

APPENDIX F. PUBLIC INVOLVEMENT



A Fairfax County, Va.
publication

Huntington Flood Damage Reduction Project

September 2007

Overview

As a result of the devastating flood in June 2006, Fairfax County requested the U.S. Army Corps of Engineers, Baltimore District, to evaluate various alternatives to reduce flood damages in the Huntington and Huntington Station communities. For this study, the Corps is taking on a role similar to a consultant, and is not authorized or funded to implement a project. At the conclusion of the study, the county will decide which alternative to pursue further for funding and implementation.

Levee/Floodwall

One alternative that is being evaluated is a levee or floodwall, which would be located between the affected communities and Cameron Run. This alternative would provide a specific level of protection (e.g. 100-year event) against both tidal and riverine flooding. The levee, which is an earthen embankment, would require more space (e.g. 10 feet high by 60 feet wide) compared to a floodwall, but is typically less expensive. The current alignment for the levee/floodwall is not situated on any existing residential structures or wetlands. Preliminary investigations show that this alternative would increase flood levels in some areas upstream, which may require mitigation. The project team is investigating ways to prevent such a rise, such as dredging on a routine basis.

Dredging

Dredging is also being considered as a stand-alone flood reduction alternative, and varying extents are being evaluated to remove approximately 5 feet of sediment

across the width of the channel. Initial modeling results show that dredging would reduce flood levels by a maximum of 1.5 feet in the Huntington area. This alternative would not protect against tidal events. A sanitary siphon — located approximately 3 feet below the current river bottom in the vicinity of Riverside Apartments — may have to be relocated.

Buyouts

Although Supervisor Hyland is not in favor of buyouts, the federal government is required to evaluate all feasible alternatives. Buyouts would involve the government purchasing houses at fair market value and restoring the land back to a natural floodplain.

Flood Proofing

For the Huntington Community, flood proofing would involve filling in the basement, providing additional living space and possibly elevating the house. The Community Center would be protected through the installation of a waterproof wall. For Huntington Station, construction of a partial ring wall around affected buildings would provide flood protection. Flood proofing alternatives would not protect vehicles, other structures or infrastructure.

The county and the Corps are working together to design a project that will provide protection to the community. The Corps will provide concept designs, costs and impacts of chosen alternatives by the end of the year. Part of the ongoing work includes determining the "cost benefit ratio" which is a factor in acquiring federal funding. Based on very preliminary plans, the cost benefit ratios are not meeting the threshold for qualification under current federal flood programs. As more information is gathered, the cost benefit analysis will also be refined. The county is also exploring other funding options including partnering with the state and Alexandria to address flooding along Cameron Run.

A Message From Supervisor Hyland

The June 2006 flood was a traumatic event for the Huntington community. Every rain since triggers a deluge of those memories. No community can endure with the fear that the next downpour may cause the creek to spill its banks and once again destroy what you have worked so hard to rebuild. If I could construct permanent flood protection tomorrow, I would. Fairfax County staff and I continue to work collaboratively with the United States Army Corps of Engineers and surrounding jurisdictions to get closer to our final goal: to keep the water away from your homes! As we near completion of the flood protection study, which is similar to the studies the City of Alexandria performed to obtain permits to channel and dredge Cameron Run, we will continue to update you on our progress. I hope all of you have already signed up for Fairfax County's Community Emergency Alert Network (CEAN). This is the best way for you to remain apprised of alerts or emergencies. If you have any questions, please contact me at 703-780-7518, TTY 711, or by e-mail at mtvernon@fairfaxcounty.gov.



Aerial photo showing the potential levee footprint (green shaded area).



Aerial photo illustrating one dredging alternative and the sanitary pipe location.



Summary of April 24th Community Meeting

Thank you to those who attended this past April's meeting. The purpose of the meeting was to present preliminary flood damage reduction alternatives for the Huntington and Huntington Station communities and to receive important and constructive feedback from the residents.

Approximately 100 people attended the meeting and many questions and concerns were discussed. In this newsletter we hope to answer some of the questions raised and continue to share information.

Questionnaire Responses

At the meeting, questionnaires were provided to attendees. We received valuable feedback through over 20 questionnaire responses. Of the questionnaires received, many residents

were in favor of the dredging and levee or floodwall alternative and were against the flood proofing alternative. An equal number of responses were in favor of buyouts as were opposed. Below are some of the most common interests and concerns expressed through the questionnaire:

- Process is taking too long and flood protection is needed now;
- Storm sewers need to be cleaned and maintained on a regular basis;
- Cameron Run should be dredged routinely in this lower reach, similar to the dredging plan already in place by the City of Alexandria, which dredges upstream of the Capital Beltway crossing.



