

*Mission: To implement a comprehensive stormwater management program that balances the following goals: 1) to reduce the potential for stormwater threats to public health, safety, and property; 2) to reduce the impacts of new and existing urban development on Arlington streams, the Potomac River, and the Chesapeake Bay; and, 3) to comply with State and federal stormwater, water quality, and floodplain management regulations*

## STORMWATER MANAGEMENT PROGRAM OBJECTIVES

- Integrate traditional stormwater infrastructure needs with watershed management and environmental protection objectives and regulatory compliance requirements, including those of the County's Municipal Separate Storm Sewer System (MS4) permit, issued in June 2013 and scheduled for re-issuance in June 2018.
- Implement critical infrastructure and environmental quality projects consistent with the goals and strategies in the Stormwater Master Plan that was adopted as an element of the County's Comprehensive Plan in September 2014.
- Provide routine preventive maintenance of the County's stormwater infrastructure assets, as well as emergency repair or replacement actions when needed.
- Ensure the County's floodplains are managed in accordance with local, State, and Federal laws and regulations.

## OVERALL PROGRAM SCOPE

Since the adoption of a dedicated funding source for stormwater management in April 2008, the Department has established a comprehensive Stormwater Management Program that ensures regulatory compliance for both County and private sector operations and activities; conducts education and training activities for employees, businesses, developers, and residents; monitors streams; responds to drainage complaints; systematically addresses severe flood risks with programmed capital projects; conducts rigorous floodplain management activities to ensure regulatory compliance, accuracy, and favorable flood insurance rates for residents; installs green infrastructure and stream, pond, and wetland restoration projects to improve environmental quality and meet the aggressive requirements for the cleanup of the Chesapeake Bay; and maintains both the traditional and green infrastructure assets of the program.

## SIGNIFICANT BUDGET CHANGES

The FY 2019 proposed expenditure budget for the Stormwater Management Fund is \$10,680,660, a five percent increase from the FY 2018 adopted budget. The FY 2019 proposed budget reflects:

- ↑ Personnel increases due to the addition of a position that supports critical Stormwater Infrastructure program priorities, including managing the small drainage projects program (\$127,354, 1.0 FTE), transfer in of an Administrative Assistant position from the General Fund to the Stormwater Fund (\$62,686, 1.0 FTE), employee salary increases, an increase in the County's cost for employee health insurance, and retirement contributions based on current actuarial projections.
- ↑ Non-personnel increases due to the transfer in of expenses from the General Fund for the street sweeping program (\$397,290), contractual increases (\$91,182); partially offset by a reduction in other operating expenses including employee training (\$19,466), fuel (\$6,000), operating supplies and equipment (\$13,000), miscellaneous items (\$5,000), and adjustments to the annual expense for maintenance and replacement of County vehicles (\$1,007).

- ↓ Capital program funding decreases due to an increase in the operating budget for personnel and non-personnel expenses (\$146,381).
- ↑ Revenue increases due to the increase in the CY 2018 real estate assessment tax base (\$78,500) and an increase in Sediment and Erosion Control Plan Revenue and Chesapeake Bay Fee Revenue (\$442,500). Of the total fee revenue increase, \$292,500 will be generated from a rate increase for erosion and sediment control and land disturbance fees.
- Due to the impact of the MS4 permit, the Chesapeake Bay Total Maximum Daily Load (TDML), transfer of stormwater related operating expenses from the General Fund to the Stormwater Management Fund (tree planting, street sweeping, maintenance of stormwater facilities in parks and at County buildings), and capital requirements, an increase in the stormwater tax rate will be required in the next several years.

