



County of Fairfax, Virginia

FLOODPLAIN MANAGEMENT PLAN

(Part of the Northern Virginia Regional Hazard Mitigation Plan)

PROGRESS REPORT



Brookfield Park Dam, Fairfax, VA (Fairfax County Photo)

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Floodplain Management Plan 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. The plan was adopted by four counties, including Fairfax, and ten participating municipalities 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 Northern Virginia Hazard Mitigation Plan, dated December 7, 2011, prepared by the Northern Virginia Regional Commission and the engineering firm, Dewberry. 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 improvements 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;
- Qualify for grant funding in both the pre-disaster and post-disaster environment;
- Speed recovery and redevelopment following future disaster events;
- 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 Stormwater Planning Division (SWPD), Department of Public Works and Environmental Services (DPWES), 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 web site is sent to the County media mailing list. Hard copies of this and earlier progress reports are available to the public and media at County libraries and at the SWPD, Fairfax County Government Center, located at 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 May 22, 2012. 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 implement floodproofing methods for some structures based on the outcome of analyzing alternative solutions to flood causes

Huntington Levee

A contract to design a levee system to better protect the Huntington community from flooding was awarded to an engineering consultant. Design work has been completed and construction is expected to begin in February 2017. The project is estimated at \$30 million and is scheduled to be completed by 2019. Additional information can be accessed through the County website at: <http://www.fairfaxcounty.gov/dpwes/huntingtonlevee/>.

III. Fairfax County Mitigation Action 2 (2010):

Encourage homeowners to make homes more resilient to wind and flood by additional outreach methods such as websites and brochures

Annually, the County mails a newsletter (Flood Protection Information) to approximately 19,000 County residents who are most at risk for flooding. The newsletter, which has been published for the last nine years including 2016, provides information about flood proofing and property protection measures that residents may take to protect themselves and their property.

The County encourages residents to obtain flood insurance. Fact sheets on flood insurance are readily available at Board offices, distributed at special County events, and displayed in the brochure room in the lobby of the Fairfax County Government Center. Information about the National Flood Insurance Program is included on the County flood information web page <http://www.fairfaxcounty.gov/dpwes/stormwater/floodinformation.htm> with links to the FEMA NFIP web page <https://www.fema.gov/national-flood-insurance-program>, the FEMA phone number 1-800-427-4661 and FEMA address, 500 C Street, SW, Washington DC 20472.

The County published a fact sheet on flood safety. The “Turn Around, Don’t Drown” information has been distributed at special events and electronically throughout 2016.

IV. Fairfax County Mitigation Action 4 (2010):

Educate the public about the dangers of driving through flooded roadways, maintain depth signs and police presence at high water crossings

In the County’s annual Flood Protection Information Newsletter, flood safety messages are included that warn residents about the dangers of driving or walking through flooded areas. Also included was the “Turn Around, Don’t Drown” message and links to the FEMA web page.

The County’s Office of Public Affairs (OPA) publishes an emergency information blog, among many other public education items, that include safety messages during flooding events and other disasters. Residents who sign up for the County’s Fairfax Alert network and the Emergency Blog receive emergency alert information by e-mail, cellular or satellite phone, or text messages.

V. Fairfax County Mitigation Action 5 (2006):

Continue to install remote lake level sensors, data collectors/alarms, streamflow gages, tide gauges, and rain gages at critical locations throughout the county to allow for earlier warning of potential flooding. Continue to develop action plans for public education and warning.

Remote monitoring equipment for rainfall and lake level data was installed at the Fairfax County Park Authority’s Brookfield Park dam in June of 2015. Also in June 2016, Fairfax County’s DPWES, Fire and Rescue Department, Police Department, and the Office of Emergency Management held their annual joint training on the flood response plan for the New Alexandria, Belle View and Huntington communities. This program is ongoing.

VI. Fairfax County Mitigation Action 5 (2010):

Work with dam owners to repair or decommission private dams within the County

The County has completed the inventory and has identified state regulated private dam owners within Fairfax County. An assessment of the resources that are needed to repair or decommission private dams within the County is ongoing.

VII. Fairfax County Mitigation Action 12 (2010): [Activity recommended by Fairfax County Park Authority]

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

The County will continue to seek funding for the replacement of undersized culverts on Fairfax County Park Authority Property.

VIII. Fairfax County Mitigation Action 13 (2010):

Increase flood warning capabilities, particularly as they relate to dam failure

Two additional low water crossing warning systems were installed in the late fall of 2014, one on Woodburn Road at Accotink Creek and the other on Browns Mill Road at Difficult Run. These sites were identified by the Fire and Rescue Department as sites where motorists have been caught in floodwaters and have had to be rescued. This program is ongoing.

IX. Fairfax County Mitigation Action 14 (2010):

Establish flood level markers along bridges and other structures to indicate the rise of water levels along creeks and rivers in potential flood prone areas

The County will initiate this work as resources become available.

X. Fairfax County Mitigation Action 15 (2010):

Retrofit Huntsman Lake, a high-hazard state-regulated dam, to adequately pass the Spillway Design Flood

This action item is completed.