Informal discussion and displays before formal meeting.

Questions and Answers

Below and on the next page are answers to some of the questions raised during the community meeting or through the questionnaire.

Q: Why does the City of Alexandria dredge and Fairfax County doesn't?

A: The City of Alexandria experienced significant flooding in the 1970's, which resulted in studies to identify and evaluate various flood damage reduction alternatives for areas impacted. As a result of such efforts, the city selected a plan, obtained permits, and allocated funding. Part of the plan selected by the city was to dredge Cameron Run, from the Capital Beltway crossing and into Backlick and Holmes Run upstream and to maintain channel depths by repeated dredging.

Fairfax County is undertaking a similar process as the city did previously.



Example of type of equipment suitable for dredging upstream reaches of Cameron Run.

Q: What about the Invisible Flood Control Wall (IFCW) technology?

A: During the meeting, the Invisible Flood Control Wall (IFCW) by Flood Control America (FCA) was suggested as another flood control solution in lieu of a typical levee in hopes of finding a cheaper and faster way to offer flood protection. The IFCW is a removable floodwall erected only when needed and is otherwise stored leaving an un-obscured riverfront view. This technology has been used for other flood control projects. Because the floodwall requires installation prior to each flood event, this technology is only suitable in areas with adequate warning time, which is not the case in Huntington. In addition, similar to the levee alternative, prior to installation of the IFCW, the following analyses would still be required: soil suitability, interior drainage, induced flooding impacts, wetland impacts, various levels of protection, etc. Preliminary cost estimates indicate the IFCW is likely to be comparable to the levee alternative.



Picture of IFCW installed in Breckenridge, MN. Photo courtesy of FCA.

Q: Which alternatives will remove me from the floodplain and will I still need to purchase flood insurance?

A: Other than the buyout alternative, only the levee/floodwall alternative has the potential to remove residents from the 1-percent-annual-chance (100-year) floodplain on a Flood Insurance Rate Map (FIRM). The levee/floodwall must meet stringent design, operation and maintenance criteria in order to be credited and mapped as providing such protection. Even if such criteria were met, the county would still recommend the purchase of flood insurance in the event the structure is overtopped.



Fairfax County's Community Emergency Alert Network (CEAN) delivers important emergency alerts, notifications and updates during a major crisis or emergency and also provides day-to-day notices about weather and traffic. Through the Riverwatch notification group, participants are notified if flooding is anticipated based on rainfall measurements and other data. Messages are delivered to all devices you register, such as e-mail accounts, pagers, and cell phones.

To register, visit:
www.fairfaxcounty.gov/cean/

(Questions and Answers continued.)

Q: What exactly is a 100-year flood?

A: The term "100-year flood" is misleading. It is not the flood that will occur once every 100 years. Rather, it is the flood elevation that has a 1-percent chance of being equaled or exceeded each year. Thus, the 100-year flood could occur more than once in a relatively short period of time. The 100-year flood, which is the standard used by most federal and state agencies, is used by the National Flood Insurance Program as the standard for floodplain management and to determine the need for flood insurance. A structure located within a special flood hazard area shown on an NFIP map has a 26 percent chance of suffering flood damage from a 100-year event and 45 percent chance of suffering flood damage from a 50-year event during the term of a 30-year mortgage. An analysis of the June 2006 flood indicates that it was a 50-year event.

Q: **Flood proofing individual houses— is this safe?** (A flood proofing alternative under consideration for the duplex homes in Huntington is to fill the basement, provide an addition, and raise the first floors above the 100-year elevation. Many people asked whether or not this is a safe practice, especially for older homes.)

FEMA Floodplain Mapping

The Federal Emergency Management Agency (FEMA) is in the process of creating new Flood Insurance Rate Maps (FIRMs) for the watershed. This will be combined with revised maps for other areas of the county to create a new countywide FIRM. Under the current schedule, FEMA would advertise their intent to publish new FIRMs in late 2007/early 2008 and an appeal period of 90 days would follow. They would then assess appeals and the process of adopting new FIRMs, per federal regulations, would follow resulting in the new maps being issued in late 2008.

