

2742 - CID510308_Spotsylvania County_CFPF_Resilience_Plan

Application Details

Funding Opportunity:	2335-Virginia Community Flood Preparedness Fund - Capacity Building/Planning Grants - CY24 Round 5
Funding Opportunity Due Date:	Mar 28, 2025 11:59 PM
Program Area:	Virginia Community Flood Preparedness Fund
Status:	Under Review
Stage:	Final Application
Initial Submit Date:	Jan 24, 2025 7:30 PM
Initially Submitted By:	Annette D'Alessandro
Last Submit Date:	
Last Submitted By:	

Contact Information

Primary Contact Information

Active User*:	Yes
Type:	External User
Name*:	Ms. Annette B D'Alessandro <small>Salutation First Name Middle Name Last Name</small>
Title:	Grants Manager
Email*:	adalessandro@spotsylvania.va.us
Address*:	Spotsylvania County Attn: Grants Division P.O. Box 215 Spotsylvania Virginia 22553 <small>City State/Province Postal Code/Zip</small>
Phone*:	540-507-7595 Ext. <small>Phone ###-###-####</small>
Fax:	540-582-6304 <small>###-###-####</small>
Comments:	

Organization Information

Status*:	Approved
Name*:	County of Spotsylvania
Organization Type*:	Local Government
Tax ID*:	54-6001622
Unique Entity Identifier (UEI)*:	GM7WK5Z7A5M1
Organization Website:	https://www.spotsylvania.va.us/

Address*: Spotsylvania County, Attn: Grants Division
9104 Courthouse Road
P.O. Box 215
Spotsylvania Virginia 22553-
City State/Province Postal Code/Zip

Phone*: (540) 507-7595 Ext.
#####

Fax: (540) 582-6304
#####

Benefactor:

Vendor ID:

Comments:

VCFPF Applicant Information

Project Description

Name of Local Government*: Spotsylvania County
Your locality's CID number can be found at the following link: [Community Status Book Report](#)

NFIP/DCR Community Identification Number (CID)*: 510308
If a state or federally recognized Indian tribe,

Name of Tribe:

Authorized Individual*: Annette D'Alessandro
First Name Last Name

Mailing Address*: Spotsylvania County - Finance
Address Line 1
P.O. Box 215
Address Line 2
Spotsylvania Virginia 22553
City State Zip Code

Telephone Number*: 540-507-7595

Cell Phone Number*: 540-623-7885

Email*: adalessandro@spotsylvania.va.us

Is the contact person different than the authorized individual?

Contact Person*: No

Enter a description of the project for which you are applying to this funding opportunity

Project Description*:

Spotsylvania County currently lacks the funds and capacity for flood resiliency planning, despite its vulnerability to flood hazards. The proposed project addresses these gaps by requesting funds to (1) provide training for existing staff in floodplain management; and (2) hire a consultant to develop a local flood resilience plan. The plan will result in new policies and updates to existing ones, particularly by integrating flood mitigation strategies into the County's Comprehensive Plan.

Low-income geographic area means any locality, or community within a locality, that has a median household income that is not greater than 80 percent of the local median household income, or any area in the Commonwealth designated as a qualified opportunity zone by the U.S. Secretary of the Treasury via his delegation of authority to the Internal Revenue Service. A project of any size within a low-income geographic area will be considered.

Is the proposal in this application intended to benefit a low-income geographic area as defined above?

Benefit a low-income geographic area*: Yes

Information regarding your census block(s) can be found at [census.gov](https://www.census.gov)

Census Block(s) Where Project will Occur*: County-wide

Is Project Located in an NFIP Participating Community?* :	Yes
Is Project Located in a Special Flood Hazard Area?* :	Yes
Flood Zone(s) (if applicable):	A, AE Floodways
Flood Insurance Rate Map Number(s) (if applicable):	Please see Appendix A for a listing of the flood insurance rate map panels.

Eligibility - Round 4

Eligibility

Is the applicant a local government (including counties, cities, towns, municipal corporations, authorities, districts, commissions, or political subdivisions created by the General Assembly or pursuant to the Constitution or laws of the Commonwealth, or any combination of these)?

Local Government*: Yes
Yes - Eligible for consideration
No - Not eligible for consideration

If the applicant is not a town, city, or county, are letters of support from all affected local governments included in this application?

Letters of Support*: N/A
Yes - Eligible for consideration
No - Not eligible for consideration

Has this or any portion of this project been included in any application or program previously funded by the Department?

Previously Funded*: No
Yes - Not eligible for consideration
No - Eligible for consideration

Has the applicant provided evidence of an ability to provide the required matching funds?

Evidence of Match Funds*: Yes
Yes - Eligible for consideration
No - Not eligible for consideration
N/A - Match not required

Scoring Criteria for Capacity Building & Planning - Round 4

Scoring

Eligible Capacity Building and Planning Activities (Select all that apply) ? Maximum 100 points. To make multiple selections, Hold CTRL and click the desired items.

Capacity Building and Planning*:

Floodplain Staff Capacity, Resilience Plan Development, Resource assessments, planning, strategies, and development - Stakeholder engagement and strategies.

Is the project area socially vulnerable? (based on [ADAPT Virginia's Social Vulnerability Index Score](#))

Social Vulnerability Scoring:

Very High Social Vulnerability (More than 1.5)
High Social Vulnerability (1.0 to 1.5)
Moderate Social Vulnerability (0.0 to 1.0)
Low Social Vulnerability (-1.0 to 0.0)
Very Low Social Vulnerability (Less than -1.0)

Socially Vulnerable*: High Social Vulnerability (1.0 to 1.5)

Is the proposed project part of an effort to join or remedy the community's probation or suspension from the NFIP?

NFIP*: No

Is the proposed project in a low-income geographic area as defined below?

"Low-income geographic area" means any locality, or community within a locality, that has a median household income that is not greater than 80 percent of the local median household income, or any area in the Commonwealth designated as a qualified opportunity zone by the U.S. Secretary of the Treasury via his delegation of authority to the Internal Revenue Service. A project of any size within a low-income geographic area will be considered.

Low-Income Geographic Area*: Yes

Does this project provide ?community scale? benefits?

Community Scale Benefits*:

50-100% of census block

Comments:

The proposed project will benefit the entirety of Spotsylvania County. The Flood Resilience Plan will address the County's growing flood risks and the need to protect infrastructure, residents, and the environment.

Scope of Work and Budget Narrative - Capacity Building and Planning - Round 4

Scope of Work - General Information**Upload your Scope of Work**

Please refer to Part IV, Section B. of the grant manual for guidance on how to create your scope of work

Scope of Work Attachment*:[CID510308_Spotsylvania_County_CFPF_Resilience_Plan_Appendix_A_Scope_of_Work_Narrative.pdf](#)**Comments:**

This document contains both the signed Appendix A and the Scope of Work Narrative for Capacity Building and Planning Applications.

Budget Narrative**Budget Narrative Attachment*:**[CID510308_Spotsylvania_County_CFPF_Resilience_Plan_Appendix_B_Budget_Narrative.pdf](#)**Comments:**

This document contains Appendix B, the Budget Narrative, the Consultant Quote, and the Spotsylvania County Board of Supervisors Resolution.

Scope of Work Supporting Information - Capacity Building and Planning

Scope of Work Supporting Information

Describe identified resource needs including financial, human, technical assistance, and training needs

Resource need identification*:

The need to create a comprehensive resilience plan to address current and future impacts of flooding has necessitated this request for a Capacity Building and Planning grant. Due to financial constraints, the County does not have the training, technical assistance, or staffing needed to develop a resilience plan in a timely manner. The Flood Resilience Plan aims to reduce property damage, economic losses, and threats to public safety by enhancing flood management practices and protecting key wetlands and floodplains, which play a crucial role in managing floodwaters. In order to protect vulnerable populations, critical infrastructure, and natural resources, including waterways and habitats, it is imperative that the County develops a resilience plan. Implementing the Flood Resilience Plan will safeguard neighborhoods, businesses, and infrastructure from flood risks while minimizing property loss, environmental damage, and injury. Without this proactive approach, the County risks escalating flood damage costs and missing opportunities to enhance resilience. Long-term protection measures can significantly reduce the impacts of future floods, ensuring that the County is prepared for increasingly frequent and severe flood events.

Describe the plan for developing, increasing, or strengthening knowledge, skills and abilities of existing or new staff. This may include training of existing staff, hiring personnel, contracting consultants or advisors

Development of Existing or New Staff*:

Capacity building will play a central role in the proposed project, ensuring that the County has the knowledge and resources necessary to safeguard its community for years to come and is essential for strengthening the County's ability to manage flood risks. The proposed project includes funding to enhance staff expertise in stormwater compliance, flood risk analysis, and long-term planning efforts. Specifically, the proposed project will provide funding to certify additional County staff members in floodplain management through the Association of State Floodplain Managers and to train County staff in stormwater management, including inspection and decision making as courses become available from the Virginia Department of Environmental Quality (DEQ), FEMA, NPDES, and/or NASSCO. The hiring of a consultant to develop the resilience plan will also further the capacity of both future and existing staff in flood resilience strategies. These efforts will ensure that the County is better equipped to anticipate, prepare for, and respond to future flood events. Strengthening internal capabilities is critical for the successful implementation of resilience strategies, allowing the County to address current challenges and future risks more effectively.

Where capacity is limited by funding, what strategies will be developed to increase resources in the local government? (This may include work with non-governmental organization, or applying for grants, loans, or other funding sources)

Resource Development Strategies*:

Spotsylvania County currently lacks the funds and capacity for resiliency planning, despite its vulnerability to flood hazards, limiting its ability to apply for resilience project funding. This proposal addresses these gaps by requesting funds to (1) provide training for existing staff in floodplain management, enabling the County to access future funding for project implementation and justify future capacity growth; and (2) hire a consultant, who has the technical expertise and time, to develop and draft a local resilience plan. The plan will identify the highest flooding risks in the County,

enabling project prioritization and future risk evaluations. It will also review existing hazard monitoring capabilities and identify potential improvements.

Once project recommendations are finalized, the County will pursue funding opportunities for implementation.

Describe policy management and/or development plans

Policy management and/or development*:

The Flood Resilience Plan will outline specific objectives, including capacity-building initiatives, vulnerability assessments, and prioritization of high-risk areas. It will build on previous planning efforts, such as the Spotsylvania County Comprehensive Plan (2021, amended in 2024) and the George Washington Regional Commission - Regional Hazard Mitigation Plan (2023), while providing more targeted and detailed strategies for flood risk reduction. The Flood Resilience Plan connects to policy management and development by addressing the county's growing flood risks and the need for proactive measures to protect infrastructure, residents, and the environment. This plan will result in new policies and updates to existing ones, particularly by integrating flood mitigation strategies into the County's Comprehensive Plan. It will also ensure alignment with state and federal regulations, such as CFPF and CRS, which are essential for accessing funding and ensuring compliance. The resilience plan will also position the County to apply for future funding opportunities, including from the State's Community Flood Preparedness Fund (CFPF), to support flood mitigation projects, nature-based solutions, and equitable protection for all residents.

Describe plans for stakeholder identification, outreach, and education strategies

Stakeholder identification, outreach, and education strategies*:

As the proposed project will benefit the entirety of Spotsylvania County, it is imperative that County residents and other community stakeholders are engaged in the development and adoption of the resilience plan. Stakeholders include local government officials, residents, businesses, and state and federal agencies. Local officials, such as the Board of Supervisors, play a critical role in developing and implementing policies. Residents and businesses, especially those in flood-prone areas, will be directly affected by these policies and are essential in shaping them through public engagement. Strategies to engage the community include hosting public meetings, digital communication through the County's website and social media postings, as well as advertising and mailings to reach those citizens in the County's rural areas that still do not have internet access. Once the resilience plan is adopted, it will be made available to the public through the County's website. The resilience plan will build on previous planning efforts while providing more targeted and detailed strategies for flood risk reduction.

Budget

Budget Summary

Grant Matching Requirement*:

Planning and Capacity Building - Fund 75%/Match 25%

*Match requirements for Planning and Capacity Building in low-income geographic areas will not require match for applications requesting less than \$3,000.

Is a match waiver being requested?

Match Waiver Request No

Note: only low-income communities are eligible for a match waiver.

*:

Total Project Amount (Request + Match)*: \$115,000.00

**This amount should equal the sum of your request and match figures

REQUIRED Match Percentage Amount: \$28,750.00

BUDGET TOTALS

Before submitting your application be sure that you meet the match requirements for your project type.

Match Percentage: 25.00%

Verify that your match percentage matches your required match percentage amount above.

Total Requested Fund Amount: \$86,250.00

Total Match Amount: \$28,750.00

TOTAL: \$115,000.00

Personnel

Description	Requested Fund Amount	Match Amount	Match Source
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Spotsylvania County Salary Costs	\$0.00	\$10,000.00	In-kind Spotsylvania County staff time
	\$0.00	\$10,000.00	

Fringe Benefits

Description	Requested Fund Amount	Match Amount	Match Source
No Data for Table			

Travel

Description	Requested Fund Amount	Match Amount	Match Source
Travel and Training for Spotsylvania County Staff	\$4,250.00	\$750.00	Local cash match from Spotsylvania County
	\$4,250.00	\$750.00	

Equipment

Description	Requested Fund Amount	Match Amount	Match Source
No Data for Table			

Supplies

Description	Requested Fund Amount	Match Amount	Match Source
No Data for Table			

Construction

Description	Requested Fund Amount	Match Amount	Match Source
No Data for Table			

Contracts

Description	Requested Fund Amount	Match Amount	Match Source
Hire a consultant to develop a resilience plan	\$82,000.00	\$18,000.00	Local cash match from Spotsylvania County
	\$82,000.00	\$18,000.00	

Pre-Award and Startup Costs

Description	Requested Fund Amount	Match Amount	Match Source
No Data for Table			

Other Direct Costs

Description	Requested Fun Amount	Match Amount	Match Source
No Data for Table			

Supporting Documentation - General

Supporting Documentation

Named Attachment	Required	Description	File Name	Type	Size	Upload Date
Detailed map of the project area(s) (Projects/Studies)		Various maps of Spotsylvania County.	CID510308_Spotsylvania_County_CFPF_Resilience_Plan_Project_Area_Maps.pdf	pdf	5 MB	01/24/2025 01:42 PM
FIRMette of the project area(s) (Projects/Studies)						
Historic flood damage data and/or images (Projects/Studies)						
A link to or a copy of the current floodplain ordinance		A copy of Spotsylvania County's Floodplain Ordinance	CID510308_Spotsylvania_County_CFPF_Resilience_Floodplain_Ordinance.pdf	pdf	395 KB	01/24/2025 01:01 PM
Maintenance and management plan for project						
A link to or a copy of the current hazard mitigation plan		A link to the George Washington Regional Commission ? Regional Hazard Mitigation Plan, which includes Spotsylvania County.	CID510308_Spotsylvania_County_CFPF_Resilience_Plan_Hazard_Mitigation_Plan.pdf	pdf	86 KB	01/24/2025 01:21 PM
A link to or a copy of the current comprehensive plan		A link to the approved 2021 Spotsylvania County Comprehensive Plan, as last amended on July 9, 2024.	CID510308_Spotsylvania_County_CFPF_Resilience_Plan_Comprehensive_Plan.pdf	pdf	67 KB	01/24/2025 12:59 PM
Social vulnerability index score(s) for the project area		Various maps illustrating Spotsylvania County's social vulnerability index to include the census tract with the highest social vulnerability index score within the County.	CID510308_Spotsylvania_County_CFPF_Resilience_Plan_SVI_Score.pdf	pdf	4 MB	01/24/2025 01:11 PM
Authorization to request funding from the Fund from governing body or chief executive of the local government		Spotsylvania County Board of Supervisors' signed resolution providing permission to apply, acknowledgement of the local match requirements, and designation of Authorized Organizational Representatives.	CID510308_Spotsylvania_County_CFPF_Resilience_Plan_BOS_Res.pdf	pdf	377 KB	01/24/2025 12:56 PM
Signed pledge agreement from each contributing organization						
Maintenance Plan						

Benefit-cost analysis must be submitted with project applications over \$2,000,000. in lieu of using the FEMA benefit-cost analysis tool, applicants may submit a narrative to describe in detail the cost benefits and value. The narrative must explicitly indicate the risk reduction benefits of a flood mitigation project and compares those benefits to its cost-effectiveness.

Benefit Cost
Analysis

Other Relevant Attachments	A map of the designated CID510308_Spotsylvania_County_CFPF_Resilience_Plan_Opportunity_Zones.pdf	pdf	1003 KB	01/24/2025 01:14 PM
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Letters of Support

Description	File Name	Type	Size	Upload Date
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No files attached.

Appendix A: Application Form for Grant and Loan Requests for All Categories

Virginia Department of Conservation and Recreation
Virginia Community Flood Preparedness Fund Grant Program

Name of Local Government: Spotsylvania County

Category Being Applied for (check one):

☒ Capacity Building/Planning

☐ Project

☐ Study

NFIP/DCR Community Identification Number (CID) 510308

Name of Authorized Official and Title: Ed Petrovitch, County Administrator

Signature of Authorized Official: 

Mailing Address (1): Spotsylvania County Administration

Mailing Address (2): P.O. Box 99

City: Spotsylvania State: VA Zip: 22553

Telephone Number: (504) 507-7010 Cell Phone Number: ()

Email Address: epetrovitch@spotsylvania.va.us

Contact and Title (If different from authorized official): Annette D'Alessandro, Grants Manager

Mailing Address (1): Spotsylvania County - Grants Division

Mailing Address (2): P.O. Box 215

City: Spotsylvania State: VA Zip: 22553

Telephone Number: (540) 507-7595 Cell Phone Number: (540) 623-7885

Email Address: adalessandro@spotsylvania.va.us

Is the proposal in this application intended to benefit a low-income geographic area as defined in the Part 1 Definitions? Yes X No

Categories (select applicable activities that will be included in the project and used for scoring criterion):

Capacity Building and Planning Grants

- ☒ Floodplain Staff Capacity.
- ☒ Resilience Plan Development
- ☐ Revisions to existing resilience plans and integration of comprehensive and hazard mitigation plans.
 - ☒ Resource assessments, planning, strategies, and development.
 - ☐ Policy management and/or development.
 - ☐ Stakeholder engagement and strategies.
 - ☐ Other: _____

Study Grants (Check All that Apply)

- ☐ Revising other land use ordinances to incorporate flood protection and mitigation goals, standards, and practices.

- ☐ Conducting hydrologic and hydraulic (H&H) studies of floodplains. *Changes to the base flood, as demonstrated by the H&H must be submitted to FEMA within 6 months of the data becoming available.*
- ☐ Studies and Data Collection of Statewide and Regional Significance.
- ☐ Revisions to existing resilience plans and modifications to existing comprehensive and hazard.
- ☐ Other relevant flood prevention and protection project or study.
- ☐ Pluvial studies.
- ☐ Studies to aid in updating floodplain ordinances to maintain compliance with the NFIP, or to incorporate higher standards that may reduce the risk of flood damage. This must include establishing processes for implementing the ordinance, including but not limited to, permitting, record retention, violations, and variances. This may include revising a floodplain ordinance when the community is getting new Flood Insurance Rate Maps (FIRMs), updating a floodplain ordinance to include floodplain setbacks, freeboard, or other higher standards, RiskMAP public noticing requirements, or correcting issues identified in a Corrective Action Plan.

Project Grants and Loans (Check All that Apply – Hybrid Solutions will include items from both the “Nature-Based” and “Other” categories)

Nature-based solutions

- ☐ Acquisition of property (or interests therein) and/or structures for purposes of allowing floodwater inundation, strategic retreat of existing land uses from areas vulnerable to flooding; the conservation or enhancement of natural flood resilience resources; or acquisition of structures, provided the acquired property will be protected in perpetuity from further development, and where the flood mitigation benefits will be achieved as a part of the same project as the property acquisition.
- ☐ Wetland restoration.
- ☐ Floodplain restoration.
- ☐ Construction of swales and settling ponds.

- ☐ Living shorelines and vegetated buffers.
- ☐ Permanent conservation of undeveloped lands identified as having flood resilience value by *ConserveVirginia* Floodplain and Flooding Resilience layer or a similar data driven analytic tool, or the acquisition of developed land for future conservation.
- ☐ Dam removal.
- ☐ Stream bank restoration or stabilization.
- ☐ Restoration of floodplains to natural and beneficial function.

Other Projects

- ☐ Developing flood warning and response systems, which may include gauge installation, to notify residents of potential emergency flooding events.
- ☐ Dam restoration.
- ☐ Beneficial reuse of dredge materials for flood mitigation purposes
- ☐ Removal or relocation of structures from flood-prone areas where the land will not be returned to open space.
- ☐ Structural floodwalls, levees, berms, flood gates, structural conveyances.
- ☐ Storm water system upgrades.
- ☐ Medium and large-scale Low Impact Development (LID) in urban areas.
- ☐ Acquisition of property (or interests therein) and/or structures for purposes of allowing floodwater inundation, strategic retreat of existing land uses from areas vulnerable to flooding; the conservation or enhancement of natural flood resilience resources; or acquisition of structures, provided the acquired property will be protected in perpetuity from further development, and where the flood mitigation benefits will not be achieved as a part of the same project as the property acquisition.
- ☐ Other project identified in a DCR-approved Resilience Plan.