XI. Fairfax County Mitigation Action 16 (2010):

Upgrade the New Alexandria/Belle View pump station and tide gate

In addition to the upgrades made in 2015-2016 to the tide gate controls and lifting mechanism, DPWES is in the final design phase of an upgrade to provide redundancy in water level data to allow alarms that can quickly detect any malfunction or decreased performance in both the flood

warning system gauges and the SCADA system gauges, particularly due to physical obstructions that could affect level reading. Signals from our flood warning system gauges will continue to be sent to our ALERT transmitter, but will soon also be supplied to the SCADA system which will then compare the data from each set of gauges and send an alarm if there are discrepancies.

XII. Fairfax County Mitigation Action 17 (2010):

Continue to seek voluntary buy-outs of FEMA's repetitive loss properties within the floodplain

The property located at 6615 Dearborn Drive was acquired by Fairfax County on June 30, 2015. The home was demolished on August 25, 2015 and the property restored to natural conditions. This program is ongoing.

XV. Fairfax County Mitigation Action 20 (2010):

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

Collaboration with FEMA has started on the development of a risk map for the Middle Potomac (including Cameron Run), Anacostia, and Occoquan watersheds. A kick-off meeting with FEMA was held in September 2014. This project is ongoing.

XVI. Fairfax County Mitigation Action 21 (2010):

Develop an outreach program aimed at assisting private dam owners

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

XVIII. Fairfax County Mitigation Action 22 (2010):

Develop a public outreach plan specific to evacuation communication before and during an event

The County has developed a set of warnings relative to flooding in Fairfax County that are transmitted to residents prior to and during storm events. This is a comprehensive program that is managed by staff of the Office of Public Affairs (OPA). A team of County employees from Stormwater Management, the Police Department, OPA, Office of Emergency Management, and the Fire and Rescue Department worked to improve warning messages for residents, as well as providing additional outreach and public education activities to assist residents of the Huntington and Belle View communities in preparedness before and during significant storm events.

There are a number of ways in which County residents receive flood warnings and preparedness information including:

- Emergency information blog at <http://www.fairfaxcounty.gov/emergency/blog>

- Emergency information website at <http://www.fairfaxcounty.gov/emergency/>
- Flood information, flood preparedness, property protection website at <http://www.fairfaxcounty.gov/dpwes/stormwater/floodinformation.htm>
- Emergency phone numbers at <http://www.fairfaxcounty.gov/emergency/phonenumbers.htm>
- News Wire at <http://www.fairfaxcounty.gov/news/>
- Mobile, Apps, and Texts at <http://www.fairfaxcounty.gov/news/mobile/>
- Ask Fairfax County at <http://www.fairfaxcounty.gov/news/askfairfax/>
- Channel 16 at <http://www.fairfaxcounty.gov/cable/channel16/vod.htm>
- Health and safety podcasts at <http://www.fairfaxcounty.gov/podcasts/>
- The County Conversation at <http://www.fairfaxcounty.gov/podcasts/the-county-conversation.htm>
- The Office of Emergency Management at <http://www.fairfaxcounty.gov/oem/>

XX. 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 recreation uses

The County was awarded a grant to acquire property located at 6615 Dearborn Drive. The project includes removing the structure on the property, restoring the property to natural conditions, and recording a deed restriction that prevents disturbance of the property. The project has been completed. See action XII on page 5.

XXI. 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

An automated electronic River Flood Response System was developed for New Alexandria/Belle View and Huntington in 2008. This system was later added to the National Weather Service (NWS) Automated Flood Warning System to facilitate providing monitoring data to county residents. This system can be accessed at <http://water.weather.gov/afws/>. The county is also working with the NWS to develop specific flood warnings and alerts for these communities.

XXII. Fairfax County Mitigation Action 28 (2006):

Continue to implement building and development standards as required under the NFIP.

The County Land Development Services enforces the Virginia Building Code and County Floodplain Regulations which incorporate provisions that meet or exceed NFIP standards.

XXIV. 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

In 2013, the County developed 18 repetitive loss area maps based on the 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.

XXV. Fairfax County Mitigation Action 31 (2010):

Review locality's compliance with the NFIP with an annual review of the Floodplain Ordinances and any newly-permitted activities in the 100-year floodplain. Additionally, conduct annual review of repetitive loss and severe repetitive loss property list requested of VDEM to ensure accuracy. Review will include verification of the geographic location of each repetitive loss property and determination if that property has been mitigated and by what means. Provide corrections if needed by filing for FEMA AW-501.

On July 27, 2010, the Fairfax County Board of Supervisors adopted amendments to the Fairfax County Floodplain Ordinance and Public Facilities Manual (PFM), effective September 17, 2010, that complies with the Virginia and NFIP model floodplain ordinances. Prior to adoption by the County Board of Supervisors, the final draft of the County floodplain ordinance and all proposed amendments to the applicable sections of PFM were reviewed and approved by the Virginia Department of Conservation and Recreation. There have been no further updates to the County's floodplain ordinance since that time. A process to conduct annual reviews of the County's floodplain requirements and repetitive loss properties located in the County is anticipated to be developed, depending on the availability of resources.

In 2012, the County received a new list of 65 repetitive loss properties. The County reviewed and submitted an update by filing for FEMA AW-501. The County will review and correct FEMA's 2016 repetitive loss list when it is received.

XXVI. Fairfax County Mitigation Action 37 (2006):

Support mitigation of priority floodprone structures through promotion of acquisition/demolition, elevation, floodproofing, minor localized flood control projects,

mitigation reconstruction, and where feasible, using FEMA HMA programs where appropriate

A priority list of floodprone structures in Fairfax 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.



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