If your home is currently not shown to be in a special flood hazard area (SFHA) on the existing ("effective") FIRM, and should the new FIRM show your home to be inside the new SFHA, there is a grand-

fathering provision which allows you to obtain a lower rate on flood insurance even after the maps are revised. The key caveats are that you must have an active policy before these changes occur and that you may not have had more than one claim paid by FEMA. So if you are outside of the current FEMA special flood hazard area, signing up for a flood insurance policy prior to the date of the map change should ensure a lower rate policy in the future. (Note: After fees are submitted, there is a 30-day waiting period before the policy becomes effective.)

For more information on the national flood insurance program, visit: www.fema.gov/hazard/flood/index.shtml and click on the "Buy Flood Insurance" link.

A: This type of flood proofing has been in practice for decades. Over 1,000 structures have been elevated throughout the country in the same manner by the U.S. Army Corps of Engineers. These structures range in age from nearly a century to recently constructed. The most important criteria in determining whether or not to elevate a structure is the condition and not the age of the building. Many qualified house-moving contractors know the techniques for elevating a building. The structure is jacked up and temporarily set on cribbing while a new foundation is built underneath. The foundation walls are raised to the flood protection level and the house is lowered onto the new foundation. The result is similar to building a house over a 3-4 foot crawlspace. If the house is raised 4 feet, the front door would be 6 steps higher than before. Utility lines are extended and reconnected, steps are built and, in some cases, the

perimeter is backfilled or landscaped to mask the change. The walls of the new foundation must have openings to allow floodwaters to pass under the building. Otherwise, hydrostatic pressure will be placed on the walls and floor, and the foundation would be in danger of cracking or breaking.

Q: If a levee or floodwall is constructed, how will this impact the park?

A: The current proposed alignment for the levee would cut across what is now playground and ball fields. The levee footprint would measure approximately 60 feet wide and a 15 foot easement on either side may be required. Recreational features may be considered if a levee is constructed, such as a hiker and biker trail on top of the levee. A floodwall may be evaluated in place of a levee to reduce the land required.



Graphic depicting elevating house, filling basement and providing an addition.

The Fairfax County Park Authority was developing a Master Plan for this park prior to the June 2006 flood. The project team has been coordinating the potential alternatives with the Park Authority. The Park Authority will resume planning activities for the park after impacts from the potential flood damage reduction activities are better known.



Fairfax County
Department of Public Works and
Environmental Services
Stormwater Planning Division
12055 Government Center Pkwy
Suite 659
Fairfax, VA 22035-5502

Phone: 703-324-5500
Fax: 703-802-5955

E-mail:
Camyllyn.Lewis@fairfaxcounty.gov
or
Randy.Bartlett@fairfaxcounty.gov

Visit us on the Web at:
www.fairfaxcounty.gov/dpwes

Huntington Flood Insurance Program Update

On February 26, 2007, the Fairfax County Board of Supervisors approved an interim flood insurance grant program called the Huntington Flood Insurance Program (HFIP) to serve a sub-area of the existing Huntington community. The purpose of the HFIP is to reimburse income-qualified residents (owner-occupants and renters) of a designated sub-area for the cost of flood insurance for a period of one year. The designated sub-area of the Huntington community includes homes that experienced the June 2006 flooding or were deemed susceptible to future flooding. The Fairfax County Redevelopment and Housing Authority subsequently approved the HFIP on March 8, 2007, and has been administering the program through the Fairfax County Department of Housing and Community Development (DHCD).

On April 20, 2007, letters, including program information, sub-area maps, FEMA flood insurance coverage summaries, and application forms, were sent by certified mail to all the current residents of the designated sub-area. Flood insurance is provided through the Federal Emergency Management Agency's National Flood Insurance Program. As of this time, approximately 25 application forms have been received and are being processed.

In addition, a new program manager Leslie Jones, was hired to administer the HFIP along with other home improvement loan programs. Jones started working at DHCD on July 9, 2007, and she may be reached on 703-246-5279, TTY 711.



To request this information in an alternate format, call DPWES at 703-324-5500, TTY 800-828-1120.

Cleaning and Maintenance of Storm Sewers

After the June 2006 flood, the county inspected the storm drainage infrastructure throughout the community and performed necessary maintenance. At that time, several underground storm sewer pipes had blockages, which required the pipes to be flushed. In addition, sediment was removed from channels leading to Cameron Run.

The county continues to proactively perform inspections of the drainage system to identify deficiencies as they arise. Inspections between June 2006 and May 2007 revealed no additional work was required. A more recent inspection, however, revealed that additional flushing and channel cleaning is necessary to enhance functionality. This work is currently underway.

Staff will continue to inspect the storm drainage infrastructure periodically. However, if residents or homeowners observe anything unusual, such as a suspected blockage, please contact Stormwater Maintenance at 703-934-2800, TTY 711.



