SEWER SYSTEM CERTIFICATION REPORT
FOR FISCAL YEAR ENDED JUNE 30, 2023
June 2024

FAIRFAX COUNTY WASTEWATER MANAGEMENT

Hazen and Sawyer
4035 Ridge Top Road
Suite 500
Fairfax, VA 22030
(703) 218-2034

Dept. of Public Works & Environmental Services
12000 Government Center Parkway
Suite 358
Fairfax, VA 22035
(703) 324-5030

This page is intentionally blank.

Table of Contents

List of Tables

List of Figures

List of Appendices

Executive Summary

In accordance with Fairfax County's Sewer Bond Resolution, Hazen and Sawyer (Hazen) has reviewed the status of the Wastewater Management Program and Integrated Sewer System and prepared the Sewer System Certification Report for the Fiscal Year (FY) ended June 30, 2023. The FY 2023 Sewer System Certification Report satisfies the requirements outlined in Section 713(b) of the Sewer Bond Resolution. This report confirms the system is operated and maintained in a satisfactory manner; and the budget is adequate to meet the operational, maintenance, debt service, and capital funding needs of the Integrated Sewer System for the next fiscal year.

Hazen evaluated the management, funding, operation, and maintenance of the Wastewater Management Program's three divisions: Wastewater Collection Division, Wastewater Treatment Division, and Wastewater Planning and Monitoring Division. This was accomplished primarily by interviewing staff; visiting the Robert P. McMath Building, three collection system pumping stations, and three metering stations; and collecting information about project work at the Noman M. Cole, Jr. Pollution Control Plant (NCPCP). The team also evaluated:

- Operating data from FY 2023
- Capital improvement plans, revenue, and bond information
- The 2023 Revenue Sufficiency and Rate Analysis Report on the five-year financial forecast
- The Annual Disclosure Report on sewer service charges
- The Annual Comprehensive Financial Report (ACFR).

The Wastewater Collection Division (WCD) continues to take a proactive approach towards maintenance and strives for continuous improvement in daily operation. The Pumping Stations Branch, Gravity Sewers Branch, and Projects and Assets Branch work collaboratively within WCD and across the Wastewater Management Program to provide exceptional planning, operation, and maintenance of the collection and conveyance system. Rehabilitation, maintenance, and expansion of the sewer collection system continues to be a focus for WCD.

The Wastewater Treatment Division (WTD) has an exemplary record of producing a high-quality effluent that surpasses regulatory requirements at a low unit cost relative to other advanced wastewater treatment plants in the region. The Engineering Support Branch, Operations Branch, Maintenance Branch, and Information Technology Services Branch work collaboratively within WTD and across the Wastewater Management Program to provide exceptional planning, operation, and maintenance of the NCPCP. WTD is recognized and awarded annually by numerous national, state, and local associations for their quality work. Rehabilitation and replacement of facilities that have reached the end of their useful service life at the plant continues to be a focus for WTD.

The Wastewater Planning and Monitoring Division (WPMD) continues to establish and manage the future requirements for the Wastewater Management Program regarding facility expansion needs. WPMD also analyzes funding levels for necessary equipment and facility replacement programs. The Engineering

Analysis and Planning Branch, Environmental Monitoring Branch, and Fiscal Control and Financial Planning Branch (Financial Monitoring Branch) work collaboratively within WPMD and across the Wastewater Management Program to provide exceptional planning, operation, and maintenance of the Integrated Sewer System. The Wastewater Management Program uses calculated financial indicators to ensure adequacy of its rates from a cash flow, business, and compliance standpoint. WPMD and the County Department of Finance work together annually to create an award-winning ACFR for the Integrated Sewer System. The County has received the Government Finances Officers Association of the United States and Canada (GFOA) certificate for FY 2022. The FY 2023 ACFR was completed during FY 2022 and is currently under review.

The Wastewater Management Program continues to meet its strategic planning goals as they relate to the financial reporting process. The Integrated Sewer System did not issue any new bonds in FY 2023. The AAA Bond Ratings from Fitch, Standard & Poor's (S&P), and Moody's issued in FY 2017 were maintained by the Wastewater Management Program. These high credit ratings have enabled the County to sell bonds, as required, on behalf of the Wastewater Management Program at competitive interest rates. The Financial Monitoring Branch is responsible for issuing and managing debt to fund major capital projects including projects to improve the County's collection system, expansion and upgrade projects at NCPCP, and its portion of enhancement projects at Treatment by Contract facilities.

The Wastewater Management Program actively manages its outstanding debt by refinancing to take advantage of lower interest rates or retiring debt to manage its debt service coverage. The system complies with the Debt Service Coverage Ratio requirement of its bond resolution, and all forecasted coverage ratios for FY 2024 to FY 2029 are considered favorable. The five-year sewer rate plan approved by the County as part of the FY 2024 Adopted Budget Plan proposed to increase the sewer charges by 6.2% in FY 2024. The County's availability fees are consistent with the fundamental principle of "system buy-in" or "growth pays for growth" cost method. Under this method, the availability fee is designed to recover the incremental costs of infrastructure required for new customers to connect to the system.

Through conducting staff interviews, it was evident that the Wastewater Management Program has well-organized leadership that emphasizes long-term cost-effectiveness, productivity, participation by staff, and collaborative teamwork. Site visits confirmed that facilities were well-maintained and operated properly during FY 2023. Ongoing projects and initiatives highlight the continued focus and commitment of the Wastewater Management Program to operate and maintain the system moving forward.

1. Introduction

Section 713(b) of the Fairfax County Sewer Bond Resolution requires the County to retain an engineer annually to review the status of the Wastewater Management Program and the Integrated Sewer System and prepare a report to include:

- A description of the system and recommendations concerning the proper maintenance, repair, and operation of the system during the following bond year.
- Any necessary changes in services to be provided throughout the system during the following bond year.
- Any additions, improvements, renewals, or replacements that should be made during the following bond year.
- The estimated gross revenues necessary for such purposes.

Figure 1-1 shows the wastewater treatment plant service areas and pump stations in the Integrated Sewer System.

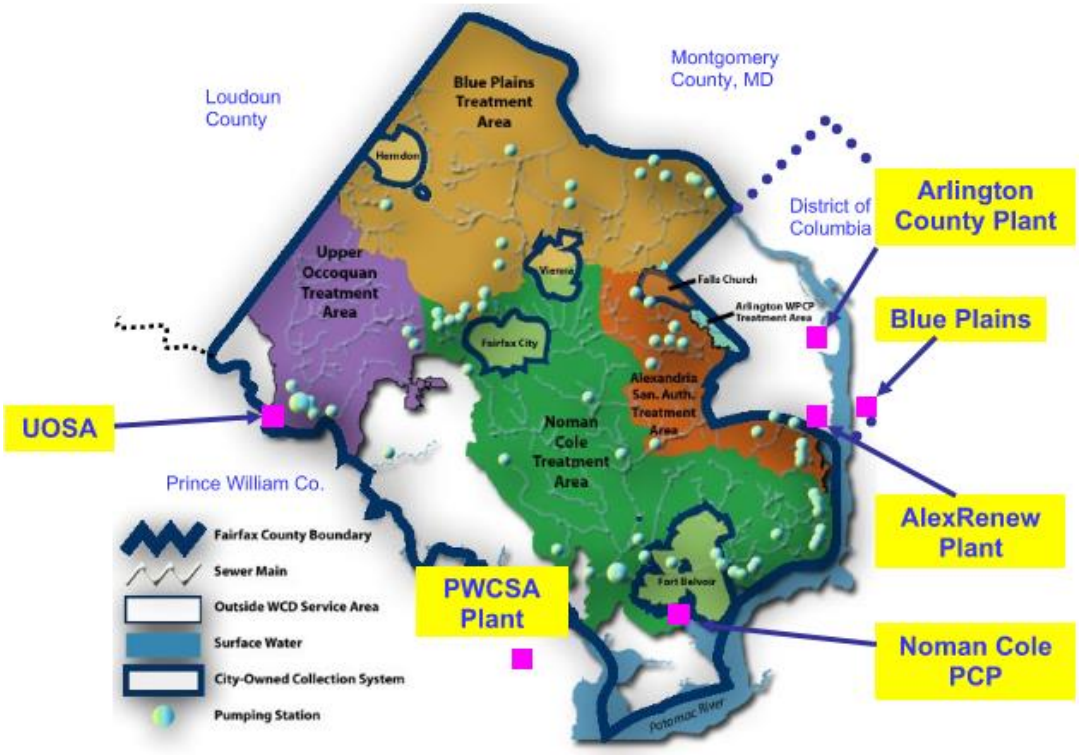


Figure 1-1: Integrated Sewer System, Fairfax County, VA (Annual Disclosure Report)

Hazen and Sawyer (Hazen) was retained to prepare the Sewer System Certification Report and document the status of the Integrated Sewer System during FY 2023, which ended on June 30, 2023. This report satisfies the requirements outlined in Section 713(b) of the Sewer Bond Resolution and ensures the system is operated and maintained in a satisfactory manner and the budget is adequate to meet the operational, maintenance and capital needs of the system for the next fiscal year. To prepare this report, the following tasks were performed:

- Interviewed key Wastewater Management Program personnel including Division Directors, Branch Chiefs, and selected personnel regarding FY 2023 activities and proposed FY 2024 efforts.
- Reviewed operation and maintenance related documents.
- Reviewed the ACFR for FY 2023.
- Reviewed budgetary information, including the FY 2024 adopted Budget, Capital Improvement Plan (FY 2024 – FY 2028), financial statements, and a sewer service charge/availability fee study.
- Reviewed the Annual Disclosure Report for FY 2023.

- Reviewed Wastewater Revenue Sufficiency and Rate Analysis Forecast Period Fiscal Year 2024 Through Fiscal Year 2029.
- Visited existing Integrated Sewer System facilities including the Noman M. Cole, Jr. Pollution Control Plant (NCPCP), the Robert P. McMath Facility, and select pumping stations and flow metering stations to assess general conditions and overall performance.

Each section of this report evaluates a different aspect or division within the Wastewater Management Program and Integrated Sewer System as follows:

- Section 2 evaluates the operation, maintenance, management activities and practices associated with the Wastewater Management Program and Integrated Sewer System.
- Section 3 provides a summary of program-wide performance indicators and awards.
- Section 4 examines the funding structure of the system and the FY 2023 budgets of the Wastewater Management Program.
- Section 5 summarizes the FY 2023 Capital Improvement Plan.
- Section 6 summarizes the current and future rates and revenues of the Wastewater Management Program and Integrated Sewer System.

2. Wastewater Management Program Operation, Maintenance and Management

The Wastewater Management Program encompasses wastewater collection, wastewater treatment, environmental monitoring, wastewater capacity planning, and management of financial operations and inter-jurisdictional agreements. The Wastewater Management Program operates under the Department of Public Works and Environmental Services (DPWES). The Wastewater Management Program provides integrated sewer collection and wastewater treatment services for Fairfax County residents and businesses, as well as for other neighboring jurisdictions through sales of service agreements.

2.1 Wastewater Management Organization

Wastewater Management Program functions are carried out by three divisions under the supervision of the Deputy Director of DPWES, as described in this section.

The County follows the High-Performance Organization model using a core team to provide leadership and management for the entire program. The Wastewater Management Leadership Team focuses on long-range planning, strategy, continuous improvement, wastewater capacity issues and financial management.

Three Divisions within DPWES are responsible for the operation, maintenance, and management of the Integrated Sewer System. Figure 2-1 shows the organization of the Wastewater Management Program. Each division is described below.

- **Wastewater Collection Division (WCD)** is responsible for the operation and maintenance of the sewers, force mains, pumping stations and metering stations; maintaining the asset management program; and overseeing the planning, design, and construction of Capital Improvement Program (CIP) projects for the collection system.
- **Wastewater Treatment Division (WTD)** is responsible for the operation and maintenance of the NCPCP facilities, maintaining the asset management program, and overseeing the planning, design, and construction of CIP projects for the treatment plant.
- **Wastewater Planning and Monitoring Division (WPMD)** is responsible for engineering planning and analysis, managing service agreements with nearby jurisdictions, financial management and planning, operation of the laboratory facility, public education, and outreach, as well as administering the Industrial Pretreatment Program for the County.

The work within these Divisions is distributed amongst ten branches, which are responsible for their assigned tasks and report to the Division Managers. As part of the overall integrated program approach, the Financial Monitoring Branch, the Information Technology Services Branch, the Human Resources/Organizational Development/Safety Section, and the Community Outreach and Education Program serve the needs of the overall Wastewater Management Program. Their functions are discussed in the following sections.

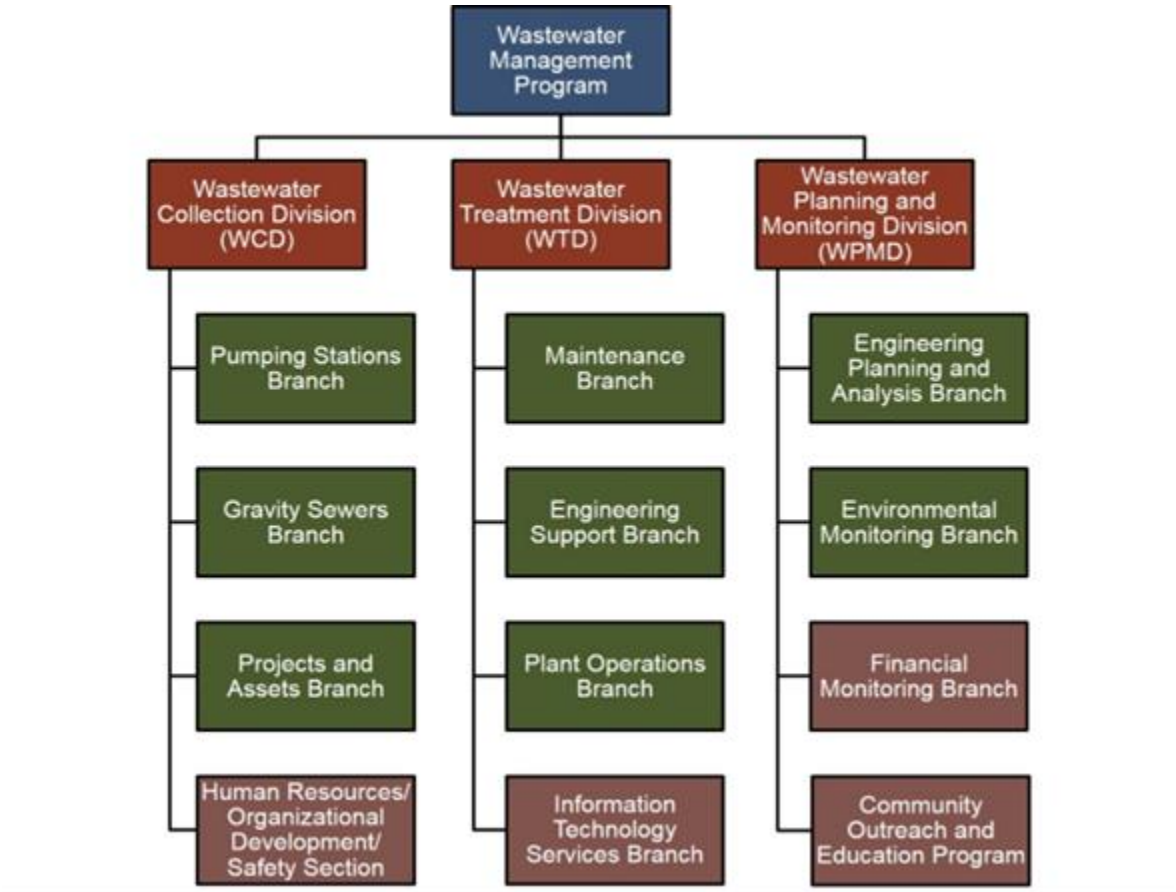


Figure 2-1: Organization of the Integrated Sewer System Wastewater Management Program

2.2 Wastewater Collection Division

2.2.1 Overview of Division

The Wastewater Collection Division (WCD) is responsible for the County's wastewater collection and conveyance system, which consists of the following components:

Wastewater Facilities:

- Approximately 3,300 miles of gravity sewers and force mains.
- 70 wastewater pumping stations.
- Three pump and haul facilities.
- 57 permanent flow metering stations.
- 150 grinder pumps and associated pressure sewer systems.
- Robert P. McMath Facility (Wastewater Maintenance Headquarters).

Other County Facilities:

- Two stormwater pumping facilities.
- One stormwater flood control facility.
- One water reuse pumping station and distribution system.
- Five rain gauge stations.

WCD had 134 permanent staff positions for FY 2023 with no new positions planned for FY 2024. All WCD employees work out of the Robert P. McMath Facility in Burke, Virginia. The organizational structure of WCD includes the Director's Office, Human Resources Section, and three branches: Gravity Sewers, Pumping Stations, and Projects and Assets.

In March of 2024, Hazen met with the Director of WCD along with the Branch Chiefs of the Pumping Stations Branch (PSB), the Gravity Sewers Branch (GSB), and the Projects and Assets Branch (PAB) to discuss the operation of the Division. The discussions focused on WCD's activities in FY 2023 and planned activities for FY 2024 and beyond, as well as the responsibilities and goals of each branch, and the organizational structure, operational and maintenance procedures, and available resources in place to meet those goals. Section 2.2.2 details initiatives and projects representative of their activities for FY 2023 onward.

WCD recognizes the importance of alignment with industry best practices and has invested significant resources into alignment with International Asset Management (IAM) and National Association of Sewer System Companies (NASSCO) trainings, certification and program adherence as part of organization's best management practices. WCD's asset management and planning engineers are required or encouraged to become certified by IAM and NASSCO based on their roles. The training and certifications have afforded WCD's asset management program the ability to modernize at a rapid pace and align with industry best practices.

2.2.2 Wastewater Collection Division Ongoing Initiatives

WCD is responsible for initiatives related to rehabilitation and repair of the existing system, investment in staff and equipment, maintenance tracking, standardization, and monitoring. Descriptions of these efforts are included below.

- WCD identified an opportunity to review its occupational safety program and conducted an overall assessment to identify gaps and improve the division wide safety program. Upon the assessment's completion, a plan was developed to start improvements to the safety program.

- **Inflow/Infiltration (I/I) and Flow Monitoring**: The WCD in-house I/I and flow monitoring work enables the Wastewater Management Program to be proactive in diagnosing problem areas. The I/I program has continued to focus on locating problem pipes in the system's older sewer service areas, which are then addressed by the comprehensive sewer rehabilitation program. The completion of the echo-level sensor pilot has led to continued use of echo-level sensors at I/I hotspot locations, the development of a flow monitoring plan, and two additional

pilot studies that began in FY 2020. Meters are used for billing, reactive and supporting data collation for various CIP projects.

- **Asset Management/Risk Model**: A robust wastewater asset management program improves the quality of wastewater service delivery to Fairfax County businesses and residents. The Projects and Assets Branch (PAB) is developing an asset management framework to align with the Institute of Asset Management recommended practices. The PAB continued improving a comprehensive risk model for the linear collection system to better understand risk throughout the system, identify high risk assets, and to identify and prioritize potential CIP projects based on conditions and capacity. In FY 2023, the framework was expanded to include vertical assets prioritization.

- **Pump Station Condition Assessment Initiative:** In FY 2020, the pump station condition assessment and asset inventory program was expanded to include inventory of all the assets in the pump stations. The additional scope also included the creation of digital dashboards to report the condition data and other metrics for WCD staff use. In FY 2023, PAB contracted inspection and condition assessment of 14 pump stations and developed inspection plans for this initiative.

- **Computerized Maintenance Management System (CMMS):** DPWES began the implementation of a new CMMS to replace the current InforEAM system used by WCD and the Stormwater Management Division. WCD selected a new system in FY 2021. Implementation of the new CMMS is ongoing and will be completed in FY 2024.

- **Stream Crossing Initiative:** Upon a successful completion of a FY 2020 pilot initiative, PAB initiated a program to field inspect expanded creek crossings starting with the most critical assets. In FY 2023, PAB engaged a contractor to perform field inspections.

- **Manhole Inspection Initiative:** In FY 2023, PAB initiated a manhole inspection program. The program is currently focused on known high I/I areas to prioritize manhole rehabilitation needs.

- **Emergency Response Plans Development:** In FY 2024, PAB initiated preparation of emergency response plans for critical assets. The plans include site specific information related to containment and mitigation measures in case of failure of a critical asset. The first-year effort is focused on siphons owned and operated by the County.

- **Supervisory Control and Data Acquisition (SCADA) Initiatives:** The WCD SCADA system is vital to providing remote monitoring and has limited remote control capability of pump operation at 68 remote facilities. Several initiatives have been implemented to ensure dependability and uninterrupted operation for many years to come. Programmable Logic Controllers (PLC) and upgraded Human Machine Interface (HMI) screens have been installed as part of pumping station rehabilitations to provide user friendly graphics, monitoring and operation at the facilities, and remote pump operation, ultimately providing a more reliable

and efficient operating system. This initiative is ongoing, as additional existing pumping stations undergo rehabilitation. New M340 PLC units and touchscreens are installed in every fully rehabilitated station. County personnel have completed the update to existing controls with new processors and touchscreens at approximately 59 pumping stations. The outstanding pumping stations will require assistance from an outside contractor. In FY 2024, the County began work to create a SCADA masterplan to help address the need for contractor assistance at remaining sites.

- **Sewer Academy:** This is an initiative developed by WTD and WCD to build standardized training programs for a wide array of disciplines (industrial electricians, mechanical crews, operators, etc.). The goal is to improve recruitment, development and retention of talent that understands and becomes invested in the County's system. WCD collaborated with department of human resources (DHR) to agree on creating three new apprenticeship classifications with three trades: Electrical, Mechanical and Instrumentation. In FY 2023, WCD coordinated with DHR to develop apprenticeship position classifications to be utilized for the Sewer Academy.

- **Asset Locating and GIS Updates:** In FY 2022, PAB developed a program to pilot locating sewer mains in Lincoln-Lewis-Vannoy neighborhood served by a low pressure system. The objective of this initiative was to pilot various locating technologies and update asset inventory in the area. As of FY 2023, this work has been completed.

2.2.3 Pumping Stations Branch

The Pumping Stations Branch (PSB) is composed of three groups: Mechanical, Electrical, and Instrumentation. The preventive and corrective maintenance performed by the PSB is critical to the reliable operation of the facilities. The following sub-sections detail the responsibilities and initiatives of the PSB.

Pumping Stations Operations

The PSB is responsible for the operation and maintenance of the County's pumping stations, low-pressure systems, flow meters, and the Robert P. McMath Facility. Each day, the staff, which includes the Branch Chief, two business operation managers, four supervisors, industrial electricians, instrumentation technicians, mechanical technicians, and engineering technicians work to monitor, repair, and identify future needs associated with keeping these facilities in good working order. The pumping stations' SCADA system provides remote monitoring, alarm management, and limited control capabilities for the pumping stations on a Local Area Network. System design is compatible with the SCADA system at the NCPCP.

The PSB is also responsible for identifying potential pumping station upgrades and rehabilitation. The Branch identifies potential costs for rehabilitation projects and submits them for inclusion in the annual CIP and budget review. The PSB maintains backup power generators, located at pumping stations throughout the County service area, to ensure continuation of wastewater pumping and flow during power outages. The PSB maintains odor control at pumping stations and works with communities to find odor mitigation strategies if residential concerns arise. An example project is the completed odor control study for the

Difficult Run Pumping Station, for which odor control began construction in FY 2023 and be substantially completed in early FY 2025.

Flow Metering

The Instrumentation Group within the PSB, with support from external contractors, maintains the flow metering program. Flow metering responsibilities include monitoring and recording wastewater flows entering and leaving the Fairfax County sewer system for inter-jurisdictional billings, flow confirmation, and detecting I/I in the sewer lines.

The Instrumentation Group operates 57 permanent flow metering stations ranging in size from approximately 0.01 to 30 million gallons per day (MGD). Many of the flow meters belong to other jurisdictions but are maintained and calibrated by the Instrumentation Group and external contractors. All flow metering stations owned by Fairfax County in the Wastewater Management Program are equipped with flow metering systems. The Instrumentation Group is also responsible for five rain gauges throughout the County and uses data from 15 additional rain gauges managed by the Maintenance and Stormwater Management Division. This extensive flow metering and rain gauge network allows the Wastewater Management Program to monitor wastewater flows every 15 minutes via SCADA and evaluate the sewer system's response to wet weather events.

In addition to the permanent flow metering stations and rain gauges, WCD has approximately 25 battery-operated temporary flow meters, 10 of which are a part of the Route 1 Embark Study. These "portable" meters can be installed in the collection system where needed to enhance I/I identification and reduction efforts. Temporary meters were used in the Tysons Corner and Reston areas in FY 2022. The Instrumentation Group and external contractor maintain and calibrate the meters regularly to ensure they provide accurate and consistent flow data. Areas with major I/I issues are isolated and permanent flow meters are installed to monitor I/I.

Pumping Station Branch Initiatives

The PSB uses weekly safety tailgate meetings covering a variety of topics including finalizing lockout/tag out procedures, issuing personal locks and safety locks, ensuring everyone is equipped with personal protection equipment (PPE) and gas monitors, and training on variable frequency drives (VFDs). The PSB is in the process of providing high visibility arc flash rated work uniforms and arc flash training for staff.

The PSB provided training opportunities for County staff in FY 2023 on the following topics:

- Arc Flash Training (National Fire Protection Association (NFPA) 70E)
- Backflow preventer certification.
- Valve maintenance and repair training.
- E-One grinder system training.
- CPR, first aid, and Automated External Defibrillator (AED) annual training.
- Fire extinguisher annual training.
- Stormwater Pollution Prevention (SWPP) annual training.
- PLC programming and troubleshooting training.
- Cross training within WCD to provide professional and personal growth opportunities.

An internal work order management system using InforEAM was implemented in FY 2021 to improve the quality of the data that is collected in the field and submitted as a work order. The improved quality of the information and ease of work order tracking will aid in the setup of Cityworks. In FY 2023, a new Enterprise Asset Management System was deployed: HxGN EAM. The additional features provided will further improve information quality and work order tracking.

The PSB has continued to develop standard operating procedures for pumping station operations including mechanical, instrumentation and electrical maintenance needs.

The PSB continued maintenance of two stormwater pumping facilities and one stormwater flood control facility in FY 2023: the new Alexandria Tide Gate, the new Alexandria Stormwater Pumping Station, and the Huntington Levee. The PSB also provided support County-wide for pumping and sewage grinding needs at locations including, but not limited to, the Historic Colvin Run Mill in Great Falls, VA and the I-95 Landfill Complex in Lorton, VA.

The PSB, as part of a division wide effort, is working towards reducing its carbon footprint through reduced energy consumption and increased pollution prevention. As part of this effort, the PSB is replacing light bulbs with LED bulbs, reducing the idling time for County vehicles, and performing internal audits to ensure compliance with peak shaving/energy audit initiative goals. In FY 2021, PSB worked with Capital Facilities staff to develop a facilities manual that standardizes the design of pump stations. In FY 2023, these updates to the facilities manual are ongoing. The PSB continued energy audits on each future pump station rehabilitation in FY 2023, and carbon footprint reduction strategies continue to be applied.

2.2.4 Gravity Sewers Branch

The Gravity Sewers Branch (GSB) provides routine sewer cleaning, visual inspections, and maintenance of the 3,250-mile sanitary sewer system. For areas of Fairfax County that are not served by the sanitary sewer system, i.e., the 21,610 individual onsite sewage disposal systems outside of the approved sewer service areas, the Wastewater Management Program provides a septage disposal facility at the NCPCP. This facility receives approximately one million gallons per month of hauled waste, largely from individual septic tank systems, portable toilets, and from the County's approximately 3,808 food service establishments whose grease traps require routine pump-outs. The GSB is also responsible for managing the County's septage pump and haul operations and hauled wastewater operations for two residential neighborhoods as well as the Town of Clifton.

The GSB's cleaning and maintenance program includes tracking, scheduling, and conducting routine inspection and/or cleaning of line segments. Staff adjust the cleaning frequency according to needs and inspect problematic sewer lines at higher frequencies.

A total of 429 miles of sewer lines were cleaned in FY 2023. Greater efforts in sewer inspection and cleaning activities resulted in a decrease in the number of overflows and backups in the system. WCD determines the number of occurrences per 100 miles and tracks this as one of the measured performance indicators. Table 2-1 shows the total number of occurrences (divided into backups and overflows) for the GSB in the last seven years. Fairfax County gravity sewers consistently have fewer occurrences of backups and overflows than the median level, established in a study conducted by the American Water Works

Association (AWWA) and Water Environment Foundation (WEF), and was below the 25th percentile for each of the last nine fiscal years. Occurrences are infrequent due to the County's aggressive cleaning, maintenance, and lining programs.

Table 2-1: Maintenance-Related Backups and Overflows in the Collection System

Fiscal Year	Backups	Overflows	Total Occurrences	Occurrences Per 100 Miles	WEF Median Per 100 Miles
FY 2014	15	21	36	1.09	4.3
FY 2015	16	12	28	0.85	4.3
FY 2016	12	23	37	1.12	4.3
FY 2017	19	17	36	1.09	4.3
FY 2018	17	20	37	1.12	4.3
FY 2019	9	18	27	0.82	4.3
FY 2020	10	10	20	0.61	4.3
FY 2021	8	19	27	0.82	4.3
FY 2022	10	23	33	1.00	4.3
FY 2023	18	22	40	0.67	4.3

2.2.5 Projects and Assets Branch

The Projects and Assets Branch is composed of five groups: Asset Management Program, Capital Improvement Program, Rehabilitation and Inspections Group, Closed Circuit Television (CCTV) Group, and Miss Utility Group.

Asset Management Program

The mission of the Asset Management Program (AMP) is to analyze asset information from maintenance, inspection, and field condition assessment to perform system risk modeling, perform decision support analysis, and to determine assets for improvement and maintenance recommendations. The data-driven work performed by this group is designed to ultimately guide WCD in maintenance and improvement decisions.

The AMP is also responsible for regulatory compliance tracking and reporting.

Capital Improvement Program

The mission of the Capital Improvement Program (CIP) is to plan, develop, and maintain an optimized 10-year capital improvement plan for WCD. The engineers in CIP use information and guidance provided by the AMP to study and analyze areas of substantial risk and in need of improvement. The studies are used to scope planned capital improvement projects to be included in the 10-year capital improvement plan. CIP engineers assign and coordinate capital improvement projects with Capital Facilities for design and construction. The CIP engineers participate in and provide general oversight of projects to ensure the engineering and operational goals of WCD are met throughout each stage of the project. CIP coordinates

with all WCD branches and other agencies involved with projects to ensure all parties are satisfied with the outcome.

Rehabilitation and Inspections Group

The Rehabilitation and Inspections Group is responsible for managing the rehabilitation of Fairfax County's sanitary sewer lines and manholes in an effective and efficient manner. The Group strives to rehabilitate gravity and force main sanitary sewer lines and manholes to maintain their structural integrity, eliminate I/I, prevent sanitary sewer backups and overflows, and prolong the life of the County's sanitary sewer system. The Group also provides customer service to homeowners, plumbers, contractors, and other County agencies.

In FY 2023, 19.9 miles of 8-inch through 15-inch diameter gravity sewers were rehabilitated using the cured-in-place pipe (CIPP) method. Figure 2-2 shows the linear feet (LF) of pipe by diameter that was repaired using trenchless technologies in FY 2023. In addition to the trenchless repairs, several point repairs including removal of cross bores were completed using open cut methods.

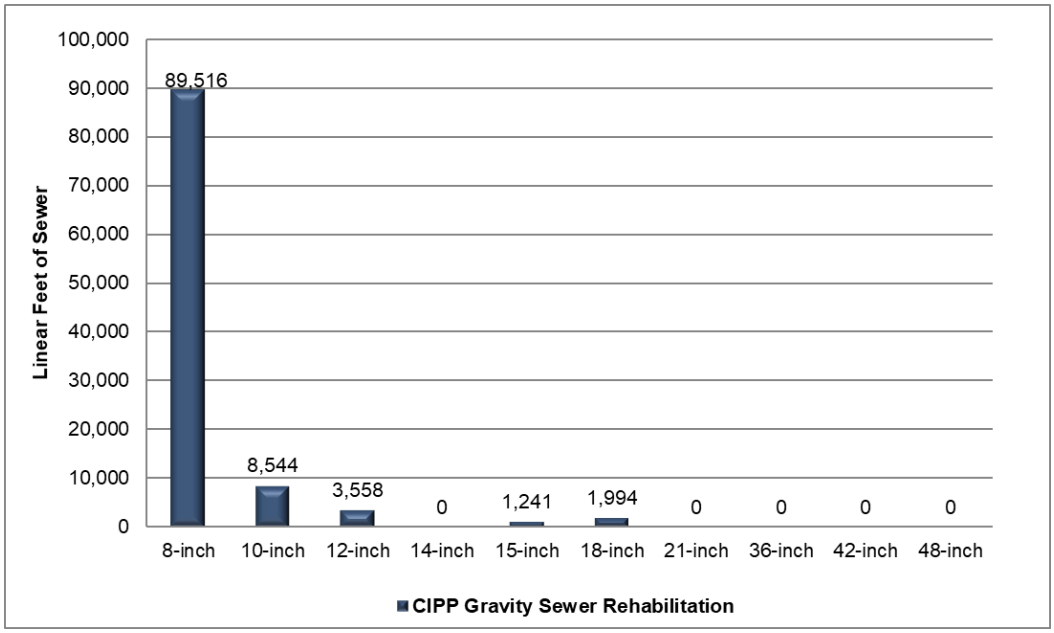


Figure 2-2: Trenchless Sewer Rehabilitation Completed in FY 2023

A private contractor is used to clear sewer easements of small trees and branches to allow crews access for inspection and maintenance activities.

Figure 2-3 illustrates the total annual length of easement cleared in the past 11 fiscal years. Additionally, the group inspects new assets installed by third parties to ensure adherence to the Public Facilities Manual (PFM) and for acceptance into the County's sewer system.

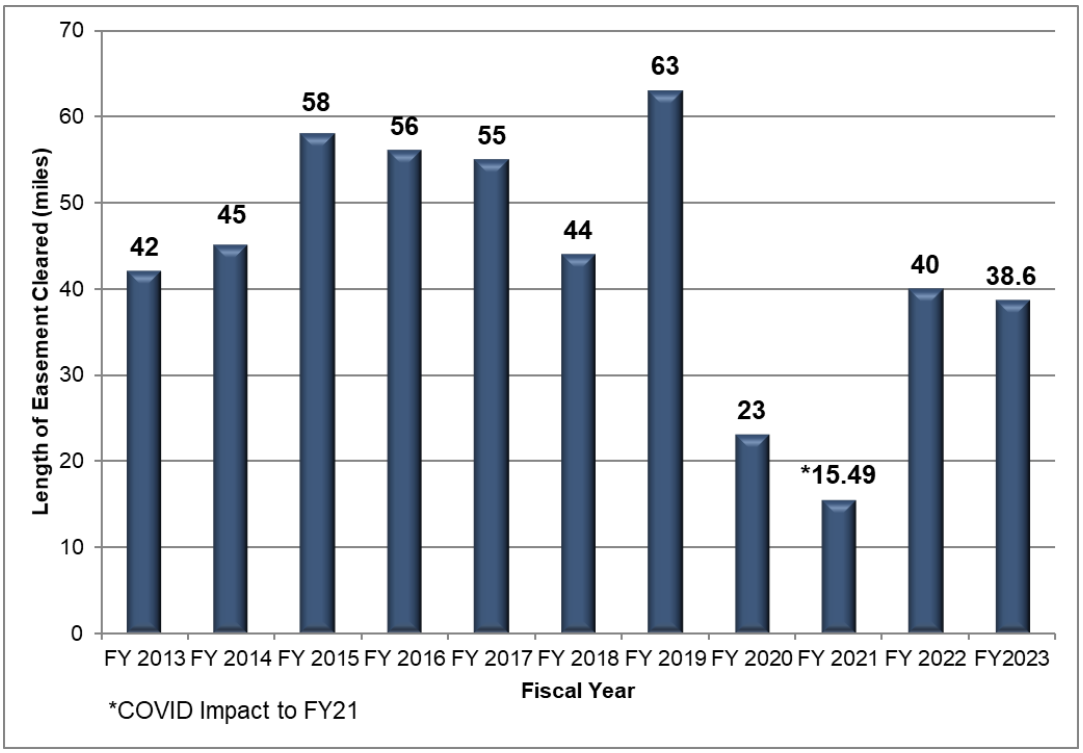


Figure 2-3: Length of Sewer Easement Cleared

Closed Circuit Television (CCTV) Group

The CCTV Group's primary functions are to detect defects in the sanitary sewer system using specialized CCTV equipment and to make repair recommendations. The Group inspects older sewer lines for possible infiltration, deterioration, loss of structural integrity, and blockages that may lead to sewer overflows or backups. In the event of an overflow or sewer backup, a team with inspection equipment is dispatched to determine the cause of the event, and recommended solutions are provided by the staff to prevent recurrence. The CCTV Group is also responsible for inspecting all new sanitary sewer lines. Using the guidelines set out in the Fairfax County PFM, inspectors ensure that only properly constructed sewer lines and manholes are accepted into the County's sewer system. The group inspected a total of 142.8 miles of sewer pipe in FY 2023. In addition, 91.5 miles of sewers were inspected by a CCTV contractor.

Miss Utility Group

The Miss Utility Group locates and marks Fairfax County's sanitary sewers and water reuse lines in accordance with the Virginia Underground Utility Damage Prevention Act and the rules and guidelines set forth by the State Corporation Commission. The service is provided to ensure that no damage occurs to Fairfax County's sanitary sewer and water reuse lines during any excavation in which there is a valid Miss Utility request. In FY 2023, the Miss Utility Group transitioned services to a locating company. In FY 2023,

the Group processed 142,933 Miss Utility requests. Of the total number of Miss Utility requests processed in FY 2023, 39,998 or 28% of all requests required field locates.

Wastewater Collection Division Capital Projects

The following sections provide a summary of capital improvement projects that are either in study/design or under construction during FY 2023 or planned for FY 2024. Funding level details for each type of project including pumping stations, sewer metering, collection system replacement and rehabilitation, and the sewer sag program are provided in Section 5.5.3. The timing and funding of projects presented in the CIP appear to be adequate to maintain anticipated service levels.

Gravity Sewer Projects

- ***In Study/Design***
    - Little Pimmit Run Sewer Relocation – The project will accomplish sewer realignment and elimination of approximately 5,000 LF of 8-inch to 21-inch high-risk sanitary sewer crossings. Project is being completed in coordination with the Stormwater Planning Division. The study began in FY 2021, and design is anticipated to begin in FY 2024.
    - Sewer Sag Package #2 – This project will replace 6 sewers with severe sags across the County. The design began in FY 2021 and is anticipated to be completed in FY 2024.
    - Accotink Gravity Sewer Capacity Improvements – This project will provide needed capacity relief on the Accotink interceptor to convey 2045 flows. The study began in FY 2021, and design in FY 2022. Construction is anticipated to be completed in FY 2027.
    - Chain Bridge Vault Site Safety Upgrades – The project addresses safety upgrades to the sewer siphon vault located near Chain Bridge Road in Arlington, Virginia. The design began in FY 2022 and construction is anticipated to begin in FY 2025.
    - Springfield Estates Pump Station Abandonment – This project is abandoning the Springfield Estates Pump Station and replacing it with 2,000 LF of gravity sewer. The study began in FY 2021, with design beginning in FY 2022. Construction is anticipated to begin in FY 2024.
    - Merrifield Capacity Upgrades – This project aims to upsize approximately 600 LF of 12-inch diameter gravity sewer serving the Merrifield area. Project study was initiated in FY 2021 with design beginning in FY 2021. The design is set to be completed in FY 2024 and construction is anticipated to begin in FY 2025.
    - West Springfield Stream Crossing – This project replaces 150 LF of 8-inch gravity sewer. The design began in FY 2022. Construction is set to be completed in FY 2025.
    - Pohick Phase 1 Sewer Rehabilitation (Trunk) – Project to rehabilitate 6,457 LF of sanitary sewer with CIPP lining. Study began in FY 2020. Design began in FY 2023 with construction anticipated to be completed in FY 2025.
    - Abilene Street Pipe Replacement – Project to replace an aging sewer. Design is expected to be complete in early FY 2024, and construction in FY 2025.
- ***Under Construction***

- CIPP Rehabilitation – Ongoing CIPP rehabilitation of gravity sewers (8-inch to 15-inch in diameter) and manholes.
- Asset Point Repair and Utility Intrusion Programs – Programmatic approach to address point repairs and intrusions.
- Carderock Gravity Sewer Rehabilitation – Rehabilitation of pipe that carries flows from Scotts Run Interceptor sewer to Potomac Interceptor owned by DC Water. Design includes rehabilitation of approximately 1,300 LF of 30-inch pipe. Design began in FY 2019. Construction began FY 2023 and is anticipated to be completed in FY 2024.
- Celadon Sewer Replacement – The project involves the replacement of approximately 1,700 LF of 6-inch sewer pipe. Design began in FY 2019 and continued through FY 2021. Construction began in FY 2023 and is anticipated to be completed in FY 2024.
- Indian Run Sewer Reinforcement – The project addresses exposed pipe within a stream valley. The goal is to relocate the pipe segments to a new location where they are not prone to stream erosion. Design began in FY 2019 and continued through FY 2023. Construction is anticipated to begin in FY 2024.
- Old Mill Sewer Replacement – The project is addressing a capacity issue with the existing pipe. The design entails replacement of approximately 1,100 LF of 10-inch slip lined pipe with a new 16-inch pipe. Design began in FY 2019 and continued through FY 2021. Construction was completed in FY 2023.
- Little Hunting Creek Sewer Sag – Rehabilitation of 12-inch sanitary sewer line due to severe sag. This is the first project from the Sewer Sag Evaluation Preliminary Engineering Report (PER). Project design was completed in FY 2019. Construction began in FY 2020 and was completed in FY 2023.
- Augusta Lane Sewer Line Improvement – This project replaced a 189 LF section of 10-inch gravity Sewer. Design began in FY 2022. Construction was completed in FY 2023.
- Coon Branch Sewer Replacement – This project replaced 900 LF of 8-inch and 16” sewer line along Coon Branch. Project design was completed in FY 2023. Construction is expected to be completed in FY 2025.

Pumping Station and Forcemain Projects

- ***In Study/Design***

  - Accotink Pumping Station – Rehabilitation of the Accotink Pumping Station. Preliminary design efforts began in FY 2019 and continued through FY 2020. Design began in FY 2021. Construction is expected to begin in FY 2025 and construction completion is anticipated in FY 2029.
  - Wellington I Force Main Replacement – Rehabilitation of 6-inch ductile iron force main. Design began in FY 2019. Construction is anticipated to begin in FY 2022 and to be completed in FY 2026.
  - Riverwood Force Main Rehabilitation – Replacement of 6-inch cast iron force main and installation of an emergency bypass structure. Design began in FY 2019. Construction is anticipated to begin and be completed in FY 2024.

- Tysons West Pump Station and Force Main – Study of the new 25 MGD Tysons West Pump Station to address new capacity needs in Tysons Corner began in FY 2020. Design began in FY 2021 and construction is set to begin in FY 2024 with the completion of all project phases in FY 2029.
- Tysons East Pump Station and Force Main – Study of the new 10 MGD Tysons East Pump Station to address new capacity needs in Tysons Corner began in FY 2020. Study was completed in FY 2022 and land acquisition is currently underway.
- Jones Point Pump Station and Force Main – Rehabilitation of aging pump station and associated facilities. Study began in FY 2021. Design is anticipated to begin in FY 2024 and construction completion in FY 2028.
- Wellington I Pump Station Rehabilitation – A project that is intended to rehabilitate the aging infrastructure at the pump station. Study began in FY 2021, design began in FY 2023 and construction is anticipated to be completed in FY 2026.
- Wellington I Force Main Replacement – Rehabilitation of 6-inch ductile iron force main. Design began in FY 2019. Construction is anticipated to be completed in FY 2026.
- Freund House Pump Station Screen Replacement – A project to replace the screens at Freund House Pump Station. Design began in FY 2022 and was completed in FY 2023. Construction is estimated to begin in FY 2024.
- Little Hunting Creek Force Main – Project to replace the 30-inch diameter, 4,556 LF Little Hunting Creek Force Main. Study began in FY 2020, design began in FY 2021 and was completed in FY 2023. Construction is anticipated to begin in FY 2025 and be completed in FY 2026.
- Lakevale Estates Collection Improvements – A project that is intended to alleviate the capacity concerns downstream of the Lakevale Pump Station by extending the forcemain. Study began in FY 2022, design is anticipated to begin in FY 2024.
- LLV System Improvements Phase 1 – A project to address increased sewer breaks over the year and rehabilitate aging infrastructure. Study began in FY 2022, with design beginning in FY 2023. Construction is planned to begin in FY 2024.

- ***Under Construction***

  - Holmes Run Pumping Station – Rehabilitation of the Holmes Run Pumping Station. Preliminary design efforts began in FY 2018 and continued through FY 2022. Construction began in FY 2023 and is anticipated to be completed in FY 2024.
  - Savile Lane Pump Station Rehabilitation – Rehabilitation of Savile Lane Pump Station. Design began in FY 2019 and continued through FY 2021. Construction began in FY 2023 and is anticipated to be completed in FY 2025.
  - Mt. Vernon Terrace Force Main – Rehabilitation of 6-inch cast iron force main and improvements to the influent gravity sewer. Design was completed in FY 2020. Construction began in FY 2023 and completion is anticipated in FY 2024.
  - Difficult Run Pump Station Grit and Odor Control Improvements – Design of a new diversion structure to eliminate grit buildup in the wet well, Addition of two dry-pit

submersible pumps, as well as modifications of the odor control system. Design began in FY 2021. Construction began FY 2023 and is anticipated to be completed in early FY 2025.

- Oak Marr Pump Station Rehabilitation – A project that is intended to rehabilitate the aging infrastructure at the pump station. Study began in FY 2021, design completed in FY 2022. Construction began in FY 2023 and is anticipated to be completed in early FY 2025
- Wellington II pumping station, force main, and adjacent gravity line – Construction began in FY 2021, continued through FY 2022 and was completed in FY 2023.
- Langley School Pump Station (PS) – Rehabilitation of the Langley School PS and replacement of the Langley School Pump Station Force Main. The Study began in FY 2022 with the design completed in FY 2022. Construction began in FY 2022 and is anticipated to be completed in FY 2024.

Miscellaneous Projects

- ***In Study/Design***
    - Flow Meter Vaults Rehabilitation – Rehabilitation of meter vaults for structural, electrical, and mechanical deficiencies. Construction of several sites was completed in FY 2021. Design for additional sites is anticipated to begin in FY 2022, construction is anticipated to begin in early FY 2026.
    - Lake Barcroft/Holmes Run Odor Study – An evaluation began in FY 2018 to address odors in the Holmes Run basin around Lake Barcroft. Future odor control projects will be implemented based on field investigation and sampling as well as recommendations made as the study is finalized. Study was completed in FY 2022 and design is anticipated to be completed in FY 2024.
    - Surveying Missing Manhole Inverts – Project to survey 807 pipes with missing inverts to update GIS and support hydraulic modeling. Study began in FY 2022 and was completed in FY 2023.
    - Wastewater Utility Management Plan – Project to complete Wastewater Utility Management Plan that includes strategic planning, master planning, hydraulic modeling, condition assessment, and capital improvement program creation. The project began in FY 2021 and is set to be completed in FY 2024.

2.2.6 Wastewater Collection Division Facilities Inspection

Pumping Stations

On April 17, 2024, Hazen conducted site inspections to assess the general condition and operability of three pumping stations. The PSB provided a summary of all the pumping stations with the location, capacity, date of original construction and date of major rehabilitation or modification. Hazen used this information, as well as discussions with PSB personnel, to select three pumping stations with the objective of inspecting pumping stations that represent the wide range of assets maintained by WCD. A summary of ongoing, proposed or recently completed projects and observations from the inspections is provided below:

Dogue Creek (Freund House) Pumping Station

- Built in 1980, 32.0 MGD capacity
- Pump station is generally in good shape with an efficient layout.
- Planned improvements for chemical storage building roof and bar screen.

Jermantown Road Pump Station

- Built in 1999, 0.14 MGD capacity
- Generator was installed in 1998 and is in excellent shape. Generators serviced once a month in accordance with County contract.
- No work planned for pump station as it is in overall in great shape.

Lorton Valley Pumping Station

- Built in 2004, 1.68 MGD capacity
- Bioxide system used for odor control and is generally always in service.
- No planned projects for this pump station as it is in overall good shape.

Figure 2-4 through Figure 2-9 are photographs taken during the site visits to the three pumping stations.

Figure 2-4: Dogue Creek (Freund House) Pumping Station External Appearance

Figure 2-5: Dogue Creek (Freund House) Pumping Station General Condition

Figure 2-6: Jermantown Road Pumping Station External Appearance

Figure 2-7: Jermantown Road Pumping Station General Condition

Figure 2-8: Lorton Valley Pump Station External Appearance

Figure 2-9: Lorton Valley Pump Station General Condition

Robert P. McMath Facility

WCD administrative offices and maintenance shops are in the Robert P. McMath Facility at 6000 Fred's Oak Road in Burke, Virginia. The facility serves as a staging area for WCD operations and is also used for equipment storage (with the old Upper Cub Run wastewater plant site providing additional storage area). This well-maintained facility is approximately 30 years old. Hazen conducted a site inspection of the facility on April 17, 2024. WCD completed design of a new building to replace the Robert P. McMath Facility, which will house multiple County departmental offices, a welding shop, an electrical shop, and the sign department. Completion of the new building is anticipated in calendar year (CY) 2026. Recent upgrades consist of new equipment for training room and conference rooms, kitchen upgrades including a composting program to generate about 150 lbs. per month of compost, first aid kit refilling, and upgrades to workstations. Figure 2-10 shows the site plan for the new facility.

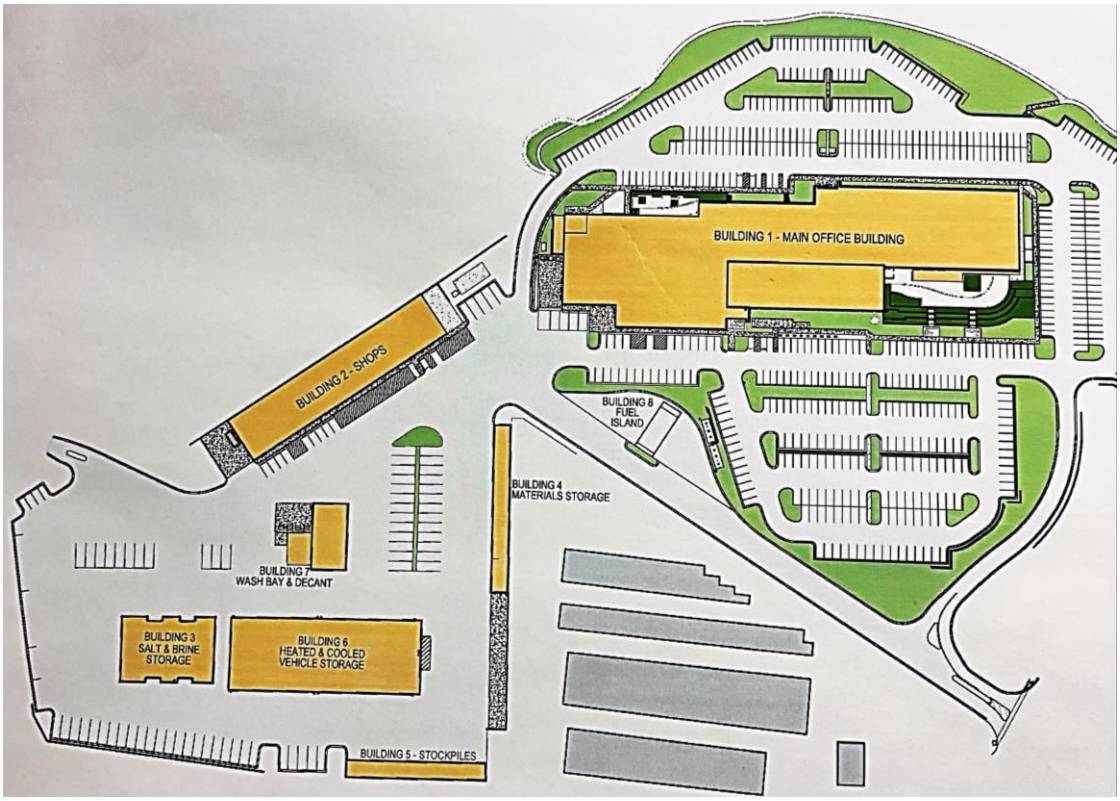


Figure 2-10: Updated McMath Facility Site Plan

Flow Monitoring Stations

On April 8, 2024, Hazen conducted site inspections for three flow monitoring stations to assess their general condition and operability. The PSB provided a summary of Fairfax County flow monitoring stations with the location, capacity, and type of flow monitoring device installed. Hazen used this information, as well as discussions with PSB personnel, to select three flow monitoring stations with the objective of inspecting flow monitoring stations that represent the wide range of assets maintained by WCD. A summary of observations from each metering station is provided below:

Chancery Park

- Type: 3-inch Parshall Flume.
- Network: 3G Communication Technology.
- Electric power is provided at the site by an external battery within the station panel.

Cedar Lane

- Type: 10-inch Leopold Lagco.
- Network: 3G Communication Technology.
- This flow monitoring station has been identified for rehabilitation due to aging infrastructure. Planned improvements include replacement of the control cabinet, electrical equipment to be externally located, and implementation of battery and solar power.

Tod Street

- Type: 10-inch Palmer Bowlus
- Network: 3G Communication Technology.
- Meter control cabinet has been rehabilitated about two years ago. Implemented improvements include a new control cabinet, all new electrical equipment, and installation of external battery and solar power.

Figure 2-11 through Figure 2-16 are photographs taken during the site visits to the three flow metering stations.

Figure 2-11: Chancery Park Flow Metering Station

Figure 2-12: 3-inch Parshall Flume

Figure 2-13: Cedar Lane Flow Metering Station

Figure 2-14: Cedar Lane Flow Metering Station

Figure 2-15: Tod Street Flow Metering Station

Figure 2-16: Tod Street Flow Metering Station

2.3 Wastewater Treatment Division

2.3.1 Overview of Division

The Wastewater Treatment Division (WTD) operates and maintains the NCPCP located in Lorton, Virginia, as shown in Appendix A – NCPCP Site Plan. The staff at the plant is organized into four branches: Engineering Support, Operations, Maintenance, and Information Technology Services. WTD had 136 positions in FY 2023.

All four branches of WTD work continually and effectively to treat wastewater and produce a high-quality treated effluent meeting all Virginia Department of Environmental Quality (DEQ) permit requirements continually and effectively. WTD also oversees the Water Reclamation Facilities, which produce Level I reclaimed water for irrigation and industrial uses in the County.

Major upgrades, initiatives, and compliance items performed this fiscal year include the following:

NCPCP Upgrades

- **Biosolids Program (Solids Processing Contracts III and IV):** The Biosolids Program continued in FY 2023 as follows:
    - Phase III focuses on the rehabilitation of the existing incineration system and supporting biosolids processing infrastructure. Phase III construction started in FY 2020 and is anticipated to be completed in FY 2026.
    - Phase IV includes several additional upgrades and infrastructure renewals including replacing the biosolids dewatering system. Design was resumed FY 2023 with construction starting in FY 2027.

- **Primary and Secondary Infrastructure Reinvestment and Optimization Program:** A comprehensive evaluation of primary and secondary processes began in FY 2016 to assess the needs for rehabilitation of existing infrastructure in conjunction with capacity expansion. This evaluation included the flash mix tanks, primary settling tanks, activated sludge processes, secondary clarifiers, aeration facilities, and associated chemical addition facilities for a 30-year planning horizon with design average flows up to 80 MGD. Due to the complexity of the program, the program is divided into three phases:
    - Phase I began in FY 2018 and included multiple pilot studies to investigate options to improve the treatment process within a limited footprint. In FY 2019, a demonstration scale aerobic granular sludge pilot was constructed for operation over a 10-month period. Findings from the demonstration scale pilot provided information for Phase II and capacity expansion.
    - Phase II design began in FY 2018 and includes rehabilitation and/or modification of existing facilities to extend service life and reduce risk. Construction of Phase II was awarded in August 2022 with construction activity currently in progress. Substantial completion of this

phase is scheduled for March 2027. This package includes construction of a full-scale pilot train in the secondary facilities.

- The schedule for Phase III design for capacity expansion depends on the outcomes of Phases I and II.

- **Motor Control Center and Distribution Center Replacement (MCC/DC):** This project includes the replacement and upgrade of 15 480V distribution centers, 20 motor control centers, multiple programmable logic controllers, and associated electrical appurtenances throughout the NCPCP. The project will reduce arc flash exposure risk, improve safety, and reinvest in the existing electrical equipment. The design phase was completed in FY 2016, and construction was completed in October 2023. This project received the Leadership in Energy and Environmental Design (LEED) Silver Certification for the new Building V. The project received the 2023 American Public Works Association (APWA) Mid-Atlantic Chapter's Project of the Year Award for the category of Environment More than $75 Million.

- **Raw Wastewater Pumping Station Rehabilitation:** This project involves the evaluation and infrastructure renewal of raw wastewater pumping at the NCPCP, including two existing pumping stations, the B3 flow equalization facility, underground infrastructure, and associated processes and systems. This project is being implemented through the construction manager at risk (CMAR) method and completed in two separate packages, Package 1 (B3) and Package 2 (B4). Preliminary engineering and design of this project commenced in FY 2020.

    - Package 1 (B3) involves demolition of existing 6" header and wall cleaning system on Equalization (EQ) Tanks No. 1-4, demolition of Wash Water Return (WWR) Pumps and above grade WWR piping in Tanks No. 1-5, replacement of sump pumps and 36" valves in the existing 5 valve vaults, replacement of 1-ton jib crane, installation of Odor Control System for Tank No. 1, installation of aluminum cover for Tank No. 1, replacement of B3 Motor Control Center (MCC), Remote Input Output (RIO) panel with PLC and HVAC improvements in B3 Building. Construction started in November 2021 and final completion is anticipated in FY 2024.

    - Package 2 (B4) consists of a new pump station with a firm capacity of 210 MGD and the associated 60-inch force mains along with an odor control system, relocating the main electric feed lines into the plant site and providing new control switches, decommissioning and demolition of the existing raw wastewater pumping facilities, improvements to the B2 equalization pump station, increasing the number of parking lots and providing Electric Vehicle (EV) charging stations, improvement to the QQ1 pump station, and improvement to the facility entrance and traffic flows. Package 2 is currently in design, and construction is anticipated to begin in FY 2024.

- **APW/ County Water System Optimization:** The project will develop hydraulic models for the Advanced Plant Water (APW) system and county water (CW) systems at the Noman Cole Pollution Control Plant site, including field verification and field testing to calibrate the model. After the model is calibrated, it will be used to optimize the water systems based on pressure and demand.

The current scope is for pre-design/study phase only with anticipated completion date of December 2024.

- **Accotink Odor Control**: Design of the Accotink Odor Control Facility located at the Noman M. Cole, Jr., Pollution Control Plant was completed in May 2023. The County has characterized nuisance odors and recommended a biotower/ carbon unit for the mitigation of off-site plant odors at the Septage Receiving Facility, improving the quality of life in the community with respect to odors. Other improvements include replacement of equipment that has reached its useful life, safety improvements, stormwater diversion, and electrical and communications upgrades. Construction began in FY 2023 and is anticipated to be completed in FY 2025.

- **Major Sustaining Program:** This is a project to identify and address rehabilitation needs for the tertiary processes. Condition assessment of the affected facilities began in FY 2020. Based on initial assessment results and urgency of needs, the major sustaining program is anticipated to be completed in several design and construction packages, including immediate needs, current needs, and future needs. Detailed scope and timing will be determined and finalized based on equipment condition, asset management program results and influent flow and nutrient increases. Major projects started in this program are summarized below.

