

Mr. Fulks asked if they would be purchasing the land or leasing it. Mrs. Parrish answered that in this case they would be purchasing the land. Mr. Fulks stated he had seen this in the Farm Journal and asked what fears or concerns the County had about leasing the land or making it a by right use for 200 acres. Mrs. Parrish answered that whether it was leased or purchased is not a concern. It would be whether the County was comfortable allowing these by right anywhere in the Agricultural District. With it being a special use the County has the ability to look at each one individually and see if it is a good fit and has the ability to place restrictions on the use. Mr. Fulks stated he did not feel there would be anything wrong with making a 200 acre parcel a by right use for this. For a smaller scale solar farm it is not worth the cost for the special use permit. Solar farms are not hurting anyone.

Mrs. Parrish stated the S – Power said if this is approved; this would be the largest corporate solar farm in the world.

There was a discussion about the tax rate for a solar farm. Mr. Benton stated he believed they would lose agricultural tax breaks as far as he knew. Mrs. Parrish stated that there are some provisions at the state level that limit the amount of tax that the County can receive. As she understands it the County only receives 20% of the total tax value. Mr. Fulks asked what the tax rate would be. Mrs. Williams answered that she does not know a lot about this – they are just learning about it - but she believes they would charge the normal tax rate which is $0.85 per $100.00. Mrs. Parrish stated as she understands it the larger solar farms would be assessed by the state. Then the County could tax 20% of that assessment. There were some questions about whether they can collect roll back taxes. Right now it is current year plus 5 years.

Mrs. Parrish introduced Mr. Jacob Pastwik who is a long range planner for the County. Mrs. Parrish explained that recently they started the Comprehensive plan update process with the Planning Commission at their first meeting in August. There was a major rewrite of the Comprehensive Plan in 2013. The Code of Virginia requires that every five years the County must review and update as necessary.

Mr. Pastwik stated that there are two reasons why he was there. First has to do with local agriculture and how it has been doing over time. He says that he has seen a gradual decline in the size of the farms. Why is that? Second, is policy and land use. Are there other uses that should be included that are missing. Mr. Pastwik stated that when he looks at the policy there are six policies… maybe there should be some more. Which is why he is here today, please take a look and maul it over – comments don't have to be turned it today. The committee can email or call him later. Is there anything that can complement the farming community?

Mr. Harris stated that there are not a lot of people coming up wanting to continue to farm.

Mr. Fulks stated that the Federal Government farm programs regulate the farm prices within a range. The profit margin is so small that it is not worth farming. You have to have a passion to farm. You also don't have consistent rains in the South and Virginia soils are very thin. We don't have the ability to economically competitive.

Mr. Pastwik asked if they felt they could find what they needed to farm within the county or did they need to go far and wide to find what they needed. Mr. Cook, Mr. Benton, Mr. Harris and Mr. Fulks all answered far and wide. Mr. Fulks stated there is nothing the County can do to change that. If it is not economically feasible to support the business here there is no way to change that.

Mr. Harris asked if staff could mail the ordinances for the Agricultural districts to them so they could take a look and see what is permitted already.

Adjourned: The meeting adjourned at 8:35 p.m.

_____
Ginger Deale, Commission Secretary

Approved: _____

T:\Planshar\Staff\GDeale\Agricul_ForestalCommittee\Minutes\Ag Forestal minutes 08.09.17.doc

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES:	November 6, 2019	
Call to Order:	Ms. Carter called the meeting to order at 7:00 p.m.	
Members Present:	Mary Lee Carter	Lee Hill
	Jennifer Maddox	Berkeley
	C. Travis Bullock	Battlefield *(arrived at 7:05)*
	Richard Thompson	Courtland
	Michael Medina	Salem
Members Absent:	Gregg Newhouse	Chancellor
	Howard Smith	Livingston
Staff Present:	Paulette Mann, Planning Commission Secretary	
	Wanda Parrish, AICP, Director of Planning	
	Alexandra Spaulding, Senior Assistant County Attorney	
	Jacob Pastwik, AICP, Planner III	

Announcements: Ms. Parrish advised the Commissioners that the AT&T tower is now certain for the next meeting. She also informed them that a new public hearing case has been submitted for Aura at Town Center and is scheduled for TRC on November 21, 2019.

Review & Approval of minutes:

Ms. Mann advised the Commission that the minutes would need to be voted at the next meeting due to the fact that Mr. Medina was absent and Mr. Newhouse and Mr. Bullock were no present to approve them.

Unfinished Business: None

Worksession(s):

CPA17-0002 Comprehensive Plan –Historic & Natural Resources Chapters

Mr. Pastwik presented the worksession. On May 22, 2018, Planning Staff provided an overview of the proposed Comprehensive Plan update process at a joint work session attended by the Planning Commission and Board of Supervisors. From a Comprehensive Plan standpoint, staff has found the Historic Resources and Natural Resources Chapters to be effective with little need of major substantive change. Thorough review of the content of both Chapters during the 2013 Comprehensive Plan update process with the aid of the Comprehensive Plan working groups and Planning Commission streamlined the goals and objectives while maintaining efforts to identify significant resources and minimize negative impacts upon them.

During the May 22, 2018 meeting staff identified need to update background information and review and update the various goals, policies, and strategies within each of the Chapters. The most notable amendments to the historic and natural resources chapters are located within the Appendices of the Comprehensive Plan where background information is presented as a means to comply with the Code of Virginia and provide more comprehensive background data. The Historic and Natural Resources Chapters and their Appendices have been studied, updated and documented to satisfy Virginia State Code Sec. 15.2-2224, Surveys and studies to be made in preparation of plan; implementation of plan, Sec. 15.2-2223.2, Comprehensive plan to include coastal resource management guidance, and 9VAC25-830-170, Comprehensive Plans, per the Chesapeake Bay Preservation Area Designation and Management Regulations. The aforementioned Code of Virginia regulations have been attached for reference. In addition to ensuring the "boxes are checked" for compliance with the Code of Virginia, the content covered within the Appendices provides direction for the Chapter policies and strategies. The Chapters and their appendices are also intended to serve as an educational resource for the community, offering valuable insights into historic and environmental resources and identifying other resources where additional information can be found. Within the Comprehensive Plan the "survey and study" information is a critical resource that helps guide recommendations elsewhere within the document including the land use and offering insights into economic development and tourism opportunities.

The Natural Resources Chapter and its Appendix have been updated with the assistance of the County Chesapeake Bay Division, Code Compliance, and a number of Federal and State level agencies providing direct input or data, including but not limited to: Virginia Department of Mines, Minerals, Energy (DMME), Virginia Department of Conservation and Recreation (DCR), Virginia Department of Health (VDH), Virginia Department of Environmental Quality (DEQ), Virginia Department of Forestry, USDA Natural Resources Conservation Service (NRCS). The Historic Resources Chapter was reviewed and updated with the assistance with the Spotsylvania County office of Economic Development and Tourism, and the Spotsylvania Museum.

Amendments proposed to policies and strategies considered as part of the development review process have been chiefly based on prior discussions with the Planning Commission focused on land use and economic development particularly. The draft also rewords a few items for clarity sake. Where additions have been proposed, staff has looked to identify specific items that have been raised numerous times throughout public hearing processes from concerned citizens such as assuring reduced impacts upon designated scenic byways, water availability and potential impacts of more draws in rural areas. Staff acknowledges there an abundance of environmental protections already in place and enforceable at varying levels of government. The draft does not seek to reiterate that which is already required. The intent is to identify specific items that would add value within the community as projects are proposed and decisions are made. As expressed throughout the Comprehensive Plan *"policies and strategies should be undertaken on behalf of the citizens of the County. The stakeholders in this endeavor- property owners, land developers, local government, preservation groups and special interest groups, and interested citizens- must have viable and creative tools to be good stewards of their [historic, natural] resources".*

Mr. Pastwik provided and overview of substantive changes to natural resources policies and strategies including adding reference to mussel farm implementation along Massaponax creek corridor.

Mr. Thompson inquired who was running the mussel project.

Mr. Pastwik stated that Mr. Street from Environmental Codes is doing so and he believes it to be a joint effort with Virginia Tech.

Mr. Thompson stated that he is curious about the funding.

Ms. Carter and Mr. Thompson expressed their desire to know what the benefit is to the County.

Mr. Pastwik stated that he couldn't speak to that but knows that Mr. Street did a presentation to the Board at one time and can talk to him about providing additional information to the Commission.

There was discussion about tourism and economic development.

Mr. Pastwik stated that the Tourism Department is dedicated to identifying resources and attractions, and helping to promote, preserve, and protect the resources.

Ms. Carter expressed her concern about something that she heard at TRC a few weeks ago. She stated that it was mentioned that there is not a lot of industrial zoned land any longer.

Mr. Thompson brought up the expansion areas for inclusion in the primary development boundary. He wanted to know where the proposals came from.

Mr. Pastwik stated the primary development boundary expansion requests came from citizens and/or landowners. Staff then reached out to Utilities to find out if the areas were feasible for gravity feed sewer. The lines were then drawn based on serviceable areas.

The discussion continued about the hundreds of lost industrial zoned pieces of land.

Ms. Carter stated that she would like an update as to what remains zoned industrial.

Mr. Pastwik stated that he ran a report about this last year and would be happy to supply it as an update. There was mention that superfund is pinching down on the sites in addition to a number of other factors including environmental sensitive areas and easements.

Mr. Medina stated that he has been looking for a piece that would offer three phase power for him to run his machinery.

Mr. Pastwik stated that private forces, such as high asking price also ingibit industrial development.

Spotsylvania County Planning Commission

Holbert Building Board Room, 9104 Courthouse Road, Spotsylvania VA 22553

MINUTES:	November 20, 2019	
Call to Order:	Ms. Carter called the meeting to order at 7:00 p.m.	
Members Present:	Mary Lee Carter	Lee Hill
	Jennifer Maddox	Berkeley
	Richard Thompson	Courtland
	Michael Medina	Salem
	Gregg Newhouse	Chancellor
	C. Travis Bullock	Battlefield
Members Absent:	Howard Smith	Livingston
Staff Present:	Paulette Mann, Planning Commission Secretary	
	Wanda Parrish, AICP, Director of Planning	
	Alexandra Spaulding, Senior Assistant County Attorney	
	Jacob Pastwik, AICP, Planner III	
	David Dameron, CZA, Planner III	
	B. Leon Hughes, AICP, Assistant Director of Planning	

Announcements: Ms. Parrish advised the Commissioners that at this point, no cases are ready for public hearing and depending on the outcome of this meeting, the Commission may want to consider canceling the December 4, 2019 meeting.

Review & Approval of minutes:

October 2, 2019 Minutes

Motion and vote: Mr. Newhouse made a motion, seconded by Mr. Thompson to approve the minutes of October 2, 2019. The motion passed 5-0-1 with Mr. Medina abstaining due to his absence and Mr. Bullock absent.

November 6, 2019 Minutes

Motion and vote: Mr. Newhouse made a motion, seconded by Ms. Carter to approve the minutes of November 6, 2019. The motion passed 6-0.

Unfinished Business: None

CPA17-0002 – Comprehensive Plan (Industrial Acreage & Mussel Farm)

Ms. Parrish stated that information was provided in the packets regarding industrial acreage and mussel farms. Should the Commission have additional questions, please reach out to her or Mr. Pastwik.

Public Hearing(s):

SUP18-0012 – AT&T Mobility (A Tempo LLC): Requests special use permit approval for a 100-foot monopole communication tower with a 6-foot lightning rod, for a total of 106 feet, on a parcel of 7.2 acres zoned Commercial 2 (C-2) District. The property is located approximately 268 feet east of Spotsylvania Avenue (Rt. 1234) and approximately 503 feet south of Mine Road (Rt. 636) to the rear of the shopping center that contains Weis Markets. The property is addressed as 10601 Spotsylvania Avenue and identified as Tax Parcel 36-17-C. The parcel is located in the Primary Development Boundary. The property is designated as Commercial on the Future Land Use Map of the Comprehensive Plan. Tax Parcel 36-17-C. Lee Hill Voting District.

Mr. Newhouse opened the public hearing.

Mr. Dameron presented the case. The proposed telecommunications facility is on a parcel of 7.2 acres currently zoned Commercial 2 (C-2). The proposed tower will be a 100-foot-tall monopole topped by a 6-foot-tall lightning rod for a total height of 106 feet within a 1,430 square foot compound surrounded by a 6' tall chain link fence topped with 12 inches of barbed wire as an anti-climbing device. The perimeter fence will have privacy slats and will be surrounded by Arborvitae and Cyprus Trees. The site will be accessed through the existing road that connects the parcel with Spotsylvania Avenue.

The applicant has stated this height will allow it to locate its antennas at a height of 100' and also allow at least two future carriers to locate antennas at 90' and 80' respectively. The height of the monopole was determined by the applicant to be the lowest possible height that will eliminate current network deficiencies. The applicant has provided a statement of justification for the proposed telecommunications facility which states that a lack of adequate wireless services in the area has resulted in customer complaints and dropped calls and the new tower will add and improve wireless services including broadband allowing residents and commuters to experience better quality and reduced dropped calls. Also, the applicant asserts the facility will further enhance the emergency communications network in the County through the First Responder Network Authority, which was established by Congress to provide reliable public safety networks across the country and dedicated bandwidth for use only by first responders.

The proposed tower site is on a parcel containing a shopping center building and is bordered by parcels containing office and commercial uses directly to the north, south and west. To the east the site is bordered by "The Meadows", an established single-family home subdivision. This location was selected because the applicant determined the site is in a half-mile radius in which a tower would meet their needs. The applicant also noted that only two existing structures in this half-mile radius met the 100-foot height required to meet coverage goals and be potential sites to co-locate AT&T's equipment. These were respectively, the Hampton Inn & Suites and the Lee's Hill Emergency and Outpatient Center. AT&T contacted the owner and/or landlord of each property and the applicant reported neither was interested in entering into a lease agreement.

Primary Development Boundary Expansion Request- Tax Map 51-A-3A

To: Jacob Pastwik
Subject: Jim Kiley 5 Acres off Summit Crossing Rd 51 A 3A

Mr. Pastwik – thanks for taking the time to speak with me regarding 5 acres of land I own off Summit Crossing Road (Tax Map 51-A-3A)

The purpose of this email is to request my 5 acres be included in the Primary Development Area.

Yesterday, I spoke with Bradley Sacra, Engineer with Spotsylvania County Utilities Dept., regarding the suitability of my property for access to Spotsylvania's utilities, specifically, sewer hook-up.

Mr. Sacra said he did not see a problem connecting my parcel to County sewer and did not see the need to install sewer pumps to service my property.

I will call Kevin Marshall, Berkeley Supervisor, and let him know that I am requesting inclusion of my property in the Primary Development Area and that I have contacted the Planning Department about the same.

I will follow-up with you after I speak with Mr. Marshall.

Regards,

Jim Kiley

Jim Kiley | Director

Berkeley Research Group, LLC

1800 M Street NW, Second Floor | Washington, DC 20036

D 202.909.2791 | O 202.480.2700 | M 540.847.7480 | F 202.559.2234

jkiley@thinkbrg.com | thinkbrg.com

BRG

BERKELEY RESEARCH GROUP, LLC (TOGETHER WITH ITS AFFILIATES, "BRG") - NOTICE

THIS EMAIL TRANSMISSION AND ANY ATTACHMENTS HERETO CONTAIN INFORMATION FROM BRG WHICH MAY BE CONFIDENTIAL AND PRIVILEGED. THE INFORMATION IS INTENDED FOR THE SOLE USE OF THE INDIVIDUAL OR ENTITY TO WHOM IT IS ADDRESSED. IF YOU ARE NOT THE INTENDED RECIPIENT, YOUR USE, DISSEMINATION, FORWARDING, PRINTING OR COPYING OF THIS INFORMATION IS PROHIBITED.

May 02, 2018

Spotsylvania, Virginia

Parcel ID Number (PIN):	Property Address:	Owner:	Billing Address:
51-A-3A	0 Assigned on Request	James A Kiley	810 Sylvania AVE
	No Data	No Data	FREDERICKSBURG, VA 22401

General Information

Subdivision:	-
Legal Description 1:	Davis Est 668
Legal Description 2:	near Summitt Parcel A
Legal Land Area:	5.00

Voting District Information

Voting:	Berkeley
Precinct:	MASSAPONAX
State House:	54
State Senate:	4
Congressional:	01
Polling Place:	MASSAPONAX HIGH SCHOOL
Polling Address:	5200 GUINEA STATION ROAD

This information listed above is based upon the location of the selected parcel in relation to the voting districts and is provided for general information purposes only. Since voting districts generally do not follow neatly along property lines, you can verify your voting location by using the map. Any specific questions about where you vote should be directed to the Spotsylvania County Voter Registrar's Office at (540) 507-7380.

Census

Magisterial:	LEE HILL DISTRICT
Census Block:	1030
Census Tract:	202.05
TAZ:	1260
First Due :	11

School Information

Elementary School:	Cedar Forest Elementary
Middle School:	Thornburg Middle
High School:	Massaponax High

School information is based upon the location of the selected parcel in relation to the school districts and is provided for general information purposes only. Please verify with the Spotsylvania County School Administration Office's Bus Stop Information Website.

Land Development

Zoning:	RU
AgForestal District:	N
Airport Protection Overlay District:	N
Historic Overlay District:	N
Highway Corridor Overlay District:	N
Reservoir Protection Overlay District:	N
River Protection Overlay District:	N

Information found here is provided for general reference purposes and does not constitute a written zoning determination. Please contact Zoning Office at (540)507-7222 for official zoning determinations.

Environmental Constraints

Resource Protection Area (RPA):	N
FEMA 100 Year Flood Plain:	N
Watershed:	E20
SubWatershed:	RA47

This information found here is provided for general reference purposes only and does not constitute an actual flood plain or RPA determination. This information is based upon the location of the selected parcels in relation to the FEMA 100 year Flood Plain or the Spotsylvania County's Resources Protection Area (RPA).Please contact a licensed professional engineer or surveyor for determination of how your property is affected by the Flood Plain or RPA.

Assessment(2017)

Building Assessment:	$
Land Assessment:	$74,000
Year Built:	0
Sq Footage:	No Data
Transfer Date:	09/11/2014
Instrument Number:	201400014019
Book Number:	No Data
Page:	No Data

Assessment Information is provided for general information purpose only. Please verify with Spotsylvania County Commissioner of Revenue Assessments Office http://www.spotsylvania.va.us/cor/realestate/assessmentsearch

DISCLAIMER: This data is provided without warranty of any kind, either expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Any person, firm or corporation which uses this map or any of the enclosed information assumes all risk for the inaccuracy thereof, as the County of Spotsylvania expressly disclaims any liability for loss or damage arising from the use of said information by any third party.

Feet

0 100 200 300 400

1:4,514 / 1"=293 Feet

Title: Parcel View

Date: 5/2/2018

DISCLAIMER: The geographic data you are about to access are electronic public records as defined by the Code of Virginia,1950, Section 2.2-3704. This information is made available as a public service. Spotsylvania County assumes no responsibilityfor any action or actions taken by users of this information. Spotsylvania County shall not be liable to the user or to any other person for the use or misuse of this data. This information is for general information only and shall not be used for thedesign, modification, or construction of improvements to real property or for flood plain determination. If you believe anydata provided is inaccurate, please inform the GIS Division by e-mail at gis@spotsylvania.va.us

Future Land Use Amendment Requests- Crossroads Area

BILL SHERMAN TRICORD INQ

Jacob Pastwik

From: Bill Sherman <bsherman@tricordinc-va.com>
Sent: Thursday, May 17, 2018 5:20 PM
To: Jacob Pastwik
Cc: Tim Hall
Subject: RE: Comp Plan
Attachments: Scan.pdf; TOD Handbook- Reconnecting America.pdf

Jacob- Thanks for reaching out, and thanks for the opportunity to comment.

