

**FLOODPLAIN MANAGEMENT PLAN** (Part of the Northern Virginia Regional Hazard Mitigation Plan)

### **PROGRESS REPORT**



EXISTING CONDITIONS



POST-CONSTRUCTION

Conceptual rendering showing proposed conditions for the Tripps Run flood mitigation project.

STORMWATER PLANNING DIVISION DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES A Fairfax County, VA Publication July, 2025

### **Table of Contents**

Page
I. Introduction
II. Fairfax County Mitigation Action 2 (2006): Continue to develop and implement flood proofing solutions for structures analyzing flood causes and responsibilities
III. Fairfax County Mitigation Action 5 (2006): Continue to install remote lake level sensors, data collectors/alarms, stream flow gauges, tide gauges and rain gauges at critical locations throughout the County to allow for earlier warning of potential flooding
<ul> <li>IV. Fairfax County Mitigation Action 13 (2006): Identify need for backup generators, communications, and/or vehicles at critical public facilities. Develop means to address shortfall identified</li></ul>
V. Fairfax County Mitigation Action 28 (2006): Continue to implement building and development standards as required under the National Flood Insurance Program
VI. Fairfax County Mitigation Action 6 (2010): Continue to employ a broad range of warning systems throughout the County
VII. Fairfax County Mitigation Action 12 (2010): Identify funding opportunities to replace vulnerable or undersized culvert stream crossings with bridges or larger culverts to reduce flood hazards
VIII. Fairfax County Mitigation Action 16 (2010): Upgrade the New Alexandria/Belle View pump station fuel oil storage tanks from underground to aboveground storage
IX. Fairfax County Mitigation Action 17 (2010): Continue to seek voluntary buy-outs of FEMA's repetitive loss properties within the floodplain
X. Fairfax County Mitigation Action 20 (2010): Collaborate with FEMA to develop risk maps for the Cameron Run Watershed and the Belle View communities
XI. Fairfax County Mitigation Action 21 (2010): Develop an outreach program aimed at assisting private dam owners with proper operation and maintenance
XII. Fairfax County Mitigation Action 23 (2010): Identify gaps in current recovery planning efforts within the County
XIII. Fairfax County Mitigation Action 26 (2010): Use fee simple and/or permanent easement to prevent development in the highest priority undeveloped floodplain (and/or wetlands) areas. Work with land trusts to purchase the land or conservation easements. Use these areas as public open space for passive recreational uses

XIV. Fairfax County Mitigation Action 27 (2010): Continue development of a comprehensive River Flood Response System for New Alexandria/Belle View and Huntington in partnership with the National Weather Service and the U.S. Army Corps of Engineers 7
XV. Fairfax County Mitigation Action 29 (2010): Conduct annual outreach to each FEMA-listed repetitive loss and severe repetitive loss property owner, providing information on mitigation programs (grant assistance, mitigation measures, flood insurance information) that can assist them in reducing their flood risk
<ul> <li>XVI. Fairfax County Mitigation Action 30 (2010): Promote structural mitigation to assure redundancy of critical facilities, to include but not limited to roof structure improvement, to meet or exceed building code standards, upgrade of electrical panels to accept generators, etc.</li> </ul>
XVII. Fairfax County Mitigation Action 32 (2010): Encourage public and private water conservation plans, including consideration of rainwater catchment system
XVIII. Fairfax County Mitigation Action 33 (2010): Work with the Virginia Department of Forestry to review local zoning and subdivision ordinances to identify areas to include wildfire mitigation principles
XIX. Fairfax County Mitigation Action 1 (2017): Develop an Emergency Action Plan for the Huntington Levee project
XX. Fairfax County Mitigation Action 2 (2017): Collaborate with other departments of Fairfax County to identify satellite locations throughout Fairfax County to build additional salt storage facilities to reduce the travel time and distance during snow/ice events
<ul> <li>XXI. Fairfax County Mitigation Action 3 (2017): Secure funding to purchase additional equipment/trucks to enhance our current level of service to be able to dedicate one piece of equipment/truck to each police station within Fairfax County or identify other resources to accomplish this need</li></ul>
<ul> <li>XXII. Fairfax County Mitigation Action 4 (2017): Coordinate and support the Virginia Department of Transportation (VDOT) in the identification and resolution of road flooding and drainage issues related to VDOT roadways</li></ul>
XXIII. Fairfax County Mitigation Action 5 (2017): Armor stream bank and construct a flood wall to prevent stream bank erosion and flooding at the Noman M. Cole, Jr. Pollution Control Plant
XXIV. Fairfax County Mitigation Action 6 (2017): Design and construct safe rooms at critical facilities to house personnel and community members during high wind events