    - **FF Gates Improvement**

      The Monomedia Filters/Activated Carbon Absorption (FF) Filter Gates Improvements project will replace backwash valves and gates to improve energy efficiency, maintenance, and safety. The backwash valves and stems will be moved away from the walls and replaced with valves of more readily available models. This project will also improve access safety and mitigation of the need to enter confined spaces for maintenance. This project started in FY 2023 and is expected to complete design in FY 2025.
    - **FF Capacity Improvement**

      This project will replace the media and underdrain systems and associated assets at FF filters 1-8 and retrofit FF filters 9-10. Additional design services were added in early 2024 which included a series of project elements such as roof replacement, operator control station addition, concrete repairs, fiber optic system improvements, electrical, mechanical and plumbing equipment. This project started in FY 2024 and is expected to complete design in FY 2026.
    - **MBBR Capacity Improvement**

      This project will equip and operate the sixth Moving Bed Biological Reactor (MBBR) train in partial nitrification/denitrification/anammox mode (PANDA/PdNA) and replace a single blower to reduce the dissolved oxygen levels of the MBBR effluent and subsequently reduce the energy costs. This project started in FY 2023 and is expected to complete design in FY 2026.
    - **Site Project**

      This project is under scope of work development with an anticipated design contract start date of summer 2024. Scope includes safety improvements, valve accessibility improvements to the reclaimed water distribution system, a new caustic dosing

system, improvements to an onsite creek, and various building, road, and sidewalk work, etc.

- **In-house Project**

  A significant portion of the in-house projects have been completed. In-house projects include replacement of the Tertiary Clarifier mechanisms and drives, bar screen freezing improvements and miscellaneous smaller projects throughout the facility. Installation and piloting of a new NN blower at the MBBR facility is anticipated in FY 2025.

- **Activated Sludge Effluent (ASE) Pump Station:** This project involves rehabilitation of the ASE Pump Station, removal and replacement of six (6) vertical turbine pumps, seven (7) cast-iron sluice gates, seven (7) actuators, fourteen (14) valves, and six (6) actuators, which convey secondary effluent to the Moving Bed Biological Reactor Facility. Design has been completed, and construction started in August 2022, and is anticipated to be complete in 2026.

- **Modernization of Support and Administrative Facilities:** This project includes design of upgrades to non-process facilities including maintenance shops, amenities areas, Lab area and Information Technology (IT) spaces. In addition, the scope also includes adding 5 trailers at the back of the plant to accommodate the maintenance group during the construction and prepare the site plan for parking lot. The project design is divided into two construction contracts, contract #1 design completed and ready for bid, and contract #2 currently ongoing. Construction is anticipated to start in FY 2024 with a completion date in FY 2026.

- **Master Plan:** A Master Plan study to provide an integrated plan that will assist Noman Cole Pollution Control Plant to maintain the current levels of service for the next 20-30 years, and to anticipate the need for future levels of service. The Notice to Proceed (NTP) of this project is March 2024.

Administrative Initiatives

- **Performance Measure Tracking:** WTD continues to track operating costs (dollars per million gallons treated), odor complaints, and compliance with permitted effluent discharge limitations. WTD benchmarks against its own performance record and other comparable advanced wastewater treatment plants in Northern Virginia. The unit cost of wastewater treatment at the NCPCP was $2,597 per million gallons in FY 2023. This is the lowest unit cost of any advanced wastewater treatment plant in Northern Virginia.

- **Operations/Maintenance Workforce Planning:** Senior staff succession planning and institutional knowledge transfer continues to be a focus for WTD. There were 6 new hires in FY 2023 in Operations and Maintenance roles. WTD also continues to improve employee competencies to prepare employees for new higher-level technical positions. In FY 2023, 18 employees within the Operations and Maintenance Branches earned promotions.

- **Professional Licensure and Certifications:** WTD staff have a wide range of skill sets and expertise, and many positions require a professional license or certification. In FY 2023, over 100

professional licenses and certifications were held by WTD staff including Professional Engineers, Wastewater Operators, HVAC Mechanic, Licensed Electricians, Plumbers, Incinerator Operators, International Society of Arboriculture (ISA) certifications, Soil and Erosion Control certifications, and Envision certifications, among others. Developing, strengthening, and expanding staff skill sets and knowledge are priorities of WTD's strategic workforce planning initiatives.

- **Energy Savings:** In FY 2023, the plant reduced its electricity usage by 3.0 percent. In FY 2022, WTD enrolled in the U.S. Department of Energy's (DOE) Sustainable Wastewater Infrastructure of the Future (SWIFT) initiative. As a result, WTD began development of an energy management system in alignment with the DOE's 50001 Ready program. WTD received a 50001 Ready certificate of recognition in November 2022. In FY 2022, WTD purchased renewable energy credits to offset 10% of its greenhouse gas emissions from electricity. In FY 2023, this was increased to 25%. As a result of these and other actions, WTD was able to reduce its greenhouse gas emissions by 24.6% in CY 2022 from a baseline year of 2018.

- **Electrical Curtailment:** WTD continued to participate in an electrical load shedding/curtailment program. In FY 2023, payments were approximately $131,590 for demand response and $350.20 for the energy efficiency program.

- **Asset Management:** Asset management continues to be a focus area for WTD and the Wastewater Management Program in general. WTD manages rehabilitation and replacement of most of its assets in-house with internal resources. An Asset Management Team (AMT) was formed in 2004. The AMT is composed of representatives of all branches within WTD. WTD currently uses an Enterprise Asset Management (InforEAM) as its Computerized Maintenance Management System (CMMS) to track physical assets, their maintenance schedules, and the maintenance records at the plant. Since the 1990s, the CMMS database has been continually updated to reflect the physical changes that were made when assets were added, replaced, or rehabilitated as part of CIP projects, or when assets were repaired as part of an in-house maintenance activity. Most of the equipment Operations and Maintenance (O&M) manuals have been scanned and uploaded to the CMMS database for immediate access by all staff at the plant, which is especially useful to maintenance staff and the AMT. WTD is tracking monthly maintenance costs of equipment using the CMMS database to optimize available resources. A Criticality Matrix composed of Consequence of Failure (COF) and Likelihood of Failure (LOF) is used to update project prioritization for the CIP projects, which helps guide infrastructure renewal strategies and decisions. In FY 2022 the AMT revised the COF and LOF criteria to include items such as physical condition, performance and reliability, regulatory compliance, financial impact, and public confidence.

- **Predictive Maintenance:** In FY 2022 the AMT began using oil and vibration analyses to prioritize equipment maintenance. G building was repurposed to house the oil drums with new and better oil distribution system.

- **Maintenance Training:** In FY 2022 the Maintenance Branch divided its staff into five mechanics shops. Each group participated in periodical rotational training to improve process knowledge related to level of service.

Regulatory/Compliance Items

- **Environmental Management System (EMS):** Since 2010, WTD, as part of the Wastewater Management Program, participated in DEQ's Virginia Environmental Excellence Program (VEEP) at the highest Extraordinary Environmental Enterprise (E4) status. E4 status is awarded to enterprises with an active, fully implemented EMS and requires yearly internal audits as well as third party audits every three years. Continuing participation in the VEEP program requires reapplication every three years, at which time the status is reevaluated and awarded. The current E4 status was received in CY 2023, and the next renewal application process will occur in FY 2026.

- **Training:** Increasing operator competency and certification levels continue to be goals of WTD. There are 43 licensed plant operators at the NCPCP. Continuing education and training for plant operations staff has been emphasized in the past year using both onsite and remote training programs. The computer-based training center in the Administration Building allows all computer-based training to be conducted in-house. Specialty training offered onsite and offsite, to maintain competency in specific skill areas was also provided. The NCPCP training manual is continually updated. The average number of training hours per employee for FY 2023 was 39 hours.

- **Waste Load Allocation:** In CY 2022, WTD met its waste load allocations for Total Nitrogen (TN) and Total Phosphorus (TP). The facility observed an annual TN discharge load of 299,566 lb vs. the allocated load of 612,158 lb. The facility discharged an annual TP load of 6,683 lb, against the allocated load of 36,729 lb.

- **Nutrient Credit Sales:** In CY 2022, the plant sold 312,592 lb of Total Nitrogen (120,945 lb of Class A, 191,622 lb of Class B, and 25 lb private exchange) that resulted in $9,642 in credits on the Virginia Nutrient Exchange. In CY 2022, the plant sold 30,046 lb of Total Phosphorus (7,258 lb of Class A and 22,788 lb of Class B) that resulted in $11,943 in credits on the Virginia Nutrient Exchange.

2.3.2 Engineering Support Branch

The Engineering Support Branch (ESB) provides support in the following areas: capital improvement, regulatory compliance, energy management, environmental management, sustainability, process engineering and other cross-branch services, such as emergency response, safety, and security. ESB is made up of three groups: Capital Improvement Program (CIP), Regulatory Compliance and Sustainability, and Operations Support. Highlights of ESB activities completed in FY 2023 and those planned for FY 2024 are described in the following sections.

Capital Improvement Program (CIP)

- **Capital Improvement Plan (CIP) Annual Budgeting:** The WTD CIP annual budgeting process is based upon a system defined in the 2009 NCPCP Master Plan. The process provides a comprehensive, repeatable, responsive, and objective means of planning the NCPCP CIP program. The program is projected a minimum of 10 years from the planning fiscal year and identifies anticipated expenditures beyond the 10-year planning period. The planning team, led by the CIP

Program Manager, includes representatives from all aspects of the CIP program including WTD operations, maintenance, and IT branches; capital facilities CIP program support staff, and the WPMD financial management group. Major steps include:

- Capture updates to reflect changes in the industry, regulatory environment, financial aspects of the Wastewater Management Program, and other factors that may influence the capital program.
- Adjust to and validate benefit criteria and scoring. For FY 2023, planning criteria included life, health, and safety; regulatory compliance; risk reduction; and financial, environmental, and local community criteria. After a project is updated, it is scored based on the benefit criteria.
- Revise existing projects and create new projects as needed. The projects are captured at a high level on project sheets that include project goals, description, drivers, high level schedules and estimates, and status in the CIP budget.
- Update the 10-year planning forecast to reflect changes in project cost, schedule, and addition or elimination of projects. The project schedule is based on multiple aspects, including asset condition, regulatory requirements, and CIP program implementation considerations.

- **Capital Improvement Project Management:** ESB provides program and project management of the CIP program. In FY 2023 extensive work was accomplished in the following areas.
  - **CIP Program:** Annual assessment on CIP program performance was performed in FY 2023 using the health measures established. They provide a more holistic view of the program's success. The measures are based on maintaining the facility's levels of service during and after construction, as well as monitoring progress and compliance with contractual requirements and County wide initiatives. This effort received executive endorsement and its implementation has improved monitoring of the CIP program.
  - **Capital Infrastructure Training:** In FY 2023, 125 training sessions were carried out in CIP. Improvement areas on training planning and scheduling, training materials and content were identified. Continuous improvement on training is being evaluated and carried out in order to better meet the training needs of plant staffs and balance plant's busy schedule and contract time constraints.

Regulatory Compliance and Sustainability

The Engineering Support Branch provides services in regulatory compliance and sustainability to NCPCP as follows:

- **Regulatory Compliance:** Reports and plans that were prepared and submitted to Virginia DEQ and Environmental Protection Agency (EPA) or maintained onsite during FY 2023 are shown below:

- Plant submitted a request to DEQ to add outfall #6 with a revised stormwater pollution prevention plan (SWPPP) in November 2022. DEQ approved the request of adding outfall #6 and the updated SWPPP in December 2022
- The Hazardous Materials Management Plan (HMMP), Oil Discharge Contingency Plan (ODCP), and Spill Prevention Control and Countermeasures (SPCC) Plan at NCPCP were updated in January 2023.
- The semi-annual Sewage Sludge Incinerator deviation report was submitted to DEQ in January 2023 for a reporting period of July 1, 2022 to December 31, 2022 and was submitted in July 2023 for the reporting period of January 1, 2023 to June 30, 2023.
- The semi-annual fuel quality certification reports were submitted to DEQ in January 2023 and July 2023, for a reporting period of July 1, 2022 and December 31, 2022 and January 1, 2023 and June 30, 2023, respectively.
- The Title V semi-annual monitoring reports were submitted to DEQ in January 2023 and August 2023, for a reporting period of July 1, 2022 and December 31, 2022 and January 1, 2023 and June 30, 2023, respectively.
- The Annual Water Reclamation and Reuse Report for CY 2022 was submitted to DEQ in February 2023.
- The Biosolids 503 reporting for CY 2022 was submitted to EPA in February 2023.
- The Title V Annual RACT report and Annual Compliance Certification for CY 2022 were submitted to DEQ in February 2023.
- The Tier II Emergency and Hazardous Chemical Inventory Report at NCPCP was submitted electronically to the Local Emergency Planning Commission in February 2023. Additionally, a hard copy was submitted to Virginia Emergency Response Council in late February 2023.
- The Annual Air Certification Statement was submitted to DEQ in April 2023.
- Stack testing was performed on Incinerator P4 as required by Sewage Sludge Incineration Maximum Achievable Control Technology (SSI MACT) for Incinerator P4 and fugitive emission tests on Ash Handling Units at K2 in October 2023. All tests were found to be in compliance with SSI MACT

- **Sustainability:** During FY 2023 ESB staff:

  - Evaluated and analyzed energy (electricity, natural gas, and diesel) consumption at the NCPCP as part of the 50001 ready program.
  - Completed the Greenhouse Gas Inventory at NCPCP for CY 2022 in April 2023.
  - Represented NCPCP in the Environmental Management System Team of the Wastewater Management Program.
  - Managed the nutrient trading program, including nitrogen and phosphorus, for NCPCP.
  - Managed the Spill Response Plan at NCPCP and provided the spill response training to both staff and contractors at the NCPCP.

Operations Support

The Engineering Support Brach provided support services to the Operations Branch at the NCPCP in FY 2023. ESB staff:

- Participated in daily process meetings to provide support pertaining to treatment processes.
- Provided daily support in process monitoring, troubleshooting, and optimization to ensure efficient, effective, and compliant operations.
- Continued to develop, review, and maintain the treatment process setting sheets and operator log sheets.
- Prepared and maintained a monthly report for emergency generator usage as required by the minor New Source Review (mNSR) permit.
- Prepared and maintained a monthly report as required by the State Operating Permit.
- Coordinated the update of Standard Operating Procedures (SOP) on an as-needed basis.
- Provided administrative support pertaining to operator training and license examination.
- Developed specifications and purchased equipment using the County procurement system as requested by the Operations Branch.
- Assisted operation and prepared miscellaneous reports, including weekly landfill gas usage, total hydrocarbon report, sewer certification, high flow event record, reclaimed water, weekly work order summary, etc.

2.3.3 Operations Branch

The Operations Branch is responsible for the daily operation, monitoring, and control of the liquid process, solids processes, residuals disposal, and reclaimed water production at the NCPCP on a continuous (24/7) basis. Included in these responsibilities are sampling; process monitoring and control; record keeping and reporting; in-house operator training; reviews of engineering, planning, and design projects; treatment system project planning; and coordination with engineers on design, construction activities and start-ups.

In FY 2023, the NCPCP consistently produced a high-quality effluent that met the effluent discharge permit requirements as shown in the following paragraphs. There were no effluent discharge violations during this period. The NCPCP has received the Peak Performance award for the past 24 consecutive years. WTD continues to be a leader in protecting the Chesapeake Bay and considers maintaining this status an important initiative for FY 2024.

The list below provides a comparison of the permit limits and the actual monthly average discharge concentrations for key effluent discharge parameters in FY 2023. The text below presents monthly average discharge concentrations for key regulated parameters. The NCPCP operates an enhanced nutrient removal process that not only achieves the required nutrient removal load requirements, but also acts as a revenue source as excess nutrient credits are sold on the Virginia Nutrient Exchange.

1. Flow
    a. Discharge Limits = 67 mgd
    b. FY 2023 Annual Average = 35.66 mgd
2. 5-day Carbonaceous Biochemical Oxygen Demand (CBOD5)
    a. Discharge Limits = 5 mg/L
    b. FY 2023 Annual Average = <2.6 mg/L
3. Total Suspended Solids (TSS)
    a. Discharge Limits = 6 mg/L
    b. FY 2023 Annual Average = 0.86 mg/L
4. Total Phosphorus (TP)
    a. Discharge Limits = 0.18 mg/L
    b. FY 2023 Annual Average = 0.1 mg/L
5. Total Nitrogen (TN)
    a. Discharge Limits = 3 mg/L
    b. FY 2023 Annual Average = 2.85 mg/L
6. Summer (April – October) Ammonia-Nitrogen (NH3-N)
    a. Discharge Limits = 1 mg/L
    b. FY 2023 Annual Average = 0.1 mg/L
7. Winter (November – March) Ammonia-Nitrogen (NH3-N)
    a. Discharge Limits = 2.2 mg/L
    b. FY 2023 Annual Average = 0.1 mg/L
8. Dissolved Oxygen (DO)
    a. Discharge Limits = >6 mg/L
    b. FY 2023 Annual Average = 8.6 mg/L
9. pH
    a. Discharge Limits = 6.0 – 9.0

b. FY 2023 Annual Average = 7.3

10. Escherichia Coliform (E. Coli) – Monthly geometric mean

    a. Discharge Limits = 126/100 mL

    b. FY 2023 Annual Average = 1/100 mL

The NCPCP is authorized to produce and distribute up to 6.6 MGD of Level 1 Reclaimed Water, as regulated under 9VAC25-740, for industrial and irrigation purposes in Fairfax County. The operations staff is responsible for monitoring all components of the treatment and distribution system and ensuring that reclaimed water achieves the minimum treatment standards listed below.

1. Flow

    a. Treatment Standard = 6.6 mgd

    b. FY 2023 Annual Average = 1.67 mgd

2. 5-day Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)

    a. Discharge Limits = 8 mg/L

    b. FY 2023 Annual Average = <2.75 mg/L

3. pH

    a. Discharge Limits = 6.0 – 9.0

    b. FY 2023 Annual Average = 7.2

4. Turbidity

    a. Treatment Standard = 5 NTU

    b. FY 2023 Annual Average = 0.66 NTU

5. Total Nitrogen (TN)

    a. Treatment Standard = 8 mg/L

    b. FY 2023 Annual Average = 2.85 mg/L

6. Total Phosphorus (TP)

    a. Treatment Standard = 1 mg/L

    b. FY 2023 Annual Average = 0.14 mg/L

7. Total Residual Chlorine (After minimum contact time of 30 minutes at average flow or 20 minutes at peak flow)

a. Treatment Standard = 1 mg/L

b. FY 2023 Annual Average = 1.3 mg/L

8. Escherichia Coliform (E. Coli) – Monthly geometric mean

a. Treatment Standard = 24/100 mL

b. FY 2023 Annual Average = 1/100 mL

In FY 2023, Fairfax County produced 621 million gallons of reclaimed water for use at the Covanta Energy Facility, Lower Potomac Public Park, and the Laurel Hill Golf Club. The sale of reclaimed water is a source of revenue for the County. In FY 2023 the County collected $275,008 for reuse water.

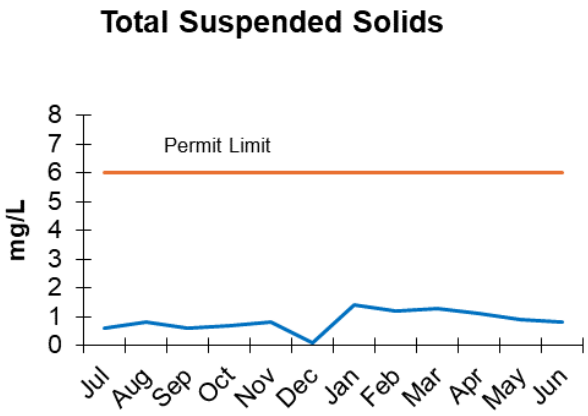


Figure 2-17: NCPCP FY 2023 TSS Effluent Quality

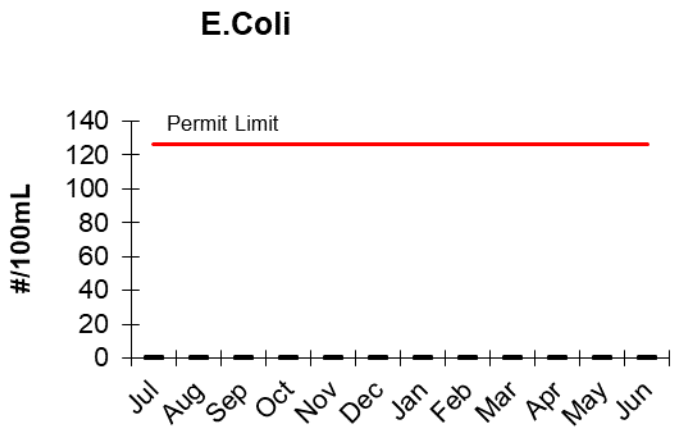


Figure 2-18: NCPCP FY 2023 E. Coli Effluent Quality

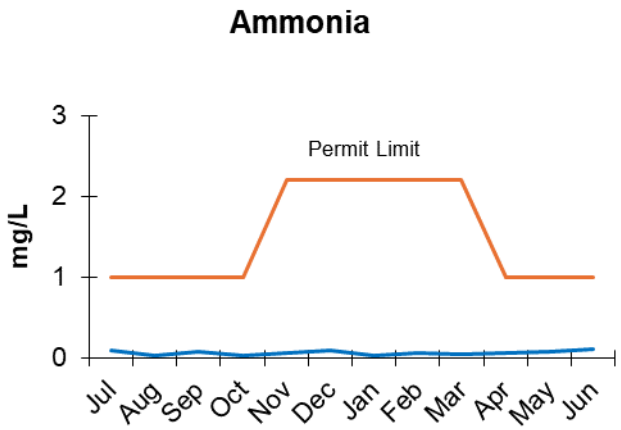


Figure 2-19: NCPCP FY 2023 Ammonia Effluent Quality

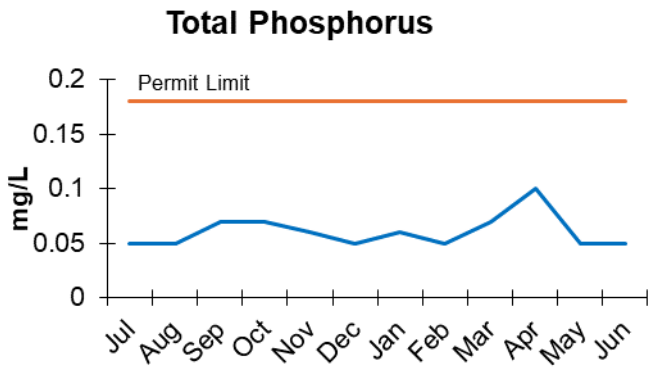


Figure 2-20: NCPCP FY 2023 Total Phosphorus Effluent Quality

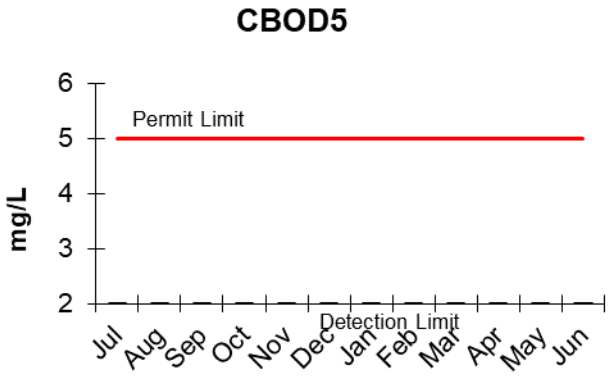


Figure 2-21: NCPCP FY 2023 CBOD5 Effluent Quality

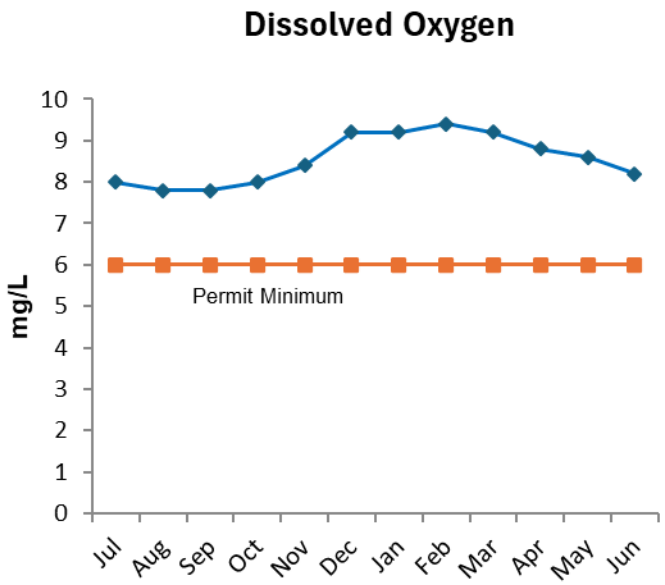


Figure 2-22: NCPCP FY 2023 Dissolved Oxygen Effluent Quality

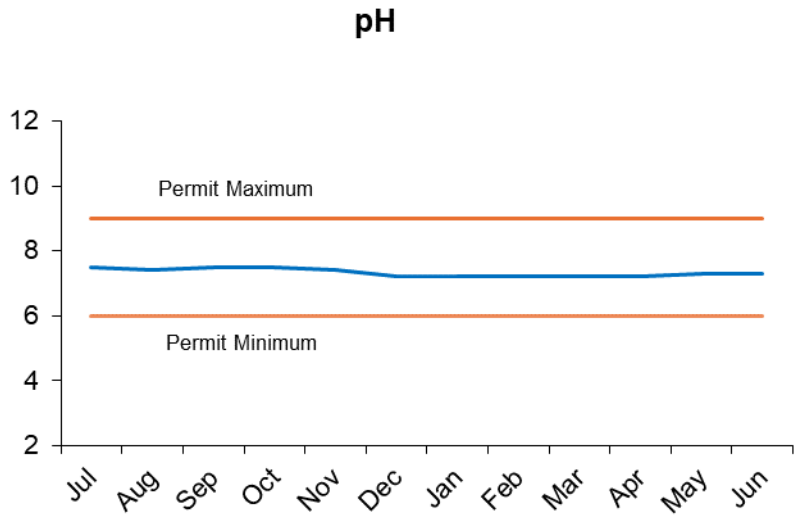


Figure 2-23: NCPCP FY 2023 pH Effluent Quality

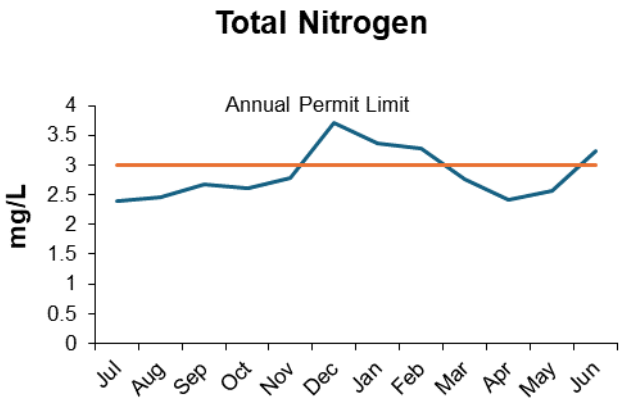


Figure 2-24: NCPCP FY 2023 Total Nitrogen Effluent Quality

2.3.4 Maintenance Branch

The Maintenance Branch at the NCPCP includes the Asset Management, Instrumentation, Electrical, HVAC, Mechanical, and Buildings and Grounds Sections. This branch provides critical support through their preventive maintenance and corrective equipment repair/replacement, administrate, and construct in-house projects and asset management efforts to ensure NCPCP achieves a high level of reliability.

Highlights for projects completed in FY 2023 or planned for FY 2024 include the following:

- **HH1 Facility:** In FY 2023, maintenance staff prepared the APW Pump Station (HH1) facility to be repurposed to the electric shop warehouse.
- **G Building – new upgraded oil system:** In FY 2023, the Maintenance Branch started oil color coding for the WTD equipment and repurposing G building to host a new oil Storage room. The branch has also started new color coding to improve the oil management and better serve the Plant equipment.
- **Secondary Rectangular Clarifier:** The rotating mechanisms in Clarifiers 12-17 were replaced in FY 2023. All expansion joints were replaced in FY 2021.
- **ASE Pumping Station:** ASE Pump Nos. 4, 5, and 6 were repaired in FY 2023.
- **Roof Upgrades:** Roofs of Bulk Storage (RR), Gravity Filter Building (DD) and Equalization Tanks (B3) were replaced in FY 2023
- **Odor Control Media Replacement:** The temporary odor control system located at Blended Sludge Storage Tank (R2) had its media replaced in FY 2023. Due to the small and temporary nature of the carbon odor control system at R2, the carbon media is replaced semi-annually.

- **Solids Handling Upgrades:** In FY 2021, maintenance staff replaced two cake pumps and the other two will be replaced in FY 2024. Rehabilitation of the centrifuges continues on an annual basis, which will postpone $24 million in spending for seven years.
- **DD Blowers:** The plant replaced the DD blowers in FY 2023. Light structure cover will be installed in FY 2024.
- **Expansion Joints:** The Plant started a new program to upgrade and replace all expansion joints, starting with Secondary Clarifiers. Currently, replacing all expansion joints of Actuated Sludge Tanks (ASTs) and Tertiary Clarifiers in FY 2023 and FY 2024.
- **Tertiary Clarifiers:** Replaced TC2B and TC3A mechanism in FY 2023 and expect to replace TC2A in FY 2024.

2.3.5 Wastewater Treatment Division Facilities Inspection

Facilities at the plant include mechanical bar screens, sewage pumping, primary clarification, off-line flow equalization, activated sludge enhanced nutrient removal (ENR) treatment and settling, along with in-line flow equalization, secondary effluent pumping, post-anoxic denitrification through MBBR with methanol addition, chemical clarification, gravity filtration, filter effluent pumping, and Ultraviolet (UV) disinfection. Primary and Waste Activated Sludge is thickened, dewatered, and incinerated onsite to produce dry ash; and then hauled to and disposed of in a sanitary landfill. Screenings and grit are hauled to the Covanta Waste-to-Energy Facility. Pictures of the NCPCP work that was recently completed or will be in progress soon are provided in Figure 2-25 through Figure 2-30.

Figure 2-25: Circular Secondary Clarifier Isolation Valve Replacement

Figure 2-26: ASE Pump Station Bypass Pumping

Figure 2-27: B3 Equalization Tank Odor Control Measures

Figure 2-28: E2 Building Return Activated Sludge (RAS) Valve Replacement

Figure 2-29: New R1 and R2 Sludge Storage Tanks

Figure 2-30: New R1 Centrifuge Feed Pumps

2.4 Wastewater Planning and Monitoring Division

2.4.1 Overview of Division

The Wastewater Planning and Monitoring Division (WPMD) performs several technical and administrative functions for the Wastewater Management Program. These functions include:

- Review of system development and additional treatment capacity needs for both short- and long-term projections.
- Administration and management of the system's financial operations.
- Administration of contract capacity for the County's wastewater flows to inter-jurisdictional plants and other jurisdictions' flows to the County's plant.
- Evaluation of compliance for developer, Fairfax Water, VDOT, FCDOT, Stormwater, and extension and improvement plans.
- Provision of environmental laboratory support for the Wastewater Management Program and other County agencies.
- Management of the federal and state pretreatment requirements under the Clean Water Act and Virginia Water Control Act, and the County's Sanitary Sewers and Sewage Disposal Code (Chapter 67.1).
- Conduct of targeted outreach and education programs to engage and raise customer awareness and engender stakeholder support.

The Division includes three branches, the Engineering Analysis and Planning Branch, the Environmental Monitoring Branch, and the Financial Monitoring Branch, which are discussed in further detail in Sections 2.4.2, 2.4.3 and 2.5, respectively. There were 56 budgeted positions in the WPMD in FY 2023. All staff, except for Environmental Monitoring Branch personnel and warehouse personnel in the Financial Monitoring Branch, are located at the Fairfax County Government Center.

The Division, in coordination with WTD and WCD, supports asset management work for the entire Wastewater Management Program. The Asset Management Team (AMT) develops and implements a program-wide business process that supports the capital planning needs of the Wastewater Management Program. Based on the outlined methodologies of component assessment and criticality rating, the AMT identifies major infrastructure components within the Wastewater Management Program that require upgrades and develops an accurate repair and replacement budget.

2.4.2 Engineering Analysis and Planning Branch

The Engineering Analysis and Planning Branch is responsible for collection system planning, review and approval of sanitary sewer construction plans, wastewater connection fee assessment and collection, and evaluating rezoning and Comprehensive Plan changes to determine their impact relative to the capacity of the sewer system, including the treatment plants. The Branch uses multiple hydraulic modeling tools including InfoSewer®, and Infoworks ICM a system-wide hydraulic model to evaluate the capacity of the system and plan for future use. The Engineering Analysis and Planning Branch reviews developer, Fairfax Water, VDOT, FCDOT, Stormwater construction plans, and the County's sanitary sewer extension and improvement plans to ensure compliance with the Fairfax County Public Facilities Manual, Board of Supervisors adopted sewer policy, and state regulations. As part of the plan review process, the Branch initiates and maintains the sanitary sewer reimbursement program, which provides an incentive to developers to install larger facilities to accommodate the ultimate buildout in the sewershed. Developers have shown an increased interest in aligning their project with the sanitary sewer reimbursement program.

In FY 2023 the Branch:

- Continued workshops and Microsoft Teams meetings with subset of Northern Virginia Building Industry Association (NVBIA)/National Association of Industrial and Office Properties (NAIOP) members to increase transparency and improve process and procedures around sewer capacity analysis for new development. The branch developed and distributed a Pipe Capacity Hydraulics Excel template to facilitate standardization within the development community.
- Coordinated the Engineers & Surveyors Institute (ESI) outreach program in Spring 2023 to review capacity challenges and changes to the Public Facilities Manual (PFM).
- Increased hydraulic modeling and sewer capacity planning efforts to determine which areas required more in-depth analysis and monitoring. Results were communicated to internal wastewater stakeholders, including engineering staff as part of cross training, to eliminate information and expertise silos.

- Increased flow meters in Sully #1 sewershed and used system wide meter data to calibrate the all-pipes Infoworks Integrated Catchment Model (ICM) and inform sizing and timing of proposed CIP projects. Additional information about flow metering is discussed in further detail in Section 2.2.
- Continued quarterly meetings between WCD and WPMD, at Branch Chief and staff levels, to encourage knowledge transfer and maintain coordination.
- Completed sanitary sewer plan reviews, rezoning application reviews, and capacity reviews within allotted time including:
    - 3.60 miles of sanitary sewer approved.
    - 6.23 miles of sanitary sewer accepted.
    - 250 manholes accepted.
    - 412 plans reviewed.
    - 59 rezoning applications reviewed.
- Led review responsibility for FCDOT and VDOT plans that impact wastewater infrastructure including Route 1 Bus Rapid Transit (BRT) project, 495 Next expansion, and Route 29 widening.
- Acted as primary point of contact for public inquiries concerning sewer availability or issues regarding connections to sewer or installation of new facilities. The Branch often collaborates with other groups inside and outside of the Wastewater Management Program. In FY 2023 they continued to receive exceptional customer service feedback.
- Coordinated Plan Review and Sewer Acceptance with other County offices including the Site Development and Inspection Division, Site Application Center, Bonds and Agreement, Records Information Management, Building Division, Wastewater Permits, Wastewater Collection, Capital Facilities, and other jurisdictions.
- Continued to encourage diversification of knowledge base and inter-division networking to support career growth by conducting a field visit by WPMD staff.
- Continued staff training internally on InfoSewer® and Infoworks ICM and provided support to County's hydraulic modeling team.
- Continued to work with the Richmond Highway Embark (Route 1) project to ensure capacity and utility conflicts are addressed during design.
- Continued procurement work on a detailed follow-up analysis to focus on an identified hydraulic bottleneck downstream of Sully #1 PI connection.
- Hired a new Engineer III and Senior Engineer III position to enhance the level of service of the sewer capacity planning effort and to develop processes and procedures for the newly revised (12/6/2023) reimbursement program. The Senior Engineer III performed CIP review to identify potential financial impacts on neighboring jurisdictions.

- Received Director's approval to update PFM Chapter 10 flow factors to reflect average wastewater generation factors that have been reduced by water saving fixtures.

In FY 2024, the Branch plans to:

- Update and calibrate hydraulic model for Holme's Run sewershed analysis. The model will be refined following developments made through the Wastewater Utility Master Plan (WUMP) completed in FY 2023.
- Refine all pipes hydraulic modeling tool in Infoworks ICM with latest asset information, flow data, and development changes.
- Further refinement of a planning level hydraulic modeling tool through small scale master plan efforts (i.e., Western Fairfax analysis) for the entire system to respond to interagency requests for information on wastewater capacity for existing customers.
- Coordinate with WCD asset management and stormwater planning staff on stream restoration projects and 5-year development plans that impact wastewater infrastructure. Determine potential needs to upsize sewers for future projects during scoping phase.
- Compile County-wide sewershed and sub-sewershed data for employment and population using COG 10.0 TAZ forecast.
- Revise PFM Chapter 10 flow factors to reflect average wastewater generation factors that have been reduced by water saving fixtures. Provide additional guidance on how to evaluate existing infrastructure capacity to determine if pipe upsizing improvements are required and perform additional updates to PFM for design details.
- As a follow-up to the Metropolitan Washington Council of Governments (MWCOG) Potomac Interceptor flow analysis, continue effort for meters within the Sully # 1 sewershed to determine locations of higher inflow and infiltration as a precursor to an official Sewer System Evaluation Survey (SSES) study.
- Continue to perform CIP review for potential financial impacts on neighboring jurisdictions and communicate findings.
- Update County Geographic Information System (GIS) Meter layer to include all historical temporary and updated current meter locations. Meter layer expanded from 90 locations to 350+ locations allowing County staff to be informed of all locations of available meter data. Coordination with WCD to ensure this layer continues to be updated as new meters are installed will continue.
- WPMD staff (8 members) will complete NASSCO training to support WCD with existing evaluations.
- Coordinate with George Mason University to assess existing asset conditions and facilitate turnover of assets to Fairfax County DPWES.

- Continue to sign reimbursements as part of Reimbursement program to provide incremental partial payments or lump sum payment to developers for upsized infrastructure. Reimbursement includes payment for additional design, construction, easements, legal fees, and permits.

2.4.3 Environmental Monitoring Branch

The Environmental Monitoring Branch operates a certified Virginia Environmental Laboratory Accreditation Program (VELAP) at the NCPCP. The Branch also administers Pretreatment Program requirements/regulations under the Federal Clean Water Act and the Virginia Water Control Act to regulate the use of the Fairfax County wastewater conveyance and treatment systems. The Branch also manages the Wastewater Management Program's Outreach and Education activities.

2.4.3.1 Environmental Monitoring Laboratory Section

The Environmental Monitoring Laboratory (EML) conducts routine and specialized analyses necessary to meet and demonstrate permit compliance and supports process optimization needs at the NCPCP. The EML performs analyses for other County agencies including the Stormwater Management Program, the Division of Vehicle Services, and the Solid Waste Management Program. Furthermore, the EML provides analytical support for the Stormwater Management Program's lake monitoring initiative.

In addition, the EML supports regional ecosystem monitoring and sampling for the Gunston Cove Monitoring Program and the Chesapeake Bay Split Sampling Program (CSSP). The Gunston Cove monitoring efforts are part of a long-term study being conducted in partnership with George Mason University (GMU) to evaluate the best management practices implemented to minimize nutrient loading to County streams and tributaries of the Chesapeake Bay. The CSSP is an inter-laboratory testing program that validates water quality data generated by Chesapeake Bay monitoring programs and involves preparation of identical surface water samples for subsequent analysis at participating state, federal and academic water quality laboratories.

In FY 2023, the EML conducted nearly 40,000 water quality analyses (not including quality control samples, which require 5 to 10 times more analyses) in support of the Wastewater Management Program and other County programs. The EML continued support of the WTD in monitoring the operation and performance of the NCPCP, including conducting analyses required under the VPDES permits for effluent and stormwater discharge as well as the Water Reuse Program. This includes analytical support of plant treatment process modifications, improvements, and pilot studies.

The EML maintained certifications for all approved analytical testing methods through the renewal process administered through the VELAP and is certified in methods covering 265 analytes.

In FY 2023, EML continued the implementation of upgrades to the laboratory's parsers equipment. Laboratory upgrades for FY 2023 included the purchase of a new Biotage Extractor for automated semi volatile extractions, Millipore HX 7120 + SDS 500 DI water system, Seal 4 Channel AA500 HR System for nutrient analyses, and continued testing of version 10 of a web-based Laboratory Information Management System (LIMS).

Staff development and quality assurance remains a program priority for the EML and are necessary to maintain the VELAP certification and enhance laboratory capacity, capability, and reliability. The EML staff continue to participate and advance in the Upward Mobility Program, which fosters growth and progression of those in Environmental Technologist positions. In FY 2023, one Environmental Technologist completed the first progression of the Upward Mobility Program. The EML demonstrates the organizational commitment to continual learning and improvement by providing cross training in aspects of advanced analytical methods and quality assurance processes.

In FY 2023, one Environmental Science and Policy, Aquatic Ecology masters student from George Mason University (GMU) participated in the Laboratory Technologist Internship Program. This program is a partnership with GMU and is used to recruit environmental science and chemistry students as possible future Environmental Technologists. Student interns are paired with a laboratory technologist who provides on-the-job training in the collection and analysis of wastewater and stormwater samples. EML is exploring options to expand the Laboratory Technologist Internship Program to Howard University and other historically black colleges and universities in FY 2024 and beyond.

2.4.3.2 Industrial Waste Section (IWS)

The IWS administers the Pretreatment Program for Fairfax County to ensure compliance with regulations under the Federal Clean Water Act, the Virginia State Water Control Act, and the County's Sanitary Sewers and Sewage Disposal Code (Chapter 67.1). This program prevents introduction of pollutants from users that may interfere with or pass through the treatment process, contaminate sewage sludge, damage infrastructure, and/or create a hazardous environment for maintenance and operations personnel. This program also facilitates and ensures industrial user compliance with wastewater discharge permits and specific one-time discharge requests and authorizations. In addition, the IWS ensures that users receiving reclaimed water from NCPCP are in full compliance with Virginia's Water Reclamation and Reuse Regulations, including the requirements for public notification and education, and facility operation and maintenance.

The IWS assists WCD in assessment of surface water quality impacts of Sanitary Sewer Overflow (SSO) events and illicit discharges to and from the collection system. In FY 2023, the IWS responded to a number of these incidents in the County. WCD uses this monitoring information to determine if/when a public advisory notice should be posted to limit recreational activities during affected periods. It should be noted that the number of SSOs in the County's system is one of the lowest nationwide.

During FY 2023, the Pretreatment Program maintained full compliance with all applicable pretreatment requirements and continued its enhanced tracking of hauled septage waste delivered to the designated receiving facility at the NCPCP. The NCPCP Septage Receiving Facility primarily received waste from haulers who service residential and commercial septic tanks, landfills (leachate), and restaurant grease traps/interceptors. The majority of the septage collected in the northern part of the County is being disposed of at the Upper Occoquan Service Authority's Regional Water Reclamation Plant in Centreville and the Blue Plains Advanced Wastewater Treatment Plant in Washington D.C. Both facilities are closer geographically to northern Fairfax County than the NCPCP Septage Receiving Facility.

The regulatory oversight of septage disposal in FY 2023 included review of hauler waste manifests, onsite inspections, and sample collection/analysis from selected haulers. These steps are being used to assess the source of waste generated and ensure compliance with Fairfax County Code and NCPCP standard operating procedures. The resulting data was used to develop hauled septage fees, which were implemented at the NCPCP in FY 2020. Due to the higher organic and nutrient content of hauled septage relative to sewershed wastewater, receipt and treatment at NCPCP incurs costs that must be recovered to ensure equitable cost sharing with sewer users.

The County conducted a proactive odor evaluation of the SRF in FY 2020 to ensure minimal nuisance to the surrounding community. To stay current with odor mitigation strategies, the County began design of the Accotink Odor Control Facility in FY 2021, and construction began in late FY 2023, anticipated to be complete in FY 2025.

The Pretreatment Program fosters and promotes critical partnerships that greatly assist in leveraging resources to ensure protection of water quality throughout the County. In FY 2023, program staff continued to partner with the Stormwater Planning Division (SWPD) to identify and control illicit wastewater discharges to the County's municipal stormwater collection/conveyance system. The Pretreatment Program worked with illicit dischargers to ensure proper connection to the sanitary sewer system. Another effort involved enhanced coordination with the County's Land Development Services (LDS) to both identify sources of industrial wastewater from new facilities through review of building plans and recommend appropriate pretreatment measures and systems to ensure conformance and compliance. The Pretreatment Program collaborates with LDS and SWPD to improve the process for review and approval of plans for new cooling tower construction to specify the options for discharge to the County's municipal separate storm sewer system (MS4) or connection to the County's sanitary sewer system. In addition, the Pretreatment Program partners with WCD, SWPD, and the County Health Department, to enhance the DPWES's fats, oils, and grease (FOG) control program. SOPs for food service establishment inspection, compliance assessment, and corrective actions continue to be updated to improve program efficiency. Implementation resulted in reduced FOG discharge from restaurants and other food service facilities.

In FY 2023, the Pretreatment Program continued to develop short- and long-term initiatives to enhance its capacity to ensure viability and protect the County's collections system and treatment assets. These initiatives included:

- Procuring and implementing a database application to streamline program planning, execution, and administration.
- Developing a template for Significant Industrial User permits and fact sheets.
- Initiating a system-wide assessment and mitigation of unsafe levels of hydrogen sulfide in the County's sanitary sewers to better protect workers and minimize infrastructure deterioration.
- Collaborating with Virginia Tech's Occoquan Watershed Monitoring Laboratory to characterize sources of sodium, a wastewater constituent that contributes to unhealthy drinking water quality in the Occoquan Reservoir.

- Implementing a strategy for compliance with the U.S. Environmental Protection Agency's Dental Amalgam Rule, which regulates the discharge of dental amalgam containing mercury and silver to publicly owned treatment works.
- Implementing a Polychlorinated Biphenyl (PCB) pollution minimization approved by DEQ in December 2020.

2.5 Fiscal Control and Financial Planning Branch (Financial Monitoring Branch)

While the Financial Monitoring Branch is organized under WPMD, it is responsible for overall financial management and financial planning of the Wastewater Management Program and continually analyzes the financial position of the Wastewater Management Program to maintain competitive rates, high bond ratings, and meet financial targets. In conjunction with the County's Department of Finance, this Branch produces the Wastewater Management Program's ACFR for the Integrated Sewer System that satisfies both generally accepted accounting principles and applicable financial reporting requirements.

The Wastewater Management Program was awarded a Certificate of Achievement for Excellence in Financial Reporting by the Government Finances Officers Association of the United States and Canada (GFOA) for the FY 2022 ACFR. The Certificate of Achievement is the highest recognition available in government accounting and financial reporting, and its attainment represents a significant accomplishment by a government entity and its management. The Wastewater Management Program's ACFRs are judged by an impartial panel to meet the high standards of the GFOA's program, to include demonstrating a constructive "spirit of full disclosure" to clearly communicate its financial story and motivate potential users and user groups to read the ACFR. The FY 2023 ACFR was completed during FY 2024 and is currently under review.

The Wastewater Management Program continues to meet its strategic planning goals as they relate to the financial reporting process. The Integrated Sewer System did not issue any new bonds in FY 2023. The AAA Bond Ratings from Fitch, Standard & Poor's (S&P), and Moody's issued in FY 2017 were maintained by the Wastewater Management Program.

These high credit ratings have enabled the County to sell bonds on behalf of the Wastewater Management Program at competitive interest rates. The Branch is responsible for issuing and managing debt to fund major expansion and upgrade projects for the NCPCP and its portion of Treatment by Contract facilities.

The Financial Monitoring Branch is responsible for managing seven separate enterprise funds that are the basis for funding the Wastewater Management Program. These include Sewer Revenue, Sewer Operation and Maintenance, Sewer Bond Parity Debt Service, Sewer Bond Debt Reserve, Sewer Bond Subordinate Debt Service, Sewer Construction Improvements, and Sewer Bond Construction. Details of the sewer funds are described in Section 4.1. To ensure that the Wastewater Management Program provides high performance operation and service quality, the Branch closely monitors the following areas:

- Sewer services charges ($/1,000 gallons).
- Sewer base charges ($/quarterly bill).

- Availability fees (one-time charge).
- Treatment costs ($/MGD treated).

The Financial Monitoring Branch is also responsible for the annual submission of the Five-Year Capital Improvement Program (CIP). To ensure system revenues are adequate to support all the financial activities within the Wastewater Management Program, a five-year financial forecast is developed annually with the assistance of a financial services consultant. A five-year rate schedule is developed annually using a financial model designed to track several financial measures to ensure the County's rates remain competitive, support the bond rating, and provide funds for all the financial activities of the Wastewater Management Program. Financial indicators projected for FY 2024 and FY 2025, based on the approved FY 2024 Budget, are presented in Table 2-2. In recent years, the Branch has recommended a phase-in approach to increase rates for both the volumetric charge ($/1,000 gal) and the quarterly base charge. Details of the proposed 5-year rate increases are presented in Appendix B.

Table 2-2: Calculated Financial Indicators

Financial Indicator	Target	FY 2024	FY 2025
Net Revenue Margin	45.0% to 65.0%	52%	53%
Days Working Capital	150 to 200 days	218	216
Debt Coverage Senior	Min 2.75x	3.13x	2.95x
Debt Coverage All-in (without Availability Charges)	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

This Branch is also responsible for the warehouse inventory and supply management for the overall Wastewater Management Program. The Property Managers at WCD and WTD are responsible for warehouse inventory and supply management for their respective divisions. WPMD operates the third highest valued inventory warehouse in the County. The results of the latest Consumable Inventory Audit of the WCD Line Maintenance stockroom was conducted in May 2020 showed an inventory accuracy rate of 100% with a gross value adjustment rate of 0%. The latest results of the Consumable Inventory Audit of the WTD Lower Potomac stockroom conducted in May 2020 showed an inventory accuracy rate of 100% with a gross value adjustment rate of 0%. The values for WCD and WTD exceed the County's standards of 96% and 3% for Inventory Accuracy and Gross Value Adjustments, respectively.

Starting July 1, 2019, the County consolidated the financial operation personnel for the stormwater and wastewater groups. This consolidation took place to streamline the payment capabilities of the stormwater and wastewater groups, allowing for redundancy for both groups. However, the funding sources for stormwater and wastewater projects will remain strictly separated.

The County's Septage Receiving Facility (SRF) was constructed to receive and treat septage from local onsite sewage disposal systems in accordance with Section 15.2-2123 of the Code of Virginia. In addition, the SRF receives landfill leachate, portable toilet waste, restaurant grease, and recycled carwash water. Previously, hauled septage and wastewater were received and treated at no cost to pump and haul contractors to encourage proper disposal. This cost had been covered by the sewer charges paid by the customers of the County's public sewer system. In FY 2020 charges were implemented to maintain equity in the costs to homeowners with septic tank systems, food service establishments, and other users of hauled wastewater. Septic tank and restaurant grease wastes have higher strength than portable toilet and landfill leachate wastes. The charge for high strength waste is $27 per 1,000 gallons of the hauler's truck capacity, and for low strength waste is $7.72 per 1,000 gallons of hauler truck capacity. The proposed charges are based on the prevailing sewer service charge and will be modified as the sewer service charge is adjusted in the future.

Hazen met with the Financial Manager for the Wastewater Management Program on March 1, 2024, and communicated via email on FY 2023 results, current financial status for FY 2023, and future financial projections. The Wastewater Management Program appears to remain in solid financial shape based on FY 2023 financial indicator metrics, and performance projections forecast a continuation of this trend.

2.6 Community Outreach and Education Program

While the Community Outreach and Education Program is organized under WPMD, it supports all three divisions of the Wastewater Management Program through development and implementation of education programs and targeted outreach that engage the community, raise customer awareness, and foster stakeholder support. These are key attributes of an effectively managed wastewater utility. The Program supports Fairfax County Public Schools with curriculum-based environmental and water quality labs, and other hands-on activities. Community outreach is focused on promoting environmental messages and changing customer actions using a variety of forums and tools, including local cable networks and radio stations, e-newsletters, Facebook, Twitter, and SlideShare. The Wastewater Management Program also supports one-on-one conversation between residents, government representatives, and stakeholders.

2.6.1 Classroom Programs for Students

The Program, through a partnership with the Fairfax County School system, has developed a science-based program with targeted curriculums for elementary, middle, and high school students. Elementary activities are focused on different properties of water and how those properties help us clean wastewater or protect our infrastructure. Hands-on water quality activities such as *Why is pH a Big Deal?, Fun with Filters, Density – the Sink or Swim Experiment, Microbes are Everywhere, Water & Oxygen*, and *Wastewater Enviroscape* are conducted in schools, childcare facilities, and libraries to educate young residents on the importance of keeping our water clean. The Wastewater Management Program also sponsors an annual "Water Quality Field Day" for elementary school students and is working on new activities that incorporate the engineering aspects of wastewater management. Two programs are offered at the middle and high school level. The Sewer Science Lab and the Science of Wastewater Lab were designed to meet the Virginia Standards of Learning (SOL) and Science, Technology, Engineering, and Mathematics (STEM) initiatives. The Sewer Science Lab teaches students the basic concepts of wastewater treatment, brings hands-on applications to science labs, and encourages students to become good stewards of the environment and consider career opportunities in the water industry. The Science of Wastewater Lab is a customized lab that goes further in-depth into scientific concepts related to wastewater treatment and environmental issues about water quality and sustainability. Over the past 16 years, approximately 30,000 students have participated in a Sewer Science Lab with 2,357 participating in FY 2023. Additional middle schools were interested, but COVID protocols only allowed virtual options for this age group, which minimized their participation. During this time, the Program created a virtual plant tour of NCPCP and the virtual Science of Wastewater program. These initiatives allowed students to learn about wastewater when in-person demonstrations were not available.

The Program began another partnership/initiative with Marymount University to develop a new sixth grade elementary school program that addressed microplastic pollutants.

Photographs from recent student-based activities are shown in Figure 2-31.

Figure 2-31: Student-Based Activities at Fairfax County Schools

The Program engages and educates young people through support of science projects, NCPCP plant tours, and Boy/Girl Scout events. Fairfax County high school and middle school students with approved water quality science projects can apply to work with lab scientists in the Environmental Monitoring Lab to conduct analyses for science fair projects. Students participating in this program have won regional competitions.

The Program also provides plant tours of the NCPCP, during which high school students and adults in the community can experience the wastewater treatment process firsthand and learn the role it plays in environmental stewardship and public health protection. Tours of the Noman M. Cole Jr. Pollution Control Plant had been paused for much of the year due to staffing and construction, but 93 participants were able to tour the facility in 2023. The participants ranged from school age to collegiate level students, county employees, and residents.

In FY 2024, the program is expanding its educational offerings to elementary schools by having a "Water Science Day". These visits offer entire grade levels hands-on activities and information related to water quality and how to help keep water clean. Some events will collaborate with other DPWES divisions and have students rotate to different rooms to hear messages and participate in activities from Stormwater, Urban Forestry, Solid Waste, and Wastewater. This will provide the students with an overall environmental message and help them to understand what DPWES does for the community.

2.6.2 Internships

The Program supports staff recruitment for laboratory and hard-to-fill trade and labor positions by promoting three internship programs:

- **Laboratory Technologist Internship Program**: This program is a partnership with GMU that is used to recruit environmental science and chemistry students as possible future technologists. During this year-long program, student interns are paired with a laboratory technologist who provides on-the-job training in the analysis of wastewater and stormwater samples. Upon graduation, interns become eligible to apply for a full-time position. One student participated in this program in FY 2023. Additionally, the laboratory offers volunteer opportunities for high school students interested in the environmental sciences. Students can work with laboratory technologists throughout the summer to gain experience in an environmental laboratory.

- **Wastewater Plant Operator Internship Program**: In FY 2023, the Wastewater Management Program partnered with the Fairfax County Workforce Innovation and Skills Hub (WISH) and Melwood for a Plant Operator Recruitment and Mentoring program. Wastewater Management's Human Resources, Wastewater Collections, Plant Operations, and Plant Maintenance staff made presentations and provided tours for this program; WISH and Melwood trained on resume writing and interviewing. One recent high school graduate was hired through this program and worked as a plant operator trainee.

- **Operation Stream Shield Internship Program**: This program is a partnership between the Department of Public Works and Environmental Services (DPWES) and the Office to Prevent and End Homelessness (OPEH). Guests of the Eleanor U. Kennedy Community Shelter, Bailey's Crossroads Community Shelter, The Lamb Center, and Embry Rucker Shelter are provided part-time, temporary work experience. Operation Stream Shield helps the County meet its mandate to keep streams clean through the removal of litter and non-native invasive plant species, maintenance of the County's pedestrian trail system, assistance at NCPCP, I-66 Transfer Station, and the I-95 Landfill, and engagement in assigned special projects as they become available. Participants earn a nominal stipend and develop workforce skills that allow them to compete in a diverse economy. In FY 2023, there were three participants in this program at NCPCP.

2.6.3 Community Involvement

Targeted community outreach and engagement efforts focus on increasing customer awareness and cultivating more informed and engaged stakeholders. The program educates customers about the work and

services provided by the Wastewater Management Program and the important role these efforts play in maintaining sustainable water quality for the County and the region. Activities are designed to educate the public on how wastewater treatment at the NCPCP works and the challenges the County faces when encountering improper disposal of items such as "flushable wipes", medications, and FOG. During these events, County staff provides users with materials on how to ensure the County's sewer systems remain in optimal working condition. This allows residents to become more involved in services that affect them by asking questions, gathering information, and offering suggestions. In FY 2023, the Program participated in the following community events: Fairfax County Board of Supervisor's Environmental Expo, and Clifton Day Festival. The intended outcome of these events is to maintain a high level of customer satisfaction and receive customer feedback. The Program was not able to participate in the Drug Enforcement Administration's (DEA) semiannual take back day in FY 2023 due to staffing limitations, but plans to do so in FY 2024. This event occurs at the Mount Vernon District Police Station and Reston Police Station where residents can safely dispose of unused and expired medication. Participation in this event promotes proper storage and disposal of medications and shows the County's commitment to helping protect human health and the environment. Figure 2-32 and Figure 2-33 illustrate examples of community involvement.

Figure 2-32: Community Involvement

Figure 2-33: Community Awareness booth setup

2.6.4 Public Messaging

Public messaging is a critical component of community engagement and education. The Program focuses on three key areas: promoting proper disposal of discarded medication, proper disposal of FOG and proper disposal of wipes. Proper disposal of discarded medications is promoted through drug take back programs and proper disposal of medication in the trash. Minimizing the discharge of FOG and wipes into the County's wastewater collection system through education on how they cause sewer backups and addressing proper disposal of FOG and wipes in the trash. A subcommittee member of the Fairfax County Opioid and Substance Abuse (OSA) Task Force helps align the message with the Virginia Governor's Task Force on Prescription Drug and Heroin Abuse Implementation Plan. The Fairfax County OSA Task Force Drug Disposal subcommittee consists of representatives from multiple County agencies, including the Wastewater Management Program. Subcommittee initiatives include creating an updated map of permanent dropboxes located in Fairfax County for residents to dispose of medications properly and conveniently.

In FY 2023, messaging and outreach efforts continued to include proper disposal of wipes and FOG in the trash to prevent sewer backups, protect the infrastructure, and highlight wastewater management workers through multiple media outlets. The video series, *Flushed! The Journey of Wastewater*, continued to highlight different teams throughout wastewater management. An EnviroPod focused on proper disposal of FOG by food service establishments was conducted and a FOG mailer in English and Spanish was created to inform residents how to avoid backups and overflows caused by FOG.

In FY 2023, public messaging continued to include webinar presentations that promoted the Wastewater Management program, highlighted environmental stewardship efforts, and continued educating attendees on proper disposal of FOG, wipes, and medication.

Other local and regional outreach consisted of public service announcements, radio ads in multiple languages, emailers, and social media posts distributed throughout the County. Figure 2-34 illustrates an example from a FOG Prevention campaign that used FOG mailers. Figure 2-35 showcases an example from a Medication Takeback campaign.

Figure 2-34: FOG Prevention Mailer

Figure 2-35: Medication Take Back Mailer

2.7 Information Technology Services Branch

While the Information Technology Services Branch (IT Branch) is organized under WTD, it provides critical system support to all three divisions of the Wastewater Management Program. The IT Branch supports Wastewater Management Program employee needs related to computers and information systems, including training, software, and hardware deployment.