**PROGRAM FINANCIAL SUMMARY**

	FY 2017 Actual	FY 2018 Adopted	FY 2019 Proposed	% Change '18 to '19
Personnel	\$4,785,177	\$4,834,889	\$5,058,271	5%
Non-Personnel	2,375,272	3,187,490	3,631,489	14%
Capital	7,838,906	2,137,281	1,990,900	-7%
<b>Total Expenditures</b>	<b>14,999,355</b>	<b>10,159,660</b>	<b>10,680,660</b>	<b>5%</b>
<b>Total Revenues</b>	<b>\$10,877,566</b>	<b>\$10,159,660</b>	<b>\$10,680,660</b>	<b>5%</b>
<b>Change in Fund Balance</b>	<b>(\$4,121,789)</b>	<b>-</b>	<b>-</b>	
Permanent FTEs	42.00	42.00	44.00	
Temporary FTEs	-	-	-	
<b>Total Authorized FTEs</b>	<b>42.00</b>	<b>42.00</b>	<b>44.00</b>	

**CAPITAL PROGRAM SUMMARY**

The current Sanitary District Tax of \$0.013 per \$100 of assessed real property value is not proposed to increase. For CY 2018, it is estimated to generate a total of \$9,688,160 in revenue, of which \$1,990,900 represents the portion of the annual revenue directed towards capital projects in the budget.

The capital revenue is divided evenly between the 'Environmental Quality' and 'Stormwater Infrastructure' capital programs. The upcoming Proposed Capital Improvement Plan (CIP) FY 2019 – FY 2028 will provide project level details and 10-year projections for each program.

The Virginia Department of Environmental Quality issued the County's current MS4 permit in June 2013. This permit is significantly more comprehensive than the previous permit and includes quantitative pollution reduction requirements for the Chesapeake Bay Total Maximum Daily Load (TMDL) — a pollution budget for the Bay. The Environmental Quality projects in the adopted CIP are key components of the County's strategy to comply with the pollution reduction requirements for the Chesapeake Bay TMDL. This permit is scheduled to be re-issued in June 2018.

Based on projects and programs implemented to date, Arlington County has already met the five percent Bay TMDL pollution reduction requirement for this permit cycle. The pollutant reductions already achieved include: nitrogen—7.3 percent; phosphorus—18 percent; and sediment—14.5

percent. It is important to exceed the 5 percent requirement during this permit cycle, to meet the full requirement in three permit cycles rather than following the progressively steep implementation curve (5 percent, 35 percent, 60 percent). Of note, the Environmental Protection Agency (EPA) will be evaluating overall Chesapeake Bay restoration progress in 2018, and may amend current pollutant reduction requirements for local governments across Virginia and the Chesapeake Bay watershed to include greater reductions.

The Stormwater Infrastructure Capital Program implements the flood risk reduction and infrastructure maintenance priorities of the adopted Stormwater Master Plan and subsequent studies. This program also implements local drainage projects to address property-scale flooding.

Highlights of progress made by these capital programs are provided below.

### **Environmental Quality**

- More than 30 watershed retrofit projects have been constructed, most recently including 11th Street Park, Northside leaf mulch facility, Patrick Henry Drive/20<sup>th</sup> Street North, John Marshall Drive, and North Kensington Street/32<sup>nd</sup> Street North.
- Four Mile Run tidal restoration project was completed in Fall 2017.
- Construction is currently underway for Williamsburg Boulevard median I and II watershed retrofit projects and Windy Run stream restoration project.
- Construction for the Donaldson Run Tributary B stream restoration project and Ballston Pond watershed retrofit project are expected in FY 2019 and FY 2020.
- Awarded innovative new contract that allows the County to purchase credits achieved through stormwater projects on private property.

### **Stormwater Infrastructure**

- To address system capacity and flood risk issues, three projects installed 4,040 linear feet of large diameter storm sewer in the public right-of-way or public easements. They were started in FY 2017 and completed in FY 2018:
  - Sycamore at 24th Street North (construction completed December 2017).
  - West Little Pimmit Run (construction completed September 2017).
  - 9th Street North between North Liberty Street and North Livingston Street (construction completed August 2017).
- Woodmont Swale repair and stabilization (between the 2400 block of North Kenmore Street and the 2900 block of 24th Road North; currently under design, with construction anticipated in late FY 2018).
- Donaldson Run outfall and channel repair and stabilization at 24th Road North (currently under design, and construction of initial phase anticipated late FY 2018). Additional phases will be constructed in FY 2019.
- Installed 1,500 linear feet of small diameter storm sewers, which repaired existing storm sewers or addressed local drainage.
- Investigated approximately 130 drainage complaints.
- Completed repairs of several large diameter storm sewers in FY 2018.

