

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 capacity needs with watershed management, environmental protection objectives, and regulatory compliance requirements, including those of the County's Municipal Separate Storm Sewer System (MS4) permit, issued in June 2013. The permit has been administratively continued by the Virginia Department of Environmental Quality (DEQ) beyond its 2018 expiration date (due to DEQ workload) and is anticipated to be reissued in CY 2020.
- Implement critical infrastructure, stream restoration and repair, and water quality mitigation 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 preventative 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:

- Conducts rigorous floodplain management activities to ensure compliance with state and federal floodplain regulations, accuracy of mapped floodplains, and favorable flood insurance rates for residents;
- Develops long-term infrastructure planning for capacity, sufficiency, and risk management for future demand and conditions;
- Implements an infrastructure capital program to ensure needed capacity enhancements are made and the system is maintained in a state of good repair (SGR);
- Administers capital maintenance, emergency response, and complaint operations;
- Ensures regulatory compliance for both County and private sector operations and activities;
- Installs green infrastructure and stream, pond, and wetland restoration projects to support local environmental recovery and restoration, protect public safety and infrastructure, and meet the aggressive requirements for the cleanup of the Chesapeake Bay;
- Maintains both the traditional and green infrastructure assets of the Program;
- Conducts education and training activities for employees, businesses, developers, and residents;
- Monitors streams; and,
- Conducts tracking, monitoring, and reporting for local, regional, and state/national bodies and agencies.

SIGNIFICANT BUDGET CHANGES

The FY 2021 adopted expenditure budget for the Stormwater Management Fund is \$11,729,047, a five percent increase from the FY 2020 adopted budget. The FY 2021 adopted budget reflects:

- Personnel changes due to the addition of two Stormwater Inspectors to meet the County's mandated MS4 permit obligations and workload (\$248,514, 2.0 FTEs), a Senior Program Manager to manage and oversee the maintenance capital and storm drainage improvements (\$203,285, 1.0 FTE), adjustments to salaries resulting from job studies for trades and planner positions, an increase in the County's cost for employee health insurance, partially offset by lower retirement contributions based on current actuarial projections.
- ↑ Non-personnel increases in operations are primarily due to contractual increases related to operating maintenance costs for DES and DPR stormwater facilities (\$329,752), one-time funding for the utility feasibility study (\$250,000), inter-departmental charges for overhead (\$231,383), County facility parking lot sweeping (\$70,000), tree planting (\$4,809), and adjustments to the annual expense for maintenance and replacement of existing County vehicles (\$12,887) as well as the addition of vehicles for the two new Stormwater Inspectors (\$44,000 one-time; \$15,310 on-going), and operating expenses for the new Senior Program Manager (\$2,652 one-time; \$2,860 on-going).
- ↓ Capital program funding decreases due to increases in the operating budget for personnel and non-personnel expenses (\$996,598).
- ↑ Revenue increases due to the increase in the CY 2020 real estate assessment tax base (\$329,759), inflationary increase of 2.5 percent to fees (\$27,938), a planned increase in Sediment and Erosion Control plan fees to support the addition of the two Stormwater Inspectors (\$328,020), and Chesapeake Bay Preservation fee increase (\$5,250), partially offset by projected reductions to Chesapeake Bay Preservation fee revenue (\$21,525), and other revenues based on resulting economic conditions from the pandemic (\$145,077).
- To increase resilience in response to intense rain events and flooding, the County is undertaking a comprehensive review of ways to mitigate flood risks. Design work is already underway for significant investments in watershed-scale solutions in critical areas that have experienced flooding and are identified in the Stormwater Master Plan. The Adopted Capital Improvement Plan (CIP) seeks to strike the right investment balance between water quality, improved maintenance of assets, education, and capacity improvements. To fund this substantial need, the County will be going to the voters for a \$50.84 million Bond Referenda in November 2020 to provide the authority to issue bonds to fund Stormwater capital projects in FY 2021 and FY 2022 and funding for key projects that will be constructed over a number of years. It is important to note that annual rate increases will be required in order to fund the debt service on the bonds that will be issued over the 10-year planning period. More detail can be found in the County Manager's Adopted FY 2021 CIP.