The IT Branch has continued to improve and remain a high-performance branch by providing quality, reliable, available, and secure information technology systems, and resources in support of the mission and strategic objectives of the Wastewater Management Program, and in compliance with the DPWES and County information technology polices. IT staff within each Division work together under the same leadership to manage and support IT infrastructure and automation systems for the entire Wastewater Management Program including following major systems:

- Supervisory Control and Data Acquisition (SCADA) systems.
- Network infrastructure for the NCPCP, 63 wastewater pumping stations, three pump and haul facilities, two stormwater pumping stations, one stormwater flood control facility, and one water reuse pumping station.
- Enterprise Asset Management System (HxGN EAM ASE V11.6 Build).
- Enterprise Asset Management System (Mobile System).
- Laboratory Information Management System (SampleMaster V9).
- Industry Waste Pretreatment iPACS public web application.
- WebDAS2K by Trace Environmental Systems.
- InfoWorks ICM - Sewer Edition.
- InfoWorks ICM Viewer.
- Plant Operation eLogbook Web application.
- Wastewater Management Program IT Request Online Web application.
- Online Operation and Maintenance Document Library.
- WWM and STW Online Requisition System.
- Wastewater Collection CCTV Inspection WinCan VX system.
- EnviroSim BioWin 6.2 to simulate operations in wastewater treatment plants.
- FactoryTalk® EnergyMetrix 2.30, web-enabled energy management software package.
- Instrumentation Flow Metering Software Qstart 1.7.

- Unity Pro, IEC Programming Software for Modicon PACs.

The Wastewater Management IT infrastructure is composed of three local area networks (LANs), one for each division, located at the Robert P. McMath Facility (WCD), NCPCP (WTD) and the Fairfax County Government Center (WPMD), respectively. These networks are part of the Fairfax County Government Enterprise System. The County currently has a total of 63 pumping stations connected to the LANs at the Robert P. McMath Facility and NCPCP through Cox Metro Ethernet service.

The SCADA systems at the NCPCP and the Robert P. McMath Facility are protected by an internal security firewall, and all systems and hardware have a private IP address that provides network security protection and mitigates the security risks inherent to the use of the SCADA system. The County has consolidated all SCADA maintenance agreements into one contract. This provides SCADA redundancy in a virtualized environment for wastewater collection and treatment processes, reducing SCADA downtime and addressing some SCADA disaster recovery needs.

In FY 2023 the IT Branch:

- Worked with the ESB on a variety of plant construction projects to deploy and establish new single mode fiber optic network communications to gradually replace the multi-mode fiber optic network communications.
- Completed the Windows 2012 OS servers to Windows 2022 OS in two WWM data centers.
- Completed the in-house project of implementation the Plant Energy Monitoring automatic reporting for plant energy consumption monitoring.
- Deployed the customized calibration interface in HxGN EAM application for the NCPCP maintenance staff. Setup the mobile interface on iPad for the EAM Transit IOS application.
- Enhanced the laboratory chemical inventory and usage tracking system for the EML.
- Worked with automation engineers to update SCADA development/production databases, which include BOA and new projects throughout the NCPCP.
- Provided support to SCADA consultants and contractors at the NCPCP with the HxGN EAM integration project.
- Maintained Wastewater Management IT infrastructure with the latest Microsoft security and patch updates and personal computer replacement program.
- Worked with department of information technology (DIT) to deploy the new release for iPACS public web application for Wastewater Industry Waste Pretreatment session.
- Completed the NCPCP security camera system enhancement project in areas such as Truck Scale.
- Installed and configured the SCADA LAN in the K1K2 operation control room. This involved configuring one Cisco IE-4000 SCADA switch and two Cisco IE-4000 switches for PLCs.

- Upgraded SCADA Cisco switch and single-mode fiber trunk line at FF facility, resolving network drop issues.
- Participated in planning and reviewing PLC/SCADA/communication infrastructure on several projects including Primary & Secondary Sustaining Project, Solid III, B3, B4, Non-Process Facility Modernization, Truck Scale, etc.
- Participated in establishing new procedures and process and monitoring tools that will potentially reduce energy use by 10% by 2029. This aligns with the NCPCP energy reduction plan.
- Worked with automation engineers to update SCADA development/production databases, which include basic ordering agreements and new projects throughout NCPCP, such as MCC/DC improvements and the UV Disinfection project.
- Reviewed facility modernization proposals related to SCADA network infrastructure, phone, cable, etc. including Primary & Secondary rehab, Accotink Odor Control, Solids 3, truck Scale, B3 & B4, None-Processing facility renovation, and plant wide process camera system.
- Provided support to SCADA consultants and contractors at the NCPCP and WCD pumping stations. In FY 2023 a total of 230 SCADA system configuration change requests have been completed, including iFIX database modifications, iHistorian database modifications, IGS drive configurations, and SCADA network switch configurations.
- In FY 2023, around 200 new assets have been added with PMs for new plant assets from multiple projects including Solids III and MCC/DC projects.
- Maintained Wastewater Management IT infrastructure with the latest Microsoft security and patch updates.
- Provided effective computer and user support for the entire Wastewater Management Program business area.

In FY 2024, the IT Branch will:

- Continue implementing secure measures to prevent cyber-attacks and provide local operational control to ensure continuous operation.
- Continue the effort to upgrade Wastewater SCADA system iFix5.9 to version 2023, iHistorian 2022 on Windows 2022 server OS.
- Continue working with DIT to deploy two new FFX Core switches and two new SCADA switches for A2 Room 201 and E2 server room; enable the network redundancy for the plant data centers.
- Continue working with DIT/QCI and Siemens to create a dedicated local network for the HVAC system, which will be fully tested and moved into production in 2024.
- Continue working with ESB and WDCD engineers to complete and make the E2 server into the redundant server room for A2 data center.

- Continue enhancing the laboratory chemical inventory and usage tracking system for the EML.
- Continue working with the ESB on a variety of plant construction projects to deploy and establish new single mode fiber optic network communications to gradually replace the multi-mode fiber optic network communications.
- Continue working with DIT and ESB on plant radio and PA system upgrade.
- Continue working with ESB on NCPCP copper line and fiber optic communication system engineering drawing project.
- Continue working with ESB on NCPCP security camera system enhancement in areas of B3 and B4 projects.
- Continue working with Siemens HVAC vendor, DIT, QCI and plant HVAC team to upgrade and secure the LAB HVAC network infrastructure.
- Continue developing and improving Power BI capabilities and implementation to support effective information management reporting.
- Continue implementing the customized calibration interface in HxGN EAM application for the NCPCP maintenance staff.
- Work with automation engineers to update SCADA development/production databases, which include BOA and new projects throughout the NCPCP.
- Continue supporting the iPACS public web application for Wastewater Industry Waste Pretreatment session.
- Provide support to SCADA consultant/contractors at the NCPCP and WCD pumping stations.
- Maintain Wastewater Management IT infrastructure with the latest Microsoft security and patch updates and personal computer replacement program.

2.8 Human Resources/Organizational Development/Safety Section

The Human Resources (HR) Section of WCD serves as a centralized HR service for all Wastewater Management (WWM) for recruitment, payroll processing, employee relations matter, workforce planning and general HR management functions. The Human Resources team coordinates with both DPWES HR and County HR to make sure WWM is operating in accordance with County and DPWES policies and guidelines.

2.8.1 WCD HR/OD/Safety Section

WCD continued with its admirable safety record in FY 2023. Compared with FY 2022, improvements were seen in the Total Recordable Incident Rate (TRIR) and Days Away Restricted or Transferred (DART) cases.

Safety training is a continual element within the Safety and Emergency Management (SEM) program no matter the particular fiscal year. What added to the difficulty in conducting training during this period was the presence of the coronavirus/COVID 19 in the community at large. In person individual and group training sessions were greatly curtailed. However, in person mandatory trainings, such as the Virginia Department of Transportation work zone trainings, were still held on occasion. But all participants had to meet the stringent personal protective equipment (PPE) requirements in place at the time.

FY 2023 also added greatly to the demands of the SEM section in meeting the inventory levels (PPE and related sanitation products) needed to support WCD operations while under the auspices of the Virginia Occupational Safety and Health Administration temporary COVID 19 standard. Hand sanitizer, plastic barrier shields, disinfectant sprays and face masks (cloth and KN95 masks, for example) were in great demand and short supply. The SEM section was supported greatly by the efforts of its in-house warehouse staff and the single point ordering system set up by the department (Department of Public Works and Environmental Services).

DriveCam (cameras in division vehicles monitoring individual driving behaviors) results continue to be encouraging in that the WCD seems to be experiencing a reduction in vehicle related accidents and losses. Handheld cell phone use continues to be monitored and addressed, as needed.

2.8.2 WTD HR/OD/Safety Section

In FY 2023, WTD performed approximately 315,660 hours of regular time and 7,412 overtime/compensatory leave (24/7/365) hours of work.

WTD experienced no property damage incidents, seven minor recordable injures, one lost time injury, and seven COVID-19 Occupational Safety and Health Administration (OSHA) reportable cases.

The WTD Process Safety Management (PSM) program was reviewed with complete Process Hazard Analysis (PHA) for each methanol: fill station, bulk storage location, pump room, fire suppression system, and electrical distribution center. Process Safety Management for covered and voluntarily covered process was accomplished in accordance with 29 CFR 1910.119.

WTD Safety Office trained new hires, contractors, and visitors, providing plant safety orientation. Training included plant hazards, focusing on emergency actions, evacuations, shelter in place, hazard communications, and emergency signals. Training activities included conformance to 29CFR 1910 Industrial Operations Respiratory Program, training personnel in the use, care, and maintenance of Powered Air Purifying Respirators (PAPR), as an option for N95 respirators.

WTD Safety participated in design and review of the new B4 pump station, Accotink Odor Control Facility, and B3 odor control unit, and new facility entrance planning. WTD Safety held a safety training day, partnering with contractors, to inform plant personnel, and contractors of new hazards. New hazards awareness focused on commissioning a new liquified petroleum transfer station and bulk storage area for building K1 and K2 incinerator back-up fuel supplies.

The Hearing Conservation Program continued plant wide, with departments participating in audiogram baseline/annual testing and training. NCPCP continued with installment of administrative controls ("Noise Area" signage) with addition of hearing conservation stations, and provision of hearing protection (ear plugs/muffs) at entrances to high noise areas.

2.9 DPWES GIS Services Team

The GIS Services team serves the entire DPWES department and directly supports the Wastewater Management Program's GIS operations and initiatives. This includes a diverse set of tasks such as completing operational service requests for physical asset data and records capture, updates, analysis, and data modeling, training, database management, application development and integration, and recommendation of GIS software and products. The GIS Services team maintains approximately 100 GIS enterprise geodatabase layers and records, and approximately 30 GIS applications.

GIS Services team initiatives completed in FY 2023 include:

- Completion of a five-year department-wide strategic GIS road map.
- Integrated GIS into CPMIS (CIP construction project management) to track projects and progress spatially.
- Built and published the backend web GIS services to support the implementation of Cityworks.
- Created a data access application using Experience Builder for contractors to access sensitive wastewater GIS data.
- Conceptualized and piloted a GIS community of practice and learning within the county to assist users with the transition from ArcMap.
- Planned and socialized updates with senior management to the GIS data model to accommodate emerging business needs.
- Migrated many ArcMap users to web GIS and ArcGIS Pro.
- Developed internal Quality Assurance/Quality Control (QA/QC) scripts to improve weekly data editing processes on GIS attribute data.
- Completed thousands of as-built attribute updates to support a county-wide all pipes model.
- Developed county-wide authoritative GIS data policy and publishing / consumption model.

In FY 2024, the GIS Services team plans to continue moving users to new desktop technology and push forward with the transition to web GIS. Expected initiatives are to:

- Continue to support the implementation of the Cityworks (work order management) by providing GIS web services and back-end data management.

- Implement a full-scale GIS community of practice and learning throughout the county to support users in the migration from ArcMap.
- Develop an office GIS viewer with tools, layers, and focus on department workflows and needs.
- Migrate off ArcMap by March 2025. Incorporate modern ArcGIS pro technologies into data management workflows including trace and/or utility networks, workflow manager, tasks, and data reviewer.
- Execute a county-wide authoritative GIS data policy and publishing / consumption model.
- Support the county's migration to ArcGIS Enterprise 11.1.

2.10 Wastewater Flows and Treatment Capacity

A significant portion of the wastewater generated in Fairfax County is treated by surrounding jurisdictions, and the County, in turn, treats flows from several other jurisdictions at the NCPCP. These arrangements are administered through inter-jurisdictional agreements and are designed to maximize the benefit of the wastewater treatment dollar for the County and the region. The County has agreements to convey its wastewater to the following facilities for treatment:

- DC Water's Blue Plains Advanced Wastewater Treatment Plant (AWTP) (Washington, DC).
- Alexandria Renew Enterprises' Water Resources Recovery Facility (AlexRenew WRRF) (Alexandria, VA).
- Arlington County Water Pollution Control Plant (WPCP) (Arlington, VA).
- Upper Occoquan Service Authority (UOSA) Millard H. Robbins, Jr. Water Reclamation Plant (RWRP), (Centreville, VA).
- Prince William County Service Authority (PWCSA) Advanced Water Reclamation Facility (AWRF) (Prince William County, VA).
- Harbor View Wastewater Treatment Plant (WTP) (Fairfax County, VA).
- Loudoun Water Broad Run Water Reclamation Facility (WRF) (Loudoun County, VA).

The County also has agreements to treat flows from the following entities either at the NCPCP or a portion of its allowed capacity at other facilities:

- Fairfax City.
- Fort Belvoir.
- Town of Vienna.
- Fairfax County Water Authority.

- Covanta/ERR Facility.
- Town of Herndon agreement to utilize a portion of Fairfax County's treatment capacity at Blue Plains.
- Arlington County agreement to utilize a portion of Fairfax County's treatment capacity at Blue Plains.

2.10.1 Treatment Capacity Status and Sufficiency

The following paragraphs describe the capacity status and sufficiency of each of the treatment plants that receive County flows.

Fairfax County - Noman M. Cole, Jr. Pollution Control Plant

NCPCP serves the Accotink, Pohick, Long Branch, Little Hunting and Dogue Creek drainage basins. In addition to flows originating within the County, the plant also treats sewage from the City of Fairfax, Fort Belvoir, and part of the Town of Vienna. The NCPCP was put into service in 1970 with an initial design capacity of 18 MGD, which was subsequently increased to a rating of 36 MGD of advanced treatment in 1978, and 54 MGD in 1995. To meet the anticipated needs for sanitary sewage service in sewersheds that contribute to the NCPCP, as well as meet new water quality standards for nitrogen control, expansion of the plant to 67 MGD was initiated in 1992. Construction began in 1997 and was completed in 2005. Since then, construction has been completed to meet additional enhanced nutrient removal requirements. A phased approach is underway to renovate and upgrade current facilities to maintain current operations, as well as expand the current facility to 80 MGD in the future. The NCPCP is currently capable of handling anticipated flows from its contributory sheds through 2040.

Alexandria Renew Enterprises - Water Resources Recovery Facility

The Cameron Run and Belle Haven sewersheds and the City of Falls Church, while included in the Fairfax County sewershed, are treated by the AlexRenew WRRF. The AlexRenew WRRF has been expanded and upgraded to provide 54 MGD of advanced treatment capacity. Fairfax County is allotted 32.4 MGD (60%) of this capacity.

By activating the Braddock Road and Keene Mill Road pumping stations, the County has the capability to divert flow from the Accotink sewershed to the AlexRenew WRRF. These diversions increase operational flexibility in the entire eastern portion of the County by providing the option of off-loading a portion of the flows that would otherwise go to the NCPCP and Blue Plains AWTP to the AlexRenew WRRF. The County's existing capacity at the AlexRenew WRRF is capable of handling anticipated flows from its contributory sewersheds through 2040.

Arlington County - Water Pollution Control Plant

The Arlington County WPCP serves the portion of Fairfax County within the Four Mile Run sewershed. The plant has been expanded and upgraded to 40 MGD of advanced treatment capacity including nitrogen removal. The construction of the 40 MGD upgrade and nitrogen removal project was completed in 2013.

The County's existing contractual capacity at the Arlington plant is 3.0 MGD, which is sufficient for anticipated flows from its contributory sewersheds through 2040.

DC Water - Blue Plains Advanced Wastewater Treatment Plant

With a current average daily flow capacity of 370 MGD, the DC Water AWTP is the largest plant in the DC Metro area. In addition to DC, it treats flows from Maryland, Virginia, and several federal installations. Wastewater flows originating in the Sugarland Run, Horsepen Creek, Scotts Run, Dead Run, Turkey Run, and Pimmit Run sewersheds are treated at the Blue Plains AWTP. Fairfax County is presently allocated 31 MGD at the plant. Blue Plains AWTP completed major renovations and improvements to the nitrogen removal processes, chemical feed and sludge disposal systems. The County's flows to Blue Plains AWTP are continually monitored to determine if additional capacity is required at Blue Plains AWTP or Loudoun Water.

Upper Occoquan Service Authority – Millard H. Robbins, Jr. Regional Water Reclamation Plant

The southwestern part of Fairfax County is served by a regional plant owned and operated by UOSA. When the UOSA plant expanded to 54 MGD, the County's flow allocation was increased to 27.6 MGD. Since that time, 5.5 MGD of this share has been sold to Prince William County and the City of Manassas, leaving the County with an allocation of 22.1 MGD. The County's current share in the UOSA plant is sufficient for anticipated flows from its contributory sewersheds through 2040.

Prince William County Service Authority – H.L. Mooney Advanced Water Reclamation Facility (AWRF)

The southernmost section of Fairfax County is served by the H.L. Mooney AWRF, which is owned and operated by the PWCSA. Fairfax County is presently allocated 0.1 MGD at the H.L. Mooney AWRF.

Colchester Utility, Inc. - Harbor View Wastewater Treatment Plant

The Harbor View WTP, owned by Colchester Utility Inc., treats flows from Harbor View, a small community in the southeastern part of the County. Fairfax County is presently allocated 0.08 MGD at the plant.

Loudoun Water – Broad Run Water Reclamation Facility

The northern portion of Fairfax County is currently served by the Blue Plains AWTP and the NCPCP. To provide additional capacity for the northern service area of Fairfax County, the County has purchased 1.0 MGD of capacity from Loudoun Water. As noted previously, flows to the Blue Plains AWTP are continually monitored to determine if additional capacity should be purchased from Loudoun Water. Currently the County is not using the Loudoun Water capacity, but the use of the capacity is anticipated in the future as the County's flows approach its allocation at Blue Plains AWTP.

2.10.2 Flow and Capacity Summary

Table 2-3 summarizes the total wastewater treatment capacity available to Fairfax County, along with the historical and estimated future wastewater flow rates at the NCPCP and at each of the other facilities that treat wastewater from Fairfax County. The County provides service to several wholesale customers, referred to as "Sales of Service." The treatment capacity available to the County is sufficient to meet expected demands during the forecast period.

Table 2-3: Capacity and Flow Rates of the Wastewater Management Program, FY 2022 – FY 2026

County-Owned Treatment Plant Capacity

	FY 2022 Actual (MGD)	FY 2023 Actual (MGD)	FY 2024 Projected (MGD)	FY 2025 Projected (MGD)	FY 2026 Projected (MGD)
NCPCP	67.00	67.00	67.00	67.00	67.00

Inter-Jurisdictional Treatment Plants Contractual Capacity

	FY 2022 Actual (MGD)	FY 2023 Actual (MGD)	FY 2024 Projected (MGD)	FY 2025 Projected (MGD)	FY 2026 Projected (MGD)
AlexRenew WRRF	32.40	32.40	33.40	33.40	33.40
DC Water Blue Plains AWTP	31.00	31.00	31.00	31.00	31.00
Arlington WPCP	3.00	3.00	3.00	3.00	3.00
UOSA RWRP	22.10	22.10	22.10	22.10	22.10
Harbor View WTP	0.08	0.08	0.08	0.08	0.08
PWCSA AWRF	0.10	0.10	0.10	0.10	0.10
Loudoun Water Broad Run WRF	1.00	1.00	1.00	1.00	1.00
Total Inter-Jurisdictional Capacity	*89.68*	*89.68*	*90.68*	*90.68*	*89.68*
Total Capacity Available	**156.68**	**156.68**	**159.68**	**159.68**	**156.68**

Actual and Projected Flow Rates of the Wastewater Management Program

	FY 2022 Actual (MGD)	FY 2023 Actual (MGD)	FY 2024 Projected (MGD)	FY 2025 Projected (MGD)	FY 2026 Projected (MGD)
NCPCP	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**
County	34.17	26.59	34.58	31.04	31.23
Sales of Service	4.39	7.07	5.38	5.64	5.04
Pump-over from Little Hunting Creek	0.00	3.67	0.91	1.53	0.91
Difficult Run Pumpdown	0.00	0.00	0.00	0.00	0.00
Pump-over to AlexRenew WRRF	0.00	0.00	0.02	0.00	0.02
Total to NCPCP	38.55	33.67	39.94	36.69	36.26
AlexRenew WRRF	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**
County	16.34	12.60	16.57	14.79	14.89
Sales of Service	1.00	0.96	1.05	1.03	1.05
Pump-over from Accotink	0.00	0.00	0.02	0.00	0.02
Total to AlexRenew WRRF	17.35	13.56	17.64	15.82	15.96
DC Water Blue Plains AWTP	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**
County	23.80	23.10	24.66	23.79	24.22
Sales of Service	3.90	3.55	4.03	4.00	4.03
Difficult Run Pumpdown	0.00	0.00	0.00	0.00	0.00
Total to DC Water Blue Plains AWTP	27.70	26.65	28.68	27.76	28.25
UOSA RWRP	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**
County	12.30	11.18	12.45	12.04	12.12
Sales of Service	0.14	0.19	0.14	0.16	0.16
Total to UOSA RWRP	12.44	11.38	12.59	12.20	12.27
Arlington WPCP	2.17	2.09	2.19	2.20	2.17
Loudoun Water Broad Run WRF	0.00	0.00	0.00	0.00	0.00
Other (PWCSA AWRF and Harbor View WTP)	0.05	0.03	0.04	0.04	0.04
Total System Flow	98.26	87.37	101.08	94.66	94.95
Available Capacity for Growth	58.42	69.31	56.60	63.02	61.73

3. Operational Excellence

Collectively, each Division contributes to the overall success and operational excellence achieved by the Wastewater Management Program. The Wastewater Management Program's accomplishments are recognized at the national, regional, and agency-wide levels through awards, accreditations, and ratings. Operational excellence is also demonstrated through measurable improvements in surface water quality and aquatic habitats in the County, and increased level of public awareness. WTD, WCD, and WPMD work together to maintain a safe and healthy environment for County residents and promote environmental stewardship within the County.

3.1 Recognitions

In FY 2023 the Wastewater Management Program maintained an excellent operating record. In 2016, the program was one of the inaugural utilities that received recognition as a Wastewater Utility of the Future by the National Association of Clean Water Agencies (NACWA) and WEF. This recognition is based on an organizational culture and achievements that support more efficient operations, enhanced productivity, and long-term sustainability. The NCPCP has consistently met all discharge compliance requirements mandated under the Virginia Pollutant Discharge Elimination System (VPDES), and WTD received a NACWA Peak Performance Award for the 37th consecutive year.

WCD's comprehensive maintenance and lining program continues to serve the rate payers, and the County outperforms the industry standard of 4.3 backups/overflows per 100 miles. In FY 2023, the County documented 0.67 sewer backups/overflows per 100 miles of pipe.

The Virginia Department of Environmental Quality (DEQ) also recognized the Wastewater Management Program's commitment to superior environmental performance and environmental leadership in FY 2023 by maintaining the Wastewater Management Program's E4 status.

The Environmental Monitoring Branch supports both WCD and WTD by maintaining certifications under the VELAP.

The Program continues its efforts in fiscal accountability as demonstrated by the Certificate of Achievement for Excellence in Financial Reporting awarded by the Government Finance Officers Association for the FY 2022 ACFR. FY 2023 ACFR is currently under review. The program has received this certificate for 19 consecutive years. The Integrated Sewer System did not issue any new bonds in FY 2023. The AAA Bond Ratings from Fitch, Standard & Poor's (S&P), and Moody's issued in FY 2017 were maintained by the Wastewater Management Program. The Program's rigorous financial planning has resulted in average household sewer bills that are below the regional average and a debt coverage ratio well above the industry average.

In FY 2022, the Wastewater Management Program's WTD and WCD warehouses maintained a 100% accuracy rating for the Accountable Equipment Site Visit conducted between March and May 2023. Staff have been trained to report any movement of accountable equipment (additions, disposals, transfers, etc.) using an Inventory Maintenance Report.

The Wastewater Management Program also supported the County's DPWES successful effort to achieve the APWA Accreditation. The accreditation process is a voluntary program that uses self-assessment as a means of formally verifying and recognizing public works agencies for compliance with the industry-wide recommended practices. In FY 2021, Fairfax County's DPWES achieved reaccreditation. DPWES first achieved accreditation in August 2016. DPWES is one of only nine in Virginia and one of 163 public works departments in the United States and Canada that are accredited by the APWA. Reaccreditation is awarded for the ensuing four-year period.

3.2 Realizing Fishable and Swimmable Watersheds

Municipal wastewater management programs are constantly challenged in ensuring that the expenditure of funds to meet environmental stewardship responsibilities, and the corresponding actions supported by these resources, achieve their intended purpose. Meeting environmental regulatory requirements is a critical mission in this journey. However, answering the more vexing question of whether or not these resources, actions, and compliance protect and enhance (and if so to what extent) the ecological health of the municipality's watersheds that receive treated effluent, requires a more comprehensive commitment.

In FY 2023, the Wastewater Management Program continued to assist in fulfilling this obligation, in partnership with George Mason University, through a longitudinal (40-year) ecological study of Gunston Cove. The Cove is a freshwater embayment that receives the treated effluent (through Pohick Creek) from the NCPCP. Blue-green algal blooms in the Cove were prevalent in the early 1980's indicating an advanced stage of eutrophication with limited submerged aquatic vegetation; as well as reduced pH, dissolved oxygen, and water clarity; and periodic fish kills. The study has enabled the simultaneous tracking of major improvements in water quality, biological resources, and aquatic habitat of the Cove commensurate with a multitude of treatment, conveyance and wastewater management enhancements that substantiate the County's efforts to transform its publicly owned treatment works.

As a major treated wastewater discharger into the tidal Potomac River (through Gunston Cove), Fairfax County was recognized in "*An Ecological Study of Gunston Cove 2018,"* as "proactive in decreasing nutrient loading since the late 1970's." As shown in Figure 3-1, the County's proactive and successful process improvements at the NCPCP have reduced nutrient loadings to Gunston Cove over decades, which has been attributed to positive ecological benefits exhibited at Gunston Cove.

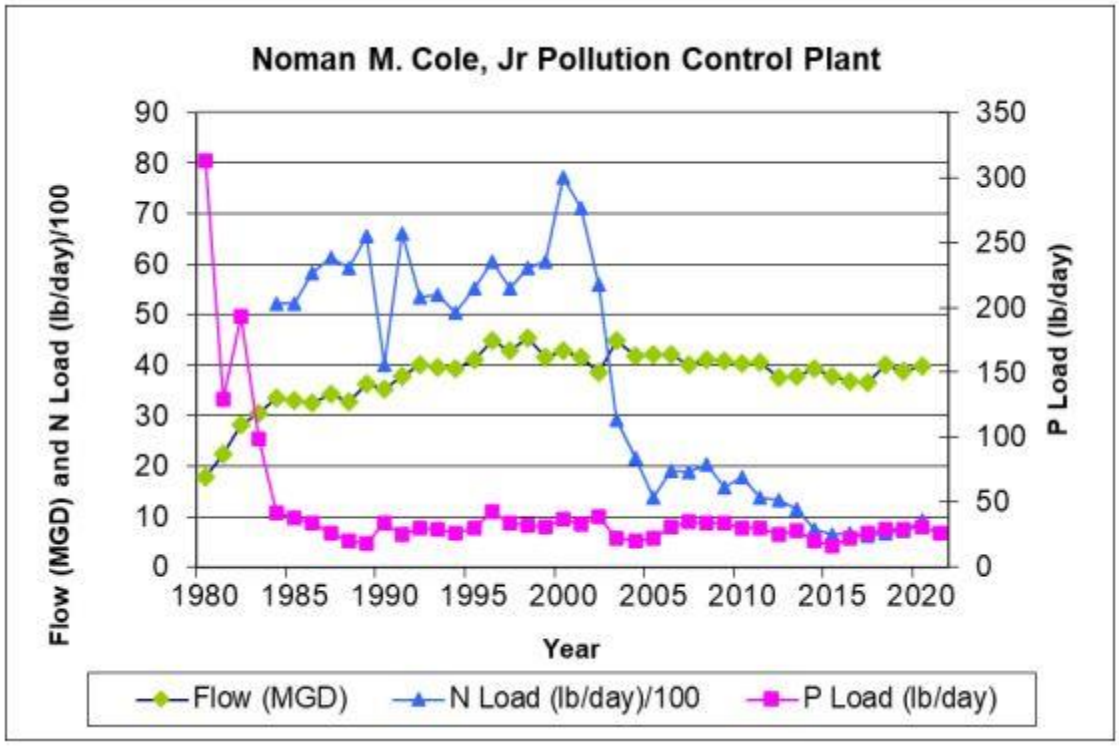


Figure 3-1: Historical Effluent Nutrient Loads at the NCPCP

The report "*An Ecological Study of Gunston Cove 2019"* published in 2020 states "phosphorus loadings were dramatically reduced in the early 1980's. In the last several years, nitrogen, and solids loadings as well as effluent chlorine concentrations have also been reduced or eliminated. These improvements and trends show that the strong wastewater management efforts and investments of the County are successfully helping to restore the embayment's habitat. This ongoing study provides documentation of major improvements in water quality and biological resources which can be attributed to these efforts in spite of the increasing population and volume of wastewater produced."

4. FY 2023 Budget

4.1 Wastewater Management Program Funds

Hazen examined the FY 2024 Adopted Budget for the Wastewater Management Program to assess the adequacy of funding to support its projected level of operation and maintenance costs. A general description of the system's outstanding debt service and funding structure is provided below, followed by a review of the FY 2024 Adopted Budget (by cost center) and a review of historical trends in Wastewater Management Program costs.

As of June 30, 2023, the system's outstanding debt was $1.07 billion: $755.6 million in Sewer Revenue Bonds, $29.2 million in Subordinate Economic Development Authority (EDA) Fairfax County Revenue Bonds, and $288.7 million in Subordinate Obligation UOSA outstanding debt.

The Wastewater Management Program is funded through seven separate sewer funds established by the County for financial and budgeting purposes. The sewer funds were reorganized with the adoption of the Sewer Bond Resolution in July 1985 and the defeasance of the 1954 Sewer Bond series in August 1986. Then, in FY 1998, the funds were restructured as part of an upgrade of the County's accounting computer system. Each of the funds is briefly described below.

4.1.1 Fund 69000 – Sewer Revenue

All operating revenues are credited to Fund 69000 Sewer Revenue. Except for interest earned from the balances of funds 69020, 69030, 69040 and 69310 (described in the following pages), interest on invested fund balances is credited to Fund 69000. Revenue receipts include lateral spur fees, sales of service fees, availability charges, connection charges, sewer service charges, miscellaneous revenue, sale of surplus property, and interest on investments. Receipts of Fund 69000 are then disbursed to Funds 69010, 69020, 69040, 69300, and 69310 to finance operations, debt service and construction. Any balance that remains after those transfers remains in Fund 69000 and is used for future year requirements and required reserves. From the FY 2024 Adopted Budget Plan, total revenues of $281,988,500 are projected for FY 2024. An estimated total reserve balance of $131,622,268 is projected for FY 2024.

4.1.2 Fund 69010 – Sewer Operation and Maintenance

Fund 69010 - Sewer Operation and Maintenance, provides funding for operational expenses of the Wastewater Management Program. This includes personnel services, operational expenses, and capital equipment for all divisions (WCD, WTD and WPMD) and Treatment by Contract expenditures. A total expenditure of $125,869,695 was adopted for FY 2024 for Fund 69010.

4.1.3 Fund 69020 – Sewer Bond Parity Debt Service

Fund 69020 - Sewer Bond Parity Debt Service, records debt service obligations incurred from bonds issued in accordance with the 1986 Sewer Bond Resolution. Bond proceeds are used to fund capital improvement

requirements of the Wastewater Management Program including upgrades to treatment facilities. At the quarterly review, necessary adjustments are made to this fund to support new initiatives of the Wastewater Management Program. In FY 2024, $40,104,264 is required to fund $16,100,000 in principal payments, $22,260,481 in interest payments, and $30,000 in Fiscal Agent Fees associated with outstanding 2014, 2016, 2017, 2021A, 2021B, and planned 2024 Sewer Revenue Bonds.

4.1.4 Fund 69030 – Sewer Bond Debt Reserve

Fund 69030 - Sewer Bond Debt Reserve, fulfills the County's requirement to maintain a Reserve Fund for existing and planned sewer bonds. As outlined in the 1986 Sewer Bond Resolution, this reserve is required to be the lesser of the maximum principal and interest requirements for any bond year or 125% of the average annual principal and interest requirements for the bonds. An increase of $15,365,475 is required for Fund 69030 in FY 2024. The required balance after the planned bond sale is $49,023,900 to satisfy the legal reserve requirements for the 2014 Sewer Refunding Bonds, the 2016 Sewer Refunding Bonds, the 2017 Sewer Revenue Bonds, the 2021A Sewer Revenue Bonds, the 2021B Sewer Refunding Bonds, and the planned 2024 Sewer Revenue Bonds.

4.1.5 Fund 69040 – Sewer Bond Subordinate Debt Service

Fund 69040 - Sewer Bond Subordinate Debt Service, was created in FY 1992 to keep separate all debt-service payments associated with the UOSA Revenue Bonds and the Stormwater/Wastewater Facility Economic Development Authority (EDA) revenue bonds. The UOSA Bond Series covers the County's portion of the cost of UOSA's plant expansion to 54 MGD. The EDA revenue bonds were issued to finance the construction of a consolidated Stormwater and Wastewater Facility.

Funding in the amount of $22,321,942 will provide for the FY 2024 principal and interest requirements including an amount of $20,784,567 for the UOSA plant requirements, and $1,537,375 for the Stormwater/Wastewater Facility Economic Development Authority revenue bond. UOSA debt for bond series 2016B is structured such that no principal payments are made during the construction phase of the project, interest is capitalized, and principal payments begin once construction is substantially complete.

4.1.6 Fund 69300 – Sewer Construction Improvements

Fund 69300 - Sewer Construction Improvements, provides for sewer system construction, upgrades, and extension and improvement projects that are funded by system revenues (Fund 69000). This fund includes the costs associated with rehabilitation of pump stations and force mains, integrated sewer metering, collection system extension, improvement, replacement and rehabilitation, large diameter pipe replacement and rehabilitation, funding of the sewer sag program, and upgrade/rehabilitation at the NCPCP and the County's pro rata share of wastewater flow to Treatment by Contract. For FY 2024 $90,000,000 was adopted to provide funding for the projects.

4.1.7 Fund 69310 – Sewer Bond Construction

Fund 69310 - Sewer Bond Construction, was established in FY 1987 to provide bond funding for major expansions and improvements to existing wastewater treatment facilities used by Fairfax County residents. In recent years, this fund has been used for nitrogen removal and plant upgrades for the County's share of wastewater flow to Treatment by Contract facilities. Funding is supported via revenue bonds from Fund 69310 Sewer Bond Construction or by cash from Fund 69300 Sewer Construction Improvements.

Based on the current schedule of identified and active projects, it is planned that approximately $227,100,000 in Sewer Revenue Bonds will be sold in FY 2024 to support the upgrade and improvement projects for Treatment Plants, the Conveyance System Capacity Expansion program, and the Wastewater Developers Reimbursement Program. The anticipated Sewer Revenue Bonds sale includes $211.7 million in this fund and approximately $15.4 million to be reserved in Fund 69030, Sewer Bond Debt Reserve, for legal requirements. The funding supports reinvestment in the NCPCP and other treatment plants necessary to maintain regulatory compliance requirements as they pertain to the Clean Water Act, Chesapeake Bay Preservation Program, and Title V of the Clean Air Act. The renovation program follows the NCPCP's Master Plan to evaluate and prioritize projects.

4.2 Wastewater Management Program Budget

A total budget of $125,869,695 was adopted in Fund 69010 for the FY 2024 operations and maintenance of the Wastewater Management Program. This budget is split between the three Divisions, with Treatment by Contract (TBC) included under WPMD, as shown in Figure 4-1.

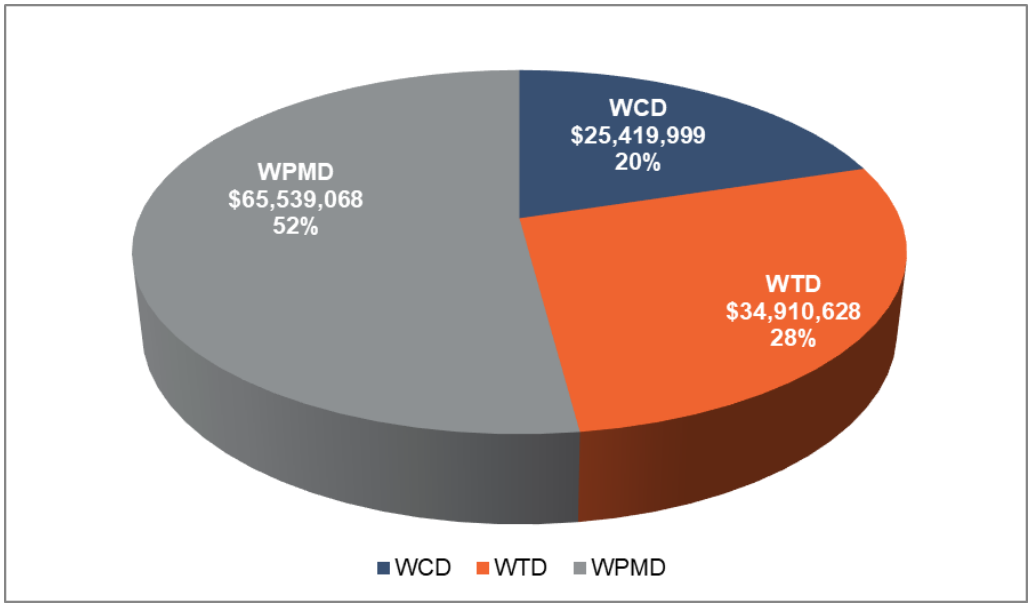


Figure 4-1: FY 2024 Adopted Budget by Division

The County has continued to improve its budget process by providing clear goals, overviews, objectives, and performance indicators for each agency. The County tracks four types of performance indicators for the Wastewater Management Program on an annual basis: output, efficiency, service quality, and effectiveness. This empowers the Wastewater Management Program to measure criteria related to the quality of service provided to its customers, as well as to develop a database upon which strategic analyses and intelligent decisions can be made.

Table 4-1 presents the Wastewater Management Programs operations budget from FY 2022 through FY 2024. The budgeted amounts by Division for FY 2023 are comparable to those in previous years, considering inflationary impacts to operational expenses and overall growth in the program.

Table 4-1: Wastewater Management Program FY 2022 - FY 2024 Budget

Cost Center	FY 2022 Actual	FY 2023 Revised	FY 2024 Adopted
Wastewater Collection Division (WCD)	$17,260,488	$25,666,533	$25,419,999
Wastewater Treatment Division (WTD)	$26,191,037	$34,107,588	$34,910,628
Wastewater Planning and Monitoring Division (WPMD; includes TBC)	$59,022,233	$73,340,873	$65,539,068
Total	$102,473,758	$133,114,994	$125,869,695

Budgets for other cost centers have also risen modestly relative to previous fiscal years. Budgets for all cost centers appear to be reasonable and adequate for the Wastewater Management Program to perform its assigned functions. The expense history of the Wastewater Management Program reflects the stability and cost consciousness of the organization. Figure 4-2 shows long-term trends in actual Operations and Maintenance expenditures of the Wastewater Management Program and its divisions (unadjusted for inflation). Despite recent inflationary pressures, costs continue to remain stable. Costs for WCD and WTD are driven by personnel costs, while WPMD costs are driven by TBC and billing agent fees (BAFs).

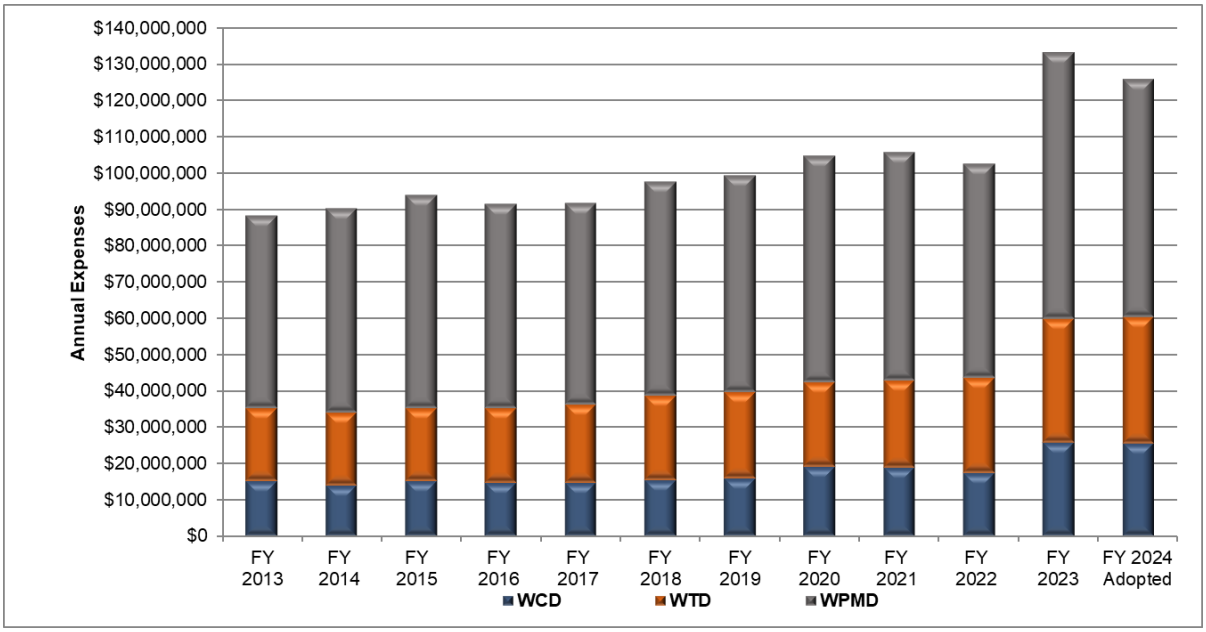


Figure 4-2: Wastewater Management Program O&M Expenses

Note: WPMD expenses include TBC expenses.

5. Capital Improvement Program FY 2024 – FY 2028

5.1 Capital Improvement Program (CIP)

The CIP is updated every year and is linked strategically to the Fairfax County Comprehensive Plan and the County's Budget. It is a five-year roadmap that addresses the Wastewater Management Program's needs relating to the acquisition, expansion and rehabilitation of facilities and systems. It serves as a planning instrument to identify needed capital projects and to coordinate the financing and timing of improvements to optimize its financial resources. The CIP is a "blueprint" for the future of the community and is used as a dynamic tool, rather than a static document.

The underlying strategy of the CIP is to plan for land acquisition, construction, and maintenance of public facilities necessary for the safe and efficient provision of public services in accordance with broad policies and objectives adopted in the County's Comprehensive Plan. The primary goals of the Wastewater Management Program's CIP are summarized as follows:

- Provide treatment facilities that meet applicable effluent discharge standards in the most cost-effective manner possible.
- Provide a system of conveyance and treatment facilities that is responsive to the development goals of the adopted Comprehensive Plan.
- Carry out the necessary renovation and improvements that will permit the entire system to function at a high level of efficiency.

While the CIP serves as a long-range plan, it is reviewed semi-annually and revised based on current circumstances and opportunities. Priorities may change due to funding opportunities or circumstances that cause a more rapid deterioration of a particular asset. Projects may be revised for significant costing variances as the needs of the community become more defined and projects move closer to final implementation. The COVID-19 pandemic is an example of an event triggering a reevaluation of CIP project priorities and scheduling, but these changes did not impact operational goals. The adoption of the CIP is a basic tool for scheduling anticipated capital projects and capital financing and is a key element in planning and controlling future debt service requirements.

5.2 CIP Funding

Funding for the CIP is derived from three sources: current system revenues, the sale of revenue bonds, and grant funding. The Wastewater Management Program uses current system revenues on a "pay as you go" basis to fund most capital improvements. This has particularly been true for recurring capital projects, such as capital replacement and rehabilitation projects, extension, and improvement (E&I) projects and general system improvement projects. Major capital initiatives such as system expansion and regulatory compliance projects have been funded using sewer revenue bonds that are payable solely from the revenues of the Integrated Sewer System.

The Wastewater Management Program actively manages its outstanding debt by refinancing to take advantage of lower interest rates or retiring debt to manage its debt service coverage. While federal and state grants were extensively used to fund the construction programs of the 1970s and 1980s, the financial burden of future programs will fall heavily on the County due to scarcity of federal grant funds. While grant funding options are still being pursued, the Wastewater Management Program has conservatively assumed that no state or federal grant funding will be available to help offset the cost of compliance with the Chesapeake Bay Program.

As discussed in Section 4.1, based on the current schedule of identified and active projects, the bond proceeds from the FY 2021 bond sale should support the capital projects at NCPCP. Sewer revenue bonds will be used to provide funds for expanding treatment facility capacity at both County-owned and County-contracted facilities. To date, the County has issued revenue bond debt for the following treatment plant expansions:

- In June 2001 and June 2002, a total of $90 million in State Revolving Fund/Virginia Resources Authority debt was issued to support the County's share of plant upgrades at the AlexRenew WRRF.
- In July 2009, $152.3 million in revenue bond debt was issued to support the County's share of the plant upgrades at DC Water Blue Plains AWTP, Arlington WPCP, and AlexRenew WRRF, as well as the NCPCP to comply with the nitrogen discharge limits as defined in the Chesapeake Bay Program.
- In August 2012, $90.7 million in revenue bond debt was issued to support the County's share of the plant upgrades at DC Water Blue Plains AWTP, AlexRenew WRRF, as well as the NCPCP to comply with the enhanced nutrient discharge limits as defined in the Chesapeake Bay Program.
- In April 2014, the County took advantage of lower market interest rates and issued $61.8 million of Sewer Revenue Refunding Bonds to retire the remaining $69.8 million of the outstanding Series 2004 Bonds.
- In May 2016 the County refinanced approximately $123.1 million of the outstanding Sewer Revenue Bonds, Series 2009 and $46.7 million of the outstanding Sewer Revenue Refunding Bonds, Series 2016A. The refinancing resulted in an average reduction to the annual debt service (interest expense savings) of approximately $1.4 million annually through FY 2040.
- In June 2017, $85.8 million in revenue bond debt was issued to provide funds for additions, extensions and improvements to the Fairfax County's sewage collection, and treatment systems including the NCPCP, paying capital improvements costs allocable to the County at other regional treatment facilities that provide service to the County, and purchasing additional capacity if deemed necessary.
- In June 2021, the System issued $192.0 million of Series 2021A Sewer Revenue Bonds to provide funds for certain additions, extensions and improvements to the County's sewage collection, treatment and disposal systems, and capital improvement costs allocable to the County at certain wastewater treatment facilities that provide service to the County.

- In June 2021, the System took advantage of lower market interest rates and issued $24.2 million of Series 2021B Sewer Revenue Refunding Bonds to advance refund $28.6 million of the outstanding Series 2012 Sewer Revenue Bonds.
- As of June 30, 2022, the County is responsible for $221 million in debt to support the expansion and upgrade of the UOSA treatment plant. A regional facility, UOSA issues its own bonds that are used to finance the expansion and upgrade projects. The participating members of UOSA (Fairfax County, Prince William County Service Authority, City of Manassas, and Manassas Park) are responsible for the debt service on the UOSA bonds on capacity owned at the facility.

5.3 Historical CIP Trends

An overview of historical trends in the Wastewater Management Program's CIP spending can be used to understand the changing priorities and relative costs of multiple categories of capital improvements over time. Figure 5-1 shows historical CIP construction activity for the last 10 years and FY 2024 projections categorized by the type of project:

- NCPCP Rehabilitation, Replacement, and Upgrades.
- Treatment by Contract.
- Sewer Line Extensions.
- Pump Stations and Force Mains.
- Sewer Repair and Rehabilitation.

Until FY 2019, costs associated with purchased capacity (Treatment by Contract) were the primary component of CIP spending.

- Total spending in FY 2013 was similar to total spending in FY 2011 and FY 2012, but with slight increases in projects associated with the purchased capacity facilities and decreases in spending on the NCPCP improvements.
- In FY 2014, there was a large increase in total spending, with the largest increases in projects associated with Treatment by Contract and the NCPCP improvements.
- Spending decreased in FY 2015 as many capital projects in the design phase did not progress to the construction phase as anticipated during budget preparation.
- In FY 2016, spending on the NCPCP capital projects remained constant, and expenditures on collections systems capital projects was less than projected. There was a 17% increase in Treatment by Contract costs. This is attributable to $14.6 million associated with UOSA upgrades at the Robbins RWRP.
- In FY 2017, spending on NCPCP capital projects remained constant ($16M), and expenditures on collections systems capital projects were less than projected. Capital costs associated with

Treatment by Contract projects decreased due to AlexRenew WRRF and DC Water Blue Plains AWTP.

- In FY 2018, overall spending decreased even with an increase in spending for NCPCP renovations and upgrades, which increased from $33.8 million in FY 2017 to $67.3 million in FY 2018.
- In FY 2019, overall spending decreased due to NCPCP spending, which decreased from $67.3 to $61.7 million in FY 2019.
- In FY 2020, overall spending increased due to Treatment by Contract and Sewer Repair and Rehabilitation spending.
- In FY 2021, overall spending increased slightly, even with a reduction in spending associated with NCPCP renovations and upgrades and sewer line extensions.
- In FY 2022, overall spending increased slightly, even with a reduction in spending associated with NCPCP renovations and upgrades and sewer line extensions.
- In FY 2023, overall spending increased due to NCPCP Rehabilitation, Replacement, and Upgrades.

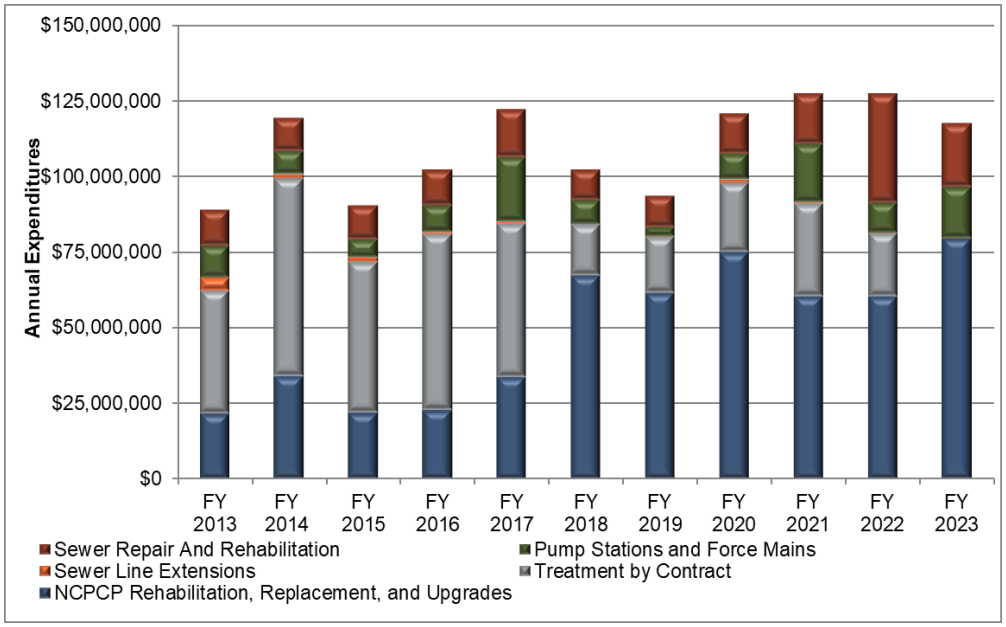


Figure 5-1: Sewer Fund Historical Construction Activity

5.4 CIP Development Process

The County's CIP development process for current and future projects involves:

- Compiling requested 5-year and 10-year CIP projects from WCD and WTD.
- Obtaining Treatment by Contract capital budgets from other jurisdictions.
- Determining initial program affordability and impact on system rates.
- Identifying projects that can be deferred to lessen financial impacts.
- Developing revised general 5-year and 10-year CIP and next fiscal year's capital budget.

The County continues to use a dynamic CIP development process, whereby County staff continually reassess capital program needs, prioritization, and affordability.

5.5 Overview of Five-Year CIP Projects

The five-year CIP for FY 2024 – 2028 for the Wastewater Management Program was reviewed for this report. The five-year CIP includes treatment, collection, and pumping projects totaling approximately $1.2 billion. Figure 5-2 below summarizes the requested five-year CIP for FY 2024 – FY 2028 on a cash flow basis. The requested CIP projects and budgets are described in this section, categorized by major project type.

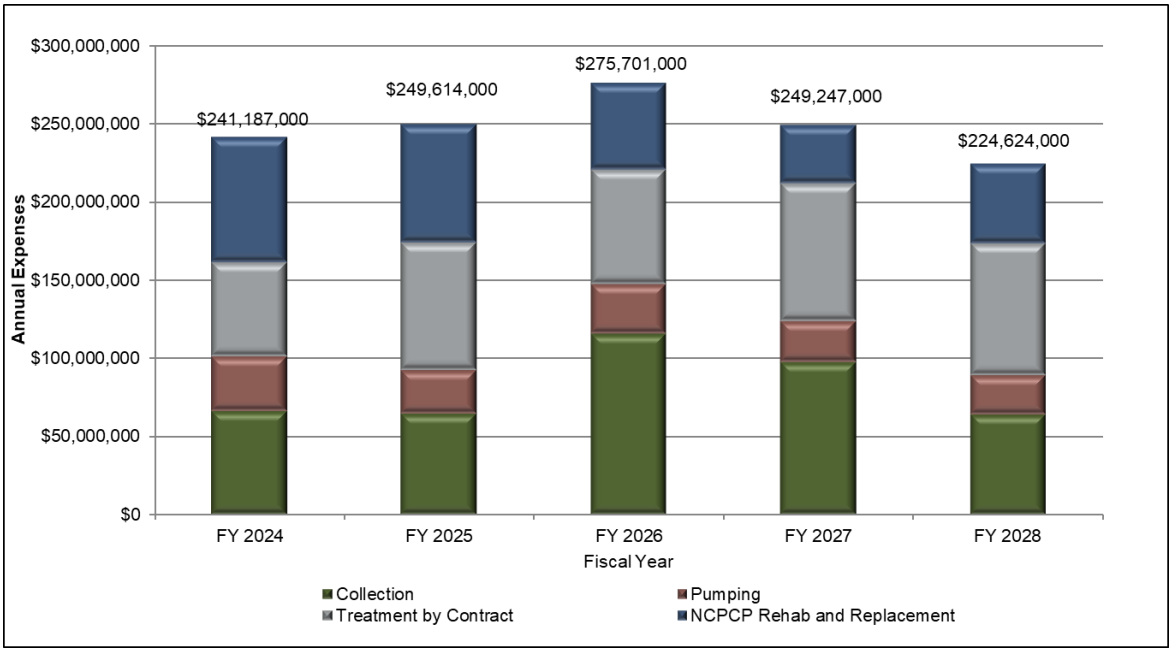


Figure 5-2: Proposed Five-Year CIP on a Cash Flow Basis

5.5.1 Wastewater Treatment Division Projects

NCPCP Construction Rehabilitation and Replacement

These projects include the continued rehabilitation of the NCPCP's assets through FY 2033. Proposed projects include replacement of and improvements to the existing biosolids facilities; replacement and upgrades to the motor control centers and electrical distribution centers; rehabilitation and replacement of the miscellaneous pumps, gates, and valves; rehabilitation of the multiple facilities; facility storm water improvements stormwater runoff improvements on plant site; HVAC upgrades to the Laboratory and Administrative Buildings; and other rehabilitation and replacement projects related to the maintenance of the wastewater treatment facility assets. The estimated cost for the rehabilitation and replacement construction in FY 2024 – FY 2033 is $579,618,000.

5.5.2 Treatment by Contract Projects

AlexRenew WRRF Improvements

This project provides for Fairfax County's 60% share of construction costs associated with improvements at the AlexRenew WRRF. This project includes the replacement and rehabilitation of existing treatment process facilities and facilities to handle wet weather flows to avoid sanitary sewer overflows. The estimated project cost share for the AlexRenew WRRF improvements through 2033 is $124,400,000.

DC Water Blue Plains AWTP Upgrades

This project funds Fairfax County's 8.4% share of the costs of upgrading the DC Water Blue Plains AWTP. The upgrades include major plant renovations, including the chemical addition, flow control tunnels, and sludge disposal system to meet the enhanced total nitrogen standards. Estimated project cost share through 2033 for the Blue Plains AWTP improvements is $289,107,000.

Arlington WPCP Upgrades

This project funds Fairfax County's 7.5% share of the costs of upgrades at the Arlington WPCP. The upgrades include non-expansion capital improvements, technology enhancements, clarifier upgrades, a biosolids master plan, and the relining of a large diameter sewer line for the Four Mile Run interceptor which runs from Fairfax County to the Arlington WPCP Estimated project cost share through 2033 for the Arlington WPCP improvements is $19,381,000.

UOSA RWRP Upgrades

This project provides for Fairfax County's 41% share of costs associated with improvements at the UOSA RWRP. Specific projects include renovations related to nutrient discharge limitations, filter press replacement, and re-carbonation clarifier improvements. FY 2024 – FY 2033 estimated debt service payment for the UOSA RWRP is $161,917,000.

Wastewater Colchester Contributions (Mount Vernon District)

This project supports an annual contribution to the Colchester Wastewater Treatment Facility for wastewater treatment services in the Harborview community. The sewer treatment plant serving the Harborview residents is a private operator. The plant bills Fairfax County and in turn, the County bills each resident using County sewer rates. Funding was previously budgeted in Agency 87, Unclassified Administrative Expenses – Public Works Programs; however, in order to provide more transparency and the carryforward of balances at year-end, funding has been budgeted in a capital project within Fund 30010, County Construction and Contributions. This change results in no net impact to the General Fund. FY 2024 – FY 2033 estimated project cost is $5,340,000 for this treatment.

5.5.3 Wastewater Collection Division Projects

Sanitary Sewer Replacement, Rehabilitation and Upgrade Program

This is a continuing project for replacement, repair, and rehabilitation of sewer lines. FY 2015 marked the initiation of efforts to address repair of large diameter sewer lines to prevent future pipe failures. FY 2024 – FY 2033 project costs for sanitary sewer projects are projected to be $324,800,000.

Pump Station Improvements

This continuing project was established to fund replacement and necessary improvements to address items such as normal wear and tear, and odor control at sewage pump stations County-wide. The goal of these improvements is not to increase capacity at the pump stations but to address continual rehabilitation and equipment upgrade needs or improve the stations to address service issues such as odor control. A total of $287,800,000 has been budgeted for pump station improvements in FY 2024 – FY 2033.

Sewer Metering Projects

Installation and rehabilitation of sewer meters is necessary to obtain billing data and identify excessive inflow and infiltration. The State Water Control Board and the Environmental Protection Agency require sewer flow data. A total of $4,500,000 is allocated to install and rehabilitate sewer meters in FY 2024 – FY 2033.

Sewer Extension and Improvement Projects

This is a continuing project to complete sewer extension and improvement projects in sewer service areas of the County that are experiencing chronic septic system failures. $5,000,000 is estimated to be required annually through FY 2033.

Gravity Sewer Capacity Improvements

This funding will be used to replace existing sewer lines with larger diameter sewer lines and to install new sewer lines to serve development within the County. This is a proactive program to manage the strain placed on the current sewer system due to additional load as areas develop. A total of $341,869,000 is allocated for upsizing existing sewer lines and installing new sewer lines through FY 2033.

5.6 CIP Conclusions

The adopted CIP addresses the anticipated capital needs of the Wastewater Management Program for FY 2024 – FY 2028. Upgrades and improvements to the NCPCP, as well as inter-jurisdictional wastewater treatment facilities, required to meet growth and new regulatory requirements, have been included in the five-year CIP budget.

The annual CIP projects necessary to upgrade/rehabilitate the collection system pump stations, buildings and sewer lines are critical to maintaining system integrity and increasing reliability. Proactive, rather than reactive, rehabilitation and maintenance projects are instrumental in avoiding costly emergency response projects resulting from system failures. These initiatives allow the County to continue to meet its goals of having an efficiently operated and effectively maintained wastewater system.

