

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 2021.
- Implement critical capacity 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 and other capacity projects identified as part of the program review subsequent to the historic flooding in July 2018 and 2019.
- 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 2022 adopted expenditure budget for the Stormwater Management Fund is \$15,065,702, a 28 percent increase from the FY 2021 adopted budget. The FY 2022 adopted budget reflects:

- The County Board added funding for a one percent merit pay adjustment, a five percent increase in the range, and an increase to the one-time bonus for staff from \$500 to approximately \$900.
- ↑ Non-personnel expenses primarily increase due to rent expense for office space occupied at Bozman Government Center (\$135,000), overhead charges based on program's pro rata share of DES General Fund expenses (\$240,000) and DES Utilities Fund expenses (\$78,985). These increases are partially offset by the elimination of the StormwaterWise program (\$120,000).
- ↑ Debt service expense added to the Stormwater Management Fund in order to pay for GO bonds issued in FY 2021 to fund Stormwater CIP projects (\$661,564).
- ↑ Capital program funding increases due to planned capital projects in FY 2022 (\$2,396,320).
- ↑ Revenue increases primarily due to the increase in the CY 2021 sanitary district tax rate and appreciation from real estate assessment growth (\$3,323,598).
 - The estimated impact to the "average" homeowner is \$34/year. This increase is a combination of the tax rate increase (\$29/year) and the appreciation of the average single-family property value from \$686,300 in calendar year 2020 to \$724,400 in calendar year 2021 (\$5/year).
- In response to intense rain events and flooding in 2018 and 2019, the County has undertaken 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 FY 2021 Adopted CIP and future CIPs seek to strike the right investment balance between water quality, improved maintenance of assets, education, and capacity improvements. To fund the near term projected need, the County received approval from voters for a \$50.84 million Bond Referenda in November 2020 which provided 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. The tax rate increase in CY 2021 is required in order to fund the debt service on the bonds that will be issued. More detail can be found in the [Adopted FY 2021 CIP](#).

PROGRAM FINANCIAL SUMMARY

	FY 2020 Actual	FY 2021 Adopted	FY 2022 Adopted	% Change '21 to '22
Personnel	\$5,219,515	\$5,727,381	\$5,920,783	3%
Non-Personnel	2,997,070	4,248,519	4,333,888	2%
Debt Service	-	-	661,564	-
Capital Projects	3,758,508	1,753,147	4,149,467	137%
Total Expenditures	11,975,093	11,729,047	15,065,702	28%
Total Revenues	\$11,375,612	\$11,729,047	\$15,065,702	28%
Change in Fund Balance	(\$599,481)	-	-	-
Permanent FTEs	44.00	47.00	47.00	
Temporary FTEs	-	-	-	
Total Authorized FTEs	44.00	47.00	47.00	

CAPITAL PROGRAM SUMMARY

The CY 2021 Sanitary District Tax of \$0.017 per \$100 of assessed real property value is an increase of \$0.004 per \$100 of assessed real property value from CY 2020. For CY 2021, it is estimated to generate a total of \$13,746,952 in revenue, of which \$2,495,591 will go towards executing the capital program and \$661,564 will go towards debt service. Recognizing the significance of the stormwater investment that is needed, the voters approved the 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 program is organized into the following areas: 'Storm Drainage Improvements', 'Maintenance Capital', and 'Streams and Water Quality'. The [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

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 in 2018 and 2019 experienced intense storm events that caused significant flooding and damage of both public infrastructure and private property.