Location of Project or Activity (Include Maps): Spotsylvania County

NFIP Community Identification Number (CID#): 510308

Is Project Located in an NFIP Participating Community? ☒ Yes ☐ No

Is Project Located in a Special Flood Hazard Area? ☒ Yes ☐ No

Flood Zone(s) (If Applicable): A, AE, Floodways

Flood Insurance Rate Map Number(s) (If Applicable): See Attached List

Total Cost of Project: \$115,000

Total Amount Requested \$86,250

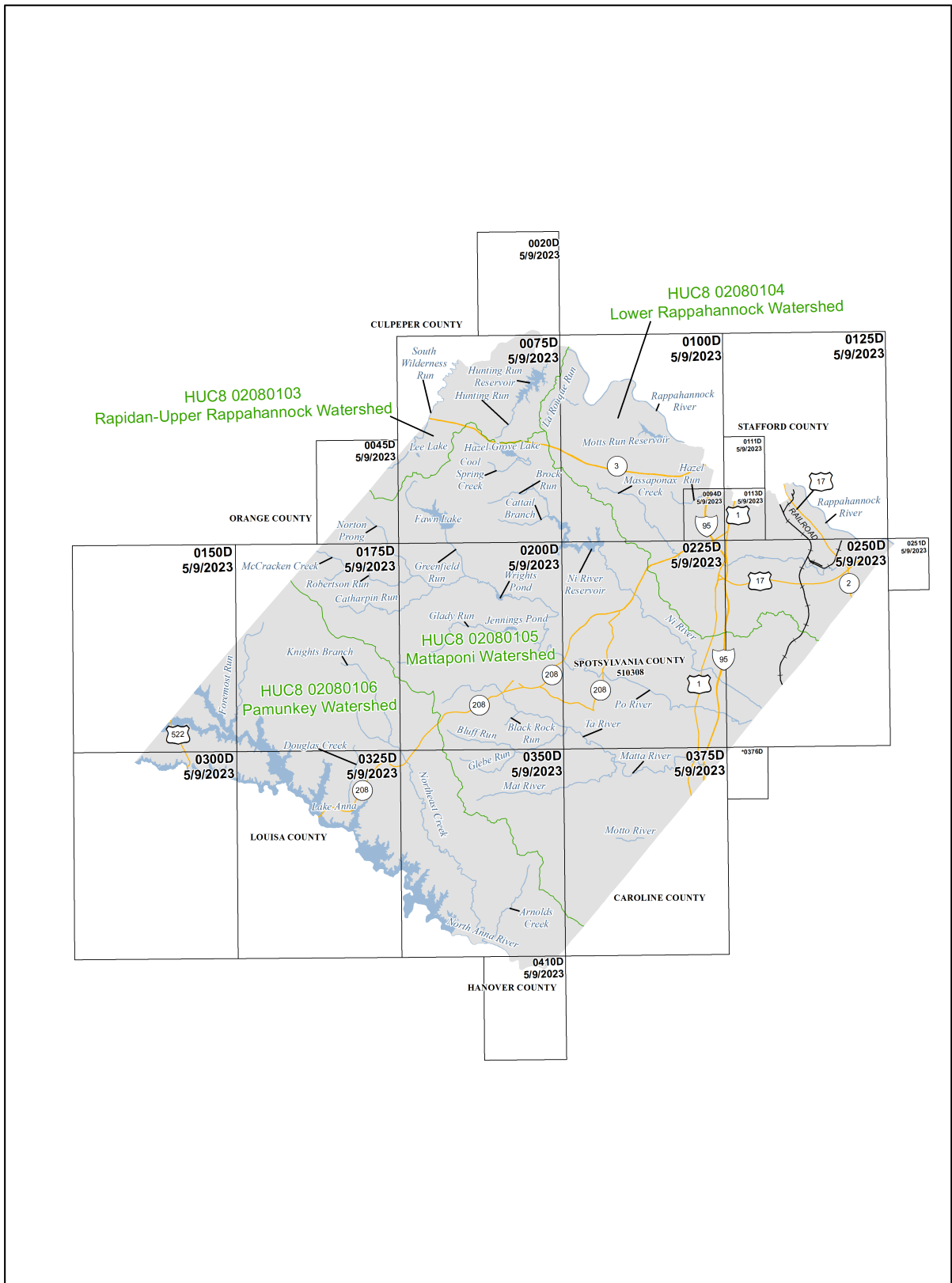
Amount Requested as Grant \$86,250

Amount Requested as Project Loan (Long-Term, not including short-term loans for up-front costs)
\$0

RVRF Loan Amount Requested as Project Match (Not including short-term loans for up-front costs)
\$0

Amount Requested as Short-Term loan for Up-Front Costs (not to exceed 20% of amount requested as Grant) \$0

For projects, planning, capacity building, and studies in low-income geographic areas: Are you requesting that match be waived? ☐ Yes ☒ No



1 inch = 20,833 feet 1:250,000
 0 6,000 12,000 24,000 36,000 48,000 feet
 Map Projection:
 State Plane Virginia North FIPS 4501 Feet;
 North American Datum 1983

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING
 DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT
[HTTPS://MSC.FEMA.GOV](https://MSC.FEMA.GOV)

SEE FLOOD INSURANCE STUDY FOR ADDITIONAL INFORMATION
 *PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS

COUNTY LOCATOR



NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP INDEX

SPOTSYLVANIA COUNTY, VIRGINIA (All Jurisdictions)

PANELS PRINTED:
 0020, 0045, 0075, 0094, 0100, 0111, 0113, 0125, 0150, 0175,
 0200, 0225, 0250, 0251, 0300, 0325, 0350, 0375, 0410



FEMA

MAP NUMBER
 51177CIND0A

EFFECTIVE DATE
 MAY 9, 2023

Flood Insurance Rate Map for Spotsylvania County Virginia

The list of the panel numbers included on the National Flood Insurance Rate Map for Spotsylvania County include:

51177C0020D

51177C0045D

51177C0075D

51177C0094D

51177C0100D

51177C0111D

51177C0113D

51177C0125D

51177C0150D

51177C0175D

51177C0200D

51177C0225D

51177C0250D

51177C0300D

51177C0325D

51177C0350D

51177C0375D

51177C0410D

Spotsylvania County Flood Resilience Plan and Capacity Building

Scope of Work Narrative

Spotsylvania County, established in 1721, has played a key role in Virginia's history, from early colonial settlements and industries like ironworks and cannon forging to significant Civil War battles, including Wilderness, Chancellorsville, and Spotsylvania Courthouse. Spanning about 414 square miles, it has rapidly grown as a suburban extension of Fredericksburg and the Washington, D.C. metro area. The county's location along major transportation routes, such as Interstate 95, U.S. Route 1, and Route 17 (a key hurricane evacuation route), makes it a critical part of the East Coast infrastructure.

However, the county faces growing flood risks and drainage issues. Aging or inadequate stormwater systems, particularly in older neighborhoods, combined with increasing impervious surfaces due to urbanization, have amplified the county's vulnerability. As noted in Figure 1, the county has added 6,533.7 impervious acres since 2001. The nearby Rappahannock and York Rivers and their tributaries compound these flood challenges, threatening existing and future infrastructure as well as private property. Heavy rainfall events often lead to flooding and drainage issues, posing risks to life, property, ecosystems, and water quality.

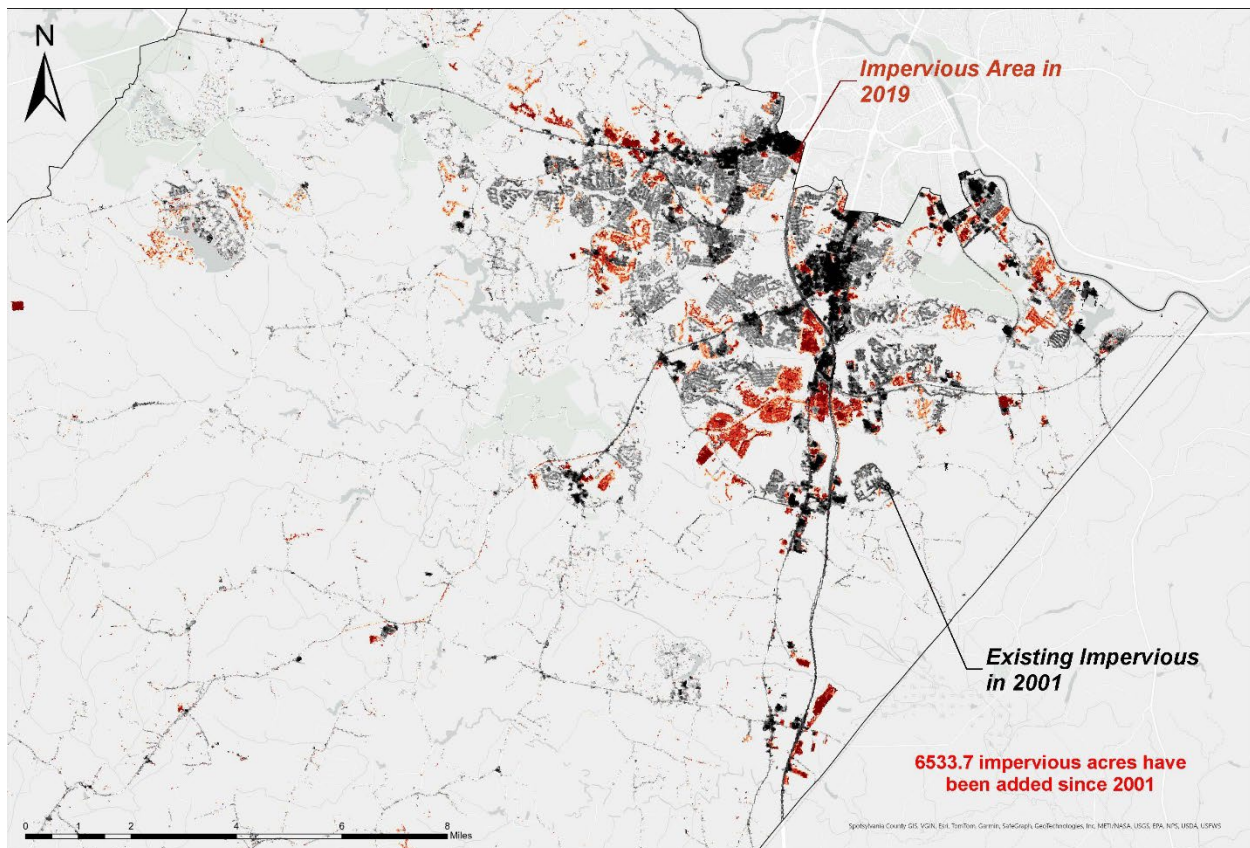


Figure 1. Change in Imperviousness from 2001 to 2019 in Spotsylvania County

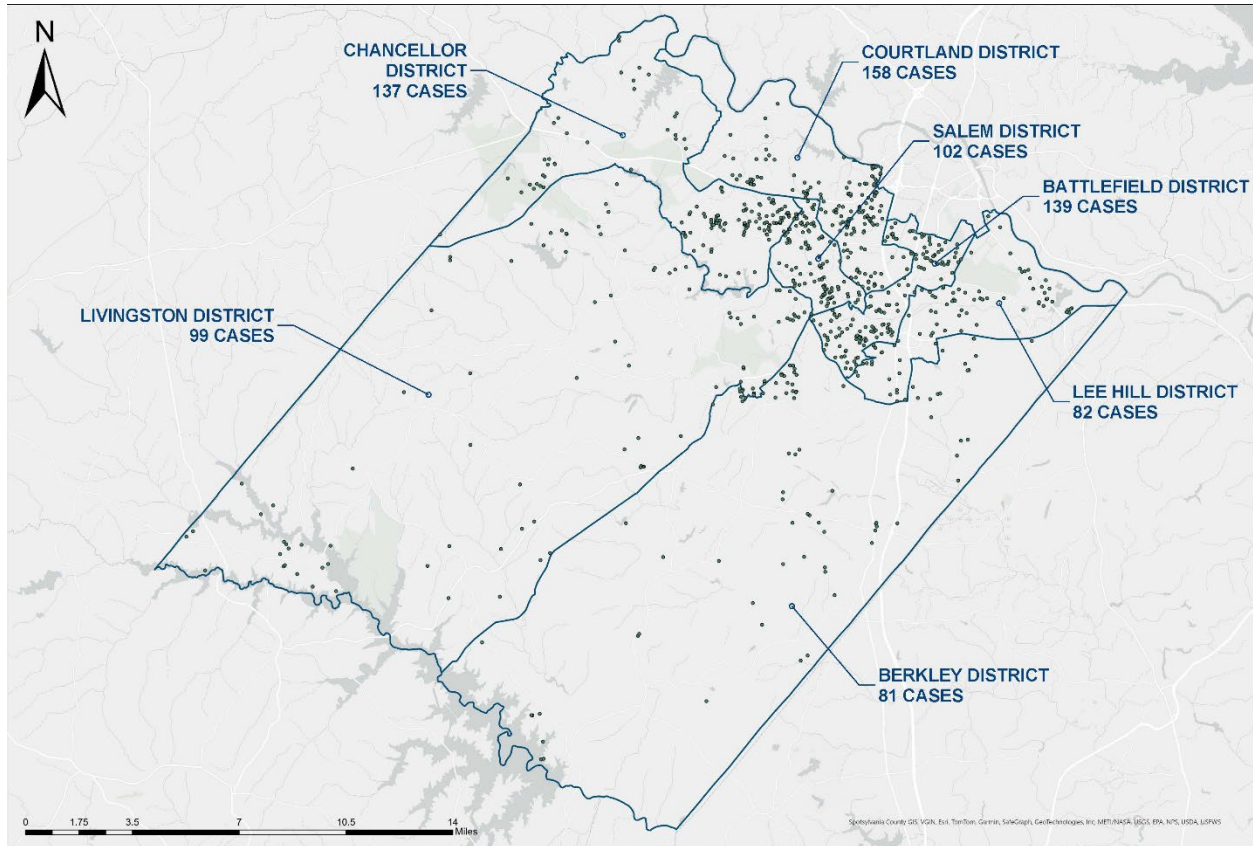


Figure 2. Flooding and Drainage complaints from 2008 to 2024

To address these challenges, developing a comprehensive Flood Resilience Plan is crucial. This plan will help manage flooding risks while protecting infrastructure, residents, and natural resources in the face of increasing flood threats.

Flood Resilience Plan & Capacity Building Objectives

The Flood Resilience Plan aims to reduce property damage, economic losses, and threats to public safety by enhancing flood management practices and protecting key wetlands and floodplains, which play a crucial role in managing floodwaters. It supports the County's participation in FEMA's Community Rating System (CRS), potentially lowering flood insurance premiums for residents. The plan also emphasizes the protection of vulnerable populations, critical infrastructure, and natural resources, including waterways and habitats.

Implementing the Flood Resilience Plan will safeguard neighborhoods, businesses, and infrastructure from flood risks while minimizing property loss, environmental damage, and injury. Without this proactive approach, the County risks escalating flood damage costs and missing

opportunities to enhance resilience. Long-term protection measures can significantly reduce the impacts of future floods, ensuring that the County is prepared for increasingly frequent and severe flood events.

The plan promotes strategic action to prevent significant damage, focusing on protecting vulnerable populations and minimizing disaster-related costs. It also positions the County to secure future grant funding, including from the State's Community Flood Preparedness Fund (CFPF), which supports flood mitigation projects, nature-based solutions, and equitable protection for all residents.

The Flood Resilience Plan outlines specific objectives, including capacity-building initiatives, vulnerability assessments, and prioritization of high-risk areas. It builds on previous planning efforts, such as the Spotsylvania County Comprehensive Plan (2021, amended in 2024) and the GWRC Regional Hazard Mitigation Plan (2023), while providing more targeted and detailed strategies for flood risk reduction.

Additionally, the plan will include a watershed engineering study to:

- Identify necessary policy and program changes for the County government.
- Address gaps in flood mitigation project planning.
- Recommend projects based on best practices, particularly nature-based solutions.
- Assess climate change impacts and integrate them into policy and project recommendations.

By implementing this Flood Resilience Plan, Spotsylvania County will strengthen its ability to manage flood risks, protect residents and infrastructure, and adopt a sustainable, long-term approach to flood resilience.

Capacity building will play a central role in this effort, ensuring that the County has the knowledge and resources necessary to safeguard its communities for years to come and is essential for strengthening the County's ability to manage flood risks. It includes funding to enhance staff expertise in stormwater compliance, flood risk analysis, and long-term planning efforts. This will ensure that the County is better equipped to anticipate, prepare for, and respond to future flood events. Strengthening internal capabilities is critical for the successful implementation of resilience strategies, allowing the County to address current challenges and future risks more effectively.

Goals and Implementation

Goal 1: Develop and Adopt a Resilience Plan for Spotsylvania County

- Hire a third-party consultant within two months of award to draft the targeted resilience plan.
- The consultant will produce a draft resilience plan within 14 months of the award, based on existing resources discussions with the County, and public workshops.

- The resilience plan will meet minimum requirements outlined in Appendix F of the 2024 Funding Manual for the Virginia Community Flood Preparedness Fund.
- The plan will adopt a community-wide approach, identifying economic impacts, critical assets at risk, and communities facing forced migration.
- The plan will incorporate relevant data and segments from other regional and county plans.
- The County will seek confirmation from the Virginia Department of Conservation and Recreation (DCR) that the draft plan meets minimum requirements within two months of its development.
- The Resilience Plan will be presented to the Board of Supervisors for approval within two months of finalizing revisions as needed.
- Following adoption, the County will seek official certification of the resilience plan by submitting it to the DCR.
- The Resilience Plan will be incorporated into the 2026 update for the comprehensive plan.

Goal 2: Build Regional Resilience Capacity through Training and Education

- Certify additional County staff member in floodplain management through the Association of State Floodplain Managers within 24 months of the CFPPF award.
- Train County staff in stormwater management, including inspection and decision making as courses become available from the Virginia Department of Environmental Quality (DEQ), FEMA, NPDES, and/or NASSCO and are feasible to attend.
- Engage and educate Spotsylvania community members and neighboring localities experiencing flooding through public meetings, providing information on available resources and training facilitated by the State.

Flood Resilience Plan Overview

The primary goal of the Flood Resilience Plan is to reduce flood risks and enhance Spotsylvania County's ability to manage future flooding through an integrated, sustainable approach. This involves improving the County's CRS standing to lower flood insurance premiums and identifying areas for public outreach and green space planning to mitigate flood impacts.

Spotsylvania County is committed to promoting the health, safety, and welfare of its citizens with a proactive and equitable approach to flood risk management. Core components will guide the planning efforts:

Key Plan Components

- **Assess Vulnerability:** Utilize floodplain mapping and climate projections to identify at-risk areas, including neighborhoods and critical infrastructure.
- **Prioritize Projects:** Highlight specific flood mitigation efforts, such as upgrading stormwater systems and restoring wetlands.
- **Secure Funding:** Serve as a foundation for state and federal grants, demonstrating the County's commitment to proactive flood risk reduction.

- **Ensure Regulatory Compliance:** Align local ordinances with state and federal floodplain management regulations.
- **Engage the Community:** Promote flood risk awareness and emergency preparedness to ensure community involvement.
- **Prepare for Climate Change:** Integrate flood risk management into broader environmental and urban planning for long-term resilience.

Strategies for Implementation

1. **Community Rating System (CRS):** Pursue County participation in the Community Rating System. Participation reduces flood insurance costs and raises awareness of flood hazards.
2. **Stormwater Management:** Conduct a Stormwater Management Study to guide cost-effective solutions. Seek funding for site-specific hydrologic studies in areas with chronic flooding.
3. **Watershed Planning:** Develop a watershed plan to achieve effective flood protection and a healthy river environment.
4. **Flood Insurance Awareness:** Encourage community engagement with the National Flood Insurance Program (NFIP) to increase coverage among structures in flood-prone areas.
5. **Disaster Impact Reduction:** Create programs for elevating, relocating, or retrofitting flood-prone homes, prioritizing repetitive loss properties.
6. **Utility Protection:** Evaluate and implement retrofitting measures to prevent service disruptions during disasters.
7. **Storm Drainage Improvement:** Support projects that enhance drainage systems and develop regular maintenance protocols.

This strategic approach will enable Spotsylvania County to proactively address flood hazards, safeguarding its residents, infrastructure, and natural resources.

Work Plan

Major activities and tasks are described above within the list of measurable objectives, as tied to each goal. Major tasks will include:

1. Select and hire third-party consultant to draft resilience plan; third-party consultants are already under review that can develop a flood resilience plan for the County;
2. Review draft resilience plan and provide feedback;
3. Review final resilience plan following incorporation of edits/feedback;
4. Present final resilience plan for adoption to the Spotsylvania County Board of Supervisors; and
5. Train staff in floodplain management and stormwater management.

During the development of the Flood Resilience Plan, various local plans and studies can be utilized including:

- Local planning documents (e.g., floodplain management ordinances, land use plans)
- George Washington Regional Commission Hazard Mitigation Plan
- Technical information from local, state, and federal sources (e.g., US Army Corps data, FEMA Flood Insurance Rate Maps, US Fish and Wildlife)
- Regional plans (e.g., economic development, environmental)

The initial step involves conducting GIS analysis to evaluate the County's current flood risks. This includes collecting and analyzing data on precipitation patterns, water flow, and floodplain extents to identify the most vulnerable areas. This process will enhance the understanding of existing flood risks while building County staff capacity through training on stormwater management and floodplain management. By building institutional knowledge, the County will achieve its flood resilience goals while fulfilling the requirements of the CRS program.

The next phase focuses on developing a community flood resilience strategy. This will engage stakeholders—residents, businesses, and local agencies—through workshops and public meetings to gather input on flood risks and mitigation strategies. The plan will emphasize nature-based solutions, such as floodplain restoration, green infrastructure, and improved stormwater management systems, fostering collaborative and inclusive flood resilience management.

The resilience plan created through the proposed activities will be integrated into the next Spotsylvania County Comprehensive Plan. Once completed, no further support is expected for its initial development. The County will use the plan for future grant applications and project proposals over the next three years, in line with the 2024 CFPF Manual. Additionally, the resilience plan will serve as a key resource for managing flood mitigation, preparedness, and resilience efforts.

