

## Response to Questions on the FY 2013 Budget

**Request By:** Supervisor Foust

**Question:** Please provide a list of anticipated stormwater projects that the increased fee would be used to cover.

**Response:** The FY 2013 Advertised Budget Plan includes a total of \$35,155,455 for capital projects. The following provides a list of the major categories and funding amounts proposed for FY 2013. Specific projects will be based on the completed watershed plans and prioritized should the increased Service District rate be approved.

### Stormwater Regulatory Program \$5,000,000

The County is required by Federal Law to operate under the conditions of a state issued Municipal Separate Storm Sewer System (MS4) Permit. The MS4 Permit allows the County to discharge stormwater from its stormwater systems into state and federal waters. The County currently owns and/or operates approximately 7,000 piped outfalls within the stormwater system that are governed by the permit. The current permit was issued in 2002 and expired in 2007, and the County has been operating under a state issued administrative extension, while the state and the Environmental Protection Agency (EPA) agree to new permit requirements. A draft permit has been prepared for the County which indicates that significant enhancements to all facets of the program will be required. In addition to the requirements outlined in the draft permit conditions, a recent EPA audit of the County's program identified the need for the County to initiate a high risk and industrial site inspection program for private properties throughout the County. The inspection of high risk and industrial properties is one of the permit requirements that the EPA focused on and identified the County's efforts as inadequate during the audit in June 2011. Also in 2011, the state adopted a new law that allows localities to enter private properties to inspect the site for potential contaminants to MS4 systems. This will require the County to implement an aggressive program to inspect private properties that drain to the storm sewer system and require mitigation of conditions that introduce contaminants into stormwater runoff. The permit further requires the County to better document the stormwater management facility inventory, enhance public out-reach and education efforts, increase water quality monitoring efforts, provide stormwater management and stormwater control training to all County employees, and to thoroughly document all of these enhanced efforts. County staff is currently developing the procedures to implement these additional requirements. Funding and staff are required to develop, manage and initiate these new mandated programs.

### Dam Safety and Facility Rehabilitation \$6,198,569

The County currently has over 6,000 Stormwater management facilities in service that range in size from small rain gardens to large state regulated flood control dams, and by permit is responsible for inspecting and maintaining both County owned and privately owned facilities. This inventory increased by over 175 facilities between FY 2010 and FY 2011, and is projected to continually increase as new developments and redevelopment sites are required to install stormwater management controls. In addition, the County is required to provide a facility retrofit program to improve stormwater management controls on all existing stormwater management facilities that were

developed and constructed prior to current standards being in place. This program includes maintaining the control structures, including the dams that control and treat the water flowing through County owned facilities. This program also includes the removal of sediments that occur in both wet and dry stormwater management facilities to ensure that adequate capacity is maintained to treat the stormwater. This program results in approximately 25 retrofit projects annually that require redesign and construction management activities, as well as contract management and maintenance responsibilities. Additionally, this program funds the next phase of the Kingstowne Park Dam, which failed in October 2010. Potential large projects for FY 2012 and FY 2013 include the design of the spillway rehabilitation for Lake Huntsman to meet current state dam safety standards, as well as dredging of the facility to restore water quality. Preparation of specifications for the dredging of Royal Lake will also be proposed.

#### Conveyance System Rehabilitation \$6,500,000

The County owns and operates approximately 1,600 miles of underground stormwater pipe and paved channels with estimated replacement value of over one billion dollars. The County began performing internal inspections of the pipes in FY 2006. Of the initial pipes inspected, over 5 percent were in complete failure with an additional 15 percent requiring immediate repair. It is estimated that a fully funded rehabilitation and reinvestment program would require an investment of approximately \$10 million per year. Increased MS4 permit regulations apply to these 1,600 miles of existing conveyance systems and 43,000 stormwater structures. The permit requirements do not address the current backlog of operational maintenance and rehabilitation needs of the entire stormwater conveyance system infrastructure, but are additive and significantly increase inspection, reporting and management actions related to the infrastructure system. Additional funding is required to review the digital imaging of pipe interiors, develop corrective solutions and provide for design, construction management and oversight costs. Acceptable industry standards indicate that one dollar re-invested in infrastructure saves seven dollars in the asset's life, and \$70 dollars if asset failure occurs. The goal of this program is to inspect pipes on a 10-year cycle, and rehabilitate pipes and paved channels before total failure occurs. To achieve this goal the deteriorated pipe must be rehabilitated as soon as is practical after the deficiency is identified. If the pipe is not too deteriorated the County can take advantage of trenchless technologies which are less costly and invasive than replacement, as well as, minimize disruption to property owners. Areas selected for inspection include sections of pipe where surface inspection or citizen complaints identify existing problems which are likely the result of a deficiency in the pipe, as well as systematic inspection of neighborhoods with priority being assigned to older areas, and areas with historic deficiencies or areas with metal pipes.