<ul> <li>XXV. Fairfax County Mitigation Action 7 (2017): Provide emergency utility capabilities for critical facilities. This includes, but is not limited to providing generator and emergency water hookups</li></ul>
<ul> <li>XXVI. Fairfax County Mitigation Action 8 (2017): Improve Fairfax County's Community Rating System (CRS) classification from Class 6 to Class 5 by documenting services that are currently being provided</li></ul>
XXVII. Fairfax County Mitigation Action 9 (2017): Provide routine inspections and maintenance of dams to ensure they are functional
XXVIII. Fairfax County Mitigation Action 10 (2017): Continue to implement flood mitigation projects for communities in Fairfax County that are exposed to severe flooding risk 11
XXIX. Fairfax County Mitigation Action 11 (2017): Update flood information website to include a link to the Office of Emergency Management website and the private dam owners outreach materials
XXX. Fairfax County Mitigation Action 12 (2017): Support mitigation of priority flood-prone structures through promotion of acquisition/demolition, elevation, flood proofing, minor localized flood control projects, mitigation reconstruction and where feasible using FEMA HMA programs where appropriate
XXXI. Fairfax County Mitigation Action 02 (2022): Work with FEMA to re-examine flood update FIRMS. Use this information to reevaluate NFIP activities

### Floodplain Management Plan Progress Report

### I. Introduction

In an effort to reduce the nation's mounting natural disaster losses, the United States Congress passed the Disaster Mitigation Act of 2000 (DMA 2000), which amends the Robert T. Stafford Disaster Relief and Emergency Act. Section 322 of DMA 2000 emphasizes the need for state and local governments to coordinate closely on mitigation planning activities and makes the development of a hazard mitigation plan a specific eligibility requirement for any local government applying for federal mitigation grant funds. These funds include the Hazard Mitigation Grant Program (HMGP) and the Pre-Disaster Mitigation (PDM) Program, both of which are administered by the Federal Emergency Management Agency (FEMA) under the U.S. Department of Homeland Security.

The Northern Virginia Regional Hazard Mitigation Plan (November 2022) was developed in accordance with state and federal rules and regulations governing local hazard mitigation plans. Fairfax County (County) adopted the plan in accordance with the authority and police powers granted to Counties and municipalities under sections 15.2-2223 through 15.2-2231 of the Virginia State Code. Under Code 44 of Federal Regulations (CFR) Part 201.6(c) (4) (i), the plan maintenance process includes a section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan. Under 44 CFR Part 201.6(c)(4)(ii), the plan maintenance process includes a procedure by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate. A copy of this plan can be found at this link: fairfaxcounty.gov/emergencymanagement/sites/emergencymanagement/files/Assets/Documents/ 2022 Northern Virginia Hazard Mitigation Plan\_Combined.pdf .

The purpose of the Northern Virginia Hazard Mitigation Plan is to:

- Protect life, safety, and property by reducing the potential for future damages and economic losses that result from natural hazards;
- Make communities safer places to live, work, and play;
- Demonstrate a local commitment to hazard mitigation principles;
- Comply with state and federal legislative requirements for local multi-jurisdictional hazard mitigation plans.

Each jurisdiction participating in the Northern Virginia Hazard Mitigation Plan is responsible for implementing specific actions as prescribed in their locally adopted mitigation action plan. In each mitigation action plan, every proposed action is assigned to a specific local department or agency for responsibility and accountability. This approach enables individual jurisdictions to update their unique mitigation action plan as needed without altering the broader focus of the regional plan. The separate adoption of locally specific actions also ensures that each jurisdiction is not held responsible for monitoring and implementing the actions of other jurisdictions involved in the planning process.

The Fairfax County Department of Public Works and Environmental Services (DPWES), Stormwater Planning Division (SWPD), has prepared this progress report on the implementation of the flood mitigation actions of the Northern Virginia Hazard Mitigation Plan in response to requirements for the County's participation in the Community Rating System (CRS) program. The CRS is a program under FEMA's National Flood Insurance Program (NFIP) that provides flood insurance discounts to participating communities. This report is required to be submitted annually.