All grant activities, including staff training, will be completed within 24 months of CFPF award. The targeted resilience plan will be finalized and adopted by the County within 24 months of CFPF award.

Evaluation

The success of the Flood Resilience Plan will be assessed through several key indicators:

1. **Adoption of the Plan:** The County Board's endorsement of the Flood Resilience Plan will mark a crucial milestone for its implementation.
2. **Training Outcomes:** Relevant County staff should demonstrate proficiency in flood risk management and/or stormwater management to indicate successful training.
3. **Reduction in Flood-Related Damages:** A long-term goal, would include a decline in insurance claims and property damage reports in vulnerable areas that will indicate the effectiveness of the plan and project implementation.

The plan will identify the highest flooding risks in the County, enabling project prioritization and future risk evaluations. It will also review existing hazard monitoring capabilities and identify potential improvements.

Once project recommendations are finalized, the County will pursue future funding opportunities for implementation. Possible funding sources include:

- Community Flood Preparedness Fund (CFPF)
- Local, state, and federal grant opportunities
- Infrastructure development funds

By continuously evaluating the Flood Resilience Plan's performance and securing funding for priority projects, Spotsylvania County will enhance its resilience to flooding, fostering safer and more sustainable communities for its residents.

Assess Capacity and Planning Needs

Spotsylvania County currently lacks the funds and capacity for resiliency planning, despite its vulnerability to flood hazards, limiting its ability to apply for resilience project funding. This proposal addresses these gaps by requesting funds to (1) provide training for existing staff in floodplain management, enabling the County to access future funding for project implementation and justify future capacity growth; and (2) hire a consultant to develop and draft a local resilience plan.

The proposed activities aim to enhance staff capabilities through training and expert consultation, focusing on drafting the resilience plan. While no permanent staff will be hired under this proposal, the activities will position the County to secure additional funding for future personnel hires and project implementation.

The Flood Resilience Plan connects to policy management and development by addressing the county's growing flood risks and the need for proactive measures to protect infrastructure, residents, and the environment. This plan will result in new policies and updates to existing ones, particularly by integrating flood mitigation strategies into the County's Comprehensive Plan. It will also ensure alignment with state and federal regulations, such as CFPF and CRS, which are essential for accessing funding and ensuring compliance.

By building internal capacity through staff training in floodplain management and stormwater compliance, the plan strengthens the County's ability to enforce these policies and become more resilient to future floods. It identifies gaps in current policies and infrastructure, such as the need for improved stormwater systems, and prioritizes high-risk areas and vulnerable populations.

Stakeholders include local government officials, residents, businesses, and state and federal agencies. Local officials, such as the Board of Supervisors, play a critical role in developing and implementing policies. Residents and businesses, especially those in flood-prone areas, will be directly affected by these policies and are essential in shaping them through public engagement.

Outreach and education are vital to this process. Public workshops and meetings will inform residents and businesses about flood risks and preparedness, while also allowing community input to ensure policies reflect local concerns. The County can enhance engagement by distributing

educational materials through newsletters and social media, ensuring residents are informed about flood resilience efforts.

Appendix B: Budget Narrative Template

<div style="display: flex; justify-content: space-between;"> <div> <p>Applicant Name: Community Flood Preparedness Fund & Resilient Virginia Revolving Loan Fund Detailed Budget Narrative</p> </div> <div> <p>Spotsylvania County</p> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <p>Period of Performance: <u>March 2025</u> through <u>February 2027</u></p> <p>Submission Date: <u>01/24/2025</u></p> </div>									
Grand Total State Funding Request									\$ 86,250
Grand Total Local Share of Project									\$ 28,750
Federal Funding (if applicable)									\$ 0
Project Grand Total									\$ 115,000
Locality Cost Match									% 25
Breakout By Cost Type	Personnel	Fringe	Travel	Equipment	Supplies	Contracts	Indirect Costs	Other Costs	Total
Federal Share (if applicable)									
Local Share	\$10,000 in-kind		\$750 cash			\$18,000 cash			\$28,750
State Share – CFPF Grant			\$4,250			\$82,000			\$86,250
State Share – RVRF Match Loan									
Pre-Award/Startup									
Maintenance									
Total	\$ 10,000	\$	\$ 5,000	\$	\$	\$ 100,000	\$	\$	\$ 115,000

Spotsylvania County Flood Resilience Plan and Capacity Building

Project Budget Narrative

Estimated total project cost

The total estimated cost for Spotsylvania County's Flood Resilience Plan and Capacity Building project is \$115,000. The County is respectfully requesting \$86,250, or 75% of the total project costs, from the Community Flood Preparedness Fund. The County will provide the remaining \$28,750, or 25% of the total project costs. The County's contribution will consist of \$18,750 in cash and \$10,000 as an in-kind contribution from County staff who will provide direct and documented support to the project.

Amount of funds requested from the Fund:

Spotsylvania County is respectfully requesting \$86,250, or 75% of the total project costs, from the Community Flood Preparedness Fund. A breakdown of the project scope and funding sources is as follows:

Project Scope	Community Flood Preparedness Fund	Local Match – Cash	Local Cash – In Kind Contribution	Total Costs
Develop and adopt a resilience plan for the County. The primary goal of the Flood Resilience Plan is to reduce flood risks and enhance the County's ability to manage future flooding through an integrated, sustainable approach. If awarded, Spotsylvania County will hire a third-party contractor to develop the plan. A detailed Professional Services Agreement is attached which breaks out the proposed scope, task, and fees associated with the development of the resilience plan.	\$82,000	\$18,000	\$0	\$100,000
Build regional resilience capacity through training and education for Spotsylvania County staff. Although the exact trainings and location have yet to be identified, the \$5,000 will be used over the two year award period towards the registration, enrollment, travel, lodging, and per diem associated with certifying additional County staff	\$4,250	\$750	\$0	\$5,000

members in floodplain management through the Association of State Floodplain Managers, and training County staff in stormwater management, including inspection and decision making as courses become available from the Virginia Department of Environmental Quality (DEQ), FEMA, NPDES, and/or NASSCO.				
An in-kind contribution from Spotsylvania County staff members from Environmental Codes, Zoning, and Planning. These personnel will provide direct and documented support to the proposed flood resilience plan and capacity building project. Examples of some of the tasks that County employees will perform in support of this project include: -Attend trainings to increase the knowledge, skills, and abilities of County staff as related to flood resiliency, -Mapping and data analysis, -Resilience plan review and coordination with the contractor, and -Participate in community engagement activities.	\$0	\$0	\$10,000	\$10,000
TOTAL	\$86,250	\$18,750	\$10,000	\$115,000

Amount of funding available:

Spotsylvania County will contribute \$28,750, or 25% of the total project costs. This local match will consist of:

- \$18,750 in cash which may come from departmental savings, fund balance, and/or a request for use of the County's contingency funds; and
- \$10,000 as an in-kind contribution for County personnel who will provide direct and documented support to the grant.

Authorization to request for funding:

Included as an attachment to this document is a signed Spotsylvania County Board of Supervisors Resolution which authorizes the request to apply for funding from the Community Flood Preparedness Fund, an acknowledgment of the County's local match requirement, and the

Authorized Organizational Representative designation for several County employees any of whom may act in the execution and submission of this grant agreement.



SHORT FORM CONTRACT PROFESSIONAL SERVICES AGREEMENT

CLIENT:	Spotsylvania County	DATE:	January 24, 2025
ADDRESS:	9019 Old Battlefield Blvd – First Floor Spotsylvania, VA 22553	VIA EMAIL:	djohnson@spotsylvania.va.us.
ATTN:	Deona Johnson	PROJECT NAME:	Resilience Plan
		WSSI PROPOSAL #:	25828

Wetland Studies and Solutions Inc. (WSSI) is pleased to provide this proposal for services related to the development of a Resilience Plan. Based on our initial communication, it is WSSI's understanding that Spotsylvania County (or County) wants to develop a Resilience Plan (Plan) to better address community flooding issues. The Plan is intended to serve as a planning level document aimed at reducing impacts to properties and community assets. The Plan will include the five Commonwealth Planning Principles established by the Virginia Coastal Resiliency Master Planning framework and the following elements required by Appendix G of the Virginia Department of Conservation and Recreation (DCR) 2022 Grant Manual for the Virginia Community Flood Preparedness Fund:

- 1) The Plan will be study/project-based with projects focused on flood control and resilience.
- 2) The Plan will incorporate nature-based infrastructure to the maximum extent possible.
- 3) The Plan will include considerations of all parts of the County regardless of socioeconomics or race.
- 4) The Plan will include coordination with other local inter-jurisdictional projects, plans and activities and will clearly articulate a timeline and phasing for plan implementation.
- 5) The Plan will be based on the best available science and will incorporate climate change and current flood maps.
- 6) The Plan may also identify additional studies, assessments, regulatory or programmatic adjustments that may be needed for the County to reach its identified resiliency goals.

SCOPE AND FEE

The focus of this project is to work closely with the County to develop a Resilience Plan to act as a framework document for future efforts related to repetitive flooding, flood preparedness and resilience with a focus on the County's floodplains, current and planned gray and green infrastructure, and stormwater management. This planning effort will be guided by social equity data and principles. The total fixed fee for the services below is **\$100,000**.

Task A – Project Management

Hourly, Not to exceed

\$ 14,000.00

Project Management will include the following:

- 1) Project coordination, meeting administration, and documentation will be facilitated by WSSI in coordination with County staff.
- 2) It is anticipated that one (1) hour virtual monthly steering committee meetings will be held during the duration of the project, which is anticipated to be approximately nine (9) months. WSSI will prepare an agenda for each meeting, provide verbal progress updates, and take meeting minutes that will be shared with the steering committee within one week of the meeting.

- 3) Strategic partners identified in steering committee meetings will be engaged as necessary throughout the plan development process. Participation and feedback from multiple County staff is assumed and critical in building a robust Plan.
- 4) General project support will be provided throughout the plan development process.

Deliverables: Agendas, meeting minutes, invoices

<u>Task B –GIS Desktop Analysis</u>	Fixed Fee of	\$ 10,000.00
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WSSI will use available local GIS shapefile data and aerial imagery to develop county-wide base mapping to help stakeholders identify high priority areas relating to issues as outlined below. The GIS Desktop Analysis may include, but is not limited to the following:

- Social/Economical Vulnerable Areas
- High Risk Flooding Areas and FEMA Flood Insurance Rate Maps
- Critical Infrastructure Location
- Existing Historical Resources
- Environmentally Critical Areas
- Other Environmental Data: Soils, Hydrology, Slope, Watershed Delineation, Imperviousness and Existing Land Cover
- Existing and Approved Resilience Efforts
- Utility Easements and Right-of-Ways
- Property Ownership

Based on the above desktop analysis, WSSI GIS staff will develop a suite of maps for use in stakeholder meetings and discussions and for use/inclusion in the Resilience Plan document to aid in visualizing critical data.

Deliverables: Maps and figures

<u>Task C – Literature Review/Gap Analysis</u>	Fixed Fee of	\$ 21,000.00
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The literature review and gap analysis will proceed as follows:

- 1) Review existing locality documents regarding stormwater, floodplains, resilience, and comprehensive planning and identify elements that can be incorporated into the County's Resilience Plan. Documents that shall be provided by locality staff for analysis may include, but are not limited to the following:
 - Historical Flood Data
 - Historical Watershed Studies
 - Masterplans
 - Floodplain Ordinances
 - Historical and Proposed Drainage Projects
 - Site Specific Drainage Studies
 - TMDL Action Plans
- 2) Review relevant climate change science and social equity literature with a focus on flooding policies, strategies, and solutions.
- 3) Analyze flood resilience plans from other similar municipalities and identify concepts and elements that can be considered for the County's Resilience Plan.
- 4) Conduct a gap analysis to determine areas to focus the development of the County's Resilience Plan and identify potential studies and projects that would increase the County's resilience.

Deliverables: Summary of existing documents/data, gap analysis narrative (both elements of overall Plan)

Task D – Community Education & Engagement **Hourly, Not to exceed** **\$ 15,000.00**

WSSI will work with the County to garner community feedback through a two-phase effort. Phase I will consist of working with County staff to identify key stakeholder groups and an outreach format that is both inclusive and equitable. We will assist County staff in posting pertinent resilience information online and/or through developing one (1) mailing/flyer to educate the public and solicit feedback that will be incorporated into the draft Resilience Plan. WSSI will document feedback from the community and incorporate it into the Plan where appropriate. The first phase will also include presentation support and attendance at two (2) community meetings at different locations to allow for greater participation by local stakeholders. This scope assumes response to one (1) round of meeting comments, up to the allowable fee cap.

The second phase will focus on supporting placement of the draft Plan on the County website to solicit additional community feedback. The feedback will be used to drive resilience priorities in the Plan aimed at reducing flood impacts. This scope assumes response to one (1) round of community comments following posting of the draft Plan and an agreed upon comment period, up to the allowable fee cap.

Deliverables: Public meeting slides/materials, mailer content, comment responses

Task E – Resilience Plan Development **Fixed Fee of** **\$ 30,000.00**

The Resilience Plan will include the following:

- 1) WSSI will work with the steering committee and results of the first phase of community engagement to determine feasible options for flood resilience and understand community needs.
- 2) WSSI will identify climate change impacts/resilience issues facing the County based on concerns identified from the public and available data. The Plan will identify needs for additional data and future studies.
- 3) WSSI will assess current County programs as they relate to identified resilience issues (e.g., development regulations, floodplain management program). WSSI will recommend programmatic changes to position the County to better achieve resilience goals.
- 4) WSSI will work with the County to assess types of projects and studies to pursue to better understand system vulnerabilities, enhance flood control, and build resilience. Both green/grey infrastructure and nature-based projects will be considered and presented in the Plan.
- 5) A draft Plan and overall summary map will be prepared for County review. This draft will be placed on the County's website during the second phase of community engagement to garner feedback from the community. After a defined comment period, WSSI staff will compile, review, and respond to one (1) round of public comments, as well as any preliminary feedback from VA DCR staff.
- 6) A final Plan will be prepared and delivered to the County based on community feedback.

Deliverables: Draft and Final County Resilience Plan

Task F – Miscellaneous Task

Hourly, Not to Exceed **\$ 8,000.00**

This is an as-needed hourly task as the budget allows for additional adjustments or requests from the County. Items could include, but are not limited to, additional analyses, additional projects, supplemental data collection, or other related activities necessary to support the development of the Resilience Plan.

Task G – Reimbursable Expenses **Fixed Fee of** **\$ 2,000.00**

ASSUMPTIONS

- ❖ County/locality staff will make relevant digital data (GIS) available for use/analysis.
- ❖ County/locality staff will assist in compiling relevant existing plans, studies, and ordinances.
- ❖ WSSI staff will provide technical assistance and presentation support for public meetings, but will rely on locality staff for public outreach coordination/communication and meeting logistics (scheduling and location planning).
- ❖ County/locality staff are expected to provide input throughout the Plan development process to include information during the literature review, community engagement support, Plan development support and participation on the steering committee.
- ❖ Specialty engineering support services such as field work, site survey, geotechnical, and modeling (e.g., floodplain) are not included in the project scope.
- ❖ The County will provide any necessary advertising.
- ❖ The County will coordinate the placement of the draft Plan on the County's website. In addition, the County will provide the means to announce the availability of the Plan to the public and devise the means for the public to provide comments.
- ❖ Based on available funds, WSSI will work with County staff to identify up to two high-priority projects. Additional project evaluations may be developed under a separate scope of work or require additional funding, following resilience plan approval.

PROJECT SCHEDULE

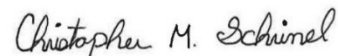
Work will begin upon a written notice to proceed and extend for a duration of approximately nine (9) months. An initial kick-off meeting with the County will begin within two (2) weeks of Notice to Proceed. Community engagement preparation will begin within one (1) month. The draft Plan will be available within eight (8) months of notice to proceed and provided for posting on the County's website within two (2) weeks of the draft submission to the County. The final Plan will be developed within nine (9) months of the notice to proceed.

The proposed price is fixed for 60 days. The work will be completed in accordance with the Professional Engineering Services Contract (#21-07-TV-08) between Spotsylvania County and WSSI or any newer contract and rates at the time of notice to proceed. If this short form contract outlines your understanding of the scope of services, please sign below and return a copy to our office.

Thank you for the opportunity to present this proposal.

Sincerely,

Wetland Studies and Solutions, Inc.



Chris Schrinel, PE
Manager – Engineering



Nathan A. Staley, PE, CFM, LEED AP, ENV SP
Manager – Engineering

ACCEPTANCE OF THIS PROPOSAL:

By signing below, you are creating a legal obligation between the client listed on this proposal and Wetland Studies and Solutions, Inc. (WSSI). This obligation cannot be transferred to a third party without prior written consent from both WSSI and the third party:

Signature

Date

L:\Proposals\2025\VA-Southwest\Spotsylvania County\Resilience Plan\Proposal\01232025P25828.docx

County of Spotsylvania
Founded 1721

Board of Supervisors
GERALD CHILDRESS
DEBORAH H. FRAZIER
LORI HAYES
JACOB LANE
KEVIN W. MARSHALL
DREW MULLINS
CHRIS YAKABOUSKI



County Administrator
ED PETROVITCH
Deputy County Administrator
MARK L. COLE
P. O BOX 99, SPOTSYLVANIA, VA 22553
Voice: (540) 507-7010
Fax: (540) 507-7019

Service, Integrity, Pride

At a meeting of the Spotsylvania County Board of Supervisors held on October 22, 2024, on a motion by Supervisor Hayes and passed unanimously, the Board adopted the resolution as follows:

RESOLUTION NO. 2024-141

**A RESOLUTION AUTHORIZING THE APPLICATION FOR THE DEPARTMENT OF
CONSERVATION AND RECREATION'S 2024 COMMUNITY FLOOD
PREPAREDNESS GRANT AND DESIGNATION OF AUTHORIZED
ORGANIZATIONAL REPRESENTATIVES**

WHEREAS, the Virginia Department of Conservation and Recreation is accepting grant applications for the 2024 Virginia Community Flood Preparedness Fund (CFPF); and

WHEREAS, this competitive state grant program provides funding in support of local efforts to help create and implement planning efforts to reduce the impacts of flooding; and

WHEREAS, Spotsylvania County is seeking to develop a resiliency plan to address flood resilience needs; and

WHEREAS, County staff would like to submit an application under this grant opportunity for the purpose of training and the development of a flood resiliency plan; and

WHEREAS, the grant application will seek \$86,250 in grant funds; and

WHEREAS, the County is required to provide a 25% local match requirement of the total project costs which is equivalent to \$28,750; and

WHEREAS, the County proposes to meet this local match requirement through a combination of \$10,000 in staff time and \$18,750 in cash.

NOW, THEREFORE, BE IT RESOLVED by the Spotsylvania County Board of Supervisors that Spotsylvania County submit a grant application under DCR's 2024 CFPF Program; and

BE IT FURTHER RESOLVED by the Spotsylvania County Board of Supervisors, that the following individuals are hereby designated as authorized organizational representatives any of whom may act in the execution and submission of the grant application: Ed Petrovitch, County

Administrator; Mark Cole, Deputy County Administrator; Wanda Parrish, Assistant County Administrator; Beckie Forry, Chief Financial Officer; Garland Miller, Deputy Chief Financial Officer; and Annette D'Alessandro, Grants Manager.

(SEAL)

A COPY TESTE:



Aimee R. Mann, MMC
Deputy Clerk to the Board of Supervisors

Footnotes:

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Editor's note— Ord. No. 23-96, adopted October 23, 2001, amended div. 2, §§ 23-7.2.1—23-7.2.17, in its entirety to read as herein set out. Formerly, div. 2 pertained to similar subject matter and derived from Ord. No. 23-66, adopted October 24, 1995; Ord. No. 23-76, adopted February 24, 1998.

Sec. 23-7.2.1. - Purpose and statutory authorization.

This Division is adopted pursuant to the authority granted to localities by Code of Virginia §15.2-2200, § 15.2-2283, and § 15.2-2280.

The purpose of these provisions is 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 flood protection and relief, and the impairment of the tax base by:

- (1) Regulating uses and development which, acting alone or in combination with other existing or future uses, activities, and development, will cause unacceptable increases in flood heights, velocities and frequencies;
- (2) Restricting or prohibiting certain uses and development from locating within areas subject to flooding;
- (3) Requiring all those uses, activities, and developments that do occur in flood-prone areas to be protected and/or floodproofed against flooding and flood damage;
- (4) Protecting individuals from buying lands and structures which are unsuited for intended purposes because of flood hazards.

(Ord. No. 23-96, 10-23-01; Ord. No. 23-184, § 1, 4-25-23)

Sec. 23-7.2.2. - Applicability and establishment of floodplain overlay district.

These provisions shall apply to all privately-owned and publicly-owned lands within the jurisdiction of the County of Spotsylvania and identified as areas of special flood hazard as shown on the flood insurance rate map (FIRM) or included in the flood insurance study (FIS) that are provided to the County by FEMA. The Board of Supervisors may designate areas as special flood hazard regardless of whether or not they are shown on the FIS or FIRMs.

The floodplain overlay district shall include all areas subject to inundation by waters of the base flood. The basis for the delineation of the district shall be the Flood Insurance Study (FIS) and the accompanying flood insurance rate maps for the County prepared by the Federal Emergency Management Agency, Federal Insurance Administration, dated May 9, 2023, and any subsequent revisions thereto.

(Ord. No. 23-96, 10-23-01; Ord. No. 23-184, § 1, 4-25-23)

Sec. 23-7.2.3. - Compliance; liability; records; enforcement.