Culvert carrying stormwater from Huntington to Cameron Run.

Upcoming Tasks

As the project team continues to investigate various flood damage reduction alternatives, the following are some of the tasks scheduled for completion during the next few months:

- In-stream soil sampling along Cameron Run and testing for chemical and physical parameters to help determine suitable placement or disposal sites for dredged material if dredging is implemented.
- Excavation (test pits) along potential levee alignment to determine soil composition and suitability for construction.
- Sediment transport analysis for the lower portion of the Cameron Run watershed to estimate frequency of sediment deposition.
- Interior drainage analysis to determine size of potential pump stations needed to transport stormwater from landward side of levee to Cameron Run during a flood event.



Southern bank of Cameron Run looking west.

Unless otherwise indicated, photos in this publication courtesy of the U.S. Army Corps of Engineers, Baltimore District.



A Fairfax County, Va.
publication

Huntington Flood Damage Reduction Project

May 2008

Background

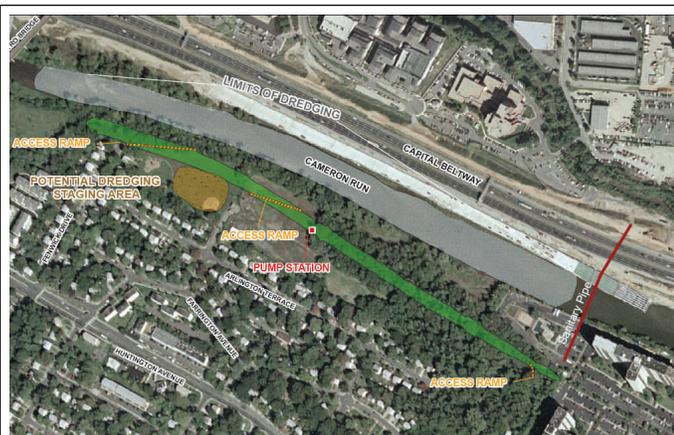
As a result of the devastating flood in June 2006, Fairfax County requested the U.S. Army Corps of Engineers, Baltimore District, to evaluate alternatives to reduce flood damages in the Huntington communities. For this study, the Corps is acting as a consultant, and is not authorized or funded to implement a project.

Alternatives Under Consideration

Levee

Based on the information to date, the county has decided to move forward with a levee design. The county continues to consider whether to include dredging as part of the project. The levee would be located between the affected residents and Cameron Run (see illustration below). The county has asked the Corps to design a levee that would provide a 100-year level of protection and would meet Federal Emergency Management Agency (FEMA) certification requirements. The levee height would range from 10 to 15 feet, depending on existing elevations, and would be approximately 75 feet wide. In addition, a fifteen-foot easement may be required on both sides of the levee. A pump station would be required as part of levee construction in order to drain rainwater from the landward side of the levee since the storm drain outlets would be closed during a flood.

Part of the analysis of various levee heights involved calculating the probability that the levee will not be overtopped during a 100-year event and is based on the uncertainty of the true 100-year flood elevation. The levee would be built 3 to 4 feet higher than the 100-year flood elevation to allow a factor of safety. The preliminary cost for levee construction is estimated at \$19.1 million.



Aerial photo illustrating levee (green), dredging extent (grey), sanitary pipe location (red), and other features.

Levee in combination with dredging

The county continues to consider dredging Cameron Run from the upstream end of the Huntington Community to just upstream of the sanitary siphon (see illustration below). This dredging would occur in addition to construction of the levee. Since the various dredging extents previously evaluated do not solve the flooding problem at Huntington, the study is focused on dredging in a limited area to offset the increased water surface elevations caused by levee construction upstream of Huntington. Modeling has shown that water surface elevations would be higher (0.1 to 0.5 feet for the 100-year flood event) for some structures just upstream of Huntington due to levee construction. These buildings are already located in the 100-year floodplain, and would flood regardless of a levee. This plan would include an initial dredging (approximately 5 feet deep and 150 feet wide) followed by maintenance dredging roughly every five years, depending on sediment deposition in the channel after storm events. Two to three access ramps and drying/staging areas would be needed for dredging operations which would impact the park. Material would likely be dredged by an excavator or similar equipment, allowed to dry for up to three days, and hauled away in trucks for disposal. Initial dredging would take approximately 8,000 truckloads and six months to complete with maintenance dredging taking roughly half the number of trucks and months to accomplish. *

