

2628 - CID515525_FairfaxCounty_CFPF-2

Application Details

Funding Opportunity: 2336-Virginia Community Flood Preparedness Fund - Project Grants - CY24 Round 5
Funding Opportunity Due Date: Jan 24, 2025 11:59 PM
Program Area: Virginia Community Flood Preparedness Fund
Status: Under Review
Stage: Final Application

Initial Submit Date: Jan 22, 2025 8:50 AM
Initially Submitted By: Ekta Amar
Last Submit Date:
Last Submitted By:

Contact Information

Primary Contact Information

Active User*: Yes
Type: External User
Name*: Ms. Ekta Middle Name Amar
Salutation First Name Last Name
Title: Engineer IV
Email*: ekta.amar@fairfaxcounty.gov
Address*: 12000 Government Center Pkwy
Suite 449
Fairfax Virginia 22035
City State/Province Postal Code/Zip
Phone*: 703-324-5500 Ext.
Phone

Fax: ### ### ####
Comments:

Organization Information

Status*: Approved
Name*: FAIRFAX COUNTY
Organization Type*: Local Government
Tax ID*: 54-0787833
Unique Entity Identifier (UEI)*: 074837626
Organization Website:

Address*: 12000 Government Center Parkway
Suite 552

Fairfax Virginia 22035-
City State/Province Postal Code/Zip

Phone*: (703) 324-2183 Ext.
#####

Fax: ### ### #####

Benefactor:

Vendor ID:

Comments:

VCFPF Applicant Information

Project Description

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

NFIP/DCR Community Identification Number (CID)*: 515525

If a state or federally recognized Indian tribe,

Name of Tribe:

Authorized Individual*: Bryan Hill
First Name Last Name

Mailing Address*: 12000 Government Center Pkwy
Address Line 1
Suite 552
Address Line 2
Fairfax Virginia 22035
City State Zip Code

Telephone Number*: 703-324-2531

Cell Phone Number*: 703-324-2531

Email*: cexbryanhill@fairfaxcounty.gov

Is the contact person different than the authorized individual?

Contact Person*: Yes

Contact: Ekta Amar
First Name Last Name
12000 Government Center Pkwy
Address Line 1
Suite 449
Address Line 2
Fairfax Virginia 22035
City State Zip Code

Telephone Number: 703-324-5500

Cell Phone Number: 703-324-5500

Email Address: ekta.amar@fairfaxcounty.gov

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

Project Description*:

The project, Wolftrap Rd Property Acquisition, incorporates a nature-based solution through the creation of an open space at 8732 Wolftrap Rd

property by acquiring and demolishing the property as it is subjected to repeated damage during storm events.

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*: No

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

Census Block(s) Where Project will Occur*: 4605.01

Is Project Located in an NFIP Participating Community?* Yes

Is Project Located in a Special Flood Hazard Area?* No

Flood Zone(s) (if applicable): X (unshaded)

Flood Insurance Rate Map Number(s) (if applicable): 51059C0165E

Eligibility CFPF - Round 4 - Projects

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

Does the local government have an approved resilience plan and has provided a copy or link to the plan with this application?

Resilience Plan*: Yes
Yes - Eligible for consideration under all categories
No - Eligible for consideration for studies, capacity building, and planning only

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
N/A - Not applicable

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 Flood Prevention and Protection Projects - Round 4

Scoring

Category Scoring:

Hold CTRL to select multiple options

Project Category*:

Acquisition of developed property consistent with an overall comprehensive local or regional plan for purposes of allowing inundation, retreat, or acquisition of structures and where the flood mitigation benefits will be achieved as a part of the same project as the property acquisition.

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*: Very Low Social Vulnerability (Less than -1.0)

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

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*: No

Projects eligible for funding may also reduce nutrient and sediment pollution to local waters and the Chesapeake Bay and assist the Commonwealth in achieving local and/or Chesapeake Bay TMDLs. Does the proposed project include implementation of one or more best management practices with a nitrogen, phosphorus, or sediment reduction efficiency established by the Virginia Department of Environmental Quality or the Chesapeake Bay Program Partnership in support of the Chesapeake Bay TMDL Phase III Watershed Implementation Plan?

Reduction of Nutrient and Sediment No

Pollution*:

Does this project provide ?community scale? benefits?

Community Scale Benefits*: Less than 25% of census block

Expected Lifespan of Project

Expected Lifespan of Project*: Over 20 Years

Comments:

Scope of Work - Projects - Round 4

Scope of Work

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*: [1. Scope of Work.docx](#)

Comments:

Scope of Work for the Wolftrap Acquisition project

Budget Narrative

Budget Narrative Attachment*: [2. Budget Narrative.docx](#)

Comments:

Budget Narrative document

Scope of Work Supporting Information - Projects

Supporting Information - Projects

Provide population data for the local government in which the project is taking place

Population*: 2691.00

Provide information on the flood risk of the project area, including whether the project is in a mapped floodplain, what flood zone it is in, and when it was last mapped. If the property or area around it has been flooded before, share information on the dates of past flood events and the amount of damage sustained

Historic Flooding data and Hydrologic Studies*: [3_Historic Flood Damage and Images.docx](#)

Include studies, data, reports that demonstrate the proposed project minimizes flood vulnerabilities and does not create flooding or increased flooding (adverse impact) to other properties

No Adverse Impact*: [3_No Adverse Impact.docx](#)

Include supporting documents demonstrating the local government's ability to provide its share of the project costs. This must include an estimate of the total project cost, a description of the source of the funds being used, evidence of the local government's ability to pay for the project in full or quarterly prior to reimbursement, and a signed pledge agreement from each contributing organization

Ability to Provide Share of Cost*: [3_Ability to Provide Share of Cost with Attachment.pdf](#)

A benefit-cost analysis must be submitted with the project application

Benefit-Cost Analysis*: [9_Benefits Cost Analysis.pdf](#)

Provide a list of repetitive loss and/or severe repetitive loss properties. Do not provide the addresses for the properties, but include an exact number of repetitive loss and/or severe repetitive loss structures within the project area

Repetitive Loss and/or Severe Repetitive Loss Properties*: [3_Repetitive Loss Property.docx](#)

Describe the residential and commercial structures impacted by this project, including how they contribute to the community such as historic, economic, or social value. Provide an exact number of residential structures and commercial structures in the project area

Residential and/or Commercial Structures*:

There is only one residential structure impacted by this project. This residential property will be acquired and demolished. It was built in the 1930s before the flooding ordinance was adopted by the County. There are no commercial structures in the project area.

If there are critical facilities/infrastructure within the project area, describe each facility

Critical Facilities/Infrastructure*:

There are no critical facilities within the project area.

Explain the local government's financial and staff resources. How many relevant staff members does the local government have? To what relevant software does the local government have access? What are the local government's capabilities?

Financial and Staff Resources*:

The Stormwater Services Emergency and Flood Response Projects program supports flood control projects for unanticipated flooding events that impact storm systems and structural flooding. The program provides annual funding for scoping, design, and construction activities related to flood mitigation projects, but does not currently include funding for voluntary acquisition of flood-prone properties. Fairfax County's advertised Fiscal Year 2025 Stormwater Services budget includes \$7.0 million for emergency and flood response projects, but there is an estimated total cost of \$70 million for active flood mitigation projects. With the increase in the frequency and intensity of storms due to climate change, we expect the number of flood mitigation projects to grow, and the associated project design and construction costs will extend well beyond what the county's current emergency and flood response program can support.

The County has one Certified Floodplain Manager (CFM) to support overall project management and another staff to provide acquisition services and one project manager supporting demolition and restoration. Two additional management staff are both CFMs are available to provide oversight.

The County has the latest version of HEC-HMS 4.12 and Hec-RAS 6.5 software to perform the hydrologic and hydraulic modeling. Microsoft 365 Office Suite and ESRI's ArcGIS Pro for any analysis and visualization of the data.

The Resilient Fairfax Plan Goal AE.1 strategy encourages surveying and protecting areas that provide Natural Resilience Benefits (Attachment 12). The Fairfax County Floodplain Management Plan also recommends volunteer acquisition under Fairfax County Mitigation Action 17 (Attachment 13). Other than federal FEMA grant programs, there is currently no County designated funding source for voluntary acquisition of flood-prone properties to meet the County's climate resiliency and floodplain management goals.

Identify and describe the goals and objectives of the project. Include a description of the expected results of the completed project and explain the expected benefits of the project. This may include financial benefits, increased awareness, decreased risk, etc.

Goals and Objectives*:

The following are the primary goals and objectives of the project:

Reduce localized flooding by acquiring and demolishing the impacted structure.

Remove 8732 Wolfrap Rd property and ensure the property remains as green space in perpetuity.

The demolition of the house and other impervious surfaces at 8732 Wolfrap Rd directly supports the Outcome Area Environment in the County's Strategic Plan. The green open space will provide environmental benefits by improved ecosystem services.

Address safety concerns for the homeowner by acquiring and removing a structure that has experienced repeated flooding.

Outline a plan of action laying out the scope and detail of how the proposed work will be accomplished with a timeline identifying expected completion dates.

Determine milestones for the project that will be used to track progress. Explain what deliverables can be expected at each milestone, and what the final project deliverables will be. Identify other project partners

Approach, Milestones, and Deliverables*: [3_Approach Milestones Deliverables.docx](#)

Where applicable, briefly describe the relationship between this project and other past, current, or future resilience projects. If the applicant has received or applied for any other grants or loans, please identify those projects, and, if applicable, describe any problems that arose with meeting the obligations of the grant and how the obligations of this project will be met

Relationship to Other Projects*:

This volunteer acquisition project is independent and is not related to any on-going projects or future projects.

For ongoing projects or projects that will require future maintenance, such as infrastructure, flood warning and response systems, signs, websites, or flood risk applications, a maintenance, management, and monitoring plan for the projects must be provided

Maintenance Plan*: [5_Maintenance and Management Plan.docx](#)

Describe how the project meets each of the applicable scoring criteria contained in Appendix B. Documentation can be incorporated into the Scope of Work Narrative

Criteria*:

Acquisition (30) - The project, Highland Lane Property Acquisition, incorporates a nature-based solution through the creation of an open space at 3239 Highland Lane property by acquiring and demolishing the property as it is subjected to repeated damage during storm events.

Social Vulnerability Index Score (0) - Not socially vulnerable

Community scale of benefits (0) - less than 25% of census block. A single residential property will be demolished, and a natural open space will be created.

Expected lifespan of project (10) - Over 20 years. The acquisition project will result in acquiring the property and demolishing it and converting the area into perpetual open space.

Budget

Budget Summary

Grant Matching Requirement*: Projects that will result in nature-based solutions - Fund 70%/Match 30%

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)*: \$1,056,000.00
**This amount should equal the sum of your request and match figures

REQUIRED Match Percentage Amount: \$316,800.00

BUDGET TOTALS

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

Match Percentage: 30.00%
Verify that your match percentage matches your required match percentage amount above.

Total Requested Fund Amount: \$739,200.00

Total Match Amount: \$316,800.00

TOTAL: \$1,056,000.00

Personnel

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

Fringe Benefits

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

Travel

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

Equipment

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

Supplies

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

Construction

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

Contracts

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

Maintenance Costs

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

PreAward and Startup Costs

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

Other Direct Costs

Description	Requested Fund Amount	Match Amount	Match Source
Property Acquisition cost & Demolition	\$739,200.00	\$316,800.00	Cash
	\$739,200.00	\$316,800.00	

Long and Short Term Loan Budget - Projects - VCFPF

Budget Summary

Are you applying for a short term, long term, or no loan as part of your application?

If you are not applying for a loan, select "not applying for loan" and leave all other fields on this screen blank

Long or Short Term*: Not Applying for Loan

Total Project Amount: \$0.00

Total Requested Fund Amount: \$0.00

TOTAL: \$0.00

Salaries

Description	Requested Fund Amount
No Data for Table	

Fringe Benefits

Description	Requested Fund Amount
No Data for Table	

Travel

Description	Requested Fund Amount
No Data for Table	

Equipment

Description	Requested Fund Amount
No Data for Table	

Supplies

Description	Requested Fund Amount
No Data for Table	

Construction

Description	Requested Fund Amount
No Data for Table	

Contracts

Description	Requested Fund Amount
No Data for Table	

Other Direct Costs

Description	Requested Fund Amount
No Data for Table	

Supporting Documentation

Supporting Documentation

Named Attachment	Required	Description
Detailed map of the project area(s) (Projects/Studies)		Wolfrap Property Detailed Map
FIRMette of the project area(s) (Projects/Studies)		FIRM51059C0165E
Historic flood damage data and/or images (Projects/Studies)		Historic flood damage and images at Wolfrap property
A link to or a copy of the current floodplain ordinance		https://online.encodeplus.com/regs/fairfaxcounty-va/doc-viewer.aspx?secid=251&keywords=floodplain%27s%2Cfloodplains%2Cfloodplains%27%2Cfloodplain%2Cordinance%27s%2Cordinances%2Cordinan251
Maintenance and management plan for project		Maintenance and Management plan of Wolfrap property
A link to or a copy of the current hazard mitigation plan		Floodplain Management Plan 2024
A link to or a copy of the current comprehensive plan		Fairfax County Comprehensive Plan
Social vulnerability index score(s) for the project area		Social Vulnerability Index
Authorization to request funding from the Fund from governing body or chief executive of the local government		Authorization letter from the County's Executive
Signed pledge agreement from each contributing organization		
Maintenance Plan		Maintenance Plan for Wolfrap Property
<i>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 that explicitly indicate the risk reduction benefits of a flood mitigation project and compares those benefits to its cost-effectiveness.</i>		
Benefit Cost Analysis		Benefit Cost Analysis
Other Relevant Attachments		Fairfax County Resilient Plan

Letters of Support

Description	File Name	Type	Size	Upload Date
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No files attached.

Resilience Plan

Resilience Plan

Description	File Name	Type	Size	Upload Date
Appendix B of Wolfrap Property	Appendix B.pdf	pdf	47 KB	01/22/2025 08:49 AM
Appendix C	Appendix C.pdf	pdf	58 KB	01/22/2025 08:43 AM
Appendix D	Appendix D.pdf	pdf	88 KB	01/22/2025 08:43 AM
Entire document of supporting Information related to Wolfrap property	3. Supporting Information - Projects.docx	docx	3 MB	01/22/2025 08:38 AM
FY25 Stormwater Budget Fairfax County	11_FY25_40100 Stormwater Budget.pdf	pdf	747 KB	01/22/2025 08:37 AM
Resilience Plan Approval from DCR and Resilience Plan	14_Resilience Plan.pdf	pdf	1 MB	10/10/2024 02:00 PM
Signed Appendix A for Wolfrap property project	Appendix A.pdf	pdf	1 MB	01/22/2025 08:42 AM
Wolfrap Property Appraisal	APPRAISAL Wolfrap Rd - Vienna.pdf	pdf	5 MB	01/22/2025 08:38 AM

Ability to provide share of cost

Voluntary acquisition of the property is in general conformance with the 2017 Fairfax Comprehensive Plan. Figure 1 shows the comprehensive plan base.

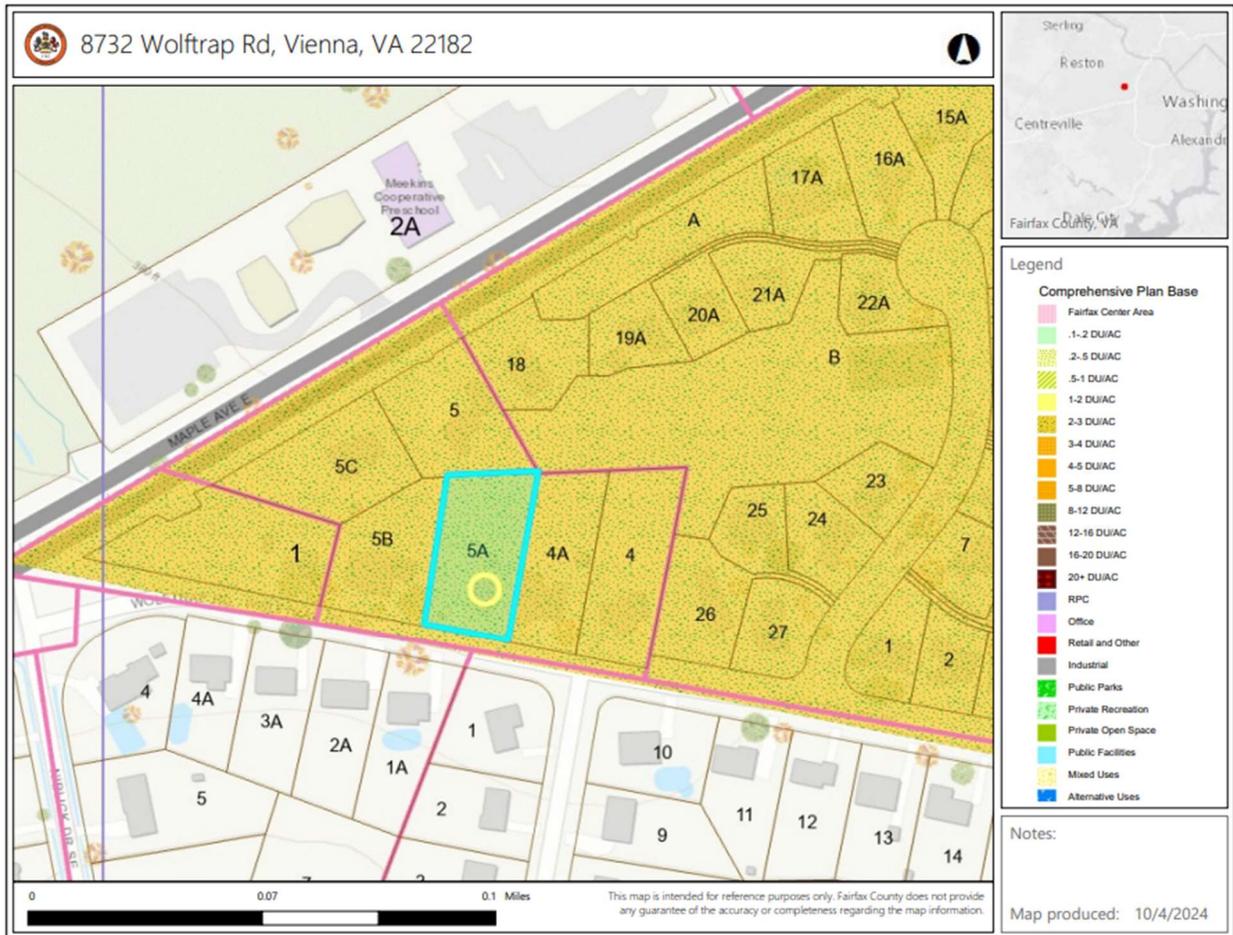


Figure 1: Comprehensive plan

It is currently anticipated that the County's cost-share would be provided through Emergency and Flood Response under Fund 40100 Stormwater Services in the Fairfax County Fiscal Year 2025 budget. The County budget document and a match authorization letter from the County Executive are included in the document.