- (a) No land shall hereafter be developed and no structure shall be located, relocated, reconstructed, enlarged, or structurally altered except in full compliance with the terms and provisions of this Division and any other applicable ordinances and regulations which apply to uses within the jurisdiction of this ordinance.
- (b) The degree of flood protection sought by the provisions of this Division is considered reasonable for regulatory purposes and is based on acceptable engineering methods of study, but does not imply total protection from flooding or flood events. Larger floods may occur on rare occasions. Flood heights may be increased by man-made or natural causes, such as ice jams and bridge openings restricted by debris. This Division does not imply that districts outside the floodplain district, or that land uses permitted within such district will be free from flooding or flood damages.
- (c) This Division shall not create liability on the part of Spotsylvania County, or any officer or employee thereof for any flood damages that result from reliance on this Division or any administrative decision lawfully made thereunder.
- (d) Records of actions associated with administering these regulations shall be kept on file and maintained in perpetuity by or under the direction of the Zoning Administrator.
- (e) Any person who fails to comply with any requirement or provision of this Division or direction of the Zoning Administrator or any authorized employee of the County shall be guilty of the appropriate violation and subject to the penalties thereof.

The Virginia Uniform Statewide Building Code addresses building code violations and the associated penalties in Section 104, 105, and 115. Violations and associated penalties of the County's Zoning Ordinance are addressed in Article 9 of the Zoning Ordinance.

In addition to the above penalties, all other actions are hereby reserved, including an action in equity for the enforcement of this Division. The imposition of a fine or a penalty for any violation of, or noncompliance with, this Division shall not excuse the violation or noncompliance or permit it to continue; and all such persons shall be required to correct or remedy such violations within a reasonable time. Any structure constructed, reconstructed, enlarged, altered or relocated in noncompliance with this Division may be declared by the County to be a public nuisance and abatable as such. Flood insurance may be withheld from structures constructed in violation of this Division.

(Ord. No. 23-96, 10-23-01; Ord. No. 23-184, § 1, 4-25-23)

Sec. 23-7.2.4. - Abrogation and severability.

To the extent that the provisions are more restrictive, this Division supersedes any ordinance currently in effect in flood-prone districts. To the extent that any other existing law or regulation is more restrictive or does not conflict, it shall remain in full force or effect.

These regulations are not intended to repeal or abrogate any existing ordinances including subdivision regulations, zoning ordinances, or building codes. In the event of a conflict between these regulations and any other regulation, ordinance, or code, the more restrictive shall govern.

If any section, subsection, paragraph, sentence, clause, or phrase of this Division shall be declared invalid for any reason whatever, such decisions shall not affect the remaining portions of this Division. The remaining portions shall remain in full force and effect; and for this purpose, the provisions of this Division are hereby declared to be severable.

(Ord. No. 23-96, 10-23-01; Ord. No. 23-184, § 1, 4-25-23)

Sec. 23-7.2.5. - Definitions.

For the purposes of this Division the words and terms below shall have the meanings ascribed to them in this section. Terms not otherwise defined herein shall have the meanings set forth in Article 2 of this Chapter.

Appurtenant or accessory structure means a non-residential structure which is on the same parcel of property as the principal structure and the use of which is incidental to the use of the principal structure. Accessory structures are not to exceed 600 square feet.

Base flood means a flood that has a statistical one percent (1%) chance of being equaled or exceeded in a given year. This term shall be synonymous with "100-year flood" and "1%-annual-chance flood".

Base flood elevation (BFE) means the water surface elevation(s) of the base flood is shown on or otherwise determined pursuant to the most current FIRM.

Basement means any area of the building having its floor subgrade (below ground level) on all sides.

Board of zoning appeals means a board appointed to review appeals made by individuals with regard to decisions of the zoning administrator in the interpretation of this division.

Chapter means Chapter 23, Zoning, of the Spotsylvania County Code of Ordinances.

Development means any man made change to improved or unimproved real estate, including but not limited to buildings or other structures (temporary and permanent), the placement of manufactured homes, streets, and other paving, utilities, filling, grading, excavation, mining, dredging, drilling operations, or other land-disturbing activities, or storage of equipment or materials (temporary or permanent). It shall not include exempt activities as set forth herein.

Division means Chapter 23 - Zoning, Article 7- Overlay District, Division 2 - Floodplain Overlay District, of the Spotsylvania County Code of Ordinances.

Elevated building means any building without a basement built to have the lowest floor elevated above the ground by means of solid perimeter walls, pilings, or columns (posts and piers).

Encroachment means the advance or infringement of development into a floodplain.

Existing construction means, for the purposes of the insurance program, structures for which the "start of construction" commenced before the effective date of the FIRM or before December 1, 1987 for FIRMs effective before that date. "Existing construction" may also be referred to as "existing structures" and "pre-FIRM".

Existing development means any lawful development which existed on or before the effective date of the most-current FIRM, and/or development which has been properly-permitted and for which construction has commenced on or before the effective date of the most-current FIRM.

FEMA means the Federal Emergency Management Agency.

Flood or flooding means

1. A general or temporary inundation of normally dry land area from:
 - a. The overflow of inland or tidal waters; and/or
 - b. The unusual and rapid accumulation or runoff of surface waters from any source.
 - c. Mudflows which are proximately caused by flooding as defined in paragraph (1)(b) of this definition and are akin to a liquid river of mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.
2. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in any of the above events.

Flood insurance rate map (FIRM) means the most recent official map prepared by the Federal Emergency Management Agency (FEMA) upon which has been delineated both the special hazard areas and risk premium zones applicable for the County of Spotsylvania. A FIRM that has been made available digitally is called a Digital Flood Insurance Rate Map (DFIRM).

Flood insurance study (FIS) means a report by FEMA that examines, evaluates, and determines flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation, and determination of mudflow and/or flood-related erosion hazards.

Floodplain or flood-prone area means any land susceptible to being inundated by water from any source.

Floodproofing means any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

Floodway means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot.

Freeboard means a factor of safety usually expressed in feet above a flood level for purposes of floodplain management.

Functionally-dependent use means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. This term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and shipbuilding and ship repair facilities, but does not include long-term storage or related manufacturing facilities.

Highest adjacent grade means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure

Historic structure means any structure in any of the following categories:

- 1.

Listed individually in the National Register of Historic Places (NRHP) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the NRHP;

2. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
3. Listed individually on the Virginia Landmarks Register (VLR); and/or
4. Included in and subject to any Historic Overlay District established pursuant to Article 7, Division 3 (Historic Overlay Districts) of this Chapter.

Hydrologic/Hydraulic engineering analysis means an analysis performed by a licensed professional engineer, in accordance with standard engineering practices that are accepted by the Virginia Department of Conservation and Recreation and FEMA, used to determine the base flood, other frequency floods, flood elevations, floodway information and boundaries, and flood profiles.

Letter of Map Change (LOMC) means an official written FEMA determination that amends or revises an effective FIRM or FIS. This term shall include:

1. *Letter of Map Amendment (LOMA)*: An amendment based on technical data showing that a property was incorrectly included in a designated special flood hazard area, and which amends the current effective FIRM and establishes that a land as defined by meets and bounds or structure is not located in a special flood hazard area.
2. *Letter of Map Revision (LOMR)*: A revision based on technical data that may show changes to flood zones, flood elevations, floodplain and floodway delineations, and planimetric features.
3. *Letter of Map Revision Based on Fill (LOMR-F)*: A determination that a structure or parcel of land has been elevated by fill, permitted and placed in accordance with applicable regulations of the County, above the base flood elevation and is, therefore, no longer exposed to flooding associated with the base flood.
4. *Conditional Letter of Map Revision (CLOMR)*: A formal review and comment as to whether a proposed flood protection project or other project complies with the minimum NFIP requirements for such projects with respect to delineation of special flood hazard areas, but does not revise the effective FIRM or FIS.

Lowest adjacent grade means the lowest natural elevation of the ground surface next to the walls of a structure.

Lowest floor means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood-resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor; provided, that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of Federal Code 44 CFR §60.3.

Manufactured home means a structure subject to federal regulation, which is transportable in one (1) or more sections; is eight (8) body feet or more in width and forty (40) or more body feet in length in the traveling mode, or is three hundred twenty (320) or more square feet when erected onsite; is built on a permanent chassis; is designed to be used as a single-family dwelling, with or without a permanent foundation, when connected to required utilities; and includes the plumbing, heating, air-conditioning, and electrical systems contained in the structure, as also set forth in Article 2 of this Chapter under *dwelling, manufactured home*.

Manufactured home park means any area fifteen (15) acres or more, however designated, that is occupied or designed for occupancy by one (1) or more manufactured homes, as also set forth in Article 2 of this Chapter, under *manufactured home park*.

Mean sea level means, for purposes of the National Flood Insurance Program, the datum to which base flood elevations shown on the County's FIRM are referenced.

New construction means, for the purposes of the National Flood Insurance Program, structures for which the start of construction commenced on or after December 1, 1987, including any subsequent improvements to said structures.

Post-FIRM structure means a structure for which construction or substantial improvement occurred on or after December 1, 1987.

Pre-FIRM structure means a structure for which construction or substantial improvement occurred before December 1, 1987.

Recreational vehicle means any vehicle which is built on a chassis; four hundred (400) square feet or less when measured at the largest horizontal projection; designed to be self-propelled or permanently towable by a light duty truck; and designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational camping, travel, or seasonal use; such use within the County for not more than 14 days in a 60 day period, see

Camping in Chapter 14, Article 1, Section 14-10.

Repetitive Loss Structure means a building covered by a contract for flood insurance that has incurred flood-related damages on two occasions in a ten (10) year period, in which the cost of the repair, on the average, equaled or exceeded twenty-five percent (25%) of the market value of the structure at the time of each flood event; and at the time of the second incidence of flood-related damage, the contract for flood insurance contains increased cost of compliance coverage.

Severe Repetitive Loss Structure means a structure that (a) is covered under a contract for flood insurance made available under the NFIP; and (b) has incurred flood-related damage - (i) for which four (4) or more separate claims payments have been made under flood insurance coverage with the amount of each such claim exceeding \$5,000, and with the cumulative amount of such claims payments exceeding \$20,000; or (ii) for which at least two (2) separate claims payments have been made under such coverage, with the cumulative amount of such claims exceeding the market value of the insured structure.

Shall means "must" or "will" and is mandatory as opposed to permissive.

Shallow flooding area means a special flood hazard area with base flood depths from one (1) to three (3) feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

Special flood hazard area (SFHA) means land in the floodplain subject to a one percent (1%) or greater chance of being flooded in any given year, and as regulated herein.

Start of construction means, for other than new construction and substantial improvement, the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, substantial improvement, or other improvement was within 180 days of the permit date. The actual start means either

the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of the construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Structure means, for floodplain management purposes, a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home.

Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed fifty percent (50%) of the market value of the structure before the damage occurred. Included in this term are flood-related damages sustained by a structure on two occasions in a ten (10)-year period, in which the cost of the repair, on the average, equals or exceeds twenty-five percent (25%) of the market value of the structure at the time of each such flood event.

Substantial improvement means any reconstruction, rehabilitation, addition, modification, alteration, repair or other improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage" regardless of the actual repair work performed. The term does not include either:

1. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the building official and which are the minimum necessary to assure safe living conditions, or
2. Any alteration of a "historic structure", provided that the alteration will not preclude the structures continued designation as a "historic structure".
3. Historic structures undergoing repair or rehabilitation that would constitute a substantial improvement as defined above must comply with all ordinance requirements that do not preclude the structure's continued designation as a historic structure. Documentation that a specific ordinance requirement will cause removal of the structure from the National Register of Historic Places or the State Historic Places must be obtained from the Secretary of the Interior or the State Historic Preservation Officer. Any exemption from ordinance requirements will be the minimum necessary to preserve the historic character and design of the structure.

Violation means the failure of a structure or other development to be fully compliant with the County's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in this ordinance is presumed to be in violation until such time as that documentation is provided.

Watercourse means a lake, river, creek, stream, wash, channel, or other topographic feature on or over which waters flow at least periodically. This term includes specifically designated areas in which substantial flood damage may occur.

Sec. 23-7.2.6. - Designation of the Floodplain Administrator.

- A. The Zoning Administrator serves as the Floodplain Administrator unless the Board of Supervisors appoints a different person or position. The Floodplain Administrator may
1. Delegate duties and responsibilities set forth herein to qualified technical personnel, plan examiners, inspectors, and other employees; and
 2. Enter into a written agreement or written contract with another community or private sector entity to administer specific provisions of this Division. Administration of any part of this Division by another entity shall not relieve the County of its responsibilities pursuant to the participation requirements of the National Flood Insurance Program as set forth in the Code of Federal Regulations at 44 CFR Section 59.22.
- B. The duties of the Floodplain Administrator shall include, but are not limited to:
1. Reviewing applications for permits to determine whether proposed activities will be located in the SFHAs.
 2. Interpreting floodplain boundaries and providing available base flood elevation and flood hazard information.
 3. Reviewing applications to determine whether proposed activities will be reasonably safe from flooding and requiring new construction and substantial improvements to meet the requirements of these regulations.
 4. Reviewing applications to determine whether all necessary permits have been obtained from the Federal, State, or local agencies from which prior or concurrent approval is required; in particular, permits from state agencies for any construction, reconstruction, repair, or alteration of a dam, reservoir, or waterway obstruction (including bridges, culverts, structures), any alteration of a watercourse, or any change of the course, current, or cross section of a stream or body of water, including any change to the 100-year frequency floodplain of free-flowing non-tidal waters of the State.
 5. Verifying that applicants proposing an alteration of a watercourse have notified adjacent communities, the Department of Conservation and Recreation (Division of Dam Safety and Floodplain Management), and other appropriate agencies (Virginia Department of Environmental Quality, U. S. Army Corps of Engineers), and have submitted copies of such notifications to FEMA.
 6. Advising applicants for new construction or substantial improvement of structures that are located within an area of Coastal Barrier Resources System established by the Coastal Barriers Resources Act that Federal flood insurance is not available on such structures; areas subject to this limitation are shown on Flood Insurance Rate Maps as Coastal Barrier Resource System Areas (CBRS) or Otherwise Restricted Areas (OPA).
 7. Approving applications and issuing permits to develop in flood hazard areas if the provisions of these regulations have been met, or disapproving applications if the provisions of these regulations have not been met.
 8. Inspecting or causing to be inspected, buildings, structures, and other development for which permits have been issued to determine compliance with these regulations or to determine if non-compliance has occurred or violations have been committed.

9. Reviewing elevation certificates prepared in accordance with FEMA standards and requiring incomplete or deficient certificates to be corrected.
10. Submitting to FEMA, or requiring applicants to submit to FEMA, data and information necessary to maintain FIRMs, including hydrologic and hydraulic engineering analyses prepared by or for Spotsylvania County within six (6) months after such data and information becomes available if the analyses indicate changes in base flood elevations.
11. Maintaining and permanently keeping records that are necessary for the administration of these regulations, including:
 - i. Flood Insurance Studies, Flood Insurance Rate Maps (including historic studies and maps and current effective studies and maps), and Letters of Map Change; and
 - ii. Documentation supporting issuance and denial of permits, elevation certificates, documentation of the elevation (in relation to the datum on the FIRM) to which structures have been floodproofed, inspection records, other required design certifications, variances, and records of enforcement actions taken to correct violations of these regulations.
12. Enforcing the provisions of these regulations, investigating violations, issuing notices of violations or stop work orders, and requiring permit holders to take corrective action.
13. Advising the Board of Zoning Appeals regarding the intent of these regulations and, for each application for a variance, preparing a staff report and recommendation.
14. Administering the requirements related to proposed work on existing buildings, including: making determinations as to whether buildings and structures that are located in flood hazard areas and that are damaged by any cause have been substantially damaged; making reasonable efforts to notify owners of substantially damaged structures of the need to obtain a permit to repair, rehabilitate, or reconstruct; and prohibiting the non-compliant repair of substantially damaged buildings except for temporary emergency protective measures necessary to secure a property or stabilize a building or structure to prevent additional damage.
15. Undertaking, as determined appropriate by the Floodplain Administrator due to the circumstances, other actions which may include but are not limited to: issuing press releases, public service announcements, and other public information materials related to permit requests and repair of damaged structures; coordinating with other Federal, State, and local agencies to assist with substantial damage determinations; providing owners of damaged structures information related to the proper repair of damaged structures in SFHAs; and assisting property owners with documentation necessary to file claims for Increased Cost of Compliance coverage under NFIP flood insurance policies.
16. Notifying FEMA when the corporate boundaries of Spotsylvania County have been modified, to include: providing a map that clearly delineates the new corporate boundaries or the new area for which the authority to regulate pursuant to these regulations has either been assumed or relinquished through annexation; and if the FIRM for any annexed area includes SFHAs that have flood zones that have regulatory requirements that are not set forth in these regulations, preparing amendments to these regulations to adopt the FIRM and appropriate requirements, and submitting the amendments to the

governing body for adoption such that adoption shall take place at the same time as or prior to the date of annexation and a copy of the amended regulations shall be provided to Department of Conservation and Recreation (Division of Dam Safety and Floodplain Management) and FEMA.

17. Upon the request of FEMA, completing and submitting a report concerning participation in the NFIP which may request information regarding the number of buildings in the SFHA, number of permits issued for development in the SFHA, and number of variances issued for development in the SFHA.
18. Taking into account flood, mudslide, and flood-related erosion hazards, to the extent that they are known, in all official actions relating to land management and use throughout the entire jurisdictional area of Spotsylvania County, whether or not those hazards have been specifically delineated geographically (e.g. via mapping or surveying).

(Ord. No. 23-96, 10-23-01; Ord. No. 23-184, § 1, 4-25-23)

Sec. 23-7.2.7. - Overlay concept.

The floodplain overlay district described in this Division is an overlay to the existing underlying zoning districts and shall be shown on or noted on the affected pages of the official zoning map by the Zoning Administrator and, as such, the provisions of the floodplain overlay district shall serve as a supplement to the underlying district provisions.

If there is any conflict between the provisions or requirements for the floodplain overlay district and those of any underlying district, the more restrictive provisions and/or those pertaining to the floodplain district apply.

In the event any provision concerning the floodplain overlay district is declared inapplicable as a result of any legislative or administrative actions of judicial decision, the basic underlying provisions shall remain applicable.

(Ord. No. 23-96, 10-23-01; Ord. No. 23-184, § 1, 4-25-23)

Sec. 23-7.2.8. - Official floodplain map, submitting model-backed technical data, and letters of map revision.

The floodplain overlay district shall include all areas subject to inundation by waters of the base flood. The basis for the delineation of the district shall be the Flood Insurance Study (FIS) and the accompanying flood insurance rate maps for the County prepared by the Federal Emergency Management Agency, Federal Insurance Administration, dated May 9, 2023, and any subsequent revisions thereto. The most recent flood insurance rate map, effective May 9, 2023, and any subsequent revisions thereto is declared to be part of this division and shall be kept on file in the office of the Zoning Administrator of the County.

The County's base flood elevations may increase or decrease resulting from physical changes affecting flood conditions. As soon as practicable, but not later than six (6) months after the date such information becomes available, the County shall notify FEMA of the changes by submitting technical or scientific data. The County may submit data via a LOMR. Such a submission is necessary so that upon confirmation of those physical changes affecting flood conditions, risk premium rates and floodplain management requirements will be based upon current data.

When development in the floodplain will cause or causes a change in the basic flood elevation, the applicant, including state agencies, must notify FEMA by applying for a Conditional Letter of Map Revision (CLOMR) and then a Letter of Map Revision (LOMR).

Sec. 23-7.2.9. - District boundary changes and interpretation.

The delineation of the general boundaries of the floodplain overlay district official map may be revised by the County when deemed appropriate where natural or man-made changes have occurred and/or more detailed studies conducted or undertaken by the U.S. Army Corps of Engineers or other qualified agency or an individual documents the need for such change. However, prior to any such changes approval must be obtained from the Federal Insurance Administration. A completed LOMR is a record of this approval.

Initial interpretations of the boundaries of the Floodplain Districts shall be made by the Zoning Administrator. Should a dispute arise concerning the boundaries of the District or zones, the Board of Zoning Appeals shall make the necessary determination. The person questioning or contesting the location of the District or zone boundary shall be given a reasonable opportunity to present his case to the Board of Zoning Appeals and to submit his own evidence if he so desires.

(Ord. No. 23-96, 10-23-01; Ord. No. 23-184, § 1, 4-25-23)

Sec. 23-7.2.10. - Use and interpretation of FIRMs.

The Floodplain Administrator shall make interpretations, where needed, as to the exact location of special flood hazard areas, floodplain boundaries, and floodway boundaries. The following shall apply to the use and interpretation of FIRMs and data:

- A. Where field-surveyed topography indicates that adjacent ground elevations are below the base flood elevation in the riverine SFHAs, or below the one percent (1%) storm surge elevation in coastal SFHAs, even in areas not delineated on a FIRM, the area shall be considered as a SFHA and subject to the requirements of this Division.
- B. Where field-surveyed topography indicates that adjacent ground elevations are above the base flood elevation, and the area is labeled as a SFHA on the FIRM, the area shall be regulated as a special flood hazard area unless the owner obtains a Letter of Map Change that removes the area from the SFHA.
- C. In FEMA-identified special flood hazard areas where base flood elevation and floodway data have not been identified and in areas where FEMA has not identified SFHAs, any other flood hazard data available from a Federal, State, or other source shall be reviewed and reasonably used.
- D. Base flood elevations and designated floodway boundaries on FIRMs and in FISs shall take precedence over base flood elevations and floodway boundaries by any other sources if such sources show reduced floodway widths and/or lower base flood elevations.
- E. Other sources of data shall be reasonably used if such sources show increased base flood elevations and/or larger floodway areas than are shown on FIRMs and in FISs.
- F. If a Preliminary Flood Insurance Rate Map and/or a Preliminary Flood Insurance Study has been provided by FEMA:
 - 1.

Upon the issuance of a Letter of Final Determination by FEMA, the preliminary flood hazard data shall be used and shall replace the flood hazard data previously provided from FEMA for the purposes of administering these regulations.