A Message From Supervisor Hyland

*At our last meeting in January, the Fairfax County Public Works staff and the Corps of Engineers presented their preferred flood control design. Since then, you may have seen engineers and surveyors along the creek, in the park and in your neighborhood. We continue to gather data and refine our designs for a flood control project. Recently, the newspapers drew attention to the Belle Haven Watershed Flood Study's positive benefit cost ratio. Their articles inaccurately assumed that the government's resolve to fund a project there instead of in Huntington was somehow stronger and that your study would be added to the shelves. Nothing is further from the truth! The Cameron Run and Belle Haven Watershed Flood Reduction Projects are not in competition with each other. The community's desire is clear. Now is the time to strengthen your resolve and as one stalwart community voice reach out to your state and federal representatives to urge their support. Please remember to sign up or update your contact information at Fairfax County's Community Emergency Alert Network (CEAN). If you have any questions or comments, please contact me at 703.780.7518, TTY 711 or by e-mail at mtvernon@fairfaxcounty.gov. **



Summary of January 15th Community Meeting

The purpose of the meeting was to present the selected flood damage reduction alternatives for the Huntington communities and discuss residents' likes and dislikes.

Approximately 85 people attended the meeting and several issues and concerns were raised. This newsletter addresses some of the issues discussed and shares additional information.

Comment Card Responses

At the meeting, comment cards were provided to attendees. Eight comment card responses were received. Some of the comments included the following:

- “Dredging should be done now to provide some protec-

tion since construction of a levee will take years to complete.”

- “Buyouts should be studied further since the levee could fail and the cost over the lifetime of the project would include operation and maintenance.”
- “Dredging is needed all the way to the Potomac River past the George Washington Parkway.”
- “The county should have tighter controls on impervious surfaces, limit new development, reduce parking lot sizes, and the number of ‘big box’ stores.”
- “The impact of construction of the beltway, which altered the historic Cameron Run floodplain, has been ignored.” *

Cameron Run/Holmes Run Watershed Study

Separate from this Huntington Flood Damage Reduction Study, a Cameron Run/Holmes Run watershed study is underway. In 2004, the county, City of Alexandria, and the Corps, with support from the Northern Virginia Regional Commission (NVRC), formed a partnership to develop a watershed plan to evaluate potential actions for preventing and addressing watershed problems. The study is currently in the feasibility phase. The goals of the study are to:

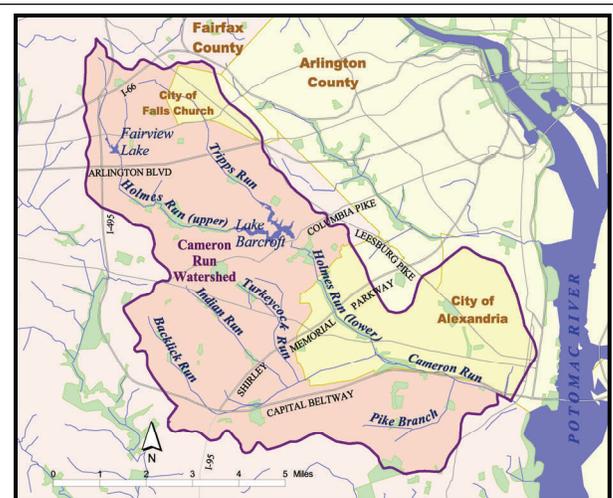
- Reduce storm water impacts on the Cameron Run watershed from impervious areas to help restore and protect streams;
- Preserve and improve watershed habitats to support native flora and fauna;
- Preserve and improve stream water quality to benefit humans and aquatic life;
- Improve stream-based quality of life and recreational opportunities for residents of and visitors to Cameron Run watershed;
- Provide adequate, cost-effective flood protection for adjacent communities along major tributaries in the Cameron Run watershed; and
- Build a framework for long-term regional cooperation.

The Cameron Run/Holmes Run Watershed Feasibility Study benefits from such ongoing efforts in the watershed as the county's Watershed Management Plan for Cameron Run, Alexandria's Water Quality Management Supplement and flood studies within the watershed. The feasibility study is scheduled for completion in September 2010.

The feasibility study is financed by both federal and local partners. The watershed study is the initial step toward potential federal construction of ecosystem restoration and flood damage reduction measures.

To date, stream restoration and habitat improvements have been identified in Backlick, Holmes and the main channel of Cameron Run. In addition, upstream detention concepts have been evaluated to reduce flood levels downstream in an environmentally sensitive manner. One concept plan, that involves a detention basin along Backlick Run, is being investigated further.