The attached sketch is rough. Looking at the VRE Station area, and a reasonable vision for that, per the attached TOD handbook, what you probably have is a small Transit Town Center. This has the 1,000,000 square feet of non-residential approved for Crossroads Station as its core, and then spreads out from there. What the area is lacking is the appropriate housing mix, as shown on page 10 of the handbook.

Area A on my markup is the most suitable area in terms of real access (pedestrian mainly, that does not have rail line, Route 17, or significant topographical obstacles) to the train station for some of that type of development. Development of that area as "Employment Center" would forego a critical opportunity to create the right mix of residential and commercial in the critical tight geography around the train station, and is probably not realistic anyway, given the already existing (zoned) employment center at Crossroads Station. The right density is probably something in between the County's definitions of Low Density Residential and High Density Residential, and, in any scenario, the land right at the intersection of 17 and Thornton Rolling Road is a nice commercial node. So the right designation is probably Mixed Use.

Area B is simply the area of the FCES special use permit. The school is certainly an appropriate use in the Mixed Use, so it probably should not change. Just bringing that to your attention.

Area C (meant to be all of the contiguous "Employment Center" should probably be Mixed Use for the same reasons identified for Area A. This is particularly true on the east side of the railroad tracks.

I may have some more ideas to send you tomorrow, but I know that it is getting late in the process and I wanted to make sure I got you something.

Thanks again- Bill

Bill Sherman
Land Development Manager
Tricord Incorporated
Cell (703) 772-0397

From: Jacob Pastwik [mailto:JPastwik@spotsylvania.va.us]
Sent: Wednesday, May 02, 2018 11:53 AM
To: Bill Sherman <bsherman@tricordinc-va.com>
Subject: RE: Comp Plan

Good morning Bill,

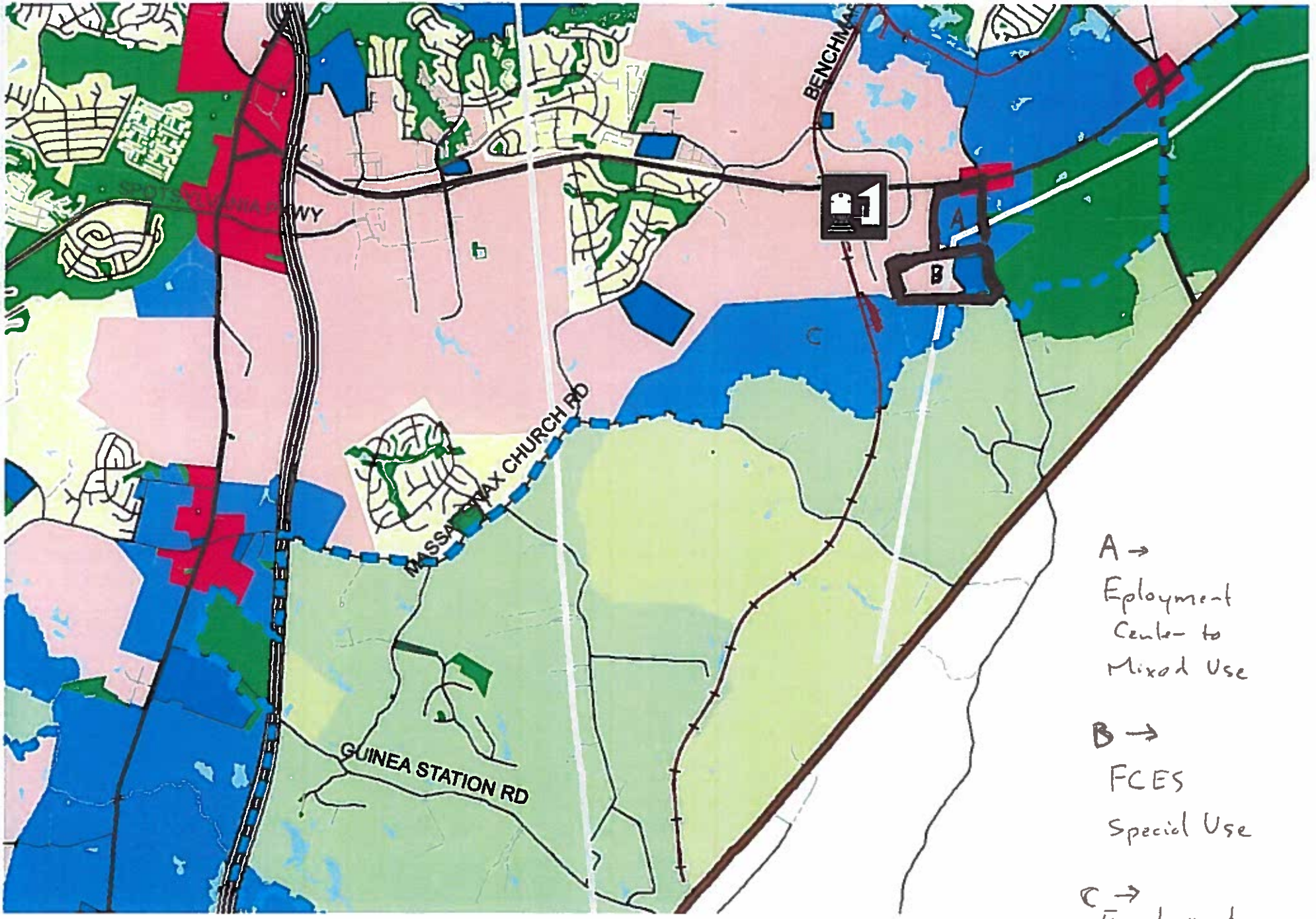
I know a week or so ago you said you were looking to put together a Comp Plan request as part of the CP update process. We have a joint meeting scheduled with the Planning Commission and Board on May 22nd. Trying to get BOS

and PC direction (on the same page) where they would like the CP to go. If you would like to submit your thoughts prior to that meeting we can hopefully get on the radar for discussion purposes. I know we have a few land use items in house currently and some suggestions coming in from the outside also. Feel free to send to Wanda and I.

Thanks,

Jacob L. Pastwik, AICP
Spotsylvania County Planning
9019 Old Battlefield Blvd, Suite 320
Spotsylvania, VA 22553
jpastwik@spotsylvania.va.us
Dept Phn: 540-507-7434
Desk: 540-507-7433

Spotsylvania
VIRGINIA
CROSSROADS OF THE CIVIL WAR™
VisitSpotsy.com


BENCHMARK
SPOTSYLVANIA PKWY
MASSAPONAX CHURCH RD
GUINEA STATION RD
A
B
C
A →
Eployment
Center to
Mixed Use
B →
FCES
Special Use
C →
Employment
Center to Mixed Use

Future Land Use and Primary Development Amendment Requests- New Post Area

MR FULKS PDB REQUEST

M. R. FULKS
1601 Belvedere Drive
Fredericksburg VA 22408
540 899-2828

The enclosed map shows properties (marked in red on the map) that are owned by Belvedere South Ltd. Partnership, (part of Tax Map 38-A-26A); Belvedere North LLC (Tax Map 38-A 26 C); and Fairfield Holdings, (Tax Map 38-A-26B) that extend on the southeast side of Rt. 17 from the southeast corner of Rt. 2 and Rt. 17 to the creek just beyond the entrance on the south side of Rt. 17 (opposite the entrance to Belvedere Plantation on the north side of Rt. 17.)

We would like this area to be designated as Mixed Use in the revised Comprehensive Plan. Some of the reasons for this change are listed below.

1. The property is located near the new VRE station. It is good planning to orient housing in and around public transportation centers.

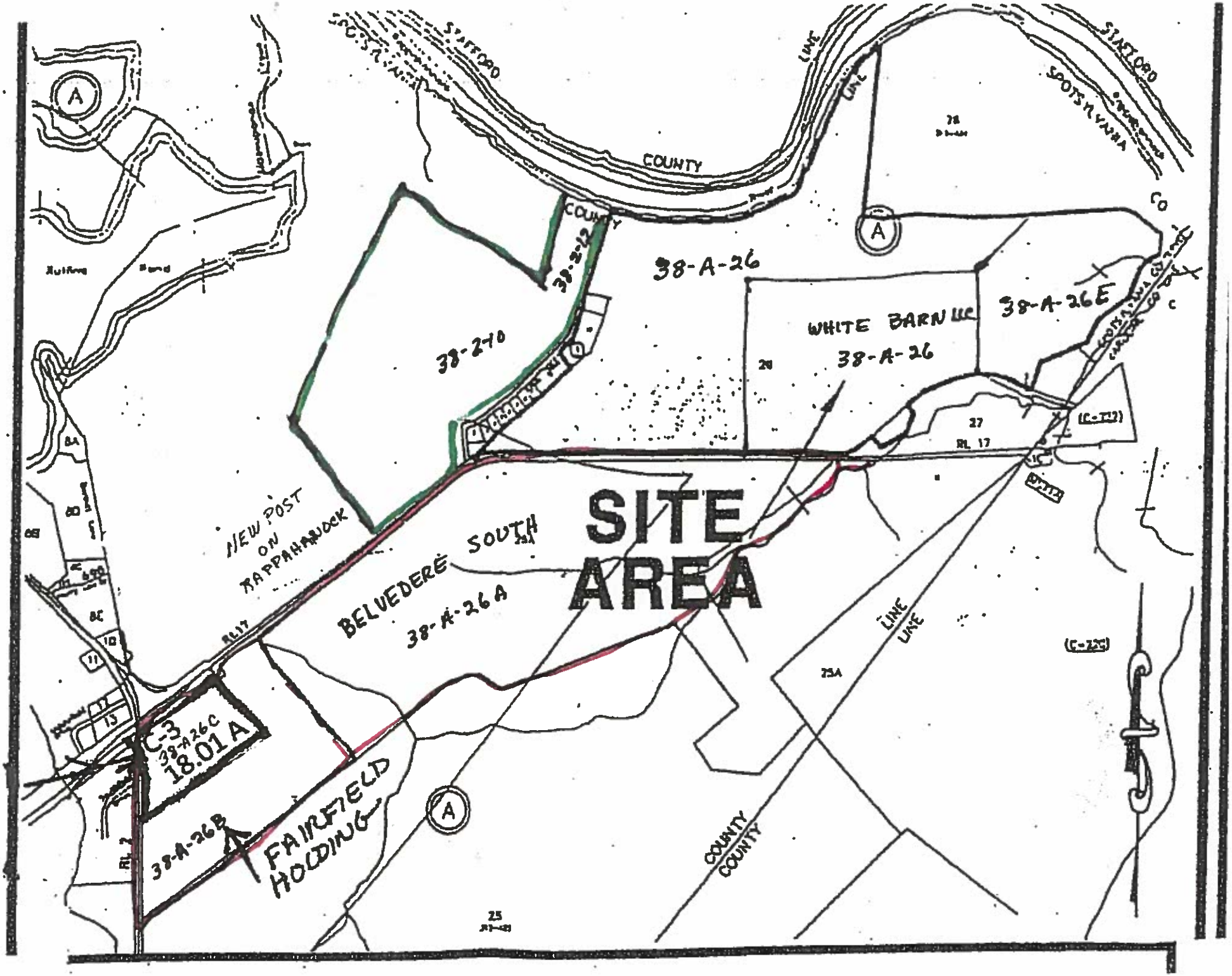
2. The county has invested a considerable amount in water and sewer infrastructure in the immediate area. Common sense suggests it is wise to maximize that investment by serving the areas that can be served by the existing infrastructure as opposed to constructing more lines somewhere else.

3. There is already adequate open space in the immediate area because of the conservation easement just west of the property. Keeping this as open space would seem to supply more open space than is warranted for the area.

4. Across Rt. 17, as a part of the New Post community, a large parcel was placed in a conservation easement to accommodate the soccer complex. This open space replaced what used to be a Mixed Use designation. Therefore, it would be reasonable to add some additional Mixed Use area to replace what was lost to open space.

5. New Post offers a number of unique and desirable amenities. This property is right across Rt. 17 and "New Post on the Rappahannock" which would make it a natural Phase 2 for the New Post community. We have had initial discussions with Tricord about this possibility. They have expressed interest but state that the Primary Development Boundary and the Future Land Use Plan would need to be revised for this Mixed Use possibility.

M. R. Fulks Managing Partner Belvedere South Ltd. Partnership and Belvedere North LLC.
John Sims, Owner Fairfield Holdings


STAFFORD
COUNTY
SPOTSYLVANIA
COUNTY
38-A-26
38-2-10
38-2-12
WHITE BARN LLC
38-A-26
38-A-26E
NEW POST ON RAPPAHANNOCK
BELVEDERE SOUTH
38-A-26A
SITE AREA
C-3
38-A-26C
18.01 A
38-A-26B
FAIRFIELD HOLDING
COUNTY
COUNTY
LINE
LINE
RL 17
RL 2
(C-222)
(C-223)

Future Land Use and Primary Development Amendment Requests- Tax Map 48-A-84, 50-A-100, 50-A-101

From: James Jarrell III
To: Jacob Pastwik
Subject: Comp Plan Amendment
Date: Thursday, August 23, 2018 1:41:44 PM

Jacob:

It was a pleasure to catch up with you yesterday. I am bummed to hear about SGI's demise, but I am not surprised. Hopefully, we can still make some progress.

As we discussed, I have few parcels that I believe are good candidates for changes in the Comp Plan.

48-A-84 - First is a portion of parcel 48-A-84. This is actually the parcel that the Lidl tract came from. The portion that I am concerned with is the 35 acres that are in the northwest corner of the Smith Station/Leavells intersection. The Future Land Use for this parcel is shown as either Low Density Residential or Agricultural/Forestal (it is very difficult to distinguish the colors on the online version of the Comp Plan. In any case, I believe that a more appropriate land use would be either the Mixed Land Use or the High Density Residential. My reasoning for this is: (i) this property is located at a major intersection, (ii) this property is directly across the street from a large area that is planned for Employment Center, (iii) this property surrounds commercially zoned property at the intersection. The current planned land use seems inappropriate for a rapidly developing suburban area. This is no longer the rural area that it was just years ago. This is a perfect example of the change in circumstances that require periodic updates to the Comp Plan.

50-A-100, 50-A-101 – These parcels are located south of Massaponax Church Road, roughly across the road from Lancaster Gate. This area is located outside of the PSA and is slated for Rural Residential and Agricultural/Forestal. I would argue that the installation of the VRE and the expansion of the Mixed Use and Employment Centers nearby make this designation seem outdated. I believe that this area should be placed into the PDA and that a Low Density Residential use would be more appropriate.

I really appreciate your attention to this.

Sincerely,

James E. Jarrell III
President
Jarrell Properties Inc.
1005 Sophia St.
Fredericksburg, VA 22401
Office: 540-899-3825
Fax: 540-899-3827
jjarrell3@jarrellinc.com

September 25, 2019

Spotsylvania, Virginia

Parcel ID Number (PIN):	Property Address:	Owner:	Billing Address:
48-A-84	9010 Luck Stone LN Fredericksburg, VA	Coleman Family Farm LLC No Data	1005 Sophia ST FREDERICKSBURG, VA 22401

General Information

Subdivision:	-
Legal Description 1:	Pt Coventry
Legal Description 2:	No Data
Legal Land Area:	207.61

Voting District Information

Voting:	Battlefield
Precinct:	TRAVELERS REST
State House:	54
State Senate:	17
Congressional:	07
Polling Place:	JOHN J WRIGHT EDUCATIONAL & CULTURAL CENTER
Polling Address:	7565 COURTHOUSE ROAD

This information listed above is based upon the location of the selected parcel in relation to the voting districts and is provided for general information purposes only. Since voting districts generally do not follow neatly along property lines, you can verify your voting location by using the map. Any specific questions about where you vote should be directed to the Spotsylvania County Voter Registrar's Office at (540) 507-7380.

Census

Magisterial:	COURTLAND DISTRICT
Census Block:	2005,2026
Census Tract:	203.09,203.10
TAZ:	1710
First Due :	1

School Information

Elementary School:	Courtland Elementary
Middle School:	Spotsylvania Middle
High School:	Courtland High

School information is based upon the location of the selected parcel in relation to the school districts and is provided for general information purposes only. Please verify with the Spotsylvania County School Administration Office's Bus Stop Information Website.

Land Development

Zoning:	I-2,RU
AgForestal District:	N
Airport Protection Overlay District:	N
Historic Overlay District:	N
Highway Corridor Overlay District:	N
Reservoir Protection Overlay District:	N
River Protection Overlay District:	N

Information found here is provided for general reference purposes and does not constitute a written zoning determination. Please contact Zoning Office at (540)507-7222 for official zoning determinations.

Environmental Constraints

Resource Protection Area (RPA):	Y
FEMA 100 Year Flood Plain:	Y
Watershed:	E20,F15
SubWatershed:	RA47,YO38

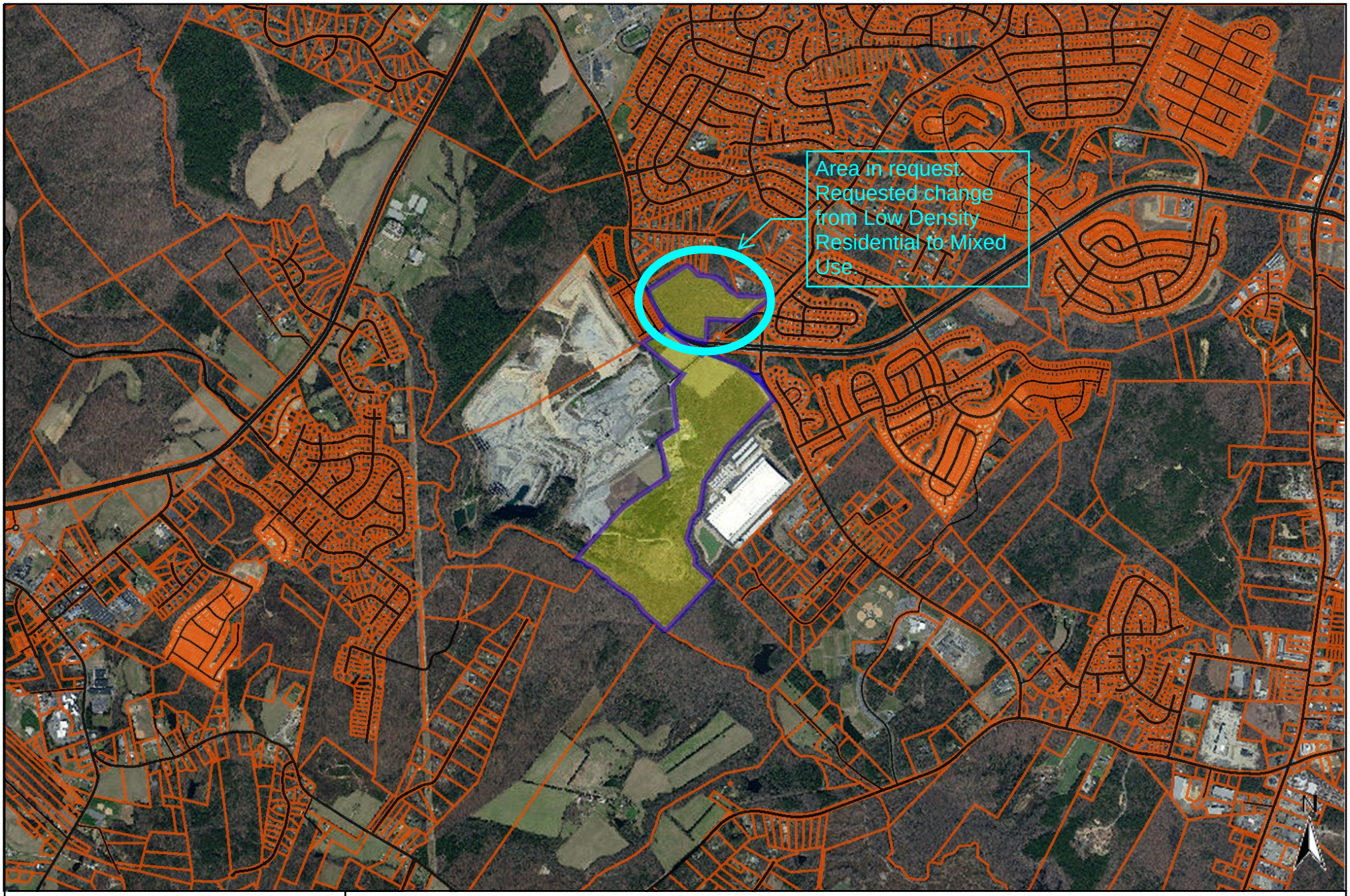
This information found here is provided for general reference purposes only and does not constitute an actual flood plain or RPA determination. This information is based upon the location of the selected parcels in relation to the FEMA 100 year Flood Plain or the Spotsylvania County's Resources Protection Area (RPA).Please contact a licensed professional engineer or surveyor for determination of how your property is affected by the Flood Plain or RPA.