2. Prior to the issuance of a Letter of Final Determination by FEMA, the use of preliminary flood hazard data shall be deemed the best available data, and used where no base flood elevations and/or floodway areas are provided on the effective FIRM.
3. Prior to issuance of a Letter of Final Determination by FEMA, the use of preliminary flood hazard data is permitted where the preliminary base flood elevations or floodway areas exceed the base flood elevations and/or designated floodway widths in existing flood hazard data provided by FEMA. Such preliminary data may be subject to change and/or appeal to FEMA.

(Ord. No. 23-96, 10-23-01; Ord. No. 23-184, § 1, 4-25-23)

Sec. 23-7.2.11. - Description and basis of Special Flood Hazard districts; general requirements.

The various special flood hazard districts shall include the SFHAs. The basis for delineation of these districts shall be the FIS and the FIRM for the County prepared by the FEMA Federal Insurance Administration, dated May 9, 2023, and any subsequent revisions or amendments thereto.

The County may identify and regulate local flood hazard or ponding areas that are not delineated on the FIRM. These areas may be delineated on a "local Flood Hazard Map" using best available topographic data and locally derived information such as flood of record, historic high water marks, or approximate study methodologies.

The boundaries of the SFHA Districts are established as shown on the FIRM, which is declared to be a part of this Division and which shall be kept on file at the County offices.

- A. *The AE, AH, or A1-30 Zones* on the FIRM accompanying the FIS shall be those areas for which one-percent (1%) annual chance flood elevations have been provided and the floodway has not been delineated. The following provisions shall apply within an AE, AH, or A1-30 zone where FEMA has provided base flood elevations:
 1. Until a regulatory floodway is designated, no new construction, substantial improvements, or other development (including fill) shall be permitted within the areas of special flood hazard, designated as Zones A1-30, AE, or AH on the FIRM, unless it is demonstrated by professional engineers or others of demonstrated qualifications, that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the County.
 2. Development activities in Zones A1-30, AE, or AH on the County's FIRM which increase the water surface elevation of the base flood by more than one (1) foot may be allowed, provided that the applicant first applies - with the County's endorsement - for a Conditional Letter of Map Revision (CLOMR), and receives FEMA approval.
- B. *The Floodway District.* These are watercourse channels and adjacent lands within an AE Zone which must be capable of carrying the waters of the one percent (1%) annual chance flood without increasing the water surface elevation of that flood more than one (1) foot at any point.

1. Within any floodway area, no encroachments, including fill, new construction, substantial improvements, or other development shall be permitted unless it has been demonstrated through hydrologic and hydraulic analysis performed in accordance with standard engineering practice that the proposed encroachment will not result in any increase in flood levels within the County during the occurrence of the base flood discharge. Hydrologic and hydraulic analyses shall be undertaken only by professional engineers or others of demonstrated qualifications, who shall certify that the technical methods used correctly reflect currently-accepted technical concepts. Studies, analyses, computations, etc., shall be submitted in sufficient detail to allow a thorough review by the Floodplain Administrator.
2. Development activities which increase the water surface elevation of the base flood may be allowed, provided that the applicant first applies - with the County's endorsement - for a Conditional Letter of Map Revision (CLOMR), and receives FEMA approval.

If this subsection is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of §§ 23-7.2.12 and 23-7.2.13 of the Spotsylvania County Code of Ordinances.

The placement of manufactured homes is prohibited, except in an existing manufactured home park or subdivision. A replacement manufactured home may be placed on a lot on an existing manufactured home park or subdivision provided the anchoring, elevation, and encroachment standards are met.

- C. *The AO Zone* on the FIRM accompanying the FIS shall be those areas of shallow flooding identified as AO on the FIRM. For these areas, the following provisions shall apply:
1. *Residential*. All new construction and substantial improvements of residential structures shall have the lowest floor, including basement, elevated to or above the flood depth specified on the FIRM, above the highest adjacent grade at least as high as the depth number specified in feet on the FIRM. If no flood depth number is specified, the lowest floor, including basement, shall be elevated no less than two (2) feet above the highest adjacent grade.
 2. *Nonresidential*. All new construction and substantial improvements of nonresidential structures shall:
 - i. Have the lowest floor, including basement, elevated to or above the flood depth specified on the FIRM, above the highest adjacent grade at least as high as the depth number specified in feet on the FIRM. If no flood depth number is specified, the lowest floor, including basement, shall be elevated at least two (2) feet above the highest adjacent grade; or,
 - ii. Together with attendant utility and sanitary facilities, be completely floodproofed to the specified flood level so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
 3. Adequate drainage paths around structures on slopes shall be provided to guide floodwaters around and away from proposed structures.

D.

The A Zone on the FIRM accompanying the FIS shall be those areas for which no detailed flood profiles or elevations are provided, but the one percent (1%) annual chance floodplain boundary has been approximated. For these areas, the following provisions shall apply:

The base flood elevations and floodway information from Federal, State, and other acceptable sources shall be used, when available. Where the specific one percent (1%) annual chance flood elevation cannot be determined for using other sources of data, such as the U. S. Army Corps of Engineers Floodplain Information Reports, U. S. Geological Survey Flood-Prone Quadrangles, etc., then the applicant for the proposed use, development and/or activity shall determine this base flood elevation. For development proposed in the approximate floodplain, the applicant must use technical methods that correctly reflect currently accepted practices, such as point on boundary, high water marks, or detailed methodologies (hydrologic and hydraulic analyses) which shall be undertaken only by professional engineers or others of demonstrated qualifications. Studies, analyses, computations, etc., shall be submitted in sufficient detail to allow a thorough review by the Floodplain Administrator.

The Floodplain Administrator reserves the right to require a hydrologic and hydraulic analysis for any development in the A Zone. When such base flood elevation data is utilized, the lowest floor shall be elevated to or above the base flood level plus eighteen (18) inches.

The following must be provided by the applicant with the building permit application(s):

- i. The elevation of the lowest floor (in relation to mean sea level), including the basement, of all new and substantially improved structures; and,
- ii. If the structure has been floodproofed in accordance with the requirements of this division, the elevation (in relation to mean sea level) to which the structure has been floodproofed.

Base flood elevation data shall be obtained from other sources or developed using detailed methodologies comparable to those contained in a FIS for subdivision proposals and other proposed development proposals (including manufactured home parks and subdivisions) that exceed fifty (50) lots or five (5) acres, whichever is the lesser.

E. *The VE or V Zone* on FIRMs accompanying the FIS shall be those areas known as Coastal High Hazard Areas, extending from offshore to the inland limit of a primary frontal dune along an open coast or other areas subject to high velocity waves. The standards in this section also apply to all manufactured homes and recreational vehicles in zones A, AE, AH, and AO placed, or substantially improved, on individual lots or parcels. These standards are as follows:

1. All new construction and substantial improvements in Zones V and VE, shall be elevated on pilings or columns so that:
 - i. The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated to or above the base flood level plus eighteen (18) inches if the lowest horizontal structural member is parallel to the direction of wave approach or elevated at least two (2) feet above the base flood level if the lowest horizontal structural member is perpendicular to the direction of wave approach; and

- ii. The pile or column foundation and structure attached thereto is anchored to resist flotation, collapse, and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Wind and water loading values shall each have a one percent (1%) chance of being equaled or exceeded in any given year (once percent (1%) annual chance).
 2. A certified professional engineer or architect shall develop or review the structural design, specifications and plans for the construction, and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of this section, and comply with the applicable requirements of the Virginia Uniform Statewide Building Code.
 3. The Floodplain Administrator shall obtain the elevation (in relation to mean sea level) of the bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) of all new and substantially improved structures in Zones V and VE. The Floodplain Management Administrator shall maintain a record of all such information.
- F. *The X Zone.* If shaded on the FIRM, these are areas of the County where the annual flood risk is considered moderate at between 1 percent and 0.2 percent. If unshaded, these are areas where the annual flood risk is considered low at below 0.2 percent. There are no specific development requirements in the X Zone pursuant to this Division.

(Ord. No. 23-96, 10-23-01; Ord. No. 23-184, § 1, 4-25-23)

Sec. 23-7.2.12. - Permits and site plans; Development standards.

- A. *Permit Requirement.* All uses, activities, and development occurring within any floodplain district, including placement of manufactured homes, shall be undertaken only upon the issuance of a permit. Such development shall be undertaken only in strict compliance with the provisions of this division and with all other applicable ordinances and regulations. Prior to the issuance of any such permit, the Floodplain Administrator shall require all applications to include compliance with all applicable State and Federal laws and shall review all sites to assure they are reasonably safe from flooding. Under no circumstances shall any use, activity, and/or development adversely affect the capacity of the channels or floodways of any watercourse, drainage ditch, or any other drainage facility or system.
- B. *Site Plans and Permit Applications.* All applications for development within any floodplain district and all permits issued for the floodplain shall incorporate the following information, to be provided by a licensed professional:
 1. The elevation of the base flood at the site.
 2. For structures to be elevated, the elevation of the lowest floor (including any basement).
 3. For nonresidential structures to be floodproofed, the elevation to which the structure will be floodproofed.
 4. Topographic information showing existing and proposed ground elevations.
 5. Certification of base flood impacts, as set forth above in Sec. 23-7.2.11.
 6. Certification of compliance with the building standards set forth below.

7. Certification of compliance with the elevation and construction standards set forth below.

C. *Building Standards.* The following shall apply to all permits issued pursuant to this Division:

1. New construction and substantial improvements shall be built according to this Division and the Virginia Uniform Statewide Building Code, and anchored to prevent flotation, collapse, or lateral movement of the structure.
2. Manufactured homes shall be anchored to prevent flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. The method of anchoring must comply with applicable provisions of the Virginia Uniform Statewide Building Code. This standard shall be in addition to and consistent with applicable state anchoring requirements for resisting wind forces.
3. New construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
4. New construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.
5. Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities, including duct work, shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding, and must comply with applicable provisions of the Virginia Uniform Statewide Building Code.
6. New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.
7. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters.
8. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding. Septic drainfields shall be prohibited within the floodplain.
9. In all special hazard flood areas, prior to any proposed alteration or relocation of any channels or of any watercourse, stream, etc., within the County a permit shall be obtained from the U.S. Corps of Engineers, the Virginia Department of Environmental Quality, and the Virginia Marine Resources Commission (a joint permit application is available from any of these organizations). Furthermore, in riverine areas, notification of the proposal shall be given by the applicant to all affected area jurisdictions, the Department of Conservation and Recreation (Division of Dam Safety and Floodplain Management), other required agencies, and FEMA. A completed CLOMR shall be required from FEMA prior to commencement of work, and a completed LOMR shall be required pursuant to Sec. 23-7.2.9 upon completion of work.
10. In all special hazard flood areas, the flood carrying capacity within an altered or relocated portion of any watercourse shall be maintained.

D. *Elevation and Construction Standards.* The following shall apply to all structures permitted to be located within any floodplain:

1.

Residential. New construction or substantial improvement of any principal residential structure (including manufactured homes) in Zones A1-30, AE, AH, and A with detailed base flood elevations shall have the lowest floor, including basement, elevated to or above the base flood level plus eighteen (18) inches.

2. *Nonresidential.* New construction or substantial improvement of any commercial, industrial, or nonresidential structure shall have the lowest floor, including basement, elevated to or above the base flood level plus eighteen (18) inches.
3. *Nonresidential - alternative.* Nonresidential structures located in all A1-30, AE, and AH zones may be floodproofed in lieu of being elevated provided that all areas of the building components below the elevation corresponding to the BFE plus two (2) feet are water tight with walls substantially impermeable to the passage of water, and use structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A certified professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification, including the specific elevation (in relation to mean sea level) to which such structures are floodproofed, shall be maintained by the Zoning Administrator.
4. *Accessory structures.* Accessory structures of any size shall be prohibited within the floodplain, except as set forth below, and shall not be subject to variance provisions set forth in this division.
 - i. *Water-dependent accessory structures.* Docks, boat houses (provided they are not designed or used for human habitation), and other similar water-dependent accessory structures which are constructed on pilings and intended to float on top or above the water surface may be permitted within the floodplain pursuant to the provisions of this division. Permit plans must demonstrate the top of all installed pilings will be at least eighteen (18) inches above the base flood elevation.
5. *Space below the Lowest Floor.* In zones A, AE, AH, AO, and A1-A30, fully enclosed areas of new construction or substantially improved structures, which are below the regulatory flood protection elevation shall:
 - i. Not be designed or used for human habitation, but shall be used solely for parking of vehicles, building access, or limited storage of maintenance equipment used in connection with the premises. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (e.g. garage door) or limited storage of maintenance equipment (e.g. standard exterior door), or entry to the living area (e.g. stairway or elevator).
 - ii. Be constructed entirely of flood-resistant materials below the regulatory flood protection elevation.
 - iii. Include measures to automatically equalize hydrostatic flood forces on walls by allowing for the entry and exit of floodwaters. To meet this requirement, in addition to complying with applicable provisions of the Virginia Uniform Statewide Building Code, the openings must either be certified by a professional engineer or architect or meet the following minimum design criteria:
 1. Provide a minimum of two openings on different sides of each enclosed area subject to flooding.
 2. The total net area of all openings must be at least one (1) square inch for each square foot of enclosed area subject to flooding.
 3. If a building has more than one enclosed area, each area must have openings to allow floodwaters to automatically enter and exit.

4. The bottom of all required openings shall be no higher than one (1) foot above the adjacent grade.
5. Openings may be equipped with screens, louvers, or other opening coverings or devices, provided they permit the automatic flow of floodwaters in both directions.
6. Foundation enclosures made of flexible skirting are not considered enclosures for regulatory purposes, and, therefore, do not require openings. Masonry or wood underpinning, regardless of structural status, is considered an enclosure and requires openings as outlined above.

E. Standards for Manufactured Homes and Recreational Vehicles.

1. In Zones A, AE, AH, and AO, all manufactured homes placed, or substantially improved, on individual lots or parcels must meet all the requirements for new construction, including the elevation and anchoring requirements in Sections 23-7.2.11(E), 23-7.2.12(C), and 23-7.2.12(D).
2. All recreational vehicles placed on sites must either:
 - i. Be on site for fewer than 180 consecutive days, be fully licensed and ready for highway use (a recreational vehicle is ready for highway use if it on wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices and has no permanently attached additions); or
 - ii. Meet all the requirements for manufactured homes in County Code Section 23-7.2.12(E)(1).
3. All manufactured homes and recreational vehicles must meet applicable requirements of the Virginia Uniform Statewide Building Code.

F. Standards for subdivision proposals.

1. All subdivision proposals shall be consistent with the need to minimize flood damage.
2. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.
3. All subdivision proposals shall have adequate drainage to reduce exposure to flood hazards.
4. Base flood elevation data shall be obtained from other sources or developed using detailed methodologies, hydraulic and hydrologic analysis, comparable to those contained in a FIS for subdivision proposals and other proposed development proposals (including manufactured home parks and subdivisions) that exceed fifty (50) lots or five (5) acres, whichever is less.

(Ord. No. 23-96, 10-23-01; Ord. No. 23-184, § 1, 4-25-23)

Sec. 23-7.2.13. - Existing structures in floodplain areas.

Any structure or use of a structure or premises must be brought into conformity with these provisions when it is changed, repaired, or improved unless one of the following exceptions is established before the change is made:

A. The Floodplain Administrator has determined that:

1. Change is not a substantial repair or substantial improvement; AND
2. No new square footage is being built in the floodplain that is not compliant; AND
3. No new square footage is being built in the floodway; AND

4. The change complies with these regulations and the Virginia Uniform Statewide Building Code; AND
 5. The change, when added to all the changes made during a rolling 5-year period does not constitute 50% or more of the structure's value.
- B. The changes are required to comply with a citation for a health or safety violation.
- C. The structure is a registered historic structure and the change required would impair the historic nature of the structure.

(Ord. No. 23-96, 10-23-01; Ord. No. 23-184, § 1, 4-25-23)

Sec. 23-7.2.14. - Variances.

- A. The Board of Zoning Appeals shall have the authority to grant variances to the provisions of the Floodplain Overlay District only in strict compliance with this section. Variances shall be issued only upon
1. A showing that the standards set forth in Sec. 23-4.8.3 and Sec. 23-4.8.4 of the Code of Ordinances of Spotsylvania County have been met;
 2. The Board of Zoning Appeals' determination that the granting of such variance will not result in
 - i. Unacceptable or prohibited increases in flood heights,
 - ii. Additional threats to public safety,
 - iii. Extraordinary public expense; and
 3. The Board of Zoning Appeals' determination that the granting of such variance will not
 - i. Create nuisances,
 - ii. Cause fraud or victimization of the public, or
 - iii. Conflict with local laws or ordinances.
- B. Variances generally are limited to a lot size less than one-half acre. Variances may be granted by the Board of Zoning Appeals for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, in conformance with the provisions of this Section.
- C. Variances may be issued for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that the criteria of this Section are met, and the structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.
- D. The Board of Zoning Appeals also shall give due consideration and weight to the following factors before granting a variance:
1. The danger to life and property due to increased flood heights or velocities caused by encroachments. No variance shall be granted for any proposed use, development, or activity within any Floodway District that will cause any increase in the one percent (1%) chance flood elevation.
 2. The danger of materials being swept on to other lands or downstream to the injury of others.
 3. The proposed water supply and sanitation systems and the ability of these systems to prevent disease, contamination, and unsanitary conditions.

4. The susceptibility of the proposed facility and its contents to flood damage, and the effect of the damage on the individual owners.
 5. The importance of the services provided by the proposed facility to the community.
 6. The requirements of the facility for a waterfront location.
 7. The availability of alternative locations for the proposed use which are not subject to flooding.
 8. The compatibility of the proposed use with existing development and development anticipated in the foreseeable future.
 9. The relationship of the proposed use to the comprehensive plan and floodplain management program for the area.
 10. The safety of access by ordinary and emergency vehicles to the property in time of flood.
 11. The expected heights, velocity, duration, rate of rise, and sediment transport of flood waters expected at the site.
 12. The historic nature of a structure. Variances for repair or rehabilitation of historic structures may be granted upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.
 13. Such other factors which are relevant to the purposes of this division.
- E. *Additional review.* The Board of Zoning Appeals may refer any application and accompanying documentation pertaining to any request for a variance to a professional engineer or other qualified person or agency for technical assistance in evaluating the proposed project in relation to flood heights and velocities, and the adequacy of the plans for flood protection and other related matters.
- F. *Factors for approval.* A variance may be approved only if the Board of Zoning Appeals has determined that the variance will be the minimum required to provide relief.
- G. *Notice and records.* The Board of Zoning Appeals shall notify the applicant for a variance, in writing, that the issuance of the variance to construct a structure below the one percent (1%) annual chance flood elevation (a) increases the risks to life and property, and (b) will result in increased premium rates for flood insurance.
- H. A record shall be maintained of the notification required in Section 23-7.2.14(G), as well as all variance actions, including justification for the issuance of the variances. Any variances that are issued shall be noted in any report submitted to the Federal Insurance Administrator.

(Ord. No. 23-96, 10-23-01; Ord. No. 23-184, § 1, 4-25-23)

Cross reference— Erosion and sediment control generally, Ch. 8.

Spotsylvania County Comprehensive Plan

The approved 2021 Comprehensive Plan, as last amended July 9, 2024 can be found at:

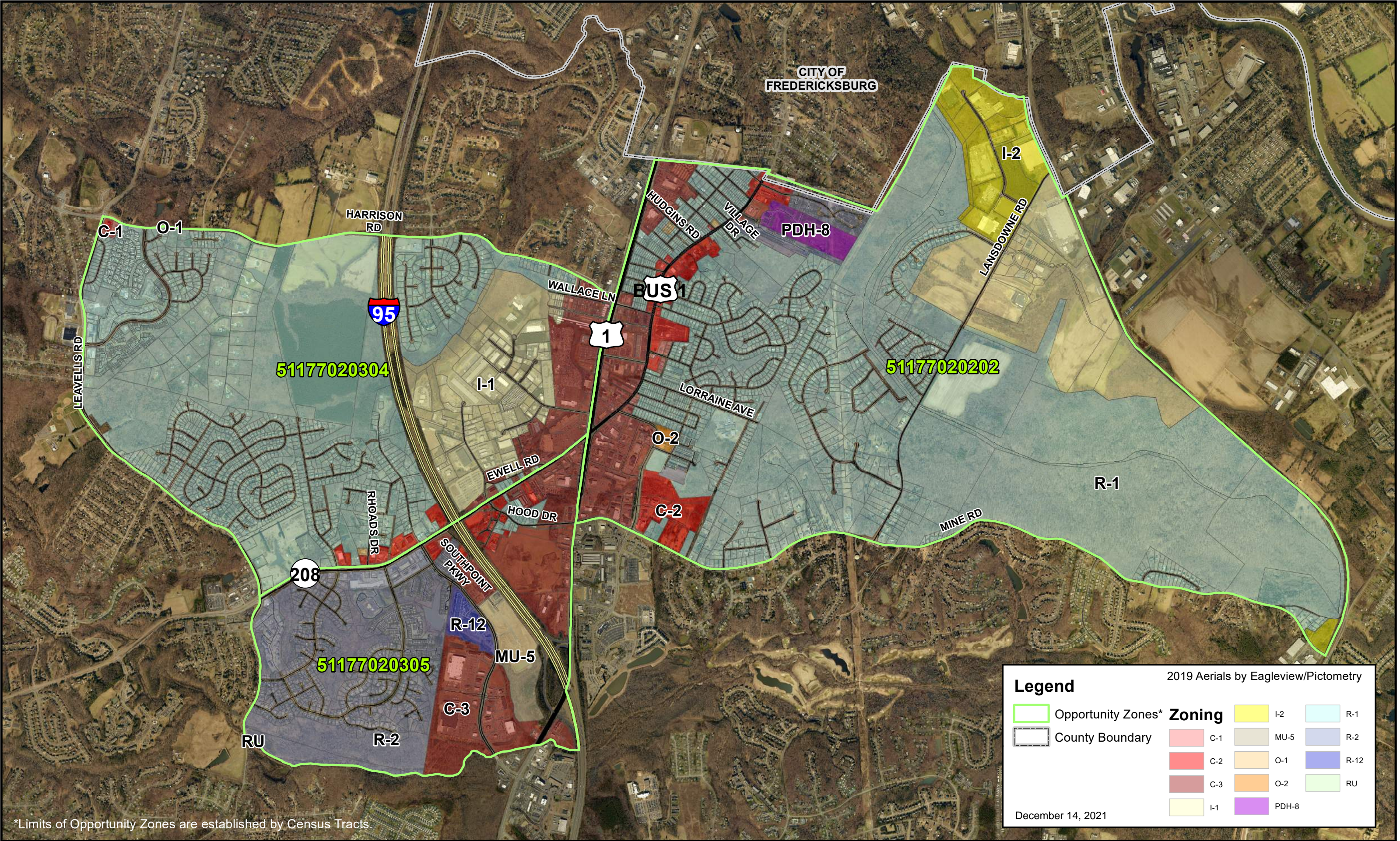
<https://gis.spotsylvania.va.us/portal/apps/sites/#/geohub/app/59e0855ba60a44f9997076e02ce8317b>

George Washington Regional Commission – Regional Hazard Mitigation Plan

The link to the George Washington Regional Commission – Regional Hazard Mitigation Plan, which includes Spotsylvania County, can be found at:

https://gwregion.org/wp-content/uploads/GWRC-HMP_2023-Update_Final-Published-10-23-2023.pdf

Spotsylvania County Opportunity Zones*



*Limits of Opportunity Zones are established by Census Tracts.