Copies of the progress report are sent to all members of the Fairfax County Board of Supervisors (Board) each year. In addition, this report will be released to the media and made available to the public. A news release inviting the media and the public to review the progress report on the County's website is sent to the County media mailing list. Hard copies of this and earlier progress reports are available to the public and media at the SWPD, Fairfax County Government Center, 12000 Government Center Parkway, Suite 449, Fairfax, VA 22035.

A hard copy of this document and earlier progress reports may be obtained from the SWPD by calling 703-324-5500, TTY 711, or a request may be made by email at DPWESSWPDMail@fairfaxcounty.gov.

The Board adopted the updated Northern Virginia Hazard Mitigation Plan (November, 2022) which includes data, assessments, and actions specific to Fairfax County in Annex 7, on June 27, 2023. This report provides an annual update of the County's actions required by this plan. Provided below is a brief discussion of the progress made on specific flood mitigation actions proposed by the County as identified in the Northern Virginia Hazard Mitigation Plan.

### **II. Fairfax County Mitigation Action 2 (2006):**

### Continue to develop and implement flood proofing solutions for structures analyzing flood causes and responsibilities

The Huntington Levee project was completed in June 2019. The Huntington Community with 230 structures in a Repetitive Loss Area (RLA) was excluded from FEMA's Special Flood Hazard Areas (SFHAs) in Fairfax County through a Letter of Map Revision (LOMR), with an effective date of December 13, 2021.

The Department of Public Works and Environmental Services (DPWES) is also currently managing 15 active flood mitigation projects. Please see item XXVIII. Fairfax County Mitigation Action 10 (2017) for additional information.

### **III. Fairfax County Mitigation Action 5 (2006):**

Continue to install remote lake level sensors, data collectors/alarms, stream flow gauges, tide gauges and rain gauges at critical locations throughout the County to allow for earlier warning of potential flooding

Operation and maintenance of the County Flood Warning System continues. No new sites were added over the past year but a significant system upgrade from ALERT to ALERT 2 communication protocol was completed in 2022 to improve system reliability. A new flood warning site will be installed within a flood prone portion of the Hybla Valley community in Alexandria, VA in 2025.

#### IV. Fairfax County Mitigation Action 13 (2006):

### Identify need for backup generators, communications, and/or vehicles at critical public facilities. Develop means to address shortfall identified

The Fairfax County Park Authority (FCPA) has three (3) facilities with gymnasiums and club rooms adequate for emergency sheltering - Franconia, Spring Hill, and Audrey Moore Rec Centers. The FCPA has received Virginia State Emergency Shelter Grant funding to install a backup natural gas-powered electric generator at the Franconia District Rec Center, to be completed by 2025. An extension to August 2024 has been approved, and a final extension is being requested. Delays are due to manufacturing, procurement, and construction delays and lead times. The generator will support the emergency shelter sections of the facility (gym, lower club room, lower halls, and locker rooms). The back-up generator design for Spring Hill Recreation Center has yet to be installed and could be part of a potential future grant submission. To help improve the facility's resilience and reduce electrical demand, Spring Hill Rec Center commissioned a 307-KW rooftop solar array in April 2024, capable of offsetting 13% of the building's annual energy usage. The site also had a geothermal HVAC system installed and commissioned in June 2024 to improve reliability and reduce electrical demand of the building HVAC system. In Fall 2024, the Park Authority Board approved the plan to demolish and rebuild Audrey Moore Rec Center as part of the 2026 Bond process. The building will likely close for repairs starting in FY2028 for a few years rebuild. Plans for sheltering space and backup generator(s) will be addressed during the scoping and design process. Of the other six (6) FCPA Rec Centers, Providence and Cub Run Rec Centers have backup generators installed. Wastewater Management operates and maintains 70 wastewater pump stations and three storm water facilities that require emergency backup power generators. These range in size from 10 KW to 1750 KW. Thirteen (13) of these wastewater pumping stations, and all three storm water facilities are located within the County's floodplain areas. In addition, five generators with an installed capacity of 2 MW each have been installed at Noman M. Cole Jr. Pollution Control Plant. In 2021, a UV final effluent disinfection system went online, and there is a 750 KW backup generator dedicated to this process.