PROGRAM FINANCIAL SUMMARY

	FY 2019 Actual	FY 2020 Adopted	FY 2021 Adopted	% Change '20 to '21
Personnel	\$4,798,036	\$5,126,484	\$5,727,381	12%
Non-Personnel	2,885,375	3,334,866	4,248,519	27%
Capital Projects	3,967,366	2,749,745	1,753,147	-36%
Total Expenditures	11,650,777	11,211,095	11,729,047	5%
Total Revenues	\$10,759,822	\$11,211,095	\$11,729,047	5%
Change in Fund Balance	(\$890,955)	-	-	-
Permanent FTEs	44.00	44.00	47.00	
Temporary FTEs	-	-	-	
Total Authorized FTEs	44.00	44.00	47.00	

CAPITAL PROGRAM SUMMARY

The adopted CY 2020 Sanitary District Tax of \$0.013 per \$100 of assessed real property value remains unchanged from CY 2019. For CY 2020, it is estimated to generate a total of \$10,423,354 in revenue, of which \$1,753,147 will go towards executing the capital program. Recognizing the significance of the stormwater investment that is needed, the County Manager will be proposing a November 2020 bond referendum for stormwater and watershed infrastructure. This will be a substantial, long-term investment in the County’s stormwater management system, with multiple generations of taxpayers benefitting.

The capital is invested in the following: ‘Storm Drainage Improvements,’ ‘Maintenance Capital,’ and ‘Streams and Water Quality,’ capital programs. The County Manager Adopted FY 2021 Capital Improvement Plan (CIP) provides more detail.

Storm Drainage Improvements

The Storm Drainage Improvements program addresses infrastructure improvements to the stormwater sewer system. Improvements are designed and executed on watershed, localized, and parcel-based scales to: 1) mitigate flood risks; 2) maintain system infrastructure in a state of good repair; 3) install tertiary system elements; 4) construct drainage projects where under capacity; 5) develop overland relief; 6) advance resiliency goals; and 7) otherwise implement the adopted Stormwater Master Plan and underlying studies.¹

FY 2020 Program highlights:

- Extreme Event Response (July 8, 2019 Storm):

¹ Arlington County’s stormwater sewer system is increasingly vulnerable due to under-capacity, age, and condition of certain pipe sections and/or network elements. More than half of the network is at least 60-80 years old and includes assets constructed from corrugated metal and terracotta. In addition, the system lacks sufficient tertiary infrastructure. Also, the community continues to experience robust redevelopment and recently (2018 and 2019) experienced intense storm events that caused significant flooding and damage of both public infrastructure and private property.

- Nearly 1,000 calls for flooding assistance were logged and 250 drainage complaints were investigated related to unusually intense rainfall and the flood. These investigations resulted in a renewed focus on capacity infrastructure investment.
- More than 90 individualized flood proofing and technical site visits were performed for residents who experienced flooding of more than three feet of water in their homes. Only those residents who specifically requested the visits participated.
- Two (2) Flood Resiliency Workshops were held in October 2019, featuring engineering and industry experts in flood-resistant design (dry- and wet-flood-proofing), flood risk mitigation, and flood insurance options and limitations. More than 200 people attended both workshops.
- Expansion of DES-Stormwater Communications Platforms, including:
 - New webpage section on flood-proofing, flood resilience, and risk mitigation (<https://www.arlingtonva.us/flooding/>).
 - Design and launch of an Arlington County Stormwater Story Map (active November 2019).
- Development and launch of the Risk Assessment and Management Project (RAMP), which will:
 - Inform Flood Resilient Arlington. Arlington is working toward flooding resilience through defining balance between private and public responsibility, scaling levels of flood protection and mitigation, and needs based investment.
 - Create mid and long-term climate mitigation and adaptation plans and actions.
 - Inform current and future CIP planning.
 - Provide certain project cost-benefit analyses.
 - Perform pre-disaster mitigation planning (with the Department of Public Safety Communications and Emergency Management).
 - Explore potential grant and alternative funding efforts.
 - Use data to support relevant future code and ordinance updates.
- Spout Run Watershed Infrastructure Project design phase began in FY 2019 and is expected to continue into FY 2021. This project has been identified as one of several critical priority areas that experience flooding as a result of system under-capacity, insufficiency, or age-related conditions on a watershed scale (other similar critical priority sites across local or sub-regionalized scales have also been identified). The current design phase funding includes surveys, engineering design, design phase outreach, and analytics.
- After the July 8, 2019 flood, watershed scale projects for four additional watersheds were accelerated and design phases were initiated, including: Torreyson Run, Lubber Run, Crossman Run, and Westover. Multiple other large-scale projects were also accelerated. These were targeted in the watersheds with the most severe flooding. These watersheds include but are not limited to: Spout Run (exclusive of Waverly Hills), Donaldson Run, and Four Mile Run.
- Four Mile Run Flood Control Project – Letter of Intent executed with the US Army Corps of Engineers (USACE), in coordination with the City of Alexandria, for the development of dredging and maintenance plans to remediate USACE identified deficiencies in Four Mile Run-Arlington East and Arlington West Levees.
- Engineering design for the replacement of the Dumbarton Street culverts began in FY 2020.
- Woodmont Swale repair and stabilization, between the 2400 block of North Kenmore Street and the 2900 block of 24th Road North: construction was initiated in FY 2018 and substantially completed in early FY 2019. Project was closed out in FY 2020.
- Phase I of the Donaldson Run outfall and channel repair and stabilization at 24th Road North: construction was initiated and completed in early FY 2019. After acquisition of a large easement a second phase was constructed in mid-FY 2020. Additional phases will proceed in FY 2021 and beyond.
- Windy Run outfall repair, at North Nelson Street: construction was initiated in late FY 2018 and completed in early FY 2019.
- Installed 700 linear feet of small diameter storm sewers, which repaired existing storm sewers or addressed local drainage.

