

# CAPITAL IMPROVEMENT PROGRAM



FY 2023-FY 2027

Approved  
May 12, 2022



Service Authority

**CAPITAL IMPROVEMENT PROGRAM  
FISCAL YEARS 2023 - 2027**



**Service Authority**  
Prince William County

*May 12, 2022*

# CAPITAL IMPROVEMENT PROGRAM

## FISCAL YEARS 2023 – 2027



**Service Authority**  
Prince William County

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# CAPITAL IMPROVEMENT PROGRAM FISCAL YEARS 2023-2027

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# CAPITAL IMPROVEMENT PROGRAM

## PURPOSE

The Capital Improvement Program (CIP) is presented annually to the Board of Directors as a planning document for the express purpose of identifying future capital projects and schedules of capital project activity as projected by all Divisions within the Service Authority. The CIP Program is not intended to commit funding but sets planning level project budgets, identifies funding sources, approximates funding allocation and estimates the project schedules.

The timing of many projects is heavily dependent on development activity throughout various areas of the county. As often occurs, CIP projects may be postponed due to reprioritization of other projects or low development activity in a specific area. Preliminary engineering design and the purchase of needed land can be initiated as a phased and timely effort in advance of development activity to prevent delays in construction when the associated development occurs. The General Manager may adjust the timing and spending schedule for projects in accordance with the Service Authority's budget transfer policy for CIP projects.

All contracts related to the CIP are approved in accordance with the Service Authority Purchasing Regulations and project funds are encumbered through the Purchase Order process. As projects can span several fiscal years, unspent encumbered funds are rolled over to the next fiscal year at the end of each fiscal year. Note that for accounting purposes, any projects not resulting in a capital asset, or any costs that do not meet the accounting criteria to be capitalized will be reclassified from capital to expense, as a year-end closing adjustment. The CIP is updated on an annual basis to reflect the latest project priorities, cost estimates and spending schedules.

## CIP DOCUMENT FORMAT

The CIP is presented for a five-year cycle for Fiscal Years 2023 through 2027 in three sections: Section A (Program Summary), Section B (Project Data Sheets), and Section C (Project Maps). The following discussion describes the contents of each Section within this report.

### Section A - Program Summary

This section provides a financial summary of each project including the project's expenditures prior to FY23, proposed expenditure schedule and respective funding source. The projects are organized into categories, which are defined in Table 1, CIP Project Categories.

This section includes all existing and proposed CIP projects that have design or construction activity in the current five-year cycle. Projects constructed by developers and contributed to the Service Authority are not included in the document, unless the project comprises a system improvement in which the Service Authority plans to participate in financially.

## CIP PROJECT CATEGORIES

The CIP is organized with respect to project categories. This arrangement facilitates locating project data sheets for comparison or study. The functional categories are listed in Table 1 below.

**Table 1. CIP Project Categories**

<b>Project Category</b>	<b>Description</b>
<b>Water Supply Projects (WSUP)</b>	Booster pumping stations and water supply projects are presented under this category.
<b>Water Storage Tank Projects (WST)</b>	This project category includes tank design, construction, maintenance and rehabilitation programs. Tanks maintain system pressures, provide fire and reserve storage, and provide water during peak demands.
<b>Water Transmission Projects (WAT)</b>	Water main projects are presented under this category. Transmission mains are pipes sized 16-inches and larger to convey large volumes of water to booster pumping stations, storage tanks and regional demand areas. Distribution mains are pipes sized 12-inches and smaller to provide water service and fire protection to localized areas.
<b>Sewage Pumping Stations Projects (SPS)</b>	This category includes replacements, upgrades or modifications to existing sewage pumping stations and associated force mains to meet future capacity needs within the sewer shed, improve safety conditions and to continue meeting DEQ regulations. Sewage pumping stations pump sewage from a low point in one gravity sewer shed to another gravity sewer shed for conveyance to either the Upper Occoquan Service Authority (UOSA) or H.L. Mooney Advanced Water Reclamation Facility (AWRF).
<b>Sewage Collection System Projects (SEW)</b>	New sewer mains and replacement/upgrades to existing sewer mains that convey sewage from commercial and residential customers to sewage pumping stations or water reclamation facilities are presented under this category.
<b>Water Reclamation Facility Projects (WRF)</b>	Construction projects and facility modifications at the H.L. Mooney AWRF are presented in this category.
<b>Miscellaneous Projects (MISC)</b>	Projects that are not directly related to any of the previous six categories are included in this section. Several projects include upgrades or expansions to office complexes and maintenance facilities.
<b>Information Technology (IT)</b>	Projects that involve improvements to Information Technology applications, infrastructure, support, and data analytics are presented in this category. Examples include: financial systems, work order management, and Supervisory Control and Data Acquisition (SCADA) upgrades and modifications; IT server, database, and communications equipment upgrades; and system integration and business analytics software improvements.
<b>Regional Utility Projects (REG)</b>	Major expansion or upgrades to regional treatment facilities at which the Service Authority has purchased capacity rights, such as UOSA's Water Reclamation Facility and the City of Manassas' and/or Fairfax Water's Water Treatment Plants are presented under this category. This category also includes a new Occoquan River crossing to increase transmission capacity and reliability of the potable water supply to eastern Prince William County.

**Section B – Project Data Sheets**

This section provides detailed information for each CIP project, which are grouped by project category. Table 2 defines all the information included on the project’s data sheet.

**Table 2. CIP Project Data Sheet Fields**

Data Sheet Field	Description
<b>Project Title</b>	Provides a name for the project.
<b>Project CIP</b>	Identifies the project category and “Engineering” project number(s).
<b>JDE Job Number(s)</b>	The job cost coding to be utilized within JD Edwards tracking system.
<b>Location</b>	A description of where the project will be in Prince William County.
<b>Pressure Zone</b>	This identifies the Pressure Zone, Sewershed and Magisterial District where the project will occur. If the project is marked as “multiple”, this indicates that the project falls within more than one area of service.
<b>Sewershed</b>	
<b>Magisterial District</b>	
<b>Project Description</b>	The scope and/or justification of the project are identified.
<b>Project Benefit</b>	The benefit of the project is described.
<b>Source Derivation</b>	Details the engineering/planning study, wherein the project need was identified. In some cases, in-house analyses have recommended projects and these are identified by the respective Division.
<b>Estimate By</b>	Identifies the Division within the Service Authority and/or Engineering Consultant that prepared the cost estimate.
<b>Project Estimate</b>	The annual estimated spending amounts and totals shown are in thousands of dollars (\$1,000’s).
	An "Order of Magnitude" estimate is generally used in the early stages of a project when only concepts, maps and historical project data are available, without the benefit of detailed engineering reports or preliminary plans. Order of Magnitude Estimates are also appropriate when anticipated construction is beyond the five-year period of the CIP. As such, “Order of Magnitude” cost estimates are accurate within +50 and -30 percent.
	When available, more accurate cost estimates as a result of a Preliminary Engineering Report (PER), Consultant’s Opinion of Probable Construction Costs (OPCC) or the Contract Award cost are utilized.

**Table 2. CIP Project Data Sheet Fields (cont.)**

Data Sheet Field	Description
<b>Proposed Funding Sources</b>	This section provides the estimated breakdown of funding of the total cost by Fund, e.g. Expansion Fund 02 – from Availability Fees, Commitment Fund 03 – from Availability Fees, Replacement Fund 04 – from User Rates, Other Contributions or Developer Contributions. The allocations may vary from the initial estimates.
<b>Project Total</b>	Total project costs include anticipated land acquisition, design and construction costs, and Service Authority inspection and project management costs. A review of the construction and materials costs over the previous year has indicated increases, and consequently, estimates from the previous year's CIP have been adjusted upward for inflation this year. The conservative nature of the estimates will absorb these minor increases for ensuing years.
<b>Project Map</b>	Maps are produced from the Service Authority’s Mapping System. The maps are annotated to detail information about the various projects. Photographs are also used for many countywide type projects.

**Section C – Project Maps**

This section provides overall county maps showing the location of the projects, giving the “big picture” of the Capital Improvement Program. The maps prove useful when correlating the information about pressure zone and sewershed on the project data sheet with the project’s location in Prince William County.

**CIP PROJECT PRIORITIZATION**

The Service Authority’s Strategic Plan plays an ongoing critical role in the management and operations of the Service Authority. All CIP projects must align with the Service Authority’s immediate business needs and remain well aligned with the short and long-term outcomes the Service Authority strives to achieve.

Each CIP project requires a business case that documents its alignment with the Strategic Plan Areas of Excellence, Strategic Objectives, and Strategic Goals. In addition, CIP projects are prioritized according to the CIP Project Prioritization Criteria shown in Table 3 below. The prioritization process involves round table evaluation and scoring of CIP projects by the Service Authority’s Work Coordination Council (WCC), consisting of Service Authority leadership and subject matter experts. The WCC uses the outcomes of this evaluation process in conjunction with consideration of available funding to develop the CIP fiscal year schedule, as reflected in Section A (CIP Program Summary).

**Table 3 - CIP Project Prioritization Criteria**

Criteria	Criteria/Factors	Criteria Description and Objectives
1	<b>Physical Condition of Asset</b> <ul style="list-style-type: none"> <li>• Physical Condition Assessment</li> <li>• Operating/Maintenance History</li> <li>• Probability/Consequence of Failure</li> <li>• Age/Useful Life</li> </ul>	Protect the health, safety and service to customers by replacing assets or information systems that have a high risk of failure due to age, condition or obsolescence.
2	<b>Regulatory/Environmental Requirements</b> <ul style="list-style-type: none"> <li>• Permit/Regulatory Compliance</li> <li>• Water Quality</li> <li>• Health and Safety</li> <li>• Environmental Impact</li> <li>• Compliance Data Accuracy</li> </ul>	Protect public health and the environment by reducing the risk of regulatory non-compliance or negative environmental impact due to the failure of an asset or information system.
3	<b>Service Level/Reliability Requirements</b> <ul style="list-style-type: none"> <li>• Workforce Productivity</li> <li>• Service interruption History</li> <li>• Health and Safety Risks</li> <li>• Water and Air Quality</li> <li>• Water Main Breaks or Sewer Backups</li> <li>• Noise or Odor Complaints</li> </ul>	Increase the reliability and redundancy of service to our customers by replacing and augmenting facilities and/or information systems that do not fully meet Service Authority standards.
4	<b>Capacity/Technical Obsolescence Issues</b> <ul style="list-style-type: none"> <li>• Workforce Productivity</li> <li>• Probability of Failure</li> <li>• Single Point of Failure</li> <li>• Customer Service Needs</li> <li>• Capacity for New Customers</li> <li>• Future Support for Equipment/Systems</li> </ul>	Meet current and future technical, capacity, operational, health, safety, security and level of service requirements.
5	<b>Operations and Maintenance Issues</b> <ul style="list-style-type: none"> <li>• Maintenance Requirements</li> <li>• Breakdowns and Downtime</li> <li>• Reactive Maintenance</li> <li>• Equipment Obsolescence</li> <li>• Manufacturer/Supplier Support</li> <li>• Labor and Operating Cost Savings</li> </ul>	Optimizing operational efficiency and reliability by replacing or enhancing the Service Authority's plant, water and sewer facilities and information systems.

**FISCAL YEAR 2023 Summary of CIP Projects**

The following is a list of Projects slated for study, design or construction during Fiscal Year 2023.

<b><i>WATER SUPPLY PROJECTS</i></b>		
<b>CIP Number</b>	<b>PROJECT NAME</b>	<b>PROJECT LOCATION</b>
WSUP-103	Water Meter Vault Improvements	Commercial Meter Vault Locations
WSUP-105	Montclair/Four Seasons Water System Improvements	17361 Four Seasons Dr., Dumfries
WSUP-111	Bull Run Mountain Well Upgrades	Bull Run Upper & Lower and Evergreen Pressure Zones
WSUP-112	Manassas Southside Booster Pumping Station Upgrades	8170 Blooms Quarry Ln., Manassas
WSUP-114	Capital Meter Program	County Wide
WSUP-116	Unity Reed (F14) Booster Pumping Station and Discharge Main	8814 Rixlew Ln., Manassas
WSUP-117	Eastern Area Pressure Reducing Valves	MS06, MS27 and F06

<b><i>WATER STORAGE PROJECTS</i></b>		
<b>CIP Number</b>	<b>PROJECT NAME</b>	<b>PROJECT LOCATION</b>
WST-110	Water Storage Tank Rehabilitation Program	16751 Interstate Dr., Dumfries
WST-111	Tank Re-Chlorination Program	5895 Antioch Rd., Haymarket

<b><i>WATER TRANSMISSION PROJECTS</i></b>		
<b>CIP Number</b>	<b>PROJECT NAME</b>	<b>PROJECT LOCATION</b>
WAT-115	Dawkins Branch Transmission Main	University Boulevard from Sudley Manor Drive to Edmonston Drive
WAT-143	Sudley Road Water Main Improvements – Phase 2	Sudley Road from Godwin Drive to Balls Ford Road
WAT-181	Route 1 Transmission Main – Phase 1	Route 1 from Garfield BPS to Dumfries Road
WAT-182	Route 1 Transmission Main – Phase 2	Route 1 and Old Triangle Rd. from Dumfries Road to Fuller Heights Road
WAT-200	Water Distribution Asset Replacement Program	County Wide
WAT-201	Bull Run Mountain Distribution System Improvements	Bull Run Upper & Lower and Evergreen Pressure Zones

<b>SEWAGE PUMPING STATION PROJECTS</b>		
<b>CIP Number</b>	<b>PROJECT NAME</b>	<b>PROJECT LOCATION</b>
SPS-100	Generator Replacement Program	County Wide
SPS-107	Replace Occoquan Forest Sewage Pumping Stations, OQL36 and OQL37	10820 Split Rail Dr. and 6204 Ramblewood Tr., Manassas
SPS-108	Replace Nokesville Sewage Pumping Station, L20	12829 Fitzwater Dr., Nokesville
SPS-112	Replace Graham Park Sewage Pumping Station, L13	3196 Shoreview Rd., Dumfries
SPS-113	Heritage Hunt Sewage Pumping Station, L52 Replacement and Force Main Extension	6588 Alderwood Way, Gainesville
SPS-115	Belmont Sewage Pumping Station, L17 Replacement and Force Main Extension	13760 Dabney Rd., Woodbridge
SPS-116	Hornbaker Sewage Pumping Station, L06 Rehabilitation and Force Main Replacement	13010 Sport & Health Dr., Woodbridge
SPS-118	Koon's Sewage Pumping Station, L28 Replacement	10640 Automotive Dr., Manassas
SPS-123	Spinnaker Court Sewage Pumping Station, L02 and Force Main Replacement	2280 Spinnaker Ct., Woodbridge
SPS-125	Occoquan Creek Sewage Pumping Station, L04 Rehabilitation	13221 Marina Way, Woodbridge
SPS-134	Hooes Run Sewage Pumping Station, L01 Rehabilitation	2502 Old Bridge Rd., Woodbridge
SPS-135	Yorkshire Sewage Pumping Station, L30 Rehabilitation	7415 Lake Dr., Manassas
SPS-136	Melrose Sewage Pumping Station, L10 Replacement	3350 Melrose Ave., Triangle
SPS-137	Dawson Landing Sewage Pumping Station, L51 Replacement	1599 Whistling Swan Wy., Woodbridge

<b>SEWAGE COLLECTION PROJECTS</b>		
<b>CIP Number</b>	<b>PROJECT NAME</b>	<b>PROJECT LOCATION</b>
SEW-106	Dumfries Force Main and Water Main Replacement	Near Route 1, Dumfries
SEW-157	Sudley Road Sewer Main Replacement and Upgrade	Sudley Rd. to Williamson Blvd., South of I-66
SEW-158	I-66 Rest Area Sewer Main Replacement	Crossing at I-66 Rest Area
SEW-200	Sewer Collection Rehabilitation & Replacement Program	County Wide

<b>WATER RECLAMATION FACILITY PROJECTS</b>		
<b>CIP Number</b>	<b>PROJECT NAME</b>	<b>PROJECT LOCATION</b>
WRF-123	Ongoing Renewal and Replacement	H.L. Mooney AWRF
WRF-131	FBI and Solids Building Repairs and Modifications	H.L. Mooney AWRF
WRF-134	Bioreactor Basin Improvements	H.L. Mooney AWRF
WRF-138	Facility Wide Improvements – Design-Build Project	H.L. Mooney AWRF

<b>MISCELLANEOUS PROJECTS</b>		
<b>CIP Number</b>	<b>PROJECT NAME</b>	<b>PROJECT LOCATION</b>
MISC-100	Water and Sewer Utility System Improvement Opportunity (USIO), formerly known as Master Plan Utility Adjustment (MPUA)	County Wide
MISC-101	PWCSA Water and Sewer Facility Security Enhancements	County Wide
MISC-102	Wellington Road Operations Center Expansion	8410 Virginia Meadows Dr., Manassas
MISC-103	PWCSA Facilities Renewals and Upgrades	County Wide
MISC-112	Administrative Office Space Expansion	TBD
MISC-114	System Wide Master Plan	County Wide
MISC-116	English Gardens Property Building & Site Improvements	14195 Dumfries Rd., Manassas
MISC-117	Studies and PER's – Organization Wide	County Wide
MISC-200	Vehicle Replacement Program	County Wide
MISC-201	Mechanical Equipment Replacement Program	County Wide
MISC-202	Computer and Other Replacement Program	County Wide

<b>INFORMATION TECHNOLOGY PROJECTS</b>		
<b>CIP Number</b>	<b>PROJECT NAME</b>	<b>PROJECT LOCATION</b>
IT-105	JD Edwards Upgrade	County Wide
IT-106	Cayenta - CIS	County Wide
IT-107	Computerized Maintenance Management System (CMMS) Implementation	County Wide
IT-110	Document Management System Implementation	County Wide
IT-117	Vertical Asset Data Development	County Wide
IT-118	System Integration	County Wide
IT-121	Asset Management Analytics	County Wide
IT-122	Project Management Information System (PMIS) Implementation	County Wide
IT-126	SCADA System Upgrade	County Wide
IT-128	Web Content Management System Migration	County Wide

<b>REGIONAL UTILITY PROJECTS</b>		
<b>CIP Number</b>	<b>PROJECT NAME</b>	<b>PROJECT LOCATION</b>
REG-1	Occoquan River Crossing	Occoquan River at Griffith WTP

## **GLOSSARY OF TERMS AND ACRONYMS**

The following is a list of acronyms and abbreviations frequently used by Prince William County Service Authority

<b><i>Acronym/Abbreviation List</i></b>	
<b>PWCSA</b>	<b>Prince William County Service Authority</b>
<b>PWC</b>	<b>Prince William County</b>
<b>SA</b>	<b>Service Authority</b>
AWRF	Advanced Water Reclamation Facility
BAKER	Michael Baker International, Inc. (Engineers)
BI	Business Intelligence
BNR	Biological Nitrogen Removal
BOCS	Board of County Supervisors
BOD	PWCSA Board of Directors
BPS	Booster Pumping Station
CBA	Chesapeake Bay Agreement
CIP	Capital Improvement Program
CIP	Cast Iron Pipe
CIPP	Cured In-Place Pipe
CMMS	Computerized Maintenance Management System
COM	City of Manassas
COMP	City of Manassas Park
CSX	Chesapeake-Seaboard Corporation (Railroad)
Ct.	Court
DIP	Ductile Iron Pipe
Dr.	Drive
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FM	Force Main
FUND 02	Expansion Fund
FUND 03	Commitment Fund
FUND 04	Replacement Fund
FW	Fairfax Water
FY	Fiscal Year
GIS	Geographic Information System

***Acronym/Abbreviation List (Cont.)***

GPM	Gallons Per Minute
GPS	Global Positioning System
H&S	Hazen and Sawyer Environmental Engineers and Scientists
HDPE	High Density Polyethylene Pipe
HOA	Homeowner Association
HP	Horsepower
HVAC	Heating Ventilation Air Conditioning
I&I	Inflow and Infiltration
IT	Information Technology
LFC	Local Facilities Charge
Ln.	Lane
MCB	Marine Corps Base
MCBQ	Marine Corps Base, Quantico
MG	Million Gallons
MGD	Million Gallons Per Day
MHI	Multiple Hearth Incinerator
MISC	Miscellaneous
MPUA	Master Plan Utility Adjustment
N-S RWY	Norfolk-Southern Railway Company
NPDES	National Pollution Discharge Elimination System
O&M	Operations and Maintenance Division
OPCC	Opinion of Probable Construction Cost
PER	Preliminary Engineering Report
PES	Potomac Embayment Standards
PFR	Public Facilities Review
PH	Phase
PO	Purchase Order
PRV	Pressure Reducing Valve
PS	Pumping Station
PVC	Polyvinyl Chloride (Plastic Pipe)
PWP	Prince William Pipeline, Corp.

***Acronym/Abbreviation List (Cont.)***

PZ	Pressure Zone
RCP	Reinforced Concrete Pipe
RCS	Residual Control System
Rd.	Road
RDA	Rinker Design Associates (Engineers)
RF&P	Richmond, Fredericksburg and Petersburg Railroad
RK&K	Rummel, Klepper and Kahl Consulting Engineers
RPM	Revolutions Per Minute
SA	Service Authority
SCADA	Supervisory Control and Data Acquisition
SEW	Sewer (Collection Mains)
SPS	Sewage Pumping Station
SS	Sanitary Sewer
SSES	Sanitary Sewer Evaluation Study
SSO	Sanitary Sewer Overflow
TDH	Total Dynamic Head
Tr.	Terrace/Trail
UOSA	Upper Occoquan Service Authority
USIO	Utility System Improvement Opportunity
UV	Ultraviolet
VDEQ	Virginia Department of Environmental Quality
VDOT	Virginia Department of Transportation
WAT	Water (Transmission and Distribution)
WL	Water Line
WRA	Whitman, Requardt and Associates, LLP (Engineers)
WRF	Water Reclamation Facility (Now AWRF)
WST	Water Storage Tank
WSUP	Water Supply
WWTP	Wastewater Treatment Plant

***Water Pressure Zones***

BH	Bull Run Mountain High
BW	Bull Run Mountain Low
DT	Dumfries
EG	Evergreen
FW	Fairfax Water
GM	Greater Manassas
GW	Gainesville
HM	Haymarket
HO	Hoadly
LR	Lake Ridge
MO	Montclair
MS	Manassas Southside
OR	Oak Ridge
WL	Woodbridge

***Water Pressure Sub-Zones (Primary Zone)***

DV	Dominion Valley Boosted (Haymarket)
OF	Occoquan Forest Reduced (Hoadly)
PC	Powell's Creek Reduced (Dumfries)

### ***Sewersheds***

BM	Belmont
BR	Broad Run
BU	Bull Run
CB	Cabin Branch
CC	Catharpin Creek
DE	Deweys Branch
DM	Dumfries
FB	Flat Branch
FS	Featherstone
GD	Godwin Drive
HB	Holkums Branch
HR	Hooes Run
HS	Harbor Station
LB	Little Bull Run
LC	Little Creek
MR	Melrose
NB	North Branch
NE	Neabsco
NK	Nokesville
OC	Occoquan Creek
OQ	Occoquan Forest
OS	Occoquan Plant
OT	Occoquan Town
PB	Piney Branch
PC	Powells Creek
PU	Purcell Branch
RU	Russia Branch
WA	Airport
YS	Yorkshire

***Magisterial Districts***

BR	Brentsville
CO	Coles
GN	Gainesville
NE	Neabsco
OC	Occoquan
PO	Potomac
WB	Woodbridge

**CAPITAL IMPROVEMENT PROGRAM  
FISCAL YEARS 2023 - 2027**



**Service Authority**  
Prince William County

**SECTION A**

**PROGRAM SUMMARY**

**PRINCE WILLIAM COUNTY SERVICE AUTHORITY  
CAPITAL IMPROVEMENT PROGRAM, FISCAL YEARS 2023-2027**

**FUNDING SOURCE SUMMARY - ALL PROJECTS**

	TOTAL EXPENDITURES (\$1,000's)	SPENDING SCHEDULE (\$1,000's)						
		PRE FY-23	FY-23	FY-24	FY-25	FY-26	FY-27	BEYOND FY-27
<b>WATER SUPPLY PROJECTS (WSUP)</b>								
Exp Fund 002	15288	1898	2235	3713	3714	3354	375	0
Fund 003	0	0	0	0	0	0	0	0
Rep Fund 004	29956	3102	5450	8339	6887	4579	1600	0
Other	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>45244</b>	<b>4999</b>	<b>7685</b>	<b>12051</b>	<b>10601</b>	<b>7933</b>	<b>1975</b>	<b>0</b>
<b>WATER STORAGE PROJECTS (WST)</b>								
Exp Fund 002	10964	688	0	0	0	5138	5138	0
Fund 003	0	0	0	0	0	0	0	0
Rep Fund 004	14450	0	1980	2820	2850	2750	3050	1000
Other	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>25414</b>	<b>688</b>	<b>1980</b>	<b>2820</b>	<b>2850</b>	<b>7888</b>	<b>8188</b>	<b>1000</b>
<b>WATER TRANSMISSION PROJECTS (WAT)</b>								
Exp Fund 002	20732	8681	5110	2026	77	170	2625	2042
Fund 003	0	0	0	0	0	0	0	0
Rep Fund 004	74334	8606	8700	6424	6960	10442	9608	23595
Other	525	82	0	0	0	38	250	156
<b>TOTAL</b>	<b>95592</b>	<b>17369</b>	<b>13810</b>	<b>8450</b>	<b>7037</b>	<b>10650</b>	<b>12483</b>	<b>25793</b>
<b>SEWAGE PUMPING STATION PROJECTS (SPS)</b>								
Exp Fund 002	26480	2732	4365	8778	8720	1887	0	0
Fund 003	0	0	0	0	0	0	0	0
Rep Fund 004	100389	10647	14966	22117	27586	17132	7942	0
Other	915	268	0	250	250	148	0	0
<b>TOTAL</b>	<b>127784</b>	<b>13646</b>	<b>19330</b>	<b>31144</b>	<b>36556</b>	<b>19166</b>	<b>7942</b>	<b>0</b>
<b>SEWER COLLECTION PROJECTS (SEW)</b>								
Exp Fund 002	4080	3375	593	113	0	0	0	0
Fund 003	0	0	0	0	0	0	0	0
Rep Fund 004	15080	2940	4591	2069	1881	1200	1200	1200
Other	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>19160</b>	<b>6315</b>	<b>5183</b>	<b>2181</b>	<b>1881</b>	<b>1200</b>	<b>1200</b>	<b>1200</b>
<b>WATER RECLAMATION FACILITY PROJECTS (WRF)</b>								
Exp Fund 002	5237	1712	270	195	300	330	360	2070
Fund 003	44954	2455	2080	12176	10798	5194	6252	6000
Rep Fund 004	117111	9722	5482	28865	25895	12888	15428	18830
Other	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>167301</b>	<b>13888</b>	<b>7832</b>	<b>41236</b>	<b>36993</b>	<b>18412</b>	<b>22040</b>	<b>26900</b>
<b>MISCELLANEOUS PROJECTS (MISC)</b>								
Exp Fund 002	23795	1155	2043	4075	5500	5500	3500	2023
Fund 003	0	0	0	0	0	0	0	0
Rep Fund 004	45383	555	7860	8967	9749	8556	6014	3683
Other	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>69177</b>	<b>1709</b>	<b>9902</b>	<b>13042</b>	<b>15249</b>	<b>14056</b>	<b>9514</b>	<b>5705</b>
<b>INFORMATION TECHNOLOGY (IT)</b>								
Exp Fund 002	517	108	233	176	0	0	0	0
Fund 003	0	0	0	0	0	0	0	0
Rep Fund 004	32563	8647	5261	7313	4812	3625	2906	0
Other	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>33080</b>	<b>8755</b>	<b>5493</b>	<b>7489</b>	<b>4812</b>	<b>3625</b>	<b>2906</b>	<b>0</b>
<b>REGIONAL UTILITY PROJECTS (REG)</b>								
Exp Fund 002	5482	755	1704	1512	1511	0	0	0
Fund 003	0	0	0	0	0	0	0	0
Rep Fund 004	12790	1761	3976	3527	3527	0	0	0
Other	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>18272</b>	<b>2515</b>	<b>5680</b>	<b>5039</b>	<b>5038</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL EXPANSION FUND 002</b>	<b>112574</b>	<b>21102</b>	<b>16551</b>	<b>20586</b>	<b>19823</b>	<b>16379</b>	<b>11998</b>	<b>6135</b>
<b>TOTAL COMMITMENT FUND 003</b>	<b>44954</b>	<b>2455</b>	<b>2080</b>	<b>12176</b>	<b>10798</b>	<b>5194</b>	<b>6252</b>	<b>6000</b>
<b>TOTAL REPLACEMENT FUND 004</b>	<b>442056</b>	<b>45978</b>	<b>58264</b>	<b>90440</b>	<b>90147</b>	<b>61172</b>	<b>47748</b>	<b>48308</b>
<b>TOTAL DEVELOPER/OTHER FUND</b>	<b>1440</b>	<b>350</b>	<b>0</b>	<b>250</b>	<b>250</b>	<b>185</b>	<b>250</b>	<b>156</b>
<b>GRAND TOTAL - ALL CIP PROJECTS</b>	<b>601024</b>	<b>69884</b>	<b>76895</b>	<b>123452</b>	<b>121017</b>	<b>82930</b>	<b>66248</b>	<b>60598</b>

**PRINCE WILLIAM COUNTY SERVICE AUTHORITY  
CAPITAL IMPROVEMENT PROGRAM, FISCAL YEARS 2023-2027**

**WATER SUPPLY PROJECTS**

CIP Number	PROJECT NAME	ESTIMATED PROJECT COST	FUNDING SOURCES				SPENDING SCHEDULE						
		(\$1,000's)	E 002	003	R 004	OTHER	PRE FY-23	FY-23	FY-24	FY-25	FY-26	FY-27	BEYOND FY-27
WSUP-103	Water Meter Vault Improvements	585	0	0	585	0	0	160	125	100	100	100	0
WSUP-105	Montclair/Four Seasons Water System Improvements	15826	5539	0	10287	0	2500	4400	5100	3826	0	0	0
WSUP-111	Bull Run Mountain Well Upgrades	2604	0	0	2604	0	304	440	1060	800	0	0	0
WSUP-112	Manassas Southside Booster Pumping Station Upgrades	1600	800	0	800	0	1325	240	35	0	0	0	0
WSUP-114	Capital Meter Program	9150	1830	0	7320	0	0	1650	1875	1875	1875	1875	0
WSUP-116	Unity Reed (F14) Booster Pumping Station and Discharge Main	14238	7119	0	7119	0	720	490	3070	4000	5958	0	0
WSUP-117	Eastern Area Pressure Reducing Valves	1241	0	0	1241	0	150	305	786	0	0	0	0
<b>TOTAL: WATER SUPPLY PROJECTS</b>		<b>45244</b>	<b>15288</b>	<b>0</b>	<b>29956</b>	<b>0</b>	<b>4999</b>	<b>7685</b>	<b>12051</b>	<b>10601</b>	<b>7933</b>	<b>1975</b>	<b>0</b>

**PRINCE WILLIAM COUNTY SERVICE AUTHORITY  
CAPITAL IMPROVEMENT PROGRAM, FISCAL YEARS 2023-2027**

**WATER STORAGE PROJECTS**

CIP Number	PROJECT NAME	ESTIMATED PROJECT COST	FUNDING SOURCES				SPENDING SCHEDULE						
		(\$1,000's)	E 002	003	R 004	OTHER	PRE FY-23	FY-23	FY24	FY-25	FY-26	FY-27	BEYOND FY-27
WST-104	Potomac Shores Water Storage Tank	10964	10964	0	0	0	688	0	0	0	5138	5138	0
WST-110	Water Storage Tank Rehabilitation Program	8250	0	0	8250	0	0	1645	1555	1350	1350	1350	1000
WST-111	Tank Re-Chlorination Program	6200	0	0	6200	0	0	335	1265	1500	1400	1700	0
<b>TOTAL: WATER STORAGE PROJECTS</b>		<b>25414</b>	<b>10964</b>	<b>0</b>	<b>14450</b>	<b>0</b>	<b>688</b>	<b>1980</b>	<b>2820</b>	<b>2850</b>	<b>7888</b>	<b>8188</b>	<b>1000</b>

**PRINCE WILLIAM COUNTY SERVICE AUTHORITY  
CAPITAL IMPROVEMENT PROGRAM, FISCAL YEARS 2023-2027**

**WATER TRANSMISSION PROJECTS**

CIP Number	PROJECT NAME	ESTIMATED PROJECT COST	FUNDING SOURCES				SPENDING SCHEDULE						
		(\$1,000's)	E 002	003	R 004	OTHER	PRE FY-23	FY-23	FY-24	FY-25	FY-26	FY-27	BEYOND FY-27
WAT-115	Dawkins Branch Transmission Main	8395	5037	0	3358	0	529	1000	2000	129	0	2500	2237
WAT-122	Gainesville to Manassas South Connector	5254	2364	0	2364	525	820	0	0	0	378	2500	1556
WAT-138	Possum Point Road Water Main Replacement - Phase 2	4680	0	0	4680	0	0	0	0	408	2272	2000	0
WAT-143	Sudley Road Water Main Improvements - Phase 2	6901	0	0	6901	0	30	90	298	2000	3500	983	0
WAT-181	Route 1 Transmission Main - Phase 1	13204	6602	0	6602	0	8100	4260	844	0	0	0	0
WAT-182	Route 1 Transmission Main - Phase 2	13458	6729	0	6729	0	7890	4760	808	0	0	0	0
WAT-200	Water Distribution Asset Replacement Program	35500	0	0	35500	0	0	3500	3500	3500	3500	3500	18000
WAT-201	Bull Run Mountain Distribution System Improvements	8200	0	0	8200	0	0	200	1000	1000	1000	1000	4000
<b>TOTAL: WATER TRANSMISSION PROJECTS</b>		<b>95592</b>	<b>20732</b>	<b>0</b>	<b>74334</b>	<b>525</b>	<b>17369</b>	<b>13810</b>	<b>8450</b>	<b>7037</b>	<b>10650</b>	<b>12483</b>	<b>25793</b>

**PRINCE WILLIAM COUNTY SERVICE AUTHORITY  
CAPITAL IMPROVEMENT PROGRAM, FISCAL YEARS 2023-2027**

**SEWAGE PUMPING STATION PROJECTS**

CIP Number	PROJECT NAME	ESTIMATED PROJECT COST	FUNDING SOURCES				SPENDING SCHEDULE						
		(\$1,000's)	E 002	003	R 004	OTHER	PRE FY-23	FY-23	FY-24	FY-25	FY-26	FY-27	BEYOND FY-27
SPS-100	Generator Replacement Program	3750	0	0	3750	0	0	765	1322	773	470	420	0
SPS-107	Replace Occoquan Forest Sewage Pumping Stations, OQL36 & OQL37	6379	0	0	6379	0	2593	2500	1116	170	0	0	0
SPS-108	Replace Nokesville Sewage Pumping Station, L20	2654	0	0	2654	0	894	1320	350	90	0	0	0
SPS-112	Replace Graham Park Sewage Pumping Station, L13	4519	0	0	4519	0	3119	1230	85	85	0	0	0
SPS-113	Heritage Hunt Sewage Pumping Station, L52 Replacement and Force Main Extension	39308	19654	0	19654	0	3807	8165	13316	12754	1266	0	0
SPS-115	Belmont Sewage Pumping Station, L17 Replacement and Force Main Extension	15434	4630	0	10804	0	620	940	5065	5809	3000	0	0
SPS-116	Hornbaker Sewage Pumping Station, L06 Rehabilitation and Force Main Replacement	6484	0	0	6484	0	175	375	923	2727	2284	0	0
SPS-118	Koon's Sewage Pumping Station, L28 Replacement	4910	0	0	4910	0	455	945	1270	1240	1000	0	0
SPS-123	Spinnaker Court Sewage Pumping Station, L02 and Force Main Replacement	4360	0	0	4360	0	355	895	1255	1255	600	0	0
SPS-125	Occoquan Creek Sewage Pumping Station, L04 Rehabilitation	14776	0	0	14776	0	100	1075	2572	4073	3456	3500	0
SPS-126	Piney Branch Sewage Pumping Station, L26 Demolition and Gravity Sewer Extension	3660	2196	0	549	915	1070	0	1000	1000	590	0	0
SPS-134	Hooes Run Sewage Pumping Station, L01 Rehabilitation	5020	0	0	5020	0	120	280	600	1520	1500	1000	0
SPS-135	Yorkshire Sewage Pumping Station, L30 Rehabilitation	5015	0	0	5015	0	115	280	600	1520	1500	1000	0
SPS-136	Melrose Sewage Pumping Station, L10 Replacement	8505	0	0	8505	0	113	280	1070	2520	2500	2022	0
SPS-137	Dawson Landing Sewage Pumping Station, L51 Replacement	3010	0	0	3010	0	110	280	600	1020	1000	0	0
<b>TOTAL: SEWAGE PUMPING STATION PROJECTS</b>		<b>127784</b>	<b>26480</b>	<b>0</b>	<b>100389</b>	<b>915</b>	<b>13646</b>	<b>19330</b>	<b>31144</b>	<b>36556</b>	<b>19166</b>	<b>7942</b>	<b>0</b>

**PRINCE WILLIAM COUNTY SERVICE AUTHORITY  
CAPITAL IMPROVEMENT PROGRAM, FISCAL YEARS 2023-2027**

**SEWER COLLECTION PROJECTS**

CIP Number	PROJECT NAME	ESTIMATED PROJECT COST (\$1,000's)	FUNDING SOURCES				SPENDING SCHEDULE						
			E 002	003	R 004	OTHER	PRE FY-23	FY-23	FY-24	FY-25	FY-26	FY-27	BEYOND FY-27
SEW-106	Dumfries Force Main and Water Main Replacement	4693	0	0	4693	0	1750	2793	150	0	0	0	0
SEW-157	Sudley Road Sewer Main Replacement and Upgrade	5440	4080	0	1360	0	4500	790	150	0	0	0	0
SEW-158	I-66 Rest Area Sewer Main Replacement	1827	0	0	1827	0	65	400	681	681	0	0	0
SEW-200	Sewer Collection Rehabilitation & Replacement Program	7200	0	0	7200	0	0	1200	1200	1200	1200	1200	1200
<b>TOTAL: SEWER COLLECTION PROJECTS</b>		<b>19160</b>	<b>4080</b>	<b>0</b>	<b>15080</b>	<b>0</b>	<b>6315</b>	<b>5183</b>	<b>2181</b>	<b>1881</b>	<b>1200</b>	<b>1200</b>	<b>1200</b>

**PRINCE WILLIAM COUNTY SERVICE AUTHORITY  
CAPITAL IMPROVEMENT PROGRAM, FISCAL YEARS 2023 - 2027**

**WATER RECLAMATION FACILITY PROJECTS**

CIP Number	PROJECT NAME	ESTIMATED PROJECT COST (\$1,000's)	FUNDING SOURCES				SPENDING SCHEDULE						
			E 002	003	R 004	OTHER	PRE FY-23	FY-23	FY-24	FY-25	FY-26	FY-27	BEYOND FY-27
WRF-123	Ongoing Renewal and Replacement	6242	1873	0	4369	0	1442	300	300	300	300	300	3300
WRF-126	Dynamic Hydraulic Model and Instrumentation	1265	380	0	886	0	665	0	0	100	200	300	0
WRF-131	FBI and Solids Building Repairs and Modifications	6500	1950	0	4550	0	2200	300	300	300	300	300	2800
WRF-134	Bioreactor Basin Improvements	3448	1034	0	2414	0	1398	300	50	300	300	300	800
WRF-138	Facility Wide Improvements - Design-Build Project *	149846	0	44954	104892	0	8183	6932	40586	35993	17312	20840	20000
<b>TOTAL: WATER RECLAMATION FACILITY PROJECTS</b>		<b>167301</b>	<b>5237</b>	<b>44954</b>	<b>117111</b>	<b>0</b>	<b>13888</b>	<b>7832</b>	<b>41236</b>	<b>36993</b>	<b>18412</b>	<b>22040</b>	<b>26900</b>

\* Partially Debt Funded Project (\$100M)

**PRINCE WILLIAM COUNTY SERVICE AUTHORITY  
CAPITAL IMPROVEMENT PROGRAM, FISCAL YEARS 2023 - 2027**

**MISCELLANEOUS PROJECTS**

CIP Number	PROJECT NAME	ESTIMATED PROJECT COST	FUNDING SOURCES				SPENDING SCHEDULE						
		(\$1,000's)	E 002	003	R 004	OTHER	PRE FY-23	FY-23	FY-24	FY-25	FY-26	FY-27	BEYOND FY-27
MISC-100	Water and Sewer Utility System Improvement Opportunity (USIO)	8000	4000	0	4000	0	0	1600	1600	1600	1600	1600	0
MISC-101	PWCSA Water & Sewer Facility Security Enhancements	1500	0	0	1500	0	0	300	300	300	300	300	0
MISC-102	Wellington Road Operations Center Expansion	10588	5294	0	5294	0	88	500	3000	3500	3500	0	0
MISC-103	PWCSA Facility Renewals and Upgrades	3660	0	0	3660	0	0	400	400	400	400	400	1660
MISC-112	Administrative Office Space Expansion	1401	701	0	701	0	951	150	300	0	0	0	0
MISC-114	System Wide Master Plan	700	700	0	0	0	600	100	0	0	0	0	0
MISC-116	English Gardens Property Building & Site Improvements	20000	10000	0	10000	0	70	135	750	5000	5000	5000	4045
MISC-117	Studies and PER's - Organization Wide	6200	3100	0	3100	0	0	1500	2500	900	900	400	0
MISC-200	Vehicle Replacement Program	4363	0	0	4363	0	0	1650	910	1058	540	205	0
MISC-201	Mechanical Equipment Replacement Program	8548	0	0	8548	0	0	2350	2532	1741	1066	859	0
MISC-202	Computer and Other Replacement Program	4217	0	0	4217	0	0	1217	750	750	750	750	0
<b>TOTAL: MISCELLANEOUS PROJECTS</b>		<b>69177</b>	<b>23795</b>	<b>0</b>	<b>45383</b>	<b>0</b>	<b>1709</b>	<b>9902</b>	<b>13042</b>	<b>15249</b>	<b>14056</b>	<b>9514</b>	<b>5705</b>

**PRINCE WILLIAM COUNTY SERVICE AUTHORITY  
CAPITAL IMPROVEMENT PROGRAM, FISCAL YEARS 2023 - 2027**

**INFORMATION TECHNOLOGY PROJECTS**

CIP	Number	PROJECT NAME	ESTIMATED PROJECT COST	FUNDING SOURCES				SPENDING SCHEDULE					
			(\$1,000's)	E 002	003	R 004	OTHER	PRE FY-23	FY-23	FY-24	FY-25	FY-26	FY-27
IT-105	JD Edwards Upgrade	829	0	0	829	0	444	155	230	0	0	0	0
IT-106	Cayenta - CIS	865	0	0	865	0	278	255	332	0	0	0	0
IT-107	Computerized Maintenance Management System (CMMS) Implementation	4176	0	0	4176	0	1860	735	1131	450	0	0	0
IT-110	Document Management System Implementation	565	0	0	565	0	115	145	205	100	0	0	0
IT-117	Vertical Asset Data Development	345	0	0	345	0	95	42	208	0	0	0	0
IT-118	System Integration	780	0	0	780	0	310	285	185	0	0	0	0
IT-121	Asset Management Analytics	750	0	0	750	0	0	63	87	600	0	0	0
IT-122	Project Management Information System (PMIS) Implementation	1722	517	0	1205	0	360	775	587	0	0	0	0
IT-126	SCADA System Upgrade	22338	0	0	22338	0	5293	2683	4226	3605	3625	2906	0
IT-128	Web Content Management System Migration	710	0	0	710	0	0	355	298	57	0	0	0
	<b>TOTAL: INFORMATION AND TECHNOLOGY PROJECTS</b>	<b>33080</b>	<b>517</b>	<b>0</b>	<b>32563</b>	<b>0</b>	<b>8755</b>	<b>5493</b>	<b>7489</b>	<b>4812</b>	<b>3625</b>	<b>2906</b>	<b>0</b>

**PRINCE WILLIAM COUNTY SERVICE AUTHORITY  
CAPITAL IMPROVEMENT PROGRAM, FISCAL YEARS 2023-2027**

**REGIONAL UTILITY PROJECTS**

CIP	Number	PROJECT NAME	ESTIMATED PROJECT COST	FUNDING SOURCES				SPENDING SCHEDULE						
			(\$1,000's)	E 002	003	R 004	OTHER	PRE FY-23	FY-23	FY-24	FY-25	FY-26	FY-27	BEYOND FY-27
REG-1		Occoquan River Crossing	18272	5482	0	12790	0	2515	5680	5039	5038	0	0	0
<b>TOTAL: REGIONAL UTILITY PROJECTS</b>			<b>18272</b>	<b>5482</b>	<b>0</b>	<b>12790</b>	<b>0</b>	<b>2515</b>	<b>5680</b>	<b>5039</b>	<b>5038</b>	<b>0</b>	<b>0</b>	<b>0</b>

**CAPITAL IMPROVEMENT PROGRAM  
FISCAL YEARS 2023 - 2027**



**Service Authority**  
Prince William County

**SECTION B**

**PROJECT DATA SHEETS**



Service Authority

# *WATER SUPPLY PROJECTS*



**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Water Meter Vault Improvements  
**CIP Number:** WSUP-103  
**JDE Number(s):** 24WCWV0001, 24WWLZ0001  
**Location:** Commercial Meter Vault Locations  
**Pressure Zone:** Multiple  
**Sewershed:** Multiple  
**Magisterial District:** Multiple  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Finance - Field Services

**PROJECT DESCRIPTION**

**Project Description:** Repair and replacement of commercial meter vaults county-wide as needed.  
**Project Benefit:** Aging meter vaults pose a safety issue for Field Services personnel servicing the respective meters. Maintenance of these facilities will provide a safe environment for the repair, replacement, and necessary customer service.  
**Source Derivation:** Operations and Maintenance Division; Finance – Field Services; Managed by Finance – Field Services.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
0	160	125	100	100	100	0	585

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Montclair / Four Seasons Water System Improvements  
**CIP Number:** WSUP-105  
**JDE Number(s):** 22WMOM0801, 24WMOM0801  
**Location:** 17361 Four Seasons Dr., Dumfries  
**Pressure Zone:** MO – Montclair  
**Sewershed:** DM – Dumfries  
**Magisterial District:** PO – Potomac  
**Project Estimate:** Contract Award  
**Estimate By:** Engineering and Planning Division

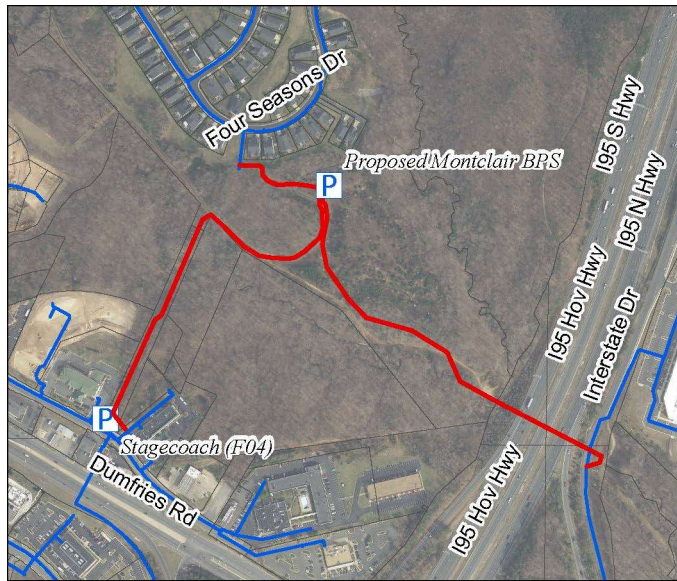
**PROJECT DESCRIPTION**

**Project Description:** Construction of a new 3 MGD booster pumping station expandable to 8 MGD with associated power and control accessories, including an emergency generator. This project also includes new 18-inch and 24-inch supply lines which shall cross Dewey’s Creek and I-95, and a new 16-inch discharge main from the new booster pumping station to Old Stage Road.

**Project Benefit:** This project shall provide auxiliary pumping capacity to the Cow Branch Booster Pumping Station, improve system reliability, as well as accommodate the anticipated build-out demands in the Montclair and Oak Ridge pressure zones. This project shall also enable the Old Stage Booster Pumping Station, which is outdated with limited capacity, to be removed from service.

**Source Derivation:** WRA East End Water System Technical Memorandum, 2001; Hazen and Sawyer PER, 2016; ACE D/B Team, 2021; Managed by the Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
2500	4400	5100	3826	0	0	0	15826

Proposed Funding Sources	
Exp. Fund (02) – Availability Rates	35%
Commit. Fund (03) – Availability Rates	-
Repl. Fund (04) – User Rates	65%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Bull Run Mountain Well Upgrades  
**CIP Number:** WSUP-111  
**JDE Number(s):** 24WBHW0101  
**Location:** Bull Run Mountain / Evergreen Well Systems  
**Pressure Zone:** BH – Bull Run Mountain High, BW – Bull Run Mountain Low, EG - Evergreen  
**Sewershed:** N/A  
**Magisterial District:** GN – Gainesville  
**Project Estimate:** PER  
**Estimate By:** Engineering and Planning Division, Operations and Maintenance Division

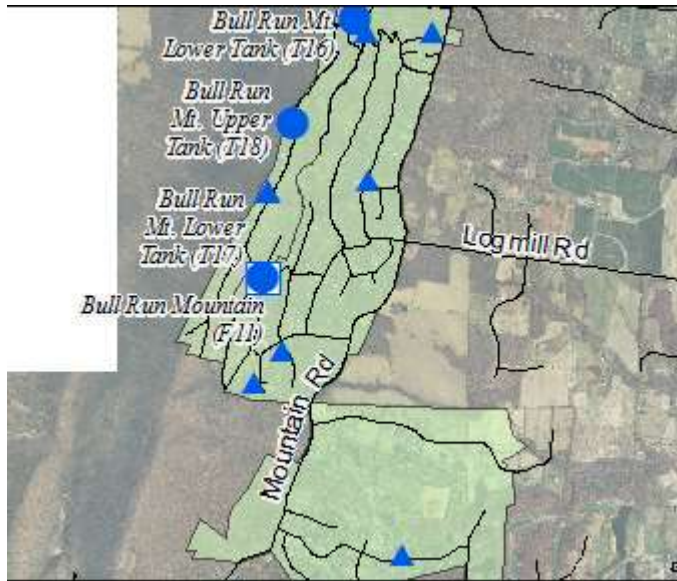
**PROJECT DESCRIPTION**

**Project Description:** The design, and construction of well improvements in the Bull Run Mountain Well Systems to meet future demands. The project scope consists of: structural modifications for updated chemical feed equipment and the installation of disinfection facilities at various well sites; design of a replacement PRV vault to control flows and pressures between service zones; the investigation, design, and construction of new well sites, piping, and a booster pump to increase capacity in the system.

**Project Benefit:** These modifications and improvements shall increase reliability and enhance system operations and ensure there is adequate capacity to meet future demands.

**Source Derivation:** Operations and Maintenance Division; Engineering and Planning Division; Bull Run Service Area Well Improvements PER – Dewberry (June 2020); Managed by the Operations and Maintenance Division.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
304	440	1060	800	0	0	0	2604

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Manassas Southside Booster Pumping Station Upgrades  
**CIP Number:** WSUP-112  
**JDE Number(s):** 22WMSF1851, 24WMSF1851  
**Location:** Blooms Quarry Ln., Manassas  
**Pressure Zone:** MS – Manassas Southside  
**Sewershed:** YS – Yorkshire  
**Magisterial District:** CO – Coles  
**Project Estimate:** Contract Award  
**Estimate By:** Engineering and Planning Division

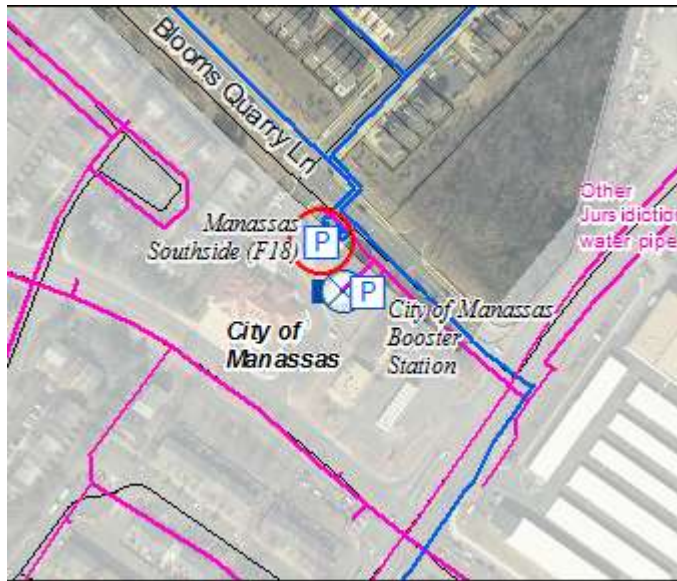
**PROJECT DESCRIPTION**

**Project Description:** Design and construction of modifications to the Manassas Southside Booster Pumping Station. Modifications to include: a third pump and new impellers to increase pumping capacity from 2 MGD to 4 MGD, pump control valves, and variable frequency drives (VFDs). A standby generator shall be provided, the HVAC system shall be modified for easier maintenance, and the SCADA and electrical systems shall be updated to current standards.

**Project Benefit:** The increased pumping capacity at the booster pumping station shall improve pumping efficiencies, provide better service and reliability to existing and future customers, and meet growth demands within the Manassas Southside pressure zone.

**Source Derivation:** Engineering and Planning Division; Operations and Maintenance Division; Manassas Southside Booster Pumping Station PER – Hazen and Sawyer (January 2018, Revision July 27, 2018); Managed by the Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
1325	240	35	0	0	0	0	1600

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	50%
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	50%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Capital Meter Program  
**CIP Number:** WSUP-114  
**JDE Number(s):** 22WCWZ0001, 24WCWZ0001  
**Location:** County Wide  
**Pressure Zone:** Multiple  
**Sewershed:** Multiple  
**Magisterial District:** Multiple  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Finance – Field Services

**PROJECT DESCRIPTION**

**Project Description:** The SA installs meters as part of new installation due to growth and to replace or rebuild existing meters. Owners/developers pay a fee to cover new meter installation costs, which are recorded to the Expansion Fund. The SA has over 95,000 meters to maintain, approximately 93% of which are residential that have a 15 year or 1.5-million-gallon lifespan. Larger meter lifespan is more variable and can be repaired or rebuilt as needed. Estimates for meter replacement account for age and consumption of active meters and are made for the following year. On average, 5,500 meters require repair or replacement annually.

**Project Benefit:** The goal of this project is to account for all new meter expenditures related to growth, approximately \$400,000 annually. Proper maintenance and timely replacement of meters reduces water loss and maximizes revenue by accurately capturing consumption. The annual cost of replacing failing meters is approximately \$1.375 million (equivalent to 5,500 meters at \$250 per meter).

**Source Derivation:** Finance – Customer Service Department; Managed by Finance – Field Services

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
0	1650	1875	1875	1875	1875	0	9150

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	20%
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	80%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

## PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET

### PROJECT INFORMATION

**Project Name:** Unity Reed, F14, Booster Pumping Station and Discharge Main

**CIP Number:** WSUP-116

**JDE Number(s):** 22WGWM0901, 24WGWM0901

**Location:** 8814 Rixlew Ln., Manassas

**Pressure Zone:** GW - Gainesville

**Sewershed:** FB – Flat Branch

**Magisterial District:** BR - Brentsville

**Project Estimate:** PER

**Estimate By:** Engineering and Planning Division

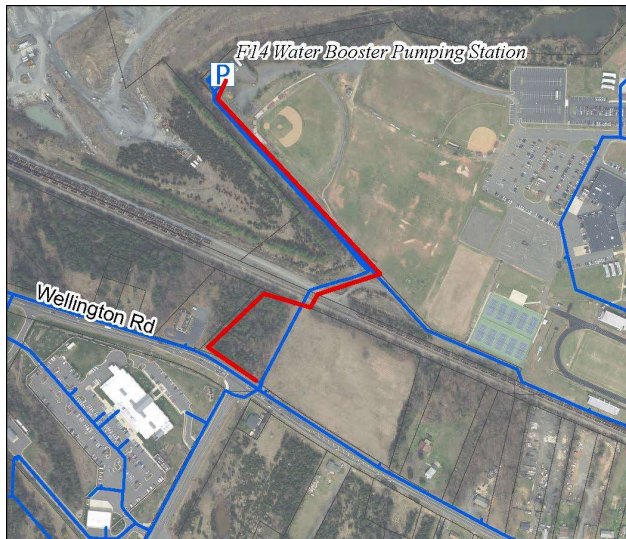
### PROJECT DESCRIPTION

**Project Description:** This project includes the design and construction of new and upgraded pumps and associated appurtenances, site work, electrical upgrades, new generator, new SCADA systems, and a control building to expand the capacity of the Unity Reed (F14) booster pumping station from 18 MGD to 24 MGD. The project also includes the design and construction of approximately 2,100 feet of 36-inch transmission main from the booster pumping station to Wellington Road and associated easement acquisition.

**Project Benefit:** The increased pumping capacity at the booster pumping station shall improve pumping efficiencies and provide better service and reliability to existing and future customers in the Gainesville pressure zone. The project shall also provide an additional supply from the discharge at the booster pumping station to improve reliability in the Gainesville pressure zone should there be a disruption in the existing 42-inch discharge main at the railroad crossing.

**Source Derivation:** Engineering and Planning Division; Gainesville Discharge Main PER - Michael Baker, July 2019; Managed by the Project Management Office.

### PROJECT PICTURE



### PROJECT FUNDING

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
720	490	3070	4000	5958	0	0	14238

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	50%
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	50%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

## PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET

### PROJECT INFORMATION

**Project Name:** Eastern Area Pressure Reducing Valves  
**CIP Number:** WSUP-117  
**JDE Number(s):** 24WFWV0101  
**Location:** Multiple Meter Stations, Garfield BPS  
**Pressure Zone:** WL – Woodbridge  
**Sewershed:** BM – Belmont  
**Magisterial District:** WB – Woodbridge  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Engineering and Planning Division

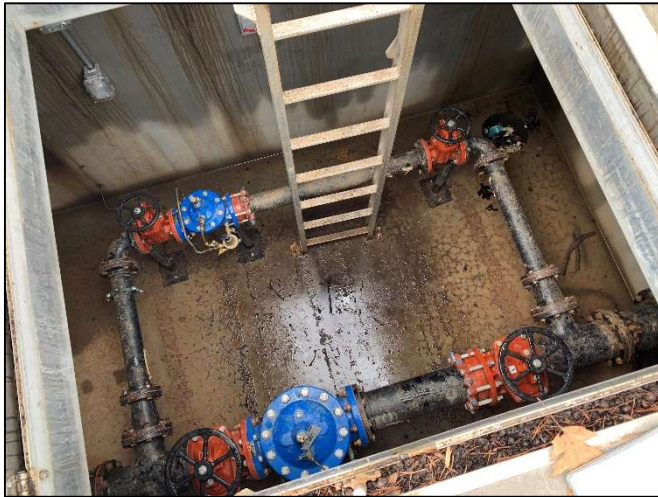
### PROJECT DESCRIPTION

**Project Description:** Design and construction of three pressure control valve vaults and associated piping in the Woodbridge and Dumfries pressure zones. These control valves are required to regulate pressures during various pumping operations at Fairfax Water, and enable the bypass of the Garfield Booster Pumping Station during normal operations.

**Project Benefit:** Pressure control in the Woodbridge and Dumfries pressure zones is required when Fairfax Water increases the delivery pressure in portions of the existing transmission system as part of the Occoquan River Crossing project (REG-1). These control valves will avoid over-pressurization in both pressure zones and allow the bypass of the Garfield Booster Pumping Station during normal operations to reduce pumping costs.

**Source Derivation:** Engineering and Planning Division; Managed by the Project Management Office.

### PROJECT PICTURE



### PROJECT FUNDING

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
150	305	786	0	0	0	0	1241

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

# WATER STORAGE PROJECTS



 **Service Authority**  
Prince William County



Service Authority

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Potomac Shores Water Storage Tank  
**CIP Number:** WST-104  
**JDE Number(s):** 22WDTT3501, 24WDTT3501  
**Location:** 2300 River Heritage Blvd.  
**Pressure Zone:** DT – Dumfries  
**Sewershed:** DM – Dumfries  
**Magisterial District:** PO – Potomac  
**Project Estimate:** OPCC  
**Estimate By:** Engineering and Planning Division

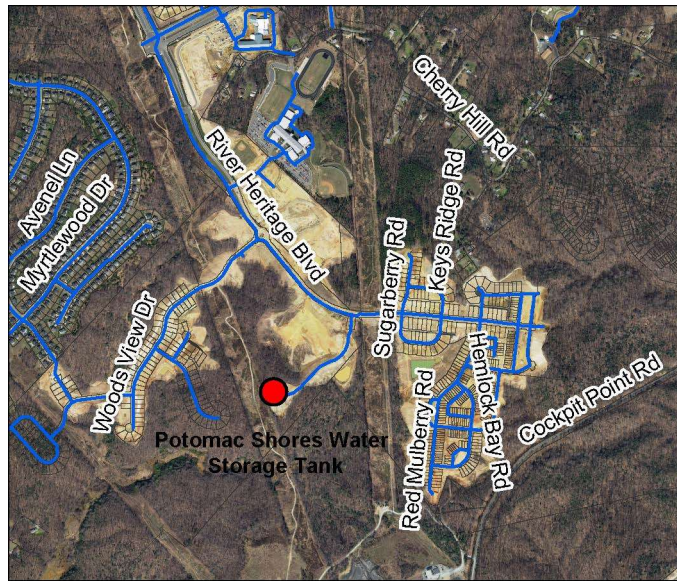
**PROJECT DESCRIPTION**

**Project Description:** Design and construction of a 2 MG elevated steel water storage tank in the Potomac Shores community of the Dumfries pressure zone. An easement for the tank site, access road, and water main was proffered with the new middle school in Potomac Shores, and have been acquired and recorded. The final PER evaluated several options and concluded this site to be the optimal location.

**Project Benefit:** This tank will help maintain system pressures, improve reliability and increase fire flows to the area by providing additional equalization, emergency and fire protection storage.

**Source Derivation:** Engineering and Planning Division, Cherry Hill Elevated Water Storage Tank PER, Hazen and Sawyer, October 2016; Managed by the Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
688	0	0	0	5138	5138	0	10964

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	100%
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	-
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Water Storage Tank Rehabilitation Program  
**CIP Number:** WST-110  
**JDE Number(s):** Not Assigned  
**Location:** County Wide  
**Pressure Zone:** Multiple  
**Sewershed:** Multiple  
**Magisterial District:** Multiple  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Operations and Maintenance Division

**PROJECT DESCRIPTION**

**Project Description:** Repair and rehabilitation of water storage tanks from defects including peeling paint, rust, pitting, and delaminating of the surface coat from the primer coat. In addition, the project shall install mixing systems as required while tanks undergo refurbishment. Other components that are upgraded as needed include lighting, fencing, control valves, and SCADA systems. The storage tanks scheduled for rehabilitation during this 5-year CIP period include Braemar (T-26), Interstate (T-22), Forest Park (T-25), Dominion Valley (T-30), Nottoway (T-28), and Locust Shade (T-29). The timing and execution are subject to change based on operational needs and priorities.

**Project Benefit:** Preserve and extend the economic life of each water tank. In addition, the project shall prevent stagnation of water within the tank with the installation of mixing systems.

**Source Derivation:** Operations and Maintenance Division; Managed by the Operations and Maintenance Division.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
0	1645	1555	1350	1350	1350	1000	<b>8250</b>

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Tank Re-Chlorination Program  
**CIP Number:** WST-111  
**JDE Number(s):** Not Assigned  
**Location:** County Wide  
**Pressure Zone:** Multiple  
**Sewershed:** Multiple  
**Magisterial District:** Multiple  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Operations and Maintenance Division

**PROJECT DESCRIPTION**

**Project Description:** Residual Control System (RCS) is a management system that provides an intelligent, automated disinfectant boosting system that provides the ability to set, control, and maintain cost-effective chlorine residual levels in water storage tanks. In addition, the project shall install the management system, controls, and ancillary equipment. Other Components that are upgraded as needed are electrical equipment, tank mixing system, and thermal probes to monitor mixing. The storage tanks scheduled for an RCS system during this 5-year CIP period include Braemar (T-26), Haymarket (T-20), Manassas Southside (T-24) and Landfill (T-31). The timing and execution are subject to change based on operational needs and priorities.

**Project Benefit:** This project provides an important safeguard against the risk of subsequent contamination after treatment, a unique and significant benefit for public health.

**Source Derivation:** Operations and Maintenance Division; Managed by the Operations and Maintenance Division.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
0	335	1265	1500	1400	1700	0	6200

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>



Service Authority



# WATER TRANSMISSION PROJECTS

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Dawkins Branch Transmission Main  
**CIP Number:** WAT-115  
**JDE Number(s):** 22WBRM0101, 24WBRM0101, 22WGWM1301, 24WGWM1301  
**Location:** University Blvd. between Sudley Manor Dr. and Devlin Rd.  
**Pressure Zone:** GW – Gainesville  
**Sewershed:** BR – Broad Run  
**Magisterial District:** PO – Potomac  
**Project Estimate:** OPCC  
**Estimate By:** Engineering and Planning Division

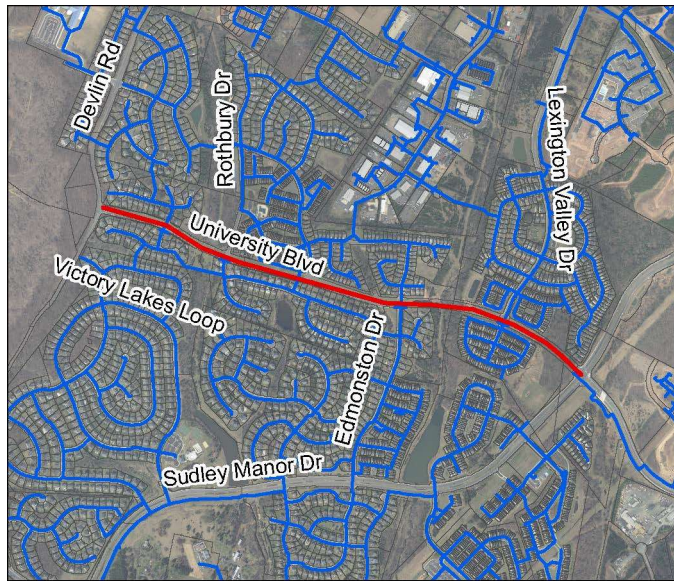
**PROJECT DESCRIPTION**

**Project Description:** Design and construction of approximately 6,650 feet of 30-inch water main along University Boulevard from Sudley Manor Drive to the west side of Devlin Road. 4,300 feet of the water main is to be designed and constructed by the SA from Edmonston Drive to Devlin Road, and 2,350 feet is to be designed and constructed with the PWC University Boulevard roadway expansion between Sudley Manor Drive and Edmonston Drive.

**Project Benefit:** This project shall extend a major transmission main through the center of the Gainesville pressure zone to convey additional pump discharge from the Unity Reed, F14 Booster Pumping Station. This project shall increase the transmission capacity throughout the pressure zone and strengthen the supply to the Haymarket pressure zone.

**Source Derivation:** Gannett Fleming Western Zone Water Transmission Main Study, 1992; Managed by the Engineering and Planning Division, Project Management Office and Prince William County.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
529	1000	2000	129	0	2500	2237	8395

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	60%
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	40%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Gainesville to Manassas South Connector  
**CIP Number:** WAT-122  
**JDE Number(s):** 22WMSM0101, 24WMSM0101  
**Location:** Harry J Parish Blvd. to Pennsylvania Ave.  
**Pressure Zone:** MS – Manassas Southside, GW – Gainesville  
**Sewershed:** GD – Godwin Drive  
**Magisterial District:** BR – Brentsville, CO – Coles  
**Project Estimate:** OPCC  
**Estimate By:** Engineering and Planning Division, CH2M, Hazen

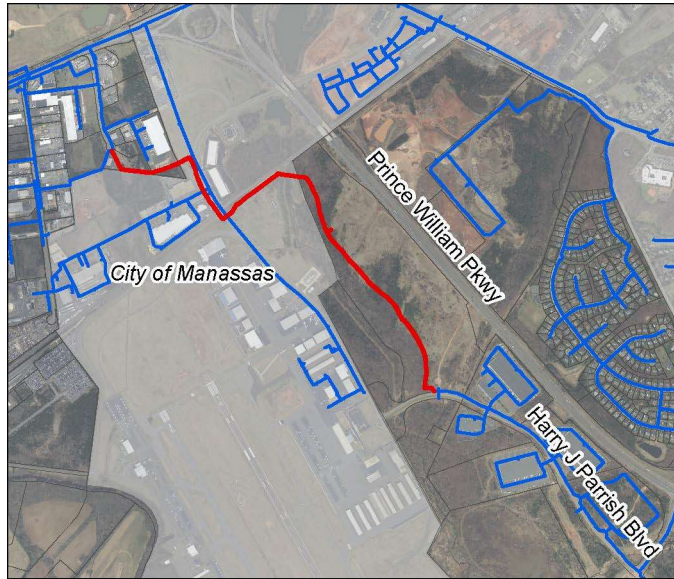
**PROJECT DESCRIPTION**

**Project Description:** Construction of approximately 6,500 feet of 16-inch water main to interconnect the Manassas Southside and Gainesville pressure zones. This project also includes the construction of a pressure control valve vault to regulate the flows and pressures between zones.

**Project Benefit:** Provides the capability to convey water between pressure zones at the same hydraulic gradient for increased reliability and redundancy. Additionally, this project shall provide a secondary route for the transmission of water from Fairfax Water to all areas surrounding the City of Manassas served by the SA.

**Source Derivation:** Engineering and Planning Division; WRA Water Supply and Distribution System Optimization Study, 2002; Managed by the Engineering and Planning Division and Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
820	0	0	0	378	2500	1556	<b>5254</b>

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	45%
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	45%
Other Contrib. – Development Contributions	10%
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

<b>PROJECT INFORMATION</b>		<b>PROJECT DESCRIPTION</b>	
<b>Project Name:</b>	<b>Possum Point Road Water Main Replacement – Phase 2</b>	<b>Project Description:</b>	Replacement of approximately 11,800 feet of existing, aged 12-inch water main with new 12-inch water main along Possum Point Road from Howard Street to Summer Duck Drive, and then from the Town of Dumfries limits to the terminus of Possum Point Road.
<b>CIP Number:</b>	WAT-138	<b>Project Benefit:</b>	Replacement of the existing water main that has corroded over time due to acidic soils resulting in numerous breaks over recent years shall improve system reliability and lower maintenance costs.
<b>JDE Number(s):</b>	Not Assigned	<b>Source Derivation:</b>	Engineering and Planning Division; Managed by the Engineering and Planning Division and Project Management Office.
<b>Location:</b>	Howard St. to Summer Duck Dr., Town Limits to Possum Point Rd. terminus		
<b>Pressure Zone:</b>	DT – Dumfries		
<b>Sewershed:</b>	DM – Dumfries		
<b>Magisterial District:</b>	PO – Potomac		
<b>Project Estimate:</b>	Order of Magnitude		
<b>Estimate By:</b>	Engineering and Planning Division		

<b>PROJECT PICTURE</b>		<b>PROJECT FUNDING</b>							
		<b>PRE-FY23</b>	<b>FY23</b>	<b>FY24</b>	<b>FY25</b>	<b>FY26</b>	<b>FY27</b>	<b>POST- FY27</b>	<b>TOTAL</b>
		0	0	0	408	2272	2000	0	4680
		<b>Proposed Funding Sources</b>							
		<b>Exp. Fund (02) – Availability Fees</b>					-		
		<b>Commit. Fund (03) – Availability Fees</b>					-		
		<b>Repl. Fund (04) – User Rates</b>					100%		
		<b>Other Contrib. – Development Contributions</b>					-		
		<b>PROJECT TOTAL</b>					<b>100%</b>		

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Sudley Road Water Main Improvements – Phase 2  
**CIP Number:** WAT-143  
**JDE Number(s):** 24WGMM0301  
**Location:** Balls Ford Rd. to Godwin Dr.  
**Pressure Zone:** GM – Greater Manassas  
**Sewershed:** BU – Bull Run, FB – Flat Branch  
**Magisterial District:** GN – Gainesville, BR – Brentsville, CO - Coles  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Engineering and Planning Division

**PROJECT DESCRIPTION**

**Project Description:** Replacement of approximately 12,275 feet of existing 14-inch cast iron water main with 16-inch ductile iron water main along Sudley Road from Balls Ford Road to Godwin Drive. The project includes several interconnections with existing mains along this corridor.

**Project Benefit:** This project shall improve transmission, distribution, fire flows, and service to a densely developed corridor of the County. This project shall also enable the abandonment of the over 40-year-old cast iron water main in the median and turn lanes of Sudley Road.

**Source Derivation:** Engineering and Planning Division; Managed by the Engineering and Planning Division and Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
30	90	298	2000	3500	983	0	6901

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Route 1 Transmission Main – Phase 1  
**CIP Number:** WAT-181  
**JDE Number(s):** 22WDM0001, 24WDM0001  
**Location:** Rt. 1 from Garfield BPS to Rt. 234  
**Pressure Zone:** DM – Dumfries  
**Sewershed:** Multiple  
**Magisterial District:** PO – Potomac and WB – Woodbridge  
**Project Estimate:** Contract Award  
**Estimate By:** Engineering and Planning Division

**PROJECT DESCRIPTION**

**Project Description:** Design and construction of approximately 13,500 feet of 30-inch water main along Route 1 from the Garfield Booster Pumping Station to Route 234.

**Project Benefit:** This project shall increase transmission capacity and reliability within the Dumfries pressure zone, increase pumping efficiency at the Garfield Booster Pumping Station, and enhance the transfer of water into the Montclair pressure zone and Potomac Shores area. This project shall also enable several existing, older concrete and cast iron mains that have experienced numerous breaks to be removed from service.

**Source Derivation:** Engineering and Planning Division; WRA East End Water System Technical Memo, 2001; Managed by the Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
8100	4260	844	0	0	0	0	13204

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	50%
Repl. Fund (04) – User Rates	50%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Route 1 Transmission Main – Phase 2  
**CIP Number:** WAT-182  
**JDE Number(s):** 22WDMM0002, 24WDMM0002  
**Location:** Rt. 1 from Rt. 234 to Fuller Heights Rd.  
**Pressure Zone:** DM – Dumfries  
**Sewershed:** DM – Dumfries and LC – Little Creek  
**Magisterial District:** PO – Potomac  
**Project Estimate:** Contract Award  
**Estimate By:** Engineering and Planning Division

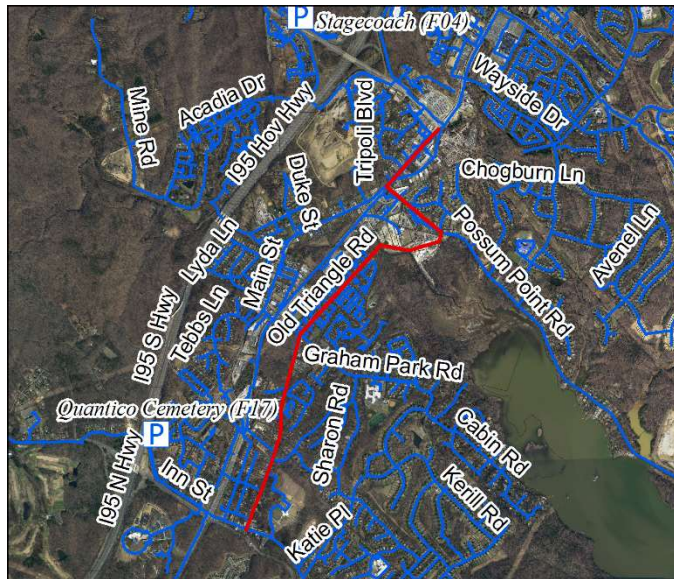
**PROJECT DESCRIPTION**

**Project Description:** Design and construction of approximately 8,750 feet of 24-inch water main along Route 1 from Route 234 to Graham Park Road, and 5,500 feet of 16-inch water main along Old Triangle Road from Graham Park Road to Fuller Heights Road.

**Project Benefit:** This project shall increase transmission capacity, reliability, and redundancy within the Dumfries pressure zone south of Route 234 and enable several existing older cast iron water mains that have experienced numerous breaks to be removed from service.

**Source Derivation:** Engineering and Planning Division; WRA East End Water System Technical Memo, 2001; Managed by the Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
7890	4760	808	0	0	0	0	13458

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	50%
Repl. Fund (04) – User Rates	50%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

<b>PROJECT INFORMATION</b>		<b>PROJECT DESCRIPTION</b>	
<b>Project Name:</b>	<b>Water Distribution Asset Replacement Program</b>	<b>Project Description:</b>	Replacement of water distribution assets including water main, hydrants, service lines, meter crocks, and isolation valves. The assets scheduled for replacement during this 5-year CIP period include: water mains in Paxton Street, King George street, Willow Lane, Norfolk Street, Salem Street, Cabin Road, Hylton Avenue, Bayside Avenue and the replacement of hydrants and valves throughout the system. The timing and execution of these projects are subject to change based on operational needs and priorities.
<b>CIP Number:</b>	WAT-200	<b>Project Benefit:</b>	The replacement of water distribution assets will improve reliability, increase fire protection, reduce maintenance costs, and improve overall customer service.
<b>JDE Number(s):</b>	Not Assigned	<b>Source Derivation:</b>	Operations and Maintenance Division; Managed by the Engineering and Planning Division, Project Management Office and Operations and Maintenance Division.
<b>Location:</b>	County Wide		
<b>Pressure Zone:</b>	Multiple		
<b>Sewershed:</b>	Multiple		
<b>Magisterial District:</b>	Multiple		
<b>Project Estimate:</b>	Order of Magnitude		
<b>Estimate By:</b>	Engineering and Planning Division		

<b>PROJECT PICTURE</b>		<b>PROJECT FUNDING</b>																									
		<b>Proposed Funding Sources</b>																									
		<table border="1"> <thead> <tr> <th>PRE-FY23</th> <th>FY23</th> <th>FY24</th> <th>FY25</th> <th>FY26</th> <th>FY27</th> <th>POST- FY27</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td align="center">0</td> <td align="center">3500</td> <td align="center">3500</td> <td align="center">3500</td> <td align="center">3500</td> <td align="center">3500</td> <td align="center">18000</td> <td align="center">35500</td> </tr> </tbody> </table>	PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL	0	3500	3500	3500	3500	3500	18000	35500	<table border="1"> <tbody> <tr> <td><b>Exp. Fund (02) – Availability Fees</b></td> <td align="center">-</td> </tr> <tr> <td><b>Commit. Fund (03) – Availability Fees</b></td> <td align="center">-</td> </tr> <tr> <td><b>Repl. Fund (04) – User Rates</b></td> <td align="center">100%</td> </tr> <tr> <td><b>Other Contrib. – Development Contributions</b></td> <td align="center">-</td> </tr> <tr> <td align="center"><b>PROJECT TOTAL</b></td> <td align="center"><b>100%</b></td> </tr> </tbody> </table>	<b>Exp. Fund (02) – Availability Fees</b>	-	<b>Commit. Fund (03) – Availability Fees</b>	-	<b>Repl. Fund (04) – User Rates</b>	100%	<b>Other Contrib. – Development Contributions</b>	-
PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL																				
0	3500	3500	3500	3500	3500	18000	35500																				
<b>Exp. Fund (02) – Availability Fees</b>	-																										
<b>Commit. Fund (03) – Availability Fees</b>	-																										
<b>Repl. Fund (04) – User Rates</b>	100%																										
<b>Other Contrib. – Development Contributions</b>	-																										
<b>PROJECT TOTAL</b>	<b>100%</b>																										

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Bull Run Mountain Distribution System Improvements

**CIP Number:** WAT-201

**JDE Number(s):** Not Assigned

**Location:** Bull Run Mountain

**Pressure Zone:** BWU – Bull Run Upper, BWL – Bull Run Lower, EG – Evergreen

**Sewershed:** N/A

**Magisterial District:** GN – Gainesville

**Project Estimate:** Order of Magnitude

**Estimate By:** Engineering and Planning Division

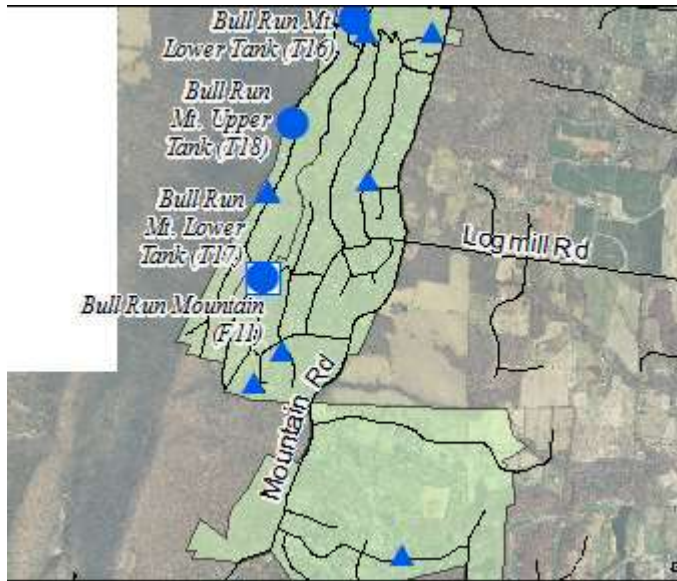
**PROJECT DESCRIPTION**

**Project Description:** Replacement and installation of water distribution assets including water mains, hydrants, service lines, meter crocks, and isolation valves. The assets scheduled for replacement during this 5-year CIP period include: water mains in Youngs Drive and Oak Lane, and valve replacements. The timing and execution are subject to change based on operational needs and priorities.

**Project Benefit:** Many of the existing assets are located in residential backyards or are in close proximity to various structures and have had numerous breaks. The replacement and relocation of water distribution assets shall improve reliability, reduce maintenance costs, increase operational efficiencies of the well sites, and improve overall customer service.

**Source Derivation:** Operations and Maintenance Division; Managed by the Engineering and Planning Division and Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
0	200	1000	1000	1000	1000	4000	8200

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

# SEWAGE PUMPING STATION PROJECTS



Service Authority

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Generator Replacement Program  
**CIP Number:** SPS-100  
**JDE Number(s):** Not Assigned  
**Location:** County Wide  
**Pressure Zone:** Multiple  
**Sewershed:** Multiple  
**Magisterial District:** Multiple  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Operations and Maintenance Division

**PROJECT DESCRIPTION**

**Project Description:** This program upgrades or replaces aging diesel generators, transfer switches, and appurtenances at SA facilities.  
**Project Benefit:** This program improves and maintains a reliable, resilient, and operational system by replacing aging generators and appurtenances. It eliminates the difficulty in obtaining replacement parts for old and outdated generators.  
**Source Derivation:** Operations and Maintenance Division, Managed by the Operations and Maintenance Division.

**PROJECT PICTURE**



FY23 – FY27

**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
0	765	1322	773	470	420	0	<b>3750</b>

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Replace Occoquan Forest Sewage Pumping Stations, OQL36 & OQL37

**CIP Number:** SPS-107

**JDE Number(s):** 24SOQL7501 (L36), 24SOQL3701 (L37)

**Location:** 10820 Split Rail Dr. and 6204 Ramblewood Tr., Manassas

**Pressure Zone:** HO – Hoadly

**Sewershed:** OQ – Occoquan Forest

**Magisterial District:** OC – Occoquan

**Project Estimate:** Contract Award

**Estimate By:** Engineering and Planning Division

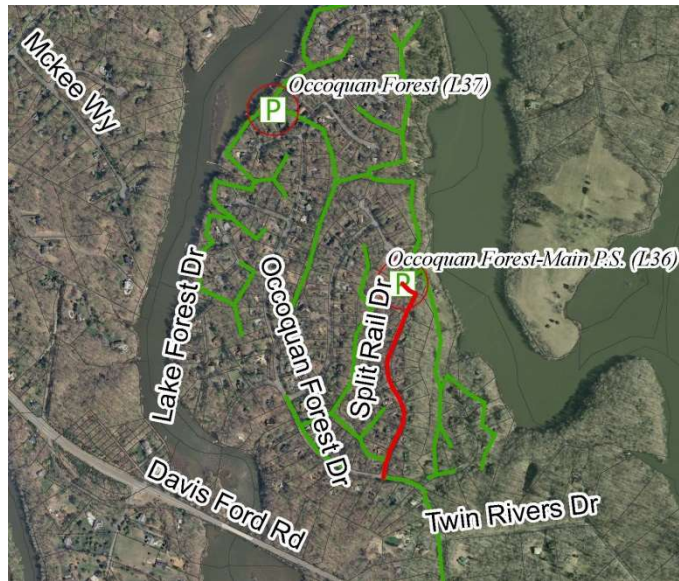
**PROJECT DESCRIPTION**

**Project Description:** The design and construction of the replacement of the antiquated Occoquan Forest Sewage Pumping Station OQL36, associated force main, and the rehabilitation of Sewage Pumping Station OQL37. This project also includes the installation of emergency generators and by-pass connections on the force mains.

**Project Benefit:** This project will provide improved reliable service to the Occoquan Forest sewershed in compliance with the PWC Comprehensive Plan and VDEQ regulations. In addition, it shall reduce maintenance costs, provide new emergency backup power supplies, and improve safety conditions at both sewage pumping stations.

**Source Derivation:** Engineering and Planning Division; Operations and Maintenance Division; Managed by the Project Management Office.

**PROJECT PICTURE**




**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
2593	2500	1116	170	0	0	0	6379

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

<b>PROJECT INFORMATION</b>		<b>PROJECT DESCRIPTION</b>	
<b>Project Name:</b>	Replace Nokesville Sewage Pumping Station, L20	<b>Project Description:</b>	The design and construction of the replacement of the antiquated Nokesville Sewage Pumping Station, L20, and associated force main. The new sewage pumping station shall be equipped with an emergency generator, a by-pass connection on the new force main, and new flow monitoring equipment.
<b>CIP Number:</b>	SPS-108	<b>Project Benefit:</b>	This project shall provide improved, reliable service to the Nokesville sewershed in compliance with the PWC Comprehensive Plan and VDEQ regulations. The project shall reduce maintenance expenses, improve reliability, provide emergency backup power supply, and improve safety conditions at the sewage pumping station.
<b>JDE Number(s):</b>	24SNKL7701	<b>Source Derivation:</b>	Engineering and Planning Division; Managed by the Project Management Office.
<b>Location:</b>	12829 Fitzwater Dr., Nokesville		
<b>Pressure Zone:</b>	N/A		
<b>Sewershed:</b>	NK – Nokesville		
<b>Magisterial District:</b>	BR - Brentsville		
<b>Project Estimate:</b>	Contract Award		
<b>Estimate By:</b>	Engineering and Planning Division		

<b>PROJECT PICTURE</b>		<b>PROJECT FUNDING</b>																							
		<table border="1"> <thead> <tr> <th>PRE-FY23</th> <th>FY23</th> <th>FY24</th> <th>FY25</th> <th>FY26</th> <th>FY27</th> <th>POST- FY27</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td align="center">894</td> <td align="center">1320</td> <td align="center">350</td> <td align="center">90</td> <td align="center">0</td> <td align="center">0</td> <td align="center">0</td> <td align="center">2654</td> </tr> </tbody> </table>								PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL	894	1320	350	90	0	0	0	2654
		PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL																
894	1320	350	90	0	0	0	2654																		
<table border="1"> <thead> <tr> <th colspan="2">Proposed Funding Sources</th> </tr> </thead> <tbody> <tr> <td>Exp. Fund (02) – Availability Fees</td> <td align="center">-</td> </tr> <tr> <td>Commit. Fund (03) – Availability Fees</td> <td align="center">-</td> </tr> <tr> <td>Repl. Fund (04) – User Rates</td> <td align="center">100%</td> </tr> <tr> <td>Other Contrib. – Development Contributions</td> <td align="center">-</td> </tr> <tr> <td><b>PROJECT TOTAL</b></td> <td align="center"><b>100%</b></td> </tr> </tbody> </table>								Proposed Funding Sources		Exp. Fund (02) – Availability Fees	-	Commit. Fund (03) – Availability Fees	-	Repl. Fund (04) – User Rates	100%	Other Contrib. – Development Contributions	-	<b>PROJECT TOTAL</b>	<b>100%</b>						
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Other Contrib. – Development Contributions	-																								
<b>PROJECT TOTAL</b>	<b>100%</b>																								

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Replace Graham Park Sewage Pumping Station, L13  
**CIP Number:** SPS-112  
**JDE Number(s):** 24SMRL7601  
**Location:** 3196 Shoreview Rd., Dumfries  
**Pressure Zone:** DT – Dumfries  
**Sewershed:** MR – Melrose  
**Magisterial District:** PO – Potomac  
**Project Estimate:** PER  
**Estimate By:** Engineering and Planning Division

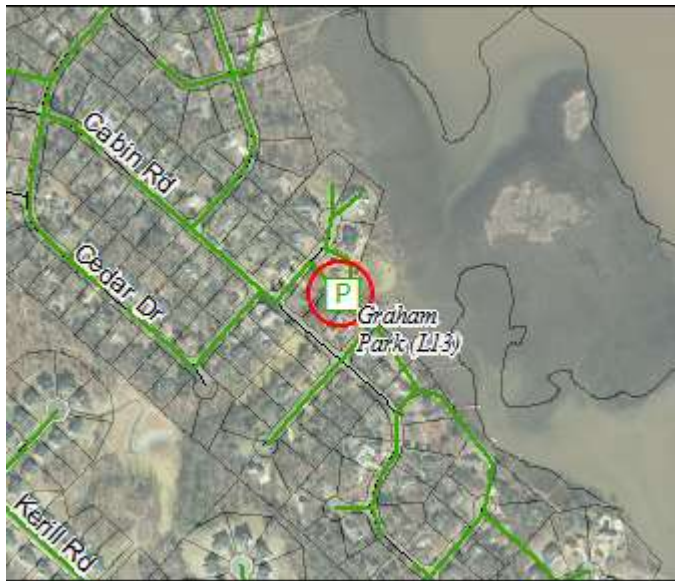
**PROJECT DESCRIPTION**

**Project Description:** Replacement of the existing antiquated Graham Park Sewage Pumping Station. The project shall include the installation of new submersible pumps with new controls, motors, emergency generator, by-pass connection on the force main, new flow metering, and SCADA equipment. The site layout shall also be improved to protect the facilities from storm surge flooding and new fencing around the premises shall be installed. Also included is the complete replacement of approximately 550 feet of existing 4-inch force main.

**Project Benefit:** Improve service to existing customers in the Graham Park sewershed in compliance with the PWC Comprehensive Plan. This project shall reduce maintenance costs, provide emergency backup power supply, and improve safety conditions at the sewage pumping station.

**Source Derivation:** Operations and Maintenance Division; Managed by the Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
3119	1230	85	85	0	0	0	4519

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Heritage Hunt Sewage Pumping Station, L52 Replacement and Force Main Extension

**CIP Number:** SPS-113

**JDE Number(s):** 22SLBL5202, 24SLBL5202, 22SLBM9001, 24SLBM9001

**Location:** 6588 Alderwood Way, Gainesville

**Pressure Zone:** HM – Haymarket

**Sewershed:** LB – Little Bull Run

**Magisterial District:** GN – Gainesville

**Project Estimate:** PER

**Estimate By:** Engineering and Planning Division

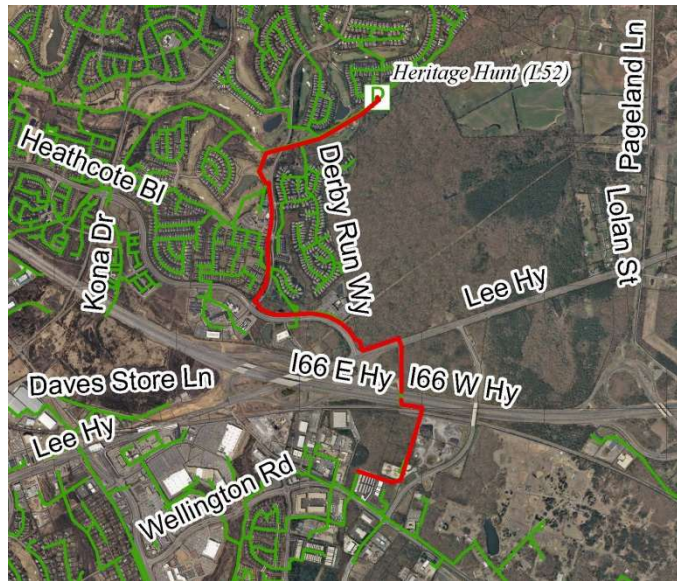
**PROJECT DESCRIPTION**

**Project Description:** Replacement of the Heritage Hunt Sewage Pumping Station to increase pumping capacity from 5 MGD to 8 MGD. The project shall include a manual screen, dual channel grinders, dry-pit submersible pumps and associated piping and valves, bioxide odor control system, new flowmeters, and a crane system. This project also includes the design and construction of approximately 10,250 feet of 24-inch force main from the station to the existing 24-inch force main south of I-66, parallel to the existing 10-inch and 16-inch force mains already in service.

**Project Benefit:** Continued access to public sewer service for residential and commercial developments in the Little Bull Run sewershed in conformance with the PWC Comprehensive Plan. Ultimate development of the service area will exceed the capacity of the current station. Discharge capacity of the station will be increased to meet current and future development needs.

**Source Derivation:** Engineering and Planning Division; Dewberry Opinion of Probable Construction Cost, 2021; Managed by the Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
3807	8015	13466	12754	1266	0	0	39308

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	50%
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	50%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Belmont Sewage Pumping Station, L17 Replacement and Force Main Extension  
**CIP Number:** SPS-115  
**JDE Number(s):** 22SBML0201, 24SBML0201  
**Location:** 13760 Dabney Rd., Woodbridge  
**Pressure Zone:** WL – Woodbridge  
**Sewershed:** BM – Belmont  
**Magisterial District:** WB – Woodbridge  
**Project Estimate:** PER  
**Estimate By:** Engineering and Planning Division

**PROJECT DESCRIPTION**

**Project Description:** Replacement of the existing Belmont Sewage Pumping Station to increase pumping capacity from 8 MGD to 12 MGD. This project will include a new influent channel, channel grinder, wet well, flow meters, odor control, SCADA, mechanical and electrical equipment, and a standby generator. This project also includes the evaluation of constructing a new parallel force main to improve overall pumping operations in the collection system.

**Project Benefit:** This project shall provide adequate pumping capacity to serve future development within the sewer shed in conformance with the PWC Comprehensive Plan. This project will also relieve capacity constraints in the existing 30-inch force main coming from the Occoquan Creek Sewage Pumping Station by conveying the Belmont Sewage Pumping Station flows directly into the Colchester Interceptor.

**Source Derivation:** GHD Belmont Sewage Pumping Station Preliminary Engineering Report, 2020; Managed by the Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
620	940	5065	5809	3000	0	0	15434

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	30%
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	70%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Hornbaker Sewage Pumping Station, L06 Rehabilitation and Force Main  
**CIP Number:** SPS-116  
**JDE Number(s):** 24SOCL0601  
**Location:** Sport & Health Dr., Woodbridge  
**Pressure Zone:** WL – Woodbridge  
**Sewershed:** OC – Occoquan Creek  
**Magisterial District:** OC – Occoquan  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Engineering and Planning Division

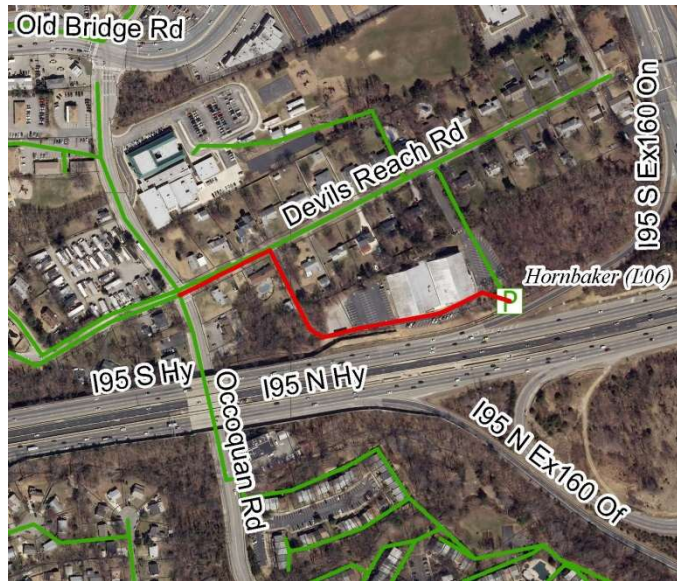
**PROJECT DESCRIPTION**

**Project Description:** Rehabilitation of the antiquated Hornbaker Sewage Pumping Station and construction of approximately 1,360 feet of 6-inch force main routed from the Hornbaker Sewage Pumping Station to Occoquan Road to replace the existing 6-inch force main that has experienced numerous breaks.

**Project Benefit:** This project shall improve service and reliability to existing customers in compliance with the PWC Comprehensive Plan and VDEQ regulations. The project shall reduce maintenance costs, improve reliability, and the new force main shall enhance operations and improve reliability of the pumping station.

**Source Derivation:** Engineering and Planning Division; Managed by the Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
175	375	923	2727	2284	0	0	6484

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

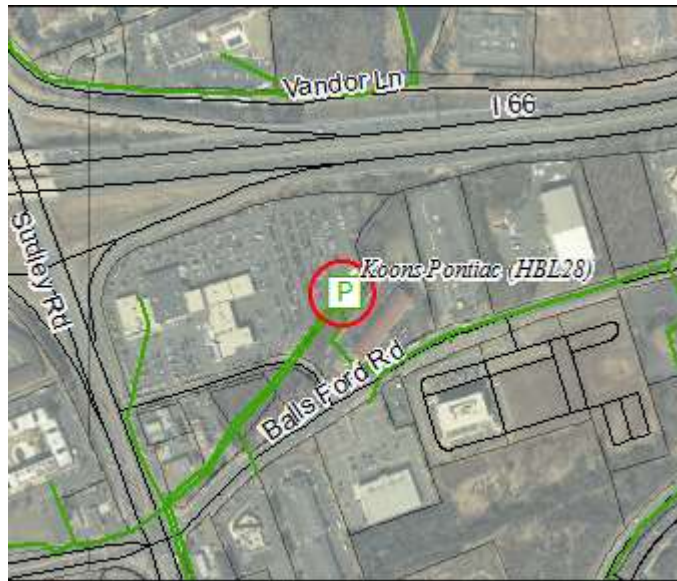
**PROJECT INFORMATION**

**Project Name:** Koon's Sewage Pumping Station, L28 Replacement  
**CIP Number:** SPS-118  
**JDE Number(s):** 24SBUL0101  
**Location:** 10640 Automotive Dr., Manassas  
**Pressure Zone:** GW – Gainesville  
**Sewershed:** BU – Bull Run  
**Magisterial District:** GN – Gainesville  
**Project Estimate:** PER  
**Estimate By:** Engineering and Planning Division

**PROJECT DESCRIPTION**

**Project Description:** Replacement of the Koon's Sewage Pumping Station to include new pumps and motors, grinder, wet well, meter/valve vault, HVAC, odor control, SCADA, mechanical and electrical equipment, standby generator, and perimeter fencing.  
**Project Benefit:** This project shall improve service and reliability to existing and future customers within the sewershed and reduce maintenance costs.  
**Source Derivation:** GHD Koon's Sewage Pumping Station Preliminary Engineering Report, 2020; Managed by the Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
455	945	1270	1240	1000	0	0	4910

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Spinnaker Court Sewage Pumping Station, L02, and Force Main Replacement  
**CIP Number:** SPS-123  
**JDE Number(s):** 24SHRL0101  
**Location:** 2280 Spinnaker Ct., Woodbridge  
**Pressure Zone:** LR – Lake Ridge  
**Sewershed:** HR – Hooes Run  
**Magisterial District:** OC – Occoquan  
**Project Estimate:** PER  
**Estimate By:** Engineering and Planning Division

**PROJECT DESCRIPTION**

**Project Description:** Replacement of the Spinnaker Court Sewage Pumping Station to include new pumps and motors, grinder, wet well, meter/valve vault, HVAC, odor control, SCADA, mechanical and electrical equipment, standby generator, and perimeter fencing. Also included is the replacement of approximately 500 feet of existing 4-inch force main.

**Project Benefit:** Upgrade an antiqued sewage pumping station, which was built in 1970, to new standards to improve station operation, reliability, security and reduce maintenance costs.

**Source Derivation:** GHD Spinnaker Court Sewage Pumping Station Preliminary Engineering Report, 2020; Managed by the Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
355	895	1255	1255	600	0	0	4360

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Occoquan Creek Sewage Pumping Station, L04 Replacement  
**CIP Number:** SPS-125  
**JDE Number(s):** 24SOCL0701  
**Location:** 13221 Marina Way, Woodbridge  
**Pressure Zone:** WL – Woodbridge  
**Sewershed:** OC – Occoquan Creek  
**Magisterial District:** WB – Woodbridge  
**Project Estimate:** PER  
**Estimate By:** Engineering and Planning Division

**PROJECT DESCRIPTION**

**Project Description:** Replacement at a new location of the existing Occoquan Creek Sewage Pumping Station to include the installation of new higher capacity pumps and associated piping and valves, mechanical and electrical equipment, flow meters, SCADA system, standby generator and security measures. This project also includes the design and construction of a new incoming 42-inch gravity main and provisions for emergency storage.

**Project Benefit:** The project shall improve pump station operation, reliability, and security, and reduce the risk of flooding by relocating the station further away from Occoquan Creek.

**Source Derivation:** GHD Occoquan Creek Sewage Pumping Station Preliminary Engineering Report, 2018; Managed by the Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
100	1075	2572	4073	3456	3500	0	14776

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Piney Branch Sewage Pumping Station, L26 Demolition and Gravity Sewer Extension  
**CIP Number:** SPS-126  
**JDE Number(s):** Not Assigned  
**Location:** Piney Branch SPS  
**Pressure Zone:** GW – Gainesville  
**Sewershed:** PB – Piney Branch, BR – Broad Run  
**Magisterial District:** BR – Brentsville  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Engineering and Planning Division

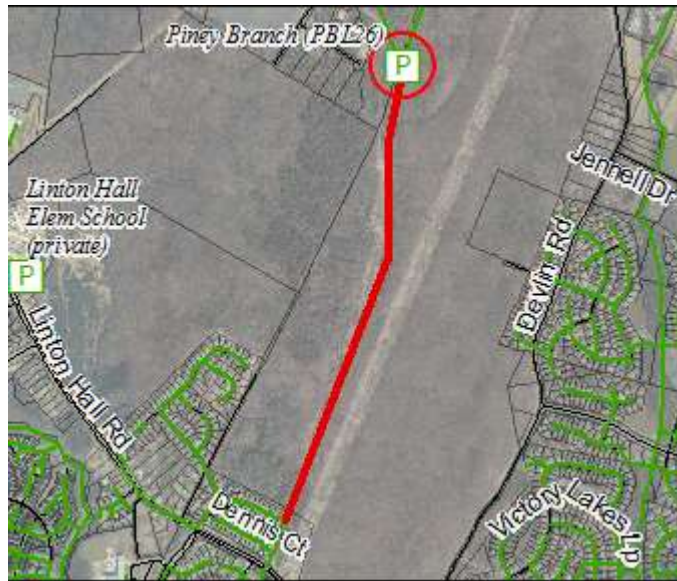
**PROJECT DESCRIPTION**

**Project Description:** Demolition of the existing Piney Branch Sewage Pumping Station that is undersized and has reached the end of its service life and construction of approximately 6,600 feet of 24-inch gravity sewer main to combine the Piney Branch sewershed with the Broad Run sewershed. This project shall be constructed in conjunction with proposed future development using the Utility System Improvement Opportunity (USIO).

**Project Benefit:** Eliminate an antiqued sewage pumping station and provide a higher capacity gravity sewer main to provide reliable service to the combined sewersheds in compliance with the PWC Comprehensive Plan and VDEQ regulations.

**Source Derivation:** Engineering and Planning Division; Managed by the Engineering and Planning Division.

**PROJECT PICTURE**



FY23 – FY27

**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
1070	0	1000	1000	590	0	0	3660

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	60%
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	15%
Other Contrib. – Development Contributions	25%
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Hooes Run Sewage Pumping Station, L01, Rehabilitation  
**CIP Number:** SPS-134  
**JDE Number(s):** 24SHRL0201  
**Location:** 2502 Old Bridge Rd., Woodbridge  
**Pressure Zone:** LR – Lake Ridge  
**Sewershed:** HR – Hooes Run  
**Magisterial District:** OC – Occoquan  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Engineering and Planning Division

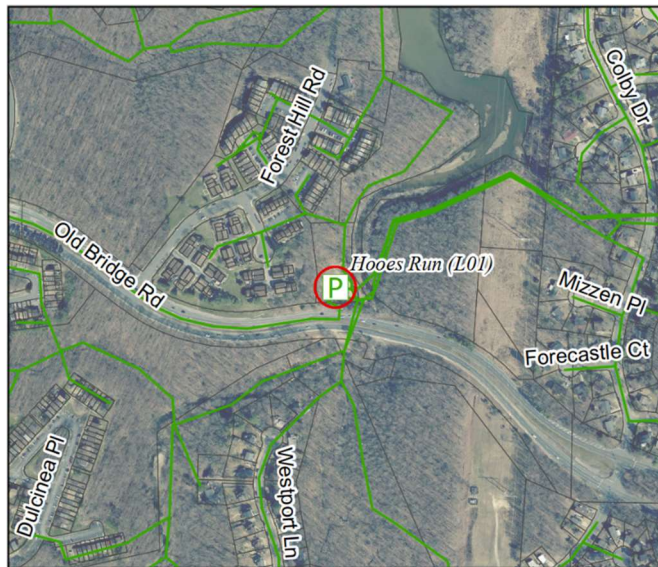
**PROJECT DESCRIPTION**

**Project Description:** Evaluation and rehabilitation of the existing 48-year old Hooes Run Sewage Pumping Station to upgrade structural, mechanical (piping and pumping capacity), electrical, SCADA, and HVAC systems as required, and include security measures and emergency storage considerations.

**Project Benefit:** The project shall improve pump station operation, reliability, security, and reduce maintenance costs and ensure projected long-term wastewater flows are satisfied.

**Source Derivation:** Engineering and Planning Division; Managed by the Engineering and Planning Division.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
120	280	600	1520	1500	1000	0	<b>5020</b>

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Yorkshire Sewage Pumping Station, L30, Rehabilitation  
**CIP Number:** SPS-135  
**JDE Number(s):** 24SYSL010  
**Location:** 7415 Lake Dr., Manassas  
**Pressure Zone:** GM – Greater Manassas/Yorkshire  
**Sewershed:** YS – Yorkshire  
**Magisterial District:** CO – Coles  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Engineering and Planning Division

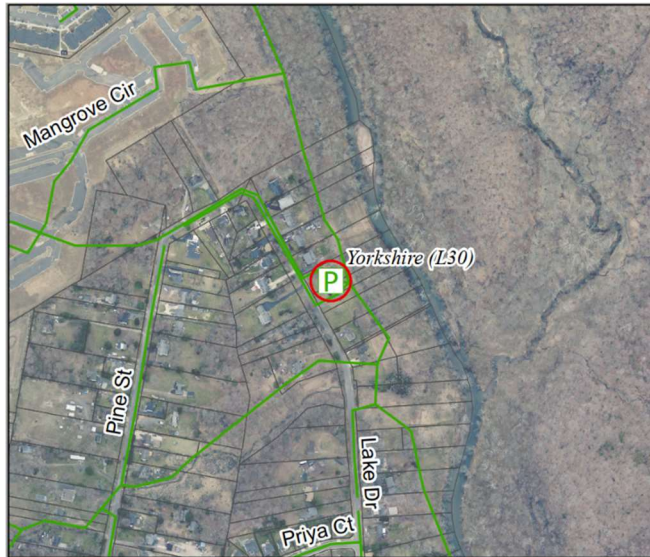
**PROJECT DESCRIPTION**

**Project Description:** Evaluation and rehabilitation of the existing 40-year old Yorkshire Sewage Pumping Station to upgrade structural, mechanical (piping and pumping capacity), electrical, SCADA, and HVAC systems as required, and include security measures and emergency storage considerations.

**Project Benefit:** The project shall improve pump station operation, reliability, security, and reduce maintenance costs and ensure projected long-term wastewater flows are satisfied.

**Source Derivation:** Engineering and Planning Division; Managed by the Engineering and Planning Division.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
115	280	600	1520	1500	1000	0	<b>5015</b>

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Melrose Sewage Pumping Station, L10, Replacement  
**CIP Number:** SPS-136  
**JDE Number(s):** 24SDML0201  
**Location:** 3350 Melrose Ave., Triangle  
**Pressure Zone:** DT – Dumfries/Triangle  
**Sewershed:** MR – Melrose  
**Magisterial District:** PO – Potomac  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Engineering and Planning Division

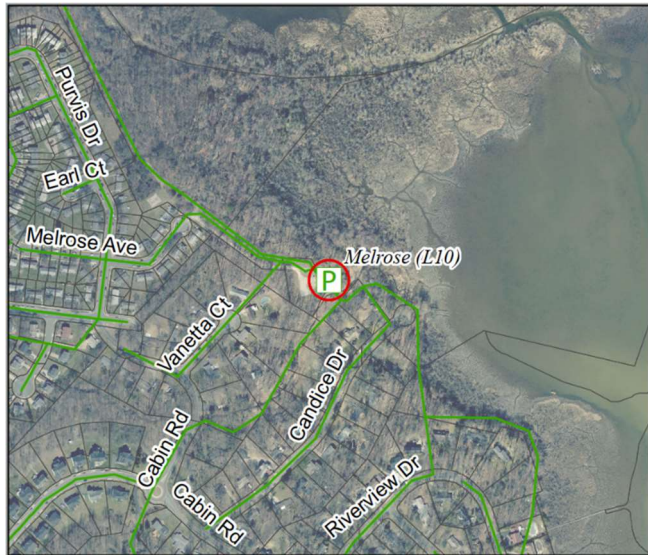
**PROJECT DESCRIPTION**

**Project Description:** Evaluation and replacement of the existing 47-year old Melrose Sewage Pumping Station to include an increase in firm pumping capacity from 490 GPM 1,150 GPM, and to improve grinder, electrical, SCADA, and HVAC systems, plus security measures and emergency storage considerations.

**Project Benefit:** The project shall improve pump station operation, reliability, security, and reduce maintenance costs and ensure projected long-term wastewater flows are satisfied.

**Source Derivation:** Engineering and Planning Division; Managed by the Engineering and Planning Division.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
113	280	1070	2520	2500	2022	0	8505

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Dawson Landing Sewage Pumping Station, L51, Replacement  
**CIP Number:** SPS-137  
**JDE Number(s):** 24SNEL0401  
**Location:** 1599 Whistling Swan Way, Woodbridge  
**Pressure Zone:** WL – Woodbridge  
**Sewershed:** NE – Neabsco  
**Magisterial District:** WB – Woodbridge  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Engineering and Planning Division

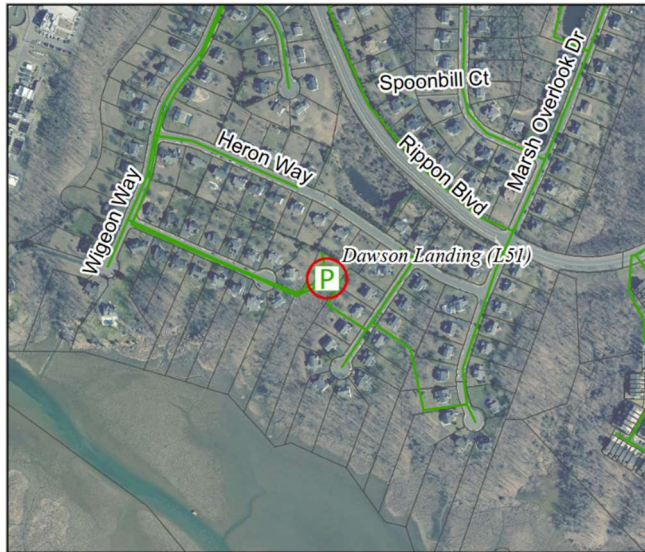
**PROJECT DESCRIPTION**

**Project Description:** Replacement of the existing 26-year old Dawson Landing Sewage Pumping Station to upgrade structural, mechanical (piping and pumping capacity), electrical, SCADA, and HVAC systems as required, and include security measures and emergency storage considerations.

**Project Benefit:** The project shall replace defective pumps to improve pump station operation, reliability, security, reduce maintenance costs and ensure projected long-term wastewater flows are satisfied.

**Source Derivation:** Engineering and Planning Division; Managed by the Engineering and Planning Division.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
110	280	600	1020	1000	0	0	<b>3010</b>

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>



Service Authority

# SEWAGE COLLECTION PROJECTS



**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Dumfries Force Main and Water Main Replacement

**CIP Number:** SEW-106

**JDE Number(s):** 24SDMM4502

**Location:** Dumfries

**Pressure Zone:** DT – Dumfries

**Sewershed:** DM – Dumfries

**Magisterial District:** PO – Potomac

**Project Estimate:** Contract Award

**Estimate By:** Engineering and Planning Division

**PROJECT DESCRIPTION**

**Project Description:** Replacement and relocation of approximately 4,000 feet of existing 16-inch force main and replacement of approximately 760 feet of existing 3-inch water main with new 6-inch DIP water main.

**Project Benefit:** The existing force main has experienced numerous breaks and presents a high risk of a major sanitary sewer overflow (SSO). The project shall increase pumping station efficiencies, improve flow capacity and reduce maintenance costs in the sewer system. This project shall also improve the water distribution system by replacing a smaller water main with a larger one and completing a system loop.

**Source Derivation:** Engineering and Planning Division; Operations and Maintenance Division; Managed by the Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST-FY27	TOTAL
1750	2793	150	0	0	0	0	4693

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Sudley Road Sewer Main Replacement & Upgrade  
**CIP Number:** SEW-157  
**JDE Number(s):** 22SBUM0102  
**Location:** Sudley Rd. at the intersection with Coverstone Dr.  
**Pressure Zone:** GM – Greater Manassas  
**Sewershed:** BR –Bull Run  
**Magisterial District:** GN – Gainesville  
**Project Estimate:** Contract Award  
**Estimate By:** Engineering and Planning Division, Baker

**PROJECT DESCRIPTION**

**Project Description:** Design and construction of approximately 2,840 feet of 24-inch sanitary sewer main and manholes from Sudley Road to Williamson Boulevard to replace an existing 12-inch gravity sewer main.  
**Project Benefit:** This project shall increase capacity along the Sudley Road corridor to accommodate future anticipated growth.  
**Source Derivation:** Engineering and Planning Division; Managed by the Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST-FY27	TOTAL
4500	790	150	0	0	0	0	5440

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	75%
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	25%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** I-66 Rest Area Sewer Main Replacement  
**CIP Number:** SEW-158  
**JDE Number(s):** Not Assigned  
**Location:** Manassas, I-66 Rest Area  
**Pressure Zone:** GM – Greater Manassas  
**Sewershed:** BR – Bull Run  
**Magisterial District:** GN – Gainesville  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Engineering and Planning Division

**PROJECT DESCRIPTION**

**Project Description:** Replacement of approximately 350 feet of existing 16-inch gravity sanitary sewer main with an 18-inch gravity sewer main inside a 30-inch casing pipe crossing under I-66.  
**Project Benefit:** The existing gravity sanitary sewer main is showing signs of severe deterioration and has several sags. Replacement shall increase capacity and reliability, minimize the potential for a sanitary sewer overflow (SSO), and reduce inflow and infiltration.  
**Source Derivation:** Operations and Maintenance Division; Managed by the Project Management Office.

**PROJECT PICTURE**



FY23 – FY27

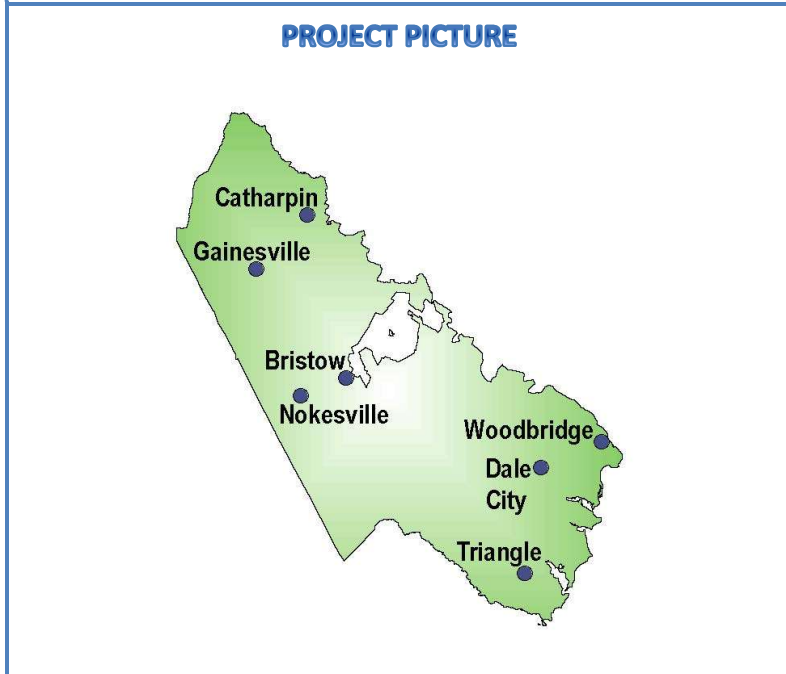
**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST-FY27	TOTAL
65	400	681	681	0	0	0	1827

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

<b>PROJECT INFORMATION</b>		<b>PROJECT DESCRIPTION</b>	
<b>Project Name:</b>	<b>Sewer Collection Rehabilitation &amp; Replacement Program</b>	<b>Project Description:</b>	Rehabilitation, replacement and/or stabilization of sewer collection system facilities including sewer main and manhole re-lining, isolation and air-release valve repair and replacement, sewer lateral repairs, and other miscellaneous system repairs. Facilities scheduled for rehabilitation during this 5-year CIP period include the re-lining of sewer main in Marumsco Hills, Rippon Landing, Old Triangle Road, Horner Road, Old Bridge Road, Oakwood Drive, Yorktown Drive, Smoketown Road and Sharon Road in addition to miscellaneous manhole rehabilitation and service line repairs. The timing and execution are subject to change based on operational needs and priorities.
<b>CIP Number:</b>	SEW-200	<b>Project Benefit:</b>	The rehabilitation or replacement of sewer collection system facilities will reduce maintenance costs, reduce inflow and infiltration, and extend the life of the assets.
<b>JDE Number(s):</b>	Not Assigned	<b>Source Derivation:</b>	Operations and Maintenance Division; Managed by the Operations and Maintenance Division.
<b>Location:</b>	County Wide		
<b>Pressure Zone:</b>	Multiple		
<b>Sewershed:</b>	Multiple		
<b>Magisterial District:</b>	Multiple		
<b>Project Estimate:</b>	Order of Magnitude		
<b>Estimate By:</b>	Operations and Maintenance Division		



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST-FY27	TOTAL
0	1200	1200	1200	1200	1200	1200	7200

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

# WATER RECLAMATION FACILITY PROJECTS



Service Authority

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Ongoing Renewal and Replacement  
**CIP Number:** WRF-123  
**JDE Number(s):** Multiple  
**Location:** H.L. Mooney AWRF  
**Pressure Zone:** WL - Woodbridge  
**Sewershed:** NE – Neabsco  
**Magisterial District:** WB - Woodbridge  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Environmental Services and Water Reclamation Division

**PROJECT DESCRIPTION**

**Project Description:** On-going major updating, restoration, and replacement projects for management of the H.L. Mooney AWRF to maintain and extend useful life of assets and address regular wear and asset aging.  
**Project Benefit:** Maintain operations, permit compliance, and plant resilience.  
**Source Derivation:** Environmental Services and Water Reclamation Division; Managed by the Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
1442	300	300	300	300	300	3300	<b>6242</b>

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	30%
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	70%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Dynamic Hydraulic Model and Instrumentation

**CIP Number:** WRF-126

**JDE Number(s):** 24NMPP0801, 22NMPP0801

**Location:** H.L. Mooney AWRF

**Pressure Zone:** WL - Woodbridge

**Sewershed:** NE – Neabsco

**Magisterial District:** WB - Woodbridge

**Project Estimate:** Order of Magnitude

**Estimate By:** Environmental Services and Water Reclamation Division

**PROJECT DESCRIPTION**

**Project Description:** A full-plant hydraulic simulation model representing existing facilities and controls will be developed for the H.L. Mooney AWRF. The project includes data collection, installation of metering, model development and calibration, and a PER for hydraulic improvements. The hydraulic modeling is phased: the first phase from plant inlet through primary clarifiers, completed in FY21, and then the second phase from bioreactor basins to the outfall.

**Project Benefit:** Facilitates selection of physical plant improvements to meet hydraulic capacity needs and address potential to overflow.

**Source Derivation:** Environmental Services and Water Reclamation Division; Managed by the Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
665	0	0	100	200	300	0	1265

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	30%
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	70%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** FBI and Solids Building Repairs and Modifications  
**CIP Number:** WRF-131  
**JDE Number(s):** 22NMPP1201, 24NMPP1201  
**Location:** H.L. Mooney AWRF  
**Pressure Zone:** WL – Woodbridge  
**Sewershed:** NE – Neabsco  
**Magisterial District:** WB – Woodbridge  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Environmental Services and Water Reclamation Division

**PROJECT DESCRIPTION**

**Project Description:** Repair and refurbishment of the existing Solids Building and Fluidized Bed Incinerator (FBI) equipment, including design and installation of new or replacement equipment from the gravity thickeners to the ash basins. Projects will include a condition assessment, solids equipment upgrades, ash basin improvements, new heat exchanger, ducts and plenums, and Solids Building modifications, repairs, and refurbishment.

**Project Benefit:** Necessary for operational resilience and regulatory compliance for solids handling.

**Source Derivation:** Environmental Services and Water Reclamation Division; Managed by the Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
2200	300	300	300	300	300	2800	6500

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	30%
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	70%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Bioreactor Basin Improvements  
**CIP Number:** WRF-134  
**JDE Number(s):** 24SMPQ0101  
**Location:** H.L. Mooney AWRF  
**Pressure Zone:** WL – Woodbridge  
**Sewershed:** NE – Neabsco  
**Magisterial District:** WB – Woodbridge  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Environmental Services and Water Reclamation Division

**PROJECT DESCRIPTION**

**Project Description:** Major bioreactor basin equipment renewal including, but not limited to, mixers, meters, diffusers, baffles, gates, pumps, and blowers. Modification to the bioreactor basin equipment, instrumentation and controls, and engineering evaluations and pilot testing, to improve such things as, but not limited to, mixed liquor settling, improve process monitoring and control, adjust biological reactions, and reduce chemical dosages. Upgrades to blowers including, but not limited to, technology, motors, and various blower components and technology.

**Project Benefit:** Increased operational resiliency, permit compliance, and maximization of treatment capacity in existing infrastructure.

**Source Derivation:** Environmental Services and Water Reclamation Division; Managed by the Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
1398	300	50	300	300	300	800	<b>3448</b>

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	30%
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	70%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Facility Wide Improvements – Design-Build Project  
**CIP Number:** WRF-138  
**JDE Number(s):** 22SMPP0012, 24SMPP0012  
**Location:** H.L. Mooney AWRF  
**Pressure Zone:** WL – Woodbridge  
**Sewershed:** NE – Neabsco  
**Magisterial District:** WB – Woodbridge  
**Project Estimate:** Order of Magnitude  
**Estimate By:** RK&K

**PROJECT DESCRIPTION**

**Project Description:** Project includes improvements to several areas of the plant including: primary clarifier and facility odor control upgrades; primary clarifier collection equipment upgrades; primary clarifier electrical improvements; equalization basin modifications; influent flow diversion structure; UV Building – additional UV equipment; yard valve replacement; methanol storage addition; lime system upgrades; ferric system improvements; secondary clarifier improvements; plant structural protection and refurbishment; polymer system replacement. Additional options include solids facilities improvements, headworks capacity improvements, Featherstone SPS force main improvements and refurbishment of the freight elevators in the Control & Process and Solids Handling Buildings.

**Project Benefit:** This project will provide improved plant resiliency, level of service, and allow the plant to continue to meet its NPDES permit requirements.

**Source Derivation:** Environmental Services and Water Reclamation Division; Managed by the Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