Assessment(2018)

Building Assessment:	$
Land Assessment:	$2,491,300
Year Built:	0
Sq Footage:	No Data
Transfer Date:	02/25/1999
Instrument Number:	No Data
Book Number:	1667
Page:	187

Assessment Information is provided for general information purpose only. Please verify with Spotsylvania County Commissioner of Revenue Assessments Office http://www.spotsylvania.va.us/cor/realestate/assessmentsearch

DISCLAIMER: This data is provided without warranty of any kind, either expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Any person, firm or corporation which uses this map or any of the enclosed information assumes all risk for the inaccuracy thereof, as the County of Spotsylvania expressly disclaims any liability for loss or damage arising from the use of said information by any third party.



Feet

0 800 1600 2400 3200

1:36,112 / 1"=2,347 Feet

Title: Parcel View

Date: 9/25/2019

DISCLAIMER: The geographic data you are about to access are electronic public records as defined by the Code of Virginia,1950, Section 2.2-3704. This information is made available as a public service. Spotsylvania County assumes no responsibilityfor any action or actions taken by users of this information. Spotsylvania County shall not be liable to the user or to any other person for the use or misuse of this data. This information is for general information only and shall not be used for thedesign, modification, or construction of improvements to real property or for flood plain determination. If you believe anydata provided is inaccurate, please inform the GIS Division by e-mail at gis@spotsylvania.va.us

September 25, 2019

Spotsylvania, Virginia

Parcel ID Number (PIN):	Property Address:	Owner:	Billing Address:
50-A-100	0 Assigned on Request	JPI-Summit Crossing LLC	1005 Sophia ST
	No Data	No Data	FREDERICKSBURG, VA 22401

General Information

Subdivision:	-
Legal Description 1:	M Watkins
Legal Description 2:	No Data
Legal Land Area:	152.00

Voting District Information

Voting:	Berkeley
Precinct:	MASSAPONAX
State House:	54
State Senate:	4
Congressional:	01
Polling Place:	MASSAPONAX HIGH SCHOOL
Polling Address:	5200 GUINEA STATION ROAD

This information listed above is based upon the location of the selected parcel in relation to the voting districts and is provided for general information purposes only. Since voting districts generally do not follow neatly along property lines, you can verify your voting location by using the map. Any specific questions about where you vote should be directed to the Spotsylvania County Voter Registrar's Office at (540) 507-7380.

Census

Magisterial:	LEE HILL DISTRICT
Census Block:	1040,1044,1047,1048
Census Tract:	202.05
TAZ:	1272
First Due :	11

School Information

Elementary School:	Riverview Elementary
Middle School:	Thornburg Middle
High School:	Massaponax High

School information is based upon the location of the selected parcel in relation to the school districts and is provided for general information purposes only. Please verify with the Spotsylvania County School Administration Office's Bus Stop Information Website.

Land Development

Zoning:	RU
AgForestal District:	N
Airport Protection Overlay District:	N
Historic Overlay District:	N
Highway Corridor Overlay District:	N
Reservoir Protection Overlay District:	N
River Protection Overlay District:	N

Information found here is provided for general reference purposes and does not constitute a written zoning determination. Please contact Zoning Office at (540)507-7222 for official zoning determinations.

Environmental Constraints

Resource Protection Area (RPA):	N
FEMA 100 Year Flood Plain:	N
Watershed:	F15
SubWatershed:	RA47,YO38

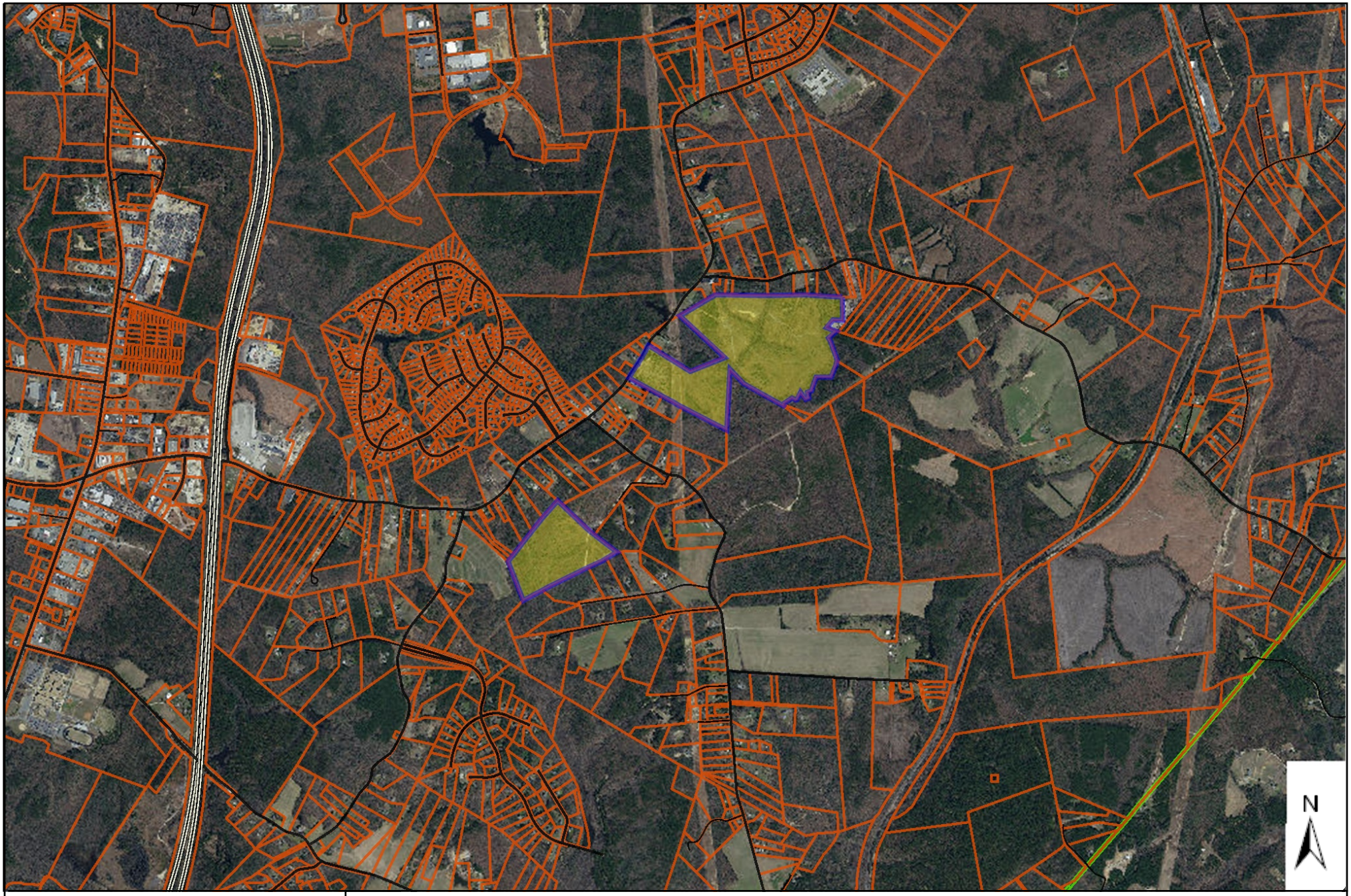
This information found here is provided for general reference purposes only and does not constitute an actual flood plain or RPA determination. This information is based upon the location of the selected parcels in relation to the FEMA 100 year Flood Plain or the Spotsylvania County's Resources Protection Area (RPA).Please contact a licensed professional engineer or surveyor for determination of how your property is affected by the Flood Plain or RPA.

Assessment(2018)

Building Assessment:	$
Land Assessment:	$628,600
Year Built:	0
Sq Footage:	No Data
Transfer Date:	05/26/2011
Instrument Number:	201100008544
Book Number:	No Data
Page:	No Data

Assessment Information is provided for general information purpose only. Please verify with Spotsylvania County Commissioner of Revenue Assessments Office http://www.spotsylvania.va.us/cor/realestate/assessmentsearch

DISCLAIMER: This data is provided without warranty of any kind, either expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Any person, firm or corporation which uses this map or any of the enclosed information assumes all risk for the inaccuracy thereof, as the County of Spotsylvania expressly disclaims any liability for loss or damage arising from the use of said information by any third party.



Feet

0 800 1600 2400 3200

1:36,112 / 1"=2,347 Feet

Title: Parcel View

Date: 9/25/2019

DISCLAIMER: The geographic data you are about to access are electronic public records as defined by the Code of Virginia,1950, Section 2.2-3704. This information is made available as a public service. Spotsylvania County assumes no responsibilityfor any action or actions taken by users of this information. Spotsylvania County shall not be liable to the user or to any other person for the use or misuse of this data. This information is for general information only and shall not be used for thedesign, modification, or construction of improvements to real property or for flood plain determination. If you believe anydata provided is inaccurate, please inform the GIS Division by e-mail at gis@spotsylvania.va.us

September 25, 2019

Spotsylvania, Virginia

Parcel ID Number (PIN):	Property Address:	Owner:	Billing Address:
50-A-101	0 Assigned on Request	JPI-Summit Crossing LLC	1005 Sophia ST
	No Data	No Data	FREDERICKSBURG, VA 22401

General Information

Subdivision:	-
Legal Description 1:	M Watkins
Legal Description 2:	No Data
Legal Land Area:	11.00

Voting District Information

Voting:	Berkeley
Precinct:	MASSAPONAX
State House:	54
State Senate:	4
Congressional:	01
Polling Place:	MASSAPONAX HIGH SCHOOL
Polling Address:	5200 GUINEA STATION ROAD

This information listed above is based upon the location of the selected parcel in relation to the voting districts and is provided for general information purposes only. Since voting districts generally do not follow neatly along property lines, you can verify your voting location by using the map. Any specific questions about where you vote should be directed to the Spotsylvania County Voter Registrar's Office at (540) 507-7380.

Census

Magisterial:	LEE HILL DISTRICT
Census Block:	1048
Census Tract:	202.05
TAZ:	1272
First Due :	11

School Information

Elementary School:	Riverview Elementary
Middle School:	Thornburg Middle
High School:	Massaponax High

School information is based upon the location of the selected parcel in relation to the school districts and is provided for general information purposes only. Please verify with the Spotsylvania County School Administration Office's Bus Stop Information Website.

Land Development

Zoning:	RU
AgForestal District:	N
Airport Protection Overlay District:	N
Historic Overlay District:	N
Highway Corridor Overlay District:	N
Reservoir Protection Overlay District:	N
River Protection Overlay District:	N

Information found here is provided for general reference purposes and does not constitute a written zoning determination. Please contact Zoning Office at (540)507-7222 for official zoning determinations.

Environmental Constraints

Resource Protection Area (RPA):	N
FEMA 100 Year Flood Plain:	N
Watershed:	F15
SubWatershed:	YO38

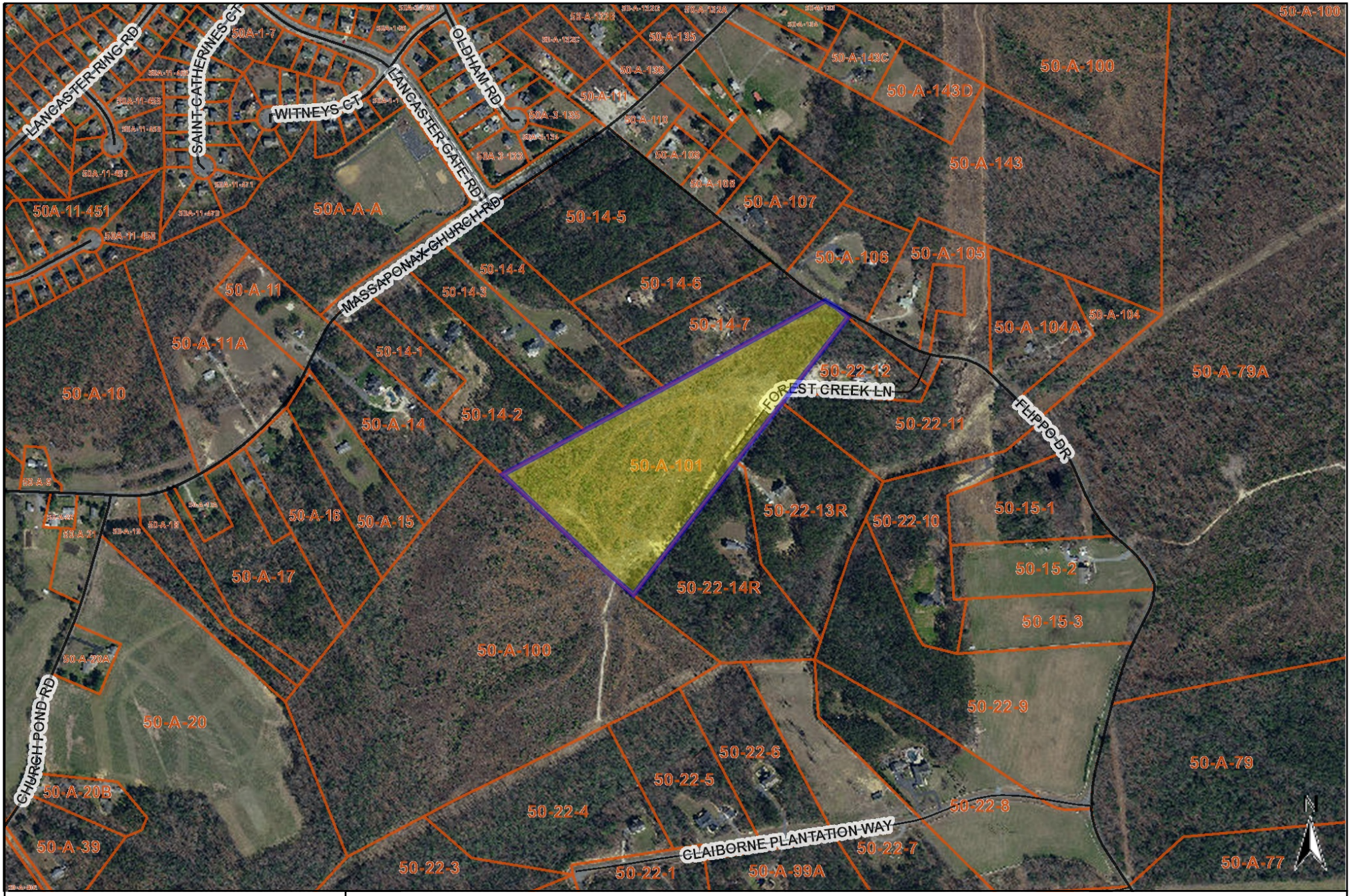
This information found here is provided for general reference purposes only and does not constitute an actual flood plain or RPA determination. This information is based upon the location of the selected parcels in relation to the FEMA 100 year Flood Plain or the Spotsylvania County's Resources Protection Area (RPA).Please contact a licensed professional engineer or surveyor for determination of how your property is affected by the Flood Plain or RPA.

Assessment(2018)

Building Assessment:	$
Land Assessment:	$113,700
Year Built:	0
Sq Footage:	No Data
Transfer Date:	05/26/2011
Instrument Number:	201100008544
Book Number:	No Data
Page:	No Data

Assessment Information is provided for general information purpose only. Please verify with Spotsylvania County Commissioner of Revenue Assessments Office http://www.spotsylvania.va.us/cor/realestate/assessmentsearch

DISCLAIMER: This data is provided without warranty of any kind, either expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Any person, firm or corporation which uses this map or any of the enclosed information assumes all risk for the inaccuracy thereof, as the County of Spotsylvania expressly disclaims any liability for loss or damage arising from the use of said information by any third party.



Feet

0 200 400 600 800

1:9,028 / 1"=587 Feet

Title: Parcel View

Date: 9/25/2019

DISCLAIMER: The geographic data you are about to access are electronic public records as defined by the Code of Virginia,1950, Section 2.2-3704. This information is made available as a public service. Spotsylvania County assumes no responsibilityfor any action or actions taken by users of this information. Spotsylvania County shall not be liable to the user or to any other person for the use or misuse of this data. This information is for general information only and shall not be used for thedesign, modification, or construction of improvements to real property or for flood plain determination. If you believe anydata provided is inaccurate, please inform the GIS Division by e-mail at gis@spotsylvania.va.us

Primary Development Boundary Amendment Request- Tax Map# 12-A-34

Jacob Pastwik

From: Mike Gentry <mistyman53@gmail.com>
Sent: Tuesday, June 18, 2019 3:19 PM
To: Jacob Pastwik
Subject: Fwd: Primary settlement district expansion

---------- Forwarded message ---------
From: **mistyman53** <mistyman53@gmail.com>
Date: Tue, Jun 18, 2019, 3:01 PM
Subject: Primary settlement district expansion
To: <jpastwick@spotsylvania.va.us>

I Michael Gentry having property @12300 five mile rd. Fredericksburg va/ tax map#12-A-34 request that my property be included in the comprehensive plan for primary settlement district expansion if possible. As to my knowledge I think all utilities are available. This property contains a little over 6 acres and has 1200 ft.of road frontage on five mile road.
I have future plans in the near future for rezoning for age restricted housing or commercial development that would coincide with the surrounding area and neighborhoods already in place. Any help you can provide with this matter would be greatly
appreciated. Thanks. Michael Gentry

--
This email was Malware checked by UTM 9. http://www.sophos.com

September 25, 2019

Spotsylvania, Virginia

Parcel ID Number (PIN):	Property Address:	Owner:	Billing Address:
12-A-34	12300 Five Mile RD Fredericksburg, VA	Michael W Gentry or Betty L Gentry	13614 Black Meadow RD SPOTSYLVANIA, VA 22553

General Information

Subdivision:	-
Legal Description 1:	Richard Bolling
Legal Description 2:	No Data
Legal Land Area:	6.00

Voting District Information

Voting:	Courtland
Precinct:	RIVERBEND
State House:	88
State Senate:	28
Congressional:	07
Polling Place:	RIVERBEND HIGH SCHOOL
Polling Address:	12301 SPOTSWOOD FURNACE ROAD

This information listed above is based upon the location of the selected parcel in relation to the voting districts and is provided for general information purposes only. Since voting districts generally do not follow neatly along property lines, you can verify your voting location by using the map. Any specific questions about where you vote should be directed to the Spotsylvania County Voter Registrar's Office at (540) 507-7380.

Census

Magisterial:	CHANCELLOR DISTRICT
Census Block:	3010
Census Tract:	201.06
TAZ:	1143
First Due :	6

School Information

Elementary School:	Harrison Road Elementary
Middle School:	Chancellor Middle
High School:	Riverbend High

School information is based upon the location of the selected parcel in relation to the school districts and is provided for general information purposes only. Please verify with the Spotsylvania County School Administration Office's Bus Stop Information Website.

Land Development

Zoning:	R-1
AgForestal District:	N
Airport Protection Overlay District:	N
Historic Overlay District:	N
Highway Corridor Overlay District:	N
Reservoir Protection Overlay District:	Y
River Protection Overlay District:	N

Information found here is provided for general reference purposes and does not constitute a written zoning determination. Please contact Zoning Office at (540)507-7222 for official zoning determinations.