#### V. Fairfax County Mitigation Action 28 (2006):

### Continue to implement building and development standards as required under the National Flood Insurance Program

The Fairfax County Department of Land Development Services (LDS) continues to enforce Virginia Building Codes and the County's floodplain regulations. Together, these provisions

meet or exceed NFIP standards. LDS conducts regular training for building inspectors, permit technicians, and plan reviewers to ensure consistent implementation of these provisions.

### VI. Fairfax County Mitigation Action 6 (2010):

#### Continue to employ a broad range of warning systems throughout the County

DEMS launched the new Fairfax Alerts system in the summer of 2014 and continues to look for new ways to alert residents including social media and WEA. Completed alert and warning annex for the EOP. Maintain and expand alert capabilities using all technology currently available. The Department of Emergency Management and Security (DEMS) utilizes Fairfax Alerts (which is part of the National Capital Region's mass alerting system) to alert residents, employees, businesses, and visitors. Other technology such as the Wireless Emergency Alerts system (WEA) and social media are also deployed and operationalized.

### VII. Fairfax County Mitigation Action 12 (2010):

### Identify funding opportunities to replace vulnerable or undersized culvert stream crossings with bridges or larger culverts to reduce flood hazards

The FCPA Trail Development Strategy Plan guides the development and renovations of trails on Park Authority property. The FCPA utilizes General Obligation Bonds, General Fund, Sinking Funds, Proffers, various federal grant funding and revenue from telecommunications poles to address trail erosion and improve vulnerable or undersized culvert stream crossings. In CY 2024, FCPA's Park Development Division Trails Team continues to implement projects with \$1 million in American Rescue Plan Act of 2021 (ARPA) funding provided by the Virginia Department of Conservation and Recreation (VDCR) for several trail improvements in Royal Lake Park and the Rabbit Branch Stream Valley. For the coming year, several projects in Royal Lake will be ready for construction including a bridge replacement, improvements to approximately 400 ft of trail and a new stream valley trail in Rabbit Branch Stream Valley. Staff are also managing 13 additional projects funded by 2016 and 2020 Park Bonds which include the installation or replacement of 6 new bridges. In addition, staff has managed the completion of 39 projects in CY23 and CY24 funded by \$2.4 million in funding from the Board of Supervisors Pedestrian Safety Improvements Fund. This has allowed the FCPA to complete 10 miles of trail maintenance improvements, including the renovation of trail surfaces, pedestrian safety improvements and the replacement of numerous culverts, along with the study of 7 potential bridge replacements. Additional BOS funding is anticipated in the coming year to complete additional renovations, including additional trail and culvert improvements and the analysis or replacement of additional bridges. Funding for these activities will be made available through the various bonds, General Fund, proffer and grant funding sources as noted above.

### VIII. Fairfax County Mitigation Action 16 (2010):

### Upgrade the New Alexandria/Belle View pump station fuel oil storage tanks from underground to aboveground storage

The Wastewater Design and Construction Division completed upgrades to the fuel oil storage tank at the New Alexandria/Belle View pump station. The project included the removal of an underground fuel oil tank and replacement with an aboveground tank. The aboveground tank was constructed to meet or exceed all NFIP minimum requirements, with all openings elevated above the base flood elevation. The project was substantially completed on October 29, 2021.

#### IX. Fairfax County Mitigation Action 17 (2010):

### Continue to seek voluntary buyouts of FEMA's repetitive loss properties within the floodplain

As part of the Tripps Run at Barrett Road Flood Mitigation Project, the County purchased (February 2024) nine private properties (many of them being repetitively loss) through voluntary acquisition to create a reconnected floodplain and an environmental stream corridor. At this location, the Tripps Run floodplain is currently designated by FEMA as "Zone AE", whereby the base flood elevations have been determined (FIRM 51059C0285E, Panel 285 of 450, September 17, 2010). Grant applications for FEMA Flood Mitigation Assistance (FMA) Funding were submitted in January 2022 and 2023, but not selected. A state Community Flood Preparedness Fund (CFPF) grant was also applied for in April 2022 to cover a portion of the cost of the voluntary acquisitions and flood mitigation design and construction. The County was awarded the CFPF grant and is currently proceeding with the design of the project. Nine properties including six repetitive loss properties (five of which are severe repetitive loss) have been acquired.