Maintenance Capital

Much of Arlington County's stormwater infrastructure was built during the 1940's and 1950's. It is approaching the end of its useful life and a regular repair and replacement program is necessary to ensure the continued functioning of the storm drainage network during storm events in order to prevent flooding and property damage.

This program provides for the regular replacement of storm sewer mains, catch basins, and endwalls (with their associated outfalls). Particular attention will be paid to the approximate 11 miles of corrugated metal pipes and plate arch culverts that have deteriorated more quickly than other materials. Associated master plans include the Watershed Management Plan and the Stormwater Master Plan.

Streams and Water Quality

This program addresses regulatory requirements and adopted policy objectives to reduce stormwater pollution, rehabilitate and restore natural infrastructure, protect public safety, and promote environmental recovery and restoration in the County's stream valleys which have been impacted by stormwater runoff from the County's increases in impervious surfaces.

Arlington County exceeded the five (5) percent Bay cleanup pollution reduction requirement for the permit cycle that ended in June 2018. The next permit cycle (anticipated to end in 2025) will require a cumulative 40 percent pollution reduction, with the subsequent permit requiring the full 100 percent reduction by 2030. Progress to date has been made through public investments in green infrastructure and stream restoration as well as water quality credit from redevelopment activity regulated under the Stormwater Management Ordinance.

Increased program drivers to repair eroded streams and failed stormwater outfalls emerged from the July 8, 2019, extreme flooding event. Also, continued increases in impervious surfaces from land development activity (both regulated and unregulated) add to the mitigation pressures on the program.

Program highlights:

- Forty-two (42) watershed retrofit projects have been constructed, most recently green infrastructure projects at North Kirkwood Road at 13th Street North and two projects along Williamsburg Boulevard.
- Four Mile Run emergency streambank repair along the W&OD Trail completed Winter 2019 (withstood July 2019 extreme flooding event).
- Windy Run stream restoration project completed Fall 2018.
- Four Mile Run tidal restoration project completed Fall 2017 (received multiple awards: The Virginia Governor's Environmental Excellence Award; 2018 Dave Pearson Watershed Excellence Award from the Virginia Lakes and Watershed Association; and the Virginia Park and Recreation Society – Best New Environmental Sustainability Award, November 2018).
- Donaldson Run Tributary B stream restoration project is expected to start construction in FY 2021.
- Ballston Pond watershed retrofit project is expected to start construction in FY 2022.
- Planning, design, and community engagement for the Sparrow Pond retrofit project and Gulf Branch stream restoration project are underway with construction expected to start in FY 2023 and FY 2024 respectively.