6. Current and Future Rates and Revenues

6.1 Rates and Revenues

Rates and revenues are reviewed during the County's annual budget cycle to ensure compliance with the Board of Supervisors' adopted policy that "growth pays for growth." The County uses an engineer to evaluate the adequacy of sewer service charges and availability fees to recover the costs associated with the Wastewater Management Program. In general, these include capital, operation and maintenance costs, and debt service costs.

To examine the rates and revenues in place to fund the Wastewater Management Program, Hazen reviewed the Wastewater Management Program's FY 2023 Annual Comprehensive Financial Report (ACFR), the FY 2023 Annual Disclosure Report, and the Wastewater Rate Study for Fiscal Year 2024 Through Fiscal Year 2029.

The financial statements of the County of Fairfax presented in the FY 2023 ACFR were audited by an independent auditor, Cherry Bekaert LLP, a firm of licensed certified public accountants and advisors. Cherry Bekaert concluded the following:

"In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the System as of June 30, 2023, and the changes in its financial position and cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America."

The Wastewater Management Program operation and maintenance, debt service and capital projects (other than those funded by revenue bonds) are funded through availability fees and sewer service charges adopted by the County's Board of Supervisors. For the Fiscal Year ending June 30, 2023, approximately 99% of the Wastewater Management Program's operating revenues are derived from charges to new and existing customers through sewer service charges, wholesale charges, and availability fees. Wholesale users include Covanta, Fairfax Water, Loudon Water, Arlington County, Fort Belvoir, the Cities of Fairfax and Falls Church and the Towns of Herndon and Vienna. The remaining 1% of system operating revenues are derived from investment earnings and other operating revenues. Figure 6-1 shows the breakdown of system revenues, excluding investment earnings and other revenues, for the previous 10 fiscal years.

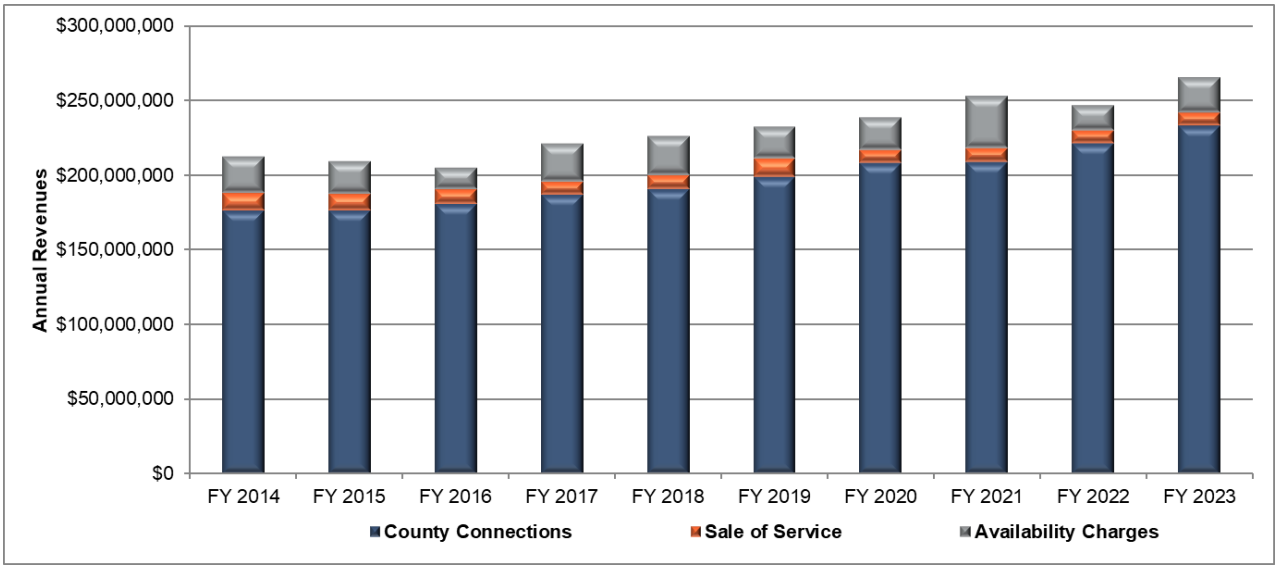


Figure 6-1: Historical Annual Wastewater Management Program Revenues by Source

The Fairfax County Board of Supervisors establish sewer service rates and availability fees. Sewer rates are reviewed and revised annually as part of the County's annual strategic planning and budgeting process to minimize the annual cost impact on customers due to increases in funding needs for the Wastewater Management Program. Sewer service charges are assessed to existing customers to recover operation and maintenance costs and debt service payments. These charges also provide capital project funding attributable to supporting or improving wastewater treatment services to existing customers.

Since 2010, the Board has used the five-year projections of financial performance measures to determine the appropriate wastewater service rates. The most significant sources of revenue are operating revenues in the form of base and volumetric sewer service charges and non-operating revenues in the form of availability fees. The Wastewater Management Program allocates revenues to cover operating expenses, capital funding allowances and debt service payments.

System operations and financial capability are impacted by several factors, including increased capital expenditures based on regulatory requirements associated with the Chesapeake Bay Program, inflationary effects on the cost of operations and construction, the need to maintain a strong financial position in the market, and the need to maintain compliance with rate covenant requirements. Maintaining financial strength is necessary to attract future capital, maintain competitive rates over the long-term, and meet the rate covenants as delineated in the General Bond Resolution, the VRA financing agreements, and other loan agreements that authorize the issuance of the Outstanding Bonds and other loans for the system.

In addition to the expenditure cost on its own system, the County (as prescribed by each agreement with the four purchased capacity entitlements of non-County facilities) is required to pay for its share of the operating, capital and/or debt costs of each entity's system based on actual wastewater flows and allocated

capacity. Capital expenditures to meet the Chesapeake Bay Program effluent discharge standards have increased significantly for all facilities. Along with these expenditures, the need to continually perform necessary renewals, replacements, and betterments because of facilities reaching the end of their useful service lives will continue to add to these expenses.

Since FY 2018, the annual average growth in the County's wastewater customer base has averaged approximately -0.54%. Due to water conservation efforts, per capita water consumption has decreased and total billed wastewater volumes in the County service area have declined. This is evidenced by an average annual decrease in billed wastewater volumes from FY 2018 to FY 2023 of -0.49%. Billed wastewater volumes are variable year to year and annual changes range from -3.41% to +1.78% in the years from FY 2015 to FY 2023. Billed wastewater volume is based on metered water sales at the customer premises. Many factors can affect billed wastewater flow, including water conservation measures, installation of low flow fixtures in new development, and climate conditions such as annual variations in temperature and precipitation. It should be noted that a reduction in billed wastewater volumes is consistent with trends experienced by other Northern Virginia utilities.

The Wastewater Management Program continuously tracks and compares prior financial forecasts to actual results as part of the rate and financial planning process. For FY 2023, actual revenues and investment income exceeded initial projections. Operating revenues exceeded forecasted estimates by approximately $2.4 million, or 0.95% of gross revenues (excluding availability fees). The differences were primarily due to higher than forecasted investment income and lower operating expenses than previously forecasted.

6.2 Rates

Fairfax County bills residential customers for use of the sanitary sewer system based on water consumption during the current billing period or the preceding winter quarter billing period, whichever is lower. Residential customers who use the County's sanitary sewer system but obtain drinking water from a well are charged based on the number of persons residing in the home. Commercial customers are billed for sewer use based on actual water consumption; however, some commercial customers use meters to separately measure water that does not drain to the sanitary sewer system. Over the past decade the Wastewater Management Program has implemented rate increases necessary to:

- meet the Wastewater Management Program's projected funding requirements for operating and capital investment,
- maintain compliance with financial policies and required rate covenants as delineated in the General Bond Resolutions, and
- meet financial targets designed to maintain the overall long-term creditworthiness of the Wastewater Management Program. Appendix B provides a detailed summary of historical sewer service volumetric charges.

A Sewer Base Charge for all customers became effective in FY 2010 and is used to partially recover fixed expenses for billing, wastewater collection, engineering, and administrative costs. The base charge was substantially increased in FY 2014 to promote revenue stability and achieve greater equitability in obtaining

cost recovery among wastewater users. The increase reflected industry-wide trends in imposing rate adjustments. Appendix B details historical Sewer Base Charges.

The Wastewater Rate Study for FY 2024 through FY 2029 includes a multi-year rate phasing program which was prepared to identify recommended FY 2025 through 2029 rates, which are considered necessary to fund the identified revenue requirements for the system and continue to meet the financial planning benchmarks (i.e., financial position and targets) identified with Wastewater Management Program staff to promote the long-term creditworthiness of the system.

The creditworthiness objective focuses on maintaining a "AAA" credit rating with the bond rating agencies, limiting long-term financial risks to the system through prudent liquidity and financial operating strategies, and promoting the long-term sustainability of rates while limiting future increases to wastewater customers. Based on the assumptions recognized in the development of the financial forecast and the actual Fiscal Year 2024 results, Table 6-1 and Table 6-2 summarize the rate adjustment recommendations:

Table 6-1: Current Quarterly Rates by Fiscal Year – Existing Board Adopted

Description	2024	2025	2026	2027	2028	2029
Quarterly Base Charge (per ERC)	$44.81	$49.73	$52.62	$55.41	$58.35	N/A
Flow Charge (per 1,000 gallons)	$8.46	$8.81	$9.33	$9.83	$10.35	N/A
Rate Revenue Adjustment [(1)]	6.2%	5.9%	5.9%	5.5%	5.3%	1.3%

[(1)] Amounts show reflect projected increases to revenues from recommended rates, rates recommended to become effective July 1st of each fiscal year.

Table 6-2: Recommended Future Quarterly Rates by Fiscal Year

Description	2024	2025	2026	2027	2028	2029
Quarterly Base Charge (per ERC)	$44.81	$49.73	$52.62	$55.78	$59.08	$62.57
Flow Charge (per 1,000 gallons)	$8.46	$8.81	$9.33	$9.88	$10.46	$11.08
Rate Revenue Adjustment [(1)]	6.2%	5.9%	5.9%	5.9%	5.9%	5.9%

[(1)] Amounts show reflect projected increases to revenues from recommended rates, rates recommended to become effective July 1st of each fiscal year.

Adopted rates for FY 2024 and FY 2025 are competitive with rates charged by neighboring public utility systems. In FY 2024 and FY 2025 the monthly bill for a single-family residential wastewater customer is projected to be $60.06 and $63.56, respectively. By comparison monthly bills from neighboring utilities range from $42.79 to $112.00. The Program also tracks rate affordability relative to the annual median household income (MHI) within the service area. Industry standards suggest that wastewater bills of 2% or greater of the MHI is likely to trigger a "large economic impact" on ratepayer households. As noted in the Wastewater Rate Study for FY 2024 through FY 2029 residential wastewater charges for the County are expected to remain well below 2% of the MHI through the forecast period.

6.3 Availability Fees

The availability fee is a one-time charge assessed to new customers to recover the proportionate share of system costs and capital project funding attributable to expansion of the system required to support new customers. Existing customers are defined as those who have paid an availability fee for access to the Integrated Sewer System. Existing customers include those who are connected to the Integrated Sewer System and are receiving wastewater conveyance and treatment services as well as those who have paid an availability fee but are not yet receiving services. New customers are those who have yet to pay the availability fee. Upon payment of the availability fee a new customer becomes an existing customer.

The County's availability fee methodology is generally based on the "system buy-in" cost method. Under this method, the availability fee is designed to recover the incremental costs of infrastructure required for new customers to connect to the system. An exception to this method is used for the valuation of UOSA capacity reservations, which are based on an "incremental approach" in which the capacity valuation is based on the cost of the last facility expansion as determined by UOSA. In FY 2025, the Availability Charge will increase from $8,860 to $9,038 for single-family homes based on current projections of capital requirements. Table 6-3 provides a comparison of the existing availability fees and fees charged in neighboring communities. Both the existing and recommended charges are competitive with other surveyed Virginia wastewater utilities.

Table 6-3: Wastewater Availability Charge – Rate per ERU (Equivalent Residential Units)

Fairfax County – Existing Availability Charge (FY 2024)	$8,860
Fairfax County – Recommended Availability Charge (FY 2025)	$9,038
Average of Other Surveyed Utilities [(1)]	$8,202

[(1)] Amount shown from the Wastewater Rate Study for FY 2024 through FY 2029

6.4 Bond Issues

The County is anticipating approximately $2.2 billion in capital projects for FY 2024 to FY 2029. Projects will include additions, extensions and improvements to the Fairfax County's sewage collection, and treatment systems including the NCPCP, capital improvement costs allocable to the County at other regional treatment facilities that provide service to the County, and purchase of additional capacity if deemed necessary with future bond proceeds. It is assumed that $595.0 million will be deferred beyond FY 2029, resulting in a total forecast of $1.55 billion. $924.5 million of the capital improvement program is

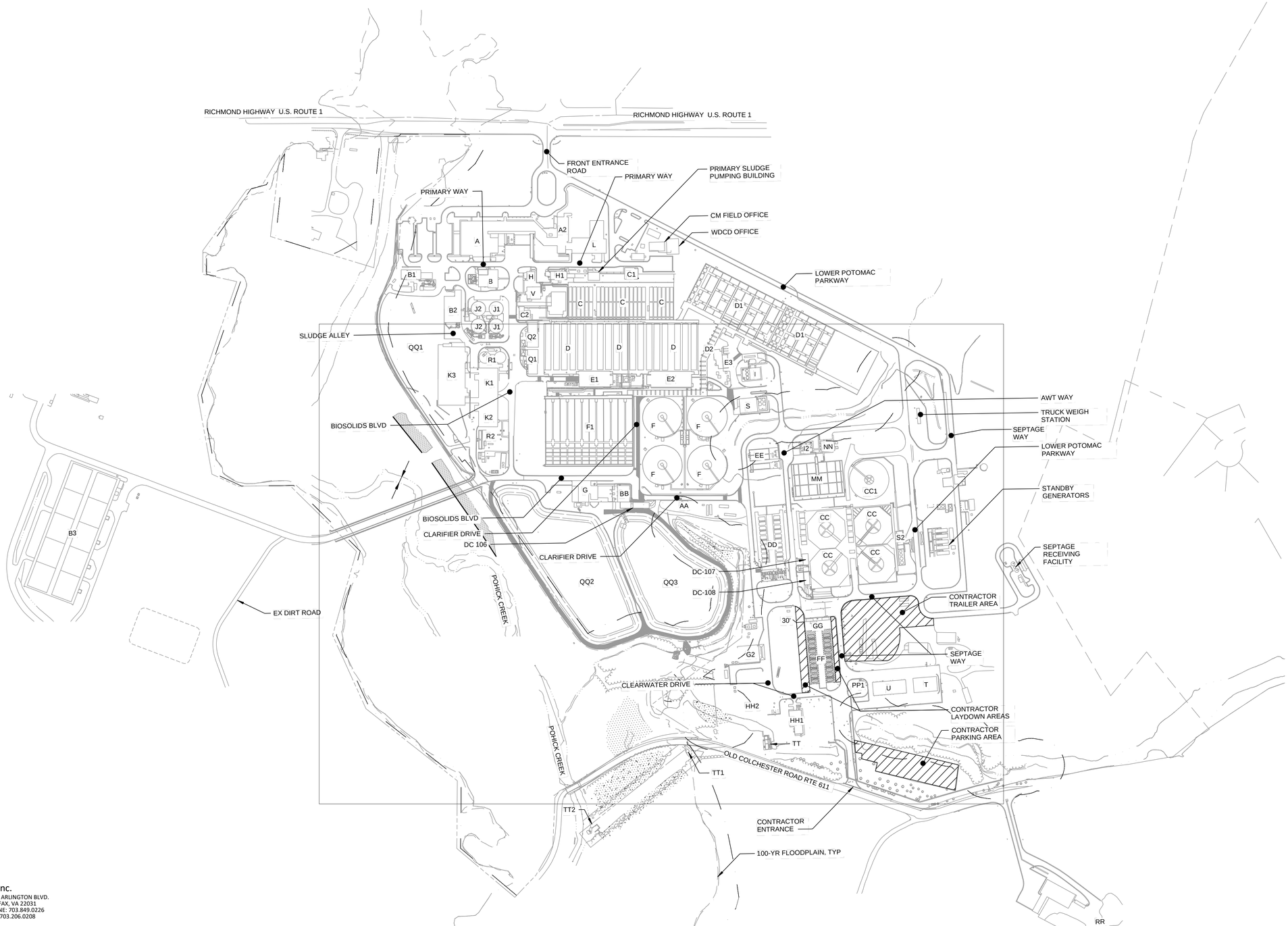
anticipated to be funded by the issuance of additional parity bonds during the next five-year forecast period. These issuances along with outstanding bond proceeds described in Section 4.1 are anticipated to meet the system's capital funds requirements through 2029.

6.5 Financial Position

In evaluating the financial position of the Wastewater Management Program, two criteria are used to assess the financial stability of the system: (1) the ability to meet the debt service coverage requirements in the General Bond Resolution for Sewer Revenue Bonds, and (2) the ability to provide adequate cash flow for operation and maintenance expenses as well as capital requirements.

The County's General Bond Resolution requires that rates be set such that new revenues, excluding availability fees and other one-time sources, provide debt service coverage of at least 1.25 times debt service on senior obligations. This was implemented to reduce the Wastewater Management Program's dependence on availability fees, a non-recurring revenue source that creates vulnerability for the system and increases reliance on service charges and new billing fees. This bond resolution governs the system's debt, including previously issued obligations. Table 7 in Appendix C indicates that revenues will be sufficient to ensure that this requirement will be met for the forecasted period of FY 2024 – FY 2029. Based on the service charge and availability fee schedule and associated financial statements, total revenue bond and senior (parity) debt coverage ratios will remain above the policy target of 2.0 with values ranging from 2.36 to 3.16 during the forecast period. Overall debt service coverage ratios, which include subordinate obligations, are forecasted to remain above the required minimum of 1.00 throughout the forecast period, with values ranging from 1.92 to 2.29. Table 12 in Appendix C indicates that there will be sufficient cash flow to fund operation and maintenance as well as capital projects, with sufficient fund balances within the multiple funds to cover projected expenditures and maintain adequate reserves.

Appendix A – NCPCP Site Plan



PLANT NORTH

VIRGINIA STATE GRID NORTH

VCS - 83

NOTES:

1. SHADED AREAS REPRESENT EXISTING FACILITIES TO BE MODIFIED DURING THIS PROJECT.
2. FINAL LOCATIONS FOR CONTRACTOR LAYDOWN, TRAILER, AND PARKING AREAS TO BE COORDINATED AFTER NOTICE TO PROCEED.
3. CONTRACTOR TO CONFORM TO ALL EROSION AND SEDIMENT (E&S) CONTROLS NEAR PROJECT LAYDOWN AREA AND LAND DISTURBANCE AREAS.

EXISTING FACILITIES LEGEND

A	OPERATIONS AND MAINTENANCE BUILDING
A2	ADMINISTRATION BUILDING
B	RAW WASTEWATER PUMP STATION
B1	SCREEN BUILDING/BAR SCREENS
B2	RAW WASTEWATER/EQUALIZATION TANKS PUMP STATION
B3	EQUALIZATION TANKS
C	PRIMARY SETTLING TANKS
C1	FLASH MIX TANKS
C2	PRIMARY SETTLING TANKS ODOR CONTROL SYSTEM
D	ACTIVATED SLUDGE TANKS 1-6
D1	ACTIVATED SLUDGE TANKS 7-9
D2	MIXED LIQUOR CHANNEL
E1	BLOWER BUILDING
E2	BLOWER BUILDING
E3	ELECTRICAL BUILDING
F	SECONDARY CLARIFIERS
F1	SECONDARY CLARIFIERS
G	CHLORINATION FACILITY
G2	AUXILIARY CHEMICAL STORAGE FACILITY
H	SAFETY OFFICE
H1	PRIMARY SLUDGE DEGRITTING FACILITY
I	METHANOL FEED BUILDING
I2	METHANOL FEED BUILDING
J1	PRIMARY SLUDGE THICKENERS
J2	PRIMARY SLUDGE THICKENERS
K1	SLUDGE PROCESSING BUILDING
K2	SLUDGE PROCESSING BUILDING
K3	SLUDGE PROCESSING BUILDING
L	LABORATORY BUILDING
Q1	DAF THICKENER
Q2	DAF THICKENER
R1	BLENDED SLUDGE STORAGE TANK
R2	BLENDED SLUDGE STORAGE TANK
S	CHEMICAL FEED BUILDING
S2	CHEMICAL FEED BUILDING - FERRIC AND POLYMER
T	AWT MAINTENANCE BUILDING
U	BUILDING AND GROUNDS STORAGE BUILDING
V	SUPERVISORS' OFFICE AND WOMEN'S FACILITY
AA	ASE METERING VAULT
BB	ASE PUMP STATION
CC	TERTIARY CLARIFIERS
CC1	TERTIARY CLARIFIERS
DD	GRAVITY FILTER BUILDING
EE	BACKWASH EFFLUENT TANKS
FF	MONOMEDIA FILTERS/ACTIVATED CARBON ABSORPTION
GG	CARBON REGENERATION BUILDING
HH1	APW PUMP STATION
HH2	DISINFECTION FACILITIES
MM	MOVING BED BIOLOGICAL REACTOR
PP1	MAINTENANCE STORAGE
NN	MBBR BLOWER BUILDING
QQ1	RETENTION BASIN 1
QQ2	EQUALIZATION BASIN 2
QQ3	EQUALIZATION BASIN 3
RR	BULK STORAGE
TT	EFFLUENT CHAMBER
TT1	OUTFALL INTERMEDIATE STRUCTURE
TT2	OUTFALL STRUCTURE

PLAN

SCALE: 1:200

0 200 400 Feet

Scale In Feet

Dewberry Engineers Inc.
8401 ARLINGTON BLVD.
FAIRFAX, VA 22031
PHONE: 703.849.0226
FAX: 703.206.0208

REV	ISSUED FOR	DATE	BY
1	REGULATORY REVIEW	02/2024	PCV

PROJECT ENGINEER:	P.VAVONESE
DESIGNED BY:	G. FAUNCE
DRAWN BY:	M. COLLINS
CHECKED BY:	G. FAUNCE

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE 0 1/2" 1"

DO NOT USE FOR CONSTRUCTION

Hazen
HAZEN AND SAWYER
4035 RIDGE TOP ROAD, SUITE 500
FAIRFAX, VA. 22030
CERTIFICATE OF AUTHORITY: 2771

DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
FAIRFAX COUNTY, VIRGINIA

NOMAN COLE, JR. PCP -
FF FILTER GATES IMPROVEMENT

DATE: FEBRUARY 2024

File: P:\PROJECT\50\165421 NOMAN COLE MAJOR SUSTAINGIFF GATES\CAD\CIVIL-SITE\SHEETS\G-C-001 GENERAL OVERALL SITE PLAN - EXISTING CONDITIONS Saved by MICOLLINS Save date: 2/20/2024 11:15 AM
PLOT DATE: 2/20/2024 1:19 PM BY: MICOLLINS

Appendix B – Fees and Charges

Appendix B – Fees and Charges

1.1 Sewer Service Charges

1.1.1 Sewer Service Charge Purpose

To charge existing customers of the Wastewater Management Program for system operation and maintenance costs in proportion to services provided. Sewer service charges include a Base Charge and a Service Charge. The Base Charge is a flat fee whereas the Service Charge is determined by consumption. In FY 2023, the Service Charge was $8.09 per 1,000 gallons, and the Base Charge was $40.14 per Billing period.

1.1.2 Sewer Service Charge Rate History

Since 2009, the Wastewater Management Program has increased the Sewer Service Charge rates as follows:

Table B - 1: Sewer Service Charge Rates FY 2009 – FY 2023

Sewer Service Charge Rates				
Fiscal Year	**Service Charge ($/1000 gal)**	**Percent Increase**	**Base Charge ($/Bill)**	**Percent Increase**
2009	$4.10	9.6%	-	-
2010	$4.50	9.8%	$5.00	0.0%
2011	$5.27	17.1%	$5.00	0.0%
2012	$6.01	14.0%	$5.00	0.0%
2013	$6.55	8.9%	$5.50	10.0%
2014	$6.55	0.0%	$12.79	132.5%
2015	$6.62	1.1%	$15.86	24.0%
2016	$6.65	0.5%	$20.15	27.05%
2017	$6.68	0.5%	$24.68	22.5%
2018	$6.75	1.0%	$27.62	11.9%
2019	$7.00	3.8%	$30.38	10.0%
2020	$7.28	4.0%	$32.91	8.3%
2021	$7.28	0.0%	$32.91	0.0%
2022	$7.72	6.0%	$36.54	11.0%
2023	$8.09	4.8%	$40.14	9.8%

Source: Annual Disclosure Report Fiscal Year 2023

1.1.3 Sewer Service Charge Rate Increase

The Wastewater Management Program Wastewater Rate Study for FY 2024 through FY 2029 includes a multi-year rate phasing program which was prepared to identify the FY 2024 through 2029 rates. The rates are established to fund the identified revenue requirements for the Integrated Sewer System and to continue to meet the financial planning benchmarks (i.e., financial position and targets) identified with WMP staff to promote the long-term creditworthiness of the Integrated Sewer System. The creditworthiness objective focuses on maintaining an "AAA" credit rating with the bond rating agencies, limiting long-term financial risks to the Integrated Sewer System through prudent liquidity and financial operating strategies, and promoting the long-term sustainability of rates while limiting future increases to wastewater customers. The table below summarizes the rate adjustment recommendations that were developed based on the assumptions recognized in the development of the financial forecast, and actual Fiscal Year 2022 results.

Table B - 2: Rate Adjustment Recommendations

Existing Board Adopted

Description	2024	2025	2026	2027	2028	2029
Quarterly Base Charge (per ERC)	$44.81	$49.73	$52.62	$55.41	$58.35	N/A
Flow Charge (per 1,000 gallons)	$8.46	$8.81	$9.33	$9.83	$10.35	N/A
Rate Revenue Adjustment (1)	6.2%	5.9%	5.9%	5.5%	5.3%	1.3%
Recommended Adjustments						
Quarterly Base Charge (per ERC)	$44.81	$49.73	$52.62	$55.78	$59.08	$62.57
Flow Charge (per 1,000 gallons)	$8.46	$8.81	$9.33	$9.88	$10.46	$11.08
Rate Revenue Adjustment (1)	6.2%	5.9%	5.9%	5.9%	5.9%	5.9%

(1) Amounts shown reflect projected increases to revenues from recommended rates, rates recommended to become effective July 1st of each fiscal year.

Source: Wastewater Revenue Sufficiency and Rate Analysis Report FY 2024 through FY 2029.

1.2 Availability Fees

1.2.1 Availability Fee Purpose

The availability fee is a one-time charge assessed to new customers to recover the proportionate share of system costs and capital project funding attributable to expansion of the system required to support new customers. Existing customers are defined as those who have paid an availability fee for access to the system. Existing customers include those who are connected to the system and are receiving wastewater conveyance and treatment services as well as those who have paid an availability fee but are not yet receiving services. New customers are those who have yet to pay the availability fee. Upon payment of the availability fee a new customer becomes an existing customer.

The County's availability fee methodology is generally based on the "system buy-in" cost method. Under this method, the availability fee is designed to recover the incremental costs of infrastructure required for new customers to connect to the system. An exception to this method is used for the valuation of Upper Occoquan Service Authority (UOSA) capacity reservations, which are based on an “incremental approach,” in which the capacity valuation is based on the cost of the last facility expansion as determined by UOSA.

1.2.2 Availability Fee Rate History

The following table shows the historical availability fees by customer class for the period from FY 2014 through FY 2023:

Table B - 3: Availability Fee by Customer Class FY 2014 – FY 2023

Historical Availability Fees by Customer Class

Fiscal Year	Single Family Residence	Townhouse or Apartment	Hotel/Motel (per unit charge)	Mobile Home	Non-residential (per fixture unit)
2014	$7,750	$6,200	$1,938	$6,200	$401
2015	$7,750	$6,200	$1,938	$6,200	$401
2016	$7,750	$6,200	$1,938	$6,200	$401
2017	$7,750	$6,200	$1,938	$6,200	$401
2018	$8,100	$6,480	$2,025	$6,480	$405

Fiscal Year	Single Family Residence	Townhouse or Apartment	Hotel/Motel (per unit charge)	Mobile Home	Non-residential (per fixture unit)
2019	$8,100	$6,480	$2,025	$6,480	$405
2020	$8,340	$6,672	$2,085	$6,672	$417
2021	$8,340	$6,672	$2,085	$6,672	$417
2022	$8,507	$6,806	$2,127	$6,806	$425
2023	$8,592	$6,874	$2,148	N/A	$430

Source: FY 2024 Fairfax County Adopted Budget Plan (Vol. 2)

1.2.3 Availability Fee Rate Increase

In FY 2024, the Availability Charge will increase from $8,592 to $8,592 for single family homes based on current projections of capital requirements. A summary of the recommended availability charges for FY 2024 is shown in the table below.

Table B - 4: Availability Fee by Customer Class

Current and Forecasted Availability Fees by Customer Class				
Fiscal Year	**Single Family Residence**	**Townhouses and Apartments**	**Hotels and Motels**	**Non- residential (per fixture unit)**
2024	$8,860	$7,088	$2,215	$443

Source: Wastewater Revenue Sufficiency and Rate Analysis Report FY 2024 through FY 2029.

1.3 Summary of FY 2023 Sewer Service Charge and Availability Changes

A detailed list of availability fees, connection fees and sewer service charges is shown in the following table.

Table B - 5: Sewer Service Charges FY 2014 – FY 2023

Fee History and Current Changes					
Fiscal Year	Availability Fee			Sewer Service Charge	
	Single Family Residence	Townhouse and Apartment	Commercial	Base Charge $/Qtr/ERC	Sewer Service Charge ($/1000 gal)
2014	$7,750	$6,200	$401	$12.79	$6.55
2015	$7,750	$6,200	$401	$15.86	$6.62
2016	$7,750	$6,200	$401	$20.15	$6.62
2017	$7,750	$6,200	$401	$24.68	$6.62
2018	$8,100	$6,480	$405	$27.62	$6.75
2019	$8,100	$6,480	$405	$30.38	$7.00
2020	$8,340	$6,672	$417	$32.91	$7.28
2021	$8,340	$6,672	$417	$32.91	$7.28
2022	$8,507	$6,806	$425	$36.54	$7.72
2023	$8,592	$6,874	$430	$40.14	$8.09

[1.] Connection Charge rate was increased to $152.50 per foot in 2011. Prior to 2011, the rate was $6.00/ft.

[2.] Lateral Spur Charge has been $600 per spur connection since March 1981.

Source: FY 2023 Annual Comprehensive Financial Report

1.4 Sewer Service Charge and Availability Rate Comparison

The table below compares average annual water and sewer service billings and Availability Fees per Single Family Residential Equivalent (SFRE) for Fairfax County with selected other regional jurisdictions. Representative average sewer service billings for the other regional jurisdictions have been developed by applying each jurisdiction's sewer service rate to appropriate SFRE water usage based on an analysis of Fairfax Water's historical average water usage records for SFREs. Both the existing and recommended charges are competitive with other surveyed Virginia wastewater utilities.

Table B - 6: Comparison of Average Sewer Service Charges and Availability Fees

Comparison of Average Sewer Service Charges and Availability Fees for SFREs		
Jurisdiction	**Average Monthly Sewer Service Billing [a,b]**	**Sewer Availability Fees [b,c]**
Fairfax County – FY 2023	$61.92	$8,592
Fairfax County – FY 2024	$65.70	$8,860
Fairfax County – FY 2025	$69.44	$9,038
City of Alexandria (served by AlexRenew)	$99.77	$9,446
Arlington County	$62.17	$3,720
DC Water	$122.79	$2,809
Loudoun Water	$72.48	$9,241
Prince William County	$53.65	$11,200
Washington Suburban Sanitary Commission	$82.67	Improved – $6,500 Unimproved – $14,500
Average of Other Jurisdictions	$82.25	$8,202

Source: Wastewater Revenue Sufficiency and Rate Analysis Report FY 2024 Through FY 2029
Notes:

a) Based on a quarterly use of 18,000 gallons which is the Fairfax County average winter quarter use.
b) Reflects rates in effect October 2023.
c) Availability fees reflect differences in the methodology utilized in their development as well as differences in such factors as level of service, regulatory requirements, and receipt of grants.

Appendix C - Wastewater Revenue Sufficiency and Rate Analysis Tables

Table of Contents

Table 1
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Summary of Implied Historical Customer Billing Statistics

Line No.	Description	Historical Fiscal Year Ended June 30, 2006	2007	2008	2009	2010	2011	2012	2013	2014
	Total System Customer Statistics (FY 2006 - FY 2014)									
1	ERU Growth	n/a	7,407	3,167	(40,116)	1,886	8,836	(61)	3,859	(2,304)
2	Estimated ERUs [1]	342,904	350,311	353,478	313,362	315,248	324,084	324,023	327,882	325,578
3	Average Billed Wastewater Flows (Kgal) [2]	24,380,182	25,112,557	24,624,563	24,510,612	24,962,443	23,934,607	24,672,538	24,518,064	24,764,339
4	Average Monthly Flow Per Billed ERC (gal)	5,925	5,974	5,805	6,518	6,599	6,154	6,345	6,231	6,339

Line No.	Description	Historical Fiscal Year Ended June 30, 2015	2016	2017	2018	2019	2020	2021	2022	2023
	Total System Customer Statistics (FY 2015 - FY 2023)									
5	ERU Growth	7,078	11,216	2,345	(4,497)	872	495	4,106	1,005	(910)
6	Estimated ERUs [1]	332,656	343,871	346,217	341,720	342,591	343,087	347,193	348,198	347,287
7	Average Billed Wastewater Flows (Kgal) [2]	23,919,871	23,451,904	23,113,566	23,086,536	22,593,545	22,770,424	22,351,730	22,750,614	22,426,454
8	Average Monthly Flow Per Billed ERC (gal)	5,992	5,683	5,563	5,630	5,496	5,531	5,365	5,445	5,381

Footnotes:

[1] Amounts shown through the Fiscal Year 2008 represent flow based ERUs reported by the County. Beginning with the Fiscal Year 2009 ERUs were estimated based on reported revenues.

[2] Billable Wastewater Flow is based on reported revenue divided by the rate in effect.

Table 2
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Summary of Projected Customer Billing Statistics

Line No.	Description	Historical 2023	Projected Fiscal Year Ending June 30, 2024	2025	2026	2027	2028	2029
	Total System Customer Statistics							
1	ERU Growth		1,600	1,607	1,617	1,621	1,635	1,642
2	Estimated ERUs [1]	347,287	348,887	350,494	352,111	353,732	355,367	357,009
3	Average Billed Wastewater Flows (Kgal)	22,426,454	22,587,133	22,701,141	22,816,405	22,931,787	23,048,712	23,165,973
4	Average Monthly Flow Per Billed ERU	5,381	5,395	5,397	5,400	5,402	5,405	5,407

Footnotes:

[1] Amounts shown for the Fiscal Year 2023 are calculated based on customer statistics provided by Fairfax Water.

Table 3
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Projection of Operating Expenses

Line No.	G/L Code		Description	Escalation Reference	Actual 2023	Adopted 2024	Adjustments	Adjusted 2024	Adjusted 2025	Projected Fiscal Year Ending June 30, 2026	2027	2028	2029
			WWC - WASTEWATER COLLECTION DEPARTMENT:										
			WWC- Administration										
			Personnel Services										
1	G252301001500000	WCDPS	Regular Salaries	Labor	$ 682,594	$ 1,140,605	$ 144,857	$ 1,285,462	$ 1,324,026	$ 1,363,746	$ 1,404,659	$ 1,446,799	$ 1,490,203
2	G252301001500040	WCDPS	New Position-Regular Salaries	Labor	-	-	-	-	-	-	-	-	-
3	G252301001500050	WCDPS	Annual Comp Increas	Labor	-	82,416	10,467	92,883	95,669	98,539	101,496	104,540	107,677
4	G252301001500080	WCDPS	POS Turnover-Pay	Labor	-	(70,915)	(9,006)	(79,921)	(82,319)	(84,788)	(87,332)	(89,952)	(92,651)
5	G252301001500090	WCDPS	Reg Sal Non Mert Em	Labor	20,850	-	-	-	-	-	-	-	-
6	G252301001500100	WCDPS	Shift Differential	Labor	-	4,002	508	4,510	4,646	4,785	4,928	5,076	5,229
7	G252301001500110	WCDPS	Extra pay	Labor	155	64,220	8,156	72,376	74,547	76,784	79,087	81,460	83,904
8	G252301001500130	WCDPS	Accrued Leave	Labor	7,940	-	-	-	-	-	-	-	-
9	G252301001500150	WCDPS	Leave Pay Out	Labor	16,390	-	-	-	-	-	-	-	-
10	G252301001501000	WCDPS	Fringe Benefits	Benefits	-	487,633	61,929	549,562	566,049	583,031	600,522	618,537	637,093
11	G252301001501010	WCDPS	FICA	Benefits	42,286	-	-	-	-	-	-	-	-
12	G252301001501011	WCDPS	Medicare	Benefits	9,834	-	-	-	-	-	-	-	-
13	G252301001501020	WCDPS	Retire Contrb-EE Sy	Benefits	185,560	-	-	-	-	-	-	-	-
14	G252301001501060	WCDPS	Health-Cigna High	Benefits	-	-	-	-	-	-	-	-	-
15	G252301001501061	WCDPS	Health OAP 90%	Benefits	21,593	-	-	-	-	-	-	-	-
16	G252301001501062	WCDPS	Health-HSA Plan	Benefits	1,400	-	-	-	-	-	-	-	-
17	G252301001501063	WCDPS	Health-MyChoice	Benefits	18,955	-	-	-	-	-	-	-	-
18	G252301001501070	WCDPS	Health-Cigna Low	Benefits	21,991	-	-	-	-	-	-	-	-
19	G252301001501080	WCDPS	Health-BC/BS	Benefits	-	-	-	-	-	-	-	-	-
20	G252301001501090	WCDPS	Health-Kaiser	Benefits	35,212	-	-	-	-	-	-	-	-
21	G252301001501100	WCDPS	Insurance-Group Life	Benefits	1,128	-	-	-	-	-	-	-	-
22	G252301001501110	WCDPS	Delta Dental	Benefits	4,191	-	-	-	-	-	-	-	-
23	G252301001502120	WCDOE	Worker Comp Ins Plc	Benefits	15,750	-	-	-	-	-	-	-	-
24			Total Personnel Services		$ 1,085,828	$ 1,707,961	$ 216,911	$ 1,924,872	$ 1,982,618	$ 2,042,097	$ 2,103,360	$ 2,166,460	$ 2,231,454
			Operating Expenses										
25	G252301001510000	WCDOE	Office Equip&Furnit	Inflation	$ 33,427	$ 2,575	$ -	$ 2,575	$ 2,634	$ 2,690	$ 2,743	$ 2,804	$ 2,865
26	G252301001510020	WCDOE	Office Supplies	Inflation	2,411	6,010	-	6,010	6,148	6,277	6,402	6,543	6,687
27	G252301001510030	WCDOE	Computer Equipment	Inflation	-	-	-	-	-	-	-	-	-
28	G252301001510040	WCDOE	Computer Acces&Supl	Inflation	660	5,160	-	5,160	5,279	5,390	5,498	5,619	5,742
29	G252301001510060	WCDOE	Printing Acces&Supl	Inflation	1,261	1,300	-	1,300	1,330	1,358	1,385	1,415	1,447
30	G252301001510070	WCDOE	Cleaning Supplies County	Inflation	-	-	-	-	-	-	-	-	-
31	G252301001510080	WCDOE	Postage	Inf/Cust	415	2,000	-	2,000	2,054	2,106	2,157	2,214	2,272
32	G252301001510200	WCDOE	Bldg Maint & Repair	Repair	29,435	12,500	-	12,500	13,000	13,520	14,061	14,623	15,208
33	G252301001510201	WCDOE	Carpentry/LumberSupl	Repair	56	-	-	-	-	-	-	-	-
34	G252301001510203	WCDOE	Hardware	Repair	1,130	-	-	-	-	-	-	-	-
35	G252301001510205	WCDOE	Lightbulbs	Repair	73	-	-	-	-	-	-	-	-
36	G252301001510206	WCDOE	Paint/Paint Supplies	Repair	622	-	-	-	-	-	-	-	-
37	G252301001510207	WCDOE	Plumbing Supplies	Repair	6,342	-	-	-	-	-	-	-	-
38	G252301001510210	WCDOE	Grnds Maint Equ&Supl	Repair	2,868	500	-	500	520	541	562	585	608
39	G252301001510400	WCDOE	Educational Supplie	Inflation	1,191	1,500	-	1,500	1,535	1,567	1,598	1,633	1,669
40	G252301001510600	WCDOE	Chemicals	Chemicals	251	-	-	-	-	-	-	-	-
41	G252301001510610	WCDOE	Tools County	Inflation	4,019	4,000	-	4,000	4,092	4,178	4,261	4,355	4,451
42	G252301001510620	WCDOE	Eng Drft&Sur Eqp&Sup	Inflation	-	-	-	-	-	-	-	-	-
43	G252301001510630	WCDOE	Water Treat Eqp&Sup	Inflation	5,556	-	-	-	-	-	-	-	-
44	G252301001510640	WCDOE	Food Srv Equip/Supl	Inflation	4,254	-	-	-	-	-	-	-	-
45	G252301001510650	WCDOE	Hshl Aplnc/Supl/Rep	Inflation	2,592	750	-	750	767	783	799	817	835
46	G252301001510660	WCDOE	Med&Lab Eqp and Sup	Inflation	18,609	6,500	-	6,500	6,650	6,789	6,925	7,077	7,233
47	G252301001510670	WCDOE	Park/Rctn Area Equip	Inflation	689	-	-	-	-	-	-	-	-
48	G252301001512990	WCDOE	Other Operating Sup	Inflation	32,060	214,680	-	214,680	219,618	224,230	228,714	233,746	238,888
49	G252301001512992	WCDOE	Goods Receipts Without PO	Inflation	-	-	-	-	-	-	-	-	-
50	G252301001513020	WCDOE	Automotive Equp&Sup	Inflation	22,668	25,000	-	25,000	25,575	26,112	26,634	27,220	27,819
51	G252301001513040	WCDOE	Fuel Oil County	Inflation	58	-	-	-	-	-	-	-	-
52	G252301001514010	WCDOE	Fire Protec Eqp&Supl	Inflation	3,334	3,186	-	3,186	3,260	3,328	3,395	3,469	3,546
53	G252301001514020	WCDOE	Uniform/Wear Appare	Inf/Emp	252,059	268,527	-	268,527	274,703	280,472	286,081	292,375	298,807
54	G252301001514030	WCDOE	Mis Pub Safe Eqp&Sup	Repair	29,155	-	-	-	-	-	-	-	-
55	G252301001520000	WCDOE	Ofc Eqp Maint&Repai	Repair	962	1,500	-	1,500	1,560	1,622	1,687	1,755	1,825
56	G252301001520010	WCDOE	Bldg Maint & Repair	Repair	21,790	201,342	-	201,342	209,395	217,771	226,482	235,541	244,963
57	G252301001520013	WCDOE	HVAC M&R	Repair	19	-	-	-	-	-	-	-	-
58	G252301001520020	WCDOE	Construct Maint/Repr	Repair	-	85,000	-	85,000	88,400	91,936	95,613	99,438	103,415
59	G252301001520025	WCDOE	Custodial Services	Repair	44,678	-	-	-	-	-	-	-	-
60	G252301001520060	WCDOE	Fire Extinguisher M&R	Repair	476	9,524	-	9,524	9,905	10,301	10,713	11,142	11,587
61	G252301001520110	WCDOE	Other Maint & Repai	Repair	7,282	32,809	-	32,809	34,121	35,486	36,905	38,382	39,917
62	G252301001520130	WCDOE	IT Equip Maint&Supp	Inflation	-	-	-	-	-	-	-	-	-
63	G252301001521050	WCDOE	Edu/Training Service	Inflation	2,505	30,000	-	30,000	30,690	31,334	31,961	32,664	33,383
64	G252301001521060	WCDOE	Computer Services	Inflation	-	40,000	-	40,000	40,920	41,779	42,615	43,552	44,511
65	G252301001521062	WCDOE	Tech Infra Chrgbck	Inflation	16,397	18,000	-	18,000	18,414	18,801	19,177	19,599	20,030
66	G252301001521070	WCDOE	Print/Typeset Servce	Inflation	944	-	-	-	-	-	-	-	-
67	G252301001521080	WCDOE	Other Pro Cntrct Sv	Inflation	38,636	50,653	-	50,653	51,818	52,906	53,964	55,152	56,365
68	G252301001521090	WCDOE	Comm & Media Servic	Inflation	279,557	209,188	-	209,188	213,999	218,493	222,863	227,766	232,777
69	G252301001521092	WCDOE	Telecom Service-Commercial	Inflation	4,747	-	-	-	-	-	-	-	-
70	G252301001521093	WCDOE	Telecommunication Chargeback	Inflation	41,997	41,424	-	41,424	42,377	43,267	44,132	45,103	46,095
71	G252301001521110	WCDOE	Public Works Service	Inflation	-	-	-	-	-	-	-	-	-
72	G252301001521140	WCDOE	Safety&Emergency Svc	Inflation	-	-	-	-	-	-	-	-	-
73	G252301001521150	WCDOE	Health Related Srvs	Inflation	3,932	1,068	-	1,068	1,092	1,115	1,138	1,163	1,188
74	G252301001521210	WCDOE	Licensing Fees	Inflation	6,556	7,500	-	7,500	7,673	7,834	7,990	8,166	8,346
75	G252301001521240	WCDOE	Meals	Inflation	-	1,500	-	1,500	1,535	1,567	1,598	1,633	1,669
76	G252301001521250	WCDOE	Miscellaneous Services	Inflation	-	266,397	-	266,397	272,524	278,247	283,812	290,056	296,437
77	G252301001530000	WCDOE	Electricity County	Electricity	66,080	84,330	-	84,330	86,438	88,599	90,814	93,084	95,411
78	G252301001530010	WCDOE	Natural Gas County	Gas	9,455	11,045	-	11,045	11,653	11,711	11,770	11,828	11,887

Footnotes on Page 14 of 14.

Table 3
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Projection of Operating Expenses

Line No.	G/L Code		Description	Escalation Reference	Actual 2023	Adopted 2024	Adjustments	Adjusted 2024	Adjusted 2025	Projected Fiscal Year Ending June 30, 2026	2027	2028	2029
79	G252301001530040	WCDOE	Water County	Water	4,522	5,778	-	5,778	6,152	6,583	6,978	7,326	7,619
80	G252301001530050	WCDOE	Other Utility Expense	Inflation	5,201	-	-	-	-	-	-	-	-
81	G252301001542000	WCDOE	Local County Travel	Inflation	285	500	-	500	512	522	533	544	556
82	G252301001542030	WCDOE	Operational Travel	Inflation	435	-	-	-	-	-	-	-	-
83	G252301001542050	WCDOE	Miscellaneous Travel	Inflation	6,801	30,770	-	30,770	31,477	32,138	32,781	33,502	34,239
84	G252301001540540	WCDOE	Housing Admin Fee	Inflation	-	-	-	-	-	-	-	-	-
85	G252301001541050	WCDOE	Gen Liab Admin	Insurance	-	-	-	-	-	-	-	-	-
86	G252301001541090	WCDOE	Auto Liab Admin	Insurance	123,716	-	-	-	-	-	-	-	-
87	G252301001542200	WCDOE	Certification	Inflation	225	-	-	-	-	-	-	-	-
88	G252301001542210	WCDOE	Mgmt/Prof Training	Inflation	2,859	5,500	-	5,500	5,627	5,745	5,860	5,988	6,120
89	G252301001542220	WCDOE	Technical Train Cnt	Inflation	26,525	5,500	-	5,500	5,627	5,745	5,860	5,988	6,120
90	G252301001542230	WCDOE	Non-Technical Training	Inflation	2,690	-	-	-	-	-	-	-	-
91	G252301001542520	WCDOE	Reimb-Telephone Exp	Inflation	-	-	-	-	-	-	-	-	-
92	G252301001543000	WCDOE	Cash Awards	Inflation	-	-	-	-	-	-	-	-	-
93	G252301001543020	WCDOE	Departmental Awards	Inflation	-	7,000	-	7,000	7,161	7,311	7,458	7,622	7,789
94	G252301001543030	WCDOE	Plaques and Awards	Inflation	-	-	-	-	-	-	-	-	-
95	G252301001544000	WCDOE	Copying	Inflation	6,782	9,000	-	9,000	9,207	9,400	9,588	9,799	10,015
96	G252301001544020	WCDOE	Phototypesetting	Inflation	-	-	-	-	-	-	-	-	-
97	G252301001544030	WCDOE	Printing and Bindin	Inflation	3,657	10,000	-	10,000	10,230	10,445	10,654	10,888	11,128
98	G252301001544050	WCDOE	Assigned Agency Veh	Inflation	590,274	190,771	-	190,771	195,159	199,257	203,242	207,714	212,283
99	G252301001544060	WCDOE	Motor Pool	Inflation	1,197	-	-	-	-	-	-	-	-
100	G252301001544070	WCDOE	Fuel	Fuel	357,154	-	-	-	-	-	-	-	-
101	G252301001544080	WCDOE	Vehicle Replacement	Inflation	(12,191)	-	-	-	-	-	-	-	-
102	G252301001544090	WCDOE	Services-Other Agency	Inflation	698	10,000	-	10,000	10,230	10,445	10,654	10,888	11,128
103	G252301001544504	WCDOE	Employee Recruitment	Inflation	655	-	-	-	-	-	-	-	-
104	G252301001544512	WCDOE	Internal FFX Suppor	Inflation	-	-	-	-	-	-	-	-	-
105	G252301001544524	WCDOE	Site Plan Fees	Inf/Emp	1,009	-	-	-	-	-	-	-	-
106	G252301001544538	WCDOE	Prof Memberships	Inf/Emp	380	3,500	-	3,500	3,581	3,656	3,729	3,811	3,895
107	G252301001544539	WCDOE	Prof Subscriptions	Inf/Emp	-	-	-	-	-	-	-	-	-
108	G252301001544540	WCDOE	Credit Card Expense	Inflation	-	-	-	-	-	-	-	-	-
109	G252301001544990	WCDOE	Other Operating Exp	Inflation	29,385	262,749	-	262,749	268,793	274,437	279,926	286,084	292,378
110	G252301001550130	WCDOE	Payments to VA	Inflation	-	-	-	-	-	-	-	-	-
111	G252301001580000	WCDOE	Indirect Cost Allocation	Constant	3,000,000	3,000,000	-	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
112			Total Operating Expenses		$ 5,153,469	$ 5,186,535	$ -	$ 5,186,535	$ 5,243,431	$ 5,297,794	$ 5,351,713	$ 5,410,676	$ 5,471,157
			Capital Equipment [1]										
113			Equipment Expense	Bud Cap	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
114			Vehicles SC/No WBS	Bud Cap	174,666	-	-	-	-	-	-	-	-
115			Total Capital Equipment [1]		$ 174,666	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
116			Total WWC- Administration		$ 6,413,963	$ 6,894,496	$ 216,911	$ 7,111,407	$ 7,226,050	$ 7,339,891	$ 7,455,073	$ 7,577,136	$ 7,702,611
			WWC - Gravity Sewer										
			Personnel Services										
117	G252301002500090	WCDPS	Regular Salaries	Labor	2,538,438	3,721,292	472,604	4,193,896	4,319,713	4,449,304	4,582,783	4,720,267	4,861,875
118	G252301002500100	WCDPS	Annual Comp Increas	Labor	-	368,520	46,802	415,322	427,782	440,615	453,834	467,449	481,472
119	G252301002500110	WCDPS	POS Turnover-Pay	Labor	-	(189,229)	(24,032)	(213,261)	(219,659)	(226,249)	(233,036)	(240,027)	(247,228)
120	G252301002500090	WCDPS	Reg Sal-Non Mert Em	Labor	229,605	115,651	14,688	130,339	134,249	138,276	142,425	146,697	151,098
121	G252301002500100	WCDPS	Shift Differential	Labor	40	-	-	-	-	-	-	-	-
122	G252301002500110	WCDPS	Extra pay	Labor	223,745	285,786	36,295	322,081	331,743	341,696	351,946	362,505	373,380
123	G252301002500130	WCDPS	Accrued Leave	Labor	16,841	-	-	-	-	-	-	-	-
124	G252301002500150	WCDPS	Stip, Award, Allwnce	Labor	-	-	-	-	-	-	-	-	-
125	G252301002500150	WCDPS	Bonuses	Labor	67,885	-	-	-	-	-	-	-	-
126	G252301002500150	WCDPS	Leave Pay-out	Labor	1,117	-	-	-	-	-	-	-	-
127	G252301002501000	WCDPS	Fringe Benefits	Benefits	-	1,799,963	228,595	2,028,558	2,089,415	2,152,098	2,216,660	2,283,160	2,351,655
128	G252301002501010	WCDPS	FICA	Benefits	181,764	-	-	-	-	-	-	-	-
129	G252301002501011	WCDPS	Medicare	Benefits	42,509	-	-	-	-	-	-	-	-
130	G252301002501020	WCDPS	Retire Contrb-EE Sy	Benefits	723,449	-	-	-	-	-	-	-	-
131	G252301002501060	WCDPS	Health-Cigna High	Benefits	-	-	-	-	-	-	-	-	-
132	G252301002501061	WCDPS	Health OAP 90%	Benefits	117,152	-	-	-	-	-	-	-	-
133	G252301002501062	WCDPS	Health-HSA Plan	Benefits	2,800	-	-	-	-	-	-	-	-
134	G252301002501063	WCDPS	Health-MyChoice	Benefits	21,094	-	-	-	-	-	-	-	-
135	G252301002501070	WCDPS	Health-Cigna Low	Benefits	74,323	-	-	-	-	-	-	-	-
136	G252301002501080	WCDPS	Health-BC/BS	Benefits	-	-	-	-	-	-	-	-	-
137	G252301002501090	WCDPS	Health-Kaiser	Benefits	170,470	-	-	-	-	-	-	-	-
138	G252301002501100	WCDPS	Insurance-Group Life	Benefits	4,209	-	-	-	-	-	-	-	-
139	G252301002501110	WCDPS	Delta Dental	Benefits	14,374	-	-	-	-	-	-	-	-
140	G252301002502150	WCDOE	Workers Comp Idmty-P	Benefits	-	-	-	-	-	-	-	-	-
141	G252301002502150	WCDOE	Employee Claim Write-off	Benefits	-	-	-	-	-	-	-	-	-
142			Total Personnel Services		$ 4,429,814	$ 6,101,983	$ 774,952	$ 6,876,935	$ 7,083,243	$ 7,295,740	$ 7,514,612	$ 7,740,051	$ 7,972,252
			Operating Expenses										
143	G252301002510000	WCDOE	Office Equip&Furnit	Inflation	$ 11,573	$ 12,125	$ -	$ 12,125	$ 12,404	$ 12,664	$ 12,918	$ 13,202	$ 13,492
144	G252301002510020	WCDOE	Office Supplies	Inflation	1,016	-	-	-	-	-	-	-	-
145	G252301002510030	WCDOE	Computer Equipment	Inflation	$ 124	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
146	G252301002510050	WCDOE	IT Replacement Part	Inflation	-	-	-	-	-	-	-	-	-
147	G252301002510040	WCDOE	Computer Acces&Supl	Inflation	$ -	$ 5,000	$ -	$ 5,000	$ 5,115	$ 5,222	$ 5,327	$ 5,444	$ 5,564
148	G252301002510080	WCDOE	Postage	Inflation	-	-	-	-	-	-	-	-	-
149	G252301002510200	WCDOE	Bldg Maint & Repair	Repair	$ 44,812	$ 130,276	$ -	$ 130,276	$ 135,487	$ 140,907	$ 146,543	$ 152,404	$ 158,501
150	G252301002510202	WCDOE	Electric Supplies	Inflation	1,193	-	-	-	-	-	-	-	-
151	G252301002510203	WCDOE	Hardware	Inflation	919	-	-	-	-	-	-	-	-
152	G252301002510204	WCDOE	HVAC Supplies	Inflation	$ (71)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
153	G252301002510205	WCDOE	Lightbulbs	Inflation	$ 912	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
154	G252301002510207	WCDOE	Plumbing Supplies	Inflation	$ 9,971	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
155	G252301002510210	WCDOE	Grnds Maint Equ&Sup	Inflation	$ 81,892	$ 15,000	$ -	$ 15,000	$ 15,345	$ 15,667	$ 15,981	$ 16,332	$ 16,691
156	G252301002510220	WCDOE	Lighting Equiptment	Inflation	-	-	-	-	-	-	-	-	-

Footnotes on Page 14 of 14.