Environmental Constraints

Resource Protection Area (RPA):	N
FEMA 100 Year Flood Plain:	N
Watershed:	E19
SubWatershed:	RA45

This information found here is provided for general reference purposes only and does not constitute an actual flood plain or RPA determination. This information is based upon the location of the selected parcels in relation to the FEMA 100 year Flood Plain or the Spotsylvania County's Resources Protection Area (RPA).Please contact a licensed professional engineer or surveyor for determination of how your property is affected by the Flood Plain or RPA.

Assessment(2018)

Building Assessment:	$57,700
Land Assessment:	$99,700
Year Built:	1951
Sq Footage:	936
Transfer Date:	01/03/1996
Instrument Number:	No Data
Book Number:	1346
Page:	296

Assessment Information is provided for general information purpose only. Please verify with Spotsylvania County Commissioner of Revenue Assessments Office http://www.spotsylvania.va.us/cor/realestate/assessmentsearch

DISCLAIMER: This data is provided without warranty of any kind, either expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Any person, firm or corporation which uses this map or any of the enclosed information assumes all risk for the inaccuracy thereof, as the County of Spotsylvania expressly disclaims any liability for loss or damage arising from the use of said information by any third party.

Feet

0 100 200 300 400

1:4,514 / 1"=293 Feet

Title: Parcel View

Date: 9/25/2019

DISCLAIMER: The geographic data you are about to access are electronic public records as defined by the Code of Virginia,1950, Section 2.2-3704. This information is made available as a public service. Spotsylvania County assumes no responsibilityfor any action or actions taken by users of this information. Spotsylvania County shall not be liable to the user or to any other person for the use or misuse of this data. This information is for general information only and shall not be used for thedesign, modification, or construction of improvements to real property or for flood plain determination. If you believe anydata provided is inaccurate, please inform the GIS Division by e-mail at gis@spotsylvania.va.us

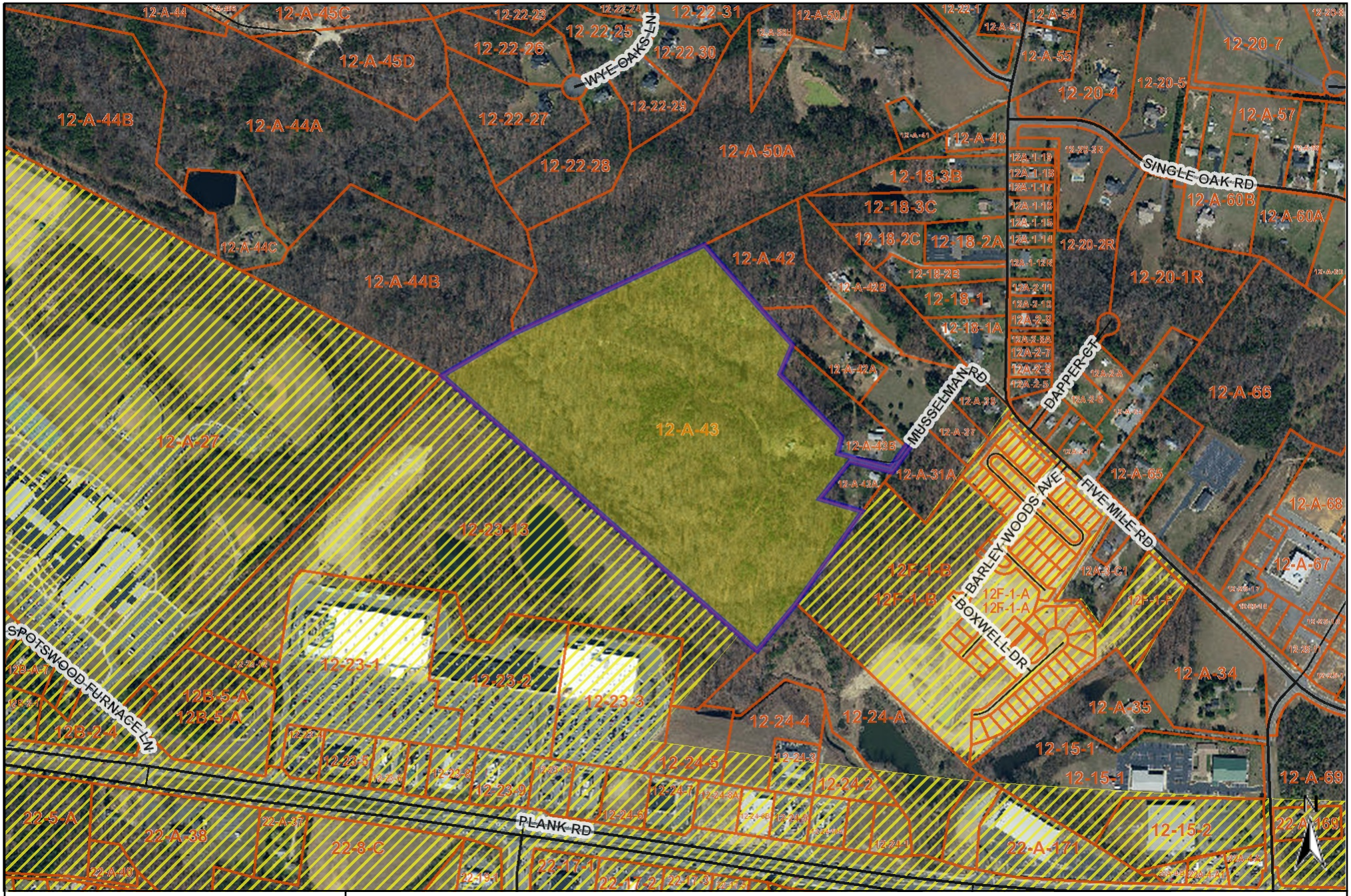
Primary Development Boundary Amendment Requests- Tax Map# 12-A-43, 12-A-50A

From: Jacob Pastwik
To: Wanda Parrish; Patrick White
Subject: RE: Another Comp Plan PDB Request
Date: Thursday, July 26, 2018 11:06:00 AM
Attachments: image001.png
12-A-43.pdf
TM 12-A-50A.pdf

Received another PDB request for expansion with TM 12-A-43, 12-A-50A looking to buy land and develop it. This is in that Five Mile Road area and adjacent to Barkley Woods but on the west side of it. Have just called and left voice message requesting the inquiry be submitted in writing with details so we can further look into it and coordinate review of feasibility with Utilities. Potential tie in with that Five Mile Road area question mark given development already built or enabled in that area or problematic due to topography issues. Have a feeling at least 12-A-50A may be pushing boundary a bit. 43 more within realm and surrounded on 2 sides by PDB.

No word based on voicemail what target use would be for development. Would think something like an office park might be more favorably viewed to housing but I have no details at this time. Await email request.

Jacob L. Pastwik, AICP
Spotsylvania County Planning
9019 Old Battlefield Blvd, Suite 320
Spotsylvania, VA 22553
jpastwik@spotsylvania.va.us
Dept Phn: 540-507-7434
Desk: 540-507-7433



Feet

0 200 400 600 800

1:9,028 / 1"=587 Feet

Title: TM 12-A-43

Date: 7/26/2018

DISCLAIMER: The geographic data you are about to access are electronic public records as defined by the Code of Virginia,1950, Section 2.2-3704. This information is made available as a public service. Spotsylvania County assumes no responsibilityfor any action or actions taken by users of this information. Spotsylvania County shall not be liable to the user or to any other person for the use or misuse of this data. This information is for general information only and shall not be used for thedesign, modification, or construction of improvements to real property or for flood plain determination. If you believe anydata provided is inaccurate, please inform the GIS Division by e-mail at gis@spotsylvania.va.us

Feet

0 200 400 600 800

1:9,028 / 1"=587 Feet

Title: TM 12-A-50A

Date: 7/26/2018

DISCLAIMER: The geographic data you are about to access are electronic public records as defined by the Code of Virginia,1950, Section 2.2-3704. This information is made available as a public service. Spotsylvania County assumes no responsibilityfor any action or actions taken by users of this information. Spotsylvania County shall not be liable to the user or to any other person for the use or misuse of this data. This information is for general information only and shall not be used for thedesign, modification, or construction of improvements to real property or for flood plain determination. If you believe anydata provided is inaccurate, please inform the GIS Division by e-mail at gis@spotsylvania.va.us

Jacob Pastwik

From: Paulette Mann
Sent: Thursday, June 4, 2020 1:51 PM
To: Jacob Pastwik
Subject: FW: [EXTERNAL]: Work session on Comp Plan update for SEFs

Did you receive a copy of this email for your file?

Paulette Mann
Office Manager
Department of Planning & Zoning
9019 Old Battlefield Blvd, Suite 320
Spotsylvania, Virginia 22553
(540) 507-7447
pmann@spotsylvania.va.us

-----Original Message-----
From: Sean Fogarty [mailto:sfogarty77@verizon.net]
Sent: Wednesday, June 3, 2020 2:56 PM
To: Travis Bullock <TBullock@spotsylvania.va.us>; Jennifer Maddox <JMaddox@spotsylvania.va.us>; Gregg Newhouse <GNewhouse@spotsylvania.va.us>; Paulette Mann <PMann@spotsylvania.va.us>; Jacob Lane <JLane@spotsylvania.va.us>; Raymond Bell <RBell@spotsylvania.va.us>
Cc: Leon Hughes <LHughes@spotsylvania.va.us>
Subject: [EXTERNAL]: Work session on Comp Plan update for SEFs

Commissioners,

Your agenda for this evening's meeting includes a work session on the update to the Comp Plan related to solar energy facilities. This update is long overdue and I hope that you direct the staff to continue the staffing process and public input on this topic ASAP. Although I don't agree with all of the items in the staff draft, I think some excellent research has been accomplished by the Planning Dept. I think it's critical for the staff and PC to receive public input on these proposals before approval.

I appreciate your continued service to the County. Thank you,

Sean Fogarty
Livingston District

--
This email was Malware checked by Sophos http://www.sophos.com

2021 Comprehensive Plan Update Community Review Comments and Responses Table

Row	Comment Received	Content	Staff Response
1	There are far too many apartments being built, which are affordable only to those working in Northern VA or DC. Anyone who works locally, cannot afford them. Additionally, the new homes are clustered and ugly to view. The reason I purchased in 2008 on Plantation Forest Drive was to own a house in the woods, in an established development far from stores and traffic, with no ties to developments with HOAs. Since that time, Spotsylvania has approved three housing developments tied to our street. These developments dumped all their traffic onto our street and littered the beauty with street lights, cut trees, and we will soon have more noise and another 140 homes. Car lights will soon be shining in our windows as development progresses. There are trucks using our street to tie in these developments, stopping traffic, flooding one neighbor's yard to accommodate this new development. It's a disgrace. As soon as my home has additional equity, I'm out of Spotsylvania County.	Comprehensive Plan Land Use and Transportation	Spotsylvania County is located within an in demand region along the Interstate 95 corridor on the southern end of the Interstate 95 megalopolis; a growing urbanized area stretching north as far as the Boston metro area. With close proximity to Interstate 95, Route 1, commuter rail, and in proximity to major metropolitan areas including Washington DC and Richmond, VA the area has experienced ongoing demand stretching over a number of decades. As a means of managing growth and inhibiting sprawling development the County has tried to focus growth and higher intensity development within a designated Primary Development Boundary. The Boundary tends to follow major transportation corridors such as Route 3 and Route 1, Interstate 95, rail corridor, areas in proximity to higher volumes of goods and services and existing density in proximity to the City of Fredericksburg. This is where growth is most prevalent. Much of the County outside of the Primary Development Boundary; majority of the County land area remains rural. Housing affordability is a recognized issue in high growth and demand areas especially. Factors that influence this may include supply and demand, buyer expectations, density limitations given high land costs, favorable climate, macroeconomic conditions having resulted in geospatial shifts in populations seeking economic opportunities resulting from economic stresses from multiple decades long large scale deindustrialization elsewhere. The County recognizes the housing challenges faces by lower income earners faced with a market of new build homes that tend to exceed, sometimes vastly exceed affordability. As part of this Comprehensive Plan update the issue of affordability is raised in the Land Use Chapter under the Housing Section. The draft updates and corrects affordable housing calculation methodology to arrive at affordable sales price figures for households and single income earners in the County. As a result we can better judge whether a proposed housing development will complement efforts to provide affordable units. The Comprehensive Plan promotes a diverse housing stock that complements a variety of incomes, lifestyle, life cycle need, variety.
2	RE: Intro and Vision - Population estimates seem low. Statements about financial reporting do not belong in this section. Classifying sPower as a manufacturing company seems a stretch - service or utility more accurate. Major issue: Detailed description of Economic Development department functions and actions is NOT appropriate for the I&V chapter. There are some good strategic statements embedded but most of the discussion seems like a justification of their existence rather than Vision statements. Land use statements and county offered sites belongs in that chapter (2). "Balanced Economic Growth" needs to be defined at the Strategic level, and expanded on later. It is just a catch phrase as used here.	Comprehensive Plan Introduction and Vision, Land Use	Population estimates are from standard sources including the US Census and University of Virginia Weldon Cooper Center for Public Service Public Research Group. These are resources the County has historically employed. Per Weldon Cooper estimates the County population will reach 181,549 by 2040. Both US Census and Weldon Cooper estimates for 2019 were approximately 136,000 residents (136,215 and 135,715 respectively). Staff remains cognizant of updates to these figures in time and internally tracks building permit data to estimate populations, student generation, etc. Since Comprehensive Plans are on an update cycle, population figures will be adjusted in subsequent updates if trends drastically changed. In the past we have found population figures overestimated. When the 2020 Census figures are released, we will review them and true up projections as necessary. Content related to financial reporting is proposed to be added as mean to complement fiscal sustainability goals established and carried into this Comprehensive Plan update that were established from the 2013 Comprehensive Plan advisory groups efforts. The information is simply meant to provide additional insight into the County's fiscal position for reference and not to serve as a fiscal plan. We have received feedback in support of this content within the draft. Concerning the Economic Development table identifying targeted industry examples, planning staff followed-up and consulted with Economic Development staff. We will remove sPower from the table. As part of this update staff sought additional input and direction from the Economic Development office to make Economic Development goals a more prominent part in the Comprehensive Plan, especially given fiscal and job goals and resulting land use impacts. The Land Use update seeks to pair better with existing economic development areas to achieve a more harmonious vision.
3	First is to STOP allowing Townehome homes and Apartments. There are way too many with little infrastructure. In 2004 there was a moratorium against Towne homes and should have stated that way. Greed is becoming a problem. - Tidewater Trail from route 3	Comprehensive Plan Land Use	There is no moratorium on the development of townhome (single family attached) communities in Spotsylvania County. Spotsylvania County is an in demand location located along the Interstate 95 corridor on the southern end of the Interstate 95 megalopolis; an urbanized area stretching north as far as the Boston Metro area. With close proximity to Interstate 95, Route 1, and Rail corridor access the County is located in a region characterized by regional economic and employment growth. This is counter to large areas of the Country that have contracted economies, income instability an depopulation. Faced with growth pressures and increased demand for services the County has sought to reduce the extent of urbanization by establishing a Primary Development Boundary (PDB), a designated area in close proximity to these growth enabling transportation corridors, and their corresponding land use designations. As noted in the Land Use Chapter, the County's designated growth area (PDB) makes up roughly 18% of the larger County. As a result large areas of the County remain rural in character. The PDB is intended to serve as the area where public water and sewer services are provided to support denser development patterns while reducing further urbanization outside of the boundary. The County promotes a variety of housing options for residents considering lifestyle, income constraints, life phase, etc. In many cases multi-family or townhome communities serve as starter homes. These renters or first time home buyers may eventually be the market to buy single family detached units as their careers, families grow and life changes. Inversely smaller more dense units may serve as a housing type to downsize to for empty nesters. These housing types tend to be more affordable compared to single family detached development. Employment income potential may hinder ones ability to afford more. Many entry level positions, service industry jobs limit homeownership affordability and potential. Staff notes single family detached housing remains the single most prevalent housing type by a large margin within the County. As of January 2020 there were 41,151 single family detached units in the County compared to 4,604 single family attached, and 5,106 multi-family units. Higher density development areas have been identified primarily within the County's mixed land use areas as designated in the future land use map. As part of this update the Comprehensive Plan the plan proposes to tier out the mixed use areas so their development densities are more sensitive to nearby existing development patterns that may be lower intensity/density. As a result, projects such as multi-family (apartment) complexes are best suited to mixed use general, mixed use commercial heavy, high density residential areas only. This land use update scales back the geographical extent of land use support for large higher density projects. These tend to be in areas within the Primary Development Boundary in close proximity to alternative modes of transportation, nearby access to major roadways or commuter rail.
4	Chapter 2: Land Use CVBT welcomes to be a partner with the County and any developer with any projects or work in the Tourism Zones and other projects with historic resources. CVBT welcomes to partner with taking advantage of the eco-tourism opportunities that the Back 40 and historic resources in the Spotsylvania Industrial Park (Old FMC site). These have significant Civil War sites that can lend themselves for preservation as well as for modern development opportunities. Chapter 3: Transportation CVBT seeks to work with the County and any developer on the impact of any road and transportation improvements to maximize the benefits for all in execution of any project. Any proposed work along Tidewater Trail and Route 3 are of note that CVBT would welcome collaboration.	Comprehensive Plan Land Use and Transportation	Staff notes reference to Tidewater Trail. The County's updated Trailways Master Plan in a collaborative effort with the City of Fredericksburg, National Park Service, East Coast Greenway Alliance and the FAMPO Regional Bicycle and Pedestrian Advisory Committee have updated the planned East Coast Greenway Route to include Tidewater Trail. This alignment helps planning efforts to improve the Tidewater Trail Corridor for both vehicular purposes and bicycle and pedestrian accommodation. As a result the East Coast Greenway will serve as a vital connection between the Slaughter Pen Farm Area and the historic Franklins Crossing site via with access off of the County's planned Deep Run Spur (likely via Lansdowne Road Extended- supported in a recent update to the Thoroughfare Plan). Funding of an initial phase to establish the East Coast Greenway shared use path extending from the Fredericksburg City line to Shannon Airport was recently announced following County submission of a Smartscale round 4 application to improve that portion of Tidewater Trail.
5	Chapter 5: Historic Resources Plan The Colonial Heritage with the early settlers, Gov. Spotswood, Spotswood Furnace, the Wilderness and early gold and iron mines that are major parts of the County's history and a tie to the eco-tourism development work. Appendix C: Historic Resources 2020 update on CVBT information: Page 6 – 461 acres in ownership Does the Todd's Tavern area and the length of Brock Road be recognized as areas of historically significance? CVBT would work with the County and any developers to work to enhance the opportunities that history and preservation allows for these areas.	Comprehensive Plan Historic Resources	Following up on the comment, the acreage inventory figure has been updated from a prior report from 2018 to reflect this new information provided for 2020. County Planning consults a number of historic resource databases in an effort to identify known resources or predict presence of resources and seek Phase 1A cultural resource surveys or more if warranted. We are aware of historical significance in the area of Todd's Tavern and Brock Road. As part of this update, the draft proposes to add the Civil War Trail by mapping its route within the County Future Land Use Map. Inclusion of the Civil War Trail within the Land Use map is intended to serve as a reminder of the historic significance of the corridor and to be sensitive to the character of the corridor. Historic resource identification, mitigation, character preservation are all promoted as part of this addition. For historic resource access and interpretation purposes the County Trailways Master Plan includes Todd's Tavern Connector Trail (off Ni River Trail) and Todd's Tavern Spur (off the Lake Anna State Park Connector) with a trailhead location identified in the area of Todd's Tavern. Significant portions of the Todd's Tavern Trail are expected to be secured as recreational trail easements soon. They resulted from project conditions associated with a special use permit for a large solar energy facility approved in 2019.