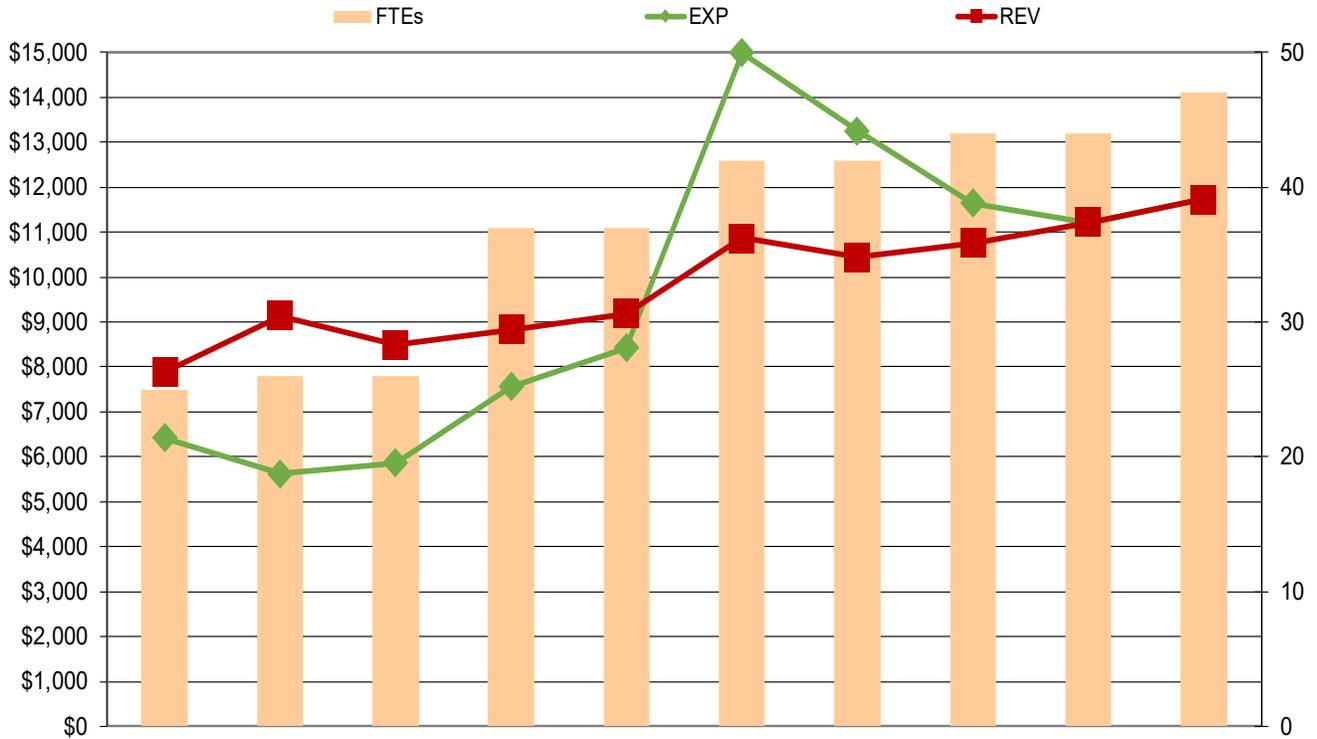
**STORMWATER MANAGEMENT FUND
FUND STATEMENT**

	FY 2019 ACTUAL	FY 2020 ADOPTED	FY 2020 RE-ESTIMATE	FY 2021 ADOPTED
ADJUSTED BALANCE, JULY 1	\$15,162,201	\$14,438,224	\$14,271,926	\$11,279,058
REVENUE				
Sanitary District Tax (\$0.013 real estate tax)	9,747,498	10,093,595	10,194,119	10,423,354
Fines & Fees	1,013,004	1,117,500	1,117,500	1,305,693
TOTAL REVENUE	10,760,502	11,211,095	11,311,619	11,729,047
TOTAL REVENUE & BALANCE	25,922,703	25,649,319	25,583,545	23,008,105
EXPENSES				
Operating and Maintenance	7,683,411	8,461,350	8,107,742	9,975,900
Capital Projects - Current Year	1,990,900	2,749,745	2,749,745	1,753,147
Capital Projects - Carry-Over	1,976,466	4,500,000	3,447,000	2,854,000
TOTAL EXPENSES	11,650,777	15,711,095	14,304,487	14,583,047
BALANCE, JUNE 30	14,271,926	9,938,224	11,279,058	8,425,058
Operating Reserve	1,920,853	2,115,338	2,026,935	2,493,975
Capital Fund Balance	12,351,073	7,822,886	9,252,124	5,931,083
TOTAL BALANCE	\$14,271,926	\$9,938,224	\$11,279,058	\$8,425,058