**PERFORMANCE MEASURES**

Critical Measures	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Estimate	FY 2019 Estimate
Cumulative number of acres treated by public retrofit projects	12.2	13.1	13.1	16.1	27.2	29.6
Lane miles swept/tons collected	9,662/ 2,646	11,210/ 2,347	11,404/ 1,891	9,992/ 1,350	9,000/ 1,500	9,000/ 1,500
Linear feet of large diameter storm sewers constructed	0	0	0	2,026	1,980	200
Major storm sewer network capital repair projects	0	0	1	1	5	5
Number of illicit discharge investigations completed	94	104	115	95	100	100
Number of new water quality facilities constructed to meet stormwater ordinance requirements	435	424	607	588	500	500
Number of private water quality facilities inspected	344	661	1,077	1,405	1,800	2,300
Number of public outreach events/ estimated number of participants	17/ 4,061	46/ 4,512	46/ 4,693	34/ 3,784	40/ 4,000	40/ 4,000
Number of StormwaterWise retrofit projects on private property*	44	0	39	31	40	40

Supporting Measures	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Estimate	FY 2019 Estimate
Catch basins cleaned	2,885	2,938	1,200	4,183	1,000	1,000
Linear feet of corrugated metal pipe replaced with reinforced concrete pipe	N/A	1,900	0	0	300	300
Linear feet of small storm sewer installed to address local drainage issue	N/A	640	2,176	2,072	1,500	1,000
Linear feet of storm sewers inspected	7,910	99,411	57,057	213,864	85,000	85,000
Local drainage complaints investigated	N/A	N/A	N/A	N/A	130	130
Number of stormwater training events/employees participating	15/984	20/788	18/1,273	17/1,163	20/800	20/800

\*Note that StormwaterWise program year runs from January 1 to June 30 of the following year.

- The increase in linear feet of large diameter storm sewers constructed in FY 2017 is due to the storm sewer upgrades at 9<sup>th</sup> and Liberty St., West Little Pimmit Run and North Rockingham Street. The drop in linear feet of large diameter storm sewers anticipated for FY 2019 is due to the required planning for the next large capital project, and the focus on outfall repairs. In addition, staff vacancies impacted available staff planning resources in FY 2018.
- New stormwater management regulations for development (required by State Law) that became effective in FY 2015, along with the increased inspection requirements in the County's new MS4 permit, have resulted in a substantial increase in the number of stormwater management facilities and associated inspection requirements.

- The StormwaterWise program, which through a lottery system provides funding for residential and commercial projects that will reduce stormwater runoff, was temporarily suspended in FY 2015 in response to a ruling by the IRS that such incentive payments to homeowners are now considered taxable income. This required a redesign of the program to ensure appropriate administrative mechanisms were in place to issue the required tax forms to homeowners through the County's non-profit partner for this program, Arlingtonians for a Clean Environment. The program resumed in FY 2016.
- Fluctuations in the number of catch basins cleaned and the linear feet of storm sewers inspected is due to the impact of weather events on the Water, Sewer and Streets crews, as well as the number of capital projects funded in a given year. These figures also reflect the relative priority of inspection versus cleaning activities, as this impacts the workload and availability of the crews.
- The drop in linear feet of corrugated metal pipe that is replaced with reinforced concrete pipe is due to the increasing difficulty of replacing the remaining corrugated metal pipe.
- The changes in linear feet of small storm sewer installed to address local drainage issues in FY 2017 are due to the inclusion of difficult outfall repairs and larger size pipes.
- The linear feet of storm sewers inspected was very low in FY 2014 because the first few months of FY 2014 were dedicated to catch basin inspections and cleaning. More time was dedicated toward storm sewer inspection in FY 2015.