In 2022, the County received an FMA grant for the voluntary acquisition of a severe repetitive loss property located in the Scotts Run watershed. The grant will assist the County with acquiring the severe repetitive loss property, demolishing the existing structure on the property, and restoring the property to a natural floodplain. The property was acquired in January 2024. Demolition and restoration are expected to be completed in the summer of 2025.

### X. Fairfax County Mitigation Action 20 (2010):

### Collaborate with FEMA to develop risk maps for the Cameron Run watershed and the Belle View communities

FEMA, as part of their Risk Map initiative, is updating the County's Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS) including Cameron Run and Belle View. The County received their preliminary FIRM and FIS on June 30<sup>th</sup>, 2021. A revised preliminary FIRM and FIS addressing the County's appeals was received in August, 2024. The second appeal period for the revised FIRMs opened in May, 2025 and will close in August, 2025. A Letter of Final

Determination (LFD) from FEMA is now expected by Spring, 2026. The County is required to adopt the maps within six months of receiving the LFD.

### XI. Fairfax County Mitigation Action 21 (2010):

### Develop an outreach program aimed at assisting private dam owners with proper operation and maintenance

SWPD will identify specific outreach techniques for the private dam owners when resources become available.

### XII. Fairfax County Mitigation Action 23 (2010):

### Identify gaps in current recovery planning efforts within the County

In 2012, Fairfax County published the Pre-Disaster Recovery Plan, which was revised in 2017. During that process, gaps will be identified and readdressed. Pre-Disaster Recovery plan was updated in 2020. The plan was adopted/signed by the County Executive in April 2020. DEMS has since completed another review and revision, and the Plan is now the Pre-Disaster Recovery Framework and was signed and adopted in August of 2024.

### XIII. Fairfax County Mitigation Action 26 (2010):

Use fee simple and/or permanent easement to prevent development in the highest priority undeveloped floodplain (and/or wetlands) areas. Work with land trusts to purchase the land or conservation easements. Use these areas as public open space for passive recreational uses

FCPA continues to acquire land in undeveloped floodplain areas via fee simple acquisitions, developer dedications, donations, and easements. In CY 2024:

- Flatlick Stream Valley Park: A total of 15.42 acres of resource protected land was acquired through developer dedication and a donation to provide continuous natural habitat, bringing the total acreage of Flatlick Stream Valley Park to 109 acres.
- Quander Park: A total of 10.61 acres of resource protected land was acquired through a Board of Supervisors transfer to provide continuous natural habitat, bringing the total acreage of Quander Park to 10.61 acres.
- Belle Haven Park: The remaining one percent of ownership of resource protected land was acquired through a donation to provide continuous natural habitat, bringing the total acreage of Belle Haven Park to 16.63 acres.

### XIV. Fairfax County Mitigation Action 27 (2010):

### Continue development of a comprehensive River Flood Response System for New Alexandria/Belle View and Huntington in partnership with the National Weather Service (NWS) and the U.S. Army Corps of Engineers

Maintenance & Stormwater Management (MSMD) continues to coordinate with NWS on updates to the County's flood warning system. SWPD is also continuing to work with the U.S. Army Corps of Engineers to develop rainfall/tide triggers for the community protected by the tide gate at New Alexandria/Belle View.

#### XV. Fairfax County Mitigation Action 29 (2010):

#### Conduct annual outreach to each FEMA-listed repetitive loss and severe repetitive loss property owner, providing information on mitigation programs (grant assistance, mitigation measures, flood insurance information) that can assist them in reducing their flood risk

The County has updated its repetitive loss area maps based on FEMA's 2022 list of properties that have experienced repetitive loss from flooding. There are now a total of 32 repetitive loss areas identified with 97 repetitive loss properties. FEMA defines repetitive loss property as, "*a National Flood Insurance Program-insured structure that has had at least two paid flood losses of more than \$1,000 each in any 10-year period since 1978.*" The County now forwards a letter to all properties that are located within the mapped repetitive loss areas biennially. The letter advises the recipients that their property is located in an area that may experience periodic flooding and how to prepare for flooding. The letter also advises the recipients about implementing permanent flood protection and provides information about FEMA Hazard Mitigation Assistance and basic facts about flood insurance.