County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

Date: 10/22/2024

Angela Davis, C.F.M.
Director, Floodplain Management
Virginia Department of Conservation and Recreation
Virginia Community Flood Preparedness Fund Division of Dam Safety and Floodplain
Management
600 East Main Street, 24th Floor
Richmond, Virginia 23219

Reference: Community Flood Preparedness Fund, 2024 Round 5 Grant Applications

Dear Ms. Davis:

This is in response to the Department of Conservation and Recreation's (DCR) recent announcement of the Virginia Community Flood Preparedness Fund (CFPF) grant.

We are providing CFPF applications (attachment) that contain information and request funding assistance for the following three flood prevention and protection projects:

1. 3239 Highland Lane Voluntary Acquisition (project)
2. 8732 Wolftrap Road Voluntary Acquisition (project)
3. Little Hunting Creek Floodplain Mapping (study)

If one or more of these grants are awarded, Fairfax County (County) will provide the necessary match for each selected project as required by your department, subject to the County's Board of Supervisors' approval. It is understood that the County's total match amount for all the three County's applications would be as much as \$785,790.

If you have any questions or need additional assistance, please contact Joni Calmbacher, Director, Department of Public Works and Environmental Service, Stormwater Planning Division at 703-324-5500.

Sincerely,

DocuSigned by:

Bryan Hill

5CF69274C2440E...

Bryan J. Hill

County Executive

Office of the County Executive
12000 Government Center Parkway, Suite 552
Fairfax, VA 22035-0066
703-324-2531, TTY 711, Fax 703-324-3956
www.fairfaxcounty.gov

Angela Davis
Virginia Department of Conservation and Recreation
Page 2 of 2

Attachment: Community Flood Preparedness Fund (CFPF): Applications

cc: Christopher Herrington, Director, Department of Public Works and Environmental Services (DPWES)
Eleanor Ku Coddling, Deputy Director, DPWES, Stormwater and Wastewater Divisions
Joni Calmbacher, Director, DPWES, Stormwater Planning Division

[Type here]

Fund 40100: Stormwater Services

Mission

To develop and maintain a comprehensive watershed and infrastructure management program to protect property, health, and safety; to enhance the quality of life; and to preserve and improve the environment for the benefit of the public. To plan, design, construct, operate, inspect, and maintain stormwater infrastructure; perform environmental assessments through coordinated stormwater and maintenance programs in compliance with all government regulations utilizing innovative techniques, customer feedback and program review; and to be responsive and sensitive to the needs of the residents, customers, and public partners.

Connection to the Countywide Strategic Plan

The Fairfax County Board of Supervisors adopted the first-ever Countywide Strategic Plan on October 5, 2021. The Countywide Strategic Plan serves as a road map to help guide future work, focusing on the 10 Community Outcome Areas that represent the issues of greatest importance to the community, and uses our One Fairfax equity policy to invest in people and places that have limited access to opportunity. On February 20, 2024, the second Annual Report on the work of the strategic plan was released to the public. The report contains point-in-time progress highlights for each of the community outcome areas, plus three data dashboards and data stories that are being replicated across all of the outcome areas, and a number of additional initiatives to embed the elements of the plan within department-level work. The report also includes a Year Three Implementation Model, which will engage hundreds of County subject-matter experts to identify and champion the specific strategies that will move forward to implementation under the guidance of the Board of Supervisors. For more information on the Countywide Strategic Plan, please visit www.fairfaxcounty.gov/strategicplan. Fund 40100, Stormwater Services, primarily supports the following Community Outcome Areas:



Community Outcome Area	Vision Statement
Environment and Energy	<i>All people live in a healthy sustainable environment.</i>
Mobility and Transportation	<i>All residents, businesses, visitors and goods can move efficiently, affordably and safely throughout the county and beyond via our well-designed and maintained network of roads, sidewalks, trails and transit options.</i>

Focus Stormwater Services are essential to protect public safety, preserve property values, and support environmental mandates such as those aimed at protecting the Chesapeake Bay and the water quality of local jurisdictional waterways. Projects in this fund include repairs to stormwater infrastructure; measures to improve water quality such as stream stabilization, rehabilitation, safety upgrades of state regulated dams, repair and rehabilitation of underground pipe systems and surface channels, flood mitigation, site retrofits and best management practices (BMP); and other stormwater improvements.

The Board of Supervisors approved a special service district to support the Stormwater Management Program and provide a dedicated funding source for both operating and capital project requirements by levying a service rate per \$100 of assessed real estate value, as authorized by Code of Virginia Ann. Sections 15.2-2400. Since this fund was established, staff has made significant progress in the implementation of watershed master plans, public outreach efforts, stormwater monitoring activities, water quality and flood mitigation project implementation, and operational maintenance programs related to existing storm drainage infrastructure including stormwater conveyance and regulatory requirements.

Staff continues to assess the appropriate service rate required to fully support the stormwater program now and, in the future, to address the growth in inventory and other community needs. Some of the additional community needs under evaluation include the anticipation of additional flood mitigation requirements and strengthening the role and financial support for the implementation of stormwater requirements associated with Fairfax County Public Schools sites under renovation. This enhanced program may require incremental changes to the rate over time and may result in a higher rate to fully support the program. Staff continue to evaluate these requirements and analyze the impact of increased real estate values on revenue projections.

One of the recent initiatives being funded by the Stormwater Services Fund is the new Stormwater/Wastewater facility which will consolidate operations and maximize efficiencies between the Stormwater and Wastewater Divisions. Stormwater operations are currently conducted from various locations throughout the County, and a new colocation of Stormwater and Wastewater staff will provide service efficiencies and sharing of resources.

While staff continues to further evaluate the impact of recent initiatives and the long-term requirements for the Stormwater Program, the FY 2025 rate will remain the same as the FY 2024 Adopted Budget Plan level of \$0.0325 per \$100 of assessed value. However, it is anticipated that in the next several years, incremental rate increases will be required based on continued growth of the stormwater system, the implementation of increasing flood mitigation projects, and additional requirements in the Municipal Separate Storm Sewer System (MS4) Permit.

The FY 2025 levy of \$0.0325 will generate \$103,877,482, supporting \$30,421,160 for staff and operational costs; \$71,846,860 for capital project implementation including contributory funding requirements; and \$1,609,462 transferred to the General Fund to partially offset central support services such as Human Resources, Purchasing, Budget and other administrative services supported by the General Fund, which benefit this fund.

Fund 40100: Stormwater Services

Stormwater Services Operational Support

Stormwater Services operational support includes funding for staff salaries, fringe benefits, and operating expenses for all stormwater operations. Fund 40100 also supports positions related to transportation operations maintenance provided by the Maintenance and Stormwater Management Division. All funding for the transportation related salary expenses and equipment are supported by capital projects in Fund 30010, General Construction and Contributions, as they do not qualify for expenses related to the stormwater service district. Funding for these programs within Fund 30010 provides more transparency and the carryforward of balances at year-end.

Fairfax County's Urban Forestry Management Division (UFMD) is also supported by Fund 40100. This dedicated team safeguards the county's valuable tree canopy by monitoring its health and implementing robust tree planting initiatives. In doing so, staff sustains the rich environmental, ecological, and socio-economic benefits that the tree canopy provides. The UFMD's mission aligns with Stormwater Services' goal of "improving water quality and stormwater management through tree conservation," as healthy trees and forest soils significantly reduce water pollution and runoff. In FY 2023, thirteen merit and two temporary positions were transferred from the UFMD in Fund 40100 (Stormwater Services) to Fund 40200 (Land Development Services) to better align resources and achieve service efficiencies.

FY 2025 Stormwater Capital Project Support



Conveyance System Inspections, Development and Rehabilitation

The County owns and operates 1,608 miles of underground stormwater pipes and improved channels with an estimated replacement value of over one billion dollars. County staff continue to perform internal inspections of all the stormwater pipes. The initial results show that approximately 4 percent of the pipes exhibit conditions of failure, and an additional 2 percent require maintenance or repair. MS4 Permit regulations require inspection and maintenance of these 1,608 miles of existing conveyance systems, 66,892 stormwater structures, and a portion of the immediate downstream channel at the 7,000 regulated pipe outlets. Acceptable industry standards indicate that one dollar reinvested in infrastructure saves seven dollars in the asset's life and 70 dollars if asset failure occurs. The goal of this program is to inspect pipes on a 20-year cycle and rehabilitate pipes and improve outfall channels before total failure occurs. Funding of \$3,000,000 for inspections and development and \$10,000,000 for conveyance system maintenance, rehabilitation, and outfall restoration has been included in FY 2025.



Dam Safety and Facility Rehabilitation

This program provides for inventory, inspections, operations, and maintenance of all stormwater facilities within the County. There are approximately 8,400 stormwater management facilities in service that range in size from small rain gardens to large state regulated flood control dams. The County is responsible for inspecting approximately 6,000 privately-owned facilities and maintaining over 2,400 County owned facilities. This inventory increases annually and is projected to continually increase as new development and redevelopment sites occur in the County. This initiative also includes the removal of sediment that occurs in both wet and dry stormwater management facilities to ensure that adequate capacity is maintained to treat the stormwater. The program results in approximately 50 projects annually that require design and construction management activities as well as contract management and maintenance responsibilities. This program supports maintenance of structures and dams that control and treat the water flowing through County owned facilities and improvement of dam safety by supporting annual inspections of 20 state-regulated dams and the Huntington Levee and by developing Emergency Action Plans required by the state. The Emergency Action Plans are updated annually. This program also supports capital repair and rehabilitation of stormwater management facilities. The County currently owns and operates dams, green infrastructure facilities, and various types of other facilities such as underground detention and proprietary systems with an estimated replacement value of over \$500 million. Funding in the amount of \$11,000,000 is included for dam rehabilitation and \$6,000,000 is included for dam maintenance in FY 2025.

Stormwater/Wastewater Facility

This project will provide funding for a Stormwater/Wastewater Facility which will consolidate operations and maximize efficiencies between the Stormwater and Wastewater Divisions. Currently, Stormwater operations are conducted from various locations throughout the County, with the majority of staff located at the West Drive facility. Facilities for field maintenance operations and for field/office-based staff are inadequate and outdated for the increased scope of the stormwater program, and inadequate to accommodate future operations. This project is currently under construction and is scheduled to be completed in spring 2026. The facility is financed by EDA bonds with the Stormwater Services Fund and Wastewater Fund supporting the debt service. Interest funding received to date in the amount of \$3,223,761 and new funding in the amount of \$957,614 will provide for the total FY 2025 requirement of \$4,181,375 for debt service payments associated with the Stormwater/Wastewater facility.

Emergency and Flood Response Projects

This program supports flood control projects for unanticipated flooding events that impact storm systems and structural flooding. The program provides annual funding for scoping, design, and construction activities related to flood mitigation projects. Funding in the amount of \$7,000,000 is included for the Emergency and Flood Response Projects in FY 2025.

Enterprise Asset Management-Work Order System

This project will provide funding for the transition from an Enterprise Asset Management (EAM) system to a more functional Asset Management Program (AMP). This funding will support the acquisition of software, servers, and consultant services to migrate asset management and related work order management into the new system. The current system tracks assets, inspections, daily work management, and associated contractor costs. Features of the replacement system include geographic information system (GIS) integration and field mobility. The Department of Public Works and Environmental Services (DPWES) Information Technology staff have collaborated with the Stormwater Management and the Wastewater Management staff to promote interagency capabilities, optimize performance, and improve system lifecycle management for the new system. This new system will meet future expectations for both divisions and optimize service delivery for DPWES. Funding in the amount of \$288,000 is included for this project in FY 2025.

Stormwater-Related Contributory Program

Contributory funds are provided annually to the Northern Virginia Soil and Water Conservation District (NVSWCD) and the Occoquan Watershed Monitoring Program (OWMP). The NVSWCD is an independent subdivision of the Commonwealth of Virginia that provides leadership in the conservation and protection of Fairfax County's soil and water resources. NVSWCD is governed by a five-member Board of Directors - three members are elected every four years by the voters of Fairfax County and two members are appointed by the Virginia Soil and Water Conservation Board. Accordingly, the work of NVSWCD supports many of the environmental goals established by the Board of Supervisors. The goal of the NVSWCD is to continue to improve the quality of the environment and general welfare of the citizens of Fairfax County by providing them with a means of dealing with soil, water conservation and related natural resource problems. NVSWCD provides County agencies with comprehensive environmental evaluations for proposed land use changes with particular attention to the properties of soils, erosion potential, drainage, and the impact on the surrounding environment. NVSWCD has consistently been able to create partnerships and leverage state, federal and private resources to benefit natural resources protection in Fairfax County. Funding of \$609,346 has been included for the County contribution to the NVSWCD in FY 2025.

The OWMP and the Occoquan Watershed Monitoring Laboratory (OWML) were established to ensure that water quality is monitored and protected in the Occoquan Watershed. Given the many diverse uses of the land and water resources in the Occoquan Watershed (agriculture, urban residential development, commercial and industrial activity, water supply, and wastewater disposal), the OWMP plays a critical role as the unbiased interpreter of basin water quality information. Funding of \$195,595 has been included for the County contribution to the OWMP in FY 2025.

Contributory funding also supports additional projects selected through NVSWCD-administered grant programs including the Conservation Assistance Program (CAP) and Virginia Conservation Assistance Program (VCAP). CAP and VCAP provide cost-share and technical assistance for the voluntary installation of environmental best management practices (BMP). The programs align with the County's watershed management plans that suggest establishing a cost share program with property owners on BMP projects located on private land. The BMPs installed under CAP and VCAP help address private drainage and erosion issues, improve water quality, and support long-term stewardship of the County watersheds by building awareness of the importance of watershed protection. FY 2025 funding of \$750,000 is included for grant contributions to NVSWCD.

Fund 40100: Stormwater Services

Stormwater Allocation to Towns

On April 18, 2012, the State Legislature passed SB 227, which entitles the Towns of Herndon and Vienna to all revenues collected within their boundaries by Fairfax County's stormwater service district. An agreement was developed for a coordinated program whereby the Towns remain part of the County's service district and the County returns 25 percent of the revenue collected from properties within each town. This allows for the Towns to provide services independently such as maintenance and operation of stormwater pipes, manholes, and catch basins. The remaining 75 percent remains with the County and the County takes on the responsibility for the Towns' Chesapeake Bay TMDL requirements as well as other TMDL and MS4 requirements. This provides for an approach that is based on watersheds rather than on jurisdictional lines. Funding in the amount of \$1,250,000 is included for the allocations to Vienna and Herndon in FY 2025.

Regulatory Program

The County is required by federal law to operate under the conditions of a state-issued MS4 Permit. Stormwater staff annually evaluates funding required to meet the increasing federal and state regulatory requirements pertaining to the MS4 Permit, and state and federal mandates associated with controlling water pollution delivered to local streams and the Chesapeake Bay. The MS4 Permit allows the County to discharge stormwater from its stormwater systems into state and federal waters. There are approximately 15,000 stormwater outfalls in the County and 7,000 are regulated outfalls covered by the permit. The permit was recently reissued in January 2024. The permit requires the County to document the stormwater management facility inventory, enhance public outreach and education efforts, increase water quality monitoring efforts, and provide stormwater management and stormwater control training to all appropriate County employees. The permit requires the County to implement sufficient stormwater projects that will reduce the nutrients and sediment to comply with the Chesapeake Bay and local stream TMDL requirements. Funding in the amount of \$4,000,000 is included for the regulatory program in FY 2025.

Stream and Water Quality Improvements

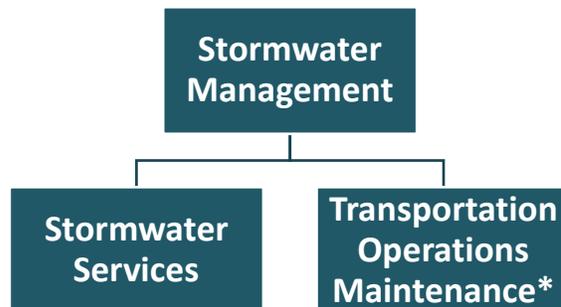
This program funds water quality improvement projects necessary to mitigate the impacts to local streams and the Chesapeake Bay resulting from urban stormwater runoff. This includes water quality projects such as construction and retrofit of stormwater management ponds, implementation of green stormwater infrastructure facilities, stream restoration, and water quality projects identified in the completed Countywide Watershed Management Plans. These projects will aid in the reduction of pollutants and improve water quality in county streams, that are considered to be in fair to very poor condition and likely do not meet Federal Clean Water Act water quality standards. In addition, Total Maximum Daily Load (TMDL) requirements for local streams and the Chesapeake Bay are the regulatory drivers by which pollutants entering impaired water bodies must be reduced. The



Fund 40100: Stormwater Services

Chesapeake Bay TMDL was established by the EPA and requires that MS4 communities, as well as other dischargers, implement measures to significantly reduce the nitrogen, phosphorous, and sediment loads in waters that drain to the Chesapeake Bay by 2025. MS4 Permit holders must achieve 35 percent of the required reductions within the current five-year permit cycle and 60 percent of the required reductions in the next five-year permit cycle. In addition, compliance with the Chesapeake Bay TMDL requires that the County undertake construction of new stormwater facilities and retrofit existing facilities and properties. The EPA continually updates the Chesapeake Bay compliance targets and credits. It is anticipated that the changes to the assigned targets as well as how projects are credited will likely impact future compliance requirements. In addition to being required to meet the Chesapeake Bay TMDL targets, the current MS4 Permit requires the County to develop and implement action plans to address local impairments. Most of the 1,900 watershed management plan projects contribute toward achieving the Chesapeake Bay and local stream TMDL requirements. Funding in the amount of \$26,796,305 is included for stream and water quality Improvements in FY 2025.