Contacts – To subscribe to the Cameron Run/Holmes Run e-newsletter, send an e-mail to mpopkin@novaregion.org. To learn more about Cameron Run projects, visit NVRC's website at www.novaregion.org/cameron. *



Cameron Run/Holmes Run Watershed Study Area



Questions and Answers

Below are answers to some questions raised during the community meeting or through the comment cards



Lower Cameron Run (Hunting Creek) at the George Washington Memorial Parkway (June 2007). Photo courtesy of the Virginia Department of Transportation/Scott Kozel.

Q: How would flood elevations change at Huntington if Cameron Run was dredged from Huntington all the way to the Potomac River?

A: As presented during the April 2007 community meeting, dredging all the way out to the Potomac River will not reduce flood levels sufficiently to prevent homes from flooding should a 50 or 100-year flood event occur. Hydrologic and hydraulic modeling has shown that dredging from the Telegraph Road Bridge to just downstream of the George Washington Memorial Parkway would decrease the 100-year water surface profile in Huntington by 1.5 feet during a 100-year event, which is not enough to eliminate damages to the majority of homes that flooded in the June storm in Huntington. Modeling shows that even if the dredging extended through the tidal flats at the mouth of the Potomac River, the decrease in water surface elevations at Huntington would be the same. The county and its partners are aware that residents want sediment removed in Cameron Run. The Corps, the county and the City of Alexandria are conducting a watershed study, that may include channel restoration along the lower portion of Cameron Run, as part of a recommended plan (for more informa-

tion see the *Cameron Run/Holmes Run Watershed Study* article on page 2).

Q: If a levee and pump station are constructed, during a flood event how long would it take to pump out the rain water that falls on the landward side of the levee?

A: During a flood event, the storm drain system will be closed off at the levee to prevent floodwaters from backing up and flooding the community. If a 100-year rainfall occurred during a flood event, it would take approximately 16 hours to pump out the water ponded behind the levee (assuming a 60,000 gallon per minute pump was operated). There should be no ponding during this event above an elevation of 9 feet and water would not impact houses, but would collect in open space and roadways.



Aerial photo shows where ponding would occur during a 100-year rainfall event with a pump station.

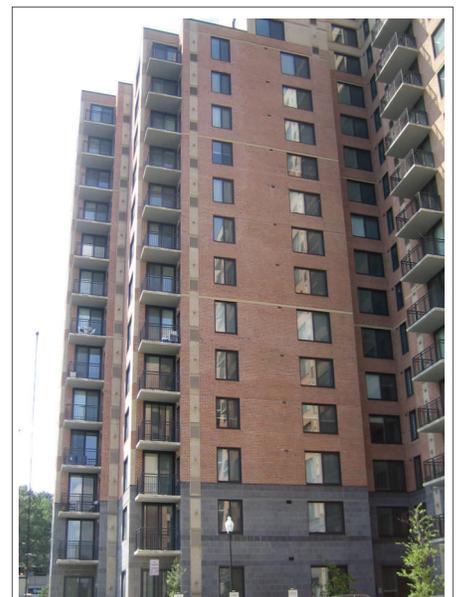
Q: If a levee or floodwall is constructed, how will this impact the park?

A: The proposed alignment for the levee would cut across what are now playground and ball fields. The levee footprint would measure approximately 75 feet wide and a 15-foot easement on both sides may be required. In February, the project team presented the proposed levee alignment to representatives of the Fairfax County Park

Authority. Some of the topics discussed included the park authority's request that an asphalt recreational trail be incorporated into the design for the top of the levee. If dredging is not pursued, the park authority would like to improve such recreational opportunities as new or different ball fields, improved open space, educational signage and a pier overlooking existing wetlands. The park authority plans to resume development of the park's master plan once the levee has been designed. If dredging is pursued, it is likely that the park authority would not maintain this area as recreation due to park impacts associated with routine maintenance dredging.

Q: Why doesn't the county buyout the community and sell the property to a developer, who could build condominiums above the floodplain similar to Mid-Towne?

A: The county is committed to supporting the community, and preserving affordable housing. *



Mid-Towne High Rise Condominiums near Huntington.