2021 Comprehensive Plan Update Community Review Comments and Responses Table

Row	Comment Received	Content	Staff Response
6	Please consider these three comments: 1. Clearer action steps should be outlined throughout and followed by the County to create and maintain greenspace and greenways. This could be a Policy 2 Strategy. 2. The Primary Development Boundary should be adjusted so it is moved east along Hickory Ridge Road to the western edge of the Mixed Use Light area on the Land Use Map. 3. In the Transportation and County Facilities sections, please consider straightening and widening Massaponax Church Road west of the new Plantation Woods development. Adding County water supply along this stretch would mitigate well problems for homeowners. Thank you and keep up the good work.	Comprehensive Plan Land Use, Transportation	1. Without committed funds to establish greenway corridors and trails, such features tend to result as opportunities arise. The County regularly references its Trailways Master Plan and recognizes the value of greenway corridors for health, wellness, recreation, scenic beauty, tourism, wildlife. 2. This Plan update proposes expansions of the Primary Development Boundary (PDB) considerate of existing development patterns, existing PDB-like zoning and favorable topography for gravity sewer without need for additional infrastructure such as a pump station. The area in question may be a viable location to look for future expansion given its proximity to the existing boundary. Staff notes sizable expansions to the PDB in 2013. The existing PDB has a large inventory of approved yet unbuilt residential units, utility infrastructure improvements required, and additional unbuilt acreage. To manage the geographic spread of higher density/intensity development and extent of utility infrastructure we do not propose an additional expansion at this time. Staff also looked at existing development trends and zoning. PDB expansions were discussed with the Planning Commission at Work Session on October 2, 2019 who supported three specific areas for expansion as part of this update. Considering this area had not been identified prior, staff will approach the Planning Commission to see if there is interest in exploring an additional expansion area at this time. Staff notes the higher intensity mixed use land use designation associated with the Courthouse Area is contained within the limits of the PDB. 3. Staff notes this section of Massaponax Church Rd has been identified as a 4-lane improvement project to include sidewalks and shared use path. Provision of road safety improvements will be a factor in any eventual design an widening. Such projects compete with a host of other priority projects throughout the County, and if non-local funds are pursued to "win" funding within a pool of competitive applications for other projects within the region, Commonwealth of Virginia. The safety concern will be passed along to County Transportation staff who are in contact with VDOT. Portions of Massaponax Church Rd are along the edge of the County's PDB and is envisioned for public water and sewer services. Identification of particular water and sewer infrastructure improvements, prioritization is best suited to the County Water and Sewer Master Plan, a separate standalone Plan managed by County Utilities and referenced within the Comprehensive Plan. The Water and Sewer Master Plan is presently in an update process. Staff has passed along the concern to Utilities. In light of the comments received and ongoing discussions with County Utilities regarding PDB Policy, exceptions, Code of Virginia 15.2-2232 reviews for provision of public facilities, and Comprehensive Plan Amendment warrants, much greater clarity has been added to the draft to potentially accommodate individual water and sewer connections under certain circumstances outside of the Boundary. Proximity to existing infrastructure, existence of failing well and septic systems without alternatives, topography for sewer services are all factors. These details will be outlined in the Public Facilities Introduction and the Future Land Use Chapter's revised PDB Policies.
7	Paragraph A.4 under Guiding Principles and Policies lists renewable energy as an innovative land use. “Encourage innovative land uses such as renewable energy generation…” Industrial (utility scale) solar is destructive. The Land Use section (Chapter 2) rightfully places restrictions on industrial solar development which conflicts with calling it an innovative use. I recommend that the Comp Plan encourage the development of distributed solar energy which is not destructive of the environment and the character of the County. Solar power’s inefficiency argues for proper siting on brownfields, industrial areas, and commercial and residential rooftops - not on open or forested, agricultural and rural land. I recommend paragraph A.4 be changed to read: “Encourage innovative land uses such as distributed (rooftop) renewable energy generation…” By encouraging distributed solar, the Comp Plan will also be supporting the state’s energy policy which encourages expansion of rooftop solar.	Comprehensive Plan Land Use	The Comprehensive Plan can generally express support for accessory rooftop solar as a means to support renewable energy as an alternative means than land consumptive solar energy facilities (a zoning defined use). This can be beneficial in the future if additional rooftop solar policy or ordinances become necessary. Staff supports adding reference to rooftop solar. These are typically accessory installations coordinated as part of building plans review (administrative review) and not subject to public hearings. Considering solar, the Comprehensive Plan provides most meaningful direction in land use cases involving rezoning applications or special use permits. A proposed rooftop installation will not involve a Comprehensive Plan conformity review unless the intent is to promote rooftop solar and take a policy position that is favorable to rezoning and special use permit applications with proposed rooftop solar versus those without. Concerning solar energy facilities in brownfields and industrial areas the County has limited areas that can be considered either. Aside from bonafide brownfields such as the 44-acre LA Clarke Superfund site off Benchmark Road, the inventory of lands would be extremely limited. Industrial zoned property in the County is near exclusively located within the Primary Development Boundary where existing infrastructure (access to major roads, etc.), availability of public water and sewer may suggest such land better suited for other economic development potential. Beyond the construction phase solar energy facilities are low impact but land heavy. Finding these land heavy uses in rural areas is not a-typical. Often such uses seek large contiguous land areas and relatively low land cost compared to urbanized areas with demand for other types of development. As part of this update the draft proposes to place greater emphasis on size, scale, location, and preservation of finite resources such as agricultural soils, forestry. The Comprehensive Plan is ultimately a guide to help in land use decision making process. The intent of the proposed amendments would provide additional guidance if such uses were proposed in the future. Staff supports technological advancements and evolution that occur in time to help perfect and make technology more efficient.
8	My suggestion would be to remove the phrasing "affordable housing" from the document or provide a general definition for what the County believes meets a standard for affordable housing. In its current vagueness, it can be defined anyway a developer wants and because of that really has no meaning or purpose. Additionally, there is no way for County staff to effectively judge whether the proposal is "affordable" without a starting point. The recent United Way A.L.I.C.E study shows that 37% of the Spotsy population would struggle to afford the majority of the projects being proposed for approval. If the purpose of having the "affordable housing" mentioned is to provide suitable and diverse housing for all residents than that won't be accomplished without a definition. This definition does not need to become a rule, but can serve as the Comprehensive Plan already does, as a guide for the future.	Comprehensive Plan Land Use	As part of this update, County staff has introduced housing affordability calculations methodologies in the housing portion of the Future Land Use Chapter. Staff acknowledges the prior iteration of the Comprehensive Plan was vague in regard to description of affordable housing. Per the updated methodology proposed for inclusion in the draft, variables should be updated in time to reflect updated conditions but serve as a good resource to determine reasonable home prices that are considered reasonably affordable. By identifying "affordability", staff is better positioned to identify projects that truly provide an affordable housing component as advocated by the Comprehensive Plan generally. The Housing portion of the Future Land Use Chapter acknowledges a number of housing studies including the United Way Alice Study and recognizes challenges to provide affordable housing to working persons who lack the earnings to afford many of the homes on the market.
9	Good revisions. Tighten up applicants ability to avoid review by saying MUST identify HRs in Policy 2. P2 is essence of what to accomplish; provide links/ easy to find lists of resources which may be ignored in app process. Using “should” in 2,3,4 ok if Staff makes sure applicant sees it’s not an option. Protection of viewsheds, scenic byways, natural elements are overlooked when compared to access to water sewer, electrical esp. in boundaries near Primary Develop. Boundaries. Chapter 2/land use: “reducing proximity conflicts between land uses related to height, physical massing, scale, density” could be repeated in HR ch 5 as reminder that all these points 2 be considered are critical in not severely damaging the resource. Repetition is necessary since historic resources r not always on radar of other depts. In house education necessary Thank you to Staff for improvements.	Comprehensive Plan Historic Resources	Staff will avoid suggestion of regulatory type language such as "must" within the Comprehensive Plan as the document serves as a guide. The Comprehensive Plan does not have enforcement powers as a County code. Staff will look to reiterate Chapter 2 land use language. Staff notes a reiteration of similar language may be interpreted by some as a duplication of existing supporting language already located elsewhere in the document. Staff notes the Comprehensive Plan tends to be employed mostly in instances where special use permits, rezoning's, capital projects improvements are proposed. It can also be supportive of new studies, policies, and regulatory updates. Since the Plan policies are not weighted, exhibiting repetitive policies in multiple chapters does not enhance outcomes.
10	Land use is horribly managed. Mixed developments are plagued by section 8 housing rather than centering large housing developments with single family, townhome, and condos, centered around a grocery store and other strip mall small shops/food. Infrastructure is also needed to support these current expansions. 95 spotsy exit is a mess. Rt 2 to 17 around fair grounds needs road expansion now to 4 lanes. Traffic backs up for miles. South point as well needs more road support as traffic there is awful, which could be helped by changing the interchange. Rt2/17 intersection is a perfect area for development of large residential/commercial neighborhoods as described above. 17 from Cosners to new post should be expanded now to 4 lanes to avoid what happened to 2. Lastly, high speed internet needs to be a priority throughout the county so all families have access.	Comprehensive Plan Land Use, Transportation	Both rezoning and special use permit applications for development require a public process through public hearings. Looking at rezoning and special use permit application activity, those projects that have been approved do complement the land use designations established. Staff has documented rezoning activity as far back as 2009 as part ongoing updates to a County rezoning activity tracking map (attached for reference). The latest update occurred on February 24, 2021. The map shows active in review and approved rezoning projects in relation to the County land use designations. The County mixed use areas have historically been envisioned to support traditional developments with mixed uses stacked vertically in multi-story buildings, or as individually developed pad areas of one dimensional uses at a higher density located nearby other uses. Resulting development tends to be tied to market and financing support. Many of the mixed use projects we have seen initially develop with their residential components. Changes in consumer demand for bricks and mortar retail have inhibited additional retail oriented commercial development. Commercial, office, industrial spaces ultimately require motivated tenants to occupy the space and create demand. Some of the multi-family developments approved within the past few years may ultimately have tax credit financing or renters may be enrolled in Section 8 housing voucher program but that is a federal program the Comprehensive Plan wouldn’t override. These developments are not bonafide Section 8 projects however. Project financing is considered a private matter between lenders and project developers. Staff notes the road projects identified are actively being addressed with recent Smartscale applications recently announced "wins" including widening of Tidewater Trail from the City of Fredericksburg line to Shannon Airport. The County is engaging in efforts to expand availability of high speed internet throughout the County to include rural areas. As part of this Plan update a number of action steps have been identified in the Future Land Use Chapter under Utility, Telecommunications and Internet Infrastructure.
11	Chap 2: The land use text from Chap 1 should be added to the ED/Biz Ready section. "Technology Zones" is repeated in Tourism . Since Tourism and Tech both go into Targeted Biz, why not explain the Targeted Biz first then show how Tech and Tourism expand. Biz Ready paragraph just explains the program - what is the relevance to the Com Plan? Could be explained in an Appendices. The e Chart of Sites - since most would not qualify under program, is this a list of County owned properties? What is the real point of the "difficult to serve" discussion? The change leaves out geothermal and wind power. There is a lot of good demographic info, esp. apartments - BUT this may be better placed in an appendix, and updated without a Comp Plan formal update.	Comprehensive Plan Introduction and Vision, Land Use	Staff will reevaluate the location of economic development related text between the Introduction and Vision Chapter and the Land Use Chapter. Since the content is intended to lend insight to the Land Use Chapter, staff is content to relocate the content there. The draft had placed the content in the Introduction and Vision Chapter as a "snapshot" of current conditions in the state of the County.

2021 Comprehensive Plan Update Community Review Comments and Responses Table

Row	Comment Received	Content	Staff Response
12	Please bring water supply and straighten the road to make it safer to my area [Massaponax Church Road]. We now have developments to the west and east. Please take care of us in the middle. There are a lot of accidents on the road -- our mailbox is often hit by passing vehicles (not by vandals). Many of my neighbors have had well problems.	Comprehensive Plan Transportation, Land Use	At this time there are no plans to further expand the Primary Development Boundary beyond what is proposed however we recommend contacting the County Utilities Department concerning any plans for public water in the area. Staff will revisit the Planning Commission to explore whether there is interest in additional expansion at this time. Otherwise, staff has forwarded this concern to County Utilities for further investigation. In light of the comments received and ongoing discussions with County Utilities regarding Primary Development Boundary Policy, exceptions, Code of Virginia 15.2-2232 reviews for provision of public facilities, and Comprehensive Plan Amendment warrants, much greater clarity has been added to the draft to potentially accommodate individual water and sewer connections under certain circumstances outside of the Boundary. Proximity to existing infrastructure, existence of failing well and septic systems without alternatives, topography for sewer services are all factors. These details will be outlined in the Public Facilities Introduction and the Future Land Use Chapter's revised Primary Development Policies. Staff notes Massaponax Church Road has been identified as a future widening project however there is no set timeline right now to result in the widening. The safety concern will be passed along to County Transportation staff who are in contact with VDOT.
13	Paragraph 10, “Land Use Policies Applicable to all Land Uses” provides guidance for solar energy facilities. Some of these provisions go a long way to limiting the proliferation of acreage dedicated to SEFs in the County. However, upon completion of the sPower facility, the County will be the home of the largest solar facility east of the Rocky Mountains at 6,350 acres and 500MW. The County has done more than our share in meeting the new state renewable energy goals. We should wait and see how this massive project affects the environment, wildlife habitat, watersheds, property values and tourism in the County before dedicating any more land to this use. In multiple locations elsewhere in the Comp Plan and in the staff notes from the June 3rd PC meeting, it’s clear there is an interest in limiting the proliferation of acreage dedicated to industrial/utility solar facilities. Therefore I recommend that the acreage cap be set at 3% of the total acreage outside the PDB instead of 5%.	Comprehensive Plan Land Use	Power generation is welcomed as a lifeline to the modern economy and lifestyle however the forms and location of that generation all pose unique challenges to the communities in which they are located. As noted in a June 2020 presentation to the Planning Commission, the County’s Primary Development Boundary is approximately 72 square miles in size, or 46,080 acres. As reported on the County webpage the land area of the County is approximately 414 square miles, or 264,960 acres. Subtracting the area of the Primary Development Boundary from total County acres, a Policy cap of five (5) percent would equate to no more than 10,944 project acres devoted to Solar Energy Facilities outside of the Primary Development Boundary. If we consider the sPower projects total project acreage of 6,350 acres, the cap would be supportive of no more than 4,594 additional acres devoted to solar energy facilities within the approximately 218,880 acres located outside of the Primary Development Boundary. Staff believes the cap accommodates the potential for solar energy facilities within the County while controlling for any real or perceived threat of widespread proliferation of such facilities within “a stones throw” of all areas of the County. Staff believes a total land percentage approach provides additional guidance and adequate opportunity to consider these uses in the future whether they be smaller projects or up to the 1,800 acre (total project area) suggested cap now in draft. This is ultimately a policy consideration however for decision makers. As currently drafted, up to 5% of the land mass outside of the Primary Development Boundary could potentially encompass solar energy facilities. As noted above, this is roughly 4,594 additional acres. Staff notes under a 3% scenario as proposed via citizen comment, the suggested cap would provide roughly 1,600 additional acres (total project area) within the County to accommodate one large project or a series of smaller ones. This is a valid policy question to discuss with the Planning Commission.
14	Under FREM did this already happen because it's a year later? " The County maintains an automatic mutual aid agreements with the City of Fredericksburg, Orange, Louisa, Hanover, and Caroline Counties. Additional automatic aid agreements are expected with Stafford and King George Counties in 2019.	Comprehensive Plan Public Facilities	Addressed. Planning staff has consulted with County FREM and updated the information.
15	Broken link in Parks and Rec with the HERE.....For more information about the County Parks and Recreation Department including facilities,activities, and programs, the Department publishes an annual report that can be found HERE.	Comprehensive Plan Public Facilities	Addressed. The hyperlink was updated shortly after the comment was received. Recognizing that hyperlinks come from a variety of sources and occasionally changed and broken in time, we have also drafted language into the Table of Contents for those interested in reporting any future broken hyperlinks found to the Planning Department email address.
16	The Economic Development section needs to prioritize broadband access for the county. The body of the document should expand on the specific steps the county is taking and ways it can foster private sector and partnership initiatives.	Comprehensive Plan Introduction and	Recognizing broadband importance for Economic Development purposes supportive language can be promoted in the Economic Development section. In draft the Plan does recognize importance of broadband services in the Land Use Chapter and further elaborates on efforts in that Chapter. This is an ongoing focus of the County Information technology (IT) staff.
17	The Tourism section should mention greenspace preservation and expansion efforts. The body of the document should outline specific steps the county is taking and ways it can foster private sector and partnership initiatives.	Comprehensive Plan Introduction and Vision	Greenspace preservation and expansion, open space, open space easements, protection of sensitive environmental resources tend to occur through the development review process or privately through land transactions and/or establishment of conservation easements. The County has not been actively using funds to purchase property for the purpose of greenspace preservation however encourages and supports such efforts in other ways. The County does pursue greenspace preservation in areas where greenway trails have been identified by the Comprehensive Plan. These efforts tend to occur when a specific project is proposed that may otherwise threaten the planned corridors. The land use map update now includes mapped wetlands and resource protection area corridors to emphasize protection of such sensitive resources. Text descriptions of the open space land use designation also supports land conservation efforts. This support is also described in reference to Rural Residential and Agricultural and Forestal Land Use designations. A variety of private land conservation organizations whose aim is historic or natural resource preservation have land holdings in the County. As part of their land acquisition process the County is typically contacted to gauge whether the local Comprehensive Plan would support their efforts. As a result the Comprehensive Plan does factor into privately advanced conservation efforts.
18	The 70/30 mix of residential to commercial is a good goal and the body of the document should outline specific steps the county is taking and ways it can foster private sector and partnership initiatives.	Comprehensive Plan Introduction and Vision	Historically this goal has been referenced as a means to promote fiscal sustainability and land use mix. This goal is supportive of commercial, office, industrial development and job creation locally and less so to support additional residential development. County Economic Development does work to attract, retain, expand business within the community and in so doing supports the 70/30 goal. Given the County's business friendly approach established in the Comprehensive Plan Vision statement established in 2013, the County has traditionally let market forces bring development proposals forward. As part of the recommended budget, there is funding for a market study to reinvestigate and potentially revised the 70:30 mix, or to create an improved measure. Any revision that may result from such a study can be included in future updates to the Comprehensive Plan.
19	The Fiscal Sustainability section is excellent and should be retained in the final Plan update.	Comprehensive Plan Introduction and Vision	Agreed. Staff believes the addition of this content further emphasizes and supports Comprehensive Plan sustainability goals carried over from earlier iterations of the Comprehensive Plan that seek to diversify the economy, assure development mitigates impacts on public facilities, promotes fiscally positive projects and growth of the commercial tax base and jobs locally. The content was added to provide a brief introduction and some insights into the subject matter. Staff recognizes the Comprehensive Plan's function is not to serve as a Fiscal Management Plan.
20	Should there be a section about cooperation with neighboring counties and the City of Fredericksburg to support smart regional initiatives?	Comprehensive Plan Introduction and Vision	The County does cooperate with regional localities on a number of issues. Many of these efforts are achieved at the regional Metropolitan Planning Organization (MPO) level through Fredericksburg Area Metropolitan Planning Organization and the George Washington Regional Commission (GWRC) where a variety of Plans, Studies, Initiatives, Transportation projects, hazard mitigation are discussed. Staff notes as part of the Comprehensive Plan update process, planning staff also reach out to the adjoining localities (including those outside the George Washington Region localities) to discuss land use and transportation issues as part of Transportation, Bike/Ped, Land Use Planning. Acknowledging that these efforts do in fact occur staff supports acknowledging and formalizing these efforts as an ongoing Action Item within the Introduction and Vision Chapter.
21	Shouldn’t the Primary Development Boundary include areas to the east of the Courthouse through the Plantation Woods development	Comprehensive Plan Primary Development Boundary/ Future Land Use	The Primary Development Boundary does include some of these areas. From the intersection of Courthouse Road and Massaponax Church Road the Primary Development Boundary extends eastward down the north side of Massaponax Church Road just beyond the intersection with Battle Park Drive (on the south side of Massaponax Church Rd). Plantation Forest Drive is included within the Boundary at present. Staff acknowledges the Boundary stops short of complete parcel coverages in the area. As outlined in the Future Land Use Chapter Primary Development Boundary Policies, outside of the Boundary, ability connect relies heavily on favorable topography to do so where infrastructure can be connected into the existing system without need for pumping. A number of Primary Development expansion areas were considered and vetted with County utilities to determine topographic feasibility and identify any utilities installation plans that would complement an expansion in the area. Staff also looked at existing development trends, zoning in the area, and use potential. Primary Development Boundary expansions were discussed with the Planning Commission at Work Session on October 2, 2019 who supported three specific areas for expansion as part of this update.
22	Given the lack of progress on the prior Jackson Gateway initiative, the Primary Development Boundary should be moved east along Hickory Ridge Road to the western edge of the Mixed Use Light area on the FLUM. This would reduce the Difficult to Serve portion in this vicinity. Infrastructure is lacking and the area is predominantly rural/agricultural/residential so the Development designation is not appropriate.	Comprehensive Plan Primary Development Boundary/ Future Land Use	Development of the Jackson Gateway is a long term incremental process that requires infrastructure improvements, rezoning activity, favorable market conditions among other factors. Within the last few years the County has seen an uptick in interest for development within the area including the Jackson Gateway and Thornburg Areas for uses envisioned. A number of Primary Development Boundary expansion areas were considered and vetted with County Utilities to determine topographic feasibility and identify any utilities installation plans that would complement an expansion in the area. The Planning Commission was not supportive of a scale back of the Primary Development Boundary. Staff also looked at existing development trends, zoning in the area, and use potential. Primary Development Boundary expansions were discussed with the Planning Commission at Work Session on October 2, 2019 who supported three specific areas for expansion as part of this update.
23	The Primary Development Boundary should be reduced west of Route 1 south of Hickory Ridge Road to remove all of the area labeled Difficult to Serve, or at least that area shouldn’t extend more than say ¼ mile west of Route 1. Infrastructure is lacking and the area is predominantly rural/agricultural/residential. The Development designation is not appropriate.	Comprehensive Plan Primary Development Boundary/ Future Land	The concept of scaling back the existing Primary Development Boundary in "difficult to serve" areas was posed to the Planning Commission. The idea of scaling back an area that has appeared within the Comprehensive Plan Primary Development Boundary through a number of iterations of the Plan update was not supported. Identification of "difficult to serve" areas were determined to be more favorable by providing more insight into potential challenges to serve the areas while not taking away or removing the opportunity.