Organizational Chart



*Denotes functions that are included in both Fund 30010, General Construction and Contributions, and Fund 40100, Stormwater Services.

Budget and Staff Resources

Category	FY 2023 Actual	FY 2024 Adopted	FY 2024 Revised	FY 2025 Advertised
FUNDING				
Expenditures:				
Personnel Services	\$23,397,305	\$26,824,362	\$26,824,362	\$27,582,524
Operating Expenses	3,330,308	3,870,636	3,995,278	3,410,636
Capital Equipment	230,007	895,000	1,640,387	928,000
Capital Projects	69,211,296	69,942,607	279,391,538	71,846,860
Subtotal	\$96,168,916	\$101,532,605	\$311,851,565	\$103,768,020
Less:				
Recovered Costs	(\$882,703)	(\$2,129,955)	(\$2,129,955)	(\$1,500,000)
Total Expenditures	\$95,286,213	\$99,402,650	\$309,721,610	\$102,268,020
AUTHORIZED POSITIONS/FULL-TIME EQUIVALENT (FTE)				
Regular	194 / 194	194 / 194	194 / 194	194 / 194

**FY 2025
Funding
Adjustments**

The following funding adjustments from the FY 2024 Adopted Budget Plan are necessary to support the FY 2025 program:

Employee Compensation **\$1,263,328**

An increase of \$1,263,328 in Personnel Services includes \$522,640 for a 2.0 percent market rate adjustment (MRA) for all employees and \$387,732 for performance-based and longevity increases for non-uniformed merit employees, both effective July 2024. The remaining increase of \$352,956 is included to support employee retention and recruitment efforts that will reduce pay compression and align the County's pay structures with the market based on benchmark data.

Other Post-Employment Benefits **(\$75,211)**

A decrease of \$75,211 in Personnel Services reflects required adjustments associated with providing Other Post-Employment Benefits (OPEBs) to retirees, including the Retiree Health Benefits Subsidy. For more information on Other Post-Employment Benefits, please refer to Fund 73030, OPEB Trust, in Volume 2 of the FY 2025 Advertised Budget Plan.

Asset Management Program **(\$260,000)**

Funding of \$400,000 in Operating Expenses, a decrease of \$260,000 from the FY 2024 Adopted Budget Plan, will continue the multi-year effort to support a new Asset Management Program (AMP). Funding includes the acquisition of software, servers, and consultant services to migrate asset management and related work order management into the new system. This new system will meet the future expectations for both Stormwater and Wastewater divisions and optimize service delivery for the Department of Public Works and Environmental Services.

Recovered Costs **\$629,955**

A decrease of \$629,955 in Recovered Costs is based on actual trends in recent years and an anticipated reduction in the amount of eligible expenses able to be recovered during FY 2025. This decrease is offset by a reduction in personnel service of \$429,955 and a reduction in Operating Expenses of \$200,000.

Capital Equipment **\$33,000**

Funding of \$928,000 in Capital Equipment, an increase of \$33,000 over the FY 2024 Adopted Budget Plan, is included primarily for replacement equipment that has outlived its useful life. Replacement equipment in the amount of \$900,000 includes: \$300,000 to replace a CCTV truck that supports staff by inspecting infrastructure and identifying and locating potential flood causing issues; \$275,000 to replace an excavator that is critical in support of excavating work sites, loading trucks with bulk material and moving heavy objects; \$150,000 to replace a bucket truck that provides support for the street name sign program; \$125,000 to replace a tractor loader that is critical in all maintenance programs and snow removal activities; and \$50,000 to replace a flatbed trailer and an air compressor with two equipment trailers that are critical for transporting and securing storage of equipment to, from and on active job sites. In addition, new equipment in the amount of \$28,000 includes the purchase of four water quality monitoring instruments that are used to support the Countywide Comprehensive Biological Monitoring Program to assess the ecological health of County watersheds and to satisfy regulatory requirements of the Municipal Separate Storm Sewer System (MS4) permit.

Capital Projects **\$1,904,253**

Funding of \$71,846,860 in Capital Projects, an increase of \$1,904,253 over the FY 2024 Adopted Budget Plan, has been included in FY 2025 for priority stormwater capital projects.

**Changes to
FY 2024
Adopted
Budget Plan**

The following funding adjustments reflect all approved changes in the FY 2024 Revised Budget Plan since passage of the FY 2024 Adopted Budget Plan. Included are all adjustments made as part of the FY 2023 Carryover Review and all other approved changes through December 31, 2023.

Carryover Adjustments \$210,318,960

As part of the FY 2023 Carryover Review, the Board of Supervisors approved funding of \$210,318,960 based on the carryover of unexpended project balances in the amount of \$188,574,772 and a net adjustment of \$21,744,188. This adjustment included the carryover of \$124,642 in operating encumbrances and \$745,387 in capital equipment encumbrances and an increase to capital projects of \$20,874,159. The adjustment to capital projects was based on the appropriation of anticipated grant revenue of \$15,399,200 approved by the Board of Supervisors on April 11, 2023; actual Economic Development Authority (EDA) Bonds interest earnings of \$3,068,861 associated with the Stormwater/Wastewater Facility; operational savings of \$911,237; revenues of \$798,000 received in FY 2023 as a reimbursement from the United States Army Corps of Engineers associated with the Watershed Flood Damage Reduction Study in the Belle Haven area; higher than anticipated Stormwater tax revenues of \$464,349; revenues of \$155,009 received in FY 2023 as a reimbursement from the Green Trails Homeowners Association associated with maintaining a Stormwater Management Facility in the community; revenues received in FY 2023 from the sale of capital equipment in the amount of \$45,883; and revenues of \$31,620 received in FY 2023 as a reimbursement from the Virginia Center Lakes Homeowners Association associated with pond improvements at Nutley Pond.

Position Detail

The FY 2025 Advertised Budget Plan includes the following positions:

STORMWATER SERVICES – 194 Positions			
Maintenance and Stormwater Management (135 positions)			
1	Director, Maintenance and SW	2	Contract Analysts I
1	Engineer V	1	Financial Specialist I
3	Public Works-Env. Serv. Managers	1	Inventory Manager
6	Engineers IV	1	Senior Engineering Inspector
1	Financial Specialist IV	1	Vehicle Maintenance Coordinator
2	Project Managers II	8	Senior Maintenance Supervisors
1	Ecologist III	1	Administrative Assistant V
2	Senior Engineers III	7	Engineering Technicians II
6	Engineers III	1	Welder II
3	Public Works-Env. Bus. Ops. Managers	1	Carpenter II
6	Project Managers I	5	Maintenance Supervisors
1	Ecologist II	3	Masons
1	HR Generalist II	1	Administrative Assistant IV
2	Public Works-Env. Serv. Specialists	9	Heavy Equipment Operators
1	Safety Analyst II	1	Material Mgmt. Specialist III
2	Env. Services Supervisors	1	Welder I
2	Financial Specialists II	2	Engineering Technicians I
1	Assistant Project Manager	2	Equipment Repairers
1	Network/Telecom. Analyst I	2	Maintenance Crew Chiefs
10	Engineering Technicians III	10	Motor Equipment Operators
1	HR Generalist I	4	Administrative Assistants III
1	Safety Analyst I	15	Senior Maintenance Workers
1	Trades Supervisor		

Stormwater Planning Division (56 positions)			
1	Director, Stormwater Planning	1	Emergency Mgmt. Specialist III
1	Engineer V	10	Engineers III
3	Project Coordinators	1	Project Manager I
1	Public Works-Env. Serv. Manager	2	Code Specialists II
4	Ecologists IV	4	Ecologists II
1	Planner IV	1	Contract Specialist II
4	Engineers IV	1	Financial Specialist II
4	Project Managers II	1	Management Analyst II
5	Ecologists III	1	Ecologist I
2	Landscape Architects III	1	Engineering Technician III
1	Planner III	1	Financial Specialist I
1	Senior Engineer III	3	Administrative Assistants III
1	Contract Specialist III		
Urban Forestry (3 positions)			
1	Director, Urban Forestry Division	1	Urban Forester III
1	Project Manager II		

Performance Measurement Results by Community Outcome Area

Environment and Energy

The objective to receive no MS4 Permit violations related to inspection and maintenance of public and private stormwater management facilities was met in FY 2021, FY 2022 and FY 2023. It is expected that this objective will also be met in FY 2024 and FY 2025. The objective to update 100 percent of the Stormwater emergency action plans was also met in prior years. It is expected that this trend will continue in both FY 2024 and FY 2025.

Mobility and Transportation

The objective to keep 100 percent of the commuter facilities operational for 365 days was met in prior years. It is expected that this goal will be met in FY 2024 and FY 2025.

Community Outcome Area	FY 2021 Actual	FY 2022 Actual	FY 2023 Estimate	FY 2023 Actual	FY 2024 Estimate	FY 2025 Estimate
Environment and Energy						
Promoting Air, Water and Land Quality						
MS4 permit violations received	0	0	0	0	0	0
Percent of Emergency Action Plans current	100%	100%	100%	100%	100%	100%
Mobility and Transportation						
Infrastructure Condition, Sustainability and Environmental Impact						
Percent of commuter facilities available 365 days per year	100%	100%	100%	100%	100%	100%

A complete list of performance measures can be viewed at <https://www.fairfaxcounty.gov/budget/fy-2025-advertised-performance-measures-pm>

Fund 40100: Stormwater Services

FUND STATEMENT

Category	FY 2023 Actual	FY 2024 Adopted Budget Plan	FY 2024 Revised Budget Plan	FY 2025 Advertised Budget Plan
Beginning Balance	\$192,147,379	\$0	\$194,623,440	\$376,790
Revenue:				
Stormwater Service District Levy	\$94,857,404	\$100,802,650	\$100,802,650	\$103,877,482
Interest on Investments ¹	3,068,861	0	0	0
Stormwater Local Assistance Fund (SLAF) Grant ²	37,503	0	592,110	0
Community Flood Preparedness Fund (CFPF) Grants ³	0	0	15,399,200	0
Miscellaneous ⁴	1,407,302	0	81,000	0
Total Revenue⁵	\$99,371,070	\$100,802,650	\$116,874,960	\$103,877,482
Total Available	\$291,518,449	\$100,802,650	\$311,498,400	\$104,254,272
Expenditures:				
Personnel Services	\$23,397,305	\$26,824,362	\$26,824,362	\$27,582,524
Operating Expenses	3,330,308	3,870,636	3,995,278	3,410,636
Recovered Costs	(882,703)	(2,129,955)	(2,129,955)	(1,500,000)
Capital Equipment	230,007	895,000	1,640,387	928,000
Capital Projects	69,211,296	69,942,607	279,391,538	71,846,860
Total Expenditures	\$95,286,213	\$99,402,650	\$309,721,610	\$102,268,020
Transfers Out:				
General Fund (10001) ⁶	\$1,400,000	\$1,400,000	\$1,400,000	\$1,609,462
Land Development Services (40200) ⁷	208,796	0	0	0
Total Transfers Out	\$1,608,796	\$1,400,000	\$1,400,000	\$1,609,462
Total Disbursements	\$96,895,009	\$100,802,650	\$311,121,610	\$103,877,482
Ending Balance⁸	\$194,623,440	\$0	\$376,790	\$376,790
Tax Rate Per \$100 of Assessed Value	\$0.0325	\$0.0325	\$0.0325	\$0.0325

¹ Interest revenue represents interest earned on EDA bond proceeds associated with the Stormwater/Wastewater Facility project.

² Represents previously approved Virginia Department of Environmental Quality (VDEQ) Stormwater Local Assistance Fund (SLAF) grants to support stream and water quality improvement projects. An amount of \$37,503 was received in FY 2023 and an amount of \$592,110 is anticipated in FY 2024 and beyond.

³ Represents grant revenue approved by the Board of Supervisors on April 11, 2023. The grant agreement is between the Department of Conservation and Recreation (DCR) and Fairfax County to accept funds from the Community Flood Preparedness Fund (CFPF) to support four stormwater improvement projects.

⁴ Miscellaneous revenues in FY 2023 represents an amount of \$798,000 received as a reimbursement from the United States Army Corps of Engineers associated with the Watershed Flood Damage Reduction Study in the Belle Haven area; an amount of \$155,009 received as a reimbursement from the Green Trails Homeowners Association associated with maintaining a Stormwater Management Facility in the community; an amount of \$45,883 received from the sale of capital equipment; an amount of \$31,620 received as a reimbursement associated with pond improvements at Nutley Pond; and \$376,790 associated with a revenue audit adjustment associated with funding received for tree preservation and plantings. In addition, an amount of \$81,000 in FY 2024 will support the Paul Springs Stream Restoration project at Hollin Hills. The existing pipes will be replaced, and the Virginia Department of Transportation (VDOT) has agreed to reimburse Fairfax County for expenses up to \$81,000.

⁵ In order to account for revenues and expenditures in the proper fiscal year, audit adjustments are reflected as an increase of \$376,790.00 to FY 2023 Revenues to record earned revenues in the proper fiscal year. The Annual Comprehensive Financial Report (ACFR) reflects all audit adjustments in FY 2023. Details of the audit adjustments will be included in the FY 2024 Third Quarter Package.

Fund 40100: Stormwater Services

⁶ Funding in the amount of \$1,609,642 is transferred to the General Fund to partially offset central support services supported by the General Fund, which benefit Fund 40100. These indirect costs include support services such as Human Resources, Purchasing, Budget and other administrative services.

⁷ Funding in the amount of \$208,796 was transferred to Fund 40200, Land Development Services, to reflect all revenues and expenditures associated with civil penalty activities in the new Special Revenue fund.

⁸ Capital projects are budgeted based on the total project costs. Most projects span multiple years, from design to construction completion. Therefore, funding for capital projects is carried forward each fiscal year, and ending balances fluctuate, reflecting the carryover of these funds. The FY 2024 ending balance of \$376,790 is due to an FY 2023 audit adjustment and will be appropriated as part of the FY 2024 Third Quarter Package.

Fund 40100: Stormwater Services

SUMMARY OF CAPITAL PROJECTS

Project	Total Project Estimate	FY 2023 Actual Expenditures	FY 2024 Revised Budget	FY 2025 Advertised Budget Plan
Conveyance System Inspection/Development (2G25-028-000)	\$19,725,000	\$2,391,834.17	\$5,699,095.48	\$3,000,000
Conveyance System Rehabilitation (SD-000034)	82,034,135	8,393,113.10	10,485,146.61	10,000,000
Dam and Facility Maintenance (2G25-031-000)	47,194,841	5,868,462.20	11,901,565.75	6,000,000
Dam Safety and Facility Rehabilitation (SD-000033)	79,762,733	4,747,623.65	18,627,750.87	11,000,000
Debt Service for Stormwater/Wastewater Facility (2G25-117-000)	17,540,250	4,179,000.00	11,110,269.78	957,614
Emergency and Flood Response Projects (SD-000032)	70,078,861	2,310,781.38	44,276,100.49	7,000,000
Enterprise Asset Management-Work Order System (SD-000044)	3,328,000	305,785.99	2,384,262.01	288,000
Flood Prevention-Huntington Area-2012 (SD-000037)	41,750,000	223,907.12	2,236,835.10	0
Grant Contributions to NVSWCD (2G25-011-000)	1,150,000	0.00	400,000.00	750,000
Lake Accotink Dredging (SD-000041)	5,000,000	55,994.68	3,550,871.46	0
NVSWCD Contributory (2G25-007-000)	7,792,366	609,346.00	652,978.00	609,346
Occoquan Monitoring Contributory (2G25-008-000)	2,162,784	183,437.00	216,548.00	195,595
Stormwater Allocation to Towns (2G25-027-000)	9,685,219	909,422.06	1,335,955.07	1,250,000
Stormwater Proffers (2G25-032-000)	56,500	0.00	54,000.01	0
Stormwater Regulatory Program (2G25-006-000)	69,014,584	3,676,033.32	5,661,178.97	4,000,000
Stormwater/Wastewater Facility (SD-000039)	102,116,033	17,336,898.57	64,628,063.71	0
Stream and Water Quality Improvements (SD-000031)	308,326,615	16,927,106.69	95,684,453.56	26,796,305
Towns Grant Contribution (2G25-029-000)	5,805,976	1,000,000.00	306,485.83	0
Tree Preservation and Plantings (2G25-030-000)	371,999	92,550.05	179,977.52	0
Total	\$872,895,896	\$69,211,295.98	\$279,391,538.22	\$71,846,860