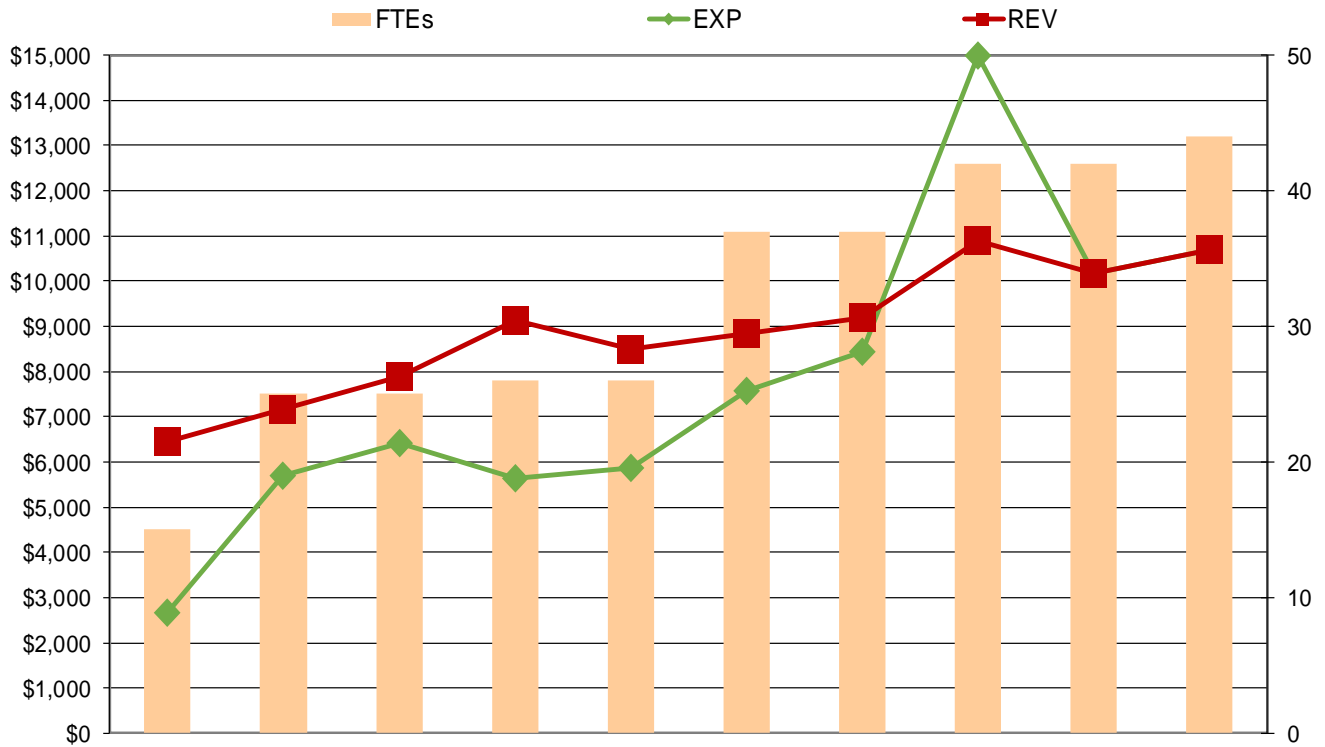
**STORMWATER MANAGEMENT FUND**  
**FUND STATEMENT**

	FY 2017 ACTUAL	FY 2018 ADOPTED	FY 2018 RE-ESTIMATE	FY 2019 PROPOSED
<b>ADJUSTED BALANCE, JULY 1</b>				
Reserve	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000
Capital Reserve	20,604,730	15,044,966	16,482,941	13,021,404
<b>TOTAL BALANCE</b>	<b>22,104,730</b>	<b>16,544,966</b>	<b>17,982,941</b>	<b>14,521,404</b>
<b>REVENUE</b>				
Sanitary District Tax (\$0.013 real estate tax)	9,276,016	9,609,660	9,609,660	9,688,160
Grants	1,143,567	-	-	-
Fines & Fees	457,983	550,000	550,000	992,500
<b>TOTAL REVENUE</b>	<b>10,877,566</b>	<b>10,159,660</b>	<b>10,159,660</b>	<b>10,680,660</b>
<b>TOTAL REVENUE &amp; BALANCE</b>	<b>32,982,296</b>	<b>26,704,626</b>	<b>28,142,601</b>	<b>25,202,064</b>
<b>EXPENSES</b>				
Operating and Maintenance	7,160,449	8,022,379	8,221,197	8,689,760
Capital Projects	7,838,906	2,137,281	5,400,000	1,990,900
<b>TOTAL EXPENSES</b>	<b>14,999,355</b>	<b>10,159,660</b>	<b>13,621,197</b>	<b>10,680,660</b>
<b>BALANCE, JUNE 30</b>	<b>17,982,941</b>	<b>16,544,966</b>	<b>14,521,404</b>	<b>14,521,404</b>
Reserve	1,500,000	1,500,000	1,500,000	1,500,000
Capital Reserve	16,482,941	15,044,966	13,021,404	13,021,404
<b>TOTAL BALANCE</b>	<b>\$17,982,941</b>	<b>\$16,544,966</b>	<b>\$14,521,404</b>	<b>\$14,521,404</b>

Notes:

- (1) The FY 2018 re-estimate is the current projection of expenses and revenues.
- (2) The change in Fund Balance from FY 2017 to FY 2018 re-estimate is due to anticipated expenditures and/or encumbrances of funds for ongoing capital projects.
- (3) The FY 2019 proposed capital projects expense represents a capital allocation for the FY 2019 budget. Actual capital project expenses are expected to be higher as the capital program is executed throughout the year. The difference will be funded through the Capital Reserve.

**EXPENDITURE, REVENUE, AND FULL-TIME EQUIVALENT TRENDS**



	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
\$ in 000s	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Adopted Budget	Proposed Budget
<b>EXP</b>	\$2,661	\$5,685	\$6,427	\$5,627	\$5,868	\$7,557	\$8,430	\$14,999	\$10,160	\$10,681
<b>REV</b>	\$6,458	\$7,173	\$7,896	\$9,136	\$8,492	\$8,833	\$9,185	\$10,878	\$10,160	\$10,681
<b>FTEs</b>	15.00	25.00	25.00	26.00	26.00	37.00	37.00	42.00	42.00	44.00

- The Stormwater Management Fund was established by the County Board in CY 2008 by adopting a Sanitary District Tax of \$0.01 per \$100 of assessed real property value. In CY 2010, the Sanitary District tax rate was increased to \$0.013 per \$100 of assessed real property value.

Fiscal Year	Description	FTEs