#### Stream and Water Quality Improvements \$11,000,000

This program funds water quality projects necessary to mitigate the impacts to local streams and the Chesapeake Bay resulting from urban stormwater runoff. This includes water quality projects such as the construction of stormwater management ponds, implementing low impact development techniques on stormwater facilities, stream restorations and approximately 1,700 water quality projects identified in the completed countywide Watershed Plans. In addition to the new permit requirements, the EPA, who is the federal regulator that oversees the Federal Clean-Water Act, completed an audit of the County's current Stormwater program in June 2011. This audit indicates that several elements of the program are non-compliant. The full impact of the audit findings have not yet been finalized, and any penalties associated with audit findings have not yet been issued. In addition, the Chesapeake Bay Total Maximum Daily Load (TMDL)

requirements are the regulatory process by which pollutants entering impaired water bodies are reduced. The Chesapeake Bay TMDL was established by the EPA and requires that MS4 communities, as well as other dischargers, significantly reduce the nitrogen, phosphorous and sediment loads entering waters draining to the Bay by 2025. Compliance with the Bay TMDL will require the County to undertake construction of new stormwater facilities, retrofit existing facilities and properties, and increase maintenance. Preliminary estimates indicate that the projects needed to bring the County's stormwater system into compliance with the Bay TMDL could cost in the range of \$70 to \$90 million, per year. The Bay TMDL facility retrofit requirement is additive to the current design and construction efforts associated with 1,700 Watershed Plan projects and ongoing stream and flood mitigation projects. A phased approach to increasing funding and staffing is recommended in order to address the audit findings and begin to address Chesapeake Bay TMDL requirements. Citizens and local groups will be engaged as individual projects are developed and begin to move forward, however to avoid creating unrealistic expectations, staff does not engage citizens until resources have been identified to move the specific project forward. For various reasons, not all projects will move forward to construction and other projects will be added as opportunities and partnerships are identified.

#### Emergency and Flood Control Program \$5,900,000

In addition to the more traditional single structure flood protection projects, this new program is recommended to provide funding to address the larger and more frequent flooding problems experienced in the County. These funds will be used to design solutions for areas experiencing frequent and severe flooding that threaten citizen safety. Funds in this program will accumulate over time to support large scale projects without the issuance of debt. This program previously supported flood control projects resulting from storm events that impacted storm systems and flooded residential properties. It is recommended that the program be expanded to include projects that threaten citizen safety, which requires improvements along roadways. In FY 2006, major flooding generated approximately 70 flood control projects, and while the potential projects related to the more recent Tropical Storm Lee are currently in the determination phase, these property floodings are anticipated to generate an additional 35 to 40 flood control projects. These projects will require scoping, design and construction activities. In addition to projects designed to protect individual structures, this program will provide funding for flood protection on a community basis, as well as address frequent flooding of transportation systems that threaten citizen safety.

If the Board desires, this funding could be used to fund final design and preparation of construction documents for the Huntington Flood Control project. Because the Board adopted a policy in 2006 to not allow the use of Stormwater funds to address roadway flooding, staff does not have a current list of potential road flooding projects nor current estimates. However some projects that had previously been identified and could represent the types of projects that this program could address include: Old Mill Road near the Golf Course(\$1-5M); Burke Lake Road near Kilkenny(\$1-5M); Guinea Road near Colony View(\$1-5M); Cherokee Avenue near Navaho(\$1-5M); Lee Highway near Bradley(over \$5M); Prosperity near Eakin Park(\$4-8M); Besley near Old Courthouse(\$4-8M); and Leigh Mill near White Chimney(\$1M). If this Program is adopted, stormwater staff will meet with Fairfax County Department of Transportation and Office of Emergency Management staff as well as Board staff to identify areas subject to frequent flooding that threaten public safety and to develop a more comprehensive list, as well as to develop an approach to prioritizing projects.

Stormwater Related Contributory Program \$556,886

Contributory funds are provided to the Northern Virginia Soil and Water Conservation District (NVSWCD), and the Occoquan Watershed Monitoring Program (OWMP). The NVSWCD is an independent subdivision of the Commonwealth of Virginia that provides leadership in the conservation and protection of Fairfax County's soil and water resources. It is governed by a five-member Board of Directors, three of whom are elected every four years by the voters of Fairfax County and two who are appointed by the Virginia Soil and Water Conservation Board. Accordingly, the work of NVSWCD supports many of the environmental efforts set forth in the Board of Supervisors' Environmental Excellence 20-year Vision Plan. The goal of the NVSWCD is to continue to improve the quality of the environment and general welfare of the citizens of Fairfax County by providing them with a means of dealing with soil, water conservation and related natural resource problems. It provides County agencies with comprehensive environmental evaluations for proposed land use changes with particular attention to the properties of soils, erosion potential, drainage and the impact on the surrounding environment. NVSWCD has consistently been able to create partnerships and leverage state, federal and private resources to benefit natural resources protection in Fairfax County. FY 2013 funding of \$444,327 is included in Fund 125 for the County contribution to the NVSWCD.

The OWMP and the Occoquan Watershed Monitoring Laboratory (OWML) were established to ensure that water quality is monitored and protected in the Occoquan Watershed. Given the many diverse uses of the land and water resources in the Occoquan Watershed (agriculture, urban residential development, commercial and industrial activity, water supply, and wastewater disposal), the OWMP provides a critical role as the unbiased interpreter of basin water quality information. FY 2013 funding of \$112,559 is included in Fund 125 for the County contribution to the OWMP.