Legend

Opportunity Zones*

County Boundary

2019 Aerials by Eagleview/Pictometry

Zoning

C-1	MU-5	R-1
C-2	O-1	R-2
C-3	O-2	R-12
I-1	PDH-8	RU

December 14, 2021

County of Spotsylvania
Founded 1721

Board of Supervisors
GERALD CHILDRESS
DEBORAH H. FRAZIER
LORI HAYES
JACOB LANE
KEVIN W. MARSHALL
DREW MULLINS
CHRIS YAKABOUSKI



County Administrator
ED PETROVITCH
Deputy County Administrator
MARK L. COLE
P. O BOX 99, SPOTSYLVANIA, VA 22553
Voice: (540) 507-7010
Fax: (540) 507-7019

Service, Integrity, Pride

At a meeting of the Spotsylvania County Board of Supervisors held on October 22, 2024, on a motion by Supervisor Hayes and passed unanimously, the Board adopted the resolution as follows:

RESOLUTION NO. 2024-141

**A RESOLUTION AUTHORIZING THE APPLICATION FOR THE DEPARTMENT OF
CONSERVATION AND RECREATION'S 2024 COMMUNITY FLOOD
PREPAREDNESS GRANT AND DESIGNATION OF AUTHORIZED
ORGANIZATIONAL REPRESENTATIVES**

WHEREAS, the Virginia Department of Conservation and Recreation is accepting grant applications for the 2024 Virginia Community Flood Preparedness Fund (CFPF); and

WHEREAS, this competitive state grant program provides funding in support of local efforts to help create and implement planning efforts to reduce the impacts of flooding; and

WHEREAS, Spotsylvania County is seeking to develop a resiliency plan to address flood resilience needs; and

WHEREAS, County staff would like to submit an application under this grant opportunity for the purpose of training and the development of a flood resiliency plan; and

WHEREAS, the grant application will seek \$86,250 in grant funds; and

WHEREAS, the County is required to provide a 25% local match requirement of the total project costs which is equivalent to \$28,750; and

WHEREAS, the County proposes to meet this local match requirement through a combination of \$10,000 in staff time and \$18,750 in cash.

NOW, THEREFORE, BE IT RESOLVED by the Spotsylvania County Board of Supervisors that Spotsylvania County submit a grant application under DCR's 2024 CFPF Program; and

BE IT FURTHER RESOLVED by the Spotsylvania County Board of Supervisors, that the following individuals are hereby designated as authorized organizational representatives any of whom may act in the execution and submission of the grant application: Ed Petrovitch, County

Administrator; Mark Cole, Deputy County Administrator; Wanda Parrish, Assistant County Administrator; Beckie Forry, Chief Financial Officer; Garland Miller, Deputy Chief Financial Officer; and Annette D'Alessandro, Grants Manager.

(SEAL)

A COPY TESTE:



Aimee R. Mann, MMC
Deputy Clerk to the Board of Supervisors

Virginia Vulnerability Viewer



Getting Started

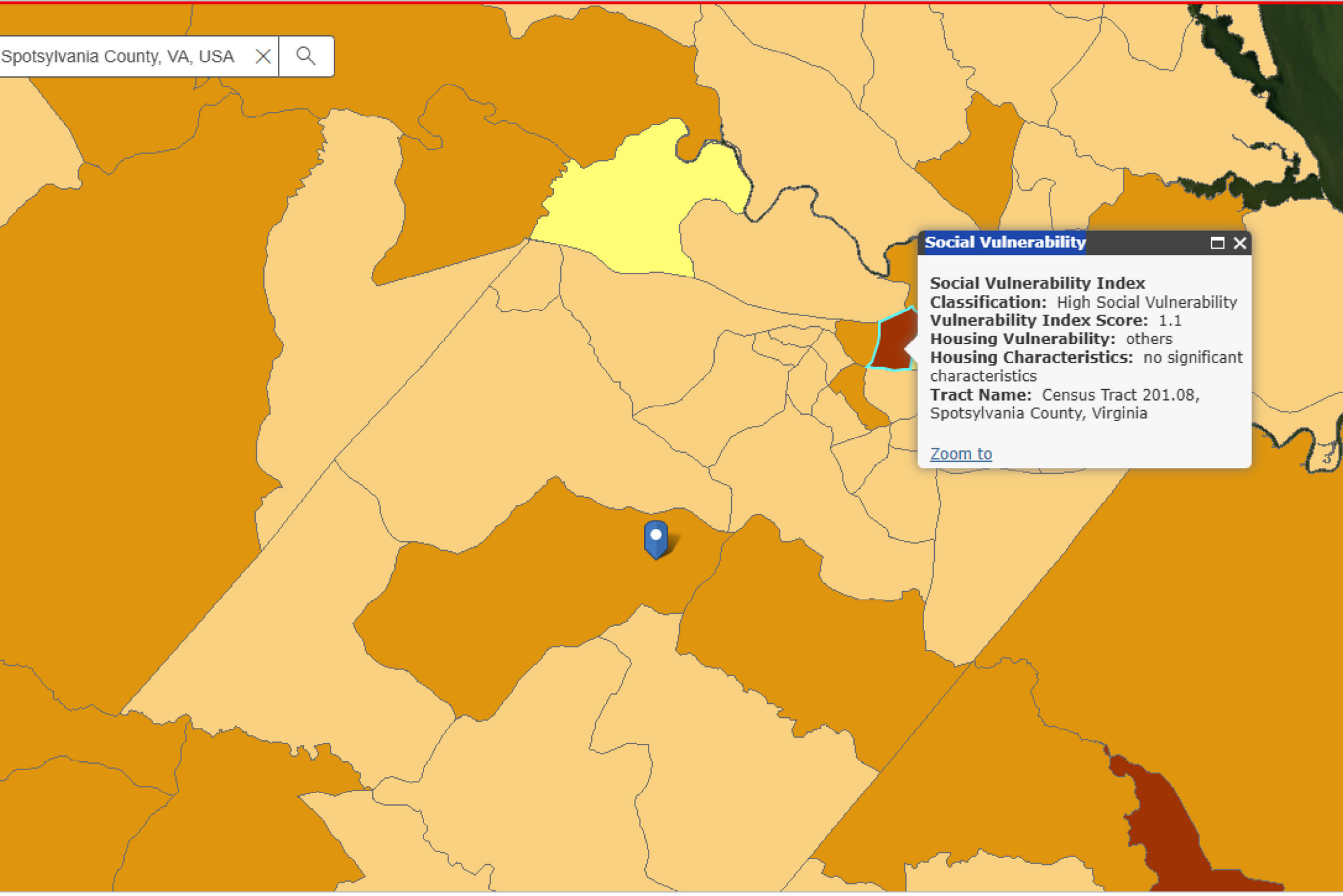
Close Search

Methods

Switch Basemap

Open Print

Spotsylvania County, VA, USA



Social Vulnerability



Social Vulnerability Index

Classification: High Social Vulnerability

Vulnerability Index Score: 1.1

Housing Vulnerability: others

Housing Characteristics: no significant characteristics

Tract Name: Census Tract 201.08,
Spotsylvania County, Virginia

[Zoom to](#)

Number by Census Tract

Income Range	Count
69,800 to 202,083	31
53,906 to 69,799.2	3

2022 Geographies: 34

Median Household Income by Census Tract:

- Tract 202.02: \$59,708
- Tract 202.06: \$59,906
- Tract 203.11: \$59,133

Source: 2022 ACS 5-Year Estimates Subject Tables

Scale: 3 mi

Median household income in 2022 was \$87,249, so areas depicted in light green are indicative of 2022 Census tracts with a median income of less than \$69,799.20.

Median Income in the Past 12 Months (in 2022 Inflation-Adjusted Dollars)

Survey/Program : American Community Survey

Year: 2022

Estimates : 5-Year

Table ID: S1903

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, the decennial census is the official source of population totals for April 1st of each decennial year. In between censuses, the Census Bureau's Population Estimates Program produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

Information about the American Community Survey (ACS) can be found on the <https://www.census.gov/programs-surveys/acs.html>. Supporting documentation including code lists, subject definitions, data accuracy, and statistical testing, and a full list of ACS tables and table shells (without estimates) can be found on the <https://www.census.gov/programs-surveys/acs/technical-documentation/code-lists.html> section of the ACS website.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the https://www.census.gov/acs/www/methodology/sample_size_and_data_quality/ section.

Source: U.S. Census Bureau, 2018-2022 American Community Survey 5-Year Estimates

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see <https://www.census.gov/programs-surveys/acs/technical-documentation.html>). The effect of nonsampling error is not represented in these tables.

Between 2018 and 2019 the American Community Survey retirement income question changed. These changes resulted in an increase in both the number of households reporting retirement income and higher aggregate retirement income at the national level. For more information see <https://www.census.gov/programs-surveys/acs/technical-documentation/user-notes/2020-01.html>.

The 2018-2022 American Community Survey (ACS) data generally reflect the March 2020 Office of

Management and Budget (OMB) delineations of metropolitan and micropolitan statistical areas. In certain instances, the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB delineation lists due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on 2020 Census data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Explanation of Symbols:

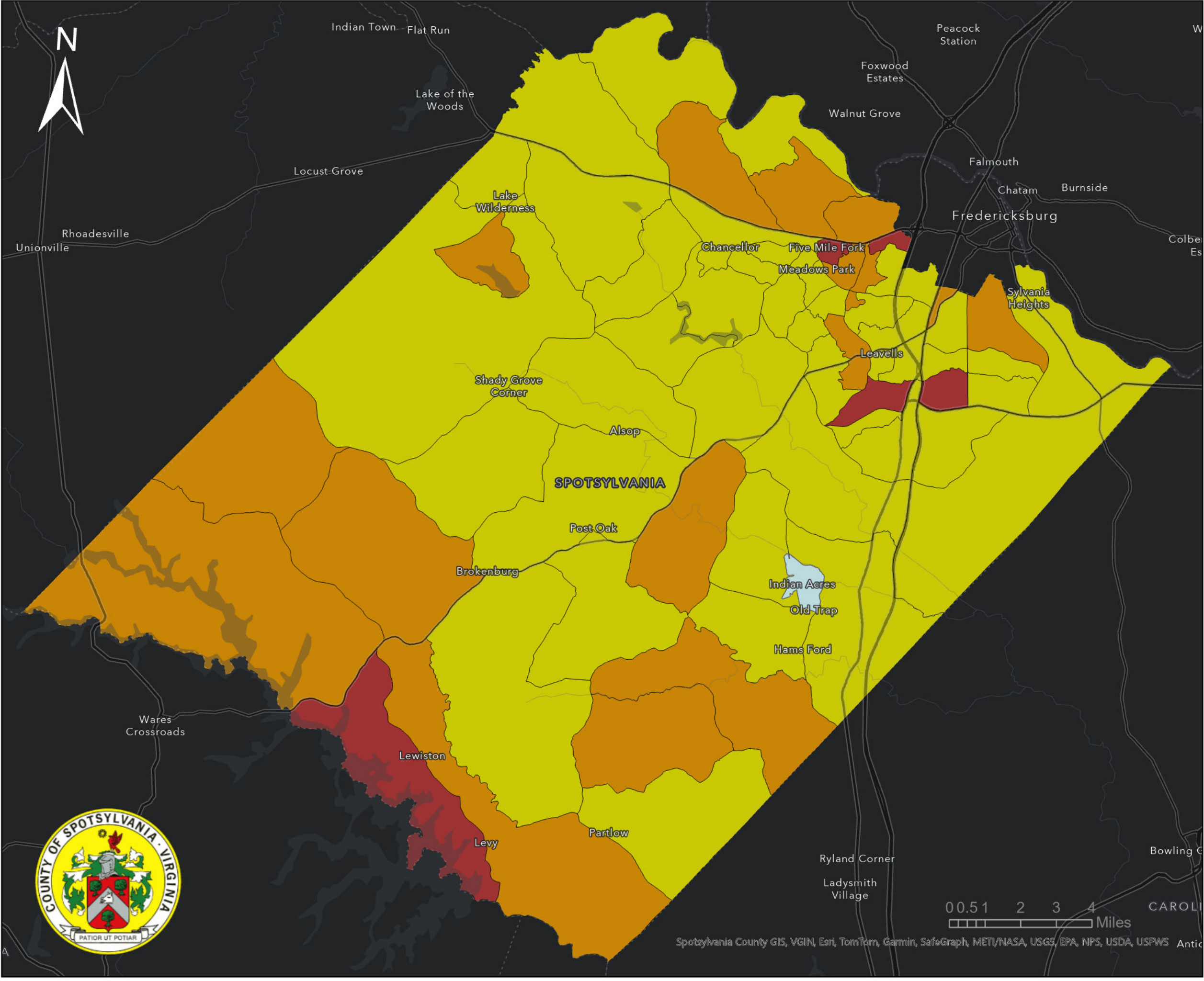
-	The estimate could not be computed because there were an insufficient number of sample observations. For a ratio of medians estimate, one or both of the median estimates falls in the lowest interval or highest interval of an open-ended distribution. For a 5-year median estimate, the margin of error associated with a median was larger than the median itself.
N	The estimate or margin of error cannot be displayed because there were an insufficient number of sample cases in the selected geographic area.
(X)	The estimate or margin of error is not applicable or not available.
median -	The median falls in the lowest interval of an open-ended distribution (for example "2,500-")
median +	The median falls in the highest interval of an open-ended distribution (for example "250,000+").
**	The margin of error could not be computed because there were an insufficient number of sample observations.
***	The margin of error could not be computed because the median falls in the lowest interval or highest interval of an open-ended distribution.
*****	A margin of error is not appropriate because the corresponding estimate is controlled to an independent population or housing estimate. Effectively, the corresponding estimate has no sampling error and the margin of error may be treated as zero.

Map Note 1:

The boundaries, roads, and hydrography shown on the map are from the Census Bureau's MAF/TIGER database. Boundaries in the vicinity of coastal areas (Atlantic Ocean, Pacific Ocean, and the Great Lakes) are clipped to a representative coastline for data years 2020 and beyond and generally do not extend into the water.

Map Note 2:

The detailed basemap includes national, state, and local parks and forests from the U.S. Geological Survey (USGS) Gap Analysis Project (GAP), 2020, Protected Areas Database of the United States (PAD-US) 2.1: U.S. Geological Survey data release, <https://doi.org/10.5066/P92QM3NT>



ADAPT VA DATA - SOCIAL VULNERABILITY CLASSIFICATIONS - 2021

- HIGH SOCIAL VULNERABILITY
- MODERATE SOCIAL VULNERABILITY
- LOW SOCIAL VULNERABILITY
- NOT INCLUDED IN THE ANALYSIS

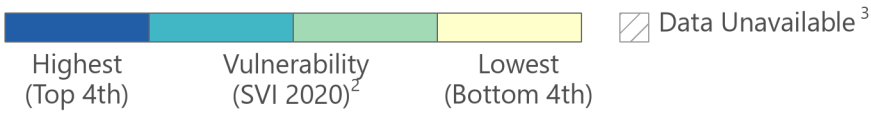
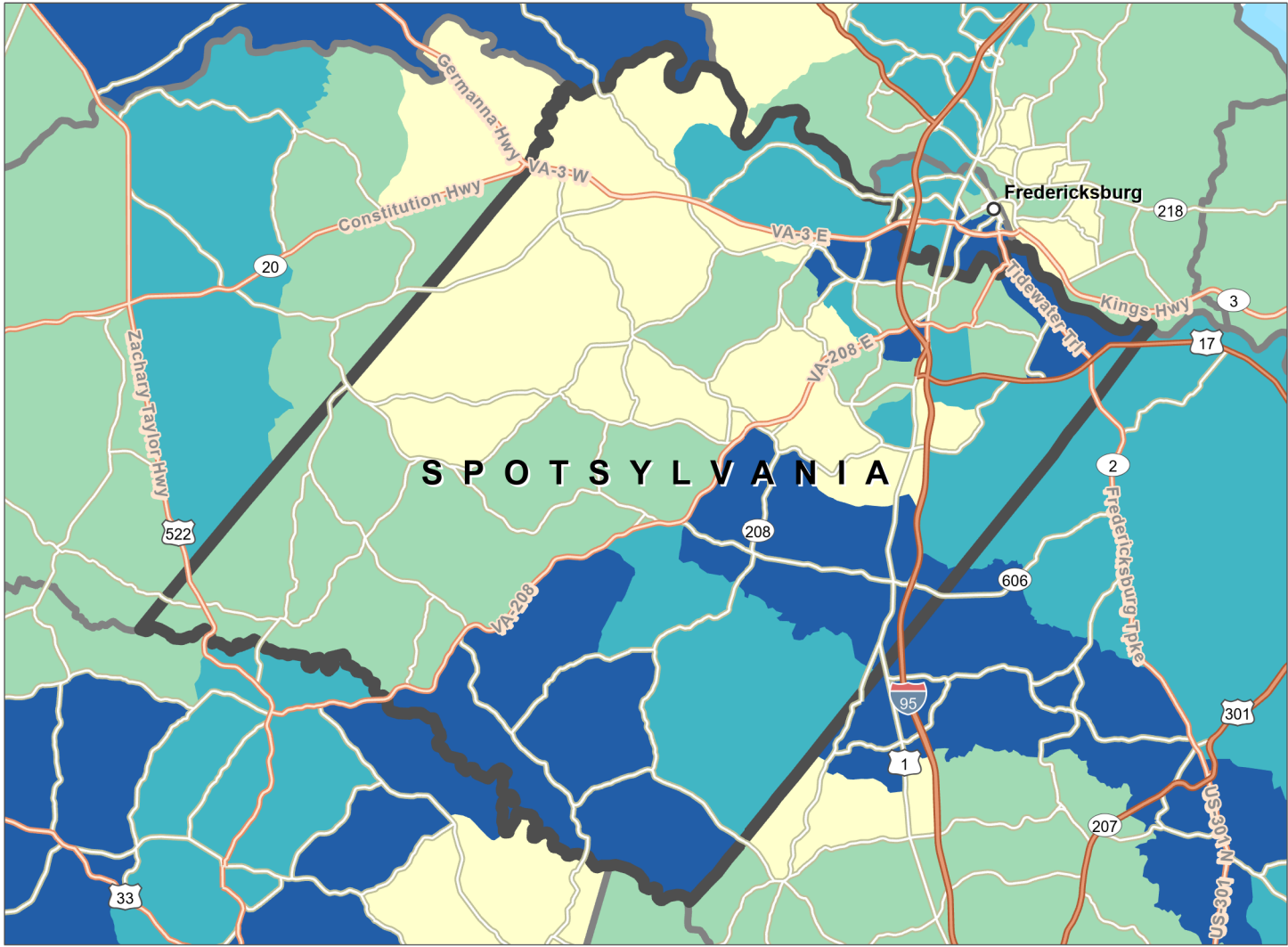
STAFFORD, SARAH AND VANDER SCHAAF, SCHYLER, "COASTAL VIRGINIA SOCIAL VULNERABILITY INDEX AT THE BLOCK GROUP LEVEL" (2021). DATA. WILLIAM & MARY.

CDC/ATSDR Social Vulnerability Index 2020

SPOTSYLVANIA COUNTY, VIRGINIA



Overall Social Vulnerability¹



Social vulnerability refers to a community's capacity to prepare for and respond to the stress of hazardous events ranging from natural disasters, such as tornadoes or disease outbreaks, to human-caused threats, such as toxic chemical spills. The **CDC/ATSDR Social Vulnerability Index (CDC/ATSDR SVI 2020)⁴ County Map** depicts the social vulnerability of communities, at census tract level, within a specified

county. CDC/ATSDR SVI 2020 groups **sixteen census-derived factors** into **four themes** that summarize the extent to which the area is socially vulnerable to disaster. The factors include economic data as well as data regarding education, family characteristics, housing, language ability, ethnicity, and vehicle access. Overall Social Vulnerability combines all the variables to provide a comprehensive assessment.