Fairfax County
Department of Public Works and
Environmental Services
Stormwater Planning Division
12000 Government Center Pkwy
Suite 449
Fairfax, VA 22035-5502

Phone: 703-324-5500
Fax: 703-802-5955

E-mail:
Camyllyn.Lewis@fairfaxcounty.gov
or
Randy.Bartlett@fairfaxcounty.gov

Visit the Web site at:
www.fairfaxcounty.gov/dpwes

Huntington Flood Insurance Program Continues in 2008

This is an update on the status of the Huntington Flood Insurance Program (HFIP). Some residents (owners and renters) participated in the first year of the program; but many did not. On February 11, 2008, the Fairfax County Board of Supervisors approved a one-year extension of the interim flood insurance grant program to reimburse qualified residents, for the cost of flood insurance offered through the Federal Emergency Management Agency's (FEMA's) National Flood Insurance Program (NFIP). If a resident participated in the first year of the program, he or she may apply again for the grant; if a resident did not participate in the first year of the program, he or she may qualify for the grant now.

On March 25, 2008, letters, including program information, sub-area maps, FEMA flood insurance coverage summa-

ries and application forms, were sent by mail to all current residents of the designated sub-area. The Huntington Flood Program Manager is Ms. Leslie Jones, she may be reached at 703-246-5279, TTY 711. Contact Ms. Jones for applications and documentation. *



Personal property damaged by the June 2006 flood. Photo courtesy of Gary Jean Photoworks.



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

Stormwater and Low Impact Development Initiatives

The county recognizes the need to reduce stormwater impacts from impervious areas to help restore and protect streams. The Fairfax County Cameron Run Watershed Plan (August 2007) identifies a total of 624 projects in the watershed, which include retrofitting nearly 100 stormwater management ponds, building new stormwater ponds and constructing more than 400 low impact development (LID) projects.

LID projects are designed to control stormwater runoff volume and improve water quality on a site-by-site scale closer to the source. LID projects may include the following techniques: bioretention areas (rain gardens); pipe outfall retrofits (off-line bioretention); infiltration trenches; grassed swales; tree box filters; rain barrels/cisterns; or permeable pavers.

Not all sites are suitable for LID. Such considerations as soil permeability, depth of water table and slope must be reviewed. LID is easier to implement for new development than retrofitting existing developments. In the case of Cameron Run, the watershed was developed before stormwater regulations were instituted, so the watershed does not have adequate stormwater controls. It would be challenging to implement LID projects to significantly reduce flow volumes and flooding in the lower reaches of the watershed, such as in Huntington. In addition, LID is not designed to work in areas with high ground water tables nor does it have any impact on stream flooding due to tidal fluctuations. *

Recent and Future Tasks

The county and Corps are focused on work related to taking the levee alternative to a more detailed level of design. The following are some of the tasks recently completed or scheduled for completion during the months ahead:



Drill rig used for soil borings.

- Right of entry permissions were obtained from landowners for soil borings along the proposed levee alignment;
- Soil borings were taken and the material is being tested. Test results will be incorporated into the levee design;
- Detailed designs of the levee and associated drainage structures are being developed; and
- Coordination is ongoing with agencies regarding potential environmental impacts as a result of levee construction and dredging operations. *



DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS
P. O. BOX 1715
BALTIMORE, MARYLAND 21203-1715

January 10, 2008

Planning Division

Mr. Randy Bartlett
Director, Fairfax County Stormwater Planning Division
Department of Public Works and Environmental Services
12000 Government Center Parkway, Suite 449
Fairfax, Virginia 22035-0052

Dear Mr. Bartlett:

I am writing in response to the Huntington Community Association, Inc. Resolution 2007-2 (Huntington Flood Damage Reduction Project) that was provided to the Fairfax County Board of Supervisors during a Board meeting on November 19, 2007. Your office provided the resolution to the U.S. Army Corps of Engineers (Corps) through a letter, dated November 27, 2007 (enclosed) and requested that the Corps review the resolution and advise the county of our evaluation. In the resolution, the community residents requested that the Corps and Fairfax County ensure that the cost-benefit analysis being conducted as part of the ongoing study include certain factors, such as loss of life, protection of a long-standing community, and the present and potential future value of the community.

As you are aware, the economic analysis that the Corps has conducted is only a small part of the Huntington study. Most of the study is technical work to assist the county in determining an optimal plan for reducing flood damages and keeping the residents of Huntington safe. It is our understanding that the county's decision to build a project will not solely rely on the Corps' economic analysis. The economic analysis was conducted to determine if a project would meet the Corps' economic justification requirements and if the Corps could potentially participate in cost-sharing the construction of a project.

