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F L O O D P L A I N M A N A G E M E N T P L A N

(Part of the Northern Virginia Regional Hazard Mitigation Plan)

P R O G R E S S R E P O R T

Tide Gate at Belle View (Fairfax County Photo)

Prepared by:

S T O R M W A T E R P L A N N I N G D I V I S I O N

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Progress Report

I. Introduction

In an effort to reduce the nation’s mounting natural disaster losses, the U.S. 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 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. A list of the participating counties is provided in the 2017 Northern Virginia Hazard Mitigation Plan. Under 44 Code 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.

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 FEMA requirements for the maintenance of the county’s Community Rating System (CRS) program. The CRS is a program under the National Flood Insurance Program (NFIP) that provides a number of benefits to participating communities. The CRS program requires the county to submit this progress report to FEMA annually.

Hard 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 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 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 SWPDmail@fairfaxcounty.gov, or in person at the Fairfax County Government Center.

The Board adopted the county’s portion of the current Northern Virginia Hazard Mitigation Plan on April 4, 2017. This report constitutes the assessment 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

Huntington Levee

This project is completed. Additional information can be accessed through the county website at: https://www.fairfaxcounty.gov/publicworks/huntington-levee

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

New flood warning system monitoring equipment was installed at the Huntington Levee (levee) to monitor ponding depth and precipitation on the neighborhood side of the levee. The new site will provide remote information on the ponding side of the levee and provide alarms to assist with early warning of flood potential in the community.
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) conducted a review of RECenters for possible installation of back-up generators. A design for a plug-in generator was completed for Spring Hill REC. The recently completed Huntington levee project includes an emergency generator sized to provide stand by power for the three high-flow submersible pumps and critical building systems including security, HVAC, lighting, and incidentals.

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 of building inspectors, permit technicians, and plan reviewers to ensure these provisions continue to be consistently implemented.

VI. Fairfax County Mitigation Action 6 (2010):

Continue to employ a broad range of warning systems throughout the county

The Office of Emergency Management (OEM) 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 utilized. The Maintenance and Stormwater Management Division (MSMD) and SWPD also maintain and utilize a remote advance flood warning system that provides rainfall and water level information at the county’s state regulated dams and flood-prone areas.

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

FCPA’s Trail Development Plan guides the development and renovations of trails. FCPA utilizes General Obligation Bonds, General Fund Sinking funds, Proffers and revenue from telecommunications poles to improve vulnerable or undersized culvert stream crossings. The county continues to coordinate with VDOT to identify and improve culverts and stream crossings subject to recurrent flooding.
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 is in the design/permitting phase of upgrading the fuel oil storage tanks at the New Alexandria/Belle View pump station. The design plan includes removal of the underground fuel oil tank and replacement with an aboveground tank.

IX. Fairfax County Mitigation Action 17 (2010):

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

This program is ongoing.

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 has initiated work on updating the county’s Flood Insurance Rate Map and Flood Insurance Study which includes the Cameron Run watershed. In support of this effort, the county provided FEMA with Geographic Information System StormNet data for their use on this project. Preliminary hydrologic and hydraulic models from FEMA for the county areas being updated are expected in late fall 2019.

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

The Pre-Disaster Recovery Plan (PDRP) is currently in the process of its first review and revision. During this process, gaps will be identified and addressed. The completion of the plan is scheduled for late 2019.
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.

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.

MSMD continues to coordinate with NWS on updates to the county’s flood warning system.

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.

Since 2013, the county developed 21 repetitive loss area maps based on FEMA’s list of properties that have experienced repetitive loss from flooding. 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 forwards a letter to all properties located within the mapped repetitive loss area every year. 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 is completed as funding is available.
XVII. Fairfax County Mitigation Action 32 (2010): 

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

FCPA offers hundreds of educational programs to promote stewardship to the residents and visitors of the county. Many of the educational program include a component related to water conservation. Additionally, the county partners with Northern Virginia Soil and Water Conservation District to host workshops and technical classes that encourage conservation plans, including consideration of rainwater catchment systems.

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.

XIX. Fairfax County Mitigation Action 1 (2017):

Develop an Emergency Action Plan for the Huntington Levee project

A draft 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. The accreditation process is expected to be complete by late spring 2020.

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

MSMD just recently completed the 2232 process for the Central Material Facility dome and will be going to bid in early August with construction start date between December 2019 and January 2020. Dulles Material Facility dome is still going through the 2232 process. FCPS is still in the design phase of their dome. The fourth location for a dome has not been determined at 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 a contracted resource at each police station for the last two seasons. To sustain this level of service, we are currently looking within DPWES for additional drivers/operators and trying to identify any additional equipment that may be available within DPWES to sustain this service. We 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

This project 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 second of two projects to armor the stream bank was completed in February 2018. The flood wall is still being constructed. Flood walls around three basins will be completed in 2019.

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 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 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**

SWPD is currently reviewing the services that are currently provided and evaluating opportunities for improving the county’s CRS classification.

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 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.

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**

Refer to: II. Fairfax County Mitigation Action 2 (2006).
XXIX. Fairfax County Mitigation Action 11 (2017):

Update flood information website to include a link to the Office of Emergency Management (OEM) 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

A priority list of flood-prone structures in the county was developed in April of 2012. This list can be used to apply for FEMA HMA grants, where appropriate, to demolish these structures and acquire the properties. This program is ongoing.

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