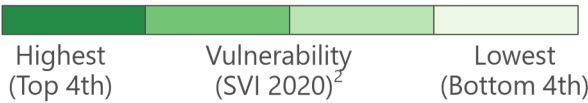
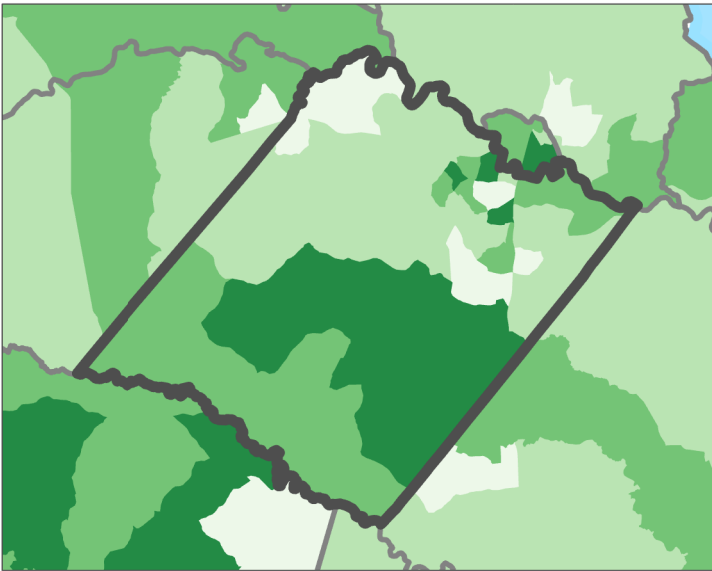


CDC/ATSDR SVI 2020 – SPOTSYLVANIA COUNTY, VIRGINIA

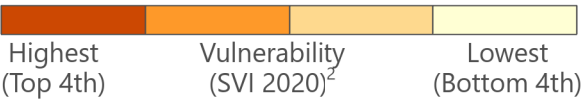
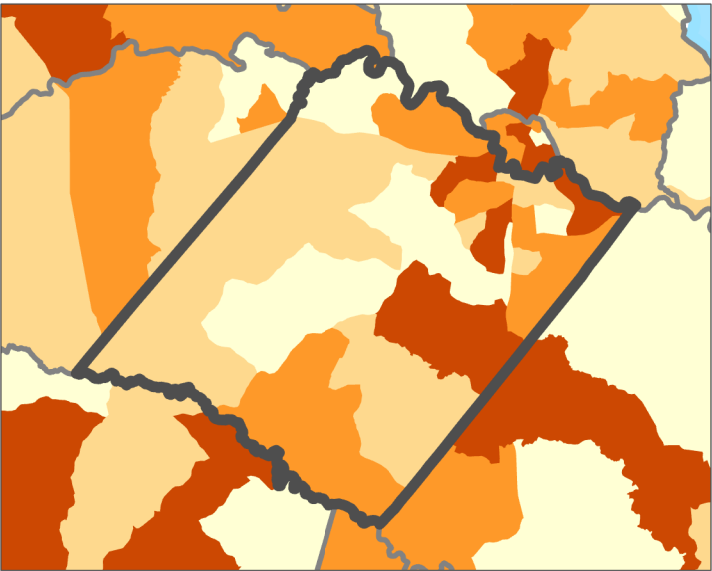
CDC/ATSDR SVI Themes



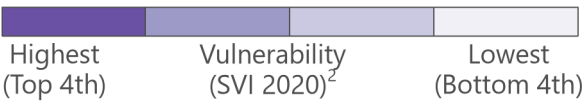
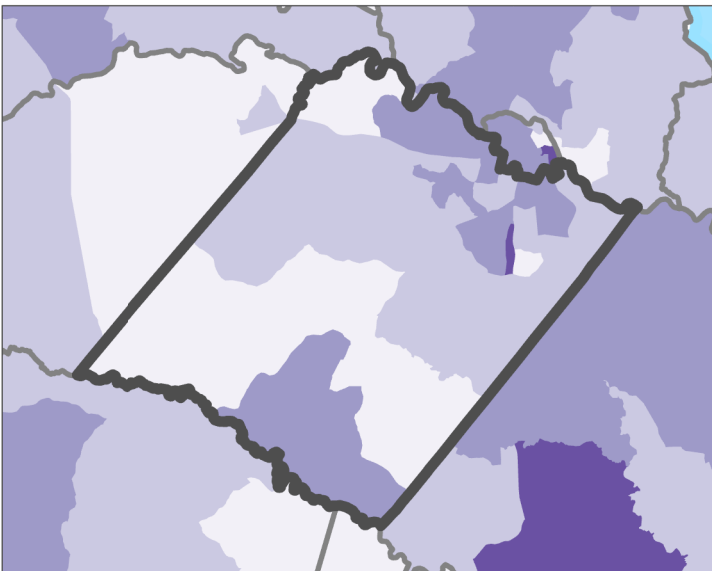
Socioeconomic Status⁵



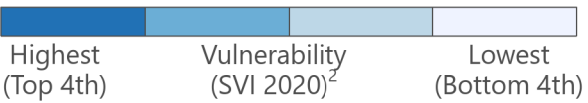
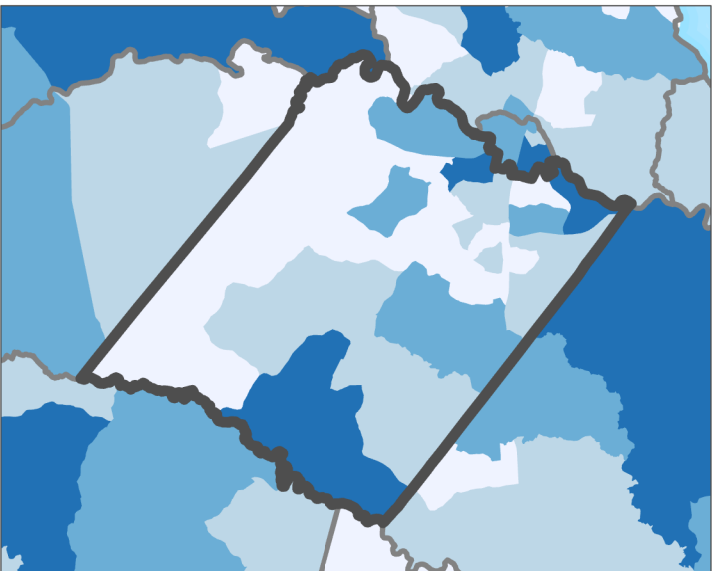
Household Characteristics⁶



Racial and Ethnic Minority Status⁷

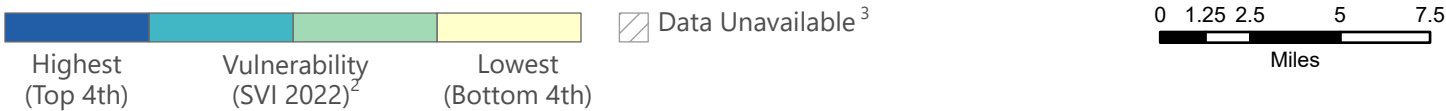
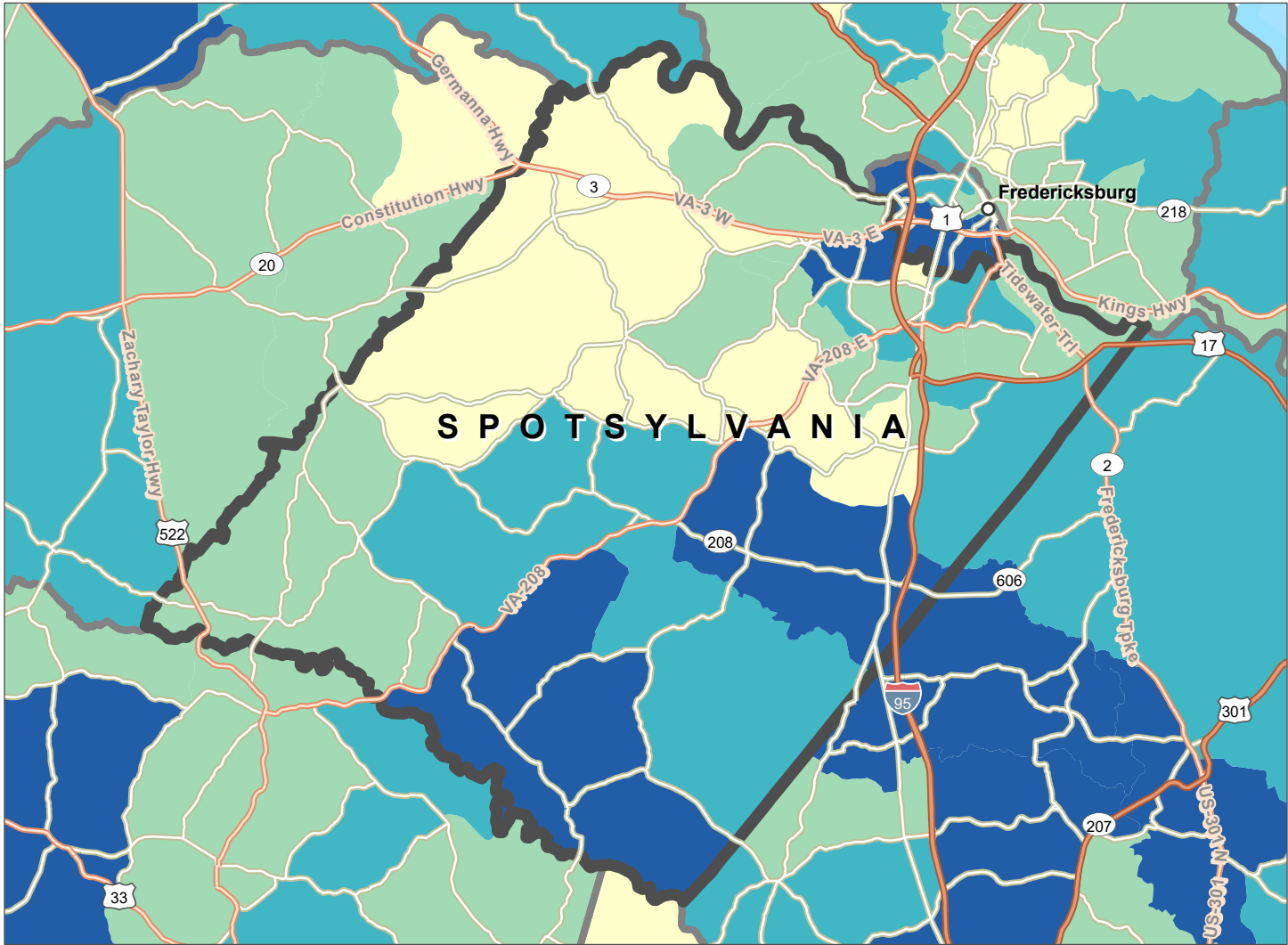


Housing Type/Transportation⁸



Data Sources: ²CDC/ATSDR/GRASP, U.S. Census Bureau, Esri® StreetMapTM Premium.
Notes: ¹Overall Social Vulnerability: All 16 variables. ³Census tracts with 0 population. ⁴The CDC/ATSDR SVI combines percentile rankings of US Census American Community Survey (ACS) 2016-2020 variables, for the state, at the census tract level. ⁵Socioeconomic Status: Below 130% Poverty, Unemployed, Housing Costs-to-Income Ratio, No High School Diploma, No Health Insurance. ⁶Household Characteristics: Aged 65 and Over, Aged 17 and Younger, Civilian with a Disability, Single-parent Household, English Language Proficiency. ⁷Race/Ethnicity: Racial/ethnic Minority. ⁸Housing Type/Transportation: Multi-unit, Mobile Homes, Crowding, No Vehicle, Group Quarters.
Projection: NAD 1983 Virginia Lambert.
References: Flanagan, B.E., et al., A Social Vulnerability Index for Disaster Management. *Journal of Homeland Security and Emergency Management*, 2011. 8(1).
CDC/ATSDR SVI web page: <https://www.atsdr.cdc.gov/placeandhealth/svi/index.html>.

Overall Social Vulnerability¹

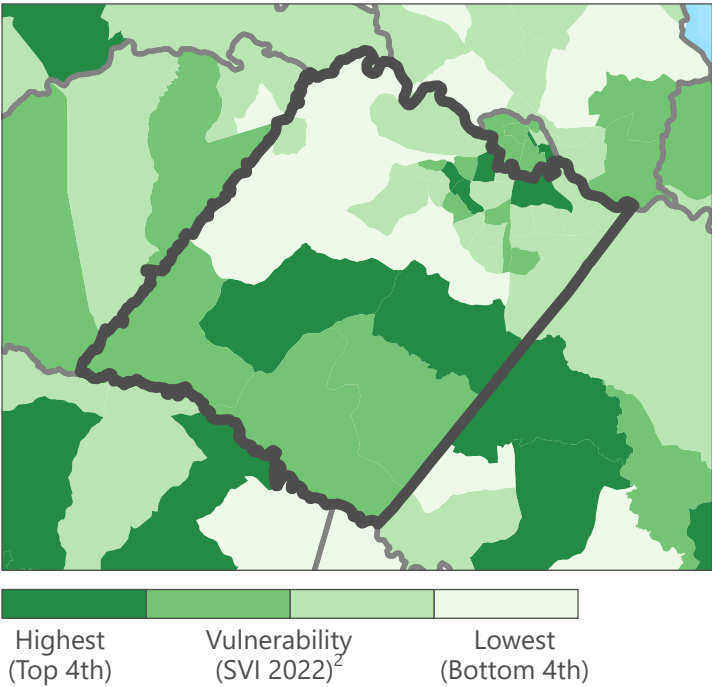


Social vulnerability refers to a community's capacity to prepare for and respond to the stress of hazardous events ranging from natural disasters, such as tornadoes or disease outbreaks, to human-caused threats, such as toxic chemical spills. The **CDC/ATSDR Social Vulnerability Index (CDC/ATSDR SVI 2022)⁴ County Map** depicts the social vulnerability of communities, at census tract level, within a specified

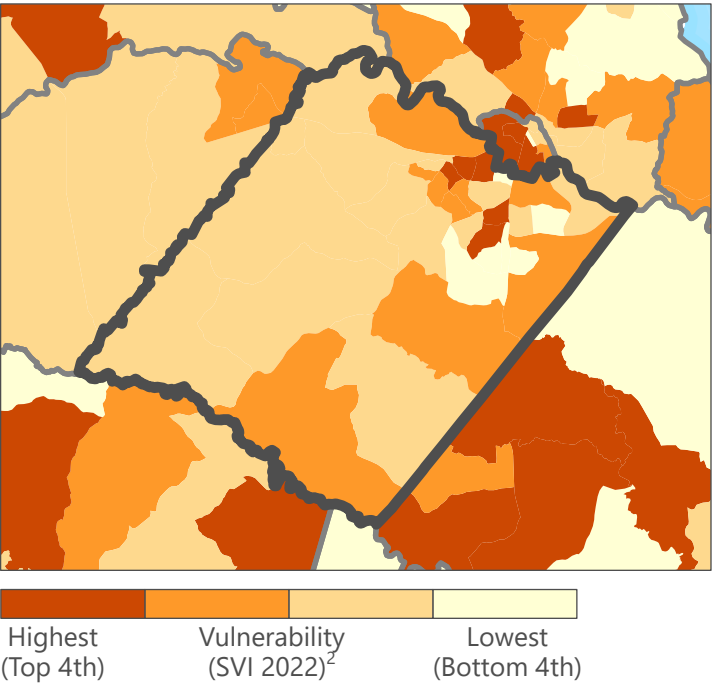
county. CDC/ATSDR SVI 2022 groups **sixteen census-derived factors** into **four themes** that summarize the extent to which the area is socially vulnerable to disaster. The factors include economic data as well as data regarding education, family characteristics, housing, language ability, ethnicity, and vehicle access. Overall Social Vulnerability combines all the variables to provide a comprehensive assessment.

CDC/ATSDR SVI Themes

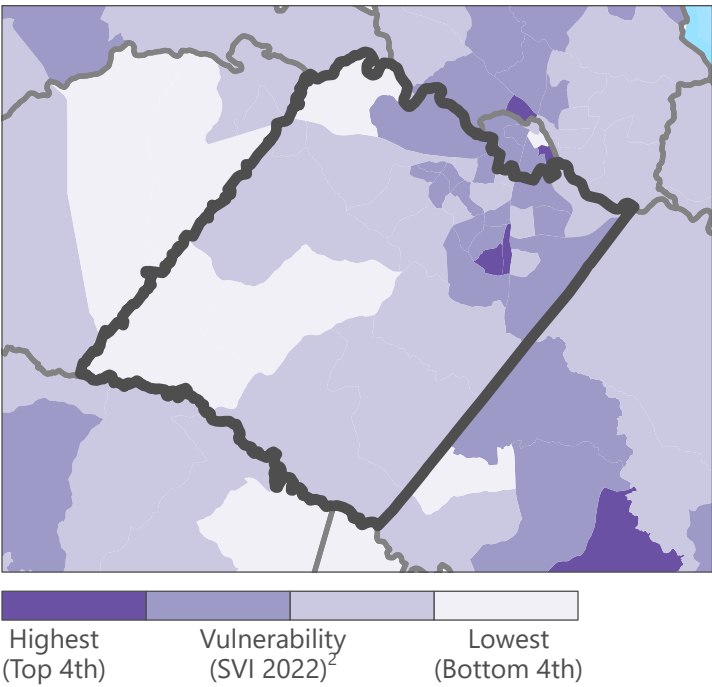
Socioeconomic Status⁵



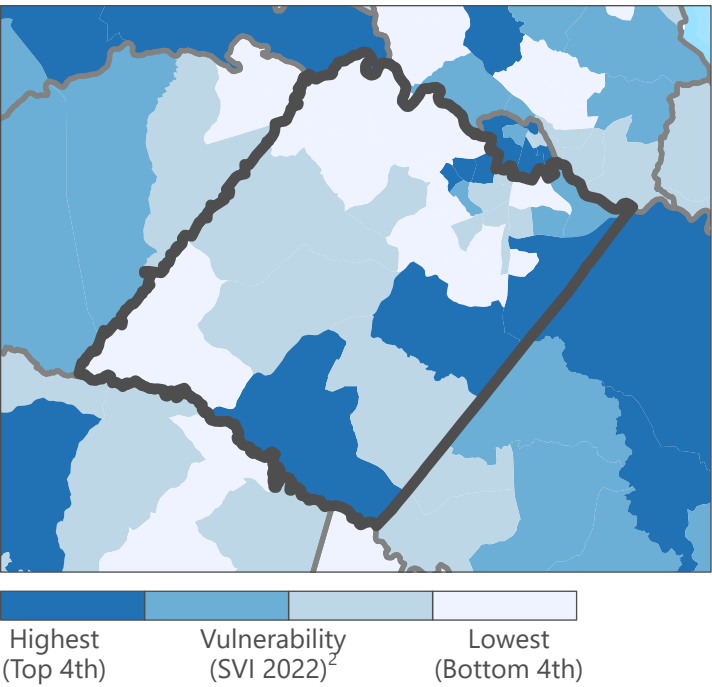
Household Characteristics⁶



Racial and Ethnic Minority Status⁷

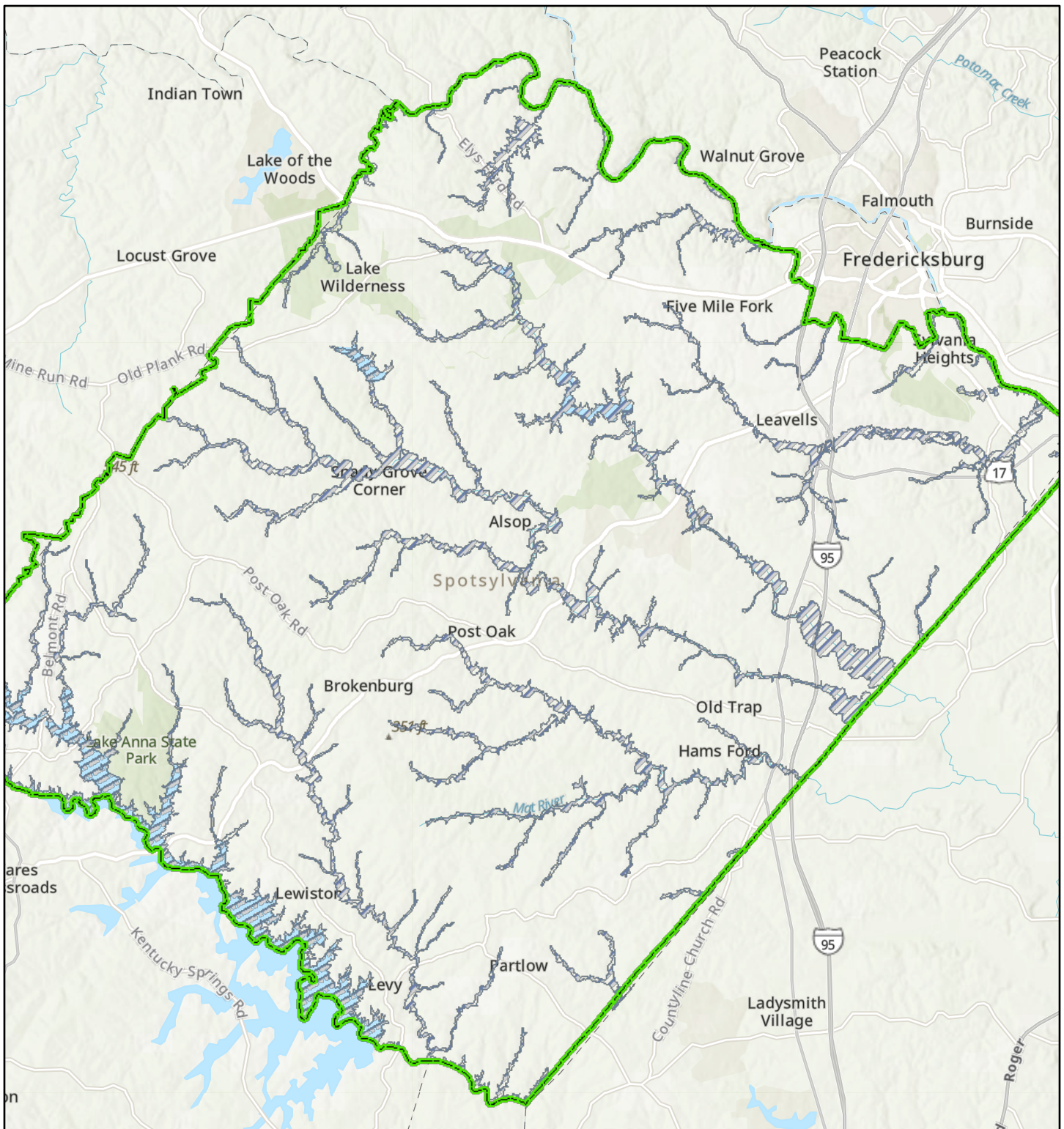


Housing Type/Transportation⁸



Data Sources: ²CDC/ATSDR/GRASP, U.S. Census Bureau, ArcGIS StreetMap Premium.
Notes: ¹Overall Social Vulnerability: All 16 variables. ³One or more variables unavailable at census tract level. ⁴The CDC/ATSDR SVI combines percentile rankings of U.S. Census American Community Survey (ACS) 2018-2022 variables, for the state, at the census tract level. ⁵Socioeconomic Status: Below 150% Poverty, Unemployed, Housing Costs Burden, No High School Diploma, No Health Insurance. ⁶Household Characteristics: Aged 65 and Older, Aged 17 and Younger, Civilian with a Disability, Single-Parent Household, English Language Proficiency. ⁷Race/Ethnicity: Hispanic or Latino (of any race); Black and African American, Not Hispanic or Latino; American Indian and Alaska Native, Not Hispanic or Latino; Asian, Not Hispanic or Latino; Native Hawaiian and Other Pacific Islander, Not Hispanic or Latino; Two or More Races, Not Hispanic or Latino; Other Races, Not Hispanic or Latino. ⁸Housing Type/Transportation: Multi-Unit Structures, Mobile Homes, Crowding, No Vehicle, Group Quarters.
Projection: NAD 1983 Virginia Lambert.
References: Flanagan, B.E., et al., A Social Vulnerability Index for Disaster Management. *Journal of Homeland Security and Emergency Management*, 2011. 8(1).
CDC/ATSDR SVI web page: <https://www.atsdr.cdc.gov/placeandhealth/svi/index.html>.