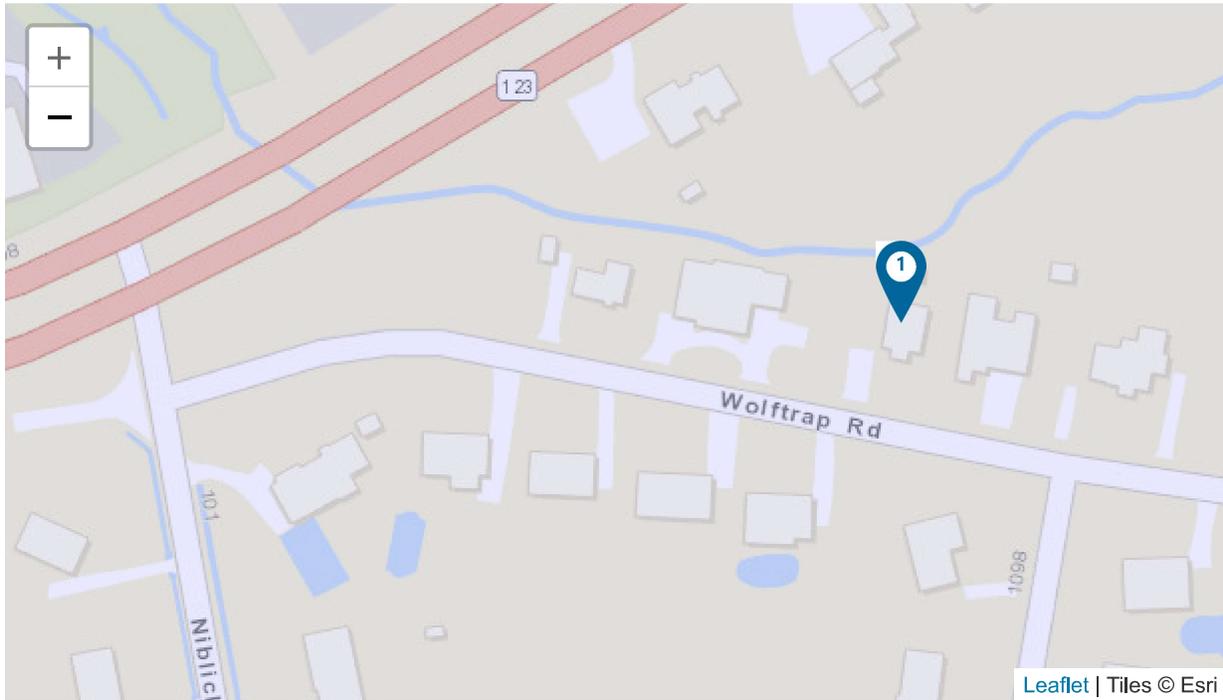
FEMA

Benefit-Cost Calculator

V.6.0 (Build 20250108.0114 | Release Notes)

Benefit-Cost Analysis

Project Name: 8732 Wolftrap Rd



Map Marker	Mitigation Title	Property Type	Hazard	Discount Rate (%)	Benefits (B)	Costs (C)	BCR (B/C)
1	Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182		Riverine Flood	3.1	\$ 9,392,403	\$ 1,056,000	8.89
TOTAL (SELECTED)					\$ 9,392,403	\$ 1,056,000	8.89
TOTAL					\$ 9,392,403	\$ 1,056,000	8.89

Property Configuration

Property Title: Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Property Location: 22182, Fairfax, Virginia

Property Coordinates: 38.910791654563866, -77.24802484607697

Is this a tribal project?: No

Hazard Type: Riverine Flood

Mitigation Action Type: Acquisition

Property Type: Residential Building

Analysis Method Type: Modeled Damages

Cost Estimation

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Discount Rate (%): 3.1% Use Default:Yes

Project Useful Life (years): 100

Project Cost: \$1,056,000

Number of Maintenance Years: 100 Use Default:Yes

Annual Maintenance Cost: \$0

Hazard Probabilities Parameters - Flood

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Lowest Floor Elevation of the Property (ft): 378.91

Use Default Recurrence Intervals: Use Default:Yes

Include Future Precipitation Impacts: No

Future Precipitation Scenario: 8.5

Delta Change Factor (%): 68.2 Use Default:Yes

Discharge

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

BEFORE MITIGATION

Recurrence Interval (years)	Surface Elevation (ft)	Discharge (cfs)
10	383.59	610
50	384.14	953
100	384.36	1134
500	384.93	1657

AFTER MITIGATION

Recurrence Interval (years)	Surface Elevation (ft)	Discharge (cfs)
10	383.59	610
50	384.14	953
100	384.36	1134
500	384.93	1657

Estimated Annual Damages by Category
 Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Before Mitigation

Flood Depth (ft)	Recurrence Interval (yr)	Building (\$)	Contents (\$)	Displacement (\$)	Loss of Function (\$)
-2	0.33	\$ 491	\$ 314	\$ 0	\$ 0
0	0.34	\$ 102,139	\$ 55,899	\$ 0	\$ 0
3.04	1.11	\$ 38,150	\$ 13,915	\$ 0	\$ 0
3.79	2	\$ 42,218	\$ 11,148	\$ 0	\$ 0
4.35	5	\$ 10,710	\$ 2,891	\$ 0	\$ 0
4.56	8	\$ 3,774	\$ 1,034	\$ 0	\$ 0
4.67	10.15	\$ 6,936	\$ 1,931	\$ 0	\$ 0
4.94	20	\$ 2,381	\$ 674	\$ 0	\$ 0
5.08	30	\$ 1,191	\$ 341	\$ 0	\$ 0
5.18	40	\$ 528	\$ 152	\$ 0	\$ 0
5.24	46.94	\$ 663	\$ 192	\$ 0	\$ 0
5.32	60	\$ 340	\$ 99	\$ 0	\$ 0
5.37	70	\$ 255	\$ 74	\$ 0	\$ 0
5.41	80	\$ 199	\$ 58	\$ 0	\$ 0
5.45	90	\$ 115	\$ 34	\$ 0	\$ 0
5.47	97.04	\$ 758	\$ 224	\$ 0	\$ 0
5.69	200	\$ 238	\$ 71	\$ 0	\$ 0
5.8	300	\$ 119	\$ 36	\$ 0	\$ 0
5.89	400	\$ 125	\$ 38	\$ 0	\$ 0
6	613.74	\$ 220	\$ 220	\$ 0	\$ 0
Total (\$)		\$ 211,551	\$ 89,344	\$ 0	\$ 0

After Mitigation

Flood Depth (ft)	Recurrence Interval (yr)	Building (\$)	Contents (\$)	Displacement (\$)	Loss of Function (\$)
Total (\$)		\$ 0	\$ 0	\$ 0	\$ 0

Building Information

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Building Type: One Story

Foundation Type:

Building Has Basement: Yes

NFIP: Yes

Standard Benefits - Building

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Depth Damage Curve:	USACE Generic Use Default:Yes
Building Size (sq.ft):	1,348
Building Replacement Value (BRV) (\$/sq.ft):	\$100 Use Default:Yes
BRV Distributional Weight Multiplier:	1
Demolition Threshold (%):	50.00% Use Default:Yes
Expected Annual Losses due to Building Damages before Mitigation:	\$200,186
Expected Annual Losses due to Building Damages after Mitigation:	\$0
Expected Annual Benefits - Building:	\$200,186

Depth Damage Curve - Building

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Flood Depth (ft)	BEFORE MITIGATION				AFTER MITIGATION			
	Percent (%)	Damage Value (\$)	NFIP (\$)	ICC Fees (\$)	Percent (%)	Damage Value (\$)	NFIP (\$)	ICC Fees (\$)
-2	13.8	20,352.4	1,750	0	0	0	0	0
-1	19.4	28,201.2	2,050	0	0	0	0	0
0	25.5	36,724	2,350	0	0	0	0	0
1	32	45,949.14	2,813.14	0	0	0	0	0
2	38.7	55,511.31	3,343.71	0	0	0	0	0
3	45.5	65,213.81	3,879.81	0	0	0	0	0
4	52.2	142,802.67	6,697.67	1,305	0	0	0	0
5	58.6	142,939.36	6,834.36	1,305	0	0	0	0
6	64.5	143,065.53	6,960.53	1,305	0	0	0	0
7	69.8	143,175.93	7,070.93	1,305	0	0	0	0
8	74.2	143,270.56	7,165.56	1,305	0	0	0	0
9	77.7	143,344.16	7,239.16	1,305	0	0	0	0
10	80.1	143,391.47	7,286.47	1,305	0	0	0	0
11	81.1	143,417.76	7,312.76	1,305	0	0	0	0
12	81.1	143,417.76	7,312.76	1,305	0	0	0	0
13	81.1	143,417.76	7,312.76	1,305	0	0	0	0
14	81.1	143,417.76	7,312.76	1,305	0	0	0	0
15	81.1	143,417.76	7,312.76	1,305	0	0	0	0
16	81.1	143,417.76	7,312.76	1,305	0	0	0	0

Standard Benefits - Contents

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Contents Value in Dollars: \$0 Use Default:Yes

Utilities Elevated: Yes

Expected Annual Losses due to Content Damages before Mitigation: \$89,344

Expected Annual Losses due to Content Damages after Mitigation: \$0

Expected Annual Benefits - Content: \$89,344

Depth Damage Curve - Contents

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Flood Depth (ft)	BEFORE MITIGATION		AFTER MITIGATION	
	Percent (%)	Damage Value (\$)	Percent (%)	Damage Value (\$)
-2	10.5	14,154	0	0
-1	13.2	17,793.6	0	0
0	16	21,568	0	0
1	18.9	25,477.2	0	0
2	21.8	29,386.4	0	0
3	24.7	33,295.6	0	0
4	27.4	36,935.2	0	0
5	30	40,440	0	0
6	32.4	43,675.2	0	0
7	34.5	46,506	0	0
8	36.3	48,932.4	0	0
9	37.7	50,819.6	0	0
10	38.6	52,032.8	0	0
11	39.1	52,706.8	0	0
12	39.1	52,706.8	0	0
13	39.1	52,706.8	0	0
14	39.1	52,706.8	0	0
15	39.1	52,706.8	0	0
16	39.1	52,706.8	0	0

Standard Benefits - Displacement

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Lodging Per Diem:	\$110	Use Default:Yes
Meals Per Diem:	\$68	Use Default:Yes
Population Affected:	0	
Duration of Displacement (days):	365	Use Default:Yes
Total Residential Displacement Cost:	\$0	
Expected Annual Losses due to Displacement Damages before mitigation:	\$0	
Expected Annual Losses due to Displacement Damages after Mitigation:	\$0	
Expected Annual Losses - Displacement:	\$0	

Depth Damage Curve - Displacement

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Flood Depth (ft)	BEFORE MITIGATION		AFTER MITIGATION	
	Days	Damage Value (\$)	Days	Damage Value (\$)
-2	0	0	0	0
-1	0	0	0	0
0	0	0	0	0
1	45	0	0	0
2	90	0	0	0
3	135	0	0	0
4	180	0	0	0
5	225	0	0	0
6	270	0	0	0
7	315	0	0	0
8	360	0	0	0
9	405	0	0	0
10	450	0	0	0
11	495	0	0	0
12	540	0	0	0
13	585	0	0	0
14	630	0	0	0
15	675	0	0	0
16	720	0	0	0

Additional Benefits - Street Maintenance

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Total Annual Street Maintenance Budget: \$0

Total Number of Street Miles Maintained: 0

Street Miles that will not require future maintenance: 0

Expected Annual Benefits - Street Maintenance: \$0

Standard Benefits - Street Maintenance Costs

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Total Annual Street Maintenance Budget (\$): \$0

Number of Street Miles Maintained: 0

Street Miles that will not require future maintenance: 0

Expected Annual Street Maintenance Benefits: \$0

Standard Benefits - Volunteer Costs

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Number of Volunteers (volunteers/event): 0

Number of Days of Lodging: 0

Expected Annual Volunteer Benefits: \$0

Standard Benefits - Ecosystem Services

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Total Project Area (acres): 0

Percentage of Urban Green Open Space: 0.00%

Percentage of Rural Green Open Space: 0.00%

Percentage of Riparian: 0.00%

Percentage of Coastal Wetlands: 0.00%

Percentage of Inland Wetlands: 0.00%

Percentage of Forests: 0.00%

Percentage of Coral Reefs: 0.00%

Percentage of Shellfish Reefs: 0.00%

Percentage of Beaches and Dunes: 0.00%

Expected Annual Ecosystem Services Benefits: \$0

Additional Benefits - Social

Acquisition @ 8732 Wolftap Rd, Vienna, Virginia, 22182

Number of Workers: 0

Expected Annual Social Benefits: \$0

Benefits-Costs Summary

Acquisition @ 8732 Wolftap Rd, Vienna, Virginia, 22182

Discount Rate (%): 3.1% Use Default:Yes

Total Standard Mitigation Benefits: \$9,392,403

Total Social Benefits: \$0

Total Mitigation Project Benefits: \$9,392,403

Total Mitigation Project Cost: \$1,056,000

Benefit Cost Ratio - Standard: 8.89

Benefit Cost Ratio - Standard + Social: 8.89



County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

Date: 10/22/2024

Angela Davis, C.F.M.
Director, Floodplain Management
Virginia Department of Conservation and Recreation
Virginia Community Flood Preparedness Fund Division of Dam Safety and Floodplain
Management
600 East Main Street, 24th Floor
Richmond, Virginia 23219

Reference: Community Flood Preparedness Fund, 2024 Round 5 Grant Applications

Dear Ms. Davis:

This is in response to the Department of Conservation and Recreation's (DCR) recent announcement of the Virginia Community Flood Preparedness Fund (CFPF) grant.

We are providing CFPF applications (attachment) that contain information and request funding assistance for the following three flood prevention and protection projects:

1. 3239 Highland Lane Voluntary Acquisition (project)
2. 8732 Wolftrap Road Voluntary Acquisition (project)
3. Little Hunting Creek Floodplain Mapping (study)

If one or more of these grants are awarded, Fairfax County (County) will provide the necessary match for each selected project as required by your department, subject to the County's Board of Supervisors' approval. It is understood that the County's total match amount for all the three County's applications would be as much as \$785,790.

If you have any questions or need additional assistance, please contact Joni Calmbacher, Director, Department of Public Works and Environmental Service, Stormwater Planning Division at 703-324-5500.

Sincerely,

DocuSigned by:

Bryan Hill

5CF69274C2440E...

Bryan J. Hill

County Executive

Office of the County Executive
12000 Government Center Parkway, Suite 552
Fairfax, VA 22035-0066
703-324-2531, TTY 711, Fax 703-324-3956
www.fairfaxcounty.gov

Angela Davis
Virginia Department of Conservation and Recreation
Page 2 of 2

Attachment: Community Flood Preparedness Fund (CFPF): Applications

cc: Christopher Herrington, Director, Department of Public Works and Environmental Services (DPWES)
Eleanor Ku Coddling, Deputy Director, DPWES, Stormwater and Wastewater Divisions
Joni Calmbacher, Director, DPWES, Stormwater Planning Division

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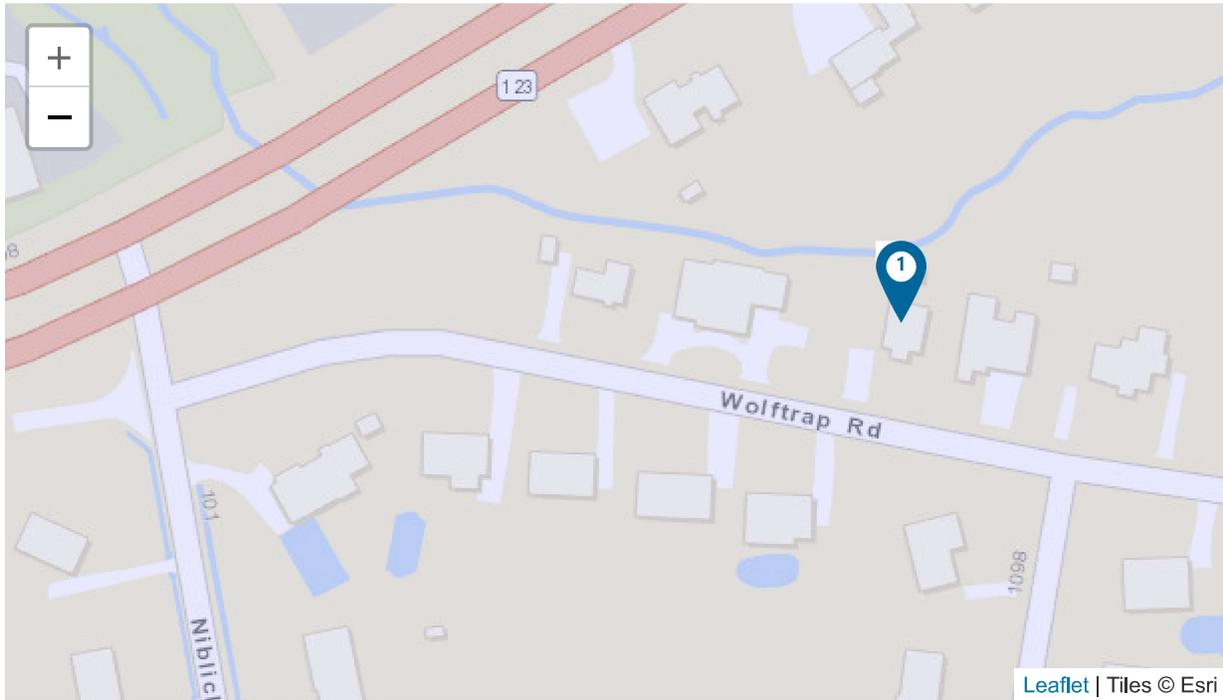
FEMA

Benefit-Cost Calculator

V.6.0 (Build 20250108.0114 | Release Notes)

Benefit-Cost Analysis

Project Name: 8732 Wolftrap Rd



Map Marker	Mitigation Title	Property Type	Hazard	Discount Rate (%)	Benefits (B)	Costs (C)	BCR (B/C)
1	Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182		Riverine Flood	3.1	\$ 9,392,403	\$ 1,056,000	8.89
TOTAL (SELECTED)					\$ 9,392,403	\$ 1,056,000	8.89
TOTAL					\$ 9,392,403	\$ 1,056,000	8.89