2021 Comprehensive Plan Update Community Review Comments and Responses Table

Row	Comment Received	Content	Staff Response
24	Similarly (to the prior comment), the Technology Zone should be reduced to the same boundaries.	Comprehensive Plan Primary Development Boundary/ Future Land Use	The Technology Zone is an Economic Development Zone proposed to be referenced in the Comprehensive Plan to lend insight and a shared vision with the Comprehensive Plan Future Land Use Map. The Technology Zone itself is independent of the Comprehensive Plan. The Technology Zone is adopted in County code and would require a separate code amendment process to revise. The intent of acknowledging the Technology Zone among other Economic Development Zones is to promote greater shared vision and parity with the Land Use designation. Prior work sessions with the Planning Commission recommended not scaling back the Primary Development Boundary to remove development potential. As such, no scale back has been proposed. Therefore no conflict with the Technology Zone would emerge.
25	I wondered if it would be appropriate to adjust the comp plan future land use designation for Regency Crossing and Springhaven on Five Mile Road? And then subsequent rear of parcel 12-a-69 to high density residential to connect the dots…	Comprehensive Plan Future Land Use	Upon review of the comment staff acknowledges that the area of Five Mile Road away from Route 3 corridor was identified as having a commercial land use designation that is no longer complementary to the development patterns approved onsite since the last Comprehensive Plan update. The land areas in question specifically referred to the Regency Crossing Townhomes and Springhaven projects. These projects were ultimately found consistent with the Comprehensive Plan due to adjacent or partial land use designations that complemented the proposed use (land use designations are not parcel specific). They were also not inconsistent with existing development patterns in the area. The Planning Commission did support the Regency Crossing (5-1) and Springhaven (7-0) projects and they were ultimately approved at the Board of Supervisors. Based on the approved densities of Springhaven and Regency Crossing the most complementary land use designation would be mixed use light as opposed to commercial or low density residential. This land use designation supports single family detached and attached developments within the densities of the projects nearby while still providing for ability for commercial developments along higher tier roads. Staff proposes creating a mixed use light designation to connect the Springhaven and Regency Crossing Townhomes projects. As opposed to additional commercialization of Five Mile Road this potentially supports additional residential development along Five Mile Road away from the Route 3 corridor before stepping down further beyond the Primary Development Boundary limits to Rural Residential. The area of additional development potential is constrained or "book ended" by existing development so impact of this change would be limited. Staff believes this to be a more favorable land use transition along Five Mile Road.
26	The Lake Anna mixed use area falls short of its potential for uses and density (esp. residential).	Comprehensive Plan Future Land Use Comments Verbal	Staff believes this is a larger policy issue requiring careful consideration of County Citizens, Landowners, Utilities, Planning and the Board of Supervisors. At this juncture without clear support for privately operated satellite systems to provide water and sewer services or a plan that the County intends on creating a satellite Primary Development Boundary at Lake Anna to support higher intensity residential development, staff does not support promoting higher density residential at this time at Lake Anna. The mixed use land use tier and description proposed for Lake Anna reflects guidance from the Planning Commission, Board of Supervisors, Utilities and Economic Development offices. If plans were in place to support a private or publically operated satellite system in the Lake Anna mixed use area then a more diversified mix and density of uses may be more favorable and appropriate. Staff notes the existing approved Comprehensive Plan initially adopted on November 14, 2013 (latest update July 28, 2020) includes Lake Anna Mixed Land Use direction in Policy 7 that speak to the area providing local shopping and professional services as well as tourist related uses such as hotels, inns and restaurants. The policy does not specifically promote higher intensity residential. As part of the initial phases of this Comprehensive Plan update, at joint work session on May 22, 2018 staff received feedback supportive of a commercial oriented land use mix similar to that identified in Policy 7. Increased residential intensity was not promoted.
27	NW corner of Rts 2/17 at New Post better suited to residential, mixed use designation. The subject intersection at Tidewater Trail and Mills Drive, especially given the uses on the northeastern side of the intersection (New Post), is better suited for a light-mixed use designation and not employment.	Comprehensive Plan Future Land Use	Staff has identified an area of approximately 30 acres focused at the northwest corner of Rts 2/17 across the street from the New Post development and bounded by natural topography to complement the nearby New Post development without sacrificing significant employment center acreage. Staff believes this land use amendment would complement development character nearby and make the location more marketable. Staff proposes redesignating the area as mixed use light, the lowest intensity mixed use designation that would still support the potential for commercial and office development along Tidewater Trail while also accommodating single family detached or attached development. A commercial designation located at the intersection of Rte 2/17 would remain.
28	Designate NW portion of Tax Map 48-A-84 on north side of Smith Station Road as mixed use.	Comprehensive Plan Future Land Use	This request was resubmitted for a second look. The request was included in prior Planning Commission work session materials from early in the update process on October 2, 2019. At that time the Planning Commission was not supportive of the prospect of additional residential density in the area beyond the current low density residential designation. The request is specific to a portion of Tax Map 48-A-44 located near the northwest corner of the Smith Station and Leavells Road intersection. This parcel is physically divided into two parts by Smith Station Road. The southern portion zoned Industrial 2 (I-2) has an employment center land use designation that would remain. If the Planning Commission ultimately feels this requests warrants a change in direction we will move ahead with a map revision in the area of interest. The portion of the property in question (approximately 35 acres) is currently zoned Rural (Ru). This zoning designation within the confines of the Primary Development Boundary is generally not compatible with the intent of the Primary Development Boundary. Rural zoning is also less intense than the current low density residential land use envisions. Rural is most prevalent outside of the Boundary. Current land use designation in the location is low density residential. The low density residential designation is a Primary Development Boundary compatible land use designation supporting up to 4 units/acre single family detached. Considering the request is for mixed use, given the development patterns in the area, staff feels the most appropriate mixed use designation in this location would be mixed use light tier. That land use would represent single family detached or attached developments of 4-8 units/acre. The land use tier also promotes commercial development along higher tier roads such as Smith Station Road and may transition more favorably to commercial property at the intersection nearby. A rezoning approval would be necessary to result in such a project. Staff notes across Smith Station Road and extending westward, the Courtland Park mixed use project is in development. Per the Comprehensive Plan draft, Courtland Park is a standalone mixed use designation. These two areas could be linked to envision similar development. Staff notes this secondary request comes at a time when the draft has evolved beyond the simple all encompassing mixed use designation. The draft now includes three distinct tiers to help reign in intensity. Of the new mixed use tiers, mixed use light is viewed by staff as most favorable. If the request is supported, staff would suggest that the commercial land use designation at the intersection of Smith Station and Leavells Road to reflect existing commercial zoning there. This would also be consistent with the request.
29	Expand the Primary Development Boundary to include Tax Map 50-A-100, 50-A-101.	Comprehensive Plan Future Land Use	This Primary Development Boundary expansion request was resubmitted for a second look. The request was included in prior Planning Commission work session materials from early in the update process on October 2, 2019. The location was not identified to be favorable for a Primary Development expansion at this time due to location and topographic concerns and infrastructure planning changes identified by Utilities staff. Given its proximity to the existing Boundary this area may eventually be a logical area to expand, However, given the inventory of approved and yet unbuilt units, additional developable acreage within the existing Boundary, staff has not identified need to expand the Boundary. The relatively minor expansions to the Boundary proposed with this update have been vetted with County Utilities to verify favorable topographic conditions for sewer services and much of these areas have existing Primary Development Boundary friendly zoning and/or existing development patterns that support their inclusion. The Planning Commission emphasized that the areas where Boundary expansion is proposed be focused on commercial and employment center type development. On this request, staff followed up with Spotsylvania County Utilities. Per Utilities "If TM 50-A-100 and 50-A-101 were added to the primary development boundary it would require a substantial investment in future infrastructure projects. These sites cannot naturally gravity flow to our existing system and would require multiple sanitary sewer pump stations to convey flow into our existing sewer shed. The downstream sanitary sewer was also not designed to handle additional capacity beyond the existing primary development zone and could potentially require significant and expensive upgrades to allow development of these parcels."
30	Given that Massaponax Church Road is planned for expansion and increased thoroughfare west of Route 208, the area between Route 208 and the new Plantation Woods development needs safety enhancements such as road widening, straightening, and improved shoulders. It would also be good to expand water lines along this part of the road, too, since development is on either side and local homeowners have had problems with their wells.	Comprehensive Plan Transportation	Staff notes this section of Massaponax Church Road has been identified as a 4-lane improvement project to include sidewalks and shared use path. Provision of road safety improvements will be a factor in any eventual design and widening. Such projects compete with a host of other priority projects throughout the County, and if non-local funds are pursued they must "win" funding within a pool of competitive applications for other projects within the region, Commonwealth of Virginia. In the meantime right-of-way dedications are pursued to proactively accommodate future road projects when development occurs. The area of Massaponax Church Road between Courthouse Road and Plantation Woods is along the edge of the County's Primary Development Boundary and is envisioned for public water and sewer services. Identification of particular water and sewer infrastructure improvements, prioritization is best suited to the County Water and Sewer Master Plan, a separate standalone Plan managed by County Utilities and referenced within the Comprehensive Plan. The Water and Sewer Master Plan is presently in an update process. Staff will pass along the concern to County Utilities. In light of the comments received and ongoing discussions with County Utilities regarding Primary Development Boundary Policy, exceptions, Code of Virginia 15.2-2232 reviews for provision of public facilities, and Comprehensive Plan Amendment warrants, much greater clarity has been added to the draft to potentially accommodate individual water and sewer connections under certain circumstances outside of the Boundary. Proximity to existing infrastructure, existence of failing well and septic systems without alternatives, topography for sewer services are all factors. These details will be outlined in the Public Facilities Introduction and the Future Land Use Chapter's revised Primary Development Policies.

2021 Comprehensive Plan Update Community Review Comments and Responses Table

Row	Comment Received	Content	Staff Response
31	It would be good to include a bicycle lane along the Civil War Trail. I see some mention of paved shoulders but specific steps towards achieving this should be outlined and the importance of the Civil War Trail should be highlighted in this section.	Comprehensive Plan Transportation	The majority of the Civil War Trail in Spotsylvania County is located outside of the Primary Development Boundary on roads such as Brock Road, Guinea Station Road. Civil War Trails looks to connect significant Civil War related locations. The network of Civil War Trails is designated and marketed by a non-profit entity. Recognizing the importance of historic resources in the County and in the interest of historic resources and rural character protection in many of the County's rural areas the land use map noted the Civil War Trail as a resource of importance whose historic resources it represents warrant consideration. The Civil War Trail is not promoted like the Appalachian Trail or East Coast Greenway with aim exclusively oriented towards bicyclists and/or walkers. Per Civil War Trails, *Some sites are accessed via walking trails while others might be on a busy street corner.* The Civil War Trails routes are already designated with signage including to serve a function as a driving route from place to place. This Trail is different from the East Coast Greenway for instance that will not formally designate and sign a route until the route meets bike/ped friendly guidelines. The Comprehensive Plan does promote alternative modes of transportation including provision of bicycle and pedestrian friendly improvements. Its good to note that portions of the Civil War Trail have been identified for bicycle and pedestrian friendly improvements linked to road improvement projects identified in the Transportation Chapter Thoroughfare and Trails Plan. Portions of Brock Road outside of the Primary Development Boundary (Shoulder improvements), and Massaponax Church Road (sidewalks and shared use path) have improvements identified. Incremental improvements will occur as projects are prioritized and funded.
32	Pedestrian, bicycle, and transit enhancements should be part of every County decision and investment in Transportation infrastructure.	Comprehensive Plan Transportation	Agreed. Staff notes the County Trailways Master Plan and Thoroughfare Plan are closely aligned. Planned road improvement projects include addition of shoulder improvements (outside of the Primary Development Boundary), sidewalks, shared use paths, etc. Such improvements are being pursued as funding opportunities for transportation improvements are available and as part of development project frontage improvements. All Round 4 Smartscale applications submitted for County transportation projects included bicycle and/or pedestrian friendly improvements such as sidewalk infrastructure of shared use path.
33	I learned tonight about the possibility of rehabbing the bridge on Roxbury Mill Road to reconnect north and south Roxbury. It is not clear to me whether the plan is for more than one lane. If so, this project may have some benefits but, unless it is implemented properly and with input from the neighbors, it has the potential to be a problem. Please consider the following suggestions: 1) A Community Meeting as soon as possible to develop consensus with the neighbors 2) Limit the kind of traffic that could use this road (i.e. perhaps prohibit commercial traffic) 3) Consider improvements at the intersection of North Roxbury and Route 1 at the same time -- unless these are made a blind spot and potential traffic hazard due to the angle of intersection of the roads 4) Consider the impact of increased traffic on the two schools that are off of North Roxbury 5) Personally, I love the idea of improving bicycle route/access and it should be done along the entire length of the road as well as intercepts with Route 1 to the north and Route 1 and Morris Rd to the south. A dedicated bike lane would be great.	Comprehensive Plan Transportation	This road project need not be a high priority at this time however as part of this Comprehensive Plan update we have proposed identifying the project now as potentially beneficial to the Route 1 corridor study recommendations. Identifying the project helps establish Comprehensive Plan support if/when the project is prioritized for funding consistent with the Code of Virginia 15.2-2232. VDOT is setting up a public community meeting for the US Rte 1 Corridor Study this Spring with April/May being the tentative timeframe. The Transportation Committee will be updated when the date is set. Its expected that this project will be sensitive to input received during that process.
34	In the Sewer and Water Section, page 2, paragraph 2, line 12, there is a word missing. Is it “have”?	Comprehensive Plan Public Facilities	Agreed. Will correct.
35	It would be good to expand the water line along Massaponax Church Road from Route 208 east to the Plantation Woods development. Development is on either side and local homeowners along Massaponax Church Road have had problems with their wells.	Comprehensive Plan Primary Development Boundary/ Future Land Use, Public Facilities-Utilities	This area of the County is along the edge of the County's Primary Development Boundary and is envisioned for public water and sewer services. Identification of particular water and sewer infrastructure improvements, prioritization is best suited to the County Water and Sewer Master Plan, a separate standalone Plan managed by County Utilities and referenced within the Comprehensive Plan. The Water and Sewer Master Plan is presently in an update process. Staff has passed along the concern to County Utilities. In light of the comments received and ongoing discussions with County Utilities regarding Primary Development Boundary Policy, exceptions, Code of Virginia 15.2-2232 reviews for provision of public facilities, and Comprehensive Plan Amendment warrants, much greater clarity has been added to the draft to potentially accommodate individual water and sewer connections under certain circumstances outside of the Boundary. Proximity to existing infrastructure, existence of failing well and septic systems without alternatives, topography for sewer services are all factors. These details will be outlined in the Public Facilities Introduction and the Future Land Use Chapter's revised Primary Development Policies.
36	The County should develop and implement a detailed plan to improve Community Centers, especially the Marshall Center. A local example of the Rowser Building in Stafford could be followed.	Comprehensive Plan Public Facilities	Such plans are specific to facility design and maintenance and best suited outside of the Comprehensive Plan. Staff believes facility design details are best suited towards development of a Parks and Recreation (incl Community Centers) Design Standards Manual to set minimum facility design expectations.
37	More “Passive Parks” should be developed that include opportunities for outdoor recreation such as picnics, hiking, birdwatching, equestrian.	Comprehensive Plan Public Facilities	Support for these improvements are outlined in the Public Facilities Parks and Recreation Sub-Chapter and the County Trailways Master Plan Sub-Chapter. Development of these resources will occur in time through enhancements to the County Park system, availability of funding, identification and prioritization of construction of similar amenities as described. As part of this Plan update, efforts have been made to achieve additional improvements when paired/co-located with other planned improvements. When opportunities arise the County has sought projects that will expand the greenway trail system or acquire right-of-way for the eventual development of one. Staff notes as part of a solar energy project approval in stern Spotsylvania County, large sections of the Lake Anna State Park, Todd's Tavern Spur, and a portion of the Po River system resulted in dedication of recreational trail right-of-way as a project condition. These trails are envisioned to eventually connect into Lake Anna State Park and provide equestrian opportunities. Staff notes a two mile segment of the Virginia Central Trail extending from Jackson Trail East to Brock Road was also secured for future development through acquisition of a recreational trail easement. Efforts are underway to extend the Virginia Central Trail further east as well from Salem Church Road and a portion of the East Coast Greenway was recently approved for funding along Tidewater Trail.
38	The Civil War Trail should play a more prominent role in County Public Relations materials and more recreational opportunities and infrastructure should be developed along it, such as a bike lane.	Comprehensive Plan Historic Resources	The majority of the Civil War Trail in Spotsylvania County is located outside of the Primary Development Boundary on roads such as Brock Road, Guinea Station Road. Civil War Trails looks to connect significant Civil War related locations. The network of Civil War Trails is designated and marketed by a non-profit entity. Recognizing the importance of historic resources in the County and in the interest of historic resources and rural character protection in many of the County's rural areas the land use map noted the Civil War Trail as a resource of importance whose historic resources it represents warrant consideration. The Civil War Trail is not promoted like the Appalachian Trail or East Coast Greenway with aim exclusively oriented towards bicyclists and/or walkers. Per Civil War Trails, *Some sites are accessed via walking trails while others might be on a busy street corner.* The Civil War Trails routes are already designated with signage including to serve a function as a driving route from place to place. This Trail is different from the East Coast Greenway for instance that will not formally designate and sign a route until the route meets bike/ped friendly guidelines. The Comprehensive Plan does promote alternative modes of transportation including provision of bicycle and pedestrian friendly improvements. Its good to note that portions of the Civil War Trail have been identified for bicycle and pedestrian friendly improvements linked to road improvement projects identified in the Transportation Chapter Thoroughfare Plan. Portions of Brock Road outside of the Primary Development Boundary (Shoulder improvements), and Massaponax Church Road (sidewalks and shared use path) have improvements identified. Incremental improvements will occur as projects are prioritized and funded.
39	Clearer action steps should be outlined and followed to create and maintain greenspace and greenways. This could be a Policy 2 Strategy.	Comprehensive Plan Natural Resources	As part of this Comprehensive Plan update the plan expands and enhances references to land uses supportive of land preservation/conservation such as via conservation easements. Additionally greenways are identified as part of the Trailways Master Plan and supported through the Transportation and Public Facilities Parks and Recreation Sub-Chapter where a number of specific greenway extension projects are identified. As part of the update to the Future Land Use Map the open space land use designation has been expanded throughout the County to reflect an update to the inventory of conserved lands (conservation easements for instance), common area/open space parcels, and mapped resource protection areas, wetlands, etc.- resulting in linear corridors of open space. This land use designation promotes land conservation and passive recreation in these areas. Historically the Comprehensive Plan has served in a supporting role when land conservation efforts are proposed or as support for pursuit of recreational trail easement acquisition or pursuit of funds to construct greenway trail projects.
40	Should fostering of cleaner transportation modes such as electric vehicles, bicycles, and transit be an articulated Policy 1 Strategy?	Comprehensive Plan Natural Resources	Promotion of alternative modes of transportation is emphasized in other Chapters of the Comprehensive Plan. This appears to be a viable addition to the Natural Resource Chapter also. Staff notes a reiteration of similar language may be interpreted by some as a duplication of existing supporting language already located elsewhere in the document. Staff notes the Comprehensive Plan tends to be employed mostly in instances where special use permits, rezoning's, capital projects improvements are proposed. Since the Plan policies are not weighted, exhibiting repetitive policies in multiple chapters does not enhance outcomes.

