

Sewer Operation and Maintenance

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► Agency Mission

Our mission is to safely collect, treat, and monitor wastewater in compliance with all regulatory requirements, using state-of-the-art technology in the most effective manner. We work to improve the environment and enhance the quality of life in Fairfax County.

► Trends/Issues

- Developed and adopted a new Agency Mission (as stated above) and Vision statement.

Vision Statement:

- We aspire to achieve a pure and natural state of air and water quality by providing superior wastewater utility service in a spirit of teamwork and excellent customer service.
- Adopted a new Leadership Philosophy and Values that will assist the organization with its mission to achieve its vision. The Leadership Philosophy and Values describes the beliefs of the organization and how we will treat each other and our customers. Our Values include Integrity, Respect for People, Trust, Open Communication, Initiative, Teamwork and Personal Growth.
- Maintains one of the lowest sewer service charges in the region, while maintaining a Triple A bond rating.
- The program has reduced 30 percent of its staff since FY 1996, without any adverse impact on service quality or the environment.
- Awarded the Association of Metropolitan Sewage Agencies (AMSA) Gold Award for complete and consistent compliance with the State of Virginia Pollutant Discharge Elimination System (VPDES) permit requirements while undergoing a major plant expansion and upgrade construction project.
- Completed a System-wide Odor Control Study to eliminate odor and corrosion caused by hydrogen sulfide gas.
- Treated 101.7 million gallons per day (MGD) of wastewater generated within Fairfax County.
- In FY 2000, there were 314,925 connections to the sanitary sewer system, an increase of 4,979 connections over FY 1999. Approximately 87 percent of Fairfax County households are connected to the sewer system. Based on the latest rate comparison, Fairfax County has the lowest annual sewer service charge and the third lowest availability fee in the region. The Program is able to maintain its competitive rates while providing quality service to its customers, protecting the environment and maintaining sufficient financial resources to fully fund the Program's initiatives.

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The collection and conveyance system is one of the nation's largest sanitary sewer systems, consisting of 3,100 miles of sewer lines, 60 pumping stations, 51 flow metering stations, and a large pressure sewer system which includes 279 grinder pumps. The system also serves the Cities of Fairfax and Fall Church, and the Towns of Clifton, Herndon, and Vienna. Preventive maintenance is one of the most important operations. It involves physical inspection of the entire system followed by rodding and flushing of the lines blocked by tree root intrusion and heavy grease accumulation, two major causes for sewer backups and overflows. As a direct result of this proactive approach, the number of sewer backups and overflows in the system is one of the lowest in the nation, averaging 17 backups per 1,000 miles over the last three years.

- Rehabilitating aging and deteriorated sewer lines, and manholes is an integral element of the Wastewater Program. Over the past several years, the program has taken a very proactive approach, especially in older neighborhoods. The various trenchless technologies utilized by the program have no adverse impacts on citizens, neighborhoods, or traffic while maintaining the aging infrastructure to the highest possible condition. Approximately six million dollars are spent annually on rehabilitation of the sanitary sewer infrastructure, which starts with measuring wastewater flows throughout the collection system to identify sewer lines with excessive stormwater infiltration, a sign of severely deteriorated infrastructure. This is followed by inspection of all sewer lines using remote-controlled closed circuit television (CCTV) cameras. Severely deteriorated sewer lines identified by the CCTV inspection are rehabilitated. This process will be linked to the program's Geographical Information System (GIS), once the GIS implementation is completed.
- In order to maintain the integrity of the collection system and the highest level of customer service, other activities and services include:
 - Manhole raising and readjustment for street repaving
 - Sewer line location and marking for the Miss Utility Program
 - Emergency sewer line repair
 - 24-hour Trouble Response Center to respond to citizens with sewer backups.
- The total flow at the Noman M. Cole, Jr. Pollution Control Plant (NCPCP) was 42.8 MGD in FY 2000, an increase of 1.3 MGD from the previous year. The NCPCP was awarded the Association of Metropolitan Sewage Agency (AMSA) Gold Award for its consistent compliance with Virginia Pollutant Discharge Elimination System (VPDES) permit requirements. Since the time the plant began operations in 1970, it has only once violated its permit, and that violation was a minor infraction several years ago. In FY 2000, the number of odor complaints rose 20 percent, which is attributed to the construction activity at the plant. To address this issue, the program has funded several initiatives to reduce or eliminate odors at the plant and the sewer system as a whole. State of the Art odor control systems are being installed at the plant to assure that the plant is a "Good Neighbor".