Table 3
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Projection of Operating Expenses

Line No.	G/L Code		Description	Escalation Reference	Actual 2023	Adopted 2024	Adjustments	Adjusted 2024	Adjusted 2025	Projected Fiscal Year Ending June 30, 2026	2027	2028	2029
157	G252301002510400	WCDOE	Educational Supplie	Inflation	$ 336	$ 5,000	$ -	$ 5,000	$ 5,115	$ 5,222	$ 5,327	$ 5,444	$ 5,564
158	G252301002510600	WCDOE	Chemicals	Inflation	91	-	-	-	-	-	-	-	-
159	G252301002510610	WCDOE	Tools County	Inflation	14,971	50,000	-	50,000	51,150	52,224	53,269	54,441	55,638
160	G252301002510620	WCDOE	Eng Drft&Sur Eqp&Sup	Inflation	$ 1,304	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
161	G252301002510630	WCDOE	Water Treat Eqp&Sup	Inflation	35,786	50,000	-	50,000	51,150	52,224	53,269	54,441	55,638
162	G252301002510650	WCDOE	Hshl Aplnc/Supl/Rep	Inflation	$ -	$ 4,999	$ -	$ 4,999	$ 5,114	$ 5,221	$ 5,326	$ 5,443	$ 5,563
163	G252301002510660	WCDOE	Med&Lab Eqp and Sup	Inflation	-	5,000	-	5,000	5,115	5,222	5,327	5,444	5,564
164	G252301002510670	WCDOE	Park/Rctn Area Equi	Inflation	$ -	$ 5,000	$ -	$ 5,000	$ 5,115	$ 5,222	$ 5,327	$ 5,444	$ 5,564
165	G252301002512990	WCDOE	Other Operating Sup	Inflation	23,869	109,028	-	109,028	111,536	113,878	116,155	118,711	121,322
166	G252301002512992	WCDOE	Goods Receipt W/O P	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
167	G252301002513004	WCDOE	Diesel Fuel	Inflation	1,525	-	-	-	-	-	-	-	-
168	G252301002513020	WCDOE	Automotive Equp&Sup	Inflation	10,335	17,134	-	17,134	17,528	17,896	18,254	18,655	19,066
169	G252301002514010	WCDOE	Fire Protec Eqp&Sup	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
170	G252301002514020	WCDOE	Uniform/Wear Appare	Inf/Emp	878	10,000	-	10,000	10,230	10,445	10,654	10,888	11,128
171	G252301002514030	WCDOE	Mis Pub Safe Eqp&Sup	Repair	$ 9,502	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
172	G252301002520000	WCDOE	Ofc Eqp Maint&Repair	Repair	1,527	-	-	-	-	-	-	-	-
173	G252301002520010	WCDOE	Bldg Maint&Rep Svcs	Repair	$ 2,538	$ 50,000	$ -	$ 50,000	$ 52,000	$ 54,080	$ 56,243	$ 58,493	$ 60,833
174	G252301002520017	WCDOE	Plumbing M&R	Repair	37,742	44,075	-	44,075	45,838	47,672	49,578	51,562	53,624
175	G252301002520020	WCDOE	Construct Maint/Repr	Repair	$ 17,482	$ 150,000	$ -	$ 150,000	$ 50,000	$ 52,000	$ 54,080	$ 56,243	$ 58,493
176	G252301002520050	WCDOE	Automotive Equip M&R	Inflation	3,609	-	-	-	-	-	-	-	-
177	G252301002520070	WCDOE	Pub Safety Equip M&	Inflation	161	10,000	-	10,000	10,230	10,445	10,654	10,888	11,128
178	G252301002520110	WCDOE	Other Maint & Repai	Repair	$ 3,748	$ 200,000	$ -	$ 200,000	$ 208,000	$ 216,320	$ 224,973	$ 233,972	$ 243,331
179	G252301002521050	WCDOE	Edu/Training Service	Inflation	10,230	-	-	-	-	-	-	-	-
180	G252301002521080	WCDOE	Other Pro Cntrct Svc	Inflation	$ 223,628	$ 697,575	$ -	$ 697,575	$ 300,000	$ 306,300	$ 312,426	$ 319,299	$ 326,324
181	G252301002521110	WCDOE	Public Works Service	Inflation	3,335	-	-	-	-	-	-	-	-
182	G252301002521090	WCDOE	Comm & Media Service	Inflation	-	-	-	-	-	-	-	-	-
183	G252301002521100	WCDOE	Transportation Services	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
184	G252301002521140	WCDOE	Safety&Emergency Sv	Inflation	842	-	-	-	-	-	-	-	-
185	G252301002521150	WCDOE	Health Related Srvs	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
186	G252301002521210	WCDOE	Licensing Fees	Inflation	-	-	-	-	-	-	-	-	-
187	G252301002521250	WCDOE	Misc Servcices	Inflation	$ -	$ 100,000	$ -	$ 100,000	$ 102,300	$ 104,448	$ 106,537	$ 108,881	$ 111,276
188	G252301002523020	WCDOE	Rent- Operat Equipmn	Inflation	7,505	15,000	-	15,000	15,345	15,667	15,981	16,332	16,691
189	G252301002523030	WCDOE	Rent-Construction Equipment	Inflation	$ -	$ 15,000	$ -	$ 15,000	$ 15,345	$ 15,667	$ 15,981	$ 16,332	$ 16,691
190	G252301002530040	WCDOE	Water County	Water	-	5,000	-	5,000	5,324	5,696	6,038	6,340	6,594
191	G252301002542000	WCDOE	Local Travel County	Inflation	$ 268	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
192	G252301002542050	WCDOE	Miscellaneous Travel	Inflation	$ 1,045	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
193	G252301002542200	WCDOE	Certification	Inflation	375	-	-	-	-	-	-	-	-
194	G252301002542210	WCDOE	Mgmt/Prof Training	Inflation	1,669	-	-	-	-	-	-	-	-
195	G252301002542220	WCDOE	Technical Train Cnt	Inflation	$ 5,475	$ 10,000	$ -	$ 10,000	$ 10,230	$ 10,445	$ 10,654	$ 10,888	$ 11,128
196	G252301002542230	WCDOE	Non-Technical Training	Insurance	265	-	-	-	-	-	-	-	-
197	G252301002541020	WCDOE	Crime Ins Prem	Insurance	-	-	-	-	-	-	-	-	-
198	G252301002543000	WCDOE	Cash Awards	Benefits	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
199	G252301002544000	WCDOE	Copying	Inflation	-	-	-	-	-	-	-	-	-
200	G252301002544050	WCDOE	Assigned Agency Veh	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
201	G252301002544060	WCDOE	Motor Pool	Inflation	-	-	-	-	-	-	-	-	-
202	G252301002544070	WCDOE	Fuel	Fuel	$ -	$ 199,496	$ -	$ 199,496	$ 207,476	$ 215,775	$ 224,406	$ 233,382	$ 242,717
203	G252301002544090	WCDOE	Service-Other Agenc	Inflation	40,288	-	-	-	-	-	-	-	-
204	G252301002544512	WCDOE	Internal FFX Suppor	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
205	G252301002544538	WCDOE	Professional Memberships	Inf/Emp	125	-	-	-	-	-	-	-	-
206	G252301002544540	WCDOE	Credit Card Expense	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
207	G252301002544547	WCDOE	Refuse Disposal Exp	Inflation	5,075	10,000	-	10,000	10,230	10,445	10,654	10,888	11,128
208	G252301002544990	WCDOE	Other Operating Exp	Inflation	468	55,400	-	55,400	56,674	57,864	59,022	60,320	61,647
209			Total Operating Expenses		$ 618,335	$ 1,980,107	$ -	$ 1,980,107	$ 1,519,395	$ 1,564,840	$ 1,610,900	$ 1,660,114	$ 1,710,899
			Recovered Costs										
210	G252301002500121	WCDRC	WPFO-Labor Charges	Labor	$ -	$ (350,000)	$ -	$ (350,000)	$ (360,500)	$ (371,315)	$ (382,454)	$ (393,928)	$ (405,746)
211	G252301002500122	WCDRC	WPFO-Agency OH Cost	Inflation	-	(198,000)	-	(198,000)	(202,554)	(206,808)	(210,944)	(215,585)	(220,327)
212	G252301002501520	WCDRC	Reimb-CptlFringe Be	Benefits	-	-	-	-	-	-	-	-	-
213	G252301002543500	WCDRC	WPFO-Materials	Inflation	-	-	-	-	-	-	-	-	-
214	G252301002543510	WCDRC	WPFO-Equipment	Inflation	-	(5,000)	-	(5,000)	(5,115)	(5,222)	(5,327)	(5,444)	(5,564)
215			Total Recovered Costs		$ -	$ (553,000)	$ -	$ (553,000)	$ (568,169)	$ (583,345)	$ (598,725)	$ (614,957)	$ (631,637)
			Capital Equipment [1] [1]										
216	G252301002566125	WCDCE	Equipment Expense	Bud Cap	$ 93,697	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
217	G252301002566150	WCDCE	Vehicles Expense	Bud Cap	833,588	6,224,549	(6,224,549)	-	-	-	-	-	-
218	G252301002566999	WCDCE	FCG General Capital	Bud Cap	-	-	-	-	-	-	-	-	-
219			Total Capital Equipment [1] [1]		$ 927,285	$ 6,224,549	$ (6,224,549)	$ -	$ -	$ -	$ -	$ -	$ -
220			Total WWC - Gravity Sewer		$ 5,975,434	$ 13,753,639	$ (5,449,597)	$ 8,304,042	$ 8,034,469	$ 8,277,235	$ 8,526,787	$ 8,785,208	$ 9,051,514
			WWC - Pumping Stations										
			Personnel Services										
221	G252301003500000	WCDPS	Regular Salaries	Labor	$ 2,114,989	$ 2,415,057	$ 306,712	$ 2,721,769	$ 2,803,422	$ 2,887,525	$ 2,974,151	$ 3,063,375	$ 3,155,277
222	G252301003500050	WCDPS	Annual Comp Increas	Labor	-	285,517	36,261	321,778	331,431	341,374	351,615	362,164	373,028
223	G252301003500080	WCDPS	POS Turnover-Pay	Labor	-	(189,264)	(24,037)	(213,301)	(219,700)	(226,291)	(233,079)	(240,072)	(247,274)
224	G252301003500090	WCDPS	Reg Sal-Non Mert Em	Labor	147,934	739	94	833	858	884	910	937	966
225	G252301003500090	WCDPS	Shift Differential	Labor	-	-	-	-	-	-	-	-	-
226	G252301003500110	WCDPS	Extra pay	Labor	169,124	96,518	12,258	108,776	112,039	115,400	118,862	122,428	126,101
227	G252301003500130	WCDPS	Accrued Leave	Labor	114,558	-	-	-	-	-	-	-	-
228	G252301003500150	WCDPS	Bonuses	Labor	2,500	-	-	-	-	-	-	-	-
229	G252301003500150	WCDPS	Leave Pay-out	Labor	373	-	-	-	-	-	-	-	-
230	G252301003501000	WCDPS	Fringe Benefits	Benefits	-	1,087,980	138,173	1,226,153	1,262,938	1,300,826	1,339,851	1,380,047	1,421,448
231	G252301003501010	WCDPS	FICA	Benefits	144,671	-	-	-	-	-	-	-	-
232	G252301003501011	WCDPS	Medicare	Benefits	33,764	-	-	-	-	-	-	-	-
233	G252301003501020	WCDPS	Retire Contrb-EE Sy	Benefits	595,993	-	-	-	-	-	-	-	-
234	G252301003501060	WCDPS	Health-Cigna High	Benefits	-	-	-	-	-	-	-	-	-
235	G252301003501061	WCDPS	Health OAP 90%	Benefits	119,515	-	-	-	-	-	-	-	-

Footnotes on Page 14 of 14.

Table 3
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Projection of Operating Expenses

Line No.	G/L Code		Description	Escalation Reference	Actual 2023	Adopted 2024	Adjustments	Adjusted 2024	Adjusted 2025	Projected Fiscal Year Ending June 30, 2026	2027	2028	2029
236	G252301003501062	WCDPS	Health-HSA Plan	Benefits	4,200	-	-	-	-	-	-	-	-
237	G252301003501063	WCDPS	Health-MyChoice	Benefits	43,136	-	-	-	-	-	-	-	-
238	G252301003501070	WCDPS	Health Insurance-Cigna Low	Benefits	85,826	-	-	-	-	-	-	-	-
239	G252301003501080	WCDPS	Health-BC/BS	Benefits	-	-	-	-	-	-	-	-	-
240	G252301003501090	WCDPS	Health-Kaiser	Benefits	92,489	-	-	-	-	-	-	-	-
241	G252301003501100	WCDPS	Insurance-Group Life	Benefits	3,484	-	-	-	-	-	-	-	-
242	G252301003501110	WCDPS	Delta Dental	Benefits	12,497	-	-	-	-	-	-	-	-
243	G252301003502150	WCDOE	Workers Comp Idmty-P	Benefits	-	-	-	-	-	-	-	-	-
244			Total Personnel Services		$ 3,685,053	$ 3,696,547	$ 469,461	$ 4,166,008	$ 4,290,989	$ 4,419,718	$ 4,552,310	$ 4,688,879	$ 4,829,546
			Operating Expenses										
245	G252301003510000	WCDOE	Office Equip&Furnitr	Inflation	6,575	-	-	-	-	-	-	-	-
246	G252301003510020	WCDOE	Office Supplies	Inflation	$ 276	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
247	G252301003510030	WCDOE	Computer Equipment	Inflation	$ 662	$ 7,500	$ -	$ 7,500	$ 7,673	$ 7,834	$ 7,990	$ 8,166	$ 8,346
248	G252301003510040	WCDOE	Computer Acces&Supl	Inflation	34	5,000	-	5,000	5,115	5,222	5,327	5,444	5,564
249	G252301003510050	WCDOE	IT Replacement Part	Inflation	-	-	-	-	-	-	-	-	-
250	G252301003510080	WCDOE	Postage	Inflation	-	-	-	-	-	-	-	-	-
251	G252301003510200	WCDOE	Bldg Maint & Repair	Repair	23,994	10,000	-	10,000	10,400	10,816	11,249	11,699	12,167
252	G252301003510202	WCDOE	Electrical Supplies	Repair	36,325	-	-	-	-	-	-	-	-
253	G252301003510203	WCDOE	Hardware	Repair	15,522	-	-	-	-	-	-	-	-
254	G252301003510204	WCDOE	HVAC Supplies	Repair	1,116	-	-	-	-	-	-	-	-
255	G252301003510205	WCDOE	Lightbulbs	Repair	2,012	-	-	-	-	-	-	-	-
256	G252301003510207	WCDOE	Plumbing Supplies	Repair	77,946	95,099	-	95,099	98,903	102,859	106,973	111,252	115,702
257	G252301003510210	WCDOE	Grnds Maint Equ&Supl	Repair	1,027	-	-	-	-	-	-	-	-
258	G252301003510400	WCDOE	Educational Supplies	Inflation	-	2,000	-	-	-	-	-	-	-
259	G252301003510220	WCDOE	Lighting Equipment	Chem-Flow	2,379	-	-	-	-	-	-	-	-
260	G252301003510600	WCDOE	Chemicals	Chem-Flow	380,729	314,166	-	314,166	500,000	521,638	544,213	567,770	592,349
261	G252301003510610	WCDOE	Tools County	Inflation	42,946	15,235	-	15,235	15,586	15,913	16,231	16,588	16,953
262	G252301003510620	WCDOE	Water Treat Eqp&Sup	Inflation	-	-	-	-	-	-	-	-	-
263	G252301003510630	WCDOE	Eng Drft&Sur Eqp&Sup	Inflation	28,737	69,046	-	69,046	70,634	72,117	73,559	75,178	76,831
264	G252301003510650	WCDOE	Hshl Aplnc/Supl/Repl	Inflation	30	-	-	-	-	-	-	-	-
265	G252301003510660	WCDOE	Med&Lab Eqp and Sup	Inflation	20	-	-	-	-	-	-	-	-
266	G252301003512990	WCDOE	Other Operating Sup	Inflation	177,469	367,486	-	367,486	375,938	383,833	391,509	400,123	408,925
267	G252301003513004	WCDOE	Diesel Fuel	Fuel	7,315	37,685	-	37,685	39,193	40,760	42,391	44,086	45,850
268	G252301003513016	WCDOE	Automotive Parts	Inflation	613	-	-	-	-	-	-	-	-
269	G252301003513020	WCDOE	Automotive Equp&Sup	Inflation	12,482	5,000	-	5,000	5,115	5,222	5,327	5,444	5,564
270	G252301003513030	WCDOE	Heating Fuel	Inf/Emp	2,987	-	-	-	-	-	-	-	-
271	G252301003514020	WCDOE	Uniform/Wear Appare	Inf/Emp	6,081	5,134	-	5,134	5,252	5,363	5,470	5,590	5,713
272	G252301003514030	WCDOE	Mis Pub Safe Eqp&Sup	Inflation	1,985	-	-	-	-	-	-	-	-
273	G252301003520000	WCDOE	Ofc Eqp Maint&Repair	Repair	209	-	-	-	-	-	-	-	-
274	G252301003520010	WCDOE	Bldg Maint & Repair	Repair	6,667	50,000	-	50,000	52,000	54,080	56,243	58,493	60,833
275	G252301003520011	WCDOE	Electrical M&R	Repair	2,643	36,640	-	36,640	38,106	39,630	41,216	42,864	44,579
276	G252301003520013	WCDOE	HVAC M&R	Repair	17,829	13,758	-	13,758	14,308	14,880	15,475	16,094	16,738
277	G252301003520014	WCDOE	Mechanical Inspect	Repair	3,672	-	-	-	-	-	-	-	-
278	G252301003520017	WCDOE	Plumbing M&R	Repair	24,449	50,650	-	50,650	52,676	54,783	56,974	59,253	61,623
279	G252301003520020	WCDOE	Construct Maint/Repr	Repair	-	-	-	-	-	-	-	-	-
280	G252301003520050	WCDOE	Automotive Equip M&R	Repair	-	-	-	-	-	-	-	-	-
281	G252301003520110	WCDOE	Other Maint & Repai	Repair	431,543	558,401	-	558,401	580,737	603,966	628,125	653,250	679,380
282	G252301003520130	WCDOE	IT Equip Maint&Supp	Inf/Emp	603	-	-	-	-	-	-	-	-
283	G252301003521040	WCDOE	Employment Services	Inf/Emp	5,451	4,544	-	4,544	4,649	4,746	4,841	4,948	5,056
284	G252301003521050	WCDOE	Educational/Training Services	Inf/Emp	16,805	-	-	-	-	-	-	-	-
285	G252301003521060	WCDOE	Computer Services	Inflation	36,690	-	-	-	-	-	-	-	-
286	G252301003521080	WCDOE	Other Pro Cntrct Sv	Inflation	22,051	240,000	-	240,000	245,520	250,676	255,689	261,315	267,064
287	G252301003521090	WCDOE	Comm & Media Service	Inflation	-	-	-	-	-	-	-	-	-
288	G252301003521130	WCDOE	Grnds/Rec/Parks Svcs	Inflation	-	-	-	-	-	-	-	-	-
289	G252301003521140	WCDOE	Safety&Emergency Sv	Inflation	9,883	10,000	-	10,000	10,230	10,445	10,654	10,888	11,128
290	G252301003521210	WCDOE	Licensing Fees	Inflation	1,282	1,500	-	1,500	1,535	1,567	1,598	1,633	1,669
291	G252301003521250	WCDOE	Misc Servcices	Inflation	-	210,000	-	210,000	214,830	219,341	223,728	228,650	233,681
292	G252301003523020	WCDOE	Rent-Operating Equipment	Inflation	-	-	-	-	-	-	-	-	-
293	G252301003530000	WCDOE	Electricity County	Electricity	1,374,542	2,028,502	-	2,028,502	1,600,000	1,640,000	1,681,000	1,723,025	1,766,101
294	G252301003530040	WCDOE	Water County	Water	38,518	45,587	-	45,587	48,539	51,936	55,052	57,805	60,117
295	G252301003542000	WCDOE	Local Travel County	Inflation	-	-	-	-	-	-	-	-	-
296	G252301003542200	WCDOE	Certification	Inflation	-	-	-	-	-	-	-	-	-
297	G252301003542210	WCDOE	Mgmt/Prof Training	Inflation	-	-	-	-	-	-	-	-	-
298	G252301003542220	WCDOE	Technical Train Cnt	Inflation	40,150	-	-	-	-	-	-	-	-
299	G252301003542030	WCDOE	Operational Travel	Inflation	-	-	-	-	-	-	-	-	-
300	G252301003543000	WCDOE	Cash Awards	Benefits	-	-	-	-	-	-	-	-	-
301	G252301003544050	WCDOE	Assigned Agency Veh	Inflation	-	61,974	-	61,974	63,399	64,731	66,025	67,478	68,962
302	G252301003544060	WCDOE	Motor Pool	Inflation	-	-	-	-	-	-	-	-	-
303	G252301003544070	WCDOE	Fuel	Fuel	-	-	-	-	-	-	-	-	-
304	G252301003544512	WCDOE	Internal FFX Suppor	Inflation	-	12,500	-	12,500	12,788	13,056	13,317	13,610	13,910
305	G252301003544538	WCDOE	Professional Memberships	Inf/Emp	-	-	-	-	-	-	-	-	-
306	G252301003544540	WCDOE	Credit Card Expenditures	Inflation	-	-	-	-	-	-	-	-	-
307	G252301003544090	WCDOE	Services-Other Agency	Inflation	10,050	-	-	-	-	-	-	-	-
308	G252301003544990	WCDOE	Other Operating Exp	Inflation	8,480	24,000	-	24,000	24,552	25,068	25,569	26,131	26,706
309			Total Operating Expenses		$ 2,880,777	$ 4,281,407	$ -	$ 4,279,407	$ 4,097,675	$ 4,220,483	$ 4,345,747	$ 4,476,778	$ 4,611,510
			Recovered Costs										
310	G252301003500121	WCDRC	WPFO-Labor Charges	Labor	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
311	G252301003500122	WCDRC	WPFO-Agency OH Cost	Inflation	-	-	-	-	-	-	-	-	-
312	G252301003543500	WCDRC	WPFO-Materials	Inflation	-	-	-	-	-	-	-	-	-
313	G252301003543510	WCDRC	WPFO-Equipment	Inflation	-	-	-	-	-	-	-	-	-
314			Total Recovered Costs		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Capital Equipment [1]										
315	G252301003564100		Construct-Equip Acq	Bud Cap	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
316	G252301003566125	WCDCE	Equipment Expense	Bud Cap	142,249	71,790	(71,790)	-	-	-	-	-	-
317	G252301003566150	WCDCE	Vehicles Expense	Bud Cap	93,762	1,271,348	(1,271,348)	-	-	-	-	-	-
318			Total Capital Equipment [1]		$ 236,011	$ 1,343,138	$ (1,343,138)	$ -	$ -	$ -	$ -	$ -	$ -
319			Total WWC - Pumping Stations		$ 6,801,840	$ 9,321,092	$ (873,677)	$ 8,445,415	$ 8,388,664	$ 8,640,201	$ 8,898,057	$ 9,165,657	$ 9,441,056

Footnotes on Page 14 of 14.

Table 3
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Projection of Operating Expenses

Line No.	G/L Code		Description	Escalation Reference	Actual 2023	Adopted 2024	Adjustments	Adjusted 2024	Adjusted 2025	Projected Fiscal Year Ending June 30, 2026	2027	2028	2029
			WWC - Project & Assets										
			Personnel Services										
320	G252301004500000	WCDPS	Regular Salaries	Labor	$ 2,653,570	$ 2,397,809	$ 304,522	$ 2,702,331	$ 2,783,401	$ 2,866,903	$ 2,952,910	$ 3,041,497	$ 3,132,742
321	G252301004500050	WCDPS	New Position-Regular Salaries	Labor	-	-	-	-	-	-	-	-	-
322	G252301004500050	WCDPS	Annual Comp Increas	Labor	-	241,533	30,675	272,208	280,374	288,785	297,449	306,372	315,563
323	G252301004500090	WCDPS	Reg Sal Non Mert Em	Labor	117,977	2,926	372	3,298	3,397	3,498	3,603	3,711	3,823
324	G252301004500100	WCDPS	Shift Differential	Labor	3,205	-	-	-	-	-	-	-	-
325	G252301004500110	WCDPS	Extra pay	Labor	118,041	4	1	5	5	5	5	5	5
326	G252301004500130	WCDPS	Accrued Leave	Labor	(924)	-	-	-	-	-	-	-	-
327	G252301004500150	WCDPS	Leave Pay Out	Benefits	2,352	-	-	-	-	-	-	-	-
328	G252301004501000	WCDPS	Fringe Benefits	Benefits	-	1,090,247	138,461	1,228,708	1,265,570	1,303,537	1,342,643	1,382,922	1,424,410
329	G252301004501010	WCDPS	FICA	Benefits	169,083	-	-	-	-	-	-	-	-
330	G252301004501011	WCDPS	Medicare	Benefits	39,600	-	-	-	-	-	-	-	-
331	G252301004501020	WCDPS	Retire Contrb-EE Sy	Benefits	752,799	-	-	-	-	-	-	-	-
332	G252301004501060	WCDPS	Health-Cigna High	Benefits	-	-	-	-	-	-	-	-	-
333	G252301004501061	WCDPS	Health OAP 90%	Benefits	229,520	-	-	-	-	-	-	-	-
334	G252301004501062	WCDPS	Health-HSA Plan	Benefits	7,410	-	-	-	-	-	-	-	-
335	G252301004501063	WCDPS	Health-MyChoice	Benefits	74,211	-	-	-	-	-	-	-	-
336	G252301004501070	WCDPS	Health Cigna Low	Benefits	57,893	-	-	-	-	-	-	-	-
337	G252301004501080	WCDPS	Health-BC/BS	Benefits	-	-	-	-	-	-	-	-	-
338	G252301004501090	WCDPS	Health-Kaiser	Benefits	114,175	-	-	-	-	-	-	-	-
339	G252301004501100	WCDPS	Insurance-Group Life	Benefits	4,468	-	-	-	-	-	-	-	-
340	G252301004501110	WCDPS	Delta Dental	Benefits	16,969	-	-	-	-	-	-	-	-
341			Total Personnel Services		$ 4,360,349	$ 3,732,519	$ 474,030	$ 4,206,549	$ 4,332,745	$ 4,462,728	$ 4,596,610	$ 4,734,508	$ 4,876,543
			Operating Expenses										
342	G252301004510000	WCDOE	Office Equip&Furnitr	Inflation	$ -	$ 10,000	$ -	$ 10,000	$ 10,230	$ 10,445	$ 10,654	$ 10,888	$ 11,128
343	G252301004510020	WCDOE	Office Supplies	Inflation	43	-	-	-	-	-	-	-	-
344	G252301004510030	WCDOE	Computer Equipment	Inflation	114	-	-	-	-	-	-	-	-
345	G252301004510031	WCDOE	Computer Sys Lic Non	Inflation	$ 39,281	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
346	G252301004510032	WCDOE	Othr NonCap Eqpt Pur	Inflation	-	-	-	-	-	-	-	-	-
347	G252301004510040	WCDOE	Computer Acces&Supl	Inflation	$ 206	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
348	G252301004510610	WCDOE	Tools County	Inflation	1,453	-	-	-	-	-	-	-	-
349	G252301004510630	WCDOE	Water Treat Eqp&Supl	Inflation	$ 94	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
350	G252301004510200	WCDOE	Bldg Materials & Sup	Inflation	110	-	-	-	-	-	-	-	-
351	G252301004510202	WCDOE	Electrical Supplies	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
352	G252301004510203	WCDOE	Hardware	Inflation	3,286	-	-	-	-	-	-	-	-
353	G252301004510206	WCDOE	Paint/Paint Supplies	Inflation	-	-	-	-	-	-	-	-	-
354	G252301004510400	WCDOE	Educational Supplies	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
355	G252301004510620	WCDOE	Eng Drft&Sur Eqp&Sup	Inflation	5,000	-	-	-	-	-	-	-	-
356	G252301004510660	WCDOE	Med&Lab Eqp and Supl	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
357	G252301004510640	WCDOE	Food Srv Equip/Supl	Inflation	24	-	-	-	-	-	-	-	-
358	G252301004512990	WCDOE	Other Operating Sup	Inflation	30,478	29,522	-	29,522	30,201	30,835	31,452	32,144	32,851
359	G252301004513016	WCDOE	Automotive Parts	Inflation	$ 1,407	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
360	G252301004513020	WCDOE	Automotive Equp&Supl	Inflation	$ 337	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
361	G252301004514000	WCDOE	Poli/Prison Eqp&Supl	Inflation	-	-	-	-	-	-	-	-	-
362	G252301004514020	WCDOE	Uniform/Wear Apparel	Repair	$ 15,697	$ 2,812	$ -	$ 2,812	$ 2,924	$ 3,041	$ 3,163	$ 3,289	$ 3,421
363	G252301004520000	WCDOE	Ofc Eqp Maint&Repair	Repair	-	-	-	-	-	-	-	-	-
364	G252301004520010	WCDOE	Bldg Maint&Rep Svcs	Repair	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
365	G252301004520016	WCDOE	Extermination Svcs	Repair	-	-	-	-	-	-	-	-	-
366	G252301004520020	WCDOE	Construct Maint/Repr	Repair	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
367	G252301004520050	WCDOE	CCTV	Inflation	-	-	290,000	290,000	168,000	171,528	174,959	178,808	182,741
368	G252301004520070	WCDOE	Pub Safety Equip M&R	Repair	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
369	G252301004520100	WCDOE	Scienti/Tech Eqp M&R	Repair	22,944	-	-	-	-	-	-	-	-
370	G252301004520110	WCDOE	Other Maint & Repai	Repair	$ 79,155	$ 15,845	$ -	$ 15,845	$ 16,479	$ 17,138	$ 17,823	$ 18,536	$ 19,278
371	G252301004521050	WCDOE	Edu/Training Service	Inflation	650	27,996	-	27,996	28,640	29,241	29,826	30,482	31,153
372	G252301004521125	WCDOE	Miss Utility Service	Inflation	$ 147,896	$ 1,851,663	$ -	$ 1,851,663	$ 1,894,251	$ 1,934,031	$ 1,972,711	$ 2,016,111	$ 2,060,465
373	G252301004521210	WCDOE	Licensing Fees	Inflation	3,780	-	-	-	-	-	-	-	-
374	G252301004521060	WCDOE	Computer Services	Inflation	$ 39,232	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
375	G252301004521063	WCDOE	Tech Contrct Svcs	Inflation	18,000	-	-	-	-	-	-	-	-
376	G252301004521070	WCDOE	Print/Typeset Service	Inflation	2,500	-	-	-	-	-	-	-	-
377	G252301004521080	WCDOE	Other Pro Cntrct Sv	Inflation	816,406	459,042	-	459,042	469,600	479,461	489,051	499,810	510,806
378	G252301004521090	WCDOE	Comm & Media Serv	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
379	G252301004521250	WCDOE	Misc Servcices	Inflation	-	290,000	(290,000)	-	-	-	-	-	-
380	G252301004542000	WCDOE	Local Travel County	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
381	G252301004542220	WCDOE	Technical Training County	Inflation	-	35,000	-	35,000	35,805	36,557	37,288	38,108	38,947
382	G252301004542050	WCDOE	Miscellaneous Travel	Inf/Emp	$ 496	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
383	G252301004542200	WCDOE	Certification	Inf/Emp	$ 1,500	$ 20,000	$ -	$ 20,000	$ 20,460	$ 20,890	$ 21,307	$ 21,776	$ 22,255
384	G252301004542210	WCDOE	Mgmt/Prof Training	Inf/Emp	695	-	-	-	-	-	-	-	-
385	G252301004544538	WCDOE	Professional Memberships	Inf/Emp	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
386	G252301004544990	WCDOE	Other Operating Exp	Inflation	5,453	-	-	-	-	-	-	-	-
387			Total Operating Expenses		$ 1,236,236	$ 2,741,880	$ -	$ 2,741,880	$ 2,676,590	$ 2,733,167	$ 2,788,234	$ 2,849,953	$ 2,913,045
			Capital Equipment [1]										
388	G252301004566125	WCDCE	Equipment Expense	Bud Cap	$ 93,204	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
389	G252301004566150	WCDCE	Vehicles Expense	Bud Cap	345,014	1,200,000	(1,200,000)	-	-	-	-	-	-
390			Total Capital Equipment [1]		$ 438,218	$ 1,200,000	$ (1,200,000)	$ -	$ -	$ -	$ -	$ -	$ -
391			Total WWC - Project & Assets		$ 6,034,803	$ 7,674,399	$ (725,970)	$ 6,948,429	$ 7,009,335	$ 7,195,895	$ 7,384,844	$ 7,584,461	$ 7,789,588
392			Total Wastewater Collection Department		$ 25,226,040	$ 37,643,627	$ (6,832,333)	$ 30,809,294	$ 30,658,517	$ 31,453,222	$ 32,264,761	$ 33,112,462	$ 33,984,769

Footnotes on Page 14 of 14.

Table 3
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Projection of Operating Expenses

Line No.	G/L Code		Description	Escalation Reference	Actual 2023	Adopted 2024	Adjustments	Adjusted 2024	Adjusted 2025	Projected Fiscal Year Ending June 30, 2026	2027	2028	2029
			WT- WASTEWATER TREATMENT (Noman M. Cole, Jr., Pollution Control Plant):										
			WWT - Administration										
			Personnel Services										
393	G252302001500000	WTDPS	Regular Salaries	Labor	$ 634,547	$ 1,143,531	$ 145,228	$ 1,288,759	$ 1,327,422	$ 1,367,245	$ 1,408,262	$ 1,450,510	$ 1,494,025
394	G252302001500000	WTDPS	Additional Personnel	Labor	-	-	-	-	-	-	-	-	-
395	G252302001500050	WTDPS	Annual Comp Increas	Labor	-	82,629	10,494	93,123	95,917	98,794	101,758	104,811	107,955
396	G252302001500080	WTDPS	POS Turnover-Pay	Labor	-	(1,310)	(166)	(1,476)	(1,521)	(1,566)	(1,613)	(1,662)	(1,712)
397	G252302001500090	WTDPS	Reg Sal- Non Mert Em	Labor	-	34,135	4,335	38,470	39,624	40,813	42,037	43,298	44,597
398	G252302001500100	WTDPS	Shift Differential	Labor	-	-	-	-	-	-	-	-	-
399	G252302001500110	WTDPS	Extra pay	Labor	25,750	21,740	2,761	24,501	25,236	25,993	26,773	27,576	28,403
400	G252302001500121	WTDPS	WPFO-Labor Charges	Labor	-	-	-	-	-	-	-	-	-
401	G252302001500122	WTDPS	WPFO-Agency OH Cost	Labor	-	-	-	-	-	-	-	-	-
402	G252302001500130	WTDPS	Accrued Leave	Labor	6,228	-	-	-	-	-	-	-	-
403	G252302001500150	WTDPS	Bonuses	Labor	8,750	-	-	-	-	-	-	-	-
404	G252302001500150	WTDPS	Leave Pay-out	Labor	-	-	-	-	-	-	-	-	-
405	G252302001501000	WTDPS	Fringe Benefits	Benefits	-	539,388	68,502	607,890	626,127	644,911	664,258	684,186	704,711
406	G252302001501010	WTDPS	FICA	Benefits	38,438	-	-	-	-	-	-	-	-
407	G252302001501011	WTDPS	Medicare	Benefits	9,201	-	-	-	-	-	-	-	-
408	G252302001501020	WTDPS	Retire Contrb-EE Sy	Benefits	140,795	-	-	-	-	-	-	-	-
409	G252302001501060	WTDPS	Health-Cigna High	Benefits	-	-	-	-	-	-	-	-	-
410	G252302001501061	WTDPS	Health OAP 90%	Benefits	9,973	-	-	-	-	-	-	-	-
411	G252302001501062	WTDPS	Health-HSA Plan	Benefits	3,670	-	-	-	-	-	-	-	-
412	G252302001501063	WTDPS	Health-MyChoice	Benefits	32,509	-	-	-	-	-	-	-	-
413	G252302001501070	WTDPS	Health-Cigna Low	Benefits	32,081	-	-	-	-	-	-	-	-
414	G252302001501080	WTDPS	Health-BC/BS	Benefits	-	-	-	-	-	-	-	-	-
415	G252302001501090	WTDPS	Health-Kaiser	Benefits	10,015	-	-	-	-	-	-	-	-
416	G252302001501100	WTDPS	Insurance-Group Life	Benefits	995	-	-	-	-	-	-	-	-
417	G252302001501110	WTDPS	Delta Dental	Benefits	3,560	-	-	-	-	-	-	-	-
418	G252302001502120	WTDOE	Workers Comp Ins Plc	Benefits	97,020	80,000	10,160	90,160	92,865	95,651	98,520	101,476	104,520
419	G252302001502150	WTDOE	Workers Comp Idmty-P	Benefits	-	-	-	-	-	-	-	-	-
420			Total Personnel Services		$ 1,053,532	$ 1,900,113	$ 241,314	$ 2,141,427	$ 2,205,670	$ 2,271,840	$ 2,339,995	$ 2,410,195	$ 2,482,501
			Operating Expenses										
421	G252302001510000	WTDOE	Office Equip&Furnit	Inflation	$ 34,483	$ 65,000	$ -	$ 65,000	$ 66,495	$ 67,891	$ 69,249	$ 70,773	$ 72,330
422	G252302001510010	WTDOE	Copier	Inflation	-	-	-	-	-	-	-	-	-
423	G252302001510020	WTDOE	Office Supplies	Inflation	12,855	20,000	-	20,000	20,460	20,890	21,307	21,776	22,255
424	G252302001510030	WTDOE	Computer Equipment	Inflation	-	912	-	912	933	953	972	993	1,015
425	G252302001510040	WTDOE	Computer Acces&Supl	Inflation	4,704	-	-	-	-	-	-	-	-
426	G252302001510060	WTDOE	Printing Acces&Supl	Inflation	$ 153	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
427	G252302001510070	WTDOE	Clean Supplies Cnty	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
428	G252302001510080	WTDOE	Postage	Inf/Cust	8,356	5,000	-	5,000	5,136	5,266	5,393	5,535	5,680
429	G252302001510640	WTDOE	Food Srv Equip	Inf/Cust	-	-	-	-	-	-	-	-	-
430	G252302001510660	WTDOE	Med&Lab Eqp and Supl	Inflation	-	-	-	-	-	-	-	-	-
431	G252302001510200	WTDOE	Bldg Maint & Repair	Repair	245	1,000	-	1,000	1,040	1,082	1,125	1,170	1,217
432	G252302001510203	WTDOE	Hardware	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
433	G252302001510204	WTDOE	HVAC Supplies	Inflation	269	-	-	-	-	-	-	-	-
434	G252302001510207	WTDOE	Plumbing Supplies	Inflation	-	-	-	-	-	-	-	-	-
435	G252302001510210	WTDOE	Grnds Maint Equ&Supl	Inflation	1,563	-	-	-	-	-	-	-	-
436	G252302001510400	WTDOE	Educational Supplie	Inflation	970	-	-	-	-	-	-	-	-
437	G252302001510610	WTDOE	Tools County	Inflation	$ 2,711	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
438	G252302001510630	WTDOE	Water Treat Eqp&Sup	Inflation	564	-	-	-	-	-	-	-	-
439	G252302001512990	WTDOE	Other Operating Sup	Inflation	7,749	50,000	-	50,000	51,150	52,224	53,269	54,441	55,638
440	G252302001513000	WTDOE	Automotive Fuel	Fuel	-	-	-	-	-	-	-	-	-
441	G252302001513004	WTDOE	Diesel Fuel	Fuel	-	20,000	-	20,000	20,800	21,632	22,497	23,397	24,333
442	G252302001513030	WTDOE	Heating Fuel	Fuel	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
443	G252302001514010	WTDOE	Fire Protec Eqp&Sup	Inflation	-	-	-	-	-	-	-	-	-
444	G252302001513016	WTDOE	Automotive Parts	Inf/Emp	80	-	-	-	-	-	-	-	-
445	G252302001513020	WTDOE	Automotive Equp&Supl	Inf/Emp	4,961	-	-	-	-	-	-	-	-
446	G252302001514020	WTDOE	Uniform/Wear Appare	Inf/Emp	328,821	317,343	-	317,343	324,642	331,459	338,089	345,527	353,128
447	G252302001514030	WTDOE	Mis Pub Safe Eqp&Sup	Inf/Emp	59,764	589	-	589	602	615	627	641	655
448	G252302001520000	WTDOE	Ofc Eqp Maint&Repai	Repair	-	-	-	-	-	-	-	-	-
449	G252302001520010	WTDOE	Bldg Maint & Repair	Repair	$ 44	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
450	G252302001520020	WTDOE	Construct Maint/Repr	Repair	-	-	-	-	-	-	-	-	-
451	G252302001520060	WTDOE	Fire Extinguishr M&R	Inflation	8,060	1,940	-	1,940	1,985	2,027	2,067	2,113	2,159
452	G252302001520070	WTDOE	Pub Safety Equip M&R	Inflation	112	-	-	-	-	-	-	-	-
453	G252302001520110	WTDOE	Other Maint & Repair	Repair	-	-	-	-	-	-	-	-	-
454	G252302001521050	WTDOE	Edu Training Servic	Repair	$ -	$ 900	$ -	$ 900	$ 936	$ 973	$ 1,012	$ 1,053	$ 1,095
455	G252302001521060	WTDOE	Computer Services	Inflation	-	845	-	845	864	882	900	920	940
456	G252302001521062	WTDOE	Telecommunication Chargeback	Inflation	737	737	-	737	754	770	785	802	820
457	G252302001521070	WTDOE	Print/Typeset Servce	Inflation	-	-	-	-	-	-	-	-	-
458	G252302001521080	WTDOE	Other Pro Cntrct Sv	Inflation	28,475	100,000	-	100,000	102,300	104,448	106,537	108,881	111,276
459	G252302001521090	WTDOE	Comm & Media Servic	Inflation	$ 66,541	$ 88,495	$ -	$ 88,495	$ 90,530	$ 92,431	$ 94,280	$ 96,354	$ 98,474
460	G252302001521092	WTDOE	Telecom Service-Commercial	Inflation	626	-	-	-	-	-	-	-	-
461	G252302001521093	WTDOE	Telecommunication Chargeback	Inflation	1,862	1,862	-	1,862	1,905	1,945	1,984	2,027	2,072
462	G252302001521110	WTDOE	Public Works Servic	Inflation	-	-	-	-	-	-	-	-	-
463	G252302001521140	WTDOE	Safety&Emergency Sv	Inflation	144,072	147,121	-	147,121	150,505	153,666	156,739	160,187	163,711
464	G252302001521150	WTDOE	Health Related Srvs	Inflation	$ 3,250	$ 20	$ -	$ 20	$ 20	$ 21	$ 21	$ 21	$ 22
465	G252302001521210	WTDOE	Licensing Fees	Inflation	26,440	45,499	-	45,499	46,545	47,523	48,473	49,540	50,630
466	G252302001521240	WTDOE	Meals	Inflation	1,172	-	-	-	-	-	-	-	-
467	G252302001521250	WTDOE	Miscellaneous Services	Inflation	-	-	-	-	-	-	-	-	-
468	G252302001530010	WTDOE	Natural Gas Company	Gas	-	-	-	-	-	-	-	-	-
469	G252302001530040	WTDOE	Water County	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
470	G252302001530050	WTDOE	Other Utility Expense	Insurance	1,556	-	-	-	-	-	-	-	-

Footnotes on Page 14 of 14.

Table 3
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Projection of Operating Expenses

Line No.	G/L Code		Description	Escalation Reference	Actual 2023	Adopted 2024	Adjustments	Adjusted 2024	Adjusted 2025	Projected Fiscal Year Ending June 30, 2026	2027	2028	2029
471	G252302001541020	WTDOE	Crime Ins Prem	Insurance	-	-	-	-	-	-	-	-	-
472	G252302001541050	WTDOE	Gen Liab Admin	Insurance	-	-	-	-	-	-	-	-	-
473	G252302001541090	WTDOE	Auto Liab Admin	Insurance	-	-	-	-	-	-	-	-	-
474	G252302001542000	WTDOE	Local Travel County	Inflation	$ 102	$ 1,000	$ -	$ 1,000	$ 1,023	$ 1,044	$ 1,065	$ 1,089	$ 1,113
475	G252302001542050	WTDOE	Miscellaneous Travel	Inflation	8,134	29,624	-	29,624	30,306	30,942	31,561	32,255	32,965
476	G252302001542200	WTDOE	Certification	Inflation	36,365	31,000	-	31,000	31,713	32,379	33,027	33,753	34,496
477	G252302001542210	WTDOE	Mgmt/Prof Training	Inflation	1,100	-	-	-	-	-	-	-	-
478	G252302001542220	WTDOE	Technical Train Cnt	Inflation	85,604	172,288	-	172,288	176,251	179,952	183,551	187,589	191,716
479	G252302001542520	WTDOE	Reimb-Telephone Exp	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
480	G252302001543000	WTDOE	Cash Awards	Benefits	-	-	-	-	-	-	-	-	-
481	G252302001543020	WTDOE	Departmental Awards	Inflation	4,391	11,585	-	11,585	11,851	12,100	12,342	12,614	12,891
482	G252302001543510	WTDOE	WPFO-Equipment	Inflation	-	-	-	-	-	-	-	-	-
483	G252302001544000	WTDOE	Copying	Inflation	-	-	-	-	-	-	-	-	-
484	G252302001544020	WTDOE	Phototypesetting	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
485	G252302001544030	WTDOE	Printing and Bindin	Inflation	1,296	1,200	-	1,200	1,228	1,253	1,278	1,307	1,335
486	G252302001544050	WTDOE	Assigned Agency Veh	Inflation	184,579	200,000	-	200,000	204,600	208,897	213,075	217,762	222,553
487	G252302001544060	WTDOE	Motor Pool	Inflation	-	-	-	-	-	-	-	-	-
488	G252302001544070	WTDOE	Fuel	Fuel	49,774	-	-	-	-	-	-	-	-
489	G252302001544090	WTDOE	Service-Other Agenc	Inflation	$ 1,200	$ 50,000	$ -	$ 50,000	$ 51,150	$ 52,224	$ 53,269	$ 54,441	$ 55,638
490	G252302001544220	WTDOE	Fam Partn Pgm-Contra	Inflation	-	-	-	-	-	-	-	-	-
491	G252302001544508	WTDOE	Mileage Allow Auto	Inflation	-	-	-	-	-	-	-	-	-
492	G252302001544538	WTDOE	Prof Memberships	Inf/Emp	65,789	75,382	-	75,382	77,116	78,735	80,310	82,077	83,883
493	G252302001544539	WTDOE	Prof Subscriptions	Inf/Emp	4,266	7,500	-	7,500	7,673	7,834	7,990	8,166	8,346
494	G252302001544540	WTDOE	Credit Card Expense	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
495	G252302001544547	WTDOE	Refuse Disposal Exp	Inflation	-	-	-	-	-	-	-	-	-
496	G252302001544990	WTDOE	Other Operating Exp	Inflation	$ 4,700	$ 35,000	$ -	$ 35,000	$ 35,805	$ 36,557	$ 37,288	$ 38,108	$ 38,947
497			Total Operating Expenses		$ 1,198,495	$ 1,481,843	$ -	$ 1,481,843	$ 1,516,319	$ 1,548,616	$ 1,580,084	$ 1,615,312	$ 1,651,333
			Capital Equipment [1]										
498	G252302001566125	WTDCE	Equipment Expense	Bud Cap	$ -	$ 2,220,000	$ (2,220,000)	$ -	$ -	$ -	$ -	$ -	$ -
499	G252302001566125	WTDCE	Vehicle Expense	Bud Cap	64,962	698,745	(698,745)	-	-	-	-	-	-
500			Total Capital Equipment [1]		$ 64,962	$ 2,918,745	$ (2,918,745)	$ -	$ -	$ -	$ -	$ -	$ -
501			Total WWT - Administration		$ 2,316,988	$ 6,300,701	$ (2,677,430)	$ 3,623,270	$ 3,721,989	$ 3,820,456	$ 3,920,079	$ 4,025,507	$ 4,133,835
			WWT - Operations										
			Personnel Services										
502	G252302002500000	WTDPS	Regular Salaries	Labor	$ 3,168,220	$ 4,158,582	$ 528,140	$ 4,686,722	$ 4,827,324	$ 4,972,143	$ 5,121,308	$ 5,274,947	$ 5,433,195
503	G252302002500050	WTDPS	Annual Comp Increas	Labor	-	572,596	72,720	645,316	664,675	684,615	705,154	726,308	748,098
504	G252302002500080	WTDPS	POS Turnover-Pay	Labor	-	(189,254)	(24,035)	(213,289)	(219,688)	(226,279)	(233,067)	(240,059)	(247,261)
505	G252302002500090	WTDPS	Reg Sal-Non Mert Em	Labor	46,774	115,628	14,685	130,313	134,222	138,249	142,396	146,668	151,068
506	G252302002500100	WTDPS	Shift Differential	Labor	46,533	46,987	5,967	52,954	54,543	56,179	57,865	59,601	61,389
507	G252302002500110	WTDPS	Extra pay	Labor	241,337	217,576	27,632	245,208	252,564	260,141	267,946	275,984	284,263
508	G252302002500130	WTDPS	Accrued Leave	Labor	36,636	-	-	-	-	-	-	-	-
509	G252302002500150	WTDPS	Leave Pay-out	Labor	47,161	-	-	-	-	-	-	-	-
510	G252302002501000	WTDPS	Fringe Benefits	Benefits	-	1,935,497	245,808	2,181,305	2,246,744	2,314,147	2,383,571	2,455,078	2,528,730
511	G252302002501010	WTDPS	FICA	Benefits	208,278	-	-	-	-	-	-	-	-
512	G252302002501011	WTDPS	Medicare	Benefits	48,777	-	-	-	-	-	-	-	-
513	G252302002501020	WTDPS	Retire Contrb-EE Sy	Benefits	938,789	-	-	-	-	-	-	-	-
514	G252302002501060	WTDPS	Health-Cigna High	Benefits	-	-	-	-	-	-	-	-	-
515	G252302002501061	WTDPS	Health OAP 90%	Benefits	332,346	-	-	-	-	-	-	-	-
516	G252302002501062	WTDPS	Health-HSA Plan	Benefits	8,095	-	-	-	-	-	-	-	-
517	G252302002501063	WTDPS	Health-MyChoice	Benefits	81,767	-	-	-	-	-	-	-	-
518	G252302002501070	WTDPS	Health-Cigna Low	Benefits	71,830	-	-	-	-	-	-	-	-
519	G252302002501080	WTDPS	Health-BC/BS	Benefits	-	-	-	-	-	-	-	-	-
520	G252302002501090	WTDPS	Health-Kaiser	Benefits	74,487	-	-	-	-	-	-	-	-
521	G252302002501100	WTDPS	Insurance-Group Life	Benefits	5,166	-	-	-	-	-	-	-	-
522	G252302002501110	WTDPS	Delta Dental	Benefits	18,982	-	-	-	-	-	-	-	-
523			Total Personnel Services		$ 5,375,179	$ 6,857,612	$ 870,917	$ 7,728,529	$ 7,960,385	$ 8,199,196	$ 8,445,172	$ 8,698,527	$ 8,959,483
			Operating Expenses										
524	G252302002510000	WTDOE	Office Equip&Furnitr	Inflation	$ 2,536	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
525	G252302002510020	WTDOE	Office Supplies	Inflation	-	-	-	-	-	-	-	-	-
526	G252302002510200	WTDOE	Bldg Maint & Repair	Repair	38,156	-	-	-	-	-	-	-	-
527	G252302002510202	WTDOE	Electrical Supploes	Inflation	2,181	-	-	-	-	-	-	-	-
528	G252302002510204	WTDOE	HVAC Supplies	Inflation	-	-	-	-	-	-	-	-	-
529	G252302002510210	WTDOE	Grnds Maint Equ&Sup	Inflation	2,173	-	-	-	-	-	-	-	-
530	G252302002510400	WTDOE	Educational Supplie	Inflation	-	-	-	-	-	-	-	-	-
531	G252302002510600	WTDOE	Chemicals	Chem-Noman	2,544,675	3,586,131	-	3,586,131	3,743,682	3,908,674	4,080,912	4,260,816	4,448,654
532	G252302002510610	WTDOE	Tools County	Inflation	64	-	-	-	-	-	-	-	-
533	G252302002510630	WTDOE	Water Treat Eqp&Sup	Inflation	33,186	11,565	-	11,565	11,831	12,079	12,321	12,592	12,869
534	G252302002510650	WTDOE	Hshl Aplnc/Supl/Rep	Inflation	-	-	-	-	-	-	-	-	-
535	G252302002510660	WTDOE	Med&Lab Eqp and Sup	Inflation	3,137	-	-	-	-	-	-	-	-
536	G252302002512990	WTDOE	Other Operating Sup	Inflation	171	-	-	-	-	-	-	-	-
537	G252302002513020	WTDOE	Automotive Equp&Sup	Inflation	4,961	-	-	-	-	-	-	-	-
538	G252302002513004	WTDOE	Diesel Fuel	Fuel	105,000	60,000	-	60,000	62,400	64,896	67,492	70,192	72,999
539	G252302002513030	WTDOE	Heating Fuel	Fuel	-	-	-	-	-	-	-	-	-
540	G252302002513040	WTDOE	Fuel Oil County	Inflation	-	-	-	-	-	-	-	-	-
541	G252302002514010	WTDOE	Fire Protec Eqp&Sup	Inflation	-	-	-	-	-	-	-	-	-

Footnotes on Page 14 of 14.

Table 3
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Projection of Operating Expenses

Line No.	G/L Code		Description	Escalation Reference	Actual 2023	Adopted 2024	Adjustments	Adjusted 2024	Adjusted 2025	Projected Fiscal Year Ending June 30, 2026	2027	2028	2029
542	G252302002514020	WTDOE	Uniform/Wear Appare	Inf/Emp	244	-	-	-	-	-	-	-	-
543	G252302002514030	WTDOE	Mis Pub Safe Eqp&Sup	Inflation	18,594	-	-	-	-	-	-	-	-
544	G252302002520010	WTDOE	Bldg Maint&Rep Svcs	Inflation	15,293	-	-	-	-	-	-	-	-
545	G252302002520110	WTDOE	Other Maint & Repair	Inflation	-	-	-	-	-	-	-	-	-
546	G252302002521040	WTDOE	Employment Services	Inflation	188,218	2,132	-	2,132	2,181	2,227	2,271	2,321	2,372
547	G252302002521080	WTDOE	Other Pro Cntrct Sv	Inflation	631,495	346,004	-	346,004	353,962	361,395	368,623	376,733	385,021
548	G252302002521090	WTDOE	Comm & Media Servic	Inflation	948	-	-	-	-	-	-	-	-
549	G252302002521210	WTDOE	Licensing Fees	Inflation	-	-	-	-	-	-	-	-	-
550	G252302002521250	WTDOE	Misc Servcices	Inflation	-	-	-	-	-	-	-	-	-
551	G252302002530000	WTDOE	Electricity County	Elec-Noman	3,477,314	3,734,391	-	3,734,391	5,000,000	5,145,361	5,294,914	5,448,912	5,607,394
552	G252302002530010	WTDOE	Natural Gas County	Gas	993,284	2,234,633	-	2,234,633	1,786,000	1,794,930	1,803,905	1,812,924	1,821,989
553	G252302002530040	WTDOE	Water County	Water	152,216	591,784	-	591,784	630,099	674,206	714,658	750,391	780,406
554	G252302002543000	WTDOE	Cash Awards	Inflation	-	-	-	-	-	-	-	-	-
555	G252302002541730	WTDOE	Emergency Assistanc	Inflation	-	-	-	-	-	-	-	-	-
556	G252302002544512	WTDOE	Internal FFX Suppor	Inflation	10,785	-	-	-	-	-	-	-	-
557	G252302002544547	WTDOE	Refuse Disposal Exp	Inflation	178,216	275,000	(275,000)	-	-	-	-	-	-
558	G252302002544990	WTDOE	Other Operating Exp	Inflation	24,825	200,000	-	200,000	204,600	208,897	213,075	217,762	222,553
559			Total Operating Expenses		$ 8,427,670	$ 11,041,641	$ (275,000)	$ 10,766,641	$ 11,794,754	$ 12,172,664	$ 12,558,171	$ 12,952,643	$ 13,354,257
			Capital Equipment [1]										
560	G252302002566125	WTDCE	Equipment Expense	Bud Cap	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
561	G252302002566150	WTDCE	Vehicles Expense	Bud Cap	-	60,000	(60,000)	-	-	-	-	-	-
562			Total Capital Equipment [1]		$ -	$ 60,000	$ (60,000)	$ -	$ -	$ -	$ -	$ -	$ -
563			Total WWT - Operations		$ 13,802,849	$ 17,959,253	$ 535,917	$ 18,495,170	$ 19,755,139	$ 20,371,860	$ 21,003,343	$ 21,651,170	$ 22,313,740
			WWT - Maintenance										
			Personnel Services										
564	G252302003500000	WTDPS	Regular Salaries	Labor	$ 3,472,538	$ 3,948,662	$ 501,480	$ 4,450,142	$ 4,583,646	$ 4,721,156	$ 4,862,790	$ 5,008,674	$ 5,158,934
565	G252302003500040	WTDPS	New Position-Regular Salaries	Labor	-	-	-	-	-	-	-	-	-
566	G252302003500050	WTDPS	Annual Comp Increas	Labor	-	483,904	61,456	545,360	561,721	578,572	595,929	613,807	632,221
567	G252302003500053	WTDPS	Annual Comp Inc-P4P	Labor	-	-	-	-	-	-	-	-	-
568	G252302003500080	WTDPS	POS Turnover-Pay	Labor	-	(189,273)	(24,038)	(213,311)	(219,710)	(226,301)	(233,090)	(240,083)	(247,286)
569	G252302003500090	WTDPS	Reg Sal-Non Mert Em	Labor	16,635	890	113	1,003	1,033	1,064	1,096	1,129	1,163
570	G252302003500100	WTDPS	Shift Differential	Labor	1,140	-	-	-	-	-	-	-	-
571	G252302003500110	WTDPS	Extra pay	Labor	150,368	32,281	4,100	36,381	37,472	38,596	39,754	40,947	42,175
572	G252302003500130	WTDPS	Accrued Leave	Labor	(15,932)	-	-	-	-	-	-	-	-
573	G252302003500150	WTDPS	Leave Pay-out	Labor	12,436	-	-	-	-	-	-	-	-
574	G252302003501000	WTDPS	Fringe Benefits	Benefits	-	2,185,055	277,502	2,462,557	2,536,434	2,612,527	2,690,903	2,771,630	2,854,778
575	G252302003501010	WTDPS	FICA	Benefits	211,452	-	-	-	-	-	-	-	-
576	G252302003501011	WTDPS	Medicare	Benefits	49,408	-	-	-	-	-	-	-	-
577	G252302003501020	WTDPS	Retire Contrb-EE Sy	Benefits	982,069	-	-	-	-	-	-	-	-
578	G252302003501060	WTDPS	Health-Cigna High	Benefits	-	-	-	-	-	-	-	-	-
579	G252302003501061	WTDPS	Health OAP 90%	Benefits	258,067	-	-	-	-	-	-	-	-
580	G252302003501062	WTDPS	Health-HSA Plan	Benefits	7,208	-	-	-	-	-	-	-	-
581	G252302003501063	WTDPS	Health-MyChoice	Benefits	66,848	-	-	-	-	-	-	-	-
582	G252302003501070	WTDPS	Health-Cigna Low	Benefits	64,562	-	-	-	-	-	-	-	-
583	G252302003501080	WTDPS	Health-BC/BS	Benefits	-	-	-	-	-	-	-	-	-
584	G252302003501090	WTDPS	Health-Kaiser	Benefits	284,349	-	-	-	-	-	-	-	-
585	G252302003501100	WTDPS	Insurance-Group Life	Benefits	5,724	-	-	-	-	-	-	-	-
586	G252302003501110	WTDPS	Delta Dental	Benefits	26,468	-	-	-	-	-	-	-	-
587	G252302003502150	WTDOE	Workers Comp Idmty-P	Benefits	-	-	-	-	-	-	-	-	-
588			Total Personnel Services		$ 5,593,338	$ 6,461,519	$ 820,613	$ 7,282,132	$ 7,500,596	$ 7,725,614	$ 7,957,382	$ 8,196,104	$ 8,441,987
			Operating Expenses										
589	G252302003150200	WTDOE	Inv-DPWES Wastewate	Inflation	$ -	$ 50,441	$ -	$ 50,441	$ 51,602	$ 52,685	$ 53,739	$ 54,921	$ 56,129
590	G252302003510000	WTDOE	Office Equip&Furnit	Inflation	332	-	-	-	-	-	-	-	-
591	G252302003510010	WTDOE	Copier	Inflation	-	-	-	-	-	-	-	-	-
592	G252302003510020	WTDOE	Office Supplies	Inflation	1,769	-	-	-	-	-	-	-	-
593	G252302003510030	WTDOE	Computer Equipment	Inflation	55	-	-	-	-	-	-	-	-
594	G252302003510040	WTDOE	Computer Acces&Supl	Inflation	11,489	-	-	-	-	-	-	-	-
595	G252302003510050	WTDOE	IT Replacement Part	Inflation	529	3,000	-	3,000	3,069	3,133	3,196	3,266	3,338
596	G252302003510060	WTDOE	Printing Acces&Supl	Inflation	705	-	-	-	-	-	-	-	-
597	G252302003510070	WTDOE	Clean Supplies Cnty	Inflation	1,222	-	-	-	-	-	-	-	-
598	G252302003510080	WTDOE	Postage	Inflation	770	-	-	-	-	-	-	-	-
599	G252302003510200	WTDOE	Bldg Maint & Repair	Repair	98,532	-	-	-	-	-	-	-	-
600	G252302003510201	WTDOE	Carpentry/LumberSupl	Inflation	3,983	-	-	-	-	-	-	-	-
601	G252302003510202	WTDOE	Electrical Supplies	Inflation	92,466	-	-	-	-	-	-	-	-
602	G252302003510203	WTDOE	Hardware	Inflation	5,710	-	-	-	-	-	-	-	-
603	G252302003510204	WTDOE	HVAC Supplies	Inflation	46,349	9,700	-	9,700	9,923	10,131	10,334	10,561	10,794
604	G252302003510205	WTDOE	Lightbulbs	Inflation	538	5,987	-	5,987	6,124	6,253	6,378	6,518	6,662
605	G252302003510206	WTDOE	Paint/Paint Supplies	Inflation	12,658	-	-	-	-	-	-	-	-
606	G252302003510207	WTDOE	Plumbing Supplies	Inflation	1,288	-	-	-	-	-	-	-	-
607	G252302003510210	WTDOE	Grnds Maint Equ&Sup	Inflation	28,675	5,805	-	5,805	5,939	6,063	6,184	6,321	6,460
608	G252302003510220	WTDOE	Lighting Equipment	Inflation	9,010	339	-	339	347	354	361	369	377
609	G252302003510400	WTDOE	Educational Supplie	Inflation	198	-	-	-	-	-	-	-	-
610	G252302003510600	WTDOE	Chemicals	Chem-Noman	651	-	-	-	-	-	-	-	-
611	G252302003510610	WTDOE	Tools County	Inflation	70,197	60,000	-	60,000	61,380	62,669	63,922	65,329	66,766
612	G252302003510620	WTDOE	Eng Drft&Sur Eqp&Su	Inflation	-	-	-	-	-	-	-	-	-
613	G252302003510630	WTDOE	Water Treat Eqp&Sup	Inflation	1,498,152	1,922,079	-	1,922,079	1,400,000	1,429,400	1,457,988	1,490,064	1,522,845
614	G252302003510640	WTDOE	Food Srv Equip/Supl	Inflation	4,308	-	-	-	-	-	-	-	-
615	G252302003510650	WTDOE	Hshl Aplnc/Supl/Rep	Inflation	3,174	-	-	-	-	-	-	-	-

Footnotes on Page 14 of 14.