2021 Comprehensive Plan Update Community Review Comments and Responses Table			
Row	**Comment Received**	**Content**	**Staff Response**
41	The management of invasive plants and enhancements of native plants should be a Policy 1 Strategy. It could also be a Policy 5 Strategy.	Comprehensive Plan Natural Resources	Addition of this would complement efforts of the County Design Standards Manual and support its future update. Staff supports this addition.
42	Why was dark sky light compliance deleted? This is important for protection of avian populations and to minimize the degradation of rural residential areas.	Comprehensive Plan Natural Resources	On September 13, 2016 (Code Amendment CA16-0002) the Spotsylvania County Board of Supervisors approved an update to the County Outdoor Lighting ordinance to require dark sky/night sky friendly lighting. The impact of this change is regulatory (by code) as opposed to serving as a guiding principle from Comprehensive Plan that has no role in by-right development site plan review. County code now addresses the issue. Formerly the Comprehensive Plan served to advocate for such lighting without regulatory power.

Jacob Pastwik

From: Lee Garrison <garrisonconsulting@verizon.net>
Sent: Saturday, January 16, 2021 9:04 AM
To: Jacob Pastwik
Subject: [EXTERNAL]: Comp plan update

CAUTION: This email originated from an external source. Do not click on any links or open attachments unless you recognize the sender and know the content is safe.

Jacob

Sorry to email you versus going online for comments! But I am not that good with technology !

I wondered if it would be appropriate to adjust the comp plan future land use designation for regency crossing and springhaven on five mile road? And then subsequent rear of parcel 12-a-69 to high density residential to connect the dots.....

I know that maybe leave regency park office as an 'island' and this maybe getting too parcel specific.

Welcome your thoughts! Thanks

Lee Garrison
Sent from my iPhone

--
This email was Malware checked by Sophos http://www.sophos.com

From:	Jacob Pastwik
To:	"Allan Lassiter"
Cc:	Shannon D. Fennell; Leon Hughes; Kimberly Pomatto
Subject:	RE: [EXTERNAL]: Re: Lake Anna Mixed Use Area
Date:	Thursday, April 1, 2021 11:53:00 AM
Attachments:	image001.png Current Future Land Use Map (2013 FLUM).pdf Future Land Use Map Draft 01192021 (11 x 17).pdf DRAFT Outside PDB Land Use Analysis Table.pdf DIVISION 4. AGRICULTURAL 3 A 3 DISTRICT.pdf DIVISION 5. RESORT AGRICULTURAL R A DISTRICT.pdf DIVISION 11. RESIDENTIAL RESORT R R DISTRICT.pdf

---

Good morning,

Per the 2008 and 2013 Comprehensive Plan Land Use Chapters there has been an abundance of "Rural Residential" land use designated along Lake Anna. The vast majority of the County outside of the Primary Development Boundary has had a Rural Residential land Use designation. I believe what you refer to is language suggestive of a density of residential at 1 unit per 2 acres and greater as described in the Rural Residential land use designation. This type of density guidance comes into play when rezoning applications are considered. There have not been an abundance of rezoning requests in the area that I can think of over the past 10 years or so. We have had seen Terry's Run and Goodwin Cove along the Lake, outside of the Rt 208 mixed use area. Towns at Point Seanna is within that mixed use area. Lake Anna rezoning activity that maintains lots on well and septic tends to be submitted to result in higher lot yields to develop beyond the 10 lot cap that exists for instance with the R-R zoning district. I will acknowledge that in instances where you have A-3 zoning which is fairly common north of Lawyers, Lewiston, Orange Springs Rds, such a density would be higher than allowed by-right. Per the current Comprehensive Plan the Rural Residential Land Use Category is described as:

Rural Residential – This category encompasses most of the area outside the Primary Development Boundary. In general, rural residential development has a density of one unit per two acres and greater, including large lot residential, cluster development, farms, and forestland. These properties are served by private wells and septic systems. The preservation of land through conservation easements or preservation methods defined by the County Code may also be appropriate within this land use.

While the primary goal of the Future Land Use Element in the rural portion of the County is the preservation of farms, forestland, and open space, rural residents also need convenient commercial services. Therefore, neighborhood commercial rezonings should be considered in the rural areas provided that the applicant can demonstrate a need for the commercial node and provided that adequate infrastructure is in place or can be added by the applicant to accommodate the use. A need can be demonstrated by the lack of similar facilities in the area and/or by population served, or underserved, in the same service area. If public water and sewer are not available, the applicant must demonstrate adequate well and septic capacity. Similarly, transportation elements, such as adequate site distance, signage, and road improvements, must be provided by the applicant to assure safe and convenient access. Site design and architectural elevations should be considered to ensure that the design and appearance of the commercial use is compatible with the architecture and character of the area.

I have attached a copy of the current Future Land Use Map. Outside of the Primary Development Boundary I would say much of these land use designations as you see them remain unchanged from the earlier 2008 Comprehensive Plan. The Lakefront has an abundance of existing R-A and R-R zoned property and to develop property under that by-right potential requires lot size compliance applicable to those zoning districts. A-3 as noted above is abundant north of Lawyers and Lewiston, Orange Springs Roads. Attached you will find the lot size and density parameters associated with each of those zoning districts as I have attached copies of those zoning regulations. This is representative of by-right as zoned potential. Existing zoning R-R along the Lake allows for 2 acre lots and 1 acre lakefront lots. The density limit is similar to that described in the rural residential land use in the Comprehensive Plan but I note R-R does have a lot yield cap. Resort Agricultural is much more restrictive and does not provide for residential subdivisions but for exempt divisions (family or annual exempt). Ive highlighted those lot and density details for RR and RA for reference sake.

As part of the Comprehensive Plan update we have proposed reducing the extent of rural residential land use designation as the density reference of one unit per two acres and greater lends land use support for residential density higher than many of the zoning designations outside the Primary Development Boundary allow for, especially A-2 and A-3 zoning districts. You end up with loss of large lot forestal, open space, agricultural parcels and further divisions of land into smaller residential uses with a growing rural residential population with road impacts, etc.

DRAFT COMP PLAN UPDATES

In draft we have emphasized preservation of agriculture, forestry, open space, and preservation of existing zoning designations in areas designated as agricultural and forestall land use. Prior iterations of the Comprehensive Plan had identified various locations with the Agricultural and Forestal Land Use designation. These tended to be areas of active farming or parcels within designated Agricultural/Forestal Districts. Those districts are associated with the Agricultural/Forestal Committee and more information can be found here:
https://www.spotsylvania.va.us/1224/AgriculturalForestal-District-Review-Com

With the draft update we have reduced the extent of Rural Residential- focusing it on areas further north in the County in proximity to major transportation routes and the Primary Development Boundary. The Agricultural and Forestal Land Use vastly expands in draft to include many of the A-3 zoned lands in the County and areas along the Lake, especially on its west end (areas along Monrovia, Days Bridge, Woolfolk) and east end (Mount Olive, Arritt Rd, Tribble). Attached you will find a copy of the DRAFT future land use map. There you can compare the current land use map to the one in draft. You can see the scale back of Rural Residential in favor of Agricultural and Forestal Land Use. We feel the expanded Agricultural and Forestal Land Use is better informed now with insights gained via the Virginia Department of Conservation and Recreation's Natural Heritage Data Explorer Land Use Suitability Models, specifically as it relates to agricultural soils, forest productivity, ecological cores, etc. Per the draft Comp Plan, the new Agricultural and Forestal Land Use description and its revised extent as mapped (see DRAFT Land Use Map) is as follows:

Agricultural and Forestal Land Use
This land use category represents areas of active agricultural and forestal land within the County,

existing agricultural and forestal character, and high to outstanding physical and locational value for agricultural, forestal suitability as exhibited in the Virginia Department of Conservation and Recreation's Natural Heritage Data Explorer Land Use Suitability models. The models are described in Appendix D, Natural Resources. This land use category is primarily intended for cultivation of crops and livestock purposes, as well as forestry operations, open space, agritourism and other agribusiness, and by-right as zoned rural residential uses. Preservation of existing rural and agricultural friendly zoning designations is encouraged and proposals that would increase residential density above by-right potential or are inconsistent with envisioned primary and secondary uses, especially those that result in significant loss of acreage of agriculture, forestry or silviculture are discouraged.

The Comprehensive Plan recognizes the importance of complementary uses in Agricultural and Forestal areas, considerate of provision of service for populations in the area and agricultural and forestal supply chains. Subordinate or secondary uses generally supported within the Agricultural and Forestal category include: Agriculture and forestry products processing and distribution (i.e. greenhouses, sawmills, feed mills,); Provision of rural, agricultural, forestry goods, services, equipment (i.e. convenience store, garden center, child care center, medical care facility, fuel dispensing facility; farm equipment and supplies establishment); Civic, social, fraternal activities; places of worship; public facilities for provision of service to the community; provision of rural infrastructure and services such as telecommunications infrastructure, broadband, natural gas, electricity (not including power generation plants as a primary use); agritourism and historic tourism (i.e. agritourism uses, camp or recreation ground, bed and breakfast); accessory uses.

Agricultural and Forestal lands are well suited for protection from development pressures through enrollment in Agricultural/Forestal Districts or other programs with similar goals. These areas are also well suited for land protection and preservation efforts (e.g. conservation easements). The County supports a "right to farm" policy which limits the circumstances in which farming practices and operations can be considered nuisances to surrounding development. This land use designation is located outside of the limits of the Primary Development Boundary and therefore outside of the public water and sewer service area.

I would note that as part of this Comp Plan update as well we have proposed to include tables correlating land use designations to zoning considered complementary to the intent of the land use. Attached you will find a copy of the table applicable to land use designations outside of the Primary Development Boundary. We are trying to provide clearer understanding how these land use categories "fit" zoning designations. This is a factor if someone proposes a rezoning.

I hope this information is helpful to you,

Jacob L. Pastwik, AICP, Planner III
Spotsylvania County Planning & Zoning
9019 Old Battlefield Blvd, Suite 320
Spotsylvania, VA 22553
jpastwik@spotsylvania.va.us
Dept Phn: 540-507-7434

Desk: 540-507-7433

Spotsylvania
Find your Spot

From: Allan Lassiter <allanlassiter2@gmail.com>
Sent: Thursday, March 25, 2021 1:20 PM
To: Jacob Pastwik <JPastwik@spotsylvania.va.us>
Cc: Shannon D. Fennell <SFennell@spotsylvania.va.us>; Leon Hughes <LHughes@spotsylvania.va.us>; Kimberly Pomatto <KPomatto@Spotsylvania.va.us>
Subject: [EXTERNAL]: Re: Lake Anna Mixed Use Area

CAUTION: This email originated from an external source. Do not click on any links or open attachments unless you recognize the sender and know the content is safe.

Jacob, thank you for all that info. We at LACA have long been concerned with mass drainfields, private utilities, etc.

BUT the question I was asking was just about residential developments at LKA. Some folks say that the Comp Plan calls for all Lake Anna residential properties to be 2 acre per lot minimum, including waterfront. Is that true ? Thanks Allan

On Thu, Mar 25, 2021 at 12:17 PM Jacob Pastwik <JPastwik@spotsylvania.va.us> wrote:

> Good afternoon,
>
> I have received your inquiry regarding the Lake Anna mixed use area. The Comprehensive Plan has spoken of a village at Lake Anna going back to iterations of the Comprehensive Plan in the 1990s. I believe the 1994 Plan may have been the first mention, if not earlier. When the Land Use Map was initially adopted with the 2008 Comp Plan this area near Rt 208 at Lake Anna was designated Mixed Use just the same as within the Primary Development Boundary. However, the mixed use area at Lake Anna was not within the Primary Development Boundary.
>
> Yes, as part of the draft update to the Comprehensive Plan there has been language suggesting a commercial focus with lower density residential development based on Lake Anna oriented Zoning Districts. The infrastructure availability is not there as it is in the Primary Development Boundary. County code has zoning districts whose purpose and intent are stated as being Lake Anna oriented. In the Lake Anna mixed use area right now we have identified R-R and R-C as compatible as well as C-1 and C-2 that have a commercial focus. Residential densities are not high with those zoning districts. There is provision in R-R for instance to drop down to 1 acre lakefront lots but the densities are at 1 per 2. Right now unless we see support for upzoning, higher density, and a plan to address water and sewer, we see conditions supporting well and septic based lots. Mass drainfields for dense residential development has been a sticking point in project review processes we have seen in this area. We are going off direction we have received from the Planning Commission

and Board thus far and concerns raised by County Utilities. The Lake Anna area is not planned for public water and sewer and until we have clearer support from decision makers for things like mass drainfields, private utility districts, or expansion of public utilities we feel it unwise to lend land use support suggestive of Primary Development Boundary densities. Staff believes this is a larger policy issue requiring careful consideration of County Citizens, Landowners, Utilities, Planning and the Board of Supervisors. At this juncture without clear support for privately operated satellite systems to provide water and sewer services or a plan that the County intends on creating a satellite Primary Development Boundary at Lake Anna to support higher intensity residential development there would be a disconnect between land use vision and infrastructure. The mixed use land use tier and description proposed for Lake Anna reflects guidance from the Planning Commission, Board of Supervisors, Utilities and Economic Development offices. If plans were in place to support a private or publically operated satellite system in the Lake Anna mixed use area then a more diversified mix and density of uses may be more favorable and appropriate. Staff notes the existing last approved Comprehensive Plan initially adopted on November 14, 2013 (latest update July 28, 2020) includes Lake Anna Mixed Land Use direction in Policy 7 that speak to the area providing local shopping and professional services as well as tourist related uses such as hotels, inns and restaurants. The policy does not specifically promote higher intensity residential. As part of the initial phases of this Comprehensive Plan update, at joint work session between the BOS and PC on May 22, 2018 staff received feedback supportive of a commercial oriented land use mix similar to that identified in Policy 7. Increased residential intensity was not promoted.

We have had some concern raised regarding this proposed revision to the Lake Anna Mixed Use Area. On April 7th we will again discuss the Lake Anna mixed use area due to concerns raised.

Jacob L. Pastwik, AICP, Planner III
Spotsylvania County Planning & Zoning
9019 Old Battlefield Blvd, Suite 320
Spotsylvania, VA 22553
jpastwik@spotsylvania.va.us
Dept Phn: 540-507-7434
Desk: 540-507-7433

--
This email was Malware checked by Sophos http://www.sophos.com

RE: [EXTERNAL]: Re: Spotsylvania County Thoroughfare Plan

Sent: January 5, 2021 9:07 AM

From: Jacob Pastwik

To: Haynes, Stephen;

CC: Paul T. Agnello;

1 Attachments

image001.png (4 KB);

Good morning,

Thanks much for following up! I appreciate the feedback.

Have a good day,

Jacob L. Pastwik, AICP, Planner III
Spotsylvania County Planning & Zoning
9019 Old Battlefield Blvd, Suite 320
Spotsylvania, VA 22553
jpastwik@spotsylvania.va.us
Dept Phn: 540-507-7434
Desk: 540-507-7433

Spotsylvania
Find your Spot

From: Haynes, Stephen [mailto:stephen.haynes@vdot.virginia.gov]
Sent: Monday, January 4, 2021 2:00 PM
To: Jacob Pastwik <JPastwik@spotsylvania.va.us>
Subject: [EXTERNAL]: Re: Spotsylvania County Thoroughfare Plan

CAUTION: This email originated from an external source. Do not click on any links attachments unless you recognize the sender and know the content is safe.

Good afternoon, Jacob,

In response to this memo, I believe I indicated earlier that I would reply if I saw any issues, bu make sure to close the door on the matter by letting you know that VDOT District Planning ha edits presented and have found no issues. Thank you.

Stephen Haynes

District Planning Manager

VDOT - Fredericksburg District

(540) 907-5884

stephen.haynes@vdot.virginia.gov

On Wed, Dec 2, 2020 at 2:01 PM Jacob Pastwik <JPastwik@spotsylvania.va.us> wrote:

Comprehensive Plan Transportation Chapter and Trailways Master Plan (revie
VDOT with approval of the draft March 25, 2020). The County Board approve
on July 28, 2020. Since that time there have been a few changes that have occu
including the announced development of a VA Medical Center near Exit 126, r
extent of a new connection to the Bowman Center Industrial Park, opportunity
improvements to Shannon Airport and users in that area (intended to improve t
conditions along Tidewater Trail), and news of intent to replace the Roxbury M
bridge. Today I am sending along the specific draft updates to our Thoroughfar
and a copy of a revised Map for reference.

Attached please find the amended documents and a review transmittal requesti
review consistent with the Code of Virginia Sect. 15.2-2223.4 specific to propc
amendments to the Thoroughfare Plan Table and Map.

Thank You,

Jacob L. Pastwik, AICP, Planner III
Spotsylvania County Planning & Zoning
9019 Old Battlefield Blvd, Suite 320
Spotsylvania, VA 22553
jpastwik@spotsylvania.va.us
Dept Phn: 540-507-7434
Desk: 540-507-7433

--
This email was Malware checked by Sophos http://www.sophos.com

Code of Virginia
Title 15.2. Counties, Cities and Towns
Chapter 22. Planning, Subdivision of Land and Zoning

§ 15.2-2223. Comprehensive plan to be prepared and adopted; scope and purpose

A. The local planning commission shall prepare and recommend a comprehensive plan for the physical development of the territory within its jurisdiction and every governing body shall adopt a comprehensive plan for the territory under its jurisdiction.

In the preparation of a comprehensive plan, the commission shall make careful and comprehensive surveys and studies of the existing conditions and trends of growth, and of the probable future requirements of its territory and inhabitants. The comprehensive plan shall be made with the purpose of guiding and accomplishing a coordinated, adjusted and harmonious development of the territory which will, in accordance with present and probable future needs and resources, best promote the health, safety, morals, order, convenience, prosperity and general welfare of the inhabitants, including the elderly and persons with disabilities.

The comprehensive plan shall be general in nature, in that it shall designate the general or approximate location, character, and extent of each feature, including any road improvement and any transportation improvement, shown on the plan and shall indicate where existing lands or facilities are proposed to be extended, widened, removed, relocated, vacated, narrowed, abandoned, or changed in use as the case may be.