### XVI. Fairfax County Mitigation Action 30 (2010):

Promote structural mitigation to assure redundancy of critical facilities, to include but not limited to roof structure improvement, to meet or exceed building code standards, upgrade of electrical panels to accept generators, etc.

This will be completed based on available funding.

### XVII. Fairfax County Mitigation Action 32 (2010):

### Encourage public and private water conservation plans, including consideration of rainwater catchment system

FCPA continues to offer many educational and outreach materials and programs that are aimed at promoting stewardship to the residents and visitors of the County. Many of the educational

programs include a component that is related to water conservation and appropriate land use. The recently completed Woodlands Stewardship Education Center provides an example of the use of reclaimed materials, solar energy generation, rainwater collection/reuse, and wastewater treatment. Additionally, the County partners with Northern Virginia Soil and Water Conservation District (NVSWCD) to host workshops and technical classes that encourage conservation plans, including consideration of rainwater catchment systems. For the last four years, FCPA's Watch the Green Grow program has provided guidance to landowners and HOAs in Fairfax to appropriately manage their landscapes to tie in with watershed initiatives and stream valley park management strategies, among other goals.

#### XVIII. Fairfax County Mitigation Action 33 (2010):

### Work with the Virginia Department of Forestry to review local zoning and subdivision ordinances to identify areas to include wildfire mitigation principles

The Virginia Department of Forestry recently drafted a "Firewise Plan" that focuses on a voluntary outreach-based program to engage the community to go out and remove fuels, clean gutters, and other activities that can help prevent wildfire mitigation. FCPA continues to partner with the Virginia Department of Forestry to develop staff training and outreach language material to support prescribed burn activities in Fairfax, a key initiative to mitigate wildlife risk in Fairfax County. Through this program, FCPA staff speak one on one with the County residents about prescribed burns in their area and discuss the benefits of prescribed burns for restoration and the reduction of natural fuels. The FY 2020 Park Bond included continued funding for the Helping Our Land Heal Program which facilitates this citizen outreach as part of its prescribed burn program. FCPA's prescribed burn program continues to conduct ~100 acres of Virginia Department of Forestry (VADOF) approved prescribed burns each year and actively recruits County staff and volunteers to participate in this import wildfire mitigation activity.

#### XIX. Fairfax County Mitigation Action 1 (2017): Develop an Emergency Action Plan for the Huntington Levee project

An interim flood response plan for the Huntington community was completed in June 2019 to reflect new triggers and actions for emergency operation activities. This plan was developed as part of the overall flood warning system which is required as part of the FEMA levee accreditation. After interdepartmental reviews and incorporation of comments, the plan was finalized on July 9, 2021. The County received a letter from FEMA dated February 23, 2022, confirming that the Huntington levee had been accredited. This mitigation action is considered complete.

### XX. Fairfax County Mitigation Action 2 (2017):

## Collaborate with other departments of Fairfax County to identify satellite locations throughout Fairfax County to build additional salt storage facilities to reduce the travel time and distance during snow/ice events

The salt domes at Central Material Facility (CMF) and Dulles Material Facility (DMF) were completed in November 2020 and both are operational. Fairfax County Public Schools (FCPS) is currently in the design phase of another salt dome at W.T. Woodson High School. DPWES is partnering with FCPS to install the salt dome and vehicle wash facility at this site. There have been no other sites identified for salt storage as of this time.

#### XXI. Fairfax County Mitigation Action 3 (2017):

## Secure funding to purchase additional equipment/trucks to enhance our current level of service to be able to dedicate one piece of equipment/truck to each police station within Fairfax County or identify other resources to accomplish this need

The County has provided contracted resources at each police station for the winter weather season. To sustain this level of service, the County acquired additional drivers/operators and equipment that may be deployed from within DPWES to sustain this service. Staff will continue to request this additional funding for equipment and resources in future budgets.

### XXII. Fairfax County Mitigation Action 4 (2017):

## Coordinate and support the Virginia Department of Transportation (VDOT) in the identification and resolution of road flooding and drainage issues related to VDOT roadways

Coordination with VDOT on the identification and resolution of road flooding and drainage issues is ongoing.