The Corps understands the importance of preventing loss of life, illness and injury, and the value of preserving a long-standing community, however, the Corps has strict regulations as far as what items can be considered in the benefit-cost analysis. As part of the federal government, the Corps must evaluate the costs and economic benefits of a project to the nation. The economic analysis can only address certain items such as expected future damages to structures and contents, vehicles, and infrastructure; the reduction in the need for emergency services; and the reduction in clean-up and relocation costs. Future development can only be included in the analysis if there is a plan in place, and typically such development does not substantially increase the project benefits because new development must be built higher than the 100-year flood elevation to meet local and federal requirements.

For Corps' project-related studies, social and environmental factors may be considered, but are not part of the benefit-cost analysis. The Corps follows specific regulations regarding how the projects are evaluated economically, and generally, only those projects in which the economic benefits outweigh the costs of the project can be considered for Corps' funding. Projects that do not meet the requirements may be implemented by the local governments in whatever manner they choose.

We continue to enjoy working with you and your staff on this project. Please contact Ms. Stacey Underwood, Study Leader, if you have any questions regarding our evaluation of the resolution.

Sincerely,

A handwritten signature in black ink, appearing to read 'RF Gore', is written over the typed name and title.

Robert F. Gore
Chief, Planning and Environmental
Services Branch

Enclosure



County of Fairfax, Virginia

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

November 27, 2007

Ms. Stacey M. Underwood, P.E.
U. S. Army Corps of Engineers
Baltimore District Planning Division
10 South Howard Street
Baltimore, MD 21201

Reference: Huntington Flood Damage Reduction Project
Resolution 2007-2

Dear Ms. Underwood:

At a regular scheduled Fairfax County Board of Supervisors (BOS) meeting on November 19, 2007, the Board unanimously directed staff to forward the Huntington Community Association, Inc. resolution to the U. S. Army Corps of Engineers for its evaluation. Please advise the Director, Stormwater Management of the result of your evaluation at the address noted below.

Sincerely,

Camyln Lewis, Engineer
Watershed Planning Evaluation Branch

Attachment: As Stated

cc: Gerald E. Connolly, Chairman, Fairfax County Board of Supervisors
Gerald W. Hyland, Supervisor, Mount Vernon District
Anthony H. Griffin, County Executive
Robert A. Stalzer, Deputy County Executive
Jimmie D. Jenkins, Director, Department of Public Works and Environmental Services

Department of Public Works and Environmental Services
Stormwater Planning Division
12000 Government Center Parkway, Suite 449
Fairfax, VA 22035-0052
Phone: 703-324-5500, TTY: 711, FAX: 703-802-5955
www.fairfaxcounty.gov/dpwes





Huntington Community Association, Inc.

Resolution 2007-2 (Huntington Flood Damage Reduction Project)

1 WHEREAS, the U.S. Army Corps of Engineers is performing a cost-benefit analysis of flood prevention
2 measures for the Huntington community (the Huntington Flood Damage Reduction Project), and
3

4 WHEREAS, in lieu of a meeting to advise the community on the progress of the cost-benefit analysis,
5 residents received a newsletter from Fairfax County that stated in part that the preliminary results of the
6 analysis are not meeting the threshold for qualification under Federal programs for funding flood
7 protection, and
8

9 WHEREAS, a decision not to implement permanent protection from future flooding will threaten the
10 well-being of the Huntington community and degrade the quality of life and the value of real estate in the
11 area, and
12

13 WHEREAS, a decision to implement permanent protection will support the well-being of the Huntington
14 community and enhance the quality of life and the value of real estate in the area,
15

16 NOW THEREFORE BE IT RESOLVED, that the Huntington Community Association requests that
17 the U.S. Army Corps of Engineers and Fairfax County ensure that the cost-benefit analysis being
18 undertaken includes, but is not limited to, consideration of the following factors:
19

- 20 ▪ the importance of preventing loss of life, illness and injury,
- 21
- 22 ▪ the protection of a conserved community of long-standing, with the plan for the conserved
23 community recommending permanent flood protection in order to preserve affordable housing,
24
- 25 ▪ the value of potential development if the conserved community designation should be removed, as the
26 term of this protection is indefinite,
27
- 28 ▪ the value of the community for its impact, positive or negative, on the area surrounding the
29 Huntington Metro station, which serves as a vital transportation link for the Route 1 corridor, and
30
- 31 ▪ the value of the community for its impact, positive or negative, on the nature and value of related
32 development in the area.
33

34 BE IT FINALLY RESOLVED, that the U.S. Army Corps of Engineers and Fairfax County consult
35 with and include community residents in the process and analysis prior to any final determination.

Passed unanimously by the general membership on November 1, 2007