Notes:

- (1) The FY 2020 re-estimate is the current projection of expenses and revenues.
- (2) Most capital projects span multiple years, from design to construction completion. The FY 2019 Actual and FY 2020 Re-Estimate columns reflect that funding for capital projects are carried forward each fiscal year, and ending balances fluctuate, reflecting the carryover of these funds. The FY 2021 Adopted budget column is presented in a similar fashion to show planned execution of projects in the fiscal year. These are staff's best estimates based on preliminary plans and design and construction schedules.
- (3) As of January 31, 2020, there are \$4.1 million in encumbrances for multi-year capital construction projects
- (4) Based on County financial policies, the operating reserve is a 90-day reserve based on the Operating and Maintenance budget.

EXPENDITURE, REVENUE, AND FULL-TIME EQUIVALENT TRENDS



	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
\$ in 000s	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Adopted Budget	Adopted Budget
EXP	\$6,427	\$5,627	\$5,868	\$7,557	\$8,430	\$14,999	\$13,259	\$11,651	\$11,211	\$11,729
REV	\$7,896	\$9,136	\$8,492	\$8,833	\$9,185	\$10,878	\$10,438	\$10,760	\$11,211	\$11,729
FTEs	25.00	26.00	26.00	37.00	37.00	42.00	42.00	44.00	44.00	47.00

- 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 2012	<ul style="list-style-type: none"> ▪ Non-personnel expenses increased to cover maintenance of stormwater quality retrofits (\$203,886). ▪ Funding for capital projects increased (\$335,837) in FY 2012 as a result of a projected increase in revenue due to higher real estate assessments. ▪ Revenue increased due to higher real estate assessments (\$541,764). 	
FY 2013	<ul style="list-style-type: none"> ▪ Added an Environmental Planner to address the increased stormwater site plan reviews and workload related to the County’s MS4 stormwater permit (1.0 FTE; \$107,537). ▪ Non-personnel expenses increased 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). ▪ Funding for capital projects increased (\$45,556) as a result of a projected increase in revenue due to higher real estate assessments. ▪ Revenue increased due to higher real estate assessments (\$456,488). 	1.0
FY 2014	<ul style="list-style-type: none"> ▪ Non-personnel expenses increased 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 (\$60,156) which was previously funded by the General Fund, 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). ▪ Funding for capital projects decreased (\$461,035) in FY 2014 as a result of higher operating expenses and transfer of projects previously supported in the General Fund. ▪ Revenues increased (\$2,000) due to a slight increase in the projected real estate assessments. ▪ Increased Inter-Department Charges for the reimbursement to the General Fund for a portion of the street sweeping program costs (\$240,000). ▪ Transferred the contribution for Arlingtonians for a Clean Environment (ACE) from the General Fund (\$69,705). 	
FY 2015	<ul style="list-style-type: none"> ▪ Added personnel for stormwater management regulations. The 11 positions are a critical foundational step for stormwater program delivery and compliance. 	11.0