B. 1. As part of the comprehensive plan, each locality shall develop a transportation plan that designates a system of transportation infrastructure needs and recommendations that include the designation of new and expanded transportation facilities and that support the planned development of the territory covered by the plan and shall include, as appropriate, but not be limited to, roadways, bicycle accommodations, pedestrian accommodations, railways, bridges, waterways, airports, ports, and public transportation facilities. The plan shall recognize and differentiate among a hierarchy of roads such as expressways, arterials, and collectors. In developing the plan, the locality shall take into consideration how to align transportation infrastructure and facilities with affordable, accessible housing and community services that are located within the territory in order to facilitate community integration of the elderly and persons with disabilities. The Virginia Department of Transportation shall, upon request, provide localities with technical assistance in preparing such transportation plan.

2. The transportation plan shall include a map that shall show road and transportation improvements, including the cost estimates of such road and transportation improvements from the Virginia Department of Transportation, taking into account the current and future needs of residents in the locality while considering the current and future needs of the planning district within which the locality is situated.

3. The transportation plan, and any amendment thereto pursuant to § 15.2-2229, shall be consistent with the Commonwealth Transportation Board's Statewide Transportation Plan developed pursuant to § 33.2-353, the Six-Year Improvement Program adopted pursuant to subsection B of § 33.2-214, and the location of routes to be followed by roads comprising systems of state highways pursuant to subsection A of § 33.2-208. The locality shall consult with the Virginia Department of Transportation to assure such consistency is achieved. The

transportation plan need reflect only those changes in the annual update of the Six-Year Improvement Program that are deemed to be significant new, expanded, or relocated roadways.

4. Prior to the adoption of the transportation plan or any amendment to the transportation plan, the locality shall submit such plan or amendment to the Department for review and comment. The Department shall conduct its review and provide written comments to the locality on the consistency of the transportation plan or any amendment to the provisions of subdivision 1. The Department shall provide such written comments to the locality within 90 days of receipt of the plan or amendment, or such other shorter period of time as may be otherwise agreed upon by the Department and the locality.

5. The locality shall submit a copy of the adopted transportation plan or any amendment to the transportation plan to the Department for informational purposes. If the Department determines that the transportation plan or amendment is not consistent with the provisions of subdivision 1, the Department shall notify the Commonwealth Transportation Board so that the Board may take appropriate action in accordance with subsection F of § 33.2-214.

6. If the adopted transportation plan designates corridors planned to be served by mass transit, as defined in § 33.2-100, a portion of its allocation from (i) the Northern Virginia Transportation Authority distribution specified in subdivision B 1 of § 33.2-2510, (ii) the commercial and industrial real property tax revenue specified in § 58.1-3221.3, and (iii) the secondary system road construction program, as described in Article 5 (§ 33.2-351 et seq.) of Chapter 3 of Title 33.2, may be used for the purpose of utility undergrounding in the planned corridor, if the locality matches 100 percent of the state allocation.

7. Each locality's amendments or updates to its transportation plan as required by subdivisions 2 through 5 shall be made on or before its ongoing scheduled date for updating its transportation plan.

C. The comprehensive plan, with the accompanying maps, plats, charts, and descriptive matter, shall show the locality's long-range recommendations for the general development of the territory covered by the plan. It may include, but need not be limited to:

1. The designation of areas for various types of public and private development and use, such as different kinds of residential, including age-restricted, housing; business; industrial; agricultural; mineral resources; conservation; active and passive recreation; public service; flood plain and drainage; and other areas;

2. The designation of a system of community service facilities such as parks, sports playing fields, forests, schools, playgrounds, public buildings and institutions, hospitals, nursing homes, assisted living facilities, community centers, waterworks, sewage disposal or waste disposal areas, and the like;

3. The designation of historical areas and areas for urban renewal or other treatment;

4. The designation of areas for the implementation of reasonable measures to provide for the continued availability, quality, and sustainability of groundwater and surface water;

5. A capital improvements program, a subdivision ordinance, a zoning ordinance and zoning district maps, mineral resource district maps and agricultural and forestal district maps, where applicable;

6. The location of existing or proposed recycling centers;

7. The location of military bases, military installations, and military airports and their adjacent safety areas; and

8. The designation of corridors or routes for electric transmission lines of 150 kilovolts or more.

D. The comprehensive plan shall include the designation of areas and implementation of measures for the construction, rehabilitation and maintenance of affordable housing, which is sufficient to meet the current and future needs of residents of all levels of income in the locality while considering the current and future needs of the planning district within which the locality is situated.

E. The comprehensive plan shall consider strategies to provide broadband infrastructure that is sufficient to meet the current and future needs of residents and businesses in the locality. To this end, local planning commissions may consult with and receive technical assistance from the Center for Innovative Technology, among other resources.

1975, c. 641, § 15.1-446.1; 1976, c. 650; 1977, c. 228; 1988, c. 268; 1989, c. 532; 1990, c. 19; 1993, cc. 116, 758; 1996, cc. 585, 600;1997, c. 587;2003, c. 811;2004, cc. 691, 799;2005, cc. 466, 699; 2006, cc. 527, 563, 564;2007, c. 761;2012, cc. 729, 733;2013, cc. 561, 585, 646, 656;2014, cc. 397, 443;2018, cc. 420, 691, 796, 828.

The chapters of the acts of assembly referenced in the historical citation at the end of this section may not constitute a comprehensive list of such chapters and may exclude chapters whose provisions have expired.

VIRGINIA ACTS OF ASSEMBLY -- 2021 SPECIAL SESSION I

CHAPTER 91

An Act to amend and reenact §§ 8.01-463, 36-139, 55.1-320, 55.1-321, and 55.1-1303 of the Code of Virginia and to amend the Code of Virginia by adding a section numbered 15.2-2223.5, relating to housing protections; foreclosures; manufactured housing.

[H 2175]

Approved March 12, 2021

Be it enacted by the General Assembly of Virginia:

1. That §§ 8.01-463, 36-139, 55.1-320, 55.1-321, and 55.1-1303 of the Code of Virginia are amended and reenacted and that the Code of Virginia is amended by adding a section numbered 15.2-2223.5 as follows:

§ 8.01-463. Enforcement of lien when judgment does not exceed $25,000.

If the amount of the judgment does not exceed ~~twenty~~ ~~dollars~~ *$25,000*, exclusive of interest and costs, no bill to enforce the lien, *pursuant to § 8.01-462*, thereof shall be entertained~~, unless it appear that thirty days before the institution of the suit, the judgment debtor or his personal representative, and the owner of the real estate on which the judgment is a lien, or, in case of a nonresident, his agent or attorney, if he had one in this Commonwealth, had notice that the suit would be instituted, if the judgment was not paid within that time~~ *if the real estate is the judgment debtor's primary residence*.

§ 15.2-2223.5. Comprehensive plan shall address manufactured housing.

During an amendment of a locality's comprehensive plan after July 1, 2021, the locality shall incorporate into its comprehensive plan strategies to promote manufactured housing as a source of affordable housing. Such strategies may include (i) the preservation of existing manufactured housing communities, (ii) the creation of new manufactured home communities, and (iii) the creation of new manufactured home subdivisions.

§ 36-139. Powers and duties of Director.

The Director of the Department of Housing and Community Development shall have the following responsibilities:

1. Collecting from the governmental subdivisions of the Commonwealth information relevant to their planning and development activities, boundary changes, changes of forms and status of government, intergovernmental agreements and arrangements, and such other information as he may deem necessary.

2. Making information available to communities, planning district commissions, service districts and governmental subdivisions of the Commonwealth.

3. Providing professional and technical assistance to, and cooperating with, any planning agency, planning district commission, service district, and governmental subdivision engaged in the preparation of development plans and programs, service district plans, or consolidation agreements.

4. Assisting the Governor in the providing of such state financial aid as may be appropriated by the General Assembly in accordance with § 15.2-4216.

5. Administering federal grant assistance programs, including funds from the Appalachian Regional Commission, the Economic Development Administration and other such federal agencies, directed at promoting the development of the Commonwealth's communities and regions.

6. Developing state community development policies, goals, plans and programs for the consideration and adoption of the Board with the ultimate authority for adoption to rest with the Governor and the General Assembly.

7. Developing a Consolidated Plan to guide the development and implementation of housing programs and community development in the Commonwealth for the purpose of meeting the housing and community development needs of the Commonwealth and, in particular, those of low-income and moderate-income persons, families and communities.

8. Determining present and future housing requirements of the Commonwealth on an annual basis and revising the Consolidated Plan, as necessary to coordinate the elements of housing production to ensure the availability of housing where and when needed.

9. Assuming administrative coordination of the various state housing programs and cooperating with the various state agencies in their programs as they relate to housing.

10. Establishing public information and educational programs relating to housing; devising and administering programs to inform all citizens about housing and housing-related programs that are available on all levels of government; designing and administering educational programs to prepare families for home ownership and counseling them during their first years as homeowners; and promoting educational programs to assist sponsors in the development of low and moderate income housing as well as programs to lessen the problems of rental housing management.

11. Administering the provisions of the Industrialized Building Safety Law (§ 36-70 et seq.).

Code of Virginia
Title 15.2. Counties, Cities and Towns
Chapter 22. Planning, Subdivision of Land and Zoning

§ 15.2-2224. Surveys and studies to be made in preparation of plan; implementation of plan

A. In the preparation of a comprehensive plan, the local planning commission shall survey and study such matters as the following:

1. Use of land, preservation of agricultural and forestal land, production of food and fiber, characteristics and conditions of existing development, trends of growth or changes, natural resources, historic areas, groundwater and surface water availability, quality, and sustainability, geologic factors, population factors, employment, environmental and economic factors, existing public facilities, drainage, flood control and flood damage prevention measures, dam break inundation zones and potential impacts to downstream properties to the extent that information concerning such information exists and is available to the local planning authority, the transmission of electricity, broadband infrastructure, road improvements, and any estimated cost thereof, transportation facilities, transportation improvements, and any cost thereof, the need for affordable housing in both the locality and planning district within which it is situated, and any other matters relating to the subject matter and general purposes of the comprehensive plan.

However, if a locality chooses not to survey and study historic areas, then the locality shall include historic areas in the comprehensive plan, if such areas are identified and surveyed by the Department of Historic Resources. Furthermore, if a locality chooses not to survey and study mineral resources, then the locality shall include mineral resources in the comprehensive plan, if such areas are identified and surveyed by the Department of Mines, Minerals and Energy. The requirement to study the production of food and fiber shall apply only to those plans adopted on or after January 1, 1981.

2. Probable future economic and population growth of the territory and requirements therefor.

B. The comprehensive plan shall recommend methods of implementation and shall include a current map of the area covered by the comprehensive plan. Unless otherwise required by this chapter, the methods of implementation may include but need not be limited to:

1. An official map;

2. A capital improvements program;

3. A subdivision ordinance;

4. A zoning ordinance and zoning district maps;

5. A mineral resource map;

6. A recreation and sports resource map; and

7. A map of dam break inundation zones.

Code 1950, § 15-964.1; 1962, c. 407, § 15.1-447; 1975, c. 641; 1977, c. 228; 1980, c. 322; 1981, c. 418; 1988, c. 438; 1990, c. 97; 1991, c. 280; 1993, cc. 758, 770; 1996, cc. 585, 600;1997, c. 587;

2006, c. 564;2007, c. 761;2008, c. 491;2018, cc. 420, 691.

The chapters of the acts of assembly referenced in the historical citation at the end of this section may not constitute a comprehensive list of such chapters and may exclude chapters whose provisions have expired.

Code of Virginia
Title 15.2. Counties, Cities and Towns
Chapter 22. Planning, Subdivision of Land and Zoning

§ 15.2-2232. Legal status of plan

A. Whenever a local planning commission recommends a comprehensive plan or part thereof for the locality and such plan has been approved and adopted by the governing body, it shall control the general or approximate location, character and extent of each feature shown on the plan. Thereafter, unless a feature is already shown on the adopted master plan or part thereof or is deemed so under subsection D, no street or connection to an existing street, park or other public area, public building or public structure, public utility facility or public service corporation facility other than a railroad facility or an underground natural gas or underground electric distribution facility of a public utility as defined in subdivision (b) of § 56-265.1 within its certificated service territory, whether publicly or privately owned, shall be constructed, established or authorized, unless and until the general location or approximate location, character, and extent thereof has been submitted to and approved by the commission as being substantially in accord with the adopted comprehensive plan or part thereof. In connection with any such determination, the commission may, and at the direction of the governing body shall, hold a public hearing, after notice as required by § 15.2-2204. Following the adoption of the Statewide Transportation Plan by the Commonwealth Transportation Board pursuant to § 33.2-353 and written notification to the affected local governments, each local government through which one or more of the designated corridors of statewide significance traverses, shall, at a minimum, note such corridor or corridors on the transportation plan map included in its comprehensive plan for information purposes at the next regular update of the transportation plan map. Prior to the next regular update of the transportation plan map, the local government shall acknowledge the existence of corridors of statewide significance within its boundaries.

B. The commission shall communicate its findings to the governing body, indicating its approval or disapproval with written reasons therefor. The governing body may overrule the action of the commission by a vote of a majority of its membership. Failure of the commission to act within 60 days of a submission, unless the time is extended by the governing body, shall be deemed approval. The owner or owners or their agents may appeal the decision of the commission to the governing body within 10 days after the decision of the commission. The appeal shall be by written petition to the governing body setting forth the reasons for the appeal. The appeal shall be heard and determined within 60 days from its filing. A majority vote of the governing body shall overrule the commission.

C. Widening, narrowing, extension, enlargement, vacation or change of use of streets or public areas shall likewise be submitted for approval, but paving, repair, reconstruction, improvement, drainage or similar work and normal service extensions of public utilities or public service corporations shall not require approval unless such work involves a change in location or extent of a street or public area.

D. Any public area, facility or use as set forth in subsection A which is identified within, but not the entire subject of, a submission under either § 15.2-2258 for subdivision or subdivision A 8 of § 15.2-2286 for development or both may be deemed a feature already shown on the adopted master plan, and, therefore, excepted from the requirement for submittal to and approval by the commission or the governing body; provided, that the governing body has by ordinance or

resolution defined standards governing the construction, establishment or authorization of such public area, facility or use or has approved it through acceptance of a proffer made pursuant to § 15.2-2303.

E. Approval and funding of a public telecommunications facility on or before July 1, 2012, by the Virginia Public Broadcasting Board pursuant to Article 12 (§ 2.2-2426 et seq.) of Chapter 24 of Title 2.2 or after July 1, 2012, by the Board of Education pursuant to § 22.1-20.1 shall be deemed to satisfy the requirements of this section and local zoning ordinances with respect to such facility with the exception of television and radio towers and structures not necessary to house electronic apparatus. The exemption provided for in this subsection shall not apply to facilities existing or approved by the Virginia Public Telecommunications Board prior to July 1, 1990. The Board of Education shall notify the governing body of the locality in advance of any meeting where approval of any such facility shall be acted upon.

F. On any application for a telecommunications facility, the commission's decision shall comply with the requirements of the Federal Telecommunications Act of 1996. Failure of the commission to act on any such application for a telecommunications facility under subsection A submitted on or after July 1, 1998, within 90 days of such submission shall be deemed approval of the application by the commission unless the governing body has authorized an extension of time for consideration or the applicant has agreed to an extension of time. The governing body may extend the time required for action by the local commission by no more than 60 additional days. If the commission has not acted on the application by the end of the extension, or by the end of such longer period as may be agreed to by the applicant, the application is deemed approved by the commission.

G. A proposed telecommunications tower or a facility constructed by an entity organized pursuant to Chapter 9.1 (§ 56-231.15 et seq.) of Title 56 shall be deemed to be substantially in accord with the comprehensive plan and commission approval shall not be required if the proposed telecommunications tower or facility is located in a zoning district that allows such telecommunications towers or facilities by right.

H. Asolar facility subject to subsection A shall be deemed to be substantially in accord with the comprehensive plan if (i) such proposed solar facility is located in a zoning district that allows such solar facilities by right or (ii) such proposed solar facility is designed to serve the electricity or thermal needs of the property upon which such facility is located, or will be owned or operated by an eligible customer-generator or eligible agricultural customer-generator under § 56-594 or by a small agricultural generator under § 56-594.2. All other solar facilities shall be reviewed for substantial accord with the comprehensive plan in accordance with this section. However, a locality may allow for a substantial accord review for such solar facilities to be advertised and approved concurrently in a public hearing process with a rezoning, special exception, or other approval process.

Code 1950, §§ 15-909, 15-923, 15-964.10; 1958, c. 389; 1960, c. 567; 1962, c. 407, § 15.1-456; 1964, c. 528; 1966, c. 596; 1968, c. 290; 1975, c. 641; 1976, c. 291; 1978, c. 584; 1982, c. 39; 1987, c. 312; 1989, c. 532; 1990, c. 633; 1997, cc. 587, 858;1998, c. 683;2007, c. 801;2009, cc. 670, 690; 2012, cc. 803, 835;2016, c. 613;2018, cc. 175, 318.

The chapters of the acts of assembly referenced in the historical citation at the end of this section may not constitute a comprehensive list of such chapters and may exclude chapters whose provisions have expired.

9VAC25-830-170. Comprehensive Plans.

Local governments shall review and revise their comprehensive plans, as necessary, for compliance with § 62.1-44.15:74 of the Act and this chapter. As a minimum, the comprehensive plan or plan component shall consist of the following basic elements: (i) a summary of data collection; (ii) analysis and policy discussion(s); (iii) land use plan map(s); and (iv) implementing measures, including specific objectives and a time frame for accomplishment.

1. Local governments shall establish and maintain, as appropriate, an information base from which policy choices are made about future land use and development that will protect the quality of state waters. This element of the plan should be based upon the following, as applicable to the locality:

a. The location and extent of Chesapeake Bay Preservation Areas;

b. Physical constraints to development, including soil limitations;

c. The character and location of commercial and recreational fisheries and other aquatic resources;

d. Shoreline and streambank erosion problems;

e. Existing and proposed land uses;

f. Catalog of existing and potential water pollution sources;

g. Public and private waterfront access areas, including the general locations of or information about docks, piers, marinas, boat ramps, and similar water access facilities;

h. A map or map series accurately representing the above information.

2. As part of the comprehensive plan, local governments shall clearly indicate local policy on land use issues relative to water quality protection based on an analysis of the data referred to in subdivision 1 of this section. Local governments shall ensure consistency among the policies developed.

a. Local governments shall discuss each component of Chesapeake Bay Preservation Areas in relation to the types of land uses considered appropriate and consistent with the goals and objectives of the Act, this chapter, and their local programs.

b. As a minimum, local governments shall prepare policy statements for inclusion in the plan on the following issues, as applicable to the locality:

(1) Physical constraints to development, including a discussion of the relationship between soil limitations and existing and proposed land use, with an explicit discussion of soil suitability for septic tank use;

(2) Protection of potable water supply, including groundwater resources and threats to the water supply or groundwater resources from existing and potential pollution sources;

(3) Relationship of land use to commercial and recreational fisheries and other aquatic resources;

(4) Siting of docks and piers;

(5) Public and private access to waterfront areas and effect on water quality;

(6) Mitigation of the impacts of land use and its associated pollution upon water quality;

(7) Shoreline and streambank erosion problems; and

(8) Potential water quality improvement through reduction of existing pollution sources and the redevelopment of Intensely Developed Areas and other areas targeted for redevelopment.

c. For each of the policy issues listed above, the plan shall contain a discussion of the scope and importance of the issue, the policy adopted by the local government for that issue, and a description of how the local policy will be implemented.

d. Within the policy discussion, local governments shall address the relationship between the plan, existing and proposed land use, public services, and capital improvement plans and budgets to ensure a consistent local policy.

Statutory Authority

§§ 62.1-44.15:69 and 62.1-44.15:72 of the Code of Virginia.

Historical Notes

Former 4VAC50-90-170 and 9VAC10-20-171 derived from Virginia Register Volume 18, Issue 9, eff. March 1, 2002; amended and renumbered, Virginia Register Volume 29, Issue 4, eff. November 21, 2012; amended and renumbered, Virginia Register Volume 30, Issue 2, eff. October 23, 2013.