#### XXIII. Fairfax County Mitigation Action 5 (2017):

### Armor stream bank and construct a flood wall to prevent stream bank erosion and flooding at the Noman M. Cole, Jr. Pollution Control Plant

The project was substantially complete on March 11, 2020.

### XXIV. Fairfax County Mitigation Action 6 (2017):

### Design and construct safe rooms at critical facilities to house personnel and community members during high wind events

This action replaces 2010-11 and provides storm proofing of any critical facilities, not only shelters. DEMS discusses mitigation measures and finding sources before, during, and after construction with builders. This will be initiated as funding is available.

### XXV. Fairfax County Mitigation Action 7 (2017):

### Provide emergency utility capabilities for critical facilities. This includes, but is not limited to, providing generator and emergency water hookups

This action replaces 2010-1. DEMS discusses mitigation measures and funding sources before, during, and after construction with builders. This will be completed as funding is available.

#### XXVI. Fairfax County Mitigation Action 8 (2017):

### Improve Fairfax County's Community Rating System (CRS) classification from Class 6 to Class 5 by documenting services that are currently being provided

FEMA's CRS management contractor conducted the five-year CRS verification cycle visit on December 18, 2019, and the County was notified it would remain a class 6 CRS community on July 31, 2020. The County successfully completed annual recertification of its rating in August 2024, and is currently compiling documentation for the 2025 verification cycle. SWPD will evaluate opportunities for improving the County's CRS classification during this verification cycle.

### XXVII. Fairfax County Mitigation Action 9 (2017):

#### Provide routine inspections and maintenance of dams to ensure they are functional

County owned state regulated dams are regularly inspected in accordance with Virginia Department of Conservation and Recreation (DCR) approved facility specific operation and maintenance plans which require the dams to be inspected at a minimum annually. State regulated dam inspections may include operator inspections, maintenance inspections, technical safety inspections (performed by a professional engineer), dam owner (or designee) inspections, and overtopping inspections. Inspection reports are submitted to the DCR annually. Routine maintenance on state regulated dams occurs throughout the year. Mowing and routine maintenance is more frequent during the growing season with mowing occurring approximately monthly on state regulated dams. Maintenance work orders and/or contractor purchase orders are prepared to address any maintenance items identified in the inspection to ensure the dams remain functional. The County owned stormwater management facility dams that are not state regulated are inspected at a minimum biennially by a qualified County consultant. Maintenance work orders and/or contractor purchase orders are prepared to address any maintenance items identified in the inspection to ensure the dams remain functional.

Privately owned stormwater management facility dams are inspected at a minimum every five years by a qualified County consultant. Maintenance items identified during the inspection are sent to the facility/dam owner requesting maintenance and follow up documentation that maintenance has been performed to ensure the dam and stormwater management facility is functional.

### XXVIII. Fairfax County Mitigation Action 10 (2017):

### Continue to implement flood mitigation projects for communities in Fairfax County that are exposed to severe flooding risk

As a result of the July 8<sup>th</sup>, 2019, storm event, the County conducted flood damage assessments and identified several potential flood mitigation projects for further evaluation and implementation. These potential projects were incorporated into the County's plan to address properties and areas with severe flooding risks, including those areas previously identified as repetitive loss areas.

DPWES is currently managing 15 active flood mitigation projects with a total estimated cost of \$85M that vary in scope from flood risk reduction measures on individual lots to neighborhood-scale stormwater improvements.

The Tripps Run at Barrett Road flood mitigation project in the Mason District involves an area of historic flooding along Barrett Road which has been identified as one of the County's 21 repetitive loss areas. The area of interest is the segment between Annandale Road and Sleepy Hollow Road. A study was conducted, and the final report was completed in December 2020, with a report revision issued in November 2021. The report recommended a scenario that included acquisition of nine properties to create an environmental stream corridor with restorative stream enhancements and stabilization. The County has secured funding through the Community Flood Preparedness Fund state grant and has engaged a consultant for completion of the construction design. Negotiations to acquire the nine properties have been completed and design of the new stream corridor has been initiated.