FY 2010	<ul style="list-style-type: none"> <li>▪ Personnel budget includes the addition of 3.0 FTEs – a Planner, a Program Coordinator and a Construction Management Specialist. In addition, a Planner position (1.0 FTE) was transferred from the General Fund to the Stormwater Management Fund.</li> <li>▪ Non-personnel operating expenses decrease due to the elimination of one-time costs that were included in the FY 2009 budget (\$414,883).</li> </ul>	4.0
FY 2011	<ul style="list-style-type: none"> <li>▪ The County Board adopted a \$0.003 tax increase (\$1,643,114) to the Stormwater Fund to cover the transfer of Stormwater costs in the General Fund to the Stormwater Fund. The increase in expenditures covers the General Fund related personnel and operating costs (10.0 FTEs, \$1,346,963) with the balance of expenditures being allocated to Stormwater Capital expenses and reserves (\$296,151).</li> </ul>	10.0
FY 2012	<ul style="list-style-type: none"> <li>▪ Non-personnel expenses increase to cover maintenance of stormwater quality retrofits (\$203,886).</li> <li>▪ Funding for capital projects increases (\$335,837) as a result of a projected increase in revenue due to higher real estate assessments.</li> <li>▪ Revenue increases due to higher real estate assessments (\$541,764).</li> </ul>	
FY 2013	<ul style="list-style-type: none"> <li>▪ Added an Environmental Planner to address the increased stormwater site plan reviews and workload related to the County’s MS4 stormwater permit (\$107,537).</li> <li>▪ Non-personnel expenses increase to cover maintenance for stream restoration projects (\$20,000), creation of a stream and storm sewer monitoring network (\$100,000), and an increase in the operating contingent (\$107,615).</li> <li>▪ Funding for capital projects increases (\$45,556) as a result of a projected increase in revenue due to higher real estate assessments.</li> <li>▪ Revenue increases due to higher real estate assessments (\$456,488).</li> </ul>	1.0
FY 2014	<ul style="list-style-type: none"> <li>▪ Non-personnel expenses increase based on higher contract costs anticipated with the new MS4 permit (\$89,726), an adjustment to the annual expense for the maintenance and replacement of County vehicles (\$6,019), funding the County’s share of the Northern Virginia Regional Commission’s work on Four Mile Run which was previously funded by the General Fund (\$60,156), higher administrative overhead contributions to the General Fund based on prior years’ actual (\$100,000), and other changes itemized below. This is partially offset by a reduction in operating contingency (\$130,824).</li> <li>▪ Funding for capital projects decrease (\$461,035) in FY 2014 as a result of higher operating expenses and transfer of projects previously supported in the General Fund.</li> <li>▪ Revenues increase (\$2,000) due to a slight increase in the projected real estate assessments.</li> </ul>	