Property Configuration

Property Title: Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Property Location: 22182, Fairfax, Virginia

Property Coordinates: 38.910791654563866, -77.24802484607697

Is this a tribal project?: No

Hazard Type: Riverine Flood

Mitigation Action Type: Acquisition

Property Type: Residential Building

Analysis Method Type: Modeled Damages

Cost Estimation

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Discount Rate (%): 3.1% Use Default:Yes

Project Useful Life (years): 100

Project Cost: \$1,056,000

Number of Maintenance Years: 100 Use Default:Yes

Annual Maintenance Cost: \$0

Hazard Probabilities Parameters - Flood

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Lowest Floor Elevation of the Property (ft): 378.91

Use Default Recurrence Intervals: Use Default:Yes

Include Future Precipitation Impacts: No

Future Precipitation Scenario: 8.5

Delta Change Factor (%): 68.2 Use Default:Yes

Discharge

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

BEFORE MITIGATION

Recurrence Interval (years)	Surface Elevation (ft)	Discharge (cfs)
10	383.59	610
50	384.14	953
100	384.36	1134
500	384.93	1657

AFTER MITIGATION

Recurrence Interval (years)	Surface Elevation (ft)	Discharge (cfs)
10	383.59	610
50	384.14	953
100	384.36	1134
500	384.93	1657

Estimated Annual Damages by Category
 Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Before Mitigation

Flood Depth (ft)	Recurrence Interval (yr)	Building (\$)	Contents (\$)	Displacement (\$)	Loss of Function (\$)
-2	0.33	\$ 491	\$ 314	\$ 0	\$ 0
0	0.34	\$ 102,139	\$ 55,899	\$ 0	\$ 0
3.04	1.11	\$ 38,150	\$ 13,915	\$ 0	\$ 0
3.79	2	\$ 42,218	\$ 11,148	\$ 0	\$ 0
4.35	5	\$ 10,710	\$ 2,891	\$ 0	\$ 0
4.56	8	\$ 3,774	\$ 1,034	\$ 0	\$ 0
4.67	10.15	\$ 6,936	\$ 1,931	\$ 0	\$ 0
4.94	20	\$ 2,381	\$ 674	\$ 0	\$ 0
5.08	30	\$ 1,191	\$ 341	\$ 0	\$ 0
5.18	40	\$ 528	\$ 152	\$ 0	\$ 0
5.24	46.94	\$ 663	\$ 192	\$ 0	\$ 0
5.32	60	\$ 340	\$ 99	\$ 0	\$ 0
5.37	70	\$ 255	\$ 74	\$ 0	\$ 0
5.41	80	\$ 199	\$ 58	\$ 0	\$ 0
5.45	90	\$ 115	\$ 34	\$ 0	\$ 0
5.47	97.04	\$ 758	\$ 224	\$ 0	\$ 0
5.69	200	\$ 238	\$ 71	\$ 0	\$ 0
5.8	300	\$ 119	\$ 36	\$ 0	\$ 0
5.89	400	\$ 125	\$ 38	\$ 0	\$ 0
6	613.74	\$ 220	\$ 220	\$ 0	\$ 0
Total (\$)		\$ 211,551	\$ 89,344	\$ 0	\$ 0

After Mitigation

Flood Depth (ft)	Recurrence Interval (yr)	Building (\$)	Contents (\$)	Displacement (\$)	Loss of Function (\$)
Total (\$)		\$ 0	\$ 0	\$ 0	\$ 0

Building Information

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Building Type: One Story

Foundation Type:

Building Has Basement: Yes

NFIP: Yes

Standard Benefits - Building

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Depth Damage Curve:	USACE Generic Use Default:Yes
Building Size (sq.ft):	1,348
Building Replacement Value (BRV) (\$/sq.ft):	\$100 Use Default:Yes
BRV Distributional Weight Multiplier:	1
Demolition Threshold (%):	50.00% Use Default:Yes
Expected Annual Losses due to Building Damages before Mitigation:	\$200,186
Expected Annual Losses due to Building Damages after Mitigation:	\$0
Expected Annual Benefits - Building:	\$200,186

Depth Damage Curve - Building

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Flood Depth (ft)	BEFORE MITIGATION				AFTER MITIGATION			
	Percent (%)	Damage Value (\$)	NFIP (\$)	ICC Fees (\$)	Percent (%)	Damage Value (\$)	NFIP (\$)	ICC Fees (\$)
-2	13.8	20,352.4	1,750	0	0	0	0	0
-1	19.4	28,201.2	2,050	0	0	0	0	0
0	25.5	36,724	2,350	0	0	0	0	0
1	32	45,949.14	2,813.14	0	0	0	0	0
2	38.7	55,511.31	3,343.71	0	0	0	0	0
3	45.5	65,213.81	3,879.81	0	0	0	0	0
4	52.2	142,802.67	6,697.67	1,305	0	0	0	0
5	58.6	142,939.36	6,834.36	1,305	0	0	0	0
6	64.5	143,065.53	6,960.53	1,305	0	0	0	0
7	69.8	143,175.93	7,070.93	1,305	0	0	0	0
8	74.2	143,270.56	7,165.56	1,305	0	0	0	0
9	77.7	143,344.16	7,239.16	1,305	0	0	0	0
10	80.1	143,391.47	7,286.47	1,305	0	0	0	0
11	81.1	143,417.76	7,312.76	1,305	0	0	0	0
12	81.1	143,417.76	7,312.76	1,305	0	0	0	0
13	81.1	143,417.76	7,312.76	1,305	0	0	0	0
14	81.1	143,417.76	7,312.76	1,305	0	0	0	0
15	81.1	143,417.76	7,312.76	1,305	0	0	0	0
16	81.1	143,417.76	7,312.76	1,305	0	0	0	0

Standard Benefits - Contents

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Contents Value in Dollars: \$0 Use Default:Yes

Utilities Elevated: Yes

Expected Annual Losses due to Content Damages before Mitigation: \$89,344

Expected Annual Losses due to Content Damages after Mitigation: \$0

Expected Annual Benefits - Content: \$89,344

Depth Damage Curve - Contents

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Flood Depth (ft)	BEFORE MITIGATION		AFTER MITIGATION	
	Percent (%)	Damage Value (\$)	Percent (%)	Damage Value (\$)
-2	10.5	14,154	0	0
-1	13.2	17,793.6	0	0
0	16	21,568	0	0
1	18.9	25,477.2	0	0
2	21.8	29,386.4	0	0
3	24.7	33,295.6	0	0
4	27.4	36,935.2	0	0
5	30	40,440	0	0
6	32.4	43,675.2	0	0
7	34.5	46,506	0	0
8	36.3	48,932.4	0	0
9	37.7	50,819.6	0	0
10	38.6	52,032.8	0	0
11	39.1	52,706.8	0	0
12	39.1	52,706.8	0	0
13	39.1	52,706.8	0	0
14	39.1	52,706.8	0	0
15	39.1	52,706.8	0	0
16	39.1	52,706.8	0	0

Standard Benefits - Displacement

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Lodging Per Diem:	\$110	Use Default:Yes
Meals Per Diem:	\$68	Use Default:Yes
Population Affected:	0	
Duration of Displacement (days):	365	Use Default:Yes
Total Residential Displacement Cost:	\$0	
Expected Annual Losses due to Displacement Damages before mitigation:	\$0	
Expected Annual Losses due to Displacement Damages after Mitigation:	\$0	
Expected Annual Losses - Displacement:	\$0	

Depth Damage Curve - Displacement

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Flood Depth (ft)	BEFORE MITIGATION		AFTER MITIGATION	
	Days	Damage Value (\$)	Days	Damage Value (\$)
-2	0	0	0	0
-1	0	0	0	0
0	0	0	0	0
1	45	0	0	0
2	90	0	0	0
3	135	0	0	0
4	180	0	0	0
5	225	0	0	0
6	270	0	0	0
7	315	0	0	0
8	360	0	0	0
9	405	0	0	0
10	450	0	0	0
11	495	0	0	0
12	540	0	0	0
13	585	0	0	0
14	630	0	0	0
15	675	0	0	0
16	720	0	0	0

Additional Benefits - Street Maintenance

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Total Annual Street Maintenance Budget: \$0

Total Number of Street Miles Maintained: 0

Street Miles that will not require future maintenance: 0

Expected Annual Benefits - Street Maintenance: \$0

Standard Benefits - Street Maintenance Costs

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Total Annual Street Maintenance Budget (\$): \$0

Number of Street Miles Maintained: 0

Street Miles that will not require future maintenance: 0

Expected Annual Street Maintenance Benefits: \$0

Standard Benefits - Volunteer Costs

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Number of Volunteers (volunteers/event): 0

Number of Days of Lodging: 0

Expected Annual Volunteer Benefits: \$0

Standard Benefits - Ecosystem Services

Acquisition @ 8732 Wolftrap Rd, Vienna, Virginia, 22182

Total Project Area (acres): 0

Percentage of Urban Green Open Space: 0.00%

Percentage of Rural Green Open Space: 0.00%

Percentage of Riparian: 0.00%

Percentage of Coastal Wetlands: 0.00%

Percentage of Inland Wetlands: 0.00%

Percentage of Forests: 0.00%

Percentage of Coral Reefs: 0.00%

Percentage of Shellfish Reefs: 0.00%

Percentage of Beaches and Dunes: 0.00%

Expected Annual Ecosystem Services Benefits: \$0

Additional Benefits - Social

Acquisition @ 8732 Wolftap Rd, Vienna, Virginia, 22182

Number of Workers: 0

Expected Annual Social Benefits: \$0

Benefits-Costs Summary

Acquisition @ 8732 Wolftap Rd, Vienna, Virginia, 22182

Discount Rate (%): 3.1% Use Default:Yes

Total Standard Mitigation Benefits: \$9,392,403

Total Social Benefits: \$0

Total Mitigation Project Benefits: \$9,392,403

Total Mitigation Project Cost: \$1,056,000

Benefit Cost Ratio - Standard: 8.89

Benefit Cost Ratio - Standard + Social: 8.89

AREA PLAN OVERVIEW

INTRODUCTION

The Fairfax County Comprehensive Plan consists of the Policy Plan, the four Area Plans, and the Comprehensive Plan and Transportation Plan maps. The Policy Plan, adopted by the Board of Supervisors on August 6, 1990, replaced the Introduction/Countywide volume of the Plan. The objectives, policies, and guidelines contained in the Policy Plan guide planning and development review considerations toward implementing county goals. The goals address the future development pattern of Fairfax County, and protection of natural and cultural resources for present and future generations.

The Area Plans are key elements for implementing the Policy Plan's goals and objectives at the more detailed Planning District and Community Planning Sector levels (see Figure 1). The Comprehensive Plan Map illustrates planned land uses, transportation improvements and public facilities. Used together, these elements comprise a dynamic document which is used by the Board of Supervisors, the Planning Commission, county staff and the public to guide land use, transportation and public facility decision making.

DEVELOPMENT OF THE AREA PLANS

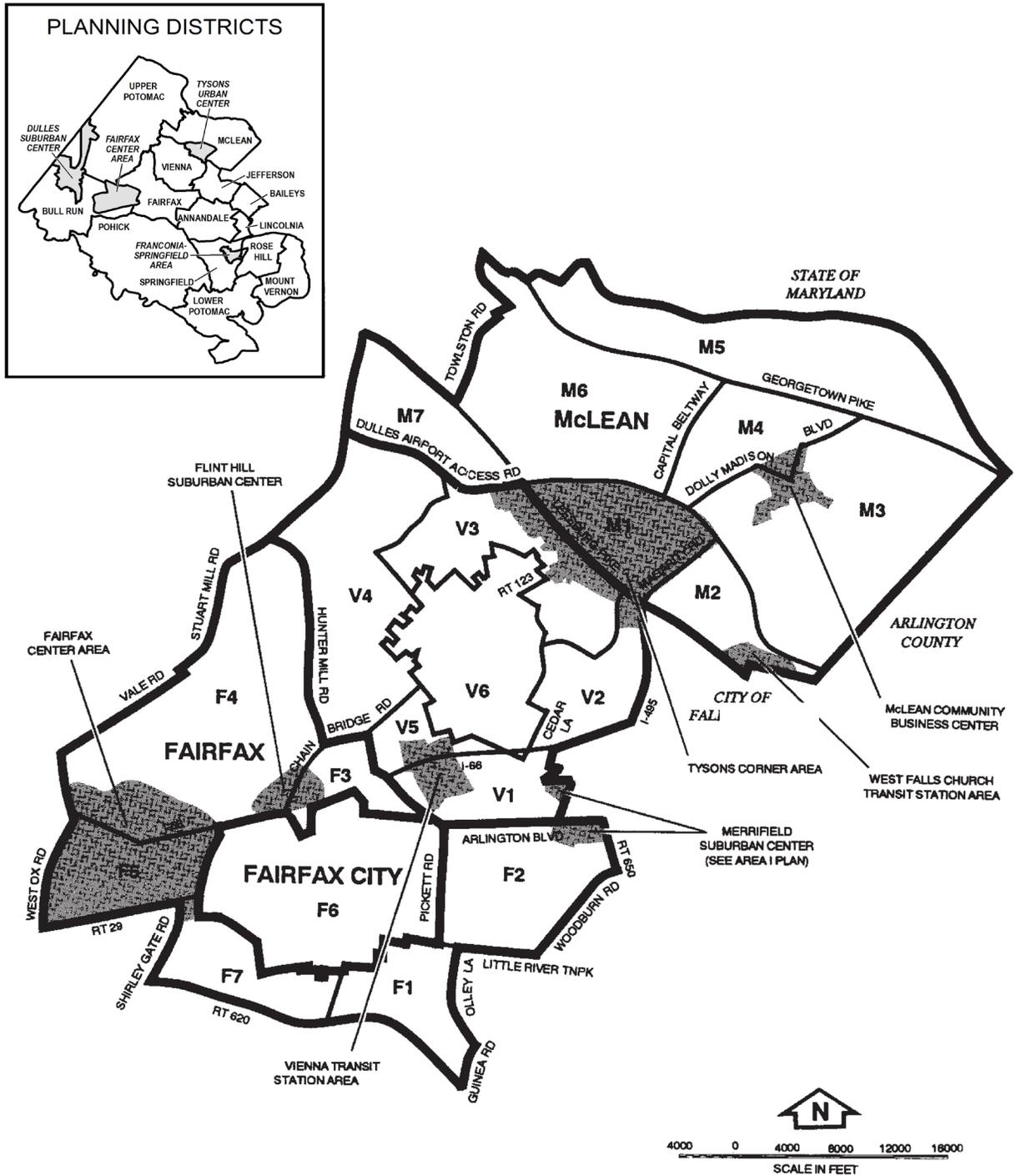
The Fairfax County Board of Supervisors designated 1988 as a Policy Review Year to review the adopted goals for the county formerly contained in the 1975 Comprehensive Plan. Based on the recommendations of the Goals Advisory Commission, the Board adopted new and revised goals for the county on October 24, 1988. The goals encompass a variety of issues, including housing, land use, transportation, public facilities and other areas and represent the broad ideals that the county should strive to achieve.

To ensure that the Comprehensive Plan includes policies, strategies and site-specific recommendations necessary to implement the revised goals, the Board directed the Planning Commission to initiate a major review of the Comprehensive Plan. The Fairfax Planning Horizons process was established as a two-phased effort aimed at achieving the following:

- Phase I: A Policy Plan for the county; and
- Phase II: Revised Area Plans that reflect the objectives of the new Policy Plan.

On August 6, 1990, the Board of Supervisors adopted the countywide objectives and policies contained in Part I of the Policy Plan for Fairfax County. This is the first volume of the five-volume Comprehensive Plan.

Phase II focused on the four Area Plan volumes of the Comprehensive Plan. The individual Planning District and Community Sector Plans which make up the Area Plans contain site-specific guidance that implement the policies adopted in Phase I. The Area Plans also seek to implement the Concept for Future Development for Fairfax County, which is described below.



AREA II
PLANNING DISTRICTS AND SECTORS **FIGURE 1**

CONCEPT FOR FUTURE DEVELOPMENT

On August 6, 1990, the Board of Supervisors adopted the countywide objectives and policies of the Policy Plan for Fairfax County to replace the Introduction/Countywide volume of the Comprehensive Plan. At the same time, the Board adopted the Concept for Future Development and the Land Classification System, to be used as guidance during the review of the Area Plans. In 2012, the Board of Supervisors adopted updates to the Concept for Future Development so that it could continue to guide review of the Comprehensive Plan in the future.

