

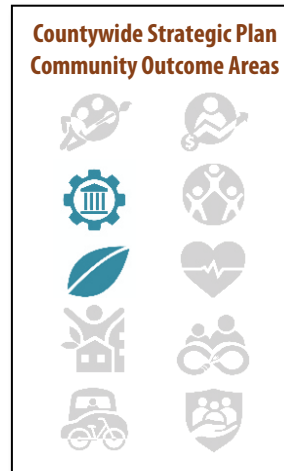
Fund 69010: Sewer Operation and Maintenance

Mission

To safely collect and treat wastewater in compliance with all regulatory requirements using state-of-the-art technology in the most cost-effective manner in order to improve the environment and enhance the quality of life in Fairfax County.

Connection to the Countywide Strategic Plan

The Fairfax County Board of Supervisors adopted the first-ever Countywide Strategic Plan on October 5, 2021. The Countywide Strategic Plan serves as a road map to help guide future work, focusing on the 10 Community Outcome Areas that represent the issues of greatest importance to the community. The Department of Management and Budget continues to integrate the Countywide Strategic Plan into budget documents. For information on how the agency's program performance contributes to these goals, please see the Performance Measurement Results by Community Outcome Area. For more information on the Countywide Strategic Plan, please see www.fairfaxcounty.gov/strategicplan/. Fund 69010, Sewer Operation and Maintenance, primarily supports the following Community Outcome Areas:



Community Outcome Area	Vision Statement
Effective and Efficient Government	<i>All people trust that their government responsibly manages resources, is responsible to their needs, provides exceptional services and equitably represents them.</i>
Environment and Energy	<i>All people live in a healthy sustainable environment.</i>

Focus

The Wastewater Management Program includes wastewater collection and conveyance, wastewater treatment, and planning and monitoring program areas. The primary functions are to strategically plan, and efficiently operate and maintain the wastewater system in the best interest of the County and its customers. Funding for Fund 69010 is financed by a transfer from Fund 69000, Sewer Revenue, which is used to credit all system revenues collected, including availability fees and sewer service charges associated with the program.



This program operates and maintains nearly 3,250 miles of sewer, 63 pump stations and 57 flow-metering stations. Treatment of wastewater generated is provided primarily through six regional wastewater collection and treatment plants. The regional treatment approach takes advantage of economies of scale in wastewater treatment and ensures the economical and efficient operation and management of the program.

One of the six regional plants is the County owned and operated Noman M. Cole, Jr. Pollution Control Plant (NCPCP), which is currently permitted to treat 67 million

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gallons per day (mgd) of flow. Other regional facilities where the County has purchased treatment capacity include the District of Columbia Water's Blue Plains Treatment Plant with 31 mgd capacity; Alexandria Renew Enterprises Treatment Plant with 32.4 mgd capacity; Upper Occoquan Service Authority's Treatment Plant with 22.1 mgd capacity; Arlington County's Treatment Plant with 3 mgd capacity; Loudoun Water's Broad Run Plant with 1 mgd capacity; and Prince William County Service Authority's treatment plant with 0.1 mgd capacity. Fairfax County utilizes all of these facilities to accommodate a total capacity of 156.6 mgd.

The Wastewater Management Program is funded by revenues generated by the customers of the sanitary sewer system and recorded in Fund 69000, Sewer Revenue. Sewer Service Charges support system operation and maintenance costs, debt service payments, and capital projects attributable to supporting and improving wastewater treatment services for existing customers. Availability Charges support a proportional share of system costs and capital projects attributable to growth of the system required to support new customers. Existing customers are defined as those who have paid an Availability Charge for access to the system and receive wastewater treatment services. New customers are those who have not paid the Availability Charge. Upon payment of the Availability Charge and connection to the system, a new customer becomes an existing customer. The County allocates expenses, interest income, bond proceeds, debt service payments, capital improvement project costs, and operating costs between existing and new users of the system. In accordance with the County's "Growth Pays for Growth Policy," both existing and new customers must pay for their share of the system's total annual revenue requirements.

A number of trends that may influence the operation and maintenance of the sanitary sewer system over the next two to five years include the following:

Chesapeake Bay Water Quality Program Requirements - The Chesapeake Bay water quality program requires reductions in the amount of nutrient pollutants discharged from wastewater treatment facilities. In December 2004, the state notified the County that the renewal of the County's Virginia Pollutant Discharge Elimination System (VPDES) permit includes a requirement that nutrient removal be performed using "State of the Art" technology and meet a waste load allocation (cap) for the nitrogen and phosphorous nutrients. A phased approach was used to renovate and upgrade current plant facilities to accommodate these more stringent nutrient discharge requirements. These renovations and upgrades were completed in FY 2015. Other regional plants serving the County are at various stages of upgrade for compliance with the new requirements.

Capacity, Management, Operation, and Maintenance (CMOM) - The United States Environmental Protection Agency (USEPA) has proposed sanitary sewer overflow (SSO) regulations, which require municipalities to develop and implement a Capacity, Management, Operation and Maintenance (CMOM) program to eliminate any sewer overflows and back-ups from the wastewater collection systems. The County has implemented the CMOM program that is featured on the USEPA's website at the following link - https://www3.epa.gov/npdes/pubs/ss0_casestudy_fairfax.pdf.

Capital Improvements - Reinvestment in the sewer system infrastructure ensures optimum operation of all wastewater facilities. This initiative, closely related to CMOM endeavors for a quality sewer system, emphasizes capital improvements to wastewater collection and treatment facilities to meet the requirements of the sanitary sewer overflow regulations. The program continues to take a proactive stance toward infrastructure rehabilitation.

Integration of Information Technology - The Geographic Information System (GIS), the Supervisory Control and Data Acquisition (SCADA) system and the Infrastructure Computerized Maintenance Management System (ICMMS) require integration for optimal use. Computing and

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information technology are an integral part of every aspect of the Wastewater Management Program operations. Today's high customer expectations and increasing reliance on consistent 24-hour services lead to an increasing dependence on stable and reliable integrated information technologies that infuse the business process. Presently, the Enterprise Asset Management system (EAM) has successfully integrated with GIS and ICMMS to provide reports for the SCADA system. The EAM system and SCADA system are not yet integrated. Future customer service needs will require a full enterprise integration of the critical information technology systems to reduce the total cost of ownership, increase availability of critical business data in the right format, and improve the quality and delivery of services to sewer customers.

Asset Management Program - As a result of evaluating the program's financial management strategies, an Asset Management Program was developed. The first phase aligned the program's capital asset policies and procedures with the County's fixed asset policies and developed a process in which to evaluate the program's infrastructure. The second phase developed criteria to identify the program's critical assets. After the criteria were tested and accepted, they were applied to all program assets. Phase three will be the condition assessment of all assets beginning with the most critical assets. In FY 2024, the condition assessment continues on the large diameter pipes, 15-inches and larger, sewer lines that were slip lined in the 1990s and sewer lines with sags.

Wastewater Collection Division (WCD) - operates and maintains approximately 3,250 miles of collection system, 63 pumping stations, and 57 flow meter stations throughout the service area. The agency continues to take a very proactive approach toward maintenance and strives for continuous improvement in its daily functions. WCD maintains facilities at a high competence level.

Wastewater Treatment Division (WTD) - operates and maintains the Noman M. Cole, Jr. Pollution Control Plant. The agency has an exemplary record of producing high-quality clean water, which surpasses regulatory requirements at a low unit cost relative to other advanced wastewater treatment plants in the region. Construction of facilities for the Enhanced Nutrient Removal upgrades at the plant is complete.

Wastewater Planning and Monitoring Division (WPMD) - establishes and manages the future requirements for the Wastewater Management Program in regard to expansion needs of facilities by reviewing and monitoring new and potential developments in the County. WPMD also analyzes the financial position of the Program in order to maintain competitive rates and high bond ratings and achieve financial targets. WPMD and Fairfax County Department of Finance work together annually to create award-winning Annual Comprehensive Financial Reports for the Integrated Sewer System. In addition, WPMD documents the high quality of the County's treated wastewater by analyzing an extensive number of water samples. While actively promoting outreach throughout the County, WPMD passes audits, confirms discharge quality, and runs a successful Industrial Pretreatment program to prevent damage to the collection system and the treatment processes, and to protect the health and safety of the employees and the public.

The table on the next page reflects the Wastewater Management Program's projected fiscal health in FY 2024 and FY 2025. The financial planning process incorporates the following indicators that are interrelated and structured to identify the adequacy of rates from a cash flow, business, and compliance standpoint. These indicators are used by the bond rating agencies to determine the Program's credit rating.

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Calculated Financial Indicators			
Financial Indicator	Target	FY 2024	FY 2025
Net Revenue Margin	45% to 65%	52%	53%
Days Working Capital ¹	150 to 200 days	218	216
Debt Coverage Senior	Min. 2.75x	3.13x	2.95x
Debt Coverage All-in ²	1.80x to 2.20x	2.03x	2.00x
Affordability (% of median income spent on sewer bill)	Less than 1.2%	0.57%	0.59%
Debt to Net Plant in Service	Below 40.0% Never above 50.0%	35%	33%
Outstanding Debt per Connection	Max \$3,000	\$1,976	\$2,134
Next Sewer Bond Sale Expected in FY 2024 - \$227.1 million			

¹ The Days Working Capital financial indicator is exclusive of Availability Charges in Fund 69000, Sewer Revenue, debt expenses in the Wastewater debt-related funds, Fund 69300, Sewer Construction Improvements, and Fund 69310, Sewer Bond Construction. It is calculated based on Operating Expenses and 360 days per year.

² The Debt Coverage All-in financial indicator is exclusive of Availability Charges.

The billing rates for both Sewer Service Charges and Base Charges will increase in FY 2024. The Base Charge will increase from \$40.14 per quarter to \$44.81 per quarter. The Sewer Service Charge will increase from \$8.09 to \$8.46 per 1,000 gallons of water consumed based on Fairfax County's winter quarter average consumption of 16,000 gallons. In addition, as part of the FY 2020 Adopted Budget Plan, the Board of Supervisors approved the establishment of charges to recover a portion of the cost of disposal and treatment of hauled wastewater at the County's septage receiving facility (SRF), which is located at the NCPCP. The Department of Public Works and Environmental Services (DPWES) initially set the charges at a level comparable to the fees charged by the Upper Occoquan Service Authority (UOSA), the only other facility in the County that receives hauled wastewater. The charge for high strength waste such as septic tank and restaurant grease and landfill leachate will remain the same at \$27 per 1,000 gallons of the hauler's truck capacity in FY 2024. The charge for low strength waste will also remain at \$7.72 per 1,000 gallons of hauler truck capacity in FY 2024. Wastewater Management is reviewing these charges, and both could be adjusted in the future. The projected FY 2024 revenue from charges for hauled wastewater is equal to \$200,000. For more information, please refer to Fund 69000, Sewer Revenue, in Volume 2 of the FY 2024 Advertised Budget Plan.

It is anticipated that these billing charges will support the County's ability to maintain high bond ratings (AAA by Fitch Investor Service and Standard and Poor's Corporation and Aaa by Moody's Investors Service, Inc.) from the rating agencies. These high credit ratings have enabled the County to sell bonds on behalf of the Program at interest rates lower than those obtained by most sewer authorities, thereby achieving savings throughout the life of the bonds.

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Organizational Chart



Budget and Staff Resources

Category	FY 2022 Actual	FY 2023 Adopted	FY 2023 Revised	FY 2024 Advertised
FUNDING				
Expenditures:				
Personnel Services	\$35,485,183	\$36,739,452	\$39,739,452	\$39,205,934
Operating Expenses	67,543,386	80,051,186	88,127,802	82,399,362
Capital Equipment	202,308	3,167,882	5,559,657	3,658,600
Subtotal	\$103,230,877	\$119,958,520	\$133,426,911	\$125,263,896
Less:				
Recovered Costs	(\$743,509)	(\$598,010)	(\$598,010)	(\$598,010)
Total Expenditures	\$102,487,368	\$119,360,510	\$132,828,901	\$124,665,886
AUTHORIZED POSITIONS/FULL-TIME EQUIVALENT (FTE)				
Regular	330 / 330	335 / 335	335 / 335	334 / 334

FY 2024 Funding Adjustments

The following funding adjustments from the FY 2023 Adopted Budget Plan are necessary to support the FY 2024 program:

Employee Compensation \$2,524,066

An increase of \$2,524,066 in Personnel Services includes \$699,894 for a 2.00 percent market rate adjustment (MRA) for all employees and \$626,545 for performance-based and longevity increases for non-uniformed merit employees, both effective July 2023. The remaining increase of \$1,197,627 is included to support employee retention and recruitment efforts that will reduce pay compression and align the County's pay structures with the market based on benchmark data.

Other Post-Employment Benefits (\$57,584)

A decrease of \$57,584 in Personnel Services reflects required adjustments associated with providing Other Post-Employment Benefits (OPEBs) to retirees, including the Retiree Health Benefits Subsidy. For more information on Other Post-Employment Benefits, please refer to Fund 73030, OPEB Trust, in Volume 2 of the FY 2024 Advertised Budget Plan.

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Position Reductions **\$0**

A review of positions for potential reduction was conducted and 1/1.0 FTE positions will be eliminated in Fund 69010, Sewer Operation and Maintenance, in FY 2024. Based on current budget constraints, the positions are unfunded and can be eliminated without adversely impacting agency operations.

Operational Requirements **\$2,348,176**

An increase of \$2,348,176 in Operating Expenses is primarily associated with the inflationary costs of chemicals and electricity, and the shared costs from inter-jurisdictional partners.

Capital Equipment **\$490,718**

Funding of \$3,658,600 in Capital Equipment, which is an increase of \$490,718 over the FY 2023 Adopted Budget Plan, is necessary to fund replacement and new Capital Equipment. Replacement vehicles and equipment in the amount of \$3,601,000 include vehicles and equipment that have outlived their useful life and are not cost effective to repair. The replacement vehicles and equipment include: \$1,050,000 for two utility trucks used for repairing and maintaining of pump stations, two fork lifts, one loader/backhoe, and one tractor backhoe; \$830,000 for two flatbed trucks, two transit trucks, and one dump truck; \$770,000 for a freightliner combo flusher used for cleaning sewer pipes and a stake body with a liftgate for transporting parts and materials; \$485,000 for seven servers, 15 industrial switches, three core switches, and one printer; \$390,000 for two rotary pumps used for pumping sewers, four chemical pumps, and a manlift; and \$76,000 for a flow analyzer equipment and an electric cart. The new Capital Equipment in the amount of \$57,600 includes a solid phase extraction system used for analyzing sewer and water samples.

**Changes to
FY 2023
Adopted
Budget Plan**

The following funding adjustments reflect all approved changes in the FY 2023 Revised Budget Plan since passage of the FY 2023 Adopted Budget Plan. Included are all adjustments made as part of the FY 2022 Carryover Review and all other approved changes through December 31, 2022:

Carryover Adjustments **\$13,468,391**

As part of the *FY 2022 Carryover Review*, the Board of Supervisors approved funding of \$13,468,391 due to an adjustment of \$3,000,000 in Personnel Services, encumbrances of \$8,076,616 in Operating Expenses and encumbrances of \$2,391,775 in Capital Equipment. The adjustment in Personnel Services was due to compensation and benefits for the Wastewater Design and Construction Division within Agency 26, Office of Capital Facilities. The expenditures were charged directly to capital projects in Fund 69300, Sewer Construction Improvements, and Fund 69310, Sewer Bond Construction, in FY 2022, but they are cost distributed to Fund 69010, Sewer Operation and Maintenance, in FY 2023 and beyond.

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Cost Centers Wastewater Collection

The Wastewater Collection Division is responsible for the operation and maintenance of the collection system which includes the physical inspection of sewer lines, the rehabilitation of aging and deteriorated sewer lines, and pumping stations; raising manholes, sewer line location and marking for the Miss Utility Program. The division also responds to emergency repair of sewer lines and provides 24-hour hotline and service response to homeowners in the County.

Category	FY 2022 Actual	FY 2023 Adopted	FY 2023 Revised	FY 2024 Advertised
EXPENDITURES				
Total Expenditures	\$17,260,487	\$22,533,579	\$25,569,279	\$24,961,635
AUTHORIZED POSITIONS/FULL-TIME EQUIVALENT (FTE)				
Regular	139 / 139	141 / 141	140 / 140	139 / 139

Wastewater Treatment

The Wastewater Treatment Division includes a variety of activities to support the advanced treatment of wastewater, which includes regulatory requirements associated with the Chesapeake Bay, the Clean Water Act, and other environmental standards. The plant also provides enhanced odor control services, water and energy management, and water reuse.

Category	FY 2022 Actual	FY 2023 Adopted	FY 2023 Revised	FY 2024 Advertised
EXPENDITURES				
Total Expenditures	\$26,212,614	\$31,719,938	\$33,932,342	\$34,408,173
AUTHORIZED POSITIONS/FULL-TIME EQUIVALENT (FTE)				
Regular	136 / 136	138 / 138	138 / 138	138 / 138

Wastewater Planning and Monitoring

The Wastewater Planning and Monitoring Division assesses and monitors long-term planning needs for the Wastewater Management Program and conducts environmental monitoring for regulatory compliance and for protection of the wastewater system and the environment. The staff also determines and plans for infrastructure expansion requirements and financial demands for the entire wastewater system.

Category	FY 2022 Actual	FY 2023 Adopted	FY 2023 Revised	FY 2024 Advertised
EXPENDITURES				
Total Expenditures	\$59,014,267	\$65,106,993	\$73,327,280	\$65,296,078
AUTHORIZED POSITIONS/FULL-TIME EQUIVALENT (FTE)				
Regular	55 / 55	56 / 56	57 / 57	57 / 57

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Position Detail

The FY 2024 Advertised Budget Plan includes the following positions:

WASTEWATER COLLECTION - 139 Positions			
Collection Program			
1	Director	1	Safety Analyst II
1	Human Resources Generalist III	3	Administrative Assistants IV
1	Human Resources Generalist II	1	Administrative Assistant III
1	Human Resources Generalist I	2	Management Analysts III
Projects and Assets			
1	Engineer VI	2	Environmental Services Supervisors
1	Engineer V	7	Instrumentation Technicians II
2	Engineers IV	4	Instrumentation Technicians I
2	Senior Engineers III	4	Project Managers II
2	Engineers III	2	Project Managers I
3	Engineering Technicians III	3	Assistant Project Managers
3	Engineering Technicians II	8	Engineering Technicians I
Gravity Sewers			
1	Public Works Env. Svcs. Mgr.	9	Senior Maintenance Workers [-1]
1	Public Works Env. Svcs. Specialist	2	Maintenance Workers
5	Senior Maintenance Supervisors	3	Environmental Services Supervisors
1	Vehicle Maintenance Coordinator	1	Mason
10	Heavy Equipment Operators	1	Engineering Technician II
14	Motor Equipment Operators	1	Industrial Electrician III
1	Instrumentation Technician I	1	Public Works Env. Business Operations Manager
Pumping Stations			
1	Public Works Env. Svcs. Mgr.	2	Industrial Electricians II
2	Public Works Env. Business Operations Managers	7	Plant Mechanics III
		8	Plant Mechanics II
1	Instrumentation Supervisor	3	Instrumentation Technicians III
2	Plant Maintenance Supervisors	2	Instrumentation Technicians II
2	Industrial Electricians III	3	Instrumentation Technicians I
WASTEWATER TREATMENT - 138 Positions			
NCPCP			
1	Director	1	Chief Building Engineer
1	Senior Engineer III	1	Heavy Equipment Supervisor
1	Safety Analyst II	3	Heavy Equipment Operators
1	Management Analyst III	1	Administrative Assistant IV
IT Services			
1	Info. Tech. Prog. Manager I	1	Business Analyst IV
1	Network/Telecomm. Analyst III	1	Programmer Analyst III
4	Network/Telecomm. Analysts II	1	Data Analyst I
1	Network/Telecomm. Analyst I		
Operations			
1	Public Works Env. Svcs. Mgr.	16	Plant Operators II
6	Plant Operations Supervisors	20	Plant Operators I
8	Plant Operators III		
Engineering Support			
1	Engineer VI	2	Engineers III
1	Engineer V	1	Engineering Technician III
3	Engineers IV	3	Assistant Project Managers

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Indicator	FY 2020 Actual	FY 2021 Actual	FY 2022 Estimate	FY 2022 Actual	FY 2023 Estimate	FY 2024 Estimate
Effective and Efficient Government						
Financial Sustainability and Trustworthiness						
Debt Coverage Ratio: (Revenue - Operating Cost/Debt)	2.28	2.86	1.92	2.74	2.18	2.03
Environment and Energy						
Promoting Air, Water and Land Quality						
Compliance with Title V air permit and State water quality permit	100%	100%	100%	100%	100%	100%
Blockages causing sewer back-ups per year (5-yr. avg. = 15)	10	8	15	11	15	15
Supporting Sound Environmental Policy and Practices						
Average household sewer bill compared to other providers in the area	Below regional average	Below regional average	Below regional average	Below regional average	Below regional average	Below regional average

A complete list of performance measures can be viewed at
<https://www.fairfaxcounty.gov/budget/fy-2024-advertised-performance-measures-pm>

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FUND STATEMENT

Category	FY 2022 Actual	FY 2023 Adopted Budget Plan	FY 2023 Revised Budget Plan	FY 2024 Advertised Budget Plan
Beginning Balance	\$6,605,238	\$303,970	\$17,980,870	\$4,251,969
Transfers In:				
Sewer Revenue (69000)	\$116,713,000	\$122,100,000	\$122,100,000	\$124,000,000
Total Transfers In	\$116,713,000	\$122,100,000	\$122,100,000	\$124,000,000
Total Available	\$123,318,238	\$122,403,970	\$140,080,870	\$128,251,969
Expenditures:				
Personnel Services	\$35,485,183	\$36,739,452	\$39,739,452	\$39,205,934
Operating Expenses	67,543,386	80,051,186	88,127,802	82,399,362
Recovered Costs	(743,509)	(598,010)	(598,010)	(598,010)
Capital Equipment	202,308	3,167,882	5,559,657	3,658,600
Total Expenditures	\$102,487,368	\$119,360,510	\$132,828,901	\$124,665,886
Transfers Out:				
General Fund (10001) ¹	\$2,850,000	\$3,000,000	\$3,000,000	\$3,000,000
Total Transfers Out	\$2,850,000	\$3,000,000	\$3,000,000	\$3,000,000
Total Disbursements	\$105,337,368	\$122,360,510	\$135,828,901	\$127,665,886
Ending Balance²	\$17,980,870	\$43,460	\$4,251,969	\$586,083

¹ Funding in the amount of \$3,000,000 is transferred to the General Fund to partially offset central support services supported by the General Fund, which benefit Fund 69010, Sewer Operation and Maintenance. These indirect costs include support services such as Human Resources, Purchasing, Budget and other administrative services.

² The Wastewater Management Program maintains fund balances at adequate levels relative to projected operation and maintenance expenses. These costs change annually; therefore, funding for sewer operations and maintenance is carried forward each fiscal year, and ending balances fluctuate, reflecting the carryover of these funds.