Table 3
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Projection of Operating Expenses

Line No.	G/L Code		Description	Escalation Reference	Actual 2023	Adopted 2024	Adjustments	Adjusted 2024	Adjusted 2025	Projected Fiscal Year Ending June 30, 2026	2027	2028	2029
616	G252302003510660	WTDOE	Med&Lab Eqp and Sup	Inflation	23,149	12,000	-	12,000	12,276	12,534	12,784	13,066	13,353
617	G252302003510670	WTDOE	Park/Rctn Area Equip	Inflation	-	-	-	-	-	-	-	-	-
618	G252302003510680	WTDOE	Lab Equip and Supl	Inflation	711	-	-	-	-	-	-	-	-
619	G252302003512990	WTDOE	Other Operating Sup	Inflation	86,336	15,000	-	15,000	15,345	15,667	15,981	16,332	16,691
620	G252302003513016	WTDOE	Automotive Parts	Inflation	40	-	-	-	-	-	-	-	-
621	G252302003512992	WTDOE	Goods Receipt W/O P	Inflation	-	-	-	-	-	-	-	-	-
622	G252302003513010	WTDOE	Automotive Oil	Inflation	-	-	-	-	-	-	-	-	-
623	G252302003513018	WTDOE	Tires	Inflation	1,441	-	-	-	-	-	-	-	-
624	G252302003513020	WTDOE	Automotive Equp&Sup	Inflation	2,197	-	-	-	-	-	-	-	-
625	G252302003513030	WTDOE	Heating Fuel	Inflation	-	12,000	-	12,000	12,276	12,534	12,784	13,066	13,353
626	G252302003514010	WTDOE	Fire Protec Eqp&Sup	Inflation	97	-	-	-	-	-	-	-	-
627	G252302003514020	WTDOE	Uniform/Wear Appare	Inf/Emp	7,202	-	-	-	-	-	-	-	-
628	G252302003514030	WTDOE	Mis Pub Safe Eqp&Sup	Inflation	12,196	-	-	-	-	-	-	-	-
629	G252302003520100	WTDOE	Scienti/Tech Eqp M&R	Repair	-	-	-	-	-	-	-	-	-
630	G252302003520010	WTDOE	Bldg Maint & Repair	Repair	624,653	1,923,664	-	1,923,664	1,700,000	1,768,000	1,838,720	1,912,269	1,988,760
631	G252302003520011	WTDOE	Electrical M&R	Repair	48,058	5,750	-	5,750	5,980	6,219	6,468	6,727	6,996
632	G252302003520012	WTDOE	Elevator M&R	Repair	7,915	3,971	-	3,971	4,129	4,295	4,466	4,645	4,831
633	G252302003520013	WTDOE	HVAC M&R	Repair	45,625	4,708	-	4,708	4,896	5,092	5,296	5,508	5,728
634	G252302003520015	WTDOE	Overhead Doors M&R	Repair	23,103	20,050	-	20,050	20,852	21,686	22,554	23,456	24,394
635	G252302003520016	WTDOE	Extermination Svcs	Repair	1,113	-	-	-	-	-	-	-	-
636	G252302003520025	WTDOE	Custodial Services	Repair	35,610	1	-	1	1	1	1	1	1
637	G252302003520014	WTDOE	Mechanical Inspect	Repair	8,490	-	-	-	-	-	-	-	-
638	G252302003520017	WTDOE	Plumbing M&R	Repair	8,313	-	-	-	-	-	-	-	-
639	G252302003520020	WTDOE	Construct Maint/Repr	Repair	-	-	-	-	-	-	-	-	-
640	G252302003520050	WTDOE	Automotive Equip M&R	Repair	593	-	-	-	-	-	-	-	-
641	G252302003520110	WTDOE	Other Maint & Repai	Repair	365,217	333,604	-	333,604	346,948	360,826	375,259	390,269	405,880
642	G252302003520120	WTDOE	Gain/loss - Inv adj	Inflation	-	-	-	-	-	-	-	-	-
643	G252302003521060	WTDOE	Computer Services	Inflation	-	-	-	-	-	-	-	-	-
644	G252302003521070	WTDOE	Print/Typeset Servce	Inflation	3,243	-	-	-	-	-	-	-	-
645	G252302003521090	WTDOE	Comm & Media Service	Inflation	6,419	-	-	-	-	-	-	-	-
646	G252302003521100	WTDOE	Transportation Svcs	Inflation	570	-	-	-	-	-	-	-	-
647	G252302003521130	WTDOE	Grnds/Rec/Parks Svc	Inflation	-	-	-	-	-	-	-	-	-
648	G252302003521210	WTDOE	Licensing Fees	Inflation	304	-	-	-	-	-	-	-	-
649	G252302003521240	WTDOE	Meals	Inflation	-	-	-	-	-	-	-	-	-
650	G252302003521250	WTDOE	Misc Servcices	Inflation	-	-	-	-	-	-	-	-	-
651	G252302003523020	WTDOE	Rent-Operat Equipmn	Inflation	40,823	21,778	-	21,778	22,279	22,747	23,202	23,713	24,234
652	G252302003523030	WTDOE	Rent-Construct Equi	Inflation	10,727	-	-	-	-	-	-	-	-
653	G252302003541110	WTDOE	Auto Lia Prop Damag	Insurance	-	-	-	-	-	-	-	-	-
654	G252302003542000	WTDOE	Local Travel County	Inflation	-	-	-	-	-	-	-	-	-
655	G252302003542200	WTDOE	Certification	Inflation	-	-	-	-	-	-	-	-	-
656	G252302003542220	WTDOE	Technical Train Cnt	Inflation	-	-	-	-	-	-	-	-	-
657	G252302003543000	WTDOE	Cash Awards	Benefits	-	-	-	-	-	-	-	-	-
658	G252302003543020	WTDOE	Departmental Awards	Benefits	-	-	-	-	-	-	-	-	-
659	G252302003544538	WTDOE	Professional Memberships	Inf/Emp	-	-	-	-	-	-	-	-	-
660	G252302003544540	WTDOE	Credit Card Expense	Inflation	-	-	-	-	-	-	-	-	-
661	G252302003544990	WTDOE	Other Operating Exp	Inflation	270	220,000	-	220,000	225,060	229,786	234,382	239,538	244,808
662			Total Operating Expenses		$ 3,257,171	$ 4,629,877	$ -	$ 4,629,877	$ 3,908,426	$ 4,030,077	$ 4,154,001	$ 4,285,938	$ 4,422,401
			Capital Equipment [1]										
663	G252302003566125	WTDOE	Equipment Expense	Bud Cap	$ 96,803	$ 54,208	$ (54,208)	$ -	$ -	$ -	$ -	$ -	$ -
664	G252302003566150	WTDOE	Vehicles Exp SC Only	Bud Cap	-	-	-	-	-	-	-	-	-
665	G252302003566275	WTDOE	DO NOT USE Infrastrc	Bud Cap	-	-	-	-	-	-	-	-	-
666			Total Capital Equipment [1]		$ 96,803	$ 54,208	$ (54,208)	$ -	$ -	$ -	$ -	$ -	$ -
667			Total WWT - Maintenance		$ 8,947,312	$ 11,145,604	$ 766,405	$ 11,912,009	$ 11,409,022	$ 11,755,690	$ 12,111,383	$ 12,482,042	$ 12,864,387
			WWT - IT Services										
			Personnel Services										
668	G252302004500000	WTDPS	Regular Salaries	Labor	$ 1,010,752	$ 887,910	$ 112,765	$ 1,000,675	$ 1,030,695	$ 1,061,616	$ 1,093,464	$ 1,126,268	$ 1,160,056
669	G252302004500050	WTDPS	Annual Comp Increas	Labor	-	104,803	13,310	118,113	121,656	125,306	129,065	132,937	136,925
670	G252302004500090	WTDPS	Reg Sal-Non Mert Emp	Labor	61,356	-	-	-	-	-	-	-	-
671	G252302004500110	WTDPS	Extra pay	Labor	-	-	-	-	-	-	-	-	-
672	G252302004500121	WTDPS	WPFO-Labor Charges	Labor	-	-	-	-	-	-	-	-	-
673	G252302004500130	WTDPS	Accrued Leave	Labor	30,509	-	-	-	-	-	-	-	-
674	G252302004500140	WTDPS	Leave Pay-Out	Labor	-	-	-	-	-	-	-	-	-
675	G252302004500150	WTDPS	Employee Leave Pay-out	Labor	-	-	-	-	-	-	-	-	-
676	G252302004501000	WTDPS	Fringe Benefits	Benefits	-	353,413	44,883	398,296	410,245	422,553	435,229	448,286	461,735
677	G252302004501010	WTDPS	FICA	Benefits	63,707	-	-	-	-	-	-	-	-
678	G252302004501011	WTDPS	Medicare	Benefits	14,899	-	-	-	-	-	-	-	-
679	G252302004501020	WTDPS	Retire Contrb-EE Sy	Benefits	291,905	-	-	-	-	-	-	-	-
680	G252302004501060	WTDPS	Health-Cigna High	Benefits	-	-	-	-	-	-	-	-	-
681	G252302004501061	WTDPS	Health OAP 90%	Benefits	79,664	-	-	-	-	-	-	-	-
682	G252302004501062	WTDPS	Health-HSA Plan	Benefits	3,050	-	-	-	-	-	-	-	-
683	G252302004501063	WTDPS	Health-MyChoice	Benefits	25,575	-	-	-	-	-	-	-	-
684	G252302004501070	WTDPS	Health Insurance-Cigna Low	Benefits	-	-	-	-	-	-	-	-	-
685	G252302004501080	WTDPS	Health-BC/BS	Benefits	-	-	-	-	-	-	-	-	-
686	G252302004501090	WTDPS	Health-Kaiser	Benefits	5,452	-	-	-	-	-	-	-	-
687	G252302004501100	WTDPS	Insurance-Group Life	Benefits	1,535	-	-	-	-	-	-	-	-
688	G252302004501110	WTDPS	Delta Dental	Benefits	4,469	-	-	-	-	-	-	-	-
689			Total Personnel Services		$ 1,592,873	$ 1,346,126	$ 170,958	$ 1,517,084	$ 1,562,597	$ 1,609,474	$ 1,657,759	$ 1,707,491	$ 1,758,716
			Operating Expenses										
690	G252302004510030	WTDOE	Computer Equipment	Inflation	$ 131,672	$ 201,944	$ -	$ 201,944	$ 206,589	$ 210,927	$ 215,146	$ 219,879	$ 224,716
691	G252302004510040	WTDOE	Computer Acces&Supl	Inflation	96,248	110,532	-	110,532	113,074	115,449	117,758	120,349	122,996
692	G252302004510200	WTDOE	Bldg Materials & Sup	Inflation	-	-	-	-	-	-	-	-	-
693	G252302004510600	WTDOE	Chemicals	Chemicals	-	-	-	-	-	-	-	-	-
694	G252302004510610	WTDOE	Tools County	Inflation	62	-	-	-	-	-	-	-	-
695	G252302004510630	WTDOE	Water Treat Eqp&Sup	Inflation	-	-	-	-	-	-	-	-	-

Footnotes on Page 14 of 14.

Table 3
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Projection of Operating Expenses

Line No.	G/L Code		Description	Escalation Reference	Actual 2023	Adopted 2024	Adjustments	Adjusted 2024	Adjusted 2025	Projected Fiscal Year Ending June 30, 2026	2027	2028	2029
696	G252302004512990	WTDOE	Other Operating Supplies	Inflation	-	-	-	-	-	-	-	-	-
697	G252302004520000	WTDOE	Ofc Eqp Maint&Repai	Repair	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
698	G252302004520020	WTDOE	Construct Maint/Repr	Repair	-	-	-	-	-	-	-	-	-
699	G252302004520030	WTDOE	Parks Ctr Facil M&R	Inflation	-	-	-	-	-	-	-	-	-
700	G252302004520100	WTDOE	Scienti/Tech Eqp M&	Inflation	-	-	-	-	-	-	-	-	-
701	G252302004521030	WTDOE	Translation Service	Inflation	-	-	-	-	-	-	-	-	-
702	G252302004521050	WTDOE	Edu/Training Servic	Inflation	12,417	-	-	-	-	-	-	-	-
703	G252302004521060	WTDOE	Computer Services	Inflation	171,314	875,393	-	875,393	895,527	914,333	932,619	953,137	974,106
704	G252302004521061	WTDOE	PC Replacement	Inflation	$ 245,743	$ 358,000	$ -	$ 358,000	$ 366,234	$ 373,925	$ 381,403	$ 389,794	$ 398,370
705	G252302004521062	WTDOE	Tech Infra Chargeback	Inflation	-	-	-	-	-	-	-	-	-
706	G252302004521080	WTDOE	Other Pro Cntrct Sv	Inflation	-	75,000	-	75,000	76,725	78,336	79,903	81,661	83,457
707	G252302004521110	WTDOE	Public Works Service	Inflation	-	-	-	-	-	-	-	-	-
708	G252302004521250	WTDOE	Misc Servcices	Inflation	-	-	-	-	-	-	-	-	-
709	G252302004542210	WTDOE	Mgmt/Prof Training	Inflation	-	18,000	-	18,000	18,414	18,801	19,177	19,599	20,030
710	G252302004542220	WTDOE	Technical Train Cnt	Inflation	-	28,600	-	28,600	29,258	29,872	30,470	31,140	31,825
711	G252302004543000	WTDOE	Cash Awards	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
712	G252302004544540	WTDOE	Credit Card Expense	Inflation	-	-	-	-	-	-	-	-	-
713	G252302004544538	WTDOE	Professional Memberships	Inf/Emp	-	-	-	-	-	-	-	-	-
714	G252302004544539	WTDOE	Prof Subscriptions	Inf/Emp	-	3,500	-	3,500	3,581	3,656	3,729	3,811	3,895
715	G252302004544090	WTDOE	Services-Other Agency	Inflation	-	-	-	-	-	-	-	-	-
716	G252302004544990	WTDOE	Other Operating Exp	Inflation	-	-	-	-	-	-	-	-	-
717			Total Operating Expenses		$ 657,455	$ 1,670,969	$ -	$ 1,670,969	$ 1,709,401	$ 1,745,299	$ 1,780,204	$ 1,819,369	$ 1,859,395
			Capital Equipment [1]										
718	G252302004566125	WTDCE	Equipment Expense	Bud Cap	$ 29,312	$ 1,093,839	$ (1,093,839)	$ -	$ -	$ -	$ -	$ -	$ -
719			Total Capital Equipment [1]		$ 29,312	$ 1,093,839	$ (1,093,839)	$ -	$ -	$ -	$ -	$ -	$ -
720			Total WWT - IT Services		$ 2,279,640	$ 4,110,934	$ (922,881)	$ 3,188,053	$ 3,271,998	$ 3,354,773	$ 3,437,963	$ 3,526,860	$ 3,618,111
			WWT - Engineering										
			Personnel Services										
721	G252302005500000	WTDPS	Regular Salaries	Labor	$ 761,208	$ 508,349	$ 64,560	$ 572,909	$ 590,097	$ 607,800	$ 626,033	$ 644,814	$ 664,159
722	G252302005500050	WTDPS	Annual Comp Increas	Labor	-	42,765	5,431	48,196	49,642	51,131	52,665	54,245	55,873
723	G252302005500090	WTDPS	Reg Sal- Non Mert Em	Labor	35,842	-	-	-	-	-	-	-	-
724	G252302005500090	WTDPS	Shift Differential	Labor	-	-	-	-	-	-	-	-	-
725	G252302005500110	WTDPS	Extra pay	Labor	1,857	-	-	-	-	-	-	-	-
726	G252302005500130	WTDPS	Accrued Leave	Labor	13,999	-	-	-	-	-	-	-	-
727	G252302005501000	WTDPS	Employee Leave Pay-out	Benefits	-	-	-	-	-	-	-	-	-
728	G252302005501000	WTDPS	Fringe Benefits	Benefits	-	237,660	30,183	267,843	275,878	284,154	292,679	301,459	310,503
729	G252302005501010	WTDPS	FICA	Benefits	46,289	-	-	-	-	-	-	-	-
730	G252302005501011	WTDPS	Medicare	Benefits	10,826	-	-	-	-	-	-	-	-
731	G252302005501020	WTDPS	Retire Contrb-EE Sy	Benefits	219,837	-	-	-	-	-	-	-	-
732	G252302005501060	WTDPS	Health Cigna High	Benefits	-	-	-	-	-	-	-	-	-
733	G252302005501061	WTDPS	Health OAP 90%	Benefits	71,553	-	-	-	-	-	-	-	-
734	G252302005501062	WTDPS	Health-HSA Plan	Benefits	-	-	-	-	-	-	-	-	-
735	G252302005501063	WTDPS	Health-MyChoice	Benefits	-	-	-	-	-	-	-	-	-
736	G252302005501070	WTDPS	Health-Cigna Low	Benefits	13,200	-	-	-	-	-	-	-	-
737	G252302005501080	WTDPS	Health-BC/BS	Benefits	-	-	-	-	-	-	-	-	-
738	G252302005501090	WTDPS	Health-Kaiser	Benefits	24,661	-	-	-	-	-	-	-	-
739	G252302005501100	WTDPS	Insurance-Group Life	Benefits	1,175	-	-	-	-	-	-	-	-
740	G252302005501061	WTDPS	Delta Dental	Benefits	4,157	-	-	-	-	-	-	-	-
741	G252302005501110	WTDPS	Tools County	Benefits	175	-	-	-	-	-	-	-	-
742	G252302005501110	WTDPS	Comm & Media Service	Benefits	2,436	-	-	-	-	-	-	-	-
743			Total Personnel Services		$ 1,207,213	$ 788,774	$ 100,174	$ 888,948	$ 915,617	$ 943,085	$ 971,378	$ 1,000,519	$ 1,030,535
			Operating Expenses										
744	G252302005544990	WTDOE	Other Operating Exp	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
745			Total Operating Expenses		-	-	-	-	-	-	-	-	-
746			Total WWT - Engineering		$ 1,207,213	$ 788,774	$ 100,174	$ 888,948	$ 915,617	$ 943,085	$ 971,378	$ 1,000,519	$ 1,030,535
747			Total Wastewater Treatment Department		$ 28,554,002	$ 40,305,265	$ (2,197,816)	$ 38,107,450	$ 39,073,764	$ 40,245,865	$ 41,444,146	$ 42,686,099	$ 43,960,608

Footnotes on Page 14 of 14.

Table 3
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Projection of Operating Expenses

Line No.	G/L Code		Description	Escalation Reference	Actual 2023	Adopted 2024	Adjustments	Adjusted 2024	Adjusted 2025	Projected Fiscal Year Ending June 30, 2026	2027	2028	2029
			WPM - WASTEWATER PLANNING & MONITORING										
			WP&M - Fiscal										
			Personnel Services										
748	G252303001500000	WPMPS	Regular Salaries	Labor	$ 5,305,128	$ 2,583,809	$ 328,144	$ 2,911,953	$ 2,999,311	$ 3,089,291	$ 3,181,969	$ 3,277,428	$ 3,375,751
749	G252303001500040	WPMPS	New Position-Regular Salaries	Labor	-	-	-	-	-	-	-	-	-
750	G252303001500050	WPMPS	Annual Comp Increas	Labor	-	216,653	27,515	244,168	251,493	259,038	266,809	274,813	283,058
751	G252303001500080	WPMPS	POS Turnover-Pay	Labor	-	(27,561)	(3,500)	(31,061)	(31,993)	(32,953)	(33,941)	(34,960)	(36,008)
752	G252303001500090	WPMPS	Reg Sal-Non Mert Em	Labor	252,179	12,682	1,611	14,293	14,721	15,163	15,618	16,086	16,569
753	G252303001500100	WPMPS	Shift Differential	Labor	-	-	-	-	-	-	-	-	-
754	G252303001500110	WPMPS	Extra pay	Labor	3,954	4,907	623	5,530	5,696	5,867	6,043	6,224	6,411
755	G252303001500130	WPMPS	Accrued Leave	Labor	61,450	132,804	16,866	149,670	154,160	158,785	163,549	168,455	173,509
756	G252303001500150	WPMPS	Leave Pay out	Labor	18,603	-	-	-	-	-	-	-	-
757	G252303001501000	WPMPS	Fringe Benefits	Benefits	48,696	900,939	114,419	1,015,358	1,045,819	1,077,194	1,109,509	1,142,795	1,177,078
758	G252303001501010	WPMPS	FICA	Benefits	326,337	-	-	-	-	-	-	-	-
759	G252303001501011	WPMPS	Medicare	Benefits	76,930	-	-	-	-	-	-	-	-
760	G252303001501020	WPMPS	Retire Contrb-EE Sy	Benefits	1,449,686	-	-	-	-	-	-	-	-
761	G252303001501055	WPMPS	OPEB Contributions	Benefits	272,767	215,183	27,328	242,511	249,787	257,280	264,999	272,949	281,137
762	G252303001501060	WPMPS	Health-Cigna High	Benefits	-	-	-	-	-	-	-	-	-
763	G252303001501061	WPMPS	Health OAP 90%	Benefits	271,820	-	-	-	-	-	-	-	-
764	G252303001501062	WPMPS	Health-HSA Plan	Benefits	13,583	-	-	-	-	-	-	-	-
765	G252303001501063	WPMPS	Health-MyChoice	Benefits	137,873	-	-	-	-	-	-	-	-
766	G252303001501070	WPMPS	Health-Cigna Low	Benefits	93,988	-	-	-	-	-	-	-	-
767	G252303001501080	WPMPS	Health-BC/BS	Benefits	-	-	-	-	-	-	-	-	-
768	G252303001501090	WPMPS	Health-Kaiser	Benefits	109,452	-	-	-	-	-	-	-	-
769	G252303001501100	WPMPS	Insurance-Group Life	Benefits	8,465	-	-	-	-	-	-	-	-
770	G252303001501110	WPMPS	Delta Dental	Benefits	24,644	-	-	-	-	-	-	-	-
771	G252303001502120	WPMPS	Worker Comp Ins Plc	Benefits	-	102,000	12,954	114,954	118,403	121,955	125,613	129,382	133,263
772			Total Personnel Services		$ 8,475,555	$ 4,141,416	$ 525,960	$ 4,667,376	$ 4,807,397	$ 4,951,619	$ 5,100,168	$ 5,253,173	$ 5,410,768
			Operating Expenses										
773	G252303001510000	WPMOE	Office Equip&Furnit	Inflation	$ 954	$ 5,000	$ -	$ 5,000	$ 5,115	$ 5,222	$ 5,327	$ 5,444	$ 5,564
774	G252303001510020	WPMOE	Office Supplies	Inflation	328	1,001	-	1,001	1,024	1,046	1,067	1,090	1,114
775	G252303001510030	WPMOE	Computer Equipment	Inflation	8,674	2,000	-	2,000	2,046	2,089	2,131	2,178	2,226
776	G252303001510000	WPMOE	Othr NonCap Eqpt Pur	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
777	G252303001510020	WPMOE	Computer Acces&Supl	Inflation	3,782	5,000	-	5,000	5,115	5,222	5,327	5,444	5,564
778	G252303001510030	WPMOE	Printing Acces&Supl	Inflation	1,298	500	-	500	512	522	533	544	556
779	G252303001510000	WPMOE	Postage	Inf/Cust	$ 568	$ 2,000	$ -	$ 2,000	$ 2,054	$ 2,106	$ 2,157	$ 2,214	$ 2,272
780	G252303001510020	WPMOE	Bldg Maint & Repair	Repair	154	3,000	-	3,000	3,120	3,245	3,375	3,510	3,650
781	G252303001510030	WPMOE	Educational Supplie	Inflation	132	1,000	-	1,000	1,023	1,044	1,065	1,089	1,113
782	G252303001510000	WPMOE	Library Equipment	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
783	G252303001510020	WPMOE	Chemicals	Inflation	-	-	-	-	-	-	-	-	-
784	G252303001510030	WPMOE	Tools County	Inflation	-	-	-	-	-	-	-	-	-
785	G252303001510000	WPMOE	Eng Drft&Sur Eqp&Sup	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
786	G252303001510020	WPMOE	Hshl Aplnc/Supl/Rep	Inflation	107	-	-	-	-	-	-	-	-
787	G252303001510030	WPMOE	Med&Lab Eqp and Sup	Inflation	173	200	-	200	205	209	213	218	223
788	G252303001510000	WPMOE	Park/Rctn Area Equi	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
789	G252303001510020	WPMOE	Lab Equip and Supl	Inflation	-	-	-	-	-	-	-	-	-
790	G252303001510030	WPMOE	Other Operating Sup	Inflation	24	2,000	-	2,000	2,046	2,089	2,131	2,178	2,226
791	G252303001510000	WPMOE	Automotive Equp&Supl	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
792	G252303001510020	WPMOE	Poli/Prison Eqp&Supl	Inflation	-	-	-	-	-	-	-	-	-
793	G252303001510030	WPMOE	Uniform/Wear Appare	Inf/Emp	-	-	-	-	-	-	-	-	-
794	G252303001510000	WPMOE	Ofc Eqp Maint&Repai	Repair	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
795	G252303001510020	WPMOE	Construct Maint/Repr	Repair	-	10,000	-	-	-	-	-	-	-
796	G252303001510030	WPMOE	Scienti/Tech Eqp M&R	Inflation	-	-	-	-	-	-	-	-	-
797	G252303001510000	WPMOE	Other Maint & Repai	Repair	$ -	$ 5,000	$ -	$ 5,000	$ 5,200	$ 5,408	$ 5,624	$ 5,849	$ 6,083
798	G252303001510020	WPMOE	Financial Services	Inflation	108,426	161,631	-	161,631	165,349	168,821	172,198	175,986	179,858
799	G252303001510030	WPMOE	Audit/Acct Services	Inflation	44,296	50,000	-	50,000	51,150	52,224	53,269	54,441	55,638
800	G252303001510000	WPMOE	Educational/Training Services	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
801	G252303001510020	WPMOE	Computer Services	Inflation	-	250,000	-	250,000	255,750	261,121	266,343	272,203	278,191
802	G252303001510030	WPMOE	Computer Replacement	Inflation	-	-	-	-	-	-	-	-	-
803	G252303001510000	WPMOE	Tech Infra Chrgbck	Inflation	$ 2,435	$ 20,000	$ -	$ 20,000	$ 20,460	$ 20,890	$ 21,307	$ 21,776	$ 22,255
804	G252303001510020	WPMOE	Other Pro Cntrct Sv	Inflation	752,413	769,692	-	769,692	500,000	510,500	520,710	532,166	543,873
805	G252303001510030	WPMOE	Comm & Media Servic	Inflation	2,786	10,000	-	10,000	10,230	10,445	10,654	10,888	11,128
806	G252303001510000	WPMOE	Telecommunication Chargeback	Inflation	$ 6,151	$ 50,000	$ -	$ 50,000	$ 51,150	$ 52,224	$ 53,269	$ 54,441	$ 55,638
807	G252303001510020	WPMOE	Special Events	Inflation	695	-	-	-	-	-	-	-	-
808	G252303001510020	WPMOE	Licensing Fees	Inflation	24,906	16,000	-	16,000	16,368	16,712	17,046	17,421	17,804
809	G252303001510030	WPMOE	Meals	Inflation	-	15,000	-	15,000	15,345	15,667	15,981	16,332	16,691
810	G252303001510000	WPMOE	Misc Services	Inflation	$ 2,310	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
811	G252303001510020	WPMOE	Rent-Copier Equipment	Inflation	5,057	1,000	-	-	-	-	-	-	-
812	G252303001510030	WPMOE	Electricity County	Electricity	-	-	-	-	-	-	-	-	-
813	G252303001510000	WPMOE	OPEB	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
814	G252303001510020	WPMOE	Gen Liab Admin	Insurance	-	1,100	-	1,100	1,125	1,149	1,172	1,198	1,224
815	G252303001510030	WPMOE	Auto Liab Admin	Insurance	1,213	15,000	-	15,000	15,345	15,667	15,981	16,332	16,691
816	G252303001510000	WPMOE	Local Travel County	Inflation	$ 2,041	$ 1,000	$ -	$ 1,000	$ 1,023	$ 1,044	$ 1,065	$ 1,089	$ 1,113
817	G252303001510020	WPMOE	Miscellaneous Travel	Inflation	3,149	25,351	-	25,351	25,934	26,479	27,009	27,603	28,210
818	G252303001510030	WPMOE	Certification	Inflation	1,150	3,000	-	3,000	3,069	3,133	3,196	3,266	3,338
819	G252303001542210	WPMOE	Mgmt/Prof Training	Inflation	13,856	40,000	-	40,000	40,920	41,779	42,615	43,552	44,511
820	G252303001542210	WPMOE	Technical Train Cnt	Inflation	102	25,000	-	25,000	25,575	26,112	26,634	27,220	27,819
821	G252303001542210	WPMOE	Reimb-Telephone Exp	Inflation	-	-	-	-	-	-	-	-	-
822	G252303001542210	WPMOE	Other General Expenses	Inflation	-	-	-	-	-	-	-	-	-
823	G252303001542210	WPMOE	Cash Awards	Inflation	-	-	-	-	-	-	-	-	-
824	G252303001542210	WPMOE	Departmental Awards	Inflation	1,914	5,862	-	5,862	5,997	6,123	6,245	6,383	6,523

Footnotes on Page 14 of 14.

Table 3
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Projection of Operating Expenses

Line No.	G/L Code		Description	Escalation Reference	Actual 2023	Adopted 2024	Adjustments	Adjusted 2024	Adjusted 2025	Projected Fiscal Year Ending June 30, 2026	2027	2028	2029
825	G252303001542210	WPMOE	Plaques and Awards	Inflation	-	1,000	-	1,000	1,023	1,044	1,065	1,089	1,113
826	G252303001542210	WPMOE	Copying	Inflation	-	-	-	-	-	-	-	-	-
827	G252303001542210	WPMOE	Phototypesetting	Inflation	-	-	-	-	-	-	-	-	-
828	G252303001542210	WPMOE	Printing and Bindin	Inflation	547	-	-	-	-	-	-	-	-
829	G252303001542210	WPMOE	Assigned Agency Veh	Inflation	3,369	2,954	-	2,954	3,022	3,085	3,147	3,216	3,287
830	G252303001542210	WPMOE	Motor Pool	Inflation	183	-	-	-	-	-	-	-	-
831	G252303001542210	WPMOE	Fuel	Fuel	1,535	-	-	-	-	-	-	-	-
832	G252303001542210	WPMOE	Service-Other Agenc	Inflation	146,198	500,000	-	500,000	200,000	204,200	208,284	212,866	217,549
833	G252303001542210	WPMOE	Mileage Allow Auto	Inflation	-	-	-	-	-	-	-	-	-
834	G252303001542210	WPMOE	Internal Fairfax Support	Inflation	-	-	-	-	-	-	-	-	-
835	G252303001542210	WPMOE	Operating Bad Debt Expense	Inflation	-	-	-	303,054	310,025	316,535	322,866	329,969	337,228
836	G252303001542210	WPMOE	Prof Memberships	Inf/Emp	89,501	60,192	-	60,192	61,577	62,870	64,127	65,538	66,980
837	G252303001542210	WPMOE	Prof Subcriptions	Inflation	136	-	-	-	-	-	-	-	-
838	G252303001542210	WPMOE	Credit Card Expense	Inflation	-	-	-	-	-	-	-	-	-
839	G252303001542210	WPMOE	Other Operating Exp	Inflation	2,078	19,044	-	19,044	19,482	19,891	20,289	20,735	21,191
840	G252303001544990		Total Operating Expenses		$ 1,232,642	$ 2,079,528	$ -	$ 2,371,583	$ 1,827,378	$ 1,865,920	$ 1,903,420	$ 1,945,467	$ 1,988,445
			Recovered Costs										
841	G252303001500121	WPMRC	WPFO-Labor Charges	Labor	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
842	G252303001500122	WPMRC	WPFO-Agency OH Cost	Inflation	-	-	-	-	-	-	-	-	-
843	G252303001542590	WPMRC	Misc Exp Reimb	Constant	$ (494,484)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
844			Total Recovered Costs		$ (494,484)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			Capital Equipment [1]										
845	G252303001563040	WPMCE	Design-Consultant	Bud Cap	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
846	G252303001564100	WPMCE	Construct-Equip Acq	Bud Cap	-	-	-	-	-	-	-	-	-
847	G252303001566125	WPMCE	Equipment Expense	Bud Cap	-	-	-	-	-	-	-	-	-
848	G252303001566150	WPMCE	Vehicles Expense	Bud Cap	-	-	-	-	-	-	-	-	-
849			Total Capital Equipment [1]		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
850			**Total WP&M - Fiscal**		**$ 9,213,713**	**$ 6,220,944**	**$ 525,960**	**$ 7,038,958**	**$ 6,634,775**	**$ 6,817,539**	**$ 7,003,588**	**$ 7,198,639**	**$ 7,399,212**
			WP&M - Engineer Planning										
			Personnel Services										
851	G252303002500000	WPMPS	Regular Salaries	Labor	$ 1,093,392	$ 989,957	$ 125,725	$ 1,115,682	$ 1,149,152	$ 1,183,627	$ 1,219,135	$ 1,255,709	$ 1,293,381
852	G252303002500050	WPMPS	Annual Comp Increas	Labor	-	78,702	9,995	88,697	91,358	94,099	96,922	99,829	102,824
853	G252303002500080	WPMPS	POS Turnover-Pay	Labor	-	(47,297)	(6,007)	(53,304)	(54,903)	(56,550)	(58,246)	(59,994)	(61,794)
854	G252303002500090	WPMPS	Reg Sal-Non Mert Emp	Labor	-	852	108	960	989	1,019	1,049	1,081	1,113
855	G252303002500110	WPMPS	Extra pay	Labor	-	-	-	-	-	-	-	-	-
856	G252303002500130	WPMPS	Accrued Leave	Labor	55,466	-	-	-	-	-	-	-	-
857	G252303002500150	WPMPS	Leave Pay out	Labor	12,890	-	-	-	-	-	-	-	-
858	G252303002501000	WPMPS	Fringe Benefits	Benefits	-	386,828	49,127	435,955	449,034	462,505	476,380	490,671	505,392
859	G252303002501010	WPMPS	FICA	Benefits	66,548	-	-	-	-	-	-	-	-
860	G252303002501011	WPMPS	Medicare	Benefits	15,564	-	-	-	-	-	-	-	-
861	G252303002501020	WPMPS	Retire Contrb-EE Sy	Benefits	297,041	-	-	-	-	-	-	-	-
862	G252303002501060	WPMPS	Health-Cigna High	Benefits	-	-	-	-	-	-	-	-	-
863	G252303002501061	WPMPS	Hleath OAP 90%	Benefits	28,727	-	-	-	-	-	-	-	-
864	G252303002501062	WPMPS	Health-HSA Plan	Benefits	1,400	-	-	-	-	-	-	-	-
865	G252303002501063	WPMPS	Health-MyChoice	Benefits	12,599	-	-	-	-	-	-	-	-
866	G252303002501070	WPMPS	Health-Cigna Low	Benefits	39,215	-	-	-	-	-	-	-	-
867	G252303002501080	WPMPS	Health-BC/BS	Benefits	-	-	-	-	-	-	-	-	-
868	G252303002501090	WPMPS	Health-Kaiser	Benefits	25,162	-	-	-	-	-	-	-	-
869	G252303002501100	WPMPS	Insurance-Group Life	Benefits	1,764	-	-	-	-	-	-	-	-
870	G252303002501110	WPMPS	Delta Dental	Benefits	4,065	-	-	-	-	-	-	-	-
871	G252303002501110	WPMPS	Computer Sys Lic Non	Benefits	-	-	-	-	-	-	-	-	-
872	G252303002501110	WPMPS	Health Related Srvs	Benefits	115	-	-	-	-	-	-	-	-
873	G252303002501110	WPMPS	Services-Other Agency	Benefits	403	-	-	-	-	-	-	-	-
874			Total Personnel Services		$ 1,654,350	$ 1,409,042	$ 178,948	$ 1,587,990	$ 1,635,630	$ 1,684,699	$ 1,735,240	$ 1,787,297	$ 1,840,916
			Operating Expenses										
875	G252303002544990	WPMCE	Other Operating Supplies	Repair	-	-	-	-	-	-	-	-	-
876	G252303002520110	WPMCE	Other Professional Consultant & Co	Inflation	$ -	$ -	$ 1,000,000	$ 1,000,000	$ 1,100,000	$ 1,123,100	$ 1,145,562	$ 1,170,764	$ 1,196,521
877	G252303002544990	WPMCE	Miscellaneous Services	Inflation	-	1,009,000	(1,009,000)	-	-	-	-	-	-
878	G252303002520110	WPMCE	Certification	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
879	G252303002544990	WPMCE	Management / Professional Training	Inflation	-	-	-	-	-	-	-	-	-
880	G252303002520110	WPMCE	Technical Training County	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
881	G252303002544990	WPMCE	Cash Awards	Inflation	-	-	-	-	-	-	-	-	-
882	G252303002520110	WPMCE	Professinal Memberships	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
883	G252303002544990	WPMCE	Other Operating Exp	Inflation	-	-	-	-	-	-	-	-	-
884			Total Operating Expenses		$ -	$ 1,009,000	$ (9,000)	$ 1,000,000	$ 1,100,000	$ 1,123,100	$ 1,145,562	$ 1,170,764	$ 1,196,521
885			Total WP&M - Engineer Planning		$ 1,654,350	$ 2,418,042	$ 169,948	$ 2,587,990	$ 2,735,630	$ 2,807,799	$ 2,880,802	$ 2,958,061	$ 3,037,437
			WP&M - Lab										
			Personnel Services										
886	G252303003500000	WPMPS	Regular Salaries	Labor	$ 1,456,556	$ 1,649,662	$ 209,507	$ 1,859,169	$ 1,914,944	$ 1,972,392	$ 2,031,564	$ 2,092,511	$ 2,155,287
887	G252303003500050	WPMPS	Annual Comp Increas	Labor	-	179,623	22,812	202,435	208,508	214,763	221,206	227,843	234,678
888	G252303003500080	WPMPS	POS Turnover-Pay	Labor	-	(70,947)	(9,010)	(79,957)	(82,356)	(84,827)	(87,371)	(89,993)	(92,692)
889	G252303003500080	WPMPS	Reg Sal Non Mert Em	Labor	109,350	1,643	209	1,852	1,907	1,964	2,023	2,084	2,147
890	G252303003500080	WPMPS	Extra pay	Labor	93,978	35,929	4,563	40,492	41,707	42,958	44,247	45,574	46,941
891	G252303003500080	WPMPS	Accrued Leave	Labor	83,385	-	-	-	-	-	-	-	-
892	G252303003500080	WPMPS	Leave Pay out	Labor	29,547	-	-	-	-	-	-	-	-
893	G252303003500080	WPMPS	Fringe Benefits	Benefits	-	652,221	82,832	735,053	757,105	779,818	803,212	827,309	852,128
894	G252303003500080	WPMPS	FICA	Benefits	99,017	-	-	-	-	-	-	-	-
895	G252303003500080	WPMPS	Medicare	Benefits	23,223	-	-	-	-	-	-	-	-
896	G252303003500080	WPMPS	Retire Contrb-EE Sy	Benefits	422,696	-	-	-	-	-	-	-	-

Footnotes on Page 14 of 14.

Table 3
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Projection of Operating Expenses

Line No.	G/L Code		Description	Escalation Reference	Actual 2023	Adopted 2024	Adjustments	Adjusted 2024	Adjusted 2025	Projected Fiscal Year Ending June 30, 2026	2027	2028	2029
897	G252303003500080	WPMPS	Health-Cigna High	Benefits	-	-	-	-	-	-	-	-	-
898	G252303003500080	WPMPS	Health OAP 90%	Benefits	212,607	-	-	-	-	-	-	-	-
899	G252303003500080	WPMPS	Health-HSA Plan	Benefits	700	-	-	-	-	-	-	-	-
900	G252303003500080	WPMPS	Health-MyChoice	Benefits	5,915	-	-	-	-	-	-	-	-
901	G252303003500080	WPMPS	Health Insurance-Cigna Low	Benefits	19,445	-	-	-	-	-	-	-	-
902	G252303003500080	WPMPS	Health-BC/BS	Benefits	-	-	-	-	-	-	-	-	-
903	G252303003500080	WPMPS	Health-Kaiser	Benefits	13,306	-	-	-	-	-	-	-	-
904	G252303003500080	WPMPS	Insurance-Group Life	Benefits	2,291	-	-	-	-	-	-	-	-
905	G252303003500080	WPMPS	Delta Dental	Benefits	7,799	-	-	-	-	-	-	-	-
906	G252303003500080	WPMPS	Workers Comp Idmty-P	Benefits	-	-	-	-	-	-	-	-	-
907			Total Personnel Services		$ 2,579,813	$ 2,448,131	$ 310,913	$ 2,759,044	$ 2,841,815	$ 2,927,069	$ 3,014,881	$ 3,105,328	$ 3,198,488
			Operating Expenses										
908	G252303003510000	WPMOE	Office Equip&Sup	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
909	G252303003510020	WPMOE	Office Supplies	Inflation	2,296	9,204	-	9,204	9,416	9,614	9,806	10,022	10,242
910	G252303003510020	WPMOE	Computer Equipment	Inflation	-	3,500	-	3,500	3,581	3,656	3,729	3,811	3,895
911	G252303003510020	WPMOE	Computer Acces&Supl	Inflation	-	-	-	-	-	-	-	-	-
912	G252303003510020	WPMOE	IT Replacement Parts	Inflation	-	-	-	-	-	-	-	-	-
913	G252303003510000	WPMOE	Printing Access & Suppl	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
914	G252303003510020	WPMOE	Postage	Inflation	2,900	2,300	-	2,300	2,353	2,402	2,450	2,504	2,559
915	G252303003510020	WPMOE	Electrical Supplies	Repair	34	-	-	-	-	-	-	-	-
916	G252303003510020	WPMOE	Bldg Maint & Repair	Repair	-	-	-	-	-	-	-	-	-
917	G252303003510020	WPMOE	Educational Supplies	Chemicals	5,099	29,124	-	29,124	30,289	31,501	32,761	34,071	35,434
918	G252303003510020	WPMOE	Chemicals	Chemicals	-	-	-	-	-	-	-	-	-
919	G252303003510000	WPMOE	Tools County	Repair	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
920	G252303003510020	WPMOE	Water Treat Eqp&Sup	Inflation	83	-	-	-	-	-	-	-	-
921	G252303003510020	WPMOE	Hshl Aplnc/Supl/Repl	Inflation	-	-	-	-	-	-	-	-	-
922	G252303003510020	WPMOE	Med&Lab Eqp and Supl	Inflation	11,991	-	-	-	-	-	-	-	-
923	G252303003510020	WPMOE	Park/Rctn Area Equip	Inflation	756	-	-	-	-	-	-	-	-
924	G252303003510020	WPMOE	Lab Equip and Supl	Inflation	293,522	92,537	-	92,537	94,665	96,653	98,586	100,755	102,972
925	G252303003510000	WPMOE	Other Operating Sup	Inflation	$ 75	$ 16,476	$ -	$ 16,476	$ 16,855	$ 17,209	$ 17,553	$ 17,939	$ 18,334
926	G252303003510020	WPMOE	Uniform/Wear Appare	Inf/Emp	28,767	54,961	-	54,961	56,225	57,406	58,554	59,842	61,159
927	G252303003510020	WPMOE	Mis Pub Safe Eqp&Sup	Inflation	2,496	-	-	-	-	-	-	-	-
928	G252303003510020	WPMOE	Ofc Eqp Maint&Repai	Repair	-	-	-	-	-	-	-	-	-
929	G252303003510020	WPMOE	Bldg Maint&Rep Svcs	Inflation	7,165	295,016	-	295,016	301,801	308,139	314,302	321,217	328,283
930	G252303003510000	WPMOE	Custodial Services	Repair	$ 13,948	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
931	G252303003510000	WPMOE	Plumbing M&R	Repair	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
932	G252303003510020	WPMOE	Automotive Equip/M&R	Repair	150	-	-	-	-	-	-	-	-
933	G252303003510020	WPMOE	Scienti/Tech Eqp M&	Repair	25,278	6,516	-	6,516	6,776	7,047	7,329	7,622	7,927
934	G252303003510020	WPMOE	Other Maint & Repai	Repair	-	3,000	-	3,000	3,120	3,245	3,375	3,510	3,650
935	G252303003510020	WPMOE	Software Maint&Supp	Inflation	-	-	-	-	-	-	-	-	-
936	G252303003510000	WPMOE	Employment Services	Inflation	$ 53,093	$ 36,907	$ -	$ 36,907	$ 37,755	$ 38,548	$ 39,319	$ 40,184	$ 41,068
937	G252303003510000	WPMOE	Edu/Training Servic	Inflation	$ 35,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
938	G252303003510020	WPMOE	Computer Services	Inflation	-	5,300	-	-	-	-	-	-	-
939	G252303003510020	WPMOE	Print/Typeset Servce	Inflation	-	-	-	-	-	-	-	-	-
940	G252303003510020	WPMOE	Other Pro Cntrct Sv	Inflation	121,968	264,642	-	264,642	270,728	276,414	281,942	288,145	294,484
941	G252303003510020	WPMOE	Health Related Srvs	Inflation	115	-	-	-	-	-	-	-	-
942	G252303003510020	WPMOE	Comm & Media Servic	Inflation	-	14,500	-	14,500	14,834	15,145	15,448	15,788	16,135
943	G252303003510000	WPMOE	Safety&Emergency Svc	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
944	G252303003510020	WPMOE	Special Events	Inflation	1,061	-	-	-	-	-	-	-	-
945	G252303003510020	WPMOE	Licensing Fees	Inflation	-	530	-	530	542	554	565	577	590
946	G252303003510020	WPMOE	Meals	Inflation	-	-	-	-	-	-	-	-	-
947	G252303003510020	WPMOE	Misc Services	Inflation	30,346	22,837	-	22,837	23,362	23,853	24,330	24,865	25,412
948	G252303003510000	WPMOE	Local County Travel	Inflation	$ 1,240	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
949	G252303003510020	WPMOE	Miscellaneous Travel	Inflation	3,797	3,504	-	3,504	3,585	3,660	3,733	3,815	3,899
950	G252303003510020	WPMOE	Certification	Inflation	-	12,000	-	12,000	12,276	12,534	12,784	13,066	13,353
951	G252303003510020	WPMOE	Mgmt/Prof Training	Inflation	1,685	66,573	-	66,573	68,104	69,534	70,925	72,485	74,080
952	G252303003510020	WPMOE	Technical Train Cnt	Inflation	-	29,355	-	29,355	30,030	30,661	31,274	31,962	32,665
953	G252303003510000	WPMOE	Cash Awards	Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
954	G252303003510020	WPMOE	Departmental Awards	Inflation	-	-	-	-	-	-	-	-	-
955	G252303003510020	WPMOE	Microfilm Services	Inflation	-	7,500	-	7,500	7,673	7,834	7,990	8,166	8,346
956	G252303003510020	WPMOE	Phototypesetting	Inflation	-	-	-	-	-	-	-	-	-
957	G252303003510020	WPMOE	Services-Other Agency	Inflation	-	-	-	-	-	-	-	-	-
958	G252303003510020	WPMOE	Mileage Allow Auto	Inflation	-	-	-	-	-	-	-	-	-
959	G252303003510020	WPMOE	Printing and Binding	Inf/Emp	5,269	-	-	-	-	-	-	-	-
960	G252303003510020	WPMOE	Prof Memberships	Inf/Emp	1,525	2,800	-	2,800	2,864	2,925	2,983	3,049	3,116
961	G252303003510020	WPMOE	Credit Card Expense	Inflation	-	-	-	-	-	-	-	-	-
962	G252303003510020	WPMOE	Rec Activities	Inflation	4	-	-	-	-	-	-	-	-
963	G252303003510020	WPMOE	Refuse Disposal Expense	Inflation	1,364	3,000	-	3,000	3,069	3,133	3,196	3,266	3,338
964	G252303003510020	WPMOE	Other Operating Exp	Inflation	861	11,471	-	11,471	11,735	11,981	12,221	12,490	12,765
965			Total Operating Expenses		$ 652,388	$ 993,552	$ -	$ 988,252	$ 1,011,638	$ 1,033,646	$ 1,055,155	$ 1,079,151	$ 1,103,706
			Recovered Costs										
966	G252303003500121	WPMRC	WPFO-Labor Charges	Labor	$ (33,050)	$ (45,010)	$ -	$ (45,010)	$ (46,360)	$ (47,751)	$ (49,184)	$ (50,659)	$ (52,179)
967	G252303003501520	WPMRC	Reimb-CptlFringe Be	Benefits	-	-	-	-	-	-	-	-	-
968			Total Recovered Costs		$ (33,050)	$ (45,010)	$ -	$ (45,010)	$ (46,360)	$ (47,751)	$ (49,184)	$ (50,659)	$ (52,179)
			Capital Equipment [1]										
969	G252303003566125	WPMCE	Equiptment Exp SC Onl	Bud Cap	$ 170,827	$ 348,305	$ (348,305)	$ -	$ -	$ -	$ -	$ -	$ -
970	G252303003566150	WPMCE	Vehicle Expense	Bud Cap	-	-	-	-	-	-	-	-	-
971			Total Capital Equipment [1]		$ 170,827	$ 348,305	$ (348,305)	$ -	$ -	$ -	$ -	$ -	$ -
972			Total WP&M - Lab		$ 3,369,978	$ 3,744,977	$ (37,392)	$ 3,702,285	$ 3,807,093	$ 3,912,965	$ 4,020,853	$ 4,133,820	$ 4,250,015
973			Total WP&M Department		$ 14,238,041	$ 12,383,963	$ 658,516	$ 13,329,234	$ 13,177,498	$ 13,538,302	$ 13,905,243	$ 14,290,520	$ 14,686,664

Footnotes on Page 14 of 14.

Table 3
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Projection of Operating Expenses

Line No.	G/L Code		Description	Escalation Reference	Actual 2023	Adopted 2024	Adjustments	Adjusted 2024	Adjusted 2025	Projected Fiscal Year Ending June 30, 2026	2027	2028	2029
			TBC - Treatment by Contract										
974	550000	WPMOE	Pmt-Alex Sanitation	Input	$ 11,827,697	$ 12,500,000	$ 1,814,620	$ 14,314,620	$ 14,711,320	$ 15,110,966	$ 15,521,402	$ 15,942,948	$ 16,375,902
975	550010	WPMOE	Pmt-Arlington Sewag	Input	2,447,972	2,600,000	(65,570)	2,534,430	2,592,722	2,647,169	2,700,112	2,759,515	2,820,224
976	550030	WPMOE	Pmt-Falls Church Sw	Repair	171,177	438,000	-	438,000	455,520	473,741	492,690	512,398	532,894
977	550040	WPMOE	Pmt-Harbor View Swg	Inflation	572,484	16	-	16	16	17	17	17	18
978	550050	WPMOE	Pmt-Inter-Jurisdict	AgentFee	-	-	-	-	-	-	-	-	-
979	550060	WPMOE	Pmt-Loudoun Water	AgentFee	-	-	-	-	-	-	-	-	-
980	550100	WPMOE	Payments-DC Water	Input	18,012,612	15,500,073	2,287,080	17,787,153	18,595,001	19,437,585	20,316,401	21,233,007	22,189,027
981	550110	WPMOE	Pmt-UOSA Sewage	Input	14,783,192	14,800,008	607,975	15,407,983	15,762,367	16,093,377	16,415,244	16,776,379	17,145,460
982	550120	WPMOE	Pmt-Loudoun Water	AgentFee	42,707	68,693	-	68,693	70,563	72,343	74,094	76,037	78,031
983	550210	WPMOE	Pmt-PWSA	AgentFee	360,267	384,648	-	384,648	395,120	405,083	414,891	425,769	436,933
984			Total TBC - Treatment by Contract		$ 48,218,107	$ 46,291,439	$ 4,644,104	$ 50,935,543	$ 52,582,629	$ 54,240,280	$ 55,934,852	$ 57,726,070	$ 59,578,489
			Contracted Billing Services										
985	550020	WPMOE	FCWA	AgentFee	$ 6,875,289	$ 8,511,873	$ (1,500,000)	$ 7,011,873	$ 7,202,762	$ 7,384,395	$ 7,563,175	$ 7,761,483	$ 7,965,001
986			Total Contracted Billing Service		$ 6,875,289	$ 8,511,873	$ (1,500,000)	$ 7,011,873	$ 7,202,762	$ 7,384,395	$ 7,563,175	$ 7,761,483	$ 7,965,001
987			Total O&M Expenses & Capital Outlay		$ 123,111,480	$ 145,136,167	$ (5,227,528)	$ 140,193,393	$ 142,695,172	$ 146,862,064	$ 151,112,176	$ 155,576,635	$ 160,175,531
988			Capital Outlay		$ 2,138,083	$ 13,242,784	$ (13,242,784)	$ -	$ -	$ -	$ -	$ -	$ -
989			Total O&M Expenses Net of Capital Outlay		$ 120,973,397	$ 131,893,383	$ 8,015,256	$ 140,193,393	$ 142,695,172	$ 146,862,064	$ 151,112,176	$ 155,576,635	$ 160,175,531
990			Op. Exp. Adj.					-	-	-	-	-	-
991			Additional Personnel					-	-	600,000	1,200,000	1,800,000	1,854,000
992			Total Adj. O&M Expenses Net of Capital Outlay		$ 120,973,397	$ 131,893,383	$ 8,015,256	$ 140,193,393	$ 142,695,172	$ 147,462,064	$ 152,312,176	$ 157,376,635	$ 162,029,531

Footnotes:

[1] WMP capitalizes budgeted equipment and capital outlays and therefore was reclassified to the forecasted Capital Improvement Program (reference Table 10).
[2] Forecasted amounts are based on: i) appo Forecasted amounts are based on the apportionment of costs from budgetary estimates and forecasts provided by the respective Treatment by Contract (TBC) provider and based on discussions with WMP staff.

Table 4
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis
Projection of Operating Expenses for Treatment By Contract (TBC

Line No.	Description	Escalation Reference [1]	Proposed Budget	Adjustments	Adjusted 2024	2025	2026	2027	2028	2029
					Projected Fiscal Year Ending June 30					
	AlexRenew - Alexandria Renew Enterprise									
	AlexRenew - O&M Costs Allocated to Fairfax Co.[2]									
1	Total Operating Expenses	O&M ARE	$ 33,023,593	$ -	$ 33,023,593	$ 33,849,183	$ 34,695,412	$ 35,562,798	$ 36,451,868	$ 37,363,164
2	Less: AlexRenew Only Expense	Input	(4,546,660)	-	(4,546,660)	(4,660,327)	(4,776,835)	(4,896,256)	(5,018,662)	(5,144,128)
3	Joint Operating Expenses		$ 28,476,933	$ -	$ 28,476,933	$ 29,188,856	$ 29,918,578	$ 30,666,542	$ 31,433,206	$ 32,219,036
4	Percentage Allocation to Fairfax Co		45.00%	0.00%	45.00%	45.12%	45.21%	45.31%	45.41%	45.50%
5	Operating Expenses Allocated to Fairfax Co		$ 12,814,620	$ -	$ 12,814,620	$ 13,169,751	$ 13,527,518	$ 13,894,946	$ 14,272,319	$ 14,659,904
6	Less: Charges for Alexandria City Flow		-	-	-	-	-	-	-	-
7	Adjustments for Historical Budget to Actual Variance		-	1,500,000	1,500,000	1,541,569	1,583,447	1,626,456	1,670,629	1,715,998
8	Operating Expenses Allocated to Fairfax Co. - FY Ad		$ 12,814,620	$ 1,500,000	$ 14,314,620	$ 14,711,320	$ 15,110,966	$ 15,521,402	$ 15,942,948	$ 16,375,902
9	Gross Joint Assets	IR&R ARE	$ 772,711,685	$ -	$ 772,711,685	$ 835,764,958	$ 877,553,006	$ 908,267,361	$ 940,056,719	$ 972,958,704
10	Funding Percentage per Agreemen		0.70%	0.00%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%
11	Fairfax Co. Share (60%) [3]		3,245,389	-	3,245,389	3,510,213	3,685,723	3,814,723	3,948,238	4,086,427
12	Adjustments		-	-	-	-	-	-	-	-
13	IR&R Expenditures Allocated to Fairfax County [3]		$ 3,245,389	$ -	$ 3,245,389	$ 3,510,213	$ 3,685,723	$ 3,814,723	$ 3,948,238	$ 4,086,427
	Subtotal ARE - O&M Costs Allocated to Fairfax Co.				$ 17,567,678	$ 18,155,327	$ 18,752,811	$ 19,303,875	$ 19,857,807	$ 20,427,781
	Accruals/Fiscal Year End Adjustments [4]				-	-	-	-	-	-
	Total ARE - O&M Costs Allocated to Fairfax Co.				$ 17,567,678	$ 18,155,327	$ 18,752,811	$ 19,303,875	$ 19,857,807	$ 20,427,781
	Arlington County - WPCF									
	Arlington WPCP - O&M Costs Allocated to Fairfax Co.[5]									
	Escalation Factor									
14	Arlington Total Operating Expenses	Composite	$ 25,980,662	$ -	$ 25,980,662	$ 26,578,217	$ 27,136,360	$ 27,679,087	$ 28,288,027	$ 28,910,364
15	Annual Sewage Flow - Fairfax Co. to Arlington	Input	-	-	797,525	797,525	797,525	797,525	797,525	797,525
16	Annual Sewage Flow at Arlington (WPCP	Input	-	-	8,175,498	8,175,498	8,175,498	8,175,498	8,175,498	8,175,498
17	Allocation Factor (Line 15/Line 16)		9.8%	9.8%	9.8%	9.8%	9.8%	9.8%	9.8%	9.8%
18	Fairfax County Allocable O&M Payment		$ 2,534,430	$ -	$ 2,534,430	$ 2,592,722	$ 2,647,169	$ 2,700,112	$ 2,759,515	$ 2,820,224
19	Accruals/Fiscal Year End Adjustments [6]		-	-	-	-	-	-	-	-
20	Total Arlington WPCP - O&M Costs Allocated to Fairfax Co.[5]		$ 2,534,430	$ -	$ 2,534,430	$ 2,592,722	$ 2,647,169	$ 2,700,112	$ 2,759,515	$ 2,820,224
	Blue Plains - DCWater									
	DCWater - O&M Costs Allocated to Fairfax Co.[7]									
21	Interceptors	Inflation	$ 671,559	$ -	$ 671,559	$ 700,436	$ 730,555	$ 761,969	$ 794,734	$ 828,908
22	Pumping Stations	Inflation	432,432	-	432,432	451,027	470,421	490,649	511,747	533,752
23	Screen Chambers	Inflation	115	-	115	120	125	130	136	142
24	Wastewater Treatment Plant	Inflation	11,340,505	-	11,340,505	11,828,147	12,336,757	12,867,238	13,420,529	13,997,612
25	D.C. Sludge Costs	DC Sludge	2,118,288	-	2,118,288	2,209,374	2,304,377	2,403,465	2,506,814	2,614,607
26	Indirect Costs	Inflation	2,888,431	-	2,888,431	3,012,634	3,142,177	3,277,291	3,418,215	3,565,198
27	Rental and User Fees	Inflation	496,607	-	496,607	517,961	540,233	563,463	587,692	612,963
28	WSSC Biosolids	Inflation	839,216	-	839,216	875,302	912,940	952,196	993,140	1,035,845
29	Excess Flow and Other Payments	Inflation	-	-	-	-	-	-	-	-
30	Additional Costs	Inflation	-	(1,000,000)	(1,000,000)	(1,000,000)	(1,000,000)	(1,000,000)	(1,000,000)	(1,000,000)
31	Accruals/Fiscal Year End Adjustments [8]	Inflation	-	-	-	-	-	-	-	-
32	Total DCWater - O&M Costs Allocated to Fairfax Co.[7]		$ 18,787,153	$ (1,000,000)	$ 17,787,153	$ 18,595,001	$ 19,437,585	$ 20,316,401	$ 21,233,007	$ 22,189,027
	Percentage Change									
	Upper Occoquan Sewage Authority - UOSA									
	UOSA - O&M Costs Allocated to Fairfax Co.[9]									
33	UOSA Total Operating Expenses	Composite	$ 35,906,380	$ 1,077,191	$ 36,983,571	$ 37,834,193	$ 38,628,712	$ 39,401,286	$ 40,268,114	$ 41,154,013
34	Annual Sewage Flow - Fairfax Co. to UOSA (MG)	Input	-	-	4,458,901	4,458,901	4,458,901	4,458,901	4,458,901	4,458,901
35	Annual Sewage Flow at UOSA (MG)	Input	-	-	12,270,000	12,270,000	12,270,000	12,270,000	12,270,000	12,270,000
36	Allocation Factor		36.3%	0.0%	36.3%	36.3%	36.3%	36.3%	36.3%	36.3%
37	Fairfax County Allocable O&M Payment		13,048,328	391,450	13,439,778	13,748,893	14,037,620	14,318,372	14,633,376	14,955,311
38	Accruals/Fiscal Year End Adjustments [10]		-	-	-	-	-	-	-	-
39	Reserve and Maintenance Fund Deposits	Composite	$ 4,809,192	$ -	$ 4,809,192	$ 4,919,803	$ 5,023,119	$ 5,123,581	$ 5,236,300	$ 5,351,499
40	Fairfax Co. Reserved Capac. from UOSA	Input	-	-	22.10	22.10	22.10	22.10	22.10	22.10
41	Total Capacity of UOSA WWTP	Input	-	-	54.00	54.00	54.00	54.00	54.00	54.00
42	Allocation Factor		40.93%	40.93%	40.93%	40.93%	40.93%	40.93%	40.93%	40.93%

Footnotes on Page 2 of 2.