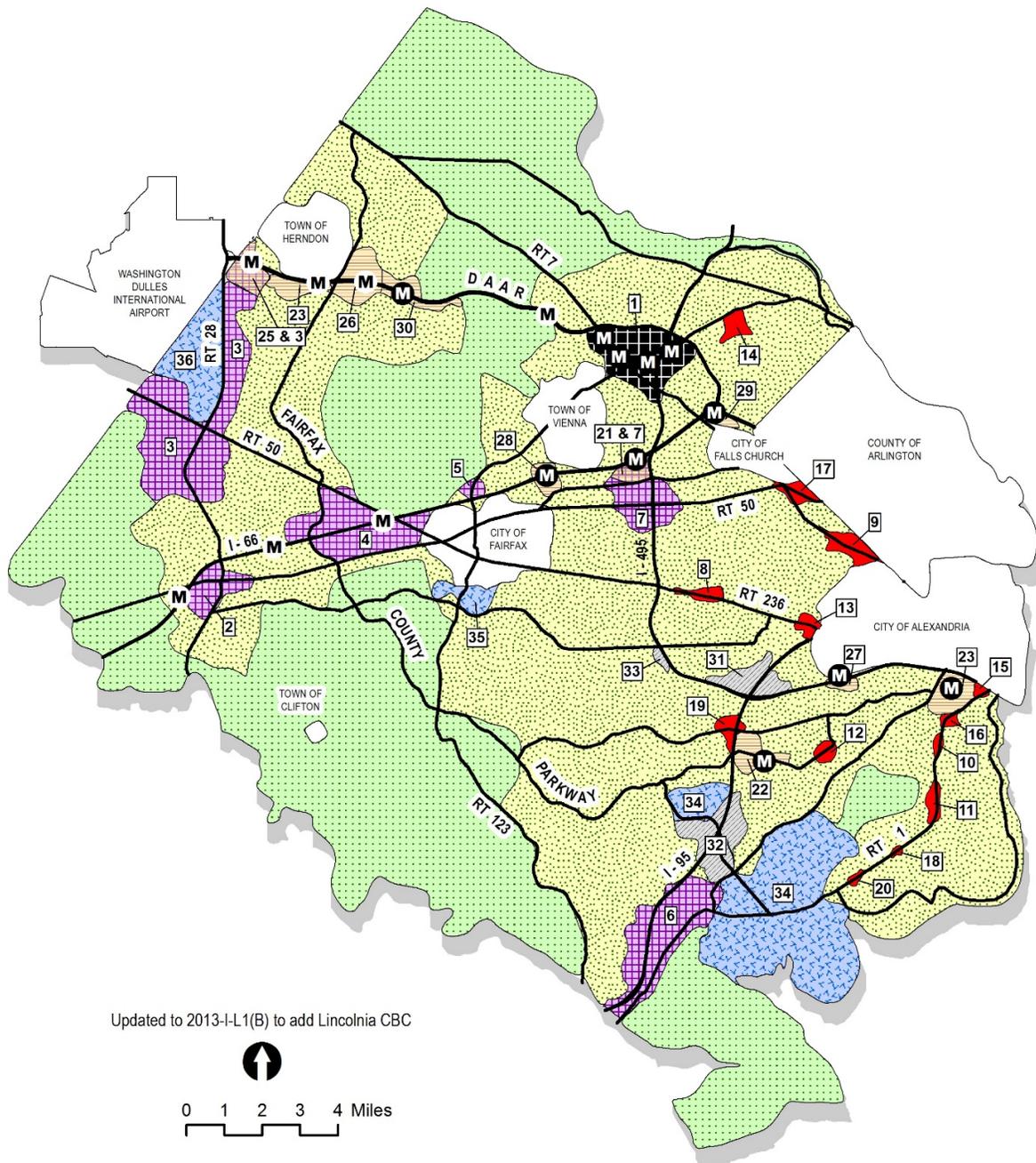
The Concept for Future Development consists of two elements: the Concept Map which shows the general location and character of future land uses and the Land Classification System which describes the desired future character for each area of the county in terms of eight broad categories as shown on the Concept Map.

The Concept for Future Development's policy direction is that almost all employment growth should occur within designated Mixed-Use Centers and Industrial Areas. When combined, these centers and areas encompass about 10 percent of the county's land area. With the exception of the Industrial Areas, some degree of mixed-use development is encouraged for each of these employment areas. This emphasis on mixed-use development is designed to introduce a substantial residential component into these employment areas. Mixed-use development is generally defined as three or more different types of uses designed to be functionally, economically and aesthetically integrated. The boundaries shown for these non-residential/ mixed-use areas coincide with the current boundaries of commercial, industrial, and mixed-use areas as generally defined by existing non-residential zoning and/or the non-residential/mixed-use boundaries traditionally identified in the Area Plans.

Within some of these employment and mixed-use oriented centers and areas, limited portions have been planned as "core" or "transit development" areas. Medium to high density development intensities within these core and transit development areas may be planned to take advantage of transportation and other functional opportunities. Lower intensities are encouraged outside the core and transit development areas in the remaining portions of these employment and mixed-use centers. Transitions are planned between core and non-core areas. These transitions are created through the tapering down of development intensity and building heights, changes in use, and through landscaping, screening and buffering treatments.

The remainder of the county is composed of Suburban Neighborhoods and Low Density Residential Areas. In general, non-residential development is not encouraged within the Low Density Residential Areas; when appropriate, neighborhood-serving commercial services and institutional uses are encouraged within the Suburban Neighborhoods if compatibly scaled with the surrounding neighborhood. The Concept Map is included on Figure 2.

In summary, the Concept for Future Development sets forth a vision and direction for guiding Fairfax County's future growth and development. This Concept for Future Development generally describes the types of land uses that are appropriate throughout the county. It has been used in conjunction with the countywide objectives and policies contained in the adopted Policy Plan to provide a foundation and framework for the Area Planning process.



G:\projects\lccp\pd\Comp_Plan_Text_Graphics\common_&_overview\Concept for Future Development\map+legend with layout tight together--map as updated to add Lincolnia CBC.mxd

CONCEPT FOR FUTURE DEVELOPMENT MAP

FIGURE 2

CONCEPT FOR FUTURE DEVELOPMENT MAP

LOCATIONS OF MIXED-USE CENTERS

Urban Center

- 1. Tysons

Suburban Centers

- 2. Centreville
- 3. Dulles (Route 28 Corridor)
- 4. Fairfax Center
- 5. Flint Hill
- 6. Lorton-South Route 1
- 7. Merrifield

Community Business Centers

- 8. Annandale
- 9. Baileys Crossroads
- 10. Beacon/Groveton
- 11. Hybla Valley/Gum Springs
- 12. Kingstowne
- 13. Lincolnia
- 14. McLean
- 15. North Gateway
- 16. Penn Daw
- 17. Seven Corners
- 18. South County Center
- 19. Springfield
- 20. Woodlawn

Transit Station Areas

- 21. Dunn Loring (inside Merrifield Suburban Center)
- 22. Franconia-Springfield
- 23. Herndon
- 24. Huntington
- 25. Innovation Center (inside Dulles Suburban Center)
- 26. Reston Town Center
- 27. Van Dorn
- 28. Vienna
- 29. West Falls Church
- 30. Wiehle-Reston East

LOCATIONS OF LARGE INSTITUTIONAL AND INDUSTRIAL AREAS

Industrial Areas

- 31. Beltway South
- 32. I-95 Corridor
- 33. Ravensworth

Large Institutional Land Areas

- 34. Fort Belvoir (Main Post and North Area)
- 35. George Mason University
- 36. Washington Dulles International Airport

LEGEND

-  Tysons Urban Center
-  Suburban Center
-  Community Business Center
-  Transit Station Area
-  Industrial Area
-  Large Institutional Land Area
-  Suburban Neighborhood
-  Low Density Residential Area
-  Major Road - Existing (1-1-2018)
-  Metro Station - Existing (1-1-2018)
-  Metro Station - Proposed

Updated to 2013-L-L1(B) to add Lincolnia CBC

SUMMARY: LAND CLASSIFICATION SYSTEM

Refer to the Areawide and District Recommendations for guidance on specific areas.

Tysons Urban Center:

Tysons is a significant economic engine to the region. The vision for Tysons includes a dynamic urban center marked by the socioeconomic diversity of residents and workers; a wide range of opportunities and activities; the quality of buildings, aesthetics, and open spaces; and connections and accessibility for all. Tysons includes four transit-oriented development (TOD) areas surrounding four Metrorail stations.

- Elements of the framework for the future development of Tysons include: encouraging transit-oriented development, improving the jobs/housing balance, providing diverse and affordable housing, incorporating community benefits, and creating excellence in the public realm.
- A strong implementation strategy should provide the flexibility, accountability, and resources necessary to achieve the vision for Tysons.

Suburban Centers:

Suburban centers are employment centers located along major arterials. These areas are evolving to include mixed-use cores such as transit station areas and town centers that are more urban in character. The core areas are generally surrounded by transitional areas of lesser intensity.

- Encourage a complementary mix of office, retail and residential uses in a cohesive moderate to high-intensity setting.
- A grid of streets and well-designed pedestrian connectivity should be established in core areas. The transitional areas outside of the core should have connectivity to core area amenities. Similarly, connectivity should be provided between transitional area amenities and core areas.
- A balance of transportation and land use in core areas is important as suburban centers evolve to be less dependent on the personal vehicle as a result of transit accessibility.

Community Business Centers:

Historically older community-serving commercial areas that emerged along major roadways, Community Business Centers (CBCs) are areas where redevelopment should encourage a mix of uses focused around a core area of higher intensity, such as a town center or main street in a pedestrian-oriented setting. Transitions in intensity and compatible land uses should protect surrounding stable residential neighborhoods.

- Appropriate revitalization and selected redevelopment advance the goal of sustaining the economic vitality in older commercial centers and adjacent neighborhoods. Revitalization efforts should also seek reinvestment in these communities and aim to foster a sense of place. There may be a particular need to address aging infrastructure.
- CBC's should emphasize design that advances pedestrian amenities and circulation.
- The generally older road networks should be optimized through a balance of retail, residential, and office uses supported by transit to provide access to CBCs. Where appropriate, a mix of uses is encouraged to create a more vibrant environment throughout the day.

Transit Station Areas:

These areas encompass Metrorail Stations (where applicable, a Transit Station Area might also be adjacent to a Metrorail station in a neighboring locality) and are directly influenced by the presence of access points to the Metrorail system. Transit station areas promote a land use pattern that supports Metrorail by encouraging a mix of uses in a compact, pedestrian-friendly urban form within walking distance of the rail station. Within the region, Metrorail provide a vital public transportation choice that enhances accessibility and reduces the reliance upon single occupancy vehicle use. Transit Station Area boundaries are strongly shaped by the area's access characteristics and the relationship of the station to surrounding stable neighborhoods.

- Refer to Appendix 11 in the Land Use section of the Policy Plan for the sixteen principles for transit-oriented development in Fairfax County.
- Generally, Transit Station Areas constitute those lands within a primary and a secondary development area. The primary development area is approximately a 5 minute walk from the station platform. The secondary development area is approximately a 10 minute walk from the station platform.
- A balance of uses and implementation of design guidelines should be achieved to create desirable neighborhoods.

Industrial Areas:

The types of uses intended for industrial areas are generally regulated more strictly due to their anticipated impacts to adjacent areas. This category is not appropriate for residential uses and limits future office uses to those which are ancillary to industrial use.

- Industrial Areas should be located near major transportation corridors such as interstate highways, railways and airports which are capable of transporting a high volume of goods and contribute to overall regional accessibility. The direct accessibility to major transportation corridors will help ensure that industrial traffic will not be routed through neighborhoods.
- Development of non-industrial uses should be discouraged. Office use generally should be limited to those parcels which are specifically designated for office use in the Area Plans.
- Development near the edges of industrial areas should include effective buffering from surrounding uses. Substantial setbacks and/or berms may be necessary in addition to vegetative screening, particularly where these areas abut residential uses. Uses that generate a minimum level of noise, glare, odors or truck traffic are preferable in transition areas and edges.

Suburban Neighborhoods:

These areas contain a broad mix of allowable residential densities, styles, parks and open space and contain the county's established residential neighborhoods. Suburban neighborhoods are considered to be stable areas of little or no change. Where appropriate, supporting neighborhood-serving commercial services, public facilities, and institutional uses are encouraged provided that the proposed intensities and character are compatible with the surrounding area.

- Parks and recreation facilities should be distributed throughout suburban neighborhoods as needed to serve residents.
- Access and internal circulation for non-residential and higher density residential uses should be designed to prevent adverse traffic impacts on nearby lower-density residential uses. Reliance on the automobile should be diminished by encouraging the provision of pedestrian accessible community-serving retail and support uses.
- For development within or adjacent to suburban neighborhoods that propose either a significantly higher intensity or a change in land use, primary access should be from major or secondary roadways which do not traverse adjacent stable residential areas. Transit service, generally bus service, should be provided to those portions of the suburban neighborhoods that are most likely to generate substantial ridership.

Low Density Residential Areas

The primary purpose of Low Density Residential Areas is to ensure the preservation of environmental resources by limiting development primarily to low density, large lot residential and open space uses. The loss of natural habitat coupled with the vital role that portions of these areas serve in protecting water quality dictates that development in these areas be minimized. These are stable areas of little or no change.

- Low Density Residential Areas typically contain large lot single family detached housing and open space. They are generally located along the Potomac River and the Difficult Run and Occoquan watersheds. Policies emphasize the preservation of significant and sensitive natural resources, especially protection of the county's water resources.

- Institutional or other neighborhood serving uses should be of a compatible scale and intensity.
- Public facilities infrastructure is to be provided at an acceptable level of service without substantial negative impacts to the natural environment. Public facilities in low density residential neighborhoods should be limited to those which are required to be located in these areas. Public water and sanitary sewer service are generally not to be provided in these areas.

Large Institutional Land Areas:

Includes publicly-owned state or federal land holdings that are not subject to the normal county development review processes. The county should encourage state and federal agencies and regional authorities to develop or redevelop their holdings only when plans are coordinated with the county. The cumulative effect of institutional uses should be considered before additional institutional and governmental uses or expansion of existing uses is developed.

PURPOSE OF THE AREA PLANS

The four Area Plans contain detailed recommendations for land use, transportation, housing, the environment, heritage resources, public facilities and parks and recreation. These recommendations refine the guidance provided in the Policy Plan and were developed within the framework of the Concept for Future Development.

Each Area Plan is subdivided into Planning Districts, which, in turn, are subdivided into Community Planning Sectors, the smallest geographical components of the Plan. The Community Planning Sector text provides details on existing development and planned land use. For purposes of development review and other land use related decisions it is emphasized that the planning guidance for each Planning District is contained in the Area Plan text; on the Area Plan map; in the Policy Plan; and in the land use guidelines contained in the Concept for Future Development and Land Classification System.

The primary planning objectives in all Area Plans are to:

- Realize the objectives and policies of the Policy Plan in planning and development decisions;
- Utilize the Concept for Future Development as a guide to land use planning decisions when Plan amendments are considered and;
- Employ site-specific guidance to review and formulate recommendations for development requests in furtherance of the public health, safety and welfare as provided in the Code of Virginia.

GENERAL PLANNING AREA RECOMMENDATIONS

Land Use

The Policy Plan contains countywide objectives for land use. These are organized under four broad categories: land use pattern; land use intensity; pace of development; and land use compatibility. The Policy Plan also contains detailed appendices which include locational guidelines for multifamily residential development, shopping centers, child care facilities and guidelines for other land use related issues such as neighborhood redevelopment. These objectives, policies and guidelines are to be used in conjunction with all of the land use recommendations contained in the Area Plans and, therefore, generally are not repeated in the Area Plans.

The Area Plans and the Plan map in concert with the Policy Plan provide site-specific land use recommendations. The Area Plan text provides detailed recommendations for areas within Planning Districts and Community Planning Sectors. Sector locator maps, included in the Area Plans, show the general locations referred to in the detailed recommendations. When the Area Plan text does not reference a specific location, the Plan map shows the recommended land use. The Plan text and map complement one another; however, in the event of a discrepancy between the specific recommendation of the text and the map, the text takes precedence.

For some parcels of land, the Area Plan recommendation provides a baseline level of density or intensity and an option for more intense development or alternative use if certain conditions are met. Where such an option is provided, all of the specific conditions must be met before the option's baseline level of development may be considered. It is not the intent of the Plan to allow an intermediate level of development based upon fulfillment of some of the specified conditions unless an intermediate level of development is specifically provided for. Further, fulfillment of the Plan conditions related to the option does not supercede requirements of the Criteria for Assignment of Appropriate Residential Development Density or the Criteria for Assignment of Appropriate Non-residential Development Intensity outlined in the Policy Plan.

Transportation

The Policy Plan contains countywide objectives for transportation, a Transportation Plan map, and appendices outlining functional classification systems for transit systems and roadways, as well as roadway right-of-way requirements.

Highways and Highway Improvements Affecting Each Planning District

The arterial and major collector roads affecting each of the Planning Districts are shown on the respective district-wide maps. When examining these maps, the following points should be recognized:

- Most Plan elements represent expressions of need and county policy with regard to these needs. Specific and explicit guidance is incorporated in the adopted Policy Plan requiring additional analyses of individual recommendations as a prerequisite for construction (see Transportation Objective 1 Policy b).
- With few exceptions, detailed engineering design has not been accomplished, and final alignments and design features have not been established. Specific design features, such as the location of medians and turning lanes, and specific interchange configurations are determined in the design and design public hearing processes, and are not addressed in the Area Plans.
- As with design issues, many operational issues such as signalization and signage, parking, and cut-through traffic are addressed through other existing processes, and as such are not addressed in the Area Plans.

The corridor-level studies should emphasize consideration of environmental limitations, community stability and the cumulative effect of other transportation network improvements in the area. In allocating and accommodating existing and forecast travel demand generated within the area served by the transportation corridor under study, they may identify alternate and preferred routes and/or modes of travel within the area generally served by the transportation corridor under study and recommend improvements to the transportation

network over and above or that differ from those identified on the adopted countywide Transportation Plan map.

Arterial roads, even if not specifically designated for widening on the adopted countywide Transportation Plan map, should be subject to corridor studies when and if severe transportation deficiencies are identified within the area served by these roads. If widening of any such roads beyond the lanes indicated on the Plan map is recommended as a result of such studies, a Plan amendment would be required.

Right-of-Way Requirements

In an effort to preserve land for roadway improvements, to decrease delays in land acquisition, and to obtain land before land values are associated with developed properties, requirements are set forth regarding right-of-way limits for roadways as shown on Table 1. This table represents a modification of the right-of-way limits shown in Appendix 2 of the Transportation element of the Policy Plan.