Fiscal Year	Description	FTEs
	<ul style="list-style-type: none"> ▪ Non-personnel increased primarily due to an increase in inter-departmental charges for overhead (\$60,364), operating expenses related to the new FTEs (\$67,643), and reimbursement of a portion of the street sweeping program costs (\$50,896), which was partially offset by an adjustment to the annual expense for maintenance and replacement of County vehicles (\$64,059). ▪ Funding for capital projects decreased (\$1,022,970) in FY 2015 as a result of adding 11.0 FTEs and other personnel expense increases. ▪ Revenues increased due to a projected increase in real estate assessment values (\$569,200). 	
FY 2016	<ul style="list-style-type: none"> ▪ Non-personnel increased 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). ▪ Revenues increased due to a projected increase in real estate assessment values (\$450,750) and fees from site plan review (\$250,000). 	
FY 2017	<ul style="list-style-type: none"> ▪ Added personnel for stormwater management regulations. The five positions (\$628,983) were a critical foundational step for stormwater program delivery and compliance. ▪ Non-personnel increased due to the transfer of the responsibility of new tree planting from DRP to the Stormwater Management Fund (\$205,000). ▪ Revenues increased due to a projected increase in real estate assessment values (\$329,520) and fees from sediment/erosion control plan review (\$200,000). 	5.0
FY 2018	<ul style="list-style-type: none"> ▪ Elimination of one-time cost for purchase of a new vehicle in FY 2017 (\$24,100). ▪ Non-personnel increased due to the transfer of the responsibility of operating maintenance costs for DES and DPR 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). ▪ Revenues increased due to a projected increase in real estate assessment values (\$258,190) and fees from sediment/erosion control plan review (\$100,000). 	
FY 2019	<ul style="list-style-type: none"> ▪ Added a position that supports critical Stormwater Infrastructure program priorities, including managing the small drainage projects program (\$127,354). ▪ Transferred an Administrative Assistant position from the General Fund to the Stormwater Management Fund (\$62,686). ▪ Street sweeping expenses were transferred in from the DES General Fund to the Stormwater Management Fund (\$397,290). 	1.0 1.0

Fiscal Year	Description	FTEs
	<ul style="list-style-type: none"> ▪ Increased contractual expenses (\$91,182), partially offset by a reduction in other operating expenses (\$44,473). ▪ Capital program funding decreased due to an increase in the operating budget for personnel and non-personnel expenses (\$146,381). ▪ Revenue increased due to the increase in the CY 2018 real estate assessment tax base (\$78,500), an increase in projected Sediment and Erosion Control plan revenue (\$282,500) and Chesapeake Bay Preservation fee revenue (\$160,000). 	
FY 2020	<ul style="list-style-type: none"> ▪ Non-personnel decreased in operations due to a reduction in residential street sweeping frequency (\$135,150), a reduction in inlet cleaning and inspection maintenance (\$100,000), and inter-departmental charges for overhead (\$70,320); offset by adjustments to the annual expense for maintenance and replacement of County vehicles (\$7,972), and a contribution to Northern Virginia Regional Commission (\$875). ▪ Capital program funding increased due to the reallocation of reductions in operations taken in for street sweeping and inlet cleaning (\$235,150) and increased revenue. ▪ Revenue increased due to the increase in the CY 2019 real estate assessment tax base (\$405,435), an increase in Sediment and Erosion Control plan revenue (\$75,000), and Chesapeake Bay Preservation fee revenue (\$50,000). 	
FY 2021	<ul style="list-style-type: none"> ▪ Added two Stormwater Inspectors to meet the County’s mandated MS4 permit obligations and workload (\$248,514) and a Senior Program Manager to manage and oversee the maintenance capital and storm drainage improvements (\$203,285). Non-personnel funding includes the addition of vehicles for the two new Stormwater Inspectors (\$44,000 one-time; \$15,310 on-going) and operating expenses for the new Senior Program Manager (\$2,652 one-time; \$2,860 on-going). ▪ Added funding for contractual increases related to operating maintenance costs for DES and DPR stormwater facilities (\$329,752), one-time funding for the utility feasibility study (\$250,000), inter-departmental charges for overhead (\$231,383), County facility parking lot sweeping (\$70,000), and tree planting (\$4,809). ▪ Capital program funding decreased due to increases in the operating budget for personnel and non-personnel expenses (\$996,598). ▪ Revenue increased due to the increase in the CY 2020 real estate assessment tax base (\$329,759), inflationary increase of 2.5 percent to fees (\$27,938), a planned increase in Sediment and Erosion Control plan fees to support the addition of the two Stormwater Inspectors (\$328,020), and Chesapeake Bay Preservation fee increase (\$5,250), partially offset by projected reductions to Chesapeake Bay Preservation revenue (\$21,525) and other revenues based on resulting economic conditions from the pandemic (\$145,077). 	3.0