Table 4
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis
Projection of Operating Expenses for Treatment By Contract (TBC

Line No.	Description	Escalation Reference [1]	Proposed Budget	Adjustments	Adjusted 2024	2025	2026	2027	2028	2029
			Projected Fiscal Year Ending June 30							
43	Fairfax County Allocable R&M Deposits		$ 1,968,205	$ -	$ 1,968,205	$ 2,013,474	$ 2,055,757	$ 2,096,872	$ 2,143,003	$ 2,190,149
44	Accruals/Fiscal Year End Adjustments [10]		-	-	-	-	-	-	-	-
45	Total UOSA Allocated Cost		$ 15,016,533	$ 391,450	$ 15,407,983	$ 15,762,367	$ 16,093,377	$ 16,415,244	$ 16,776,379	$ 17,145,460
	Loudoun County Sanitation Authority									
47	Fairfax Flow to BRWRF		-		-	-	-	-	-	-
48	Total Wastewater Treated at BRWRF		-		-	-	-	-	-	-
49	Fairfax Proportion		0.00%		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
50	LCSA Total Operating Costs		$ 21,500,000		$ 21,500,000	$ 21,500,000	$ 21,500,000	$ 21,500,000	$ 21,500,000	$ 21,500,000
51	Fairfax County Allocable O&M Payment		-		-	-	-	-	-	-

Footnotes:

[1] Escalation reference apply to costs beginning with the Fiscal Year 2025 and beyond.

[2] Forecasted amounts are based on: i) apportionment of costs from budgetary estimates by AlexRenew; and ii) escalation of costs based on information provided by AlexRenew and discussions with WMP Staff.

[3] Projected IR&R contribution based on the master indenture of trust agreement that entitles AlexRenew to collect IR&R Funds not to exceed 0.70% of the prior year's gross utility plant in service multiplied by the Fairfax Allocation of such plant in service (currently at 60.0%).

[4] Adjustment made for Historical Fiscal Years to account for: i) true up of the operating costs performed by AlexRenew at the end of the Fiscal Year; and ii) adjustments to account for the difference in the Fiscal Year period between AlexRenew and Fairfax County.

[5] Forecasted amounts are based on: i) apportionment of costs from budgetary estimates by Arlington County; and ii) escalation of costs based on information provided by Arlington County and discussions with WMP Staff.

[6] Adjustment made for Historical Fiscal Years to account for: i) true up of the operating costs performed by Arlington County at the end of the Fiscal Year, if any.

[7] Forecasted amounts are based on apportionment of costs from budgetary estimates by DCWater; and ii) escalation of costs based on information provided by DCWater and discussions with WMP Staff.

[8] Adjustment made for Historical Fiscal Years to account for: i) true up of the operating costs performed by DCWater at the end of the Fiscal Year; and ii) adjustments to account for the difference in the Fiscal Year period between DCWater and Fairfax County.

[9] Forecasted amounts are based on: i) apportionment of costs from budgetary estimates by UOSA; and ii) escalation of costs based on information provided by UOSA and discussions with WMP Staff.

[10] Adjustment made for Historical Fiscal Years to account for: i) true up of the operating costs performed by UOSA at the end of the Fiscal Year; and ii) Interest earnings and additional charges/credits that occurred during the F

Table 5
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Historical and Projected Sales of Service (Bulk Sales) and Other Revenue

Line No.	Description	Escalation Factors	Actual [1] 2023	Projected Fiscal Year Ending June 30, 2024	2025	2026	2027	2028	2029
	Sales of Service (Bulk Sales)								
1	City of Fairfax [2]	Calculated	$ 2,071,199	$ 2,910,009	$ 2,970,768	$ 3,050,184	$ 3,131,176	$ 3,214,351	$ 3,299,274
2	Town of Herndon [3]	Calculated	1,461,205	1,932,015	2,012,773	2,096,687	2,183,891	2,274,505	2,368,664
3	Arlington County [4]	Calculated	715,272	862,066	898,192	935,735	974,754	1,015,305	1,057,447
4	Fort Belvoir [5]	Calculated	2,142,140	2,771,507	2,886,167	3,056,520	3,236,701	3,426,709	3,629,822
5	City of Falls Church [6]	Calculated	712,905	938,785	955,338	979,088	1,002,649	1,025,905	1,049,696
6	Town of Vienna [7]	Calculated	640,413	998,547	1,037,522	1,065,298	1,093,564	1,122,578	1,152,204
7	FCWA [8]	Calculated	182,930	172,253	179,561	189,391	200,559	212,345	224,902
8	I-95 ERRF (Covanta) [9]	Calculated	383,563	303,887	316,779	334,121	353,823	374,615	396,769
9	LCSA [10]	Calculated	268,183	254,817	260,678	266,152	271,475	277,448	283,551
10	Sales of Service (Bulk Revenue)		$ 8,577,811	$ 11,143,886	$ 11,517,779	$ 11,973,177	$ 12,448,591	$ 12,943,761	$ 13,462,329
11	Percentage Change			29.92%	3.36%	3.95%	3.97%	3.98%	4.01%
	Other Revenues								
12	Miscellaneous Revenue	Constant	$ 222,897	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000
13	Industrial Pretreatment Charges	Constant	-	-	-	-	-	-	-
14	Engineering Fees	Constant	-	-	-	-	-	-	-
15	Sale of Capital Equipment	Constant	-	-	-	-	-	-	-
16	Sales of Salvage	Constant	30,589	100,000	100,000	100,000	100,000	100,000	100,000
17	Subtotal Other Revenues		$ 253,486	$ 775,000	$ 775,000	$ 775,000	$ 775,000	$ 775,000	$ 775,000
18	Percentage Change			205.74%	0.00%	0.00%	0.00%	0.00%	0.00%
	Non-Recurring Revenues (to E&I Fund)								
19	Lateral Spur Fees [11]	Connections	$ -	$ 10,000	$ 10,041	$ 10,083	$ 10,124	$ 10,166	$ 10,208
20	Connection Charges [11]	Connections	559,175	250,000	251,032	252,069	253,110	254,155	255,205
21	Frontage Fees [11]	Constant	-	-	-	-	-	-	-
22	Subtotal Non-Recurring Revenues		$ 559,175	$ 260,000	$ 261,073	$ 262,152	$ 263,234	$ 264,321	$ 265,413
23	Percentage Change			(53.50%)	0.41%	0.41%	0.41%	0.41%	0.41%
	Capital Contributions [12]								
24	City of Fairfax			$ 8,950,075	$ 11,115,394	$ 8,728,624	$ 6,824,081	$ 7,198,507	$ 4,027,361
25	Town of Herndon			1,806,290	2,748,484	2,840,710	4,182,000	4,541,613	3,808,645
26	Arlington County			1,083,774	1,649,090	1,704,426	2,509,200	2,724,968	2,285,187
27	City of Falls Church			1,124,074	1,203,426	1,261,852	1,390,432	1,195,370	1,183,426
28	Town of Vienna			2,663,713	3,308,153	2,597,805	2,030,976	2,142,413	1,198,619
29	Total Capital Reimbursement from SoS			$ 15,627,926	$ 20,024,547	$ 17,133,416	$ 16,936,689	$ 17,802,871	$ 12,503,239

Footnotes:

[1] Historical amounts obtained from information as provided by the County.

[2] Amounts calculated from: i) assumptions as contained on the respective agreement; ii) review of historical invoices as provided by the County; iii) other information as provided by the County.

Amounts shown estimated as follows:

Description	Projected Fiscal Year Ending June 30, 2024	2025	2026	2027	2028	2029
City of Fairfax:						
City of Fairfax Share of Noman Cole O&M Costs						
G252302002 NMColeJr PCP	$18,495,170	$19,755,139	$20,371,860	$21,003,343	$21,651,170	$22,313,740
G252302003 NMColeJr PCP	11,912,009	11,409,022	11,755,690	12,111,383	12,482,042	12,864,387
Other Direct Cost Allocation	11,942,266	12,239,567	12,617,934	13,005,642	13,405,647	13,816,032
Other Direct Cost Allocation - % of Total O&M	28.2%	28.2%	28.2%	28.2%	28.2%	28.2%
Forecast Adjustment	(1,270,483)	(1,302,112)	(1,342,365)	(1,383,611)	(1,426,166)	(1,469,825)
Total Noman Cole O&M Costs	$41,078,961	$42,101,617	$43,403,120	$44,736,756	$46,112,693	$47,524,335
Sewage Flows - City of Fairfax	933,086	933,086	933,086	933,086	933,086	933,086
Total Noman Cole Sewage Flow	14,423,178	14,479,909	14,538,873	14,597,983	14,657,604	14,717,480
Allocation Percentage - O&M Costs	6.47%	6.44%	6.42%	6.39%	6.37%	6.34%
Allocated O&M Cost to City of Fairfax	$2,657,542	$2,713,030	$2,785,556	$2,859,521	$2,935,480	$3,013,036
Plus: Overhead @ 9.5% of Allocated O&M Costs	252,466	257,738	264,628	271,655	278,871	286,238
Total Allocated O&M Cost to City of Fairfax	$2,910,009	$2,970,768	$3,050,184	$3,131,176	$3,214,351	$3,299,274
Adjustments for Accruals/True-Up	0	0	0	0	0	0
Adjusted Total Sales of Service Revenue - City of Fairfax	$2,910,009	$2,970,768	$3,050,184	$3,131,176	$3,214,351	$3,299,274
City of Fairfax Share of Noman Cole Capital Costs						
Noman Cole CIP Costs	$142,775,000	$177,317,000	$139,242,333	$108,860,333	$114,833,333	$64,246,000
Forecast Adjustment	0	0	0	0	0	0
Adjusted Noman Cole CIP Costs	$142,775,000	$177,317,000	$139,242,333	$108,860,333	$114,833,333	$64,246,000
Total Capacity - Noman Cole	67	67	67	67	67	67
Capacity Reservation City of Fairfax	4.2	4.2	4.2	4.2	4.2	4.2
Capital Cost Allocation Percentage	6.27%	6.27%	6.27%	6.27%	6.27%	6.27%
City of Fairfax Share of Noman Cole Capital Costs	$8,950,075	$11,115,394	$8,728,624	$6,824,081	$7,198,507	$4,027,361
Adjustments for Accruals/True-Up	0	0	0	0	0	0
Adjusted Total Capital Reimbursement - City of Fairfax	$8,950,075	$11,115,394	$8,728,624	$6,824,081	$7,198,507	$4,027,361

[3] **Town of Herndon:**

Trunk Sewer Operation and Maintenance Payment						
Actual O&M Costs	$0	$0	$0	$0	$0	$0
Plus Overhead @ 4%	0	0	0	0	0	0
Total Costs	$0	$0	$0	$0	$0	$0
	0	0	0	0	0	0
Town of Herndon Allocated Costs (@37.70%)	$0	$0	$0	$0	$0	$0
District of Columbia Conveyance and Disposal Charge						
Blue Plains - O&M Payments	$17,787,153	$18,595,001	$19,437,585	$20,316,401	$21,233,007	$22,189,027
Sewage Flows - Herndon	1,078,064	1,078,064	1,078,064	1,078,064	1,078,064	1,078,064
Total Flows sent to Blue Plains	9,925,226	9,959,694	9,994,318	10,029,065	10,063,967	10,099,023
Allocation Percentage	10.86%	10.82%	10.79%	10.75%	10.71%	10.67%
Blue Plains O&M Costs Allocable to Herndon	$1,932,015	$2,012,773	$2,096,687	$2,183,891	$2,274,505	$2,368,664
Adjustments for Accruals/True-Up	0	0	0	0	0	0
Adjusted Total Sales of Service Revenue - Herndon	$1,932,015	$2,012,773	$2,096,687	$2,183,891	$2,274,505	$2,368,664
Blue Plains - Capital Payment						
Blue Plains CIP Costs	$18,665,000	$28,401,000	$29,354,000	$43,214,000	$46,930,000	$39,356,000
Capacity Reservation - Herndon	3.00	3.00	3.00	3.00	3.00	3.00

Table 5
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Historical and Projected Sales of Service (Bulk Sales) and Other Revenue

Total Capacity Reservation for County	31.00	31.00	31.00	31.00	31.00	31.00
Allocation Percentage - Capital Costs	9.68%	9.68%	9.68%	9.68%	9.68%	9.68%
CIP costs allocated to Herndon	$1,806,290	$2,748,484	$2,840,710	$4,182,000	$4,541,613	$3,808,645
Adjustments	0	0	0	0	0	0
Total Capital Reimbursement - Herndon	$1,806,290	$2,748,484	$2,840,710	$4,182,000	$4,541,613	$3,808,645
Determination of Rate						
Adjusted Total Sales of Service Revenue - Herndon	$1,932,015	$2,012,773	$2,096,687	$2,183,891	$2,274,505	$2,368,664
Total Capital Reimbursement - Herndon	$1,806,290	$2,748,484	$2,840,710	$4,182,000	$4,541,613	$3,808,645
Total Payment due from Herndon	$3,738,306	$4,761,257	$4,937,397	$6,365,891	$6,816,118	$6,177,309
Sewage Flows (000's gallons)	1,078,064	1,078,064	1,078,064	1,078,064	1,078,064	1,078,064
Rate Charged	$3.47	$4.42	$4.58	$5.90	$6.32	$5.73
Calculation of Balance (Informational)						
Beginning Balance Due from/(to) Herndon	$0	$0	$0	$0	$0	$0
Ending Balance Due from/(to) Herndon	$0	$0	$0	$0	$0	$0
[4] **Arlington County:**						
District of Columbia Conveyance and Disposal Charge						
Blue Plains - O&M Payments	$17,290,546	$18,077,040	$18,897,352	$19,752,938	$20,645,315	$21,576,064
Sewage Flows - Arlington County	478,296	478,296	478,296	478,296	478,296	478,296
Total Flows sent to Blue Plains	9,925,226	9,959,694	9,994,318	10,029,065	10,063,967	10,099,023
Allocation Percentage	4.82%	4.80%	4.79%	4.77%	4.75%	4.74%
Blue Plains O&M Costs Allocable to Arlington County	$833,230	$868,117	$904,367	$942,037	$981,181	$1,021,856
Adjustments for Accruals/True-Up	0	0	0	0	0	0
Adjusted Blue Plains O&M Costs - Arlington County	$833,230	$868,117	$904,367	$942,037	$981,181	$1,021,856
Blue Plains Annual User Fee Payments (IMA)						
Fairfax County Payments	$496,607	$517,961	$540,233	$563,463	$587,692	$612,963
Capacity Reservation - Arlington	1.80	1.80	1.80	1.80	1.80	1.80
Total Capacity Reservation for Fairfax County	31.00	31.00	31.00	31.00	31.00	31.00
Arlington County Share of Payments	5.81%	5.81%	5.81%	5.81%	5.81%	5.81%
Blue Plains User Fee Payments (IMA)	$28,835	$30,075	$31,368	$32,717	$34,124	$35,591
Pimmit Run Trunk Sewer O&M Payment						
Annual O&M Costs - Fairfax Trunk Sewers	$0	$0	$0	$0	$0	$0
Sewage Flows - Arlington County	0	0	0	0	0	0
Annual Flow of Sewage - Pimmit Run System of Fairfax	1	1	1	1	1	1
Allocation Percentage - Pimmit Run O&M Costs	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Pimmit Run O&M Costs Allocable to Arlington	$0	$0	$0	$0	$0	$0
Adjustments for Accruals/True-Up	0	0	0	0	0	0
Adjusted Pimmit Run Trunk Sewer O&M payment	$0	$0	$0	$0	$0	$0
Total Sales of Services Receivables - Arlington County	$862,066	$898,192	$935,735	$974,754	$1,015,305	$1,057,447
Adjustments for Accruals/True-Up	$0	$0	$0	$0	$0	$0
Adjusted Total Sales of Service Revenue for Arlington County	$862,066	$898,192	$935,735	$974,754	$1,015,305	$1,057,447
Blue Plains - Capital Payment						
Blue Plains CIP Costs	$21,580,000	$33,330,000	$34,523,000	$46,884,000	$48,546,000	$39,601,000
Capacity Reservation - Arlington	1.80	1.80	1.80	1.80	1.80	1.80
Total Capacity Reservation for County	31.00	31.00	31.00	31.00	31.00	31.00
Allocation Percentage	5.81%	5.81%	5.81%	5.81%	5.81%	5.81%
CIP costs Allocated to Arlington	$1,253,032	$1,935,290	$2,004,561	$2,722,297	$2,818,800	$2,299,413
Accrual/Adjustments	0	0	0	0	0	0
Total Capital Reimbursement - Arlington	$1,083,774	$1,649,090	$1,704,426	$2,509,200	$2,724,968	$2,285,187
[5] **Fort Belvoir:**						
Noman Cole CIP Costs	142,775,000	177,317,000	139,242,333	108,860,333	114,833,333	64,246,000
Capacity Reservation - Fort Belvior	3.00	3.00	3.00	3.00	3.00	3.00
Total Payment due from Herndon	67.00	67.00	67.00	67.00	67.00	67.00
Allocation Percentage	4.48%	4.48%	4.48%	4.48%	4.48%	4.48%
CIP costs Allocated to Arlington	$6,392,910	$7,939,567	$6,234,731	$4,874,343	$5,141,791	$2,876,687
Accrual/Adjustments	0	0	0	0	0	0
Total Capital Reimbursement - Fort Belvior	$6,392,910	$7,939,567	$6,234,731	$4,874,343	$5,141,791	$2,876,687
Norman Cole O&M Payment	0	0	0	0	0	0
Sewage Flows	398,434	398,434	398,434	398,434	398,434	398,434
Rate Charged	$6.96	$7.24	$7.67	$8.12	$8.60	$9.11
Total Sales of Services Receivables - Fort Belvoir	$2,771,507	$2,886,167	$3,056,520	$3,236,701	$3,426,709	$3,629,822
Accrual/Adjustments	0	0	0	0	0	0
Adjusted Total Sales of Service Revenue for Fort Belvoir	$2,771,507	$2,886,167	$3,056,520	$3,236,701	$3,426,709	$3,629,822
[6] **City of Falls Church:**						
AlexRenew O&M Payment						
AlexRenew WWTP O&M Costs	$17,567,678	$18,155,327	$18,752,811	$19,303,875	$19,857,807	$20,427,781
City of Falls Church Flows	400,916	400,916	400,916	400,916	400,916	400,916
Total Flows Sent to AlexRenew	6,116,451	6,145,949	6,169,654	6,193,443	6,217,338	6,241,339
Allocation Percentage	$0	$0	$0	$0	$0	$0
AlexRenew O&M Costs allocable to City of Falls Church	$1,151,511	$1,184,318	$1,218,594	$1,249,585	$1,280,502	$1,312,190
Adjustments for Accruals/True-Up	(212,726)	(228,980)	(239,505)	(246,936)	(254,596)	(262,494)
Adjusted Total Sales of Service Revenue for the City of Falls Church	$938,785	$955,338	$979,088	$1,002,649	$1,025,905	$1,049,696
AlexRenew O&M Payment						
AlexRenew WWTP O&M Costs	$36,420,000	$38,991,000	$40,884,000	$45,050,000	$38,730,000	$38,343,000
City of Falls Church Flows	1.0	1.0	1.0	1.0	1.0	1.0
Total Flows Sent to AlexRenew	32	32	32	32	32	32
Allocation Percentage	3.09%	3.09%	3.09%	3.09%	3.09%	3.09%
AlexRenew O&M Costs allocable to City of Falls Church	$1,124,074	$1,203,426	$1,261,852	$1,390,432	$1,195,370	$1,183,426
Adjustments for Accruals/True-Up	0	0	0	0	0	0
Adjusted Total Sales of Service Revenue for the City of Falls Church	$1,124,074	$1,203,426	$1,261,852	$1,390,432	$1,195,370	$1,183,426

Table 5
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Historical and Projected Sales of Service (Bulk Sales) and Other Revenue

[7] **Town of Vienna**

Payment Number 1 - O&M Payments						
A. Noman Cole O&M Payment						
Noman Cole O&M Costs	$41,078,961	$42,101,617	$43,403,120	$44,736,756	$46,112,693	$47,524,335
Plus: Overhead @4.0% of Allocable O&M Costs	1,643,158	1,684,065	1,736,125	1,789,470	1,844,508	1,900,973
Total Allocable Costs	$42,722,120	$43,785,681	$45,139,245	$46,526,226	$47,957,201	$49,425,309
Town of Vienna Sewage Flow	337,114	337,114	337,114	337,114	337,114	337,114
Total Noman Cole Sewage Flow	14,423,178	14,479,909	14,538,873	14,597,983	14,657,604	14,717,480
Allocation Percentage	2.34%	2.33%	2.32%	2.31%	2.30%	2.29%
Noman Cole O&M Costs allocable to Town of Vienna	$998,547	$1,019,396	$1,046,647	$1,074,439	$1,102,980	$1,132,121
B. Alex Renew O&M Payment	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
Alex Renew O&M Costs Allocable to Fairfax	$17,567,678	$18,155,327	$18,752,811	$19,303,875	$19,857,807	$20,427,781
Plus: Overhead @ 4.0% of Allocable O&M Costs	702,707	726,213	750,112	772,155	794,312	817,111
Total Allocable Costs	$18,270,385	$18,881,540	$19,502,923	$20,076,030	$20,652,119	$21,244,893
Accotink Flows - Vienna	0	5,900	5,900	5,900	5,900	5,900
Total Flows to Alex Renew	6,116,451	6,145,949	6,169,654	6,193,443	6,217,338	6,241,339
Allocation Percentage	0.00%	0.10%	0.10%	0.10%	0.09%	0.09%
Alex Renew O&M Cost Allocated to Town of Vienna	$0	$18,126	$18,651	$19,125	$19,598	$20,083
Total O&M Payments	$998,547	$1,037,522	$1,065,298	$1,093,564	$1,122,578	$1,152,204
Adjustments for Accruals/True-Up	0	0	0	0	0	0
Adjusted Total O&M Payments	$998,547	$1,037,522	$1,065,298	$1,093,564	$1,122,578	$1,152,204
Payment Number 2 - Capital Payments						
A. Capital Contributions for Nitrogen Removal	$0	$0	$0	$0	$0	$0
B. Noman Cole CIP	142,775,000	177,317,000	139,242,333	108,860,333	114,833,333	64,246,000
Capacity Reservation - Vienna	$67	$67	$67	$67	$67	$67
Total Capacity - Noman Cole	$1	$1	$1	$1	$1	$1
Allocation Percentage - Capital Costs	$0	$0	$0	$0	$0	$0
Total Capital Payments	$2,663,713	$3,308,153	$2,597,805	$2,030,976	$2,142,413	$1,198,619
Accrual/Adjustments	0	0	0	0	0	0
Adjusted Total Capital Payments	$2,663,713	$3,308,153	$2,597,805	$2,030,976	$2,142,413	$1,198,619

[8] **FCWA:**

Sewage Flows	20,586	20,586	20,586	20,586	20,586	20,586
Rate Charged	$8.37	$8.72	$9.20	$9.74	$10.32	$10.93
Total Sales of Services Receivables - Fairfax Water	$172,253	$179,561	$189,391	$200,559	$212,345	$224,902
Adjustments for Accruals/True-Up	0	0	0	0	0	0
Adjusted Total Sales of Service Revenue for Fairfax Water	$172,253	$179,561	$189,391	$200,559	$212,345	$224,902
Blue Plains CIP Costs	$15,774,935	$24,003,426	$24,808,865	$36,522,800	$39,663,419	$33,262,168
Capacity Reservation - FCWA	67	67	67	67	67	67
Total Capacity - Noman Cole	1.00	1.00	1.00	1.00	1.00	1.00
Allocation Percentage - Capital Costs	1.49%	1.49%	1.49%	1.49%	1.49%	1.49%
Total Capital Payments	$235,446.80	$358,260.09	$370,281.56	$545,116.42	$591,991.33	$496,450.26
Accrual/Adjustments	(235,447)	(358,260)	(370,282)	(545,116)	(591,991)	(496,450)
Adjusted Total Capital Payments	$172,253	$179,561	$189,391	$200,559	$212,345	$224,902

[9] **I-95 ERRF (Covanta):**

Sewage Flows	36,318	36,318	36,318	36,318	36,318	36,318
Rate Charged	$8.37	$8.72	$9.20	$9.74	$10.32	$10.93
Total Sales of Services Receivables - Covanta	$303,887	$316,779	$334,121	$353,823	$374,615	$396,769
Adjustments for Accruals/True-Up	0	0	0	0	0	0
Adjusted Total Sales of Service Revenue for Covanta	$303,887	$316,779	$334,121	$353,823	$374,615	$396,769
B. Noman Cole CIP	$142,775,000	$177,317,000	$139,242,333	$108,860,333	$114,833,333	$64,246,000
Capacity Reservation - Vienna	67	67	67	67	67	67
Total Capacity - Noman Cole	1.00	1.00	1.00	1.00	1.00	1.00
Allocation Percentage - Capital Costs	1.49%	1.49%	1.49%	1.49%	1.49%	1.49%
Total Capital Payments	$2,130,970	$2,646,522	$2,078,244	$1,624,781	$1,713,930	$958,896
Accrual/Adjustments	(2,130,970)	(2,646,522)	(2,078,244)	(1,624,781)	(1,713,930)	(958,896)
Adjusted Total Capital Payments	$303,887	$316,779	$334,121	$353,823	$374,615	$396,769

[10] **Loudoun County Sanitation Authority:**

1. UOSA O&M Payments Billed to Fairfax Co.						
Fairfax Co. Paym. of O&M to UOSA	$13,439,778	$13,748,893	$14,037,620	$14,318,372	$14,633,376	$14,955,311
LCSA Share of Payments	1.23%	1.23%	1.23%	1.23%	1.23%	1.23%
UOSA O&M Payments Allocated to LCSA	$165,758	$169,570	$173,131	$176,594	$180,479	$184,450
2. UOSA Reserve Maintenance Billed to Fairfax Co.	$ -	$ -	$ -	$ -	$ -	$ -
Fairfax County Payments	$1,968,205	$2,013,474	$2,055,757	$2,096,872	$2,143,003	$2,190,149
LCSA Share of Payments	4.52%	4.52%	4.52%	4.52%	4.52%	4.52%
UOSA R&M Payments Allocated to LCSA	$89,059	$91,107	$93,021	$94,881	$96,968	$99,102
Total Sales of Services Allocated to LCSA	$254,817	$260,678	$266,152	$271,475	$277,448	$283,551
Adjustments for Accruals/True-Up	0	0	0	0	0	0
Adjusted Total Sales of Service Revenue for LCSA	$254,817	$260,678	$266,152	$271,475	$277,448	$283,551

[11] Amounts Shown considered as a Non-recurring Revenue pursuant to the General Bond Resolution

[12] Amounts Shown reflect SOS customer direct capital contributions. Other SOS customers such as Fort Belvoir are charged a single rate to recover both operating and capital cost apportionment and is considered an oper

Table 6
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Development of Wastewater System Revenue Requirements and Revenue Sufficiency

Line No.	Description	Projected Fiscal Year Ending June 30, 2024	2025	2026	2027	2028	2029
1	Total Operating Expenses (Including TBC) [1]	$ 140,193,393	$ 142,695,172	$ 147,462,064	$ 152,312,176	$ 157,376,635	$ 162,029,531
	Debt Service [2]						
	Senior Debt Service						
2	Existing Debt	$ 36,991,731	$ 36,976,929	$ 37,020,171	$ 37,010,629	$ 36,995,085	$ 31,357,802
3	Proposed Debt [3]	2,897,325	11,589,299	21,430,086	31,270,872	39,262,062	53,326,399
4	Subtotal - Senior Debt Service	$ 39,889,056	$ 48,566,228	$ 58,450,257	$ 68,281,502	$ 76,257,148	$ 84,684,201
	Subordinate Debt Service						
5	Existing Debt (Includes UOSA Planned Debt) [4]	$ 23,290,012	$ 23,747,430	$ 24,049,537	$ 24,048,665	$ 24,050,780	$ 17,966,302
6	Proposed Debt [5]	-	1,988,884	1,988,884	1,988,884	6,394,687	6,394,687
7	Subtotal - Subordinate Debt Service	$ 23,290,012	$ 25,736,314	$ 26,038,421	$ 26,037,549	$ 30,445,468	$ 24,360,989
8	Total Debt Service	$ 63,179,068	$ 74,302,542	$ 84,488,677	$ 94,319,050	$ 106,702,615	$ 109,045,190
	Other Revenue Requirements						
9	Transfer to Capital - Subfund C69300 (Programmed)	$ 63,961,681	$ 76,590,524	$ 81,076,060	$ 86,237,641	$ 89,486,931	$ 104,495,256
10	Transfer to Extension - Subfund 69300A	3,000,000	1,478,927	-	-	-	-
11	Transfer to Reserves - Fund 69000	1,110,000	1,028,128	1,958,997	1,993,196	2,081,285	1,912,149
12	Capital Improvements Funded from Rates	13,242,784	6,000,000	6,180,000	6,365,400	6,556,362	6,753,053
13	Total Other Revenue Requirements	$ 81,314,465	$ 85,097,579	$ 89,215,057	$ 94,596,237	$ 98,124,578	$ 113,160,458
14	Gross Revenue Requirements	$ 284,686,926	$ 302,095,292	$ 321,165,798	$ 341,227,463	$ 362,203,828	$ 384,235,179
	Less Income and Funds from Other Sources:						
15	Sales of Service (Bulk Revenue) [6]	$ 11,143,886	$ 11,517,779	$ 11,973,177	$ 12,448,591	$ 12,943,761	$ 13,462,329
16	Other Operating Revenues [7]	775,000	775,000	775,000	775,000	775,000	775,000
17	Unrestricted Interest Income [8]	4,579,000	4,900,000	5,641,000	6,338,000	6,598,000	6,788,000
18	Transfers from Reserves - Fund 69000	-	-	-	-	-	-
19	Availability Fees Used to Pay Debt	18,286,001	18,895,975	19,770,973	20,446,046	21,331,985	22,015,343
20	Subtotal Other Operating Revenues	$ 34,783,887	$ 36,088,754	$ 38,160,150	$ 40,007,638	$ 41,648,746	$ 43,040,673
21	Net Revenue Requirements	$ 249,903,039	$ 266,006,539	$ 283,005,648	$ 301,219,826	$ 320,555,082	$ 341,194,507
	Revenues from Proposed Sewer Service Charges:						
22	Proposed Rate Adjustments - Effective	0.0%	5.9%	5.9%	5.9%	5.9%	5.9%
23	Rate Revenues Under Proposed Rates	$ 249,903,039	$ 266,006,538	$ 283,005,648	$ 301,219,826	$ 320,555,083	$ 341,194,506
24	Rate Revenue Surplus/(Deficiency)	$ -	$ -	$ -	$ -	$ -	$ -

Footnotes on Page 2 of 2.

Table 6
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Development of Wastewater System Revenue Requirements and Revenue Sufficiency

Line No.	Description	Projected Fiscal Year Ending June 30, 2024	2025	2026	2027	2028	2029

Footnotes:

[1] Amounts shown derived from information as contained on Table 3.

[2] The total Outstanding Senior Lien Debt Service include debt service associated with the Sewer Revenue Bonds, Series 2012 (the "Series 2012 Bonds"), the Sewer Revenue Refunding Bonds, Series 2014 (the "Series 2014 Bonds"), the Sewer Revenue Refunding Bonds, Series 2016A (the "Series 2016A Bonds"), the Sewer Revenue Bonds, Series 2017 (the "Series 2017 Bonds"), and the Sewer Revenue Bonds, Series 2021 (the "Series 2021 Bonds").

[3] The following table summarizes the assumptions utilized for additional Senior Lien Debt:

	2024	2026	2028	2033
Term-Years	30	30	30	30
Interest Rate	4.50%	5.00%	5.10%	5.60%
Issue Month - Principal Pmt (Jan=1)	4	1	1	7
Total Projects Funded (Millions)	$ 175.0	$ 361.3	$ 288.1	$ 47.5
Total Principal Issued (Millions)	$ 188.8	$ 393.6	$ 313.4	$ 48.2
Annual Debt Service (Millions)	$ 11.6	$ 19.7	$ 18.5	$ 0.0

[4] Amount shown includes debt service associated with outstanding VRA Loan 2001 C-515259-01, VRA Loan 2002 C-515273-01 and various outstanding UOSA debt issues.

[5] Based on discussions with WMP staff, forecast assumes the County will participate in issuances by UOSA.

[6] Amounts shown derived from information as contained on Table 5.

[7] Other Revenues includes revenues derived from: miscellaneous revenue, pretreatment changes and the sale of property. Amount shown include Non-Recurring Revenues from growth related miscellaneous charges.

[8] Amounts shown derived from information as contained on Table 9.

Table 7
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Projected Operating Results and Debt Service Coverage Analysis

Line No.	Description	Projected Fiscal Year Ending June 30, 2024	2025	2026	2027	2028	2029
	Operating Revenues: [1]						
1	Sewer Service Charges (Retail Customers)	$ 249,903,039	$ 266,006,538	$ 283,005,648	$ 301,219,826	$ 320,555,083	$ 341,194,506
2	Sales of Service (Bulk revenue)	11,143,886	11,517,779	11,973,177	12,448,591	12,943,761	13,462,329
3	Other Revenues [2]	775,000	775,000	775,000	775,000	775,000	775,000
4	Interest Income	4,579,000	4,900,000	5,641,000	6,338,000	6,598,000	6,788,000
5	Other	-	-	-	-	-	-
6	Total Operating Revenues Before Availability Charges	$ 266,400,925	$ 283,199,317	$ 301,394,825	$ 320,781,417	$ 340,871,843	$ 362,219,835
	Operating Expenses: [3]						
7	Total Operating Expenses	$ 140,193,393	$ 142,695,172	$ 147,462,064	$ 152,312,176	$ 157,376,635	$ 162,029,531
8	Net Operating Revenues	$ 126,207,532	$ 140,504,146	$ 153,932,761	$ 168,469,241	$ 183,495,208	$ 200,190,304
	Non-Recurring Revenues and Revenue Subfund Credit: [4]						
9	Availability Charge Revenues [5]	$ 18,286,001	$ 18,895,975	$ 19,770,973	$ 20,446,046	$ 21,331,985	$ 22,015,343
10	Availability Charge Interest Income [5]	-	-	-	-	-	-
11	Other Non-recurring Revenues [6]	260,000	261,073	262,152	263,234	264,321	265,413
12	Moneys Held to Credit of Revenue Subfund [7]	-	-	-	-	-	-
13	Net Revenues [8]	$ 144,753,532	$ 159,661,194	$ 173,965,886	$ 189,178,522	$ 205,091,514	$ 222,471,060
	Rate Covenant Test [9]						
	TEST 1 - Net Revenue Less Excluded Revenues						
14	Net Revenues [8]	$ 144,753,532	$ 159,661,194	$ 173,965,886	$ 189,178,522	$ 205,091,514	$ 222,471,060
	Less: Excluded Revenues [4]:						
15	Availability Charge Revenues	$ (18,286,001)	$ (18,895,975)	$ (19,770,973)	$ (20,446,046)	$ (21,331,985)	$ (22,015,343)
16	Availability Charge Interest Earned	-	-	-	-	-	-
17	Other Non-recurring Revenues [6]	(260,000)	(261,073)	(262,152)	(263,234)	(264,321)	(265,413)
18	Net Revenues Available Less Excluded Revenues	$ 126,207,532	$ 140,504,146	$ 153,932,761	$ 168,469,241	$ 183,495,208	$ 200,190,304
	Debt Service Requirements:						
	Principal and Interest Requirements [10]						
19	Sewer Revenue Refunding Bonds, Series 2014	$ 5,958,531	$ 5,921,406	$ 5,947,398	$ 5,966,138	$ 5,971,740	$ 248,831
20	Series 2016A Refunding Bonds [11]	12,729,304	12,741,460	12,751,085	12,718,658	12,687,763	12,768,179
21	Sewer Revenue Bonds, Series 2017 [11]	5,549,542	5,554,292	5,554,979	5,555,958	5,561,990	5,563,208
22	Series 2021A [11]	11,858,704	11,864,121	11,871,058	11,874,225	11,877,944	11,881,933
23	Series 2021B [11]	895,650	895,650	895,650	895,650	895,650	895,650
24	Series 2024 Bonds [11]	2,897,325	11,589,299	11,589,299	11,589,299	11,589,299	11,589,299
25	Series 2026 Bonds [11]	0	0	9,840,787	19,681,574	19,681,574	23,281,699
26	Series 2028 Bonds [11]	0	0	0	0	7,991,190	18,455,400
28	Series 2030 Bonds [11]	0	0	0	0	0	0
29	Series 2032 Bonds [11]	0	0	0	0	0	0
30	Total Debt Service Requirements	$ 39,889,056	$ 48,566,228	$ 58,450,257	$ 68,281,502	$ 76,257,148	$ 84,684,201
31	**Calculated Coverage**	**3.16**	**2.89**	**2.63**	**2.47**	**2.41**	**2.36**
32	**Required Coverage**	**1.25**	**1.25**	**1.25**	**1.25**	**1.25**	**1.25**
33	**Policy Target**	**2.00**	**2.00**	**2.00**	**2.00**	**2.00**	**2.00**
	-AND-						

Footnotes on Page 2 of 3.

Table 7
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Projected Operating Results and Debt Service Coverage Analysis

	TEST 2 - Net Revenues With Excluded Revenues						
34	Net Revenues [8]	$ 144,753,532	$ 159,661,194	$ 173,965,886	$ 189,178,522	$ 205,091,514	$ 222,471,060
	Debt Service Requirements:						
	Subordinate Obligations [12]:						
35	EDA Facilities Revenue Bonds, Series 2021 [11]	$ 1,696,683	$ 1,697,583	$ 1,697,283	$ 1,696,354	$ 1,700,000	$ 1,697,250
35	Subtotal VRA Debt Service	$ 1,696,683	$ 1,697,583	$ 1,697,283	$ 1,696,354	$ 1,700,000	$ 1,697,250
	UOSA Subordinate Debt						
36	UOSA Existing Subordinate Debt	$ 21,593,328	$ 22,049,847	$ 22,352,254	$ 22,352,311	$ 22,350,780	$ 16,269,052
37	Subtotal UOSA Debt Service	$ 21,593,328	$ 22,049,847	$ 22,352,254	$ 22,352,311	$ 22,350,780	$ 16,269,052
38	UOSA Proposed Subordinate Debt [13]	-	1,988,884	1,988,884	1,988,884	1,988,884	1,988,884
39	UOSA Proposed Subordinate Debt [13]	-	-	-	-	4,405,804	4,405,804
40	UOSA Proposed Subordinate Debt [13]	-	-	-	-	-	-
41	UOSA Proposed Subordinate Debt [13]	-	-	-	-	-	-
42	Total Subordinate Obligations	$ 23,290,012	$ 25,736,314	$ 26,038,421	$ 26,037,549	$ 30,445,468	$ 24,360,989
43	Principal and Interest Requirements [10]	$ 39,889,056	$ 48,566,228	$ 58,450,257	$ 68,281,502	$ 76,257,148	$ 84,684,201
44	Total Debt Service Requirements	$ 63,179,068	$ 74,302,542	$ 84,488,677	$ 94,319,050	$ 106,702,615	$ 109,045,190
45	**Calculated Coverage**	**2.29**	**2.15**	**2.06**	**2.01**	**1.92**	**2.04**
46	**Required Minimum Coverage**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
47	**Min. Recommended Target for Test 2 - 2.00**	**2.00**	**2.00**	**2.00**	**2.00**	**2.00**	**2.00**
48	Net Revenues [8]	$ 144,753,532	$ 159,661,194	$ 173,965,886	$ 189,178,522	$ 205,091,514	$ 222,471,060
	Less Transfers to Other Funds [14]:						
49	Debt Service Subfund [15]	$ 39,889,056	$ 48,566,228	$ 58,450,257	$ 68,281,502	$ 76,257,148	$ 84,684,201
50	Subordinate Obligations Subfund [16]	23,290,012	25,736,314	26,038,421	26,037,549	30,445,468	24,360,989
51	Amount Available for Other Purposes	$ 81,574,464	$ 85,358,652	$ 89,477,209	$ 94,859,471	$ 98,388,899	$ 113,425,870

Footnotes:

[1] Operating Revenues reflect rates recently adopted by the Board of Supervisors pursuant to the Rate Ordinance

	Projected Fiscal Year Ending June 30,					
	2024	2025	2026	2027	2028	2029
	(Existing)	(Recommended)	(Recommended)	(Recommended)	(Recommended)	(Recommended)
Recommended Rates						
Quarterly Base Charge	$ 44.81	$ 49.73	$ 52.62	$ 55.78	$ 59.08	$ 62.57
Quarterly Billing Charge	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
Flow Charge	8.46	8.81	9.33	9.88	10.46	11.08
Effective Rate Revenue Adjustment (%)		5.9%	5.9%	5.9%	5.9%	5.9%
Annualized Rate Revenue Adjustment (%) [*]		5.8%	5.9%	5.9%	5.9%	5.9%

[*] Reflects expected annualized increase to rate revenues from adopted and forecasted rate changes, everything else held constant, and assuming they are effective for an entire fiscal year or

[2] Amounts shown include other miscellaneous revenues of the System (customer service fees, sale of property, etc.); amounts do not include Non-Recurring Revenues associated with lateral spur

[3] Amounts include the Operating Component of the Cost of Contracted Services, i.e., treatment by contract (TbCs) costs. Amounts shown do not include depreciation and amortization expenses, which are non-cash expenses and are not considered Operating Expenses as defined in the General Bond Resolution.

[4] The sum of the amounts shown for Non-recurring Revenue and the Revenue Subfund credit balance is defined in the General Bond Resolution as the "Excluded Revenues".

[5] Amounts shown represent fees charged to new development and interest income earned on the balance of deposits from such fees for the allocable share of conveyance, treatment and disposal

[6] Amounts shown include lateral spur fees, connection charges for meter replacement and other similar charges which are considered as a Non-recurring Revenues in the General Bond Resolution (represents a one-time charge generally to new development to initiate or receive service).

Table 7
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Projected Operating Results and Debt Service Coverage Analysis

Footnotes (continued):

[7] Pursuant to the General Bond Resolution, Net Revenues shall include income previously received and currently held by the County to the credit of the Revenue Subfund and all rights to receive the same (cash and cash equivalents). For the purposes of this report, no recognition for the availability of funds held by the County in the Revenue Subfund has been assumed for purposes of determining Net Revenues as defined in the General Bond Resolution; such amounts were assumed to be available for ongoing System purposes (Operating Expenses and Capital Project

[8] Net Revenues as defined in the General Bond Resolution includes: i) Non-recurring Revenues (e.g., availability fee revenue and investment earnings on available balances, connection fees, reconnection fees, charges for meter replacements, etc.); and ii) income previously received and currently held by the County to the credit of the Revenue Subfund and all rights to receive the

[9] Rate Covenant requirements as defined in the General Bond Resolution under Article V, Section 501

[10] Amounts shown reflect Debt Service Requirement on all Outstanding Bonds and Additional Parity Bonds assumed to be issued during the Forecast Period on parity with the Outstanding Bonds. Amounts shown reflect payments required to the Sinking Fund (accrual basis) and not when such Bonds are paid.

[11] The financial forecast assumes the issuance of additional parity bonds to fund certain improvements to the System. The terms of the debt assume: i) level annual debt service payments over a 30 year repayment period; ii) interest rate of ranging from 4.50% - 5.20%; iii) debt service reserve funded from the debt proceeds; and iii) issuance costs equal to 1.5% of the principal amount of

[12] Subordinate Obligations as defined in the General Bond Resolution includes any Debt Service Component of the Cost of Contracted Services (for the UOSA debt obligation) (other than Parity Debt Service Components) and any other obligations of the County with respect to the System (VRA obligations).

[13] Based on discussions with WMP staff, forecast assumes the County will participate in issuances by UOSA.

[14] Amounts shown reflect transfers to other subfunds as delineated in the General Bond Resolution

[15] Amounts shown reflect transfers to the Debt Service Subfund associated with the payment of the Principal and Interest Requirements on the Outstanding and Additional Parity Bonds based on the deposit requirements delineated in the General Bond Resolution (on an accrual basis and not when the payments are made). Also included in the recognized deposits would be funds required to pay Parity Indebtedness, if any, which are required to be set aside in a special account in the Debt Service Subfund.

[16] Amounts shown reflect transfers to the Subordinate Obligations Subfund associated with the payment of debt on any loans considered subordinate to the Senior Lien Bonds and the Parity Indeb

Table 8
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Summary of Debt Service Payments - Outstanding and Additional Debt [1]

Line No.	Description	Projected Fiscal Year Ending June 30, 2024	2025	2026	2027	2028	2029
	Outstanding Senior Lien Debt Service:						
1	Sewer Revenue Bonds Series 2014	$ 5,958,531	$ 5,921,406	$ 5,947,398	$ 5,966,138	$ 5,971,740	$ 248,831
2	Series 2016A Refunding Bonds	12,729,304	12,741,460	12,751,085	12,718,658	12,687,763	12,768,179
3	Sewer Revenue Bonds, Series 2017	5,549,542	5,554,292	5,554,979	5,555,958	5,561,990	5,563,208
4	Sewer Revenue Bonds Series 2021A	11,858,704	11,864,121	11,871,058	11,874,225	11,877,944	11,881,933
5	Sewer Revenue Bonds Series 2021B	895,650	895,650	895,650	895,650	895,650	895,650
6	Subtotal - Current Senior Lien Debt Service	$ 36,991,731	$ 36,976,929	$ 37,020,171	$ 37,010,629	$ 36,995,085	$ 31,357,802
	Additional Senior Lien Debt Service:						
7	Series 2024 Bonds [2]	$ 2,897,325	$ 11,589,299	$ 11,589,299	$ 11,589,299	$ 11,589,299	$ 11,589,299
8	Series 2026 Bonds [2]	-	-	9,840,787	19,681,574	19,681,574	23,281,699
9	Series 2028 Bonds [2]	-	-	-	-	7,991,190	18,455,400
10	Series 2030 Bonds [2]	-	-	-	-	-	-
11	Series 2032 Bonds [2]	-	-	-	-	-	-
12	Subtotal - Additional Senior Debt Service	$ 2,897,325	$ 11,589,299	$ 21,430,086	$ 31,270,872	$ 39,262,062	$ 53,326,399
13	Total Senior Debt Service	$ 39,889,056	$ 48,566,228	$ 58,450,257	$ 68,281,502	$ 76,257,148	$ 84,684,201
	Outstanding Subordinate Debt Service:						
14	EDA Facilities Revenue Bonds, Series 2021	$ 1,696,683	$ 1,697,583	$ 1,697,283	$ 1,696,354	$ 1,700,000	$ 1,697,250
15	UOSA Existing Subordinate Debt [3]	21,593,328	22,049,847	22,352,254	22,352,311	22,350,780	16,269,052
16	Subtotal - Current Subordinate Debt Service	$ 23,290,012	$ 23,747,430	$ 24,049,537	$ 24,048,665	$ 24,050,780	$ 17,966,302
	Additional Subordinate Debt Service:						
17	Series 2024 Bonds - UOSA	$ -	$ 1,988,884	$ 1,988,884	$ 1,988,884	$ 1,988,884	$ 1,988,884
18	Series 2027 Bonds - UOSA	-	-	-	-	4,405,804	4,405,804
19	Series 2030 Bonds - UOSA	-	-	-	-	-	-
20	Series 2033 Bonds - UOSA	-	-	-	-	-	-
21	Subtotal - Subordinate Debt Service	$ -	$ 1,988,884	$ 1,988,884	$ 1,988,884	$ 6,394,687	$ 6,394,687
22	Total Subordinate Debt Service	$ 23,290,012	$ 25,736,314	$ 26,038,421	$ 26,037,549	$ 30,445,468	$ 24,360,989
23	Total Debt Service (Senior Lien and Subordinate)	$ 63,179,068	$ 74,302,542	$ 84,488,677	$ 94,319,050	$ 106,702,615	$ 109,045,190

Footnotes:

[1] Amounts are shown reflect deposits to the sinking fund for future debt service payments (i.e., accrued payments) and do not reflect actual debt service payments (i.e., cash basis).

[2] The financial forecast assumes the issuance of additional parity bonds to fund certain improvements to the System. The terms of the debt assume:
i) level annual debt service payments over a 30 year repayment period; ii) interest rate of ranging from 4.50% - 5.20%;
iii) debt service reserve funded from the debt proceeds; and iii) issuance costs equal to 1.5% of the principal amount of bonds.

[3] Represents subordinated indebtedness issued on behalf of the County by UOSA as the contractual wastewater treatment provider.

Table 9
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Projected Fund Balances and Interest Income Determination

Line No.	Description	Historical FY 2023	Fiscal Year Ending June 30, 2024	2025	2026	2027	2028	2029
	ENDING FUND BALANCE SUMMARY							
1	Revenue and Operating Fund - 69000 / 69010	$ 80,836,855	$ 77,389,995	$ 78,418,123	$ 80,377,120	$ 82,370,317	$ 84,451,601	$ 86,363,750
2	Availability Charge Funds - 69000A [1]	-	-	-	-	-	-	-
3	VRA Debt Service Reserve - 69000B	-	-	-	-	-	-	-
4	Sewer Construction Fund - 69300	65,889,803	115,787,911	67,629,435	100,563,547	98,166,588	79,209,881	75,458,189
5	Sewer Construction Subfund - 69300A	-	3,260,000	5,000,000	5,262,152	5,525,386	5,789,707	6,055,119
6	Parity Debt Service Reserve - 69030	32,463,311	48,609,470	48,609,470	69,813,243	69,813,243	90,741,664	90,741,664
7	Sewer Bond Construction - 69310 (Exist Proceeds)	86,192,943	862,000	879,000	899,000	919,000	940,000	962,000
8	Sewer Bond Construction - 69310 (Add'l Proceeds)	-	87,500,000	-	176,694,400	-	143,659,000	-
9	Total Projected Ending Balance	$ 265,382,912	$ 333,409,375	$ 200,536,028	$ 433,609,462	$ 256,794,533	$ 404,791,852	$ 259,580,723
	Allocation of Ending Fund Balances							
10	Existing Customers	$ 253,696,120	$ 315,909,966	$ 183,036,618	$ 408,476,694	$ 231,661,765	$ 372,124,853	$ 226,913,724
11	New Customers (Includes DSR Allocation)	11,686,792	17,499,409	17,499,409	25,132,767	25,132,767	32,666,999	32,666,999
	REVENUE AND OPERATING FUND - 69000 / 69010							
12	Beginning Balance		$ 80,836,855	$ 77,389,995	$ 78,418,123	$ 80,377,120	$ 82,370,317	$ 84,451,601
	Transfers In:							
13	Operations		$ 1,110,000	$ 1,028,128	$ 1,958,997	$ 1,993,196	$ 2,081,285	$ 1,912,149
14	Debt Service Reserve - 69030		-	-	5,678,052	-	-	-
15	VRA Debt Service Reserve - 69000B		-	-	-	-	-	-
16	Subtotal		$ 1,110,000	$ 1,028,128	$ 7,637,049	$ 1,993,196	$ 2,081,285	$ 1,912,149
	Transfers Out:							
17	Operations		$ -	$ -	$ -	$ -	$ -	$ -
18	Debt Service Reserve - 69030		4,556,860	0	0	0	0	0
19	Sewer Construction Fund 69300		0	0	5,678,052	0	0	0
20	CIP		0	0	0	0	0	0
21	Subtotal		$ 4,556,860	$ 0	$ 5,678,052	$ -	$ -	$ -
22	Interest Rate		2.00%	2.00%	2.22%	2.22%	2.27%	2.31%
23	Interest Income		$ 1,582,000	$ 1,558,000	$ 1,764,000	$ 1,808,000	$ 1,891,000	$ 1,974,000
24	Recognition Of Interest in Revenue Requirements	Yes	1,582,000	1,558,000	1,764,000	1,808,000	1,891,000	1,974,000
25	Ending Balance (Excl. New Customer Share)		$ 77,389,995	$ 78,418,123	$ 80,377,120	$ 82,370,317	$ 84,451,601	$ 86,363,750
	AVAILABILITY CHARGE FUNDS - 69000A [1]							
26	Beginning Balance		$ -	$ -	$ -	$ -	$ -	$ -
27	Transfer In - Availability Charges Collections		$ 18,286,001	$ 18,895,975	$ 19,770,973	$ 20,446,046	$ 21,331,985	$ 22,015,343
28	Transfer In - Sale of Capacity / Other Contributions		0	0	0	0	0	0
	Transfers Out:							
29	Debt Service		$ 18,286,001	$ 18,895,975	$ 19,770,973	$ 20,446,046	$ 21,331,985	$ 22,015,343
30	CIP		-	-	-	-	-	-
31	Total Transfers Out		$ 18,286,001	$ 18,895,975	$ 19,770,973	$ 20,446,046	$ 21,331,985	$ 22,015,343
32	Interest Rate		2.00%	2.00%	2.22%	2.22%	2.27%	2.31%
33	Interest Income		$ -	$ -	$ -	$ -	$ -	$ -
34	Recognition Of Interest in Revenue Requirements	No	-	-	-	-	-	-
35	Ending Balance (Availability Charges Fund		$ -	$ -	$ -	$ -	$ -	$ -
	VRA DEBT SERVICE RESERVE - FUND 69000B							
36	Beginning Balance		$ -	$ -	$ -	$ -	$ -	$ -
	Revenues / Transfers In							
37	New Debt		$ -	$ -	$ -	$ -	$ -	$ -
	Expenditures / Transfers Out							
38	Operating Reserves - Fund 69000		$ -	$ -	$ -	$ -	$ -	$ -
39	Interest Rate	Med. Term	2.00%	2.00%	2.22%	2.22%	2.27%	2.31%
40	Interest Income		$ -	$ -	$ -	$ -	$ -	$ -
41	Recognition of Interest in Revenue Requirements	Yes	-	-	-	-	-	-
42	Ending Balance		$ 0	$ 0	$ 0	$ 0	$ 0	$ 0

Footnotes on Page 3 of 3.

Table 9
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Projected Fund Balances and Interest Income Determination

Line No.	Description	Historical FY 2023	Fiscal Year Ending June 30, 2024	2025	2026	2027	2028	2029
	SEWER CONSTRUCTION FUND 69300							
	Renewals and Replacements - Fund 69300							
43	Beginning Balance		$ 65,889,803	$ 115,787,911	$ 67,629,435	$ 100,563,547	$ 98,166,588	$ 79,209,881
	Revenues / Transfers In:							
44	Transfers In From Operations		$ 63,961,681	$ 76,590,524	$ 81,076,060	$ 86,237,641	$ 89,486,931	$ 104,495,256
45	Transfers In From Revenue Fund 69000		-	-	5,678,052	-	-	-
46	Total Transfers In		$ 63,961,681	$ 76,590,524	$ 86,754,112	$ 86,237,641	$ 89,486,931	$ 104,495,256
	Expenditures / Transfers Out							
47	Transfers Out Capital Expenditures		$ 14,063,573	$ 124,749,000	$ 53,820,000	$ 88,634,600	$ 108,443,638	$ 108,246,947
48	Interest Rate		2.00%	2.00%	2.22%	2.22%	2.27%	2.31%
49	Interest Income		$ 1,817,000	$ 1,834,000	$ 1,869,000	$ 2,208,000	$ 2,010,000	$ 1,787,000
50	Recognition Of Interest in Revenue Requirements	Yes	1,817,000	1,834,000	1,869,000	2,208,000	2,010,000	1,787,000
51	Ending Balance Fund 69300		$ 115,787,911	$ 67,629,435	$ 100,563,547	$ 98,166,588	$ 79,209,881	$ 75,458,189
	Service Line Extensions - Subfund 69300A							
52	Beginning Balance		$ -	$ 3,260,000	$ 5,000,000	$ 5,262,152	$ 5,525,386	$ 5,789,707
	Revenues / Transfers In							
53	Transfers In From Operations		$ 3,000,000	$ 1,478,927	$ -	$ -	$ -	$ -
54	Non-Recurring Revenues		260,000	261,073	262,152	263,234	264,321	265,413
55	Total Transfers In		$ 3,260,000	$ 1,740,000	$ 262,152	$ 263,234	$ 264,321	$ 265,413
	Expenditures / Transfers Out							
56	Transfers Out Capital Expenditures		$ -	$ -	$ -	$ -	$ -	$ -
57	Interest Rate		2.00%	2.00%	2.22%	2.22%	2.27%	2.31%
58	Interest Income		$ 33,000	$ 83,000	$ 114,000	$ 120,000	$ 128,000	$ 137,000
59	Recognition Of Interest in Revenue Requirements	Yes	33,000	83,000	114,000	120,000	128,000	137,000
60	Ending Balance Fund C69300A		$ 3,260,000	$ 5,000,000	$ 5,262,152	$ 5,525,386	$ 5,789,707	$ 6,055,119
	SENIOR SINKING FUND - 69020							
61	Annual Senior Debt Service		$ 39,889,056	$ 48,566,228	$ 58,450,257	$ 68,281,502	$ 76,257,148	$ 84,684,201
62	Average Balance		$ 13,296,352	$ 16,188,743	$ 19,483,419	$ 22,760,501	$ 25,419,049	$ 28,228,067
63	Interest Rate		2.00%	2.00%	2.22%	2.22%	2.27%	2.31%
64	Interest Income		266,000	324,000	433,000	506,000	576,000	652,000
65	Recognition Of Interest in Revenue Requirements	Yes	266,000	324,000	433,000	506,000	576,000	652,000
	DEBT SERVICE RESERVE - FUND 69030							
66	Beginning Balance		$ 32,463,311	$ 48,609,470	$ 48,609,470	$ 69,813,243	$ 69,813,243	$ 90,741,664
	Revenues / Transfers In							
67	Transfer In - Deficiency Below Reserve Requirement from Reserves		$ 4,556,860	$ 0	$ -	$ -	$ -	$ -
68	Transfer in New Debt Proceeds		11,589,299	-	26,881,825	-	20,928,421	-
	Expenditures / Transfers Out							
69	Transfer Out - Excess Above Requirement to Reserves		$ -	$ -	$ 5,678,052	$ -	$ -	$ -
70	Interest Rate		2.00%	2.00%	2.22%	2.22%	2.27%	2.31%
71	Interest Income		$ 765,000	$ 972,000	$ 1,316,000	$ 1,551,000	$ 1,820,000	$ 2,097,000
72	Recognition Of Interest in Revenue Requirements	Yes	765,000	972,000	1,316,000	1,551,000	1,820,000	2,097,000
73	Ending Balance Fund C69030		$ 48,609,470	$ 48,609,470	$ 69,813,243	$ 69,813,243	$ 90,741,664	$ 90,741,664
	SUBORDINATE DEBT SINKING FUND - 69040							
74	Annual Subordinate Debt Service		$ 23,290,012	$ 25,736,314	$ 26,038,421	$ 26,037,549	$ 30,445,468	$ 24,360,989
75	Average Balance		$ 5,822,503	$ 6,434,078	$ 6,509,605	$ 6,509,387	$ 7,611,367	$ 6,090,247
76	Interest Rate		2.00%	2.00%	2.22%	2.22%	2.27%	2.31%
77	Interest Income		$ 116,000	$ 129,000	$ 145,000	$ 145,000	$ 173,000	$ 141,000
78	Recognition Of Interest in Revenue Requirements	Yes	116,000	129,000	145,000	145,000	173,000	141,000

Footnotes on Page 3 of 3.