The other flood mitigation projects in various stages of implementation are:

- Dead Run Drive (Dranesville District)
- Valley Avenue (Dranesville District)
- Forest Villa Lane (Dranesville District)
- Weaver-Dillon Avenue Stormwater Neighborhood Improvements (Dranesville District)
- Tucker Avenue (Dranesville District)
- Kent Gardens (Dranesville District)

- Broad Branch Court (Dranesville District)
- Kings Manor Neighborhood Stormwater Improvement Project (Dranesville District)
- Sunset Hills Drainage Improvement Project (Hunter Mill District)
- Ravenwood Park Neighborhood Stormwater Improvement Project Study (Mason District)
- Chowan Avenue and 8<sup>th</sup> Street (Mason District)
- Chesterbrook Road and North Albemarle Street (Dranesville District)
- Gordon Avenue Channel Improvements (Dranesville District)
- Hollin Hall/Wellington Neighborhood Stormwater Improvement Project (Mt. Vernon District)

DPWES is also developing a flood risk reduction plan with newly proposed flood mitigation levels of service for existing structures and future developments. The proposed service level for existing structures would apply a proactive risk-based approach to the County flood mitigation projects by factoring the frequency, degree of flooding, and equity considerations into project selection and prioritization, regardless of proximity to existing infrastructure.

The primary focus of these projects is to prevent structural flooding. Since the July 8<sup>th</sup>, 2019, storm event, DPWES has completed flood mitigation projects on individual residential properties. It should be noted that some structural floodings do not have any feasible solution beyond voluntary acquisition of the property or are not supported by the homeowner and do not move forward.

Stormwater staff regularly respond to flooding and drainage reports from residents. Staff regularly address drainage and flooding concerns through routine maintenance actions. Staff also provide information to property owners about what steps they can take to report drainage/flooding issues to better protect their properties.

DPWES also initiated a project to complete modeling and mapping of the County's regulatory floodplains in the County's 30 designated watersheds in 2022. Base hydraulic models for all watersheds were completed in May, 2025. A pilot for a detailed hydraulic model including representation of crossings will be initiated in Summer, 2025.

### XXIX. Fairfax County Mitigation Action 11 (2017):

### Update flood information website to include a link to the Department of Emergency Management and Security and outreach materials for private dam owners.

A link to the Fairfax County Department of Emergency Management and Security website is included on the flood information web page:

<u>https://www.fairfaxcounty.gov/publicworks/stormwater/flood-information</u>. Also included on this page is general information on dams and dam safety for, as well requirements for proposed developments located in the breach zones of state regulated dams in the County.

### XXX. Fairfax County Mitigation Action 12 (2017):

# Support mitigation of priority flood-prone structures through promotion of acquisition/demolition, elevation, flood proofing, minor localized flood control projects, mitigation reconstruction and where feasible using FEMA HMA programs where appropriate.

The Tripps Run at Barrett Road Flood Mitigation Project involves an area of historic flooding along Barrett Road which has been identified as one of the County's 21 repetitive loss areas. Most recently, several structures in this area experienced flooding and interior damage during significant storm events on July 8, 2019 and July 7, 2020.

A study analyzing and evaluating several flood mitigation alternatives was completed in December 2020. The study recommended a scenario that included acquisition and demolition of nine properties (many of these repetitive loss) to create a reconnected floodplain and an environmental stream corridor. The County has secured partial funding for the project through a state Community Flood Preparedness Fund grant and has engaged a consultant for completion of the construction design. Negotiations to acquire the nine properties have been completed and design of the stream corridor has been initiated. Please also refer to Item IX. Fairfax County Mitigation Action 17 (2010) for additional information.

### XXXI. Fairfax County Mitigation Action 2 (2022):

### Work with FEMA to re-examine flood zones and update FIRMs. Use this information to re-evaluate NFIP/CRS activities.

Fairfax County submitted an appeal for a number of FIRMs in July 2022. The majority of the appeals were accepted and a revised preliminary FIRM and FIS issued by FEMA in August, 2024. The County plans one additional re-appeal for Tripps Run that will be submitted in August, 2025. Once the final revised FIRMs have been adopted, they will be used for future CRS activities.

To request this information in an alternate format, call 703-324-5500, TTY 711.



Fairfax County Department of Public Works and Environmental Services Stormwater Planning Division 12000 Government Center Parkway Suite 449 Fairfax, VA 22035 Fairfax County website: <u>https://www.fairfaxcounty.gov/publicworks/stormwater</u> 703-324-5500, TTY 711 FAX 703-802-5955