FY 2021 Program highlights:

- Continued development 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 2022. 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. 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.
 - The County is currently collaborating with Arlington Public Schools (APS) on an underground stormwater management facility at the new Walter Reed Elementary School locate in Torreyson Run. This project will build an underground detention facility beneath the athletic fields in order to mitigate downstream impacts in the watershed for future storm events. The Phase 1 agreement was approved by both the County and School Boards in December 2020. Construction of Phase 2 stormwater facilities are expected to start in the fall of 2021.
- Four Mile Run Flood Control Project – The Letter of Intent was 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. This project is currently in procurement with expected construction in Summer 2021.
- Engineering design for the replacement of the Dumbarton Street culverts began 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.
- Installed 300 linear feet in FY 2020 and projected to install 200 linear feet in FY 2021 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 CY 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. DES has proposed enhanced Land Disturbance Activity (LDA) regulations (LDA 2.0) to require further mitigation of runoff impacts related to development.

Program highlights:

- Forty-five (45) watershed retrofit projects have been constructed, most recently green infrastructure projects at 2nd Street South at South Uhle and 22nd Street North at North Kentucky Street.
- Three (3) green infrastructure projects will begin construction in FY 2021.
- Donaldson Run Tributary B stream restoration project is expected to start construction in late FY 2021 or early FY 2022.
- Ballston Pond watershed retrofit project is expected to start construction in late FY 2021 or early 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 after FY 2022.

STORMWATER MANAGEMENT FUND
FUND STATEMENT

	FY 2020 ACTUAL	FY 2021 ADOPTED	FY 2021 RE-ESTIMATE	FY 2022 ADOPTED
ADJUSTED BALANCE, JULY 1	\$14,271,927	\$11,279,059	\$13,672,446	\$6,802,170
REVENUE				
Sanitary District Tax	10,129,002	10,423,354	12,174,485	13,746,952
Fines & Fees	1,246,610	1,305,693	1,305,693	1,318,750
Transfer in of Trust & Agency Funds	-	-	2,436,368	-
TOTAL REVENUE	11,375,612	11,729,047	15,916,546	15,065,702
TOTAL REVENUE & BALANCE	25,647,539	23,008,106	29,588,992	21,867,872
EXPENSES				
Operating and Maintenance	8,216,585	9,975,900	9,887,822	10,254,671
Debt Service	-	-	-	661,564
Capital Projects - Current Year	2,749,745	1,753,147	1,753,147	4,149,467
Capital Projects - Carry-Over	1,008,763	2,854,000	11,145,853	2,934,000
TOTAL EXPENSES	11,975,093	14,583,047	22,786,822	17,999,702
BALANCE, JUNE 30	13,672,446	8,425,059	6,802,170	3,868,170
Operating Reserve	2,054,146	2,115,338	2,471,955	2,563,668
Capital Fund Balance	11,618,300	6,309,721	4,330,216	1,304,502
TOTAL BALANCE	\$13,672,446	\$8,425,059	\$6,802,170	\$3,868,170

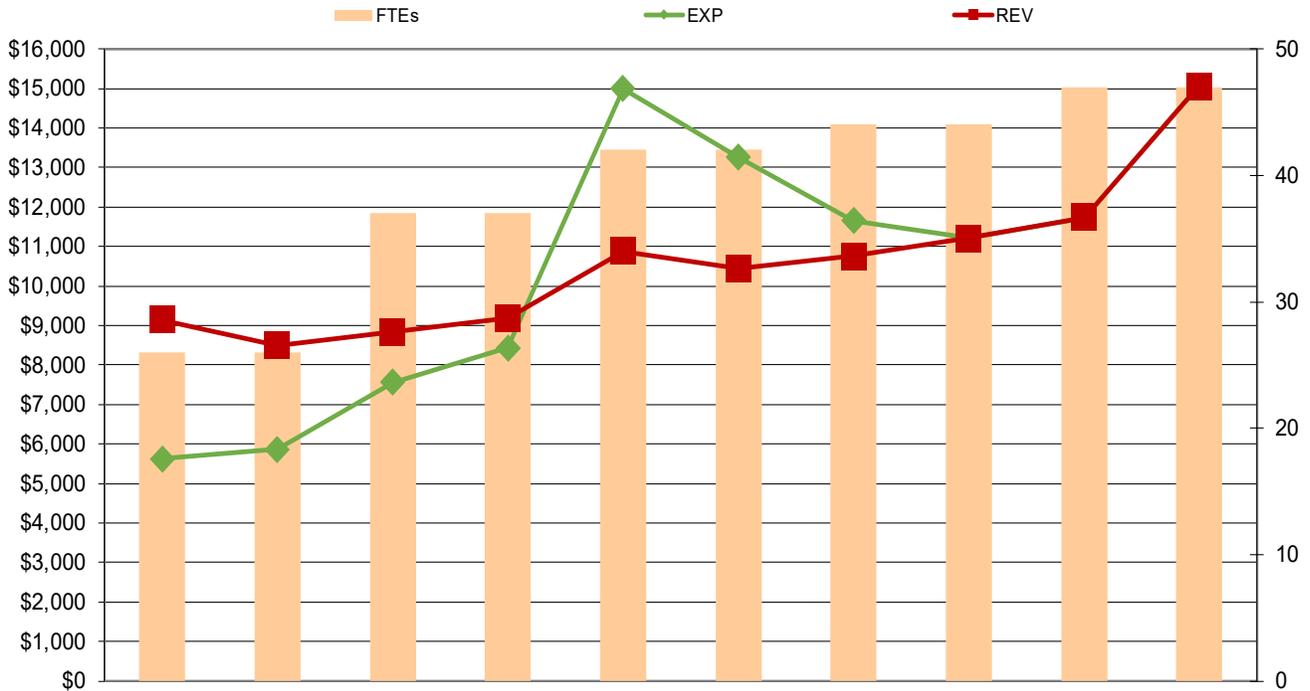
Notes:

(1) The FY 2021 re-estimate is the current projection of expenses and revenues.

(2) Most capital projects span multiple years, from design to construction completion. The FY 2020 Actual and FY 2021 Re-Estimate columns reflect that funding for capital projects is carried forward each fiscal year, and ending balances fluctuate, reflecting the carryover of these funds. The FY 2022 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) 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 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual	FY 2019 Actual	FY 2020 Actual	FY 2021 Adopted Budget	FY 2022 Adopted Budget
EXP	\$5,627	\$5,868	\$7,557	\$8,430	\$14,999	\$13,259	\$11,651	\$11,211	\$11,729	\$15,066
REV	\$9,136	\$8,492	\$8,833	\$9,185	\$10,878	\$10,438	\$10,760	\$11,211	\$11,729	\$15,066
FTEs	26.00	26.00	37.00	37.00	42.00	42.00	44.00	44.00	47.00	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. For CY 2021, the Sanitary District Tax rate is increasing by four tenths of a cent to \$0.017 per \$100 of assessed real property value.

Fiscal Year	Description	FTEs
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). 	1.00
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. ▪ 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). 	11.00

Fiscal Year	Description	FTEs
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 DPR 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). 	5.00
FY 2018	<ul style="list-style-type: none"> ▪ Eliminated 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). ▪ 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). 	1.00 1.00

Fiscal Year	Description	FTEs
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). 	3.00
FY 2022	<ul style="list-style-type: none"> ▪ The County Board added funding for a one percent merit pay adjustment, a five percent increase in the range, and an increase to the one-time bonus for staff from \$500 to approximately \$900. ▪ Non-personnel expenses primarily increased due to Bozman Government Center rent expense (\$135,000), overhead charges (\$240,000) and DES Utilities Fund expenses (\$78,985). ▪ Eliminated the StormwaterWise Program (\$120,000). ▪ Debt service expense added to pay for GO bonds issued in FY 2021 to fund Stormwater CIP projects (\$661,564). 	

Fiscal Year	Description	FTEs
	<ul style="list-style-type: none">▪ Capital program funding increased due to planned FY 2022 capital projects (\$2,396,320).▪ Revenue increased primarily due to the increase in the CY 2021 sanitary district tax rate and appreciation from real estate assessment growth (\$3,323,598).	