Table 9
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Projected Fund Balances and Interest Income Determination

Line No.	Description	Historical FY 2023	Fiscal Year Ending June 30, 2024	2025	2026	2027	2028	2029
	SEWER BOND CONSTRUCTION - FUND 69310 (Existing Proceeds)							
79	Beginning Balance		$ 86,192,943	$ 862,000	$ 879,000	$ 899,000	$ 919,000	$ 940,000
	Revenues / Transfers In							
80	Transfers In		$ -	$ -	$ -	$ -	$ -	$ -
81	Interest Income from Additional Debt Proceeds		-	-	-	-	-	-
	Expenditures / Transfers Out							
82	Transfers Out - CIP		$ 86,192,943	$ -	$ -	$ -	$ -	$ -
83	Interest Rate		2.00%	2.00%	2.22%	2.22%	2.27%	2.31%
84	Interest Income		$ 862,000	$ 17,000	$ 20,000	$ 20,000	$ 21,000	$ 22,000
85	Recognition Of Interest in Revenue Requirements	No	-	-	-	-	-	-
86	Ending Balance Fund C69310		$ 862,000	$ 879,000	$ 899,000	$ 919,000	$ 940,000	$ 962,000
	SEWER BOND CONSTRUCTION - FUND 69310 (Additional Debt Proceeds)							
87	Total Beginning Balance		$ -	$ 87,500,000	$ -	$ 176,694,400	$ -	$ 143,659,000
	Transfers In - Additional Debt Proceeds							
88	Transfers In Series 2017 Bonds		$ 175,000,000	$ -	$ -	$ -	$ -	$ -
89	Total Transfers Out CIP Funded From New Bonds		$ 191,500,700	$ 8,001,000	$ 367,944,400	$ 14,555,600	$ 314,909,000	$ 27,591,000
	Transfers Out - CIP							
90	Series 2017 Bonds		$ 87,500,000	$ 87,500,000	$ -	$ -	$ -	$ -
91	Sweep Interest Income to Fund 69310		-	-	-	-	-	-
92	Total Transfers Out CIP Funded From New Bonds		$ 104,000,700	$ 95,501,000	$ 191,250,000	$ 191,250,000	$ 171,250,000	$ 171,250,000
93	Interest Rate		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
94	Interest Income		$ -	$ -	$ -	$ -	$ -	$ -
95	Recognition Of Interest in Revenue Requirements	No	-	-	-	-	-	-
96	Ending Balance Fund C69310B		$ 87,500,000	$ -	$ 176,694,400	$ -	$ 143,659,000	$ -
97	**TOTAL UNRESTRICTED INTEREST INCOME**		$ 4,579,000	$ 4,900,000	$ 5,641,000	$ 6,338,000	$ 6,598,000	$ 6,788,000

Footnotes:

[1] Fund C69000A will be used only to finance new customer capital projects. Fund C69000A includes new customer monies from Fund C6930(

Table 10
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Allocated Ten-Year Estimated Capital Improvement Program for the Wastewater System (in $000s)

Line No.	Project #	Description	Projected Fiscal Year Ending June 30, 2024	2025	2026	2027	2028	2029	Total Cost
		WASTEWATER TREATMENT DIVISION							
1	WTD1	2025 WTD Master Plan	$ 1,100,000	$ 817,000	$ -	$ -	$ -	$ -	$ 1,917,000
2	WTD2	Accotink Odor Control Facility	1,400,000	-	-	-	-	-	1,400,000
3	WTD3	APW/CW System Optimization	262,000	-	1,333,333	1,333,333	1,333,333	-	4,262,000
4	WTD4	Activated Sludge Effluent (ASE) Pump Station	6,300,000	4,300,000	2,900,000	-	-	-	13,500,000
5	WTD5	Biosolids Processing Rehabilitation, Phase III	19,100,000	9,100,000	4,100,000	-	-	-	32,300,000
6	WTD6	Biosolids Phase IV	899,000	1,800,000	9,900,000	18,600,000	14,300,000	422,000	45,921,000
7	WTD7	Biosolids Master Plan	-	-	2,000,000	-	-	-	2,000,000
8	WTD8	Expansion to 80 MGD	-	-	-	-	-	6,300,000	6,300,000
9	WTD9	Future Regulatory Project	-	-	-	-	-	3,000,000	3,000,000
10	WTD10	Generator Facility Rehabilitation	-	-	-	-	-	-	-
11	WTD11	WPMD Lab HVAC Upgrade	5,700,000	6,500,000	-	-	-	-	12,200,000
12	WTD12	Master Filtration	-	-	-	-	-	-	-
13	WTD13	Miscellaneous Small Projects	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	36,000,000
14	WTD14	Modernization of Support and Administrative Facilities	2,100,000	1,200,000	-	-	-	-	3,300,000
15	WTD15	MSP - Project Management and In-house Design	442,000	3,600,000	-	-	-	-	4,042,000
16	WTD16	MSP - In-house Design Construction	2,300,000	3,800,000	450,000	-	-	-	6,550,000
17	WTD17	MSP - Current Needs: Barscreen and Degrit	1,200,000	4,400,000	5,700,000	5,700,000	3,100,000	224,000	20,324,000
18	WTD18	MSP - FF Gates	4,400,000	5,700,000	808,000	208,000	-	-	11,116,000
19	WTD19	MSP - FF Capacity Improvements	1,000,000	33,400,000	21,800,000	20,300,000	11,000,000	-	87,500,000
20	WTD20	MSP - Current Needs Clarifiers, MBBRs, and DD	-	1,500,000	541,000	16,200,000	14,700,000	15,700,000	48,641,000
21	WTD21	MSP - Phase 1 MBBR Capacity Improvements	1,100,000	10,700,000	6,700,000	-	-	-	18,500,000
22	WTD22	MSP - Future Needs Tertiary Clarifiers and DD Renewal	-	1,000,000	1,500,000	541,000	15,200,000	14,700,000	32,941,000
23	WTD23	Next Generation Biosolids Program	-	-	-	-	6,900,000	6,900,000	13,800,000
24	WTD24	Pohick Creek Stream Stabilization	381,000	3,000,000	419,000	-	-	-	3,800,000
25	WTD25	Primary and Secondary Sustaining Project	30,500,000	19,000,000	24,400,000	78,000	-	-	73,978,000
26	WTD26	Primary and Secondary In-House Projects	2,000,000	-	-	-	-	-	2,000,000
27	WTD27	Primary and Secondary Program, Phase II	791,000	1,500,000	791,000	-	-	-	3,082,000
28	WTD28	Raw Wastewater Pump Station - B3	1,300,000	-	-	-	-	-	1,300,000
29	WTD29	Raw Wastewater Pump Station - B4	54,500,000	59,000,000	48,900,000	38,900,000	31,300,000	-	232,600,000
30	WTD30	Reclaimed Water Drought Relief	-	-	-	-	-	-	-
31	WTD31	Sustainability and Energy Projects	-	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
32	WTD32	Unidentified Future Projects	-	-	-	-	10,000,000	10,000,000	20,000,000
33		**Total Wastewater Treatment Division**	$ 142,775,000	$ 177,317,000	$ 139,242,333	$ 108,860,333	$ 114,833,333	$ 64,246,000	$ 747,274,000
		TREATMENT BY CONTRACT							
		ASA Program							
34	TbC3	ASA Construction- Joint Projects	$ 36,420,000	$ 38,991,000	$ 40,884,000	$ 45,050,000	$ 38,730,000	$ 38,343,000	$ 238,418,000
35		Subtotal ASA Program	$ 36,420,000	$ 38,991,000	$ 40,884,000	$ 45,050,000	$ 38,730,000	$ 38,343,000	$ 238,418,000
		Blue Plains Program Total							
36	TbC5	Blue Plains Capital Projects	$ 18,665,000	$ 28,401,000	$ 29,354,000	$ 43,214,000	$ 46,930,000	$ 39,356,000	$ 205,920,000
37		Subtotal Blue Plains Program Total	$ 18,665,000	$ 28,401,000	$ 29,354,000	$ 43,214,000	$ 46,930,000	$ 39,356,000	$ 205,920,000
		Arlington Program							
38	TbC12	Arlington Process Upgrades	$ 2,915,000	$ 4,929,000	$ 5,169,000	$ 3,670,000	$ 1,616,000	$ 245,000	$ 18,544,000
39		Subtotal Arlington Program	$ 2,915,000	$ 4,929,000	$ 5,169,000	$ 3,670,000	$ 1,616,000	$ 245,000	$ 18,544,000
		UOSA Projects Place Holder							
40	TbC14	Delivery System Expansion to 54 mg	$ 2,163,800	$ -	$ -	$ 186,900	$ 840,300	$ 2,131,900	$ 5,322,900
41	TbC15	Reserve Maintenance	10,808,900	4,439,400	3,368,500	10,987,700	25,942,600	25,459,100	81,006,200
42	TbC16	Hydraulic Improvements	-	-	-	-	-	-	-
43	TbC17	Nutrient Cap	3,380,200	3,561,600	3,246,200	3,381,000	-	-	13,569,000
44	TbC18	Master Planning	147,800	-	-	-	-	-	147,800
45	TbC19	Delivery System Expansion to 64 mg	-	-	-	-	-	-	-
46		Subtotal UOSA Projects Place Holder	$ 16,500,700	$ 8,001,000	$ 6,614,700	$ 14,555,600	$ 26,782,900	$ 27,591,000	$ 100,045,900
47		**Total Treatment By Contract**	$ 74,500,700	$ 80,322,000	$ 82,021,700	$ 106,489,600	$ 114,058,900	$ 105,535,000	$ 562,927,900

Footnotes on Page 2 of 2

Table 10
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Allocated Ten-Year Estimated Capital Improvement Program for the Wastewater System (in $000s)

Line No.	Project #	Description	Projected Fiscal Year Ending June 30, 2024	2025	2026	2027	2028	2029	Total Cost
		WASTEWATER COLLECTION DIVISION (WCD)							
		Pumping Stations							
48	PS1	PUMP STATION CONDITION ASSESSMENT	$ 250,000	$ 100,000	$ -	$ -	$ -	$ -	$ 350,000
49	PS2	Accotink Pump Station	3,912,416	17,997,889	17,752,005	22,877,284	22,877,284	5,719,323	91,136,200
50	PS3	Holmes Run Pump Station	5,187,447	2,932,353	2,057,218	-	-	-	10,177,018
51	PS4	Difficult Run Odor & Grit	2,348,928	1,792,681	-	-	-	-	4,141,608
52	PS5	Savile Lane Pump Station	2,304,026	-	-	-	-	-	2,304,026
53	PS6	Oak Marr Pump Station	1,528,516	1,340,617	-	-	-	-	2,869,133
54	PS7	Wellington II Pump Station	-	181,503	-	-	-	-	181,503
55	PS8	Wellington I Pump Station	27,302	2,031,254	-	-	-	-	2,058,556
56	PS9	Lakebarcroft Odor Control	294,178	1,909,540	1,690,489	1,137,254	-	-	5,031,461
57	PS10	Jones Point Pump Station and Forcemain	411,995	2,096,156	6,259,764	603,269	1,498,719	-	10,869,903
58	PS11	Langley School Pump Station and Forcemain	120,749	246,127	-	-	-	-	366,876
59	PS12	LLV LOW PRESSURE SYSTEM	2,037,254	1,000,000	1,000,000	1,000,000	1,500,000	1,500,000	8,037,254
60	PS13	Oxford and Washington Woods PS	197,848	-	1,266,413	3,063,015	1,030,340	-	5,557,616
61	PS14	Penderbrook and Wesley House Pump Stations	113,991	1,532,745	1,585,173	1,267,797	-	-	4,499,706
62	PS15	FREUND HOUSE PUMP STATION SCREENS	131,795	880,732	121,984	-	-	-	1,134,511
63	PS16	SCADA	846,000	350,000	1,723,010	4,667,452	4,667,452	3,500,589	15,754,503
64	PS17	EMERGENCY Langley School PS	20,099	-	-	-	-	-	20,099
65	PS18	Edgewater and The Fairfax Pump Stations	165,187	-	790,000	1,855,312	-	-	2,810,500
66	PS19	Waynewood I & Waynewood II PS	213,550	-	1,334,472	5,092,190	2,116,689	-	8,756,901
67	PS20	Covanta FM Replacement	1,777,279	4,232,533	3,208,245	-	-	-	9,218,057
68	PS21	Yacht Haven Structure Abandonment	-	-	55,000	575,000	-	-	630,000
69	PS22	BRADDOCK ROAD	-	416,506	2,058,997	9,253,224	10,035,022	12,485,434	34,249,183
70	PS23	Dead Run Valve Replacement	175,142	-	-	-	-	-	175,142
71	PS24	Downscrest PS Replacement	188,427	-	906,303	3,458,582	1,442,243	-	5,995,555
72	PS25	Little Hunting Creek Forcemain	750,575	7,460,621	1,188,112	-	-	-	9,399,308
73	PS26	Mount Vernon Terrace Forcemain	675,948	984,370	181,407	-	-	-	1,841,726
74	PS27	Wellington I Forcemain	21,214	899,901	-	-	-	-	921,115
75	PS28	Riverwood Forcemain	870,121	151,293	-	-	-	-	1,021,414
76	PS29	Miscellaneous Pump Station Projects	1,600,000	1,711,602	2,775,156	4,392,817	10,043,236	11,515,744	32,038,555
77		Toal Pumping Stations	$ 26,169,987	$ 50,248,423	$ 45,953,751	$ 59,243,195	$ 55,210,984	$ 34,721,090	$ 271,547,430
		Gravity Sewers							
78	GS1	Meter Rehabilitation - Project 4	$ 46,890	$ 2,288,694	$ 3,405,055	$ 1,123,824	$ -	$ -	$ 6,864,463
79	GS2	Little Hunting Creek Sewer Sag	259,045	-	-	-	-	-	259,045
80	GS3	Carderock Gravity Sewer Rehabilitation	2,242,572	143,832	263,043	-	-	-	2,649,447
81	GS4	Inspections	2,000,000	2,060,000	2,121,800	2,185,454	2,251,018	2,318,548	12,936,820
82	GS5	Asset Repairs	5,633,811	5,204,102	4,463,539	4,172,800	6,207,360	8,248,832	33,930,444
83	GS6	CIPP LINING	8,000,000	7,000,000	6,000,000	6,180,000	4,120,000	4,243,600	35,543,600
84	GS7	Sag Replacement Package 2	1,402,112	4,323,042	43,075	-	-	-	5,768,229
85	GS8	CREEK BED PROGRAM	850,000	875,500	250,000	250,000	200,000	200,000	2,625,500
86	GS9	CAMERON RUN I&I	-	-	50,000	50,000	50,000	-	150,000
87	GS10	Pohick Creek Rehabilitation-Phase 1 (Pohick Interceptor)	4,400,000	6,000,000	-	-	-	-	10,400,000
88	GS11	Springfield Estates Gravity Bypass	926,430	5,177,169	861,505	-	-	-	6,965,104
89	GS12	Little Pimmit Run Sewer Relocation	380,815	574,338	2,590,893	3,820,126	1,020,458	-	8,386,630
90	GS13	UTILITY INTRUSION	200,000	100,000	105,000	110,250	115,763	121,551	752,563
91	GS14	Chain Bridge Vault - Site Safety Improvements	5,653	-	-	-	-	-	5,653
92	GS15	Augusta Drive Sewer	10,118	-	-	-	-	-	10,118
93	GS16	Coon Branch Tributary Sewer Replacement	50,000	550,000	-	-	-	-	600,000
94	GS17	Belleview Program	2,336,536	3,044,260	7,000,000	4,000,000	4,120,000	4,243,600	24,744,397
95	GS18	WEST SPRINGFIELD STREAM CROSSING	102,321	1,579,065	-	-	-	-	1,681,386
96	GS19	MH 198 Study	219,831	146,610	-	-	-	-	366,441
97	GS20	EMERGENCY Wolf Trap	423,409	-	-	-	-	-	423,409
98	GS21	Old Mill Odor Study	81,000	-	-	-	-	-	81,000
99	GS22	Pohick Phase 2	508,752	1,166,217	3,446,021	2,333,726	-	-	7,454,715
100	GS23	Town of Vienna Pipes Construction	250,000	250,000	250,000	250,000	250,000	250,000	1,500,000
101	GS24	Chain Bridge Siphon Project - Arlington	300,000	2,000,000	3,000,000	-	-	-	5,300,000
102	GS25	Abilene Street Pipe Replacement	600,000	-	-	-	-	-	600,000
103	GS26	Emergency Joseph Barnes Battery Park	266,339	-	-	-	-	-	266,339
104	GS27	Emergency - Reservoir Road	94,213	-	-	-	-	-	94,213
105	GS28	Emergency - Shreve Road	100,000	-	-	-	-	-	100,000
106	GS29	Miscellaneous Gravity Sewer Projects	2,400,000	2,100,000	2,100,000	5,266,863	9,625,589	6,458,726	27,951,178
107		Toal Gravity Sewers	$ 34,089,848	$ 44,582,828	$ 35,949,932	$ 29,743,044	$ 27,960,187	$ 26,084,857	$ 198,410,695
		Expansion							
108	E1	TYSONS WEST	$ 3,017,068	$ 12,545,489	$ 54,253,245	$ 66,673,029	$ 34,198,424	$ 11,341,498	$ 182,028,752
109	E2	Route 1 Sewer Capacity Access Improvements	1,500,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	51,500,000
110	E3	UTILITY MANAGEMENT PLAN	850,000	-	-	-	-	-	850,000
111	E4	Accotink Creek Relief Sewer-Phase 1	1,458,615	4,571,569	22,378,459	24,476,118	5,320,895	-	58,205,657
112	E5	Lakevale Capacity Improvements	223,397	2,052,076	1,530,730	1,513,504	-	-	5,319,707
113	E6	Merrifield Capacity Upgrade	270,994	2,865,188	766,996	-	-	-	3,903,179
114	E7	TYSONS EAST	1,509,297	-	-	1,076,816	3,195,429	3,186,674	8,968,215
115	E8	I-495 Next Lane	303,816	2,427,811	-	-	-	-	2,731,627
116	E9	Miscellaneous Expansion Projects	-	-	-	1,083,317	9,128,823	21,081,400	31,293,540
117		Toal Expansion	$ 9,133,186	$ 34,462,134	$ 88,929,431	$ 104,822,783	$ 61,843,571	$ 45,609,572	$ 344,800,677
118		**Total Wastewater Collection Division**	$ 69,393,021	$ 129,293,385	$ 170,833,114	$ 193,809,022	$ 145,014,743	$ 106,415,518	$ 814,758,802
		C&C Conveyance Projects							
119	OP1	Oversizing Projects - County Responsibility	$ 22,500,000	$ 11,250,000	$ 11,250,000	$ 11,250,000	$ 11,250,000	$ 11,250,000	$ 78,750,000
120		Total Oversizing Program	$ 22,500,000	$ 11,250,000	$ 11,250,000	$ 11,250,000	$ 11,250,000	$ 11,250,000	$ 78,750,000
121		**Capital Outlay (From Operations)**	$ 13,242,784	$ 6,000,000	$ 6,180,000	$ 6,365,400	$ 6,556,362	$ 6,753,053	$ 45,097,598
122		Total System Capital Projects	$ 322,411,504	$ 404,182,385	$ 409,527,147	$ 426,774,355	$ 391,713,338	$ 294,199,571	$ 2,248,808,301

Footnotes:
[1] Amounts shown reflect estimated proportionate share of County allocable capital costs pursuant to the service agreement with UOSA to maintain the County's capacity rights with UOSA.

Table 10A
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Allocated Ten-Year Estimated Capital Improvement Program for the Wastewater System (in $000s)

Line No.	Project #	Description	Projected Fiscal Year Ending June 30, 2024	2025	2026	2027	2028	2029	Total Cost
		WASTEWATER TREATMENT DIVISION							
1	WTD1	2025 WTD Master Plan	$ 1,100,000	$ 817,000	$ -	$ -	$ -	$ -	$ 1,917,000
2	WTD2	Accotink Odor Control Facility	1,400,000	-	-	-	-	-	1,400,000
3	WTD3	APW/CW System Optimization	262,000	-	1,333,333	1,333,333	1,333,333	-	4,262,000
4	WTD4	Activated Sludge Effluent (ASE) Pump Station	6,300,000	4,300,000	2,900,000	-	-	-	13,500,000
5	WTD5	Biosolids Processing Rehabilitation, Phase III	19,100,000	9,100,000	4,100,000	-	-	-	32,300,000
6	WTD6	Biosolids Phase IV	899,000	1,800,000	9,900,000	18,600,000	14,300,000	422,000	45,921,000
7	WTD7	Biosolids Master Plan	-	-	2,000,000	-	-	-	2,000,000
8	WTD8	Expansion to 80 MGD	-	-	-	-	-	6,300,000	6,300,000
9	WTD9	Future Regulatory Project	-	-	-	-	-	3,000,000	3,000,000
10	WTD10	Generator Facility Rehabilitation	-	-	-	-	-	-	-
11	WTD11	WPMD Lab HVAC Upgrade	5,700,000	6,500,000	-	-	-	-	12,200,000
12	WTD12	Master Filtration	-	-	-	-	-	-	-
13	WTD13	Miscellaneous Small Projects	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	36,000,000
14	WTD14	Modernization of Support and Administrative Facilities	2,100,000	1,200,000	-	-	-	-	3,300,000
15	WTD15	MSP - Project Management and In-house Design	442,000	3,600,000	-	-	-	-	4,042,000
16	WTD16	MSP - In-house Design Construction	2,300,000	3,800,000	450,000	-	-	-	6,550,000
17	WTD17	MSP - Current Needs: Barscreen and Degrit	1,200,000	4,400,000	5,700,000	5,700,000	3,100,000	224,000	20,324,000
18	WTD18	MSP - FF Gates	4,400,000	5,700,000	808,000	208,000	-	-	11,116,000
19	WTD19	MSP - FF Capacity Improvements	1,000,000	33,400,000	21,800,000	20,300,000	11,000,000	-	87,500,000
20	WTD20	MSP - Current Needs Clarifiers, MBBRs, and DD	-	1,500,000	541,000	16,200,000	14,700,000	15,700,000	48,641,000
21	WTD21	MSP - Phase 1 MBBR Capacity Improvements	1,100,000	10,700,000	6,700,000	-	-	-	18,500,000
22	WTD22	MSP - Future Needs Tertiary Clarifiers and DD Renewal	-	1,000,000	1,500,000	541,000	15,200,000	14,700,000	32,941,000
23	WTD23	Next Generation Biosolids Program	-	-	-	-	6,900,000	6,900,000	13,800,000
24	WTD24	Pohick Creek Stream Stabilization	381,000	3,000,000	419,000	-	-	-	3,800,000
25	WTD25	Primary and Secondary Sustaining Project	30,500,000	19,000,000	24,400,000	78,000	-	-	73,978,000
26	WTD26	Primary and Secondary In-House Projects	2,000,000	-	-	-	-	-	2,000,000
27	WTD27	Primary and Secondary Program, Phase II	791,000	1,500,000	791,000	-	-	-	3,082,000
28	WTD28	Raw Wastewater Pump Station - B3	1,300,000	-	-	-	-	-	1,300,000
29	WTD29	Raw Wastewater Pump Station - B4	54,500,000	59,000,000	48,900,000	38,900,000	31,300,000	-	232,600,000
30	WTD30	Reclaimed Water Drought Relief	-	-	-	-	-	-	-
31	WTD31	Sustainability and Energy Projects	-	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
32	WTD32	Unidentified Future Projects	-	-	-	-	10,000,000	10,000,000	20,000,000
33		**Total Wastewater Treatment Division**	$ 142,775,000	$ 177,317,000	$ 139,242,333	$ 108,860,333	$ 114,833,333	$ 64,246,000	$ 747,274,000
		TREATMENT BY CONTRACT							
		ASA Program							
34	TbC3	ASA Construction- Joint Projects	$ 36,420,000	$ 38,991,000	$ 40,884,000	$ 45,050,000	$ 38,730,000	$ 38,343,000	$ 238,418,000
35		Subtotal ASA Program	$ 36,420,000	$ 38,991,000	$ 40,884,000	$ 45,050,000	$ 38,730,000	$ 38,343,000	$ 238,418,000
		Blue Plains Program Total							
36	TbC5	Blue Plains Capital Projects	$ 18,665,000	$ 28,401,000	$ 29,354,000	$ 43,214,000	$ 46,930,000	$ 39,356,000	$ 205,920,000
37		Subtotal Blue Plains Program Total	$ 18,665,000	$ 28,401,000	$ 29,354,000	$ 43,214,000	$ 46,930,000	$ 39,356,000	$ 205,920,000
		Arlington Program							
38	TbC12	Arlington Process Upgrades	$ 2,915,000	$ 4,929,000	$ 5,169,000	$ 3,670,000	$ 1,616,000	$ 245,000	$ 18,544,000
39		Subtotal Arlington Program	$ 2,915,000	$ 4,929,000	$ 5,169,000	$ 3,670,000	$ 1,616,000	$ 245,000	$ 18,544,000
		UOSA Projects Place Holder							
40		UOSA Existing Debt Service	$ 21,435,239	$ 21,751,418	$ 22,348,276	$ 22,356,232	$ 22,348,390	$ 22,353,171	$ 132,592,725
41		Subtotal UOSA Projects Place Holder	$ 21,435,239	$ 21,751,418	$ 22,348,276	$ 22,356,232	$ 22,348,390	$ 22,353,171	$ 132,592,725
42		**Total Treatment By Contract**	$ 79,435,239	$ 94,072,418	$ 97,755,276	$ 114,290,232	$ 109,624,390	$ 100,297,171	$ 595,474,725

Footnotes on Page 2 of 2

Table 10A
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Allocated Ten-Year Estimated Capital Improvement Program for the Wastewater System (in $000s)

Line No.	Project #	Description	Projected Fiscal Year Ending June 30, 2024	2025	2026	2027	2028	2029	Total Cost
		WASTEWATER COLLECTION DIVISION (WCD)							
		Pumping Stations							
43	PS1	PUMP STATION CONDITION ASSESSMENT	$ 250,000	$ 100,000	$ -	$ -	$ -	$ -	$ 350,000
44	PS2	Accotink Pump Station	3,912,416	17,997,889	17,752,005	22,877,284	22,877,284	5,719,323	91,136,200
45	PS3	Holmes Run Pump Station	5,187,447	2,932,353	2,057,218	-	-	-	10,177,018
46	PS4	Difficult Run Odor & Grit	2,348,928	1,792,681	-	-	-	-	4,141,608
47	PS5	Savile Lane Pump Station	2,304,026	-	-	-	-	-	2,304,026
48	PS6	Oak Marr Pump Station	1,528,516	1,340,617	-	-	-	-	2,869,133
49	PS7	Wellington II Pump Station	-	181,503	-	-	-	-	181,503
50	PS8	Wellington I Pump Station	27,302	2,031,254	-	-	-	-	2,058,556
51	PS9	Lakebarcroft Odor Control	294,178	1,909,540	1,690,489	1,137,254	-	-	5,031,461
52	PS10	Jones Point Pump Station and Forcemain	411,995	2,096,156	6,259,764	603,269	1,498,719	-	10,869,903
53	PS11	Langley School Pump Station and Forcemain	120,749	246,127	-	-	-	-	366,876
54	PS12	LLV LOW PRESSURE SYSTEM	2,037,254	1,000,000	1,000,000	1,000,000	1,500,000	1,500,000	8,037,254
55	PS13	Oxford and Washington Woods PS	197,848	-	1,266,413	3,063,015	1,030,340	-	5,557,616
56	PS14	Penderbrook and Wesley House Pump Stations	113,991	1,532,745	1,585,173	1,267,797	-	-	4,499,706
57	PS15	FREUND HOUSE PUMP STATION SCREENS	131,795	880,732	121,984	-	-	-	1,134,511
58	PS16	SCADA	846,000	350,000	1,723,010	4,667,452	4,667,452	3,500,589	15,754,503
59	PS17	EMERGENCY Langley School PS	20,099	-	-	-	-	-	20,099
60	PS18	Edgewater and The Fairfax Pump Stations	165,187	-	790,000	1,855,312	-	-	2,810,500
61	PS19	Waynewood I & Waynewood II PS	213,550	-	1,334,472	5,092,190	2,116,689	-	8,756,901
62	PS20	Covanta FM Replacement	1,777,279	4,232,533	3,208,245	-	-	-	9,218,057
63	PS21	Yacht Haven Structure Abandonment	-	-	55,000	575,000	-	-	630,000
64	PS22	BRADDOCK ROAD	-	416,506	2,058,997	9,253,224	10,035,022	12,485,434	34,249,183
65	PS23	Dead Run Valve Replacement	175,142	-	-	-	-	-	175,142
66	PS24	Downscrest PS Replacement	188,427	-	906,303	3,458,582	1,442,243	-	5,995,555
67	PS25	Little Hunting Creek Forcemain	750,575	7,460,621	1,188,112	-	-	-	9,399,308
68	PS26	Mount Vernon Terrace Forcemain	675,948	984,370	181,407	-	-	-	1,841,726
69	PS27	Wellington I Forcemain	21,214	899,901	-	-	-	-	921,115
70	PS28	Riverwood Forcemain	870,121	151,293	-	-	-	-	1,021,414
71	PS29	Miscellaneous Pump Station Projects	1,600,000	1,711,602	2,775,156	4,392,817	10,043,236	11,515,744	32,038,555
72		Toal Pumping Stations	$ 26,169,987	$ 50,248,423	$ 45,953,751	$ 59,243,195	$ 55,210,984	$ 34,721,090	$ 271,547,430
		Gravity Sewers							
73	GS1	Meter Rehabilitation - Project 4	$ 46,890	$ 2,288,694	$ 3,405,055	$ 1,123,824	$ -	$ -	$ 6,864,463
74	GS2	Little Hunting Creek Sewer Sag	259,045	-	-	-	-	-	259,045
75	GS3	Carderock Gravity Sewer Rehabilitation	2,242,572	143,832	263,043	-	-	-	2,649,447
76	GS4	Inspections	2,000,000	2,060,000	2,121,800	2,185,454	2,251,018	2,318,548	12,936,820
77	GS5	Asset Repairs	5,633,811	5,204,102	4,463,539	4,172,800	6,207,360	8,248,832	33,930,444
78	GS6	CIPP LINING	8,000,000	7,000,000	6,000,000	6,180,000	4,120,000	4,243,600	35,543,600
79	GS7	Sag Replacement Package 2	1,402,112	4,323,042	43,075	-	-	-	5,768,229
80	GS8	CREEK BED PROGRAM	850,000	875,500	250,000	250,000	200,000	200,000	2,625,500
81	GS9	CAMERON RUN I&I	-	-	50,000	50,000	50,000	-	150,000
82	GS10	Pohick Creek Rehabilitation-Phase 1 (Pohick Interceptor)	4,400,000	6,000,000	-	-	-	-	10,400,000
83	GS11	Springfield Estates Gravity Bypass	926,430	5,177,169	861,505	-	-	-	6,965,104
84	GS12	Little Pimmit Run Sewer Relocation	380,815	574,338	2,590,893	3,820,126	1,020,458	-	8,386,630
85	GS13	UTILITY INTRUSION	200,000	100,000	105,000	110,250	115,763	121,551	752,563
86	GS14	Chain Bridge Vault - Site Safety Improvements	5,653	-	-	-	-	-	5,653
87	GS15	Augusta Drive Sewer	10,118	-	-	-	-	-	10,118
88	GS16	Coon Branch Tributary Sewer Replacement	50,000	550,000	-	-	-	-	600,000
89	GS17	Belleview Program	2,336,536	3,044,260	7,000,000	4,000,000	4,120,000	4,243,600	24,744,397
90	GS18	WEST SPRINGFIELD STREAM CROSSING	102,321	1,579,065	-	-	-	-	1,681,386
91	GS19	MH 198 Study	219,831	146,610	-	-	-	-	366,441
92	GS20	EMERGENCY Wolf Trap	423,409	-	-	-	-	-	423,409
93	GS21	Old Mill Odor Study	81,000	-	-	-	-	-	81,000
94	GS22	Pohick Phase 2	508,752	1,166,217	3,446,021	2,333,726	-	-	7,454,715
95	GS23	Town of Vienna Pipes Construction	250,000	250,000	250,000	250,000	250,000	250,000	1,500,000
96	GS24	Chain Bridge Siphon Project - Arlington	300,000	2,000,000	3,000,000	-	-	-	5,300,000
97	GS25	Abilene Street Pipe Replacement	600,000	-	-	-	-	-	600,000
98	GS26	Emergency Joseph Barnes Battery Park	266,339	-	-	-	-	-	266,339
99	GS27	Emergency - Reservoir Road	94,213	-	-	-	-	-	94,213
100	GS28	Emergency - Shreve Road	100,000	-	-	-	-	-	100,000
101	GS29	Miscellaneous Gravity Sewer Projects	2,400,000	2,100,000	2,100,000	5,266,863	9,625,589	6,458,726	27,951,178
102		Toal Gravity Sewers	$ 34,089,848	$ 44,582,828	$ 35,949,932	$ 29,743,044	$ 27,960,187	$ 26,084,857	$ 198,410,695
		Expansion							
103	E1	TYSONS WEST	$ 3,017,068	$ 12,545,489	$ 54,253,245	$ 66,673,029	$ 34,198,424	$ 11,341,498	$ 182,028,752
104	E2	Route 1 Sewer Capacity Access Improvements	1,500,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	51,500,000
105	E3	UTILITY MANAGEMENT PLAN	850,000	-	-	-	-	-	850,000
106	E4	Accotink Creek Relief Sewer-Phase 1	1,458,615	4,571,569	22,378,459	24,476,118	5,320,895	-	58,205,657
107	E5	Lakevale Capacity Improvements	223,397	2,052,076	1,530,730	1,513,504	-	-	5,319,707
108	E6	Merrifield Capacity Upgrade	270,994	2,865,188	766,996	-	-	-	3,903,179
109	E7	TYSONS EAST	1,509,297	-	-	1,076,816	3,195,429	3,186,674	8,968,215
110	E8	I-495 Next Lane	303,816	2,427,811	-	-	-	-	2,731,627
111	E9	Miscellaneous Expansion Projects	-	-	-	1,083,317	9,128,823	21,081,400	31,293,540
112		Toal Expansion	$ 9,133,186	$ 34,462,134	$ 88,929,431	$ 104,822,783	$ 61,843,571	$ 45,609,572	$ 344,800,677
113		**Total Wastewater Collection Division**	$ 69,393,021	$ 129,293,385	$ 170,833,114	$ 193,809,022	$ 145,014,743	$ 106,415,518	$ 814,758,802
		C&C Conveyance Projects							
114	OP1	Oversizing Projects - County Responsibility	$ 22,500,000	$ 11,250,000	$ 11,250,000	$ 11,250,000	$ 11,250,000	$ 11,250,000	$ 78,750,000
115		Total Oversizing Program	$ 22,500,000	$ 11,250,000	$ 11,250,000	$ 11,250,000	$ 11,250,000	$ 11,250,000	$ 78,750,000
116		**Capital Outlay (From Operations)**	$ 13,242,784	$ 6,000,000	$ 6,180,000	$ 6,365,400	$ 6,556,362	$ 6,753,053	$ 45,097,598
117		Total System Capital Projects	$ 327,346,043	$ 417,932,804	$ 425,260,723	$ 434,574,987	$ 387,278,828	$ 288,961,742	$ 2,281,355,126

Table 11
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Funding Sources for the Allocated Ten-Year Estimated Capital Improvement Program for the Wastewater System (in $000s)

Line No.	Description	Projected Fiscal Year Ending June 30, 2024	2025	2026	2027	2028	2029	Total Cost
	Funding Requirements							
1	New Customer / Expansion	$ 139,732,429	$ 181,855,453	$ 193,752,274	$ 203,314,634	$ 177,013,568	$ 132,830,596	$ 1,028,498,955
2	Existing Customer / Non-Expansion	167,051,150	202,302,385	198,641,457	206,523,032	196,896,898	148,865,736	$ 1,120,280,657
3	Existing Customer / Non-Expansion	15,627,926	20,024,547	17,133,416	16,936,689	17,802,871	12,503,239	$ 100,028,688
4	Total	$ 322,411,504	$ 404,182,385	$ 409,527,147	$ 426,774,355	$ 391,713,338	$ 294,199,571	$ 2,248,808,301
5	SOS Contributions	$ (15,627,926)	$ (20,024,547)	$ (17,133,416)	$ (16,936,689)	$ (17,802,871)	$ (12,503,239)	(100,028,688)
6	Net Funding Requirements - Existing	$ 306,783,578	$ 384,157,838	$ 392,393,732	$ 409,837,666	$ 373,910,466	$ 281,696,332	$ 2,148,779,613
7	Deferred Funding [1]	(89,283,578)	(157,907,838)	(141,143,732)	(123,587,666)	(87,660,466)	4,553,668	(595,029,613)
8	Net Funding Requirements - Existing	$ 217,500,000	$ 226,250,000	$ 251,250,000	$ 286,250,000	$ 286,250,000	$ 286,250,000	$ 1,553,750,000
	Funding Sources:							
9	Rate Revenues	$ 13,242,784	$ 6,000,000	$ 6,180,000	$ 6,365,400	$ 6,556,362	$ 6,753,053	$ 45,097,598
10	Rev & Op Fund - 69000 / 69010	-	-	-	-	-	-	-
11	Availability Fee Fund - 69000A	-	-	-	-	-	-	-
12	Construction (E&I) Fund - 69300	14,063,573	124,749,000	53,820,000	88,634,600	108,443,638	108,246,947	497,957,759
13	Construction (E&I) Fund - 69300A (Extensions)	-	-	-	-	-	-	-
14	Bond Construction Fund - 69310	86,192,943	-	-	-	-	-	86,192,943
15	Grants / Contributions	-	-	-	-	-	-	-
16	New Debt 1 - Existing	35,394,087	40,154,216	-	-	-	-	75,548,303
17	New Debt 1 - New	29,605,913	36,095,784	-	-	-	-	65,701,697
18	New Debt 1 - Oversizing Program	22,500,000	11,250,000	-	-	-	-	33,750,000
19	New Debt 2 - Existing	-	-	87,772,831	83,369,787	-	-	171,142,618
20	New Debt 2 - New	-	-	85,612,469	82,074,613	-	-	167,687,082
21	New Debt 2 - Oversizing Program	-	-	11,250,000	11,250,000	-	-	22,500,000
22	New Debt 3 - Existing	-	-	-	-	70,150,574	69,973,091	140,123,665
23	New Debt 3 - New	-	-	-	-	63,066,526	62,435,909	125,502,435
24	New Debt 3 - Oversizing Program	-	-	-	-	11,250,000	11,250,000	22,500,000
25	New Debt 4 - Existing - UOSA	8,919,261	4,324,847	3,575,499	-	-	-	16,819,607
26	New Debt 4 - New - UOSA	7,581,439	3,676,153	3,039,201	-	-	-	14,296,793
27	New Debt 4 - Oversizing Program	-	-	-	-	-	-	-
28	New Debt 5 - Existing - UOSA	-	-	-	7,867,860	14,477,185	14,913,994	37,259,038
29	New Debt 5 - New - UOSA	-	-	-	6,687,740	12,305,715	12,677,006	31,670,462
30	New Debt 5 - Oversizing Program	-	-	-	-	-	-	-
31	New Debt 6 - Existing - UOSA	-	-	-	-	-	-	-
32	New Debt 6 - New - UOSA	-	-	-	-	-	-	-
33	New Debt 6 - Oversizing Program	-	-	-	-	-	-	-
34	New Debt 7 - Existing - UOSA	-	-	-	-	-	-	-
35	New Debt 7 - New - UOSA	-	-	-	-	-	-	-
36	New Debt 7 - Oversizing Program	-	-	-	-	-	-	-
37	New Debt 8 - Existing - UOSA	-	-	-	-	-	-	-
38	New Debt 8 - New - UOSA	-	-	-	-	-	-	-
39	New Debt 8 - Oversizing Program	-	-	-	-	-	-	-
40	New Debt 9 - Existing	-	-	-	-	-	-	-
41	New Debt 9 - New	-	-	-	-	-	-	-
42	New Debt 9 - Oversizing Program	-	-	-	-	-	-	-
43	New Debt 10 - Existing	-	-	-	-	-	-	-
44	New Debt 10 - New	-	-	-	-	-	-	-
45	New Debt 10 - Oversizing Program	-	-	-	-	-	-	-
46	Subordinate Debt - UOSA	-	-	-	-	-	-	-
48	Total	$ 217,500,000	$ 226,250,000	$ 251,250,000	$ 286,250,000	$ 286,250,000	$ 286,250,000	$ 1,553,750,000

Footnotes:

[1] Based on discussions with WMP staff, certain capital improvements were deferred to reduce existing customer impacts and to recognize timing adjustments for the actual need of funds.

[2] UOSA is a Treatment by Contract provider (TBC) to the County and funds all jointly shared improvements through the issuance of additional indebtedness.

Table 12
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Forecasted Statements of Flows of Financial Resources and Changes in Fund Balance

Line No.		Projected Fiscal Year Ending June 30, 2024	2025	2026	2027	2028	2029
1	Beginning Balance [1]	$ 265,382,912	$ 333,409,375	$ 200,536,028	$ 433,609,462	$ 256,794,533	$ 404,791,852
	Operating Revenues:						
2	Sewer Service Charges [2]	$ 249,903,039	$ 266,006,538	$ 283,005,648	$ 301,219,826	$ 320,555,083	$ 341,194,506
3	Sales of Service (Bulk Revenue)				12,448,591		
4	Other Operating Revenues [3]				1,038,234		
5	Subtotal Operating Revenues	$262,081,925	$278,560,391	$296,015,977	$314,706,651	$334,538,164	$355,697,248
		11,143,886	11,517,779	11,973,177		12,943,761	13,462,329
	Non -Operating Revenues:	1,035,000	1,036,073	1,037,152		1,039,321	1,040,413
6	Proposed (New) Debt Proceeds [4]	$ 191,500,700	$ 8,001,000	$ 367,944,400	$ 14,555,600	$ 314,909,000	$ 27,591,000
7	Additions to Debt Reserve Fund [4]						
8	Availability Fees	$ 18,286,001	$ 18,895,975	$ 19,770,973	$ 20,446,046	$ 21,331,985	$
9	Unrestricted Interest Earned						22,015,343
10	Restricted Interest Income [5]	11,589,299 $ 862,000	$ 17,000	26,881,825 $ 20,000	$	20,928,421 $ 21,000	$ 22,000
11	Grants				20,000 -		
12	Subtotal	4,579,000 $ 226,816,999	4,900,000 $ 31,813,975 -	5,641,000 $ 420,258,199	6,338,000 $ 41,359,646 -	6,598,000 $ 363,788,406	6,788,000 $ 56,416,343 -
13	TOTAL FUNDS AVAILABLE	$ 754,281,836	$ 643,783,741	$ 916,810,203	$ 789,675,759	$ 955,121,103	$ 816,905,444
	Operating Expenses						
14	Personnel Services	$ 45,541,780	$ 46,908,034	$ 48,315,275	$ 49,764,733	$ 51,257,675	$ 52,795,405
15	Operating Expenses						
16	Recovered Costs					45,272,727	
17	TBC and Billing Agent Costs						
18	General Fund Transfer	42,205,437	41,740,257	42,888,789	44,042,192	(665,616)	46,533,329
19	Operating Expense Adjustment	(598,010)	(614,529)	(631,096)	(647,909)		[illegible]
20	Subtotal	50,044,186 $ 140,193,393	51,661,440 $ 142,695,172	53,289,097 $ 147,462,064	54,953,159 $ 152,312,176	56,711,849 $ 157,376,635 1,800,000	58,530,613 $
		3,000,000	3,000,000	3,000,000	3,000,000 1,200,000	3,000,000	3,000,000 162,029,531 1,854,000
	Capital Expenses by Funding Source						
21	Cash Reserves / Rate Revenues [6]	$ 14,063,573	$ 124,749,000	600,000 $ 53,820,000	$ 88,634,600	$ 108,443,638	$ 108,246,947
22	Availability Charge Fund					-	
23	Existing Debt Proceeds	-	-				
24	New Debt Proceeds [7]					171,250,000	
25	Grant Funding						
26	Capital Outlay	86,192,943 104,000,700	95,501,000	191,250,000	191,250,000		171,250,000
27	Subtotal	$ 217,500,000 -	$ 226,250,000 -	$ 251,250,000 -	$ 286,250,000 -	$ 286,250,000 -	$ - 286,250,000
		13,242,784	6,000,000	6,180,000	6,365,400	6,556,362	6,753,053
		-	-	-		-	-

Footnotes on Page 2 of 2

Table 12
Fairfax County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Forecasted Statements of Flows of Financial Resources and Changes in Fund Balance

	Debt Service:												
28	Existing Senior Debt Service	$	36,991,731	$	36,976,929	$	37,020,171	$	37,010,629	$	36,995,085	$	31,357,802
29	Proposed Senior Debt Service [4]								31,270,872				
30	Existing Subordinate Debt Service								24,048,665				
31	Proposed Subordinate Debt Service [7]												
32	Subtotal	$	63,179,068	$	74,302,542	$	84,488,677	$	94,319,050	$	106,702,615	$	109,045,190
		$	2,897,325	$	11,589,299	$	21,430,086			$	39,262,062	$	53,326,309
		$	23,290,012	$	23,747,430	$	24,049,537			$	24,050,780	$	17,966,302
33	TOTAL USE OF FUNDS	$	420,872,461	$	443,247,714	$	483,200,742	$	552,881,226	$	550,329,250	$	557,324,721
		$	1,988,884	$	1,988,884	$	1,988,884	$	1,988,884	$	8,394,687	$	8,394,687
34	ENDING BALANCE BEFORE RESERVES	$	333,409,375	$	200,536,027	$	433,609,462	$	256,794,533	$	404,791,853	$	259,580,723
		-											
	RESERVES / RESTRICTIONS:												
35	Operating Reserve Target (150 Days)	$	57,613,723	$	58,641,851	$	60,600,848	$	62,594,045	$	64,675,329	$	66,587,479
36	Debt Reserve Balance												
37	Debt Proceeds												
38	Availability Charge Balance										144,599,000		
											90,741,664		
39	Sewer Construction Fund - 69300A [8]		48,609,470		48,609,470		69,813,243		69,813,243	-			90,741,664
			88,362,000				177,593,400						
40	Subtotal	$	197,845,193	$	113,130,321	$	313,269,643	$	132,407,288	$	305,805,700	$	
					879,000				919,000				962,000
41	UNRESTRICTED ENDING BALANCE	$	135,564,182	$	87,405,706	$	120,339,819	$	117,942,859	$	98,986,153	$	164,346,262
		$	3,260,000	$	5,000,000	$	5,262,152			$	5,789,707	$	6,053,119
													95,234,461

Footnotes:

- - - - -

[1] Reflects starting fund balance, but is exclusive of funds held in the debt service sinking fund.

[2] Includes recommended rate adjustments as follows:

	Projected Fiscal Year Ending June 30,					
	2024	2025	2026	2027	2028	2029
	(Existing)	(Recommended)	(Recommended)	(Recommended)	(Recommended)	(Recommended)
Quarterly Base Charge	$ 44.81	$ 49.73	$ 52.62	$ 55.78	$ 59.08	$ 62.57
Flow Charge	$ 8.46	$ 8.81	$ 9.33	$ 9.88	$ 10.46	$ 11.08
Effective Rate Revenue Increase	n/a	5.9%	5.9%	5.9%	5.9%	5.9%
Effective Rate Revenue Increase	n/a	5.8%	5.9%	5.9%	5.9%	5.9%

[3] Represents other operating revenues from lateral spur fees, connection charges, miscellaneous revenues, sale of property, etc.

[4] Represents the proposed issuance of the Series 2024 UOSA Bonds, Series 2027 UOSA Bonds, and Series 2030 UOSA Bonds as well as the Series 2024 Bonds on or about July 1, 2023, the Series 2027 Bonds on or about July 1, 2026, and the Series 2030 Bonds on or about July 1, 2029. Terms assume 30 year level debt with proceeds to fund deposits to the debt service reserve fund.

[5] Includes Interest Income on debt proceeds and availability charge fund balances.

[6] Includes capital funding from rate revenues, E&I fund balances and operating reserves.

[7] Represents additional debt service from UOSA issued bonds on behalf of the County.

[8] Represents restricted funds held on balance within the SC Fund for line extensions.

Table 13
Fairfaix County, Virginia
Wastewater Revenue Sufficiency and Rate Analysis

Comparison of Typical Quarterly Residential Bills for Wastewater Service [1][2]

Line No.	Description	Billing Cycle	Residential Service for a 5/8" or 3/4" Meter 0 Gallons	2,000 Gallons	4,000 Gallons	5,000 Gallons	8,000 Gallons	10,000 Gallons	12,000 Gallons	16,000 Gallons	18,000 Gallons	20,000 Gallons	30,000 Gallons	40,000 Gallons
	Fairfax County													
1	Existing Rates - FY24 [3]	Quarterly	$44.81	$61.73	$78.65	$87.11	$112.49	$129.41	$146.33	$180.17	$197.09	$214.01	$298.61	$383.21
2	Proposed Rates - FY25 [3]	Quarterly	49.73	67.35	84.97	93.78	120.21	137.83	155.45	190.69	208.31	225.93	314.03	402.13
	Other Neighboring Utilities:													
3	City of Alexandria [3][4][5]	Monthly	41.55	70.19	98.83	113.15	156.11	184.75	213.39	270.67	299.31	327.95	471.15	614.35
4	Arlington County	Quarterly	13.52	32.74	51.96	61.57	90.40	109.62	128.84	167.28	186.50	205.72	301.82	397.92
5	DCWASA [4][6]	Monthly	77.21	109.56	141.91	158.08	206.61	238.96	271.31	336.01	368.36	400.71	562.46	724.21
6	Loudoun Water [4]	Quarterly	116.82	128.00	139.18	144.77	161.54	172.72	183.90	206.26	217.44	228.62	284.52	340.42
7	Prince William County S.A. [3][4]	Monthly	37.65	51.35	65.05	71.90	92.45	106.15	119.85	147.25	160.95	174.65	243.15	311.65
8	Washington Suburban Sanitary Commission [4][7]	Quarterly	30.39	47.73	65.07	73.74	107.43	126.69	145.95	223.83	248.01	272.19	509.49	669.19
9	**Other Neighboring Virginia Utilities' Average**		$52.86	$73.26	$93.67	$103.87	$135.76	$156.48	$177.21	$225.22	$246.76	$268.31	$395.43	$509.62

Footnotes:

[1] Unless otherwise noted, amounts shown reflect residential rates in effect October, 2023 and are exclusive of taxes or franchise fees, if any, and do not include any surcharges for service rendered outside the corporate limits of the local jurisdiction, for specific capital improvements or for any other purpose. All rates are as reported by the respective utility. This comparison is intended to show comparable charges for similar service for comparison purposes only and is not intended to be a complete listing of all rates and charges offered by each listed utility.

[2] It should be noted that utilities may differ as to the term of billing period (e.g., monthly billing) and units of measurement (e.g., ccf) used in order to determine the respective utility customer's wastewater bill. For purposes of this comparison, all bills shown have been adjusted to match bills rendered on a monthly basis and recognized in units of gallons.

[3] Unless otherwise noted, utilities shown cap the wastewater user charge based on a customers metered water use during the winter months (referred to as a "billing cap"). While the billing cap may vary by customer and by utility, for comparison purposes the billing cap was not reflected in order to present the potential wastewater bill for residential customers that may have higher use than the typical residential customer.

[4] Utilities shown bill a fixed cost or base charge per billing period per respective account or meter.

[5] Alexandria Renew Enterprises provides wastewater treatment services, while the City provides wastewater collection services. Alexandria Renew Enterprises incorporates a sewer billing cap, however the City does not and no cap was applied in calculation of the City's charges for this comparison.

[6] Amounts shown assumes: i) the Clean Rivers Impervious Area Charge of $21.86 per month associated with runoff entering the sewer system; ii) a 50% allocation of the $7.75 metering fee; iii) a 50% allocation of the a Right-of-Way fee to the District of Columbia of $0.25 per 1,000 gallons; iv) 50% allocation of the PILOT fee charged to water and wastewater customers of $0.82 per 1,000 gallons; and v) the residential wastewater flow charge of $15.64 per 1,000 gallons.

[7] The Washington Suburban Sanitary Commission ("WSSC") bills customers of the utility by calculating the respective customer's average daily flow of use, which is in turn used to determine the variable rate charged to the customer. The calculated bill assumes 5,333 gallons per month or approximately 175 gallons per day. Amounts shown assume a 50% allocation of the quarterly Account Maintenance fee of $18.23 and a $12.54 infrastructure fee. Amounts shown also include a Bay Restoration Fee of $5.00 per month.

Table 14
Fairfax County Wastewater Management
Fiscal Year 2024 Availability Charge Study

Calculation of Weighted Cost by Treatment Facility per MGD of Reserved Capacity

Line No.	Description	Upper Occoquan Service Authority (UOSA)	Blue Plains Advanced Wastewater Treatment Plant - DC Water (Blue Plains)	Alexandria Renew Enterprises (ARE)	Arlington County Water Pollution Control Plant (Arlington)	Loudon County Sanitation Authority	Noman Cole (Fairfax County)	Total
		Treatment by Contract						
	WASTEWATER TREATMENT							
1	Gross Fixed Capacity Rights / Assets [1]	$341,231,346	$343,412,799	$406,346,261	$53,324,936	$20,942,294	$850,527,547	$2,015,785,184
2	Less Fixed Asset Allocation to SOS Customers (Dont Direct Pay C	(15,440,332)	n/a	n/a	n/a	n/a	(50,777,764)	(66,218,096)
3	Less Donated Assets	n/a	n/a	n/a	n/a	n/a	(24,837)	(24,837)
4	Plus 10 Year CIP CIP (Inflated) [3]	268,718,050	248,904,226	299,148,963	19,381,000	0	392,637,881	1,228,790,120
5	Less Allowance for Retirements for CIP	n/a	n/a	n/a	n/a	n/a	(145,276,016)	(145,276,016)
6	Plus Land, Easements, and CWIP	n/a	n/a	n/a	n/a	n/a	171,146,361	171,146,361
7	Total	$594,509,064	$592,317,025	$705,495,224	$72,705,936	$20,942,294	$1,218,233,173	$3,204,202,716
8	Total Reserved Capacity (MGD)	22.10	31.00	32.40	3.00	1.00	67.00	156.50
9	Sales of Service Reservations (MGD) [4]	(1.00)	(4.80)	(1.00)	0.00	0.00	(9.45)	(16.25)
10	Net Retail Reservations	21.10	26.20	31.40	3.00	1.00	57.55	140.25
11	Less Reserved Capacity for Reliability (MGD)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Net Reliable Retail Capacity (MGD)	21.10	26.20	31.40	3.00	1.00	57.55	140.25
13	Cost per GPD of Reliable Capacity (Line 7 / $1,000,000 / Line 12)	$28.18	$22.61	$22.47	$24.24	$20.94	$21.17	$139.60
14	Other Adjustments [5]	($5.29)	0.00	0.00	0.00	0.00	0.00	(5.29)
15	Adjusted Cost per GPD of Reliable Capacity	$22.89	$22.61	$22.47	$24.24	$20.94	$21.17	$134.31
16	Retail Customers Annual Treated Flows (10yr Max kgal) [6]	5,270,965	9,750,610	7,447,460	854,830	0	13,317,755	36,641,620
17	Retail Customers Annual Treated Flows (ADF-MGD)	14.44	26.71	20.40	2.34	0.00	36.49	100.39
18	Remaining Reliable Retail Capacity (MGD) (Line 12 - Line 17)	6.66	0.00	11.00	0.66	1.00	21.06	40.38
19	Capacity as % of Total Remaining Capacity	16.49%	0.00%	27.23%	1.63%	2.48%	52.17%	100.00%
20	**Weighted cost of Reliable Capacity for Retail Customers**	**$3.77**	**$0.00**	**$6.12**	**$0.39**	**$0.52**	**$11.04**	**$21.84**
	WASTEWATER NON-TREATMENT							
21	Gross Fixed Capacity Rights / Assets [1]	$4,434,649	$0	$5,893,325	$0	$0	$978,642,147	$988,970,121
22	Less Donated Assets	n/a	n/a	n/a	n/a	n/a	(234,124,715)	(234,124,715)
23	Less Grants	n/a	n/a	n/a	n/a	n/a	0	0
24	Plus 10 Year CIP CIP (Inflated) [3]	0	0	0	0	0	1,760,564,575	1,760,564,575
25	Less Allowance for Retirements for CIP	n/a	n/a	n/a	n/a	n/a	(651,408,893)	(651,408,893)
26	Plus Land, Easements, and CWIP	n/a	n/a	n/a	n/a	n/a	83,966,605	83,966,605
27	Total	$4,434,649	$0	$5,893,325	$0	$0	$1,937,639,719	$1,947,967,693
28	Net Reliable Retail Reservations (MGD)							140.25
29	**Cost per MGD of Capacity**							**$13.89**
30	**Treatment and Transmission Cost per MGD of Capacity**							**$35.73**

Footnotes:

[1] Amounts shown provided by the County and are booked net of the Sale of Service customers that make direct capital contributions.
[2] Reflects adjustment to remove SOS customer allocations that do not make direct capital contribution payments to the County (i.e., paid via rates)
[3] Amounts shown reflect the County's most recent CIP and include treatment and transmission projects only.
[4] Amounts shown represent reserved capacity for Sale of Service customers
[5] The adjustment shown is the to show the most recent cost of capacity as calculated by UOSA using an incremental approach while all other costs were calculated using the buy in method.
[6] The flows shown above are the 10 year max treated flows.

Table 15

Fairfax County Wastewater Management
Fiscal Year 2024 Availability Charge Study

Summary of Calculated and Existing Availability Fees

Line No.	Description	Fee
	Existing Availability Fee:	
	LOS GPD Basis	
1	Fee ($ per GPD)	$31.64
2	Level of Service (per GPD)	280
3	Fee ($ per ERC)	$8,860.00
	Fixture Unit Basis	
4	Fixture Units	20.00
5	Fee per fixture Unit	$443.00
6	Existing Fee	$8,860.00
	Calculated Availability Fee:	
7	Net Assets / CIP ($ per GPD)	$35.73
8	Level of Service (per GPD)	280
9	Fee ($ per ERC)	$10,004.19
	Carrying Costs:	
10	Years of Carry Cost	5.0
11	Current Weighted Cost of Capital	4.29%
12	Carry Cost ($ per ERC)	$2,147.32
13	Carry Cost ($ per GPD)	$7.67
	Total Calculated Fee	
14	Per ERC	$12,151.51
15	Per GPD	$43.40
	Total Calculated Fee (Rounded Down)	
16	Per ERC	$12,150.00
17	Per GPD	$43.39
18	Per Fixture Unit	$607.50
	Difference to Existing Fee:	
19	Change in Fee per GPD - Amount	$11.75
20	Change in Fee per GPD - Percent	37.13%
21	Change in Fee per Fixture Unit - Amount	$164.50
22	Change in Fee per Fixture Unit - Percent	37.13%
23	Change in LOS (per GPD) - Amount	0
24	Change in LOS (per GPD) - Percent	0.00%
25	Change in Fee per ERC - Amount	$3,290.00
26	Change in Fee per ERC - Percent	37.13%

Table 16
Fairfaix County, Virginia
Comparison of Availability Fee Charges for Equivalent Residential Unit [1]

Line No.	Description	Residential 5/8" x 3/4" Meter Wastewater
	Fairfax County	
1	Existing Availability Fee	$8,860
2	Recommended Availability Fee	$9,038
	Other Surveyed Virginia Utilities:	
3	City of Alexandria	$9,446
4	Arlington County [2]	$3,720
5	DCWASA	$2,809
6	Loudoun Water	$9,241
7	Prince William County S.A.	$11,200
8	Washington Suburban Sanitary Commission [3]	$14,500
9	Washington Suburban Sanitary Commission (Unimproved) [3]	$6,500
10	Other Surveyed Virginia Utilities' Average	$8,202

Footnotes:

[1] Unless otherwise noted, amounts shown reflect residential rates in effect October 2023 and are exclusive of taxes or franchise fees, if any, and reflect rates charged for inside the city service. All rates are as reported by the respective utility. This comparison is intended to show comparable charges for comparison purposes only.

[2] Impact Fee for Arlington County assumes 24 fixture units (DFU's) per Single Family Residential Unit at a cost of $155/DFU.

[3] WSSC charges a separate availability fees for areas designated as unimproved or "improved".