Fiscal Year	Description	FTEs
	<ul style="list-style-type: none"> <li>▪ Increase Inter-Department Charges for the reimbursement to the General Fund for a portion of the street sweeping program costs (\$240,000).</li> <li>▪ Transfer of the contribution to Arlingtonians for a Clean Environment (ACE) from the General Fund (\$69,705).</li> </ul>	
FY 2015	<ul style="list-style-type: none"> <li>▪ Added personnel for stormwater management regulations. The 11 positions are a critical foundational step for stormwater program delivery and compliance.</li> <li>▪ Non-personnel increases primarily due to an increase in inter-departmental charges for overhead (\$60,364), operating expenses related to the new positions (\$67,643), and reimbursement of a portion of the street sweeping program costs (\$50,896), which is partially offset by an adjustment to the annual expense for maintenance and replacement of County vehicles (\$64,059).</li> <li>▪ Funding for capital projects decrease (\$1,022,970) as a result of adding 11.0 FTEs and other personnel expense increases.</li> <li>▪ Revenues increase due to a projected increase in real estate assessment values (\$569,200).</li> </ul>	11.0
FY 2016	<ul style="list-style-type: none"> <li>▪ Non-personnel increases primarily due to an increase in inter-departmental charges for overhead (\$20,714) and an adjustment to the annual expense for maintenance and replacement of County vehicles (\$89,070).</li> <li>▪ Revenues increase due to a projected increase in real estate assessment values (\$450,750) and fees from site plan review (\$250,000).</li> </ul>	
FY 2017	<ul style="list-style-type: none"> <li>▪ Added personnel for stormwater management regulations. The five positions (\$628,983) are a critical foundational step for stormwater program delivery and compliance.</li> <li>▪ Non-personnel increases due to the transfer of the responsibility of new tree planting from DPR to the Stormwater Management Fund (\$205,000).</li> <li>▪ Revenues increase due to a projected increase in real estate assessment values (\$329,520) and fees from sediment/erosion control plan review (\$200,000).</li> </ul>	5.0
FY 2018	<ul style="list-style-type: none"> <li>▪ Elimination of one-time cost for purchase of a new vehicle in FY 2017 (\$24,100).</li> <li>▪ Non-personnel increases due to the transfer of the responsibility of operating maintenance costs for DES and DRP stormwater facilities to the Stormwater Management Fund (\$265,130), an increase in operating supplies (\$60,331), and adjustments to the annual expense for maintenance and replacement of County vehicles (\$8,776).</li> <li>▪ Revenues increase due to a projected increase in real estate assessment values (\$258,190) and fees from sediment/erosion control plan review (\$100,000).</li> </ul>	

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