Flood Plain



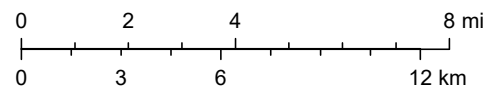
January 23, 2025

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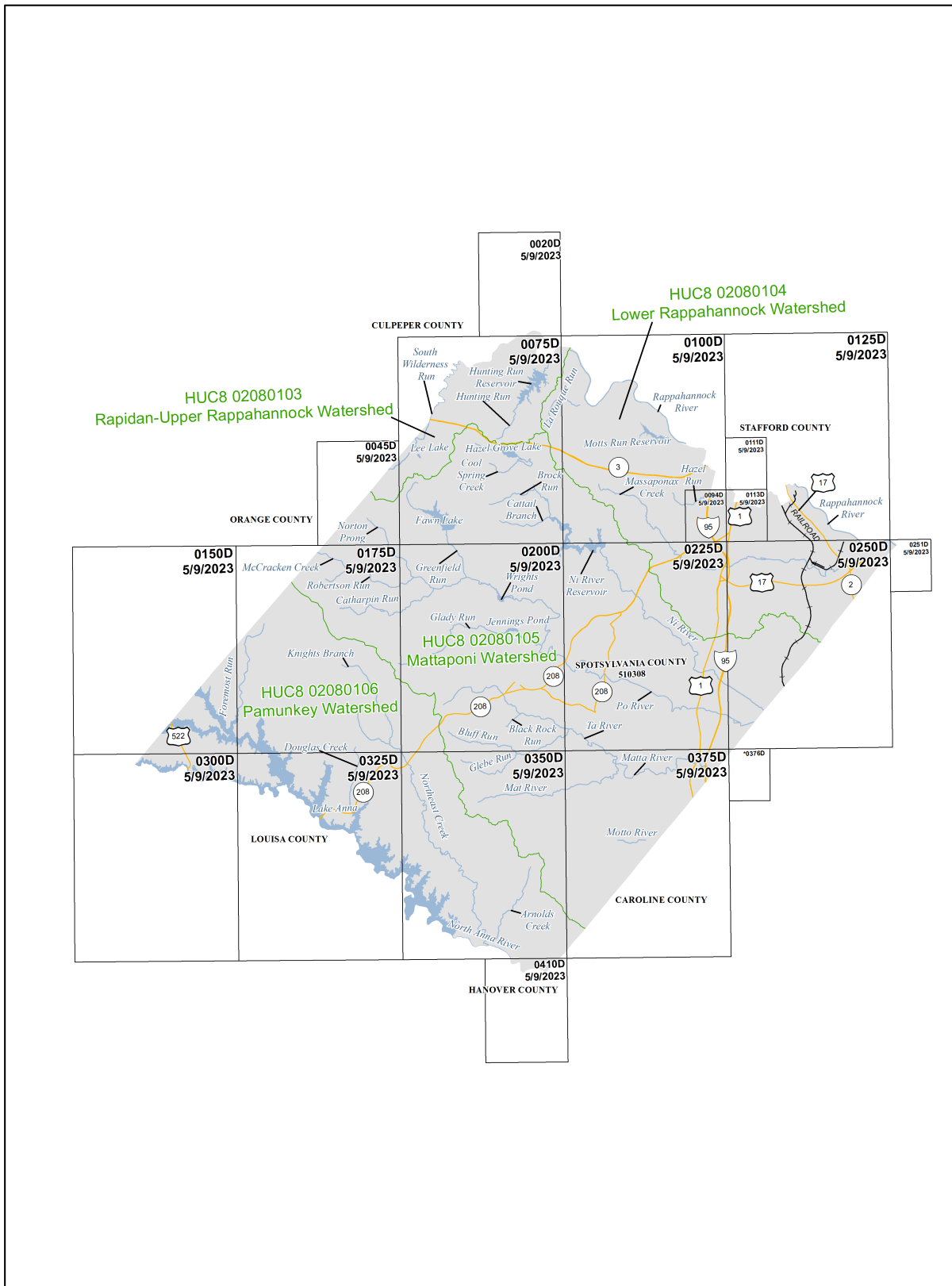
Tax County Boundary
 100 Year Flood Zone (FEMA)

A

AE



Spotsylvania County GIS, VGIN, Esri, TomTom, Garmin, SafeGraph, METI/
 NASA, USGS, EPA, NPS, USDA, USFWS, Esri, NASA, NGA, USGS, None



1 inch = 20,833 feet 1:250,000
 0 6,000 12,000 24,000 36,000 48,000 feet

Map Projection:
 State Plane Virginia North FIPS 4501 Feet;
 North American Datum 1983

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING
 DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT

[HTTPS://MSC.FEMA.GOV](https://MSC.FEMA.GOV)

SEE FLOOD INSURANCE STUDY FOR ADDITIONAL INFORMATION

*PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS

COUNTY LOCATOR



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP INDEX

SPOTSYLVANIA COUNTY, VIRGINIA (All Jurisdictions)

PANELS PRINTED:

0020, 0045, 0075, 0094, 0100, 0111, 0113, 0125, 0150, 0175,
 0200, 0225, 0250, 0251, 0300, 0325, 0350, 0375, 0410

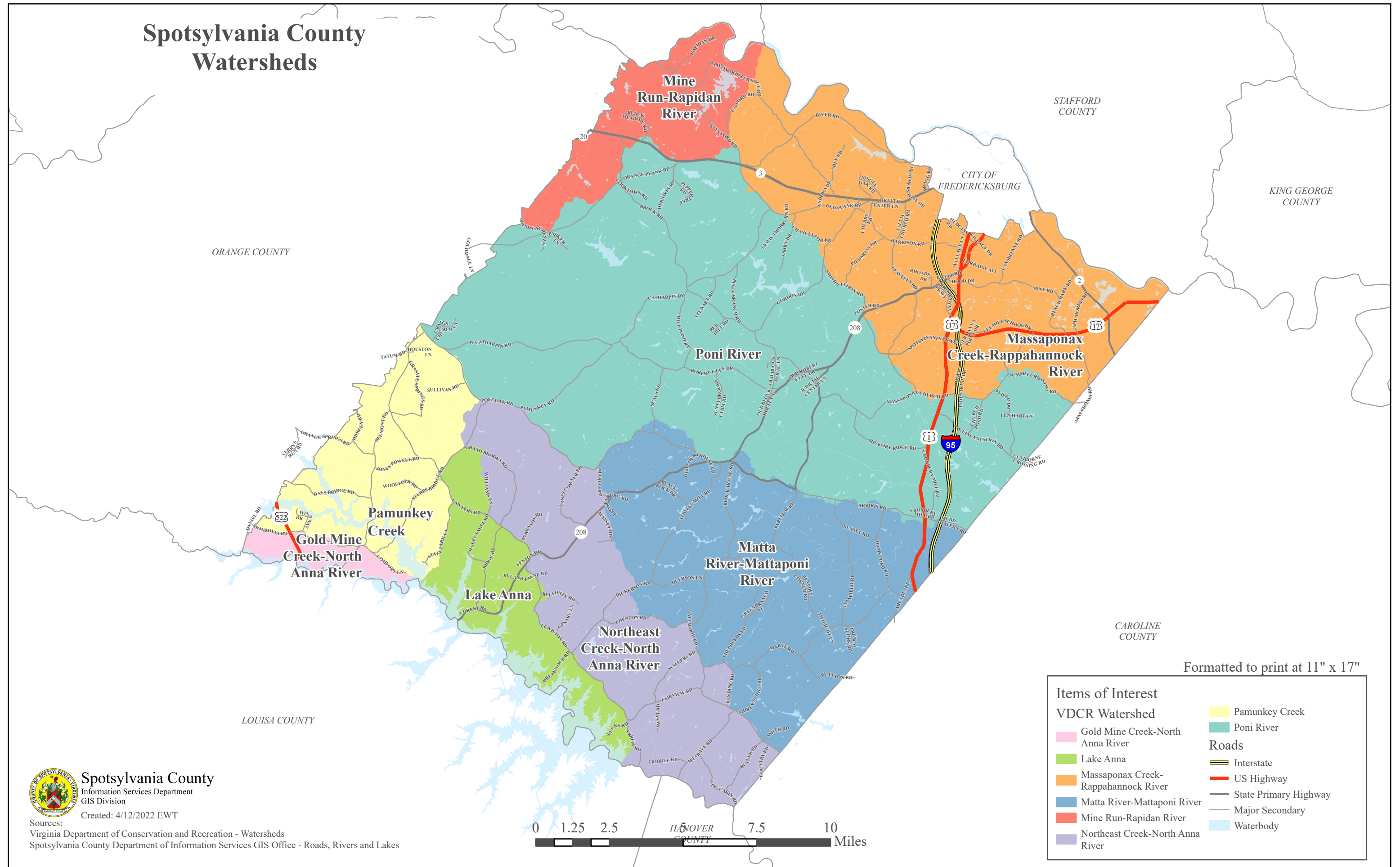


FEMA

MAP NUMBER
 51177CIND0A

EFFECTIVE DATE
 MAY 9, 2023

Spotsylvania County Watersheds



Formatted to print at 11" x 17"



Spotsylvania County

Information Services Department
GIS Division

Created: 4/12/2022 EWT

Sources:
Virginia Department of Conservation and Recreation - Watersheds
Spotsylvania County Department of Information Services GIS Office - Roads, Rivers and Lakes



Items of Interest

VDCR Watershed

- Gold Mine Creek-North Anna River
- Lake Anna
- Massaponax Creek-Rappahannock River
- Matta River-Mattaponi River
- Mine Run-Rapidan River
- Northeast Creek-North Anna River

Roads

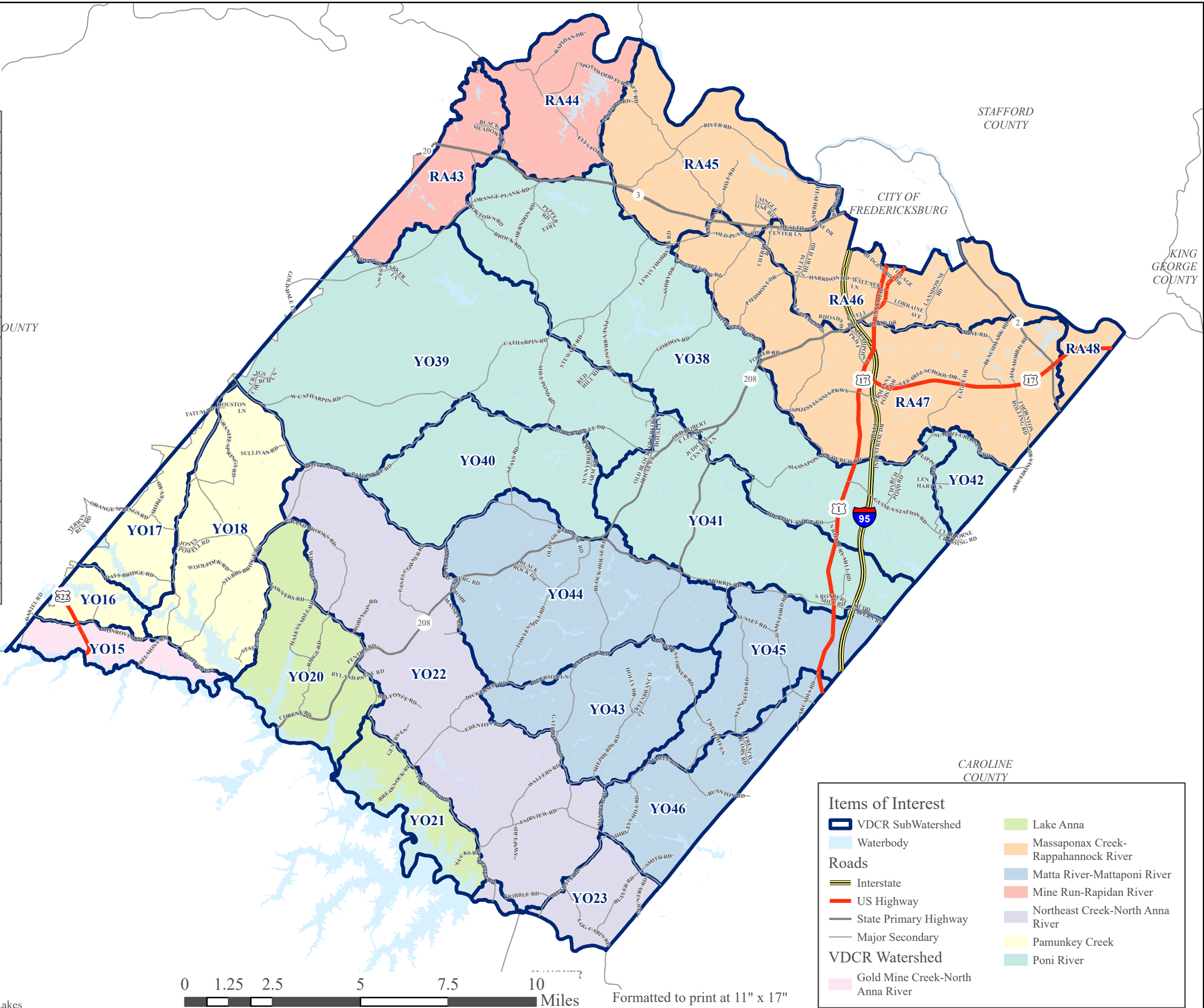
- Interstate
- US Highway
- State Primary Highway
- Major Secondary
- Waterbody

- Pamunkey Creek
- Poni River

Spotsylvania County

Sub Watersheds

VAHU5	VAHU6	VAHU6_Name
RA-L	RA45	Rappahannock River-Motts Run
RA-K	RA44	Rapidan River-Hazel Run
RA-L	RA46	Rappahannock River-Hazel Run-Claiborne Run
RA-K	RA43	Wilderness Run
RA-L	RA48	Rappahannock River-Muddy Creek
YO-L	YO38	Ni River
RA-L	RA47	Massaponax Creek
YO-L	YO39	(Upper) Po River-Robertson Run
YO-E	YO17	Terrys Run-Lake Anna
YO-E	YO16	Pamunkey Creek-Lake Anna-Clear Creek
YO-E	YO18	Pamunkey Creek/Lake Anna-Plentiful Creek
YO-L	YO40	Glady Run
YO-L	YO41	(Lower) Po River-Lake Pocahontas
YO-L	YO42	Poni River
YO-H	YO22	Northeast Creek
YO-M	YO44	Ta River
YO-F	YO20	North Anna River/Lake Anna-Pigeon Run
YO-D	YO15	North Anna River-Lake Anna-Christopher Creek
YO-M	YO45	Matta River
YO-M	YO43	Mat River
YO-M	YO46	South River-Mays Run
YO-F	YO21	North Anna River/Lake Anna-Elk Creek
YO-H	YO23	North Anna River-Hawkins Creek



Spotsylvania County

Information Services Department
GIS Division

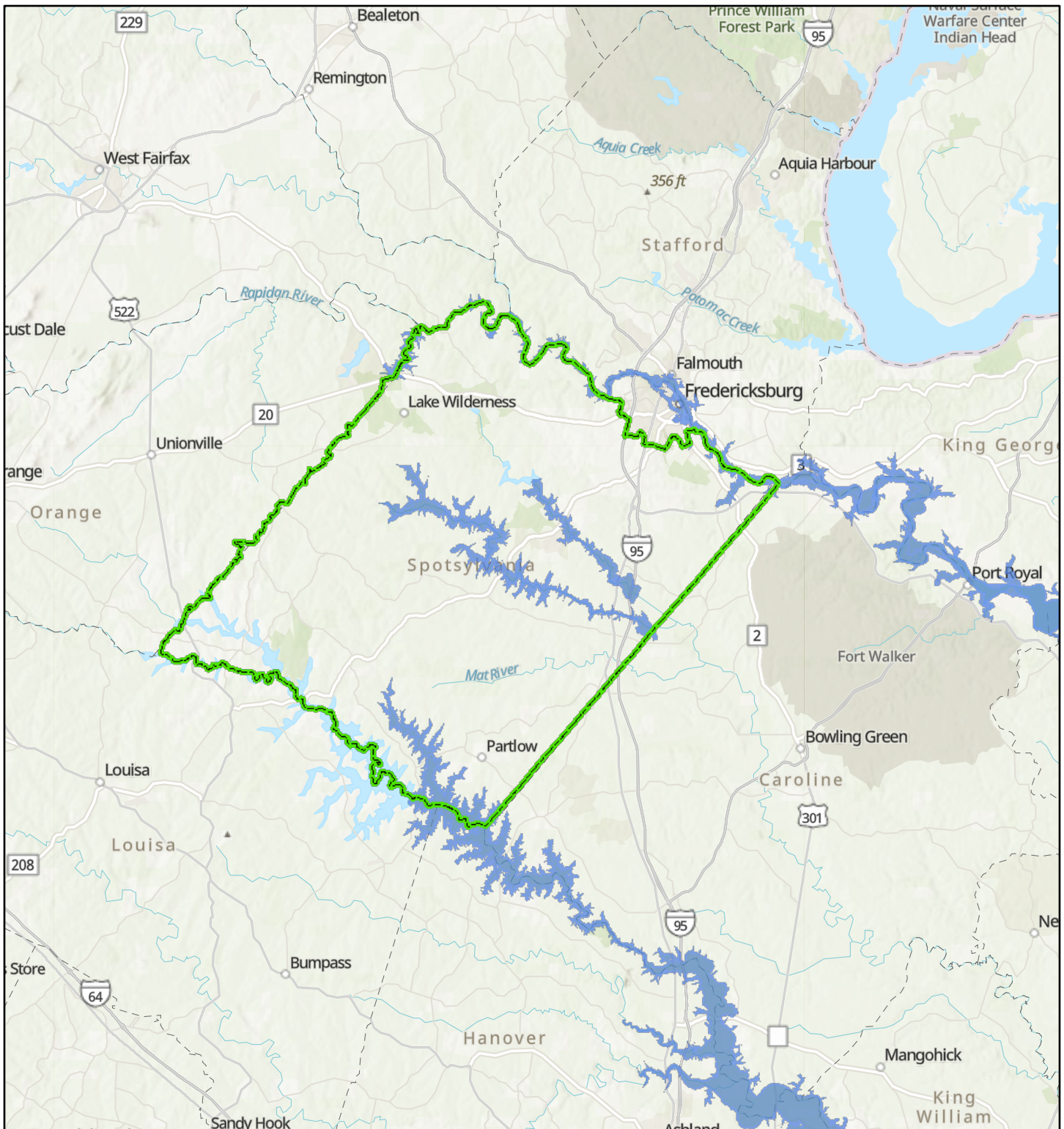
Created: 6/7/2022 EWT

Sources:
Virginia Department of Conservation and Recreation - SubWatersheds
Spotsylvania County Department of Information Services GIS Office - Roads, Rivers and Lakes

Items of Interest

- VDCR SubWatershed
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 - Pamunkey Creek
 - Poni River

Dam Break Inundation Zone



January 23, 2025

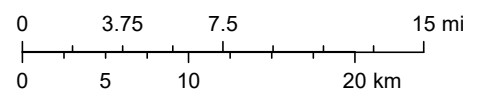
1:577,791



Tax County Boundary



Dam Failure Inundation Area



None, Esri, CGIAR, USGS, Spotsylvania County GIS, VGIN, Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, USFWS