The rights-of-way specified therein should be obtained through the development approval process (e.g. rezoning, special exception, site plan, etc.) as applications are submitted to the county. The provision of these rights-of-way will allow for future road improvements to be constructed with adequate ancillary features such as turning lanes, trails, and buffering, while minimizing impacts on properties which are subsequently developed. It should be stressed, however, that the ultimate roadway designs will recognize available right-of-way to the extent possible; the intent of these requirements is not to impose a rigid right-of-way swath through areas or mature neighborhoods, but rather to secure additional right-of-way needed for road improvements as development or redevelopment occurs.

Freeways

Right-of-way needs along freeway facilities can be variable and extensive. The right-of-way may need to accommodate HOV treatments and rail transit as well as roadway configurations which are difficult to standardize such as collector-distributor systems. The right-of-way requirements for freeway facilities should be based upon the associated studies for each improvement. These studies could include the detailed corridor analyses, which are referred to in Transportation Objective 1, for the Shirley Highway, I-66 and Dulles Airport Access Road Corridors as well as other environmental impact studies, feasibility studies and design efforts.

Arterials

The right-of-way requirements for arterial roadways based upon the number of lanes and the type of edge treatment provided are detailed in Transportation Appendix 2 of the Policy Plan. The number of lanes refers to the designation on the Transportation Plan. Edge treatment is also more fully discussed in the Policy Plan Transportation Appendix. It is anticipated that curb-and-gutter sections will be provided throughout the county, except in some Low Density Residential Areas and in Suburban Neighborhoods, where shoulder sections may be considered as an option on an individual roadway basis.

TABLE 1

**Right-of-Way Requirements (in Feet) for Roads
 Shown on Transportation Plan Where No Plans Exist ^{1,6}**

<u>Lanes</u>	<u>Edge Treatment</u>	
	<u>Curb-and-Gutter</u>	<u>Shoulder</u>
2 lane	--	90
4 lane	112	158
6 lane	136	182
8 lane	160	206

Add XX feet of right-of-way for each of the following special circumstances:

Tandem Left Turn Lanes at Major ² Intersections on All Legs	<u>XX</u> 12
Right Turn Lanes at Major ² Intersections on All Approaches	12
Enhanced Median Treatments ³	4
Service Drives ⁴	92
Parking Lanes ⁵	9

Add 15 feet in ancillary easements.

Add supplemental right-of-way with transitions to avoid special features (e.g., historic properties, parks, cemeteries, wetlands, landfills, sewage and water treatment facilities, existing buildings, etc.) and/or to improve horizontal alignment. Add 40 feet radius at intersections dedicated to the chord of the radius curve.

¹ Where design plans consistent with the Comprehensive Plan and providing all anticipated future turn lane requirements are developed to a sufficient level of detail and approval, right-of-way and easement dedication requirements should be based upon them.

² Within 500 feet of intersections of arterial roads with collectors or with other arterials unless specifically determined by a traffic study to not be needed.

³ Commercial revitalization areas or other special areas where landscaping or special design features are desired.

⁴ Primary Highways, except where waived.

⁵ On side(s) of road where residences front on the road or service drive. Does not apply to shoulder sections.

⁶ Where a substitute trail is to be provided in easements within the development site, the right-of-way requirements can be reduced in an amount to be determined by VDOT and DEM; however, adequate right-of-way must be retained to meet VDOT clear zone requirements.

Collectors and Locals

The rights-of-way for collector and local streets should be determined by the application of the Public Facilities Manual or other appropriate ordinances, unless proffers or other specific development conditions have been established for the affected road.

Interchanges

Interchange locations have been identified on the Transportation Plan map and are also shown as Plan elements on the district-wide map. The provision of an interchange has both land use and transportation planning implications. In terms of land use, caution must be exercised in reviewing development proposals in the immediate interchange area due to right-of-way implications. In terms of transportation planning, care must be taken to accommodate revised access patterns in the immediate area, since the interchange ramps cause grade changes and weaving/merging traffic conflicts. Because of these interchange features, access to properties in close proximity to the intersection is often affected by interchange construction.

The amount of land needed for interchanges, and the extent to which access must be re-oriented, varies with the actual design of the interchange. Many planned interchanges have not been designed and their specific configurations are unknown. In these instances, every effort should be made to accommodate the potential access modifications associated with a future design. Toward this end, typical dimensions of potential ramps and acceleration/deceleration lanes have been established based on typical interchange design.

The interchanges shown on the sector maps identify the roadway segments of the intersecting streets where access must be restricted to accommodate these potential designs based on the typical dimensions. The restriction of access as used herein is intended to guide the manner in which access is provided to parcels in close proximity to the interchange. Any development or redevelopment of property affected by such access restrictions should recognize the need to re-orient access in anticipation of the future interchange. The design of such sites should be consistent with and oriented to the provision of alternate access. Such access may take the form of an alternative street or street system (e.g., reverse frontage), the provision of service drives or similar parallel frontage roads, or some combination thereof. In those instances where interchange designs have been approved or are in active stages of development, the maps contained in this section do not show these restricted access segments. Where an interchange project is in an active design stage, or where such designs have been approved, access in the intersection area should be planned to be consistent with such designs.

Transit and High Occupancy Vehicle (HOV) Facilities

Several major public transportation features are incorporated into the countywide Transportation Plan. In general, these features may be grouped either as corridor recommendations, or as specific supporting facility recommendations. They are shown on the district-wide and sector maps. These recommendations are briefly summarized below.

Corridor Recommendations

The countywide Transportation element of the Plan recognizes the need for significant public transportation improvements in many specific corridors. The Plan also recognizes, however, that the final determination of the most appropriate mode of public transportation

should be based on a detailed corridor-level analysis of the various possible alternatives. Thus, the Transportation Plan identifies several "Enhanced Public Transportation Corridors" on the map, and incorporates a policy requiring the detailed analysis of alternative transportation modes within those specific corridors (see Transportation Objective 2, Policy b).

Similarly, the countywide Plan identifies several potential High Occupancy Vehicle (HOV) facilities, and indicates that the ultimate determination of HOV feasibility and performance should occur after more detailed corridor-level studies are completed.

Supporting Facility Recommendations

Regardless of the mode of public transportation chosen in a specific corridor, supporting facilities such as commuter park-and-ride lots must be identified and located. Such sites could serve as parking areas for HOV or express bus collection, or as rail stations, or perhaps for both functions as public transportation ridership increases over time. The Plan locates these sites in order that actions can be taken to preserve their availability, since the supply of potential sites is rapidly decreasing as the county continues to develop.

The countywide Transportation Plan identifies approximate locations for these facilities. The District Plans provide an opportunity to apply this countywide guidance to specific areas, so that properties affected by such recommendations can be appropriately developed, preserved, or protected in the development approval process. In some cases, the District Plans might contain alternative sites for these facilities in order to preserve flexibility until a final determination of site location is made.

The countywide Transportation Plan map contains several different symbols representing different types of supporting facilities. These are briefly discussed below:

- T = *Transit Transfer Center (no parking)*. These facilities consist primarily of bus loading areas and passenger waiting areas at locations where multiple transit routes and/or modes may be reasonably expected. They have good access both to nearby arterials and freeways in order to minimize transit travel times. They could be free-standing, individual facilities or could easily be integrated with the design of a building. No automobile parking lots would be provided at these locations, consistent with their intended function as transfer centers.
- R = *Rail Station*. A rail station as defined on the countywide Plan map represents a location where a rail rapid transit station could be located, assuming the selection of rail as the preferred mode in the corridor (see previous discussion). For similar reasons, it should not be assumed that such stations would be extensions of the WMATA Metro system, as other rail modes may also be considered. Rail stations may or may not be accompanied by automobile parking areas, depending on the nature of the area. The rail station symbol is accompanied by the Commuter Parking (P) symbol for those sites where such parking appears to be possible.
- P = *Commuter Parking Lot*. Commuter parking lots are shown on the countywide Plan Map along major highway corridors where sufficient land area having access to the highway may be available. These lots could function either as traditional commuter park-and-ride lots associated with HOV and/or express bus service, or as parking for a rail station as appropriate. The size of such lots may vary; however, these lots should generally be no smaller than 500 spaces in order to maximize their efficiency as transit collection and staging areas. These facilities must have

good access to nearby arterials and freeways in order to be effective.

VRE = *Virginia Railway Express*. Virginia Railway Express Stations are identified along the Norfolk Southern and CSX rail lines where commuter rail service is provided. VRE station parking areas are generally surface lots accommodating between 200 and 800 vehicles.

Service Drives

Service drives are required by the county's Zoning Ordinance along Primary Highways. The requirement supports the county's transportation objective to maximize the efficiency of roadway facilities. Primary Highways are arterials which primarily accommodate through travel movements. However, direct access to and from these highways occurs frequently. In general, the provision of many access points reduces the efficiency and capacity of an arterial road. This reduction is caused by the interruptions in smooth traffic flow due to turning movements into and out of the driveway entrances. Service drives provide for the separation of the access and travel functions along roadways. When correctly planned and built, their use allows the adjacent parallel roadway to operate more efficiently, with increased capacity and improved safety. At the same time, access to adjacent properties is provided and oriented to controlled access points. Service drives also allow for purely local interparcel trips to be made without disrupting the through traffic on the adjacent arterial. On the sector maps, which describe the transportation recommendations, the required application of service drives along Primary Highways is noted.

It is recognized that service drives are not without disadvantages. Operational problems are created where the service drive intersects side streets because of inadequate intersection separation. Moreover, service drives are often incomplete along a given road segment, and numerous entrances often exist between the service drive and the arterial. Both of these situations reduce the effectiveness of the service drives.

For these reasons, service drives should be minimized and alternatives to service drives should be provided whenever possible. The Zoning Ordinance allows for service drives to be waived if alternative interparcel access is available, or if other compelling circumstances are present, and such waivers are often granted. However, service drives are utilized extensively in many of the older commercial highway corridors in the county, such as Route 7 between Seven Corners and Baileys Crossroads, Route 236 through Annandale, and Route 1 between Alexandria and Fort Belvoir. The system of service drives in these commercial areas is characterized by incomplete connections which return the local traffic to the arterial mainline. The segments which are built are not necessarily in the state highway system and therefore do not meet the state's standards for construction and maintenance. Large potholes, parked vehicles, and barricades exist on many of these privately maintained service drives. It is important to complete the service drives along the Primary Highways and upgrade the substandard segments so they can be incorporated into the state's maintenance program.

Cases occur where the widening of the primary highway eliminates the service drives which preceded the widening. The Plan should anticipate these situations by providing for alternatives to the service drive, such as consolidation of entrances and provision of interparcel access through travelways, or by other means. This feature is addressed by Objective 9b of the Transportation element of the Policy Plan. Where other alternative measures may be available, they are identified in the Area Plans.

Site Access

In many instances, the Area Plans identify the primary orientation of access to a specific site or group of sites. Such recommendations are shown by arrow symbols on the sector and/or sub-sector maps. The purpose of these recommendations is to identify the primary access orientation of the area(s) in question. The symbols indicate the direction and approximate location of the primary access point(s) to the site. Where such access is identified in the Area Plans, the specific details of providing this access may be resolved at the rezoning or site plan stage of development review. Where such access orientation recommendations exist, the absence of an arrow symbol in a specific direction or to a specific road should be construed as a recommendation that access not be provided in that direction, or that any such access be secondary in nature.

Level of Service

Application of transportation levels of service is intended to be a mechanism for timing development in this Plan. For areas where the appropriate level of service (LOS) is not specified in the Area Plan, it is anticipated that a minimum LOS will be determined through future analyses. These analyses should be performed in a subsequent phase of the Planning Horizons process. The Planning Commission in conjunction with the staff should determine the best way to proceed with an appropriate process for analysis and recommended amendments to the Plan. Lower levels of service may be assigned to development centers and cores, where the Plan proposes that growth will be concentrated. Higher levels of service may be recommended in outlying areas, where the spread of development is inimical to an efficient transportation system. Applicants for new development should be required to demonstrate that their proposals will meet the level of service designated for their area. Upon adoption by the Board, these sector-specific levels of service for transportation should be inserted into the Area Plans.

In the interim, development applications will be reviewed based on the "non-degradation" and "offsetting impact" policies discussed below:

"Non-degradation" Policy: The "non-degradation" policy requires applicants to ensure that the transportation system affected by the application performs no worse after the project is developed than it would otherwise. This approach is primarily a performance based approach which requires applicants to provide improvements or other guarantees to maintain certain performance levels. These levels would be measured by levels of service or critical movement volumes or other measures as deemed appropriate by the Department of Transportation.

"Offsetting Impact" Policy: The "offsetting impact" policy requires applicants to contribute to transportation improvements. The contributions would be proportional to the traffic generated by the project and the amount of transportation capacity required to accommodate that traffic, presumably based on lane-miles. However, this policy would not ensure that the localized performance of the transportation system would be maintained. Instead, it recognizes that in some instances, it may be impossible for performance to be maintained or for one individual applicant to provide the transportation improvements which may be needed.

In general, the "non-degradation" policy would be pursued in reviewing development applications, with the "offsetting impact" policy employed in those instances where the "non-degradation" policy is not appropriate.

Housing

The Housing element of the Policy Plan contains objectives for promoting affordable housing, conserving stable neighborhoods, encouraging rehabilitation and increasing the supply of housing available to special populations.

Each Planning District within the Area Plans includes a chart which designates existing and proposed sites for assisted housing. Each district plan also includes recommendations for the preservation and conservation of stable residential areas and identifies areas where new housing development, including multi-family housing, may be appropriate. In general, higher density housing is planned to be located within or in proximity to mixed-use centers as envisioned in the Concept for Future Development.

Environment

The Environmental element of the Policy Plan provides guidance for achieving a balance between the need to protect the environment and planning for the orderly development and redevelopment of the county. This element contains objectives for preserving and improving air and water quality; minimizing noise and light pollution; minimizing exposure to environmental hazards including unstable soils, flood impact areas and pipeline and electrical transmission lines; preserving environmental resources; and protecting and enhancing the Environmental Quality Corridor (EQC) System.

Environmental objectives and policies of the Policy Plan apply throughout Fairfax County, in conjunction with the environmental policies contained in the Area Plans. Therefore, the Area Plans contain only limited additional guidance.

Text addressing areas with specialized environmental concerns, including the Difficult Run Watershed, the Occoquan Basin and the Dulles Airport Noise Impact Area is presented below. Text concerning the Difficult Run watershed is also presented in the Area II Plan.

Difficult Run Watershed

The Difficult Run Environmental Quality Corridor has been classified as a critical environmental area by the State of Virginia. Floodplains and shallow bedrock depth on valley slopes constrain development. The area contains soils with relatively good bearing capacity but the potential for severe erodibility.

Part of the Difficult Run watershed was the subject of an environmental and land use study, the Difficult Run Headwaters Land Use Study, April 1978, prepared by the Office of Comprehensive Planning, currently known as the Department of Planning and Zoning. The study area was analyzed for its ability to accept various residential densities and simultaneously maintain high-quality environmental standards. The primary environmental objectives for this area are designed to protect this fragile environment from the impacts of urbanization such as increased stormwater runoff, increased nonpoint source pollution loadings, stream channel enlargement, loss of high-quality wildlife habitats, increased number of septic fields and possible soil and groundwater contamination from septic effluent.

A detailed environmental inventory identified geologic, topographic, hydrologic, vegetative, soil, wildlife, air quality, noise and open space factors. This information was used to prepare a land use design that would minimize the impacts of development in a region that

is not planned for sanitary sewer service and serves as a green space between Fairfax, Vienna, Chantilly and Reston.

An Environmental Quality Corridor (EQC) was outlined using a U.S. Forest Services water quality filter strip equation, areas of steep slopes, U.S. Geological Survey designated 100-year floodplain and existing parkland. The result is an environmentally sensitive plan with land use boundaries determined by the environmental carrying capacity of the land. The environmental factors, together with other factors such as existing and committed development in the area and site and road design controls, are reflected on the Plan map for this area.

Areas with long narrow ridge lines, thin overburden, highly erodible soils, steep topography, high quality vegetation and poor access are planned for very low density (less than one unit per five acres) uses. One unit per two to five acres is proposed for areas adjacent to streams where topography is relatively steep, overburden moderately thick (10-50 feet) and soils moderately erodible. Areas on plateaus or ridge lines where thick overburden (50 feet or more), gently sloping topography, good septic suitability soils, mixed vegetation and varied access points are capable of accommodating somewhat higher density development are planned for .5-1 dwelling unit per acre.

Factors other than environmental considerations were also evaluated before arriving at the land use recommendations shown on the Plan map. Since adoption of the Plan recommendations, there has been some development which limits the options for planning this sensitive headwaters areas only for very low densities. Existing and committed development is used in Plan recommendations in many areas of the Difficult Run headwaters to obtain compatible densities. New development should also be compatible with the established development pattern in its vicinity with similar lot sizes, provided these lot sizes would not be detrimental to environmental amenities.

Owners of large tracts are encouraged to plan and develop these tracts as an entity. Also, owners of small parcels adjacent to large parcels should consolidate them with the larger tracts in order to create a more integrated development. Such development could produce more imaginative designs, preserve a variety of habitats, and provide recreational facilities and a variety of architectural styles.

Heritage Resources

The Heritage Resources element of the Policy Plan provides guidance in achieving a balance between physical and economic growth and preservation of the county's prehistoric and historic heritage resources. Objectives and policies focus on three general issues: identification of the resource base; protection and preservation of significant heritage resources; and promotion of community awareness and involvement.

The Area Plans identify specific heritage resources including historic, architectural and archaeological resources. Each District Plan contains a chart and map of the resources derived from the county's Inventory of Historic Sites. In some sectors, historic overlay districts are identified and special land use guidelines related to these districts are cited under the Recommendations section.

Public Facilities

The Public Facilities element of the Policy Plan provides guidance for an effective and efficient public facilities system. Public facilities are defined as those facilities required to support governmental services and functions or public utility companies. The Policy Plan contains

countywide objectives for establishing a facility network which is responsive to the county's ability to pay, community expectations, the public health, safety and general welfare and neighborhood and land use impacts. Additional objectives relate to education, libraries, public safety and utilities and services.

In the Area Plans, existing public facilities are identified on a chart for each Planning District. Where a need for additional public facilities has been identified, these facilities are also included within the District Plan overview. Site-specific recommendations are included within the Community Planning Sector recommendations.

Parks and Recreation

The Parks and Recreation element of the Policy Plan contains countywide objectives for the provision of a high quality, diverse park and recreation system. As defined by service areas, the county should plan, develop and maintain four primary types of parks: Neighborhood, Community, District and Countywide. These are augmented by regional, state and federal parks. The parks classification system and standards for establishment of parks and recreation facilities is contained in the Parks and Recreation Appendices of the Policy Plan.

The Area Plans identify existing and proposed parks within the Parks Classification System. A summary chart of existing public parks is included in the overview for each Planning District. Specific recommendations related to existing and proposed parks are contained in each Community Planning Sector.

Trails

Fairfax County has a comprehensive countywide trails system which supports pedestrian, bicycle and equestrian usage and provides both transportation and recreational benefits. The overall trails system is planned to ultimately connect major activity centers and key destination points to establish desirable recreational corridors. The countywide trails plan map is published at the scale of 1 inch to 4,000 feet (1":4000') and is depicted on Figure 2 in the Transportation component of the Policy Plan.

The trails system is being constructed primarily through site plan requirements associated with development activity, as part of new road improvement projects, or with county funds. This process dictates that the ultimate network be constructed segment-by-segment and that the public be aware of trail requirements and planned routes. The 1":4000' Trails Plan Map is available from the Department of Planning and Zoning and should be consulted for specific recommendations on trail location and type.

HOW TO USE THE PLAN

FINDING A SPECIFIC PROPERTY IN THE PLAN TEXT

The Comprehensive Plan for Fairfax County is divided into four planning areas. See Figure 5 for the countywide map showing these four planning areas. Each planning area is divided into Planning Districts and each Planning District is subdivided into Community Planning Sectors. A map depicting each district and its sectors is found at the beginning of each Area Plan overview. In addition, sector level locator maps which correspond to land use recommendations in the text are located within the Community Planning Sectors.

In order to locate that portion of the Comprehensive Plan which pertains to a specific property, it is necessary to:

1. Determine the planning area in which the property is located.
 - a. This may be accomplished by looking at Figure 3. The four planning areas are cited in Roman numerals. The heavy dotted line forms the planning district boundaries, with the planning districts indicated by name.
 - b. Identify the planning area or areas in which the property is located.

Note: Due to the nature of the planning area boundaries, it may be necessary to refer to more than one area map to determine in which planning area the property is located.

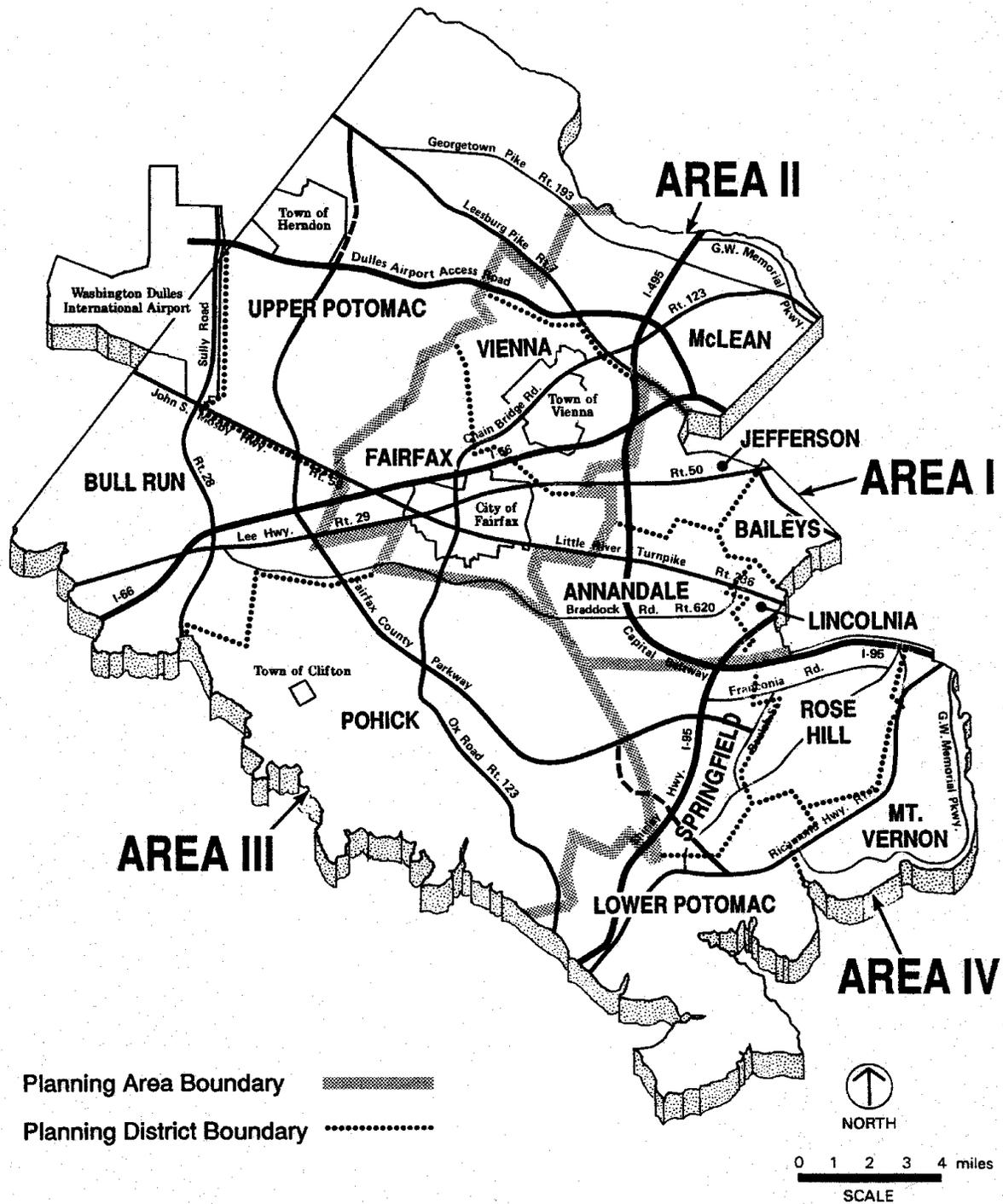
2. Find the planning district in which the property is located.
3. Determine in which community planning sector the specific property is located by referring to the district map. Once the appropriate sector is known, turn to that sector in the text.
4. If the property is located within that portion of the sector map that is shaded, this indicates that it is part of a special area to which you are referred.
5. The information in the community planning sector is organized into two sections:
 - a. Character: a brief description of existing land use; and
 - b. Recommendations: guidance for the future development of the sector. Specific uses, ranges of residential density or land use intensity, as well as possible alternative or optional uses, are presented for certain tracts of land within the sector.
6. If no recommendation is stated in either the sector or the appropriate special area of the text for the property in question, then consult the Plan map.

FINDING A SPECIFIC PROPERTY ON THE PLAN MAP

The Comprehensive Plan includes color-coded maps for each of the four planning areas. The colors correspond to particular land use categories as noted in the legend on the Plan map. Properties can be easily located on this map by using street references or the tax map grid square system. The tax map grids are shown as an overlay on the Plan map and relate to the countywide grid location system. Grids are denoted by a hyphenated number, such as 42-4.

PLAN MAP AND TEXT RELATIONSHIP

The Plan text and Comprehensive Plan map complement one another. Often the Plan text gives detailed recommendations which are illustrated generally on the Plan map. In the event of a discrepancy between the specific recommendations of the text and the Plan map, the text takes precedence.



PLANNING AREAS AND DISTRICTS FIGURE 3

Goal AE.1

Protection: Protect Natural Resources That Enhance Resilience

STRATEGY AE.1b

Survey and Protect Areas that Provide Natural Resilience Benefits

Strategy Description: Healthy natural lands and environmentally sensitive areas are critical to the long-term resilience of Fairfax County. These areas, such as wetlands, critical habitats, biodiverse land, natural shorelines, and healthy stream corridors, can reduce our climate vulnerabilities and enhance resilience in several ways. They can serve as natural barriers against severe storms, absorb excess flood waters and storm surge energy, protect downstream communities, reduce erosion, mitigate against extreme heat, and support the biodiversity of ecosystems threatened by climate change, among other benefits. These areas and natural resources provide many additional co-benefits, such as water quality protection and protection of areas with historical, archaeological, or recreational significance. This strategy involves the surveying, mapping, prioritization, and conservation of natural areas that currently lack sufficient protection.

Climate Hazards Addressed:



Lead:	FCPA, NVSWCD
Partners:	DPD, DPWES, FCDOT, OCA, OEEC, UFMD
Timeline:	Long-Term (5-8 years)
Cost:	\$\$\$ (\$500k - \$1 million)
Existing Staff:	Partial

Implementation Actions:

- i. Identify and secure additional staff capacity and/or consultant support needed to implement this strategy.
- ii. Leverage the Consolidated Natural Resources Management Plan (Strategy AE1.a) and other applicable plans as a starting point for identification of environmentally sensitive areas that could be candidates for more stringent protection. To thoroughly analyze these candidate areas, complete field surveys of public land to verify and document lands that naturally enhance climate resilience, contain sensitive and/or rare habitats, and areas with extensive invasive species in need of management. Consider leveraging existing GIS data, such as tree canopy cover and land use type, to inform field survey work. Partner with state and federal agencies, as applicable, to coordinate survey work and data collection. Build off of existing and ongoing surveys and documentation from FCPA and NVRC.
- iii. Informed by data collection under this strategy as well as available county data, create an updated GIS database of natural areas in need of stronger protections for climate resilience, including lands with sensitive and/or rare habitat and species and high-quality natural resources areas.
- iv. Based upon the field surveys, GIS database, and [Resilient Fairfax Vulnerability and Risk Assessment](#), identify land prioritized for conservation easements, Natural Area Preserve designation, or other protective status to enhance or preserve natural climate resilience.
- v. Explore strategic partnerships, grant opportunities and/or financing opportunities for conservation and protection of identified environmentally sensitive areas, including but not limited to: tidal and freshwater wetlands, intermittent streams, shorelines, and habitat for key species. Partners in this effort may include, but are not limited to: Department of Defense, National Park Service, Northern Virginia Regional Parks, Northern Virginia Conservation Trust, and Virginia Department of Conservation and Recreation.



Key Performance Indicators:

- Total amount of land area surveyed, and number of field surveys completed.
- Amount secured in grant and/or other funding sources for conservation.
- Percent of eligible acres of environmentally sensitive land conserved and/or protected within the county.

Equitable Implementation:



- ✓ Consider how the protection of environmentally sensitive areas could affect development and/or change land values.
- ✓ Consider whether the benefits of protecting environmentally sensitive areas will be distributed equitably.
- ✓ Along with protecting environmentally sensitive areas, include aspects of environmental restoration in low-income neighborhoods so the benefits that come from these ecosystems are equitably distributed.



Funding and Resource Opportunities:

- BRIC
- Coastal and Estuarine Land Conservation Program
- Conservation Reserve Enhancement Program
- Emergency Coastal Resilience Fund
- Land and Water Conservation Fund
- National Coastal Resilience Fund
- National Coastal Wetlands Conservation Grant Program
- Virginia Environmental Endowment
- Wildlife Conservation Society Climate Adaptation Fund
- Virginia Land Conservation Fund
- Virginia Open Space Lands Preservation Trust Fund
- Virginia Recreational Trails Fund

Co-Benefits:



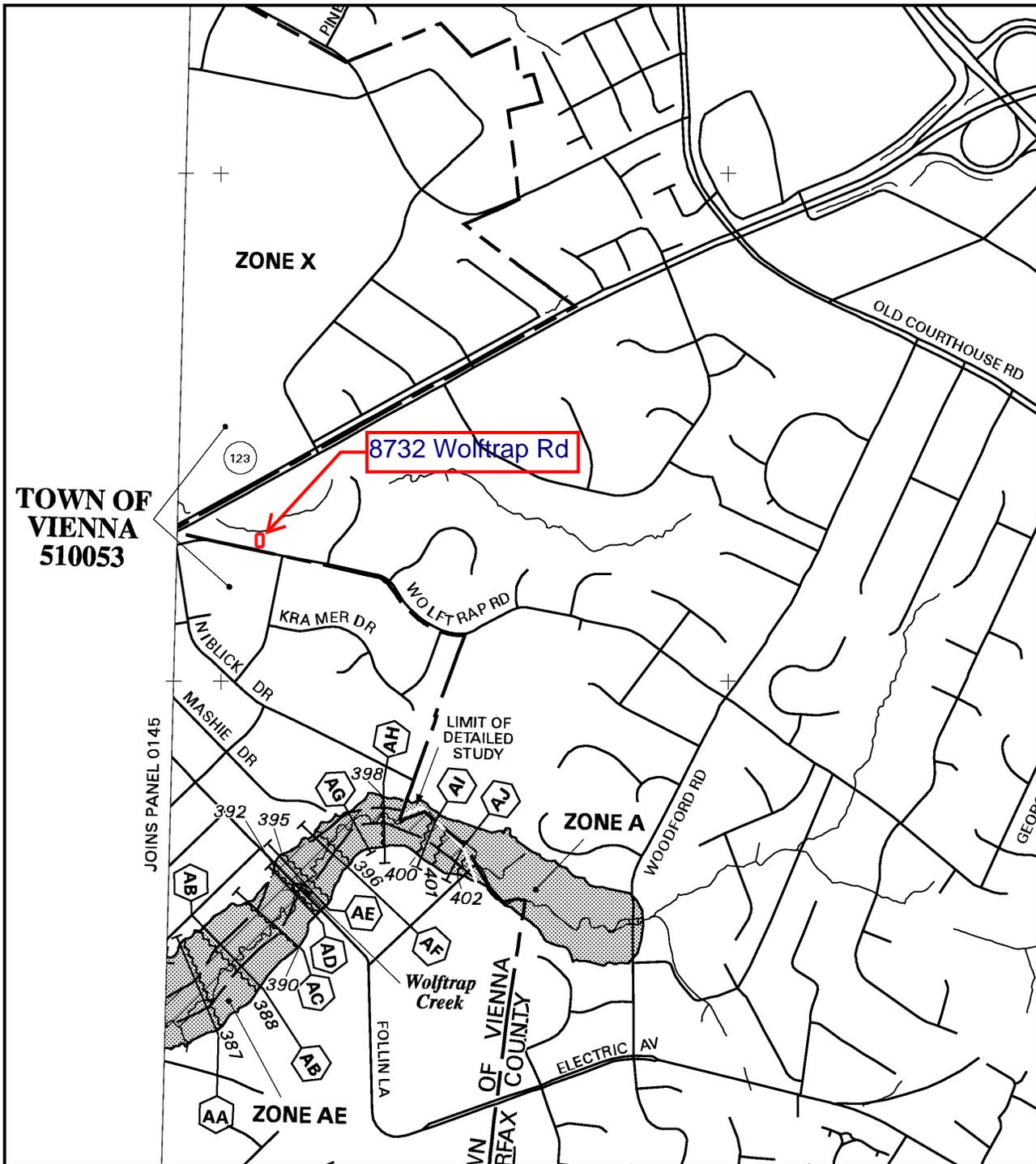
ADDITIONAL STRATEGIES FOR GOAL AE.1

<p>Strategy AE.1c</p>	<p>Update Provisions for Conservation Easements Update the provisions for conservation easements to include potential canopy credit as well as resources needed to maintain or improve the condition of the resource in perpetuity.</p>
<p>Strategy AE.1d</p>	<p>Integrate Climate Change Considerations into Urban Forestry Program Consider future climate conditions to support long term tree health, including consideration for tree selection, required maintenance, and planting processes.</p>



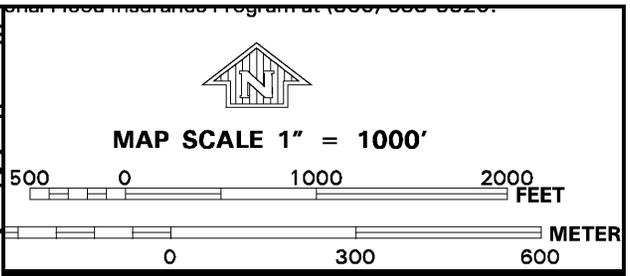
Dyke Marsh Wildlife Preserve Restoration

Dyke Marsh is the Washington metropolitan region’s largest freshwater wetland and one of the best studied wetlands in the nation. Located in Fairfax County, the marsh is home to 300 different plant species including six species of concern. The marsh began growing 2,500 years ago. During the 20th century, over 100 acres of the marsh was dredged away for mining of sand and gravel. Erosion and sea level rise pose additional threats. The USACE and NPS have been working on Dyke Marsh stabilization. Phase I is complete, and Phase II was scheduled to start summer 2022. Restoration and stabilization of marshes like Dyke Marsh not only provide critical habitat for a variety of wildlife, but also provide storm buffers, helping to reduce wave energy and prevent erosion. Additionally, our marshes act as natural filters to clean the waters of the Potomac River.



TOWN OF VIENNA
510053

JOINS PANEL 0145



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0165E

FIRM
FLOOD INSURANCE RATE MAP
FAIRFAX COUNTY,
VIRGINIA
AND INCORPORATED AREAS

PANEL 165 OF 450
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
FAIRFAX COUNTY UNINCORPORATED AREAS	51525	0165	E
VIENNA, TOWN OF	51053	0165	E

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
51059C0165E
EFFECTIVE DATE:
SEPTEMBER 17, 2010

Federal Emergency Management Agency

This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at <https://msc.fema.gov>.