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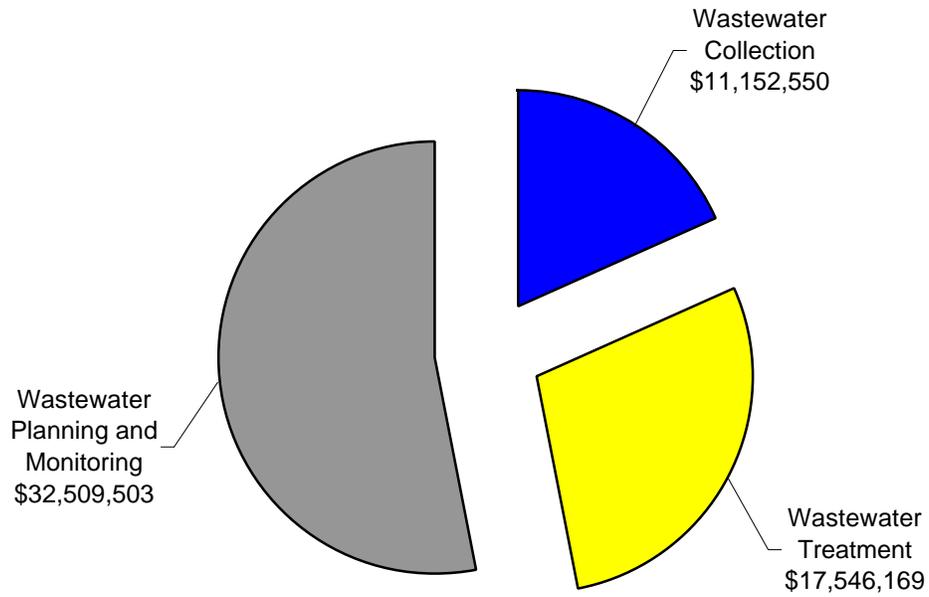
- The Environmental Monitoring Laboratory is one of the premier laboratories in the nation. The highly technical and diverse staff has backgrounds in engineering, chemistry, biology, and environmental science. They conduct water quality analysis and data management using state-of-the-art equipment and instrumentation. Approximately 100,000 analyses are conducted each year in support of the County environmental programs. Wastewater analyses (80,000) comprise the majority of the Laboratory's testing. These tests are conducted to help optimize plant operations as well as to meet regulatory compliance and water quality standards. The Laboratory conducts stormwater analysis, toxicity testing, pretreatment analysis, groundwater analysis, and stream analysis. Data generated from laboratory analysis is used to make strategic decisions on waste management practices. The Pretreatment Program regulates industrial discharges to the sanitary sewer system to prevent adverse impact to the wastewater treatment plant, the environment and human health and safety. Pretreatment functions are accomplished by inspections, reviewing plans, issuing permits, and maintaining an active sampling and survey program of businesses within the County.

► Summary of All Agency CAPS

CAPS Number	CAPS Title	CAPS Net Cost	CAPS Number of Positions/SYE
401-01	Wastewater Collection	\$11,052,550	144/144
401-02	Wastewater Treatment	\$17,546,169	165/165
401-03	Wastewater Planning and Monitoring	\$32,509,503	49/48.5
TOTAL Agency		\$61,108,222	358/357.5

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Total FY 2002 Adopted Budget Expenditures = \$61,208,222

Total FY 2002 Adopted Budget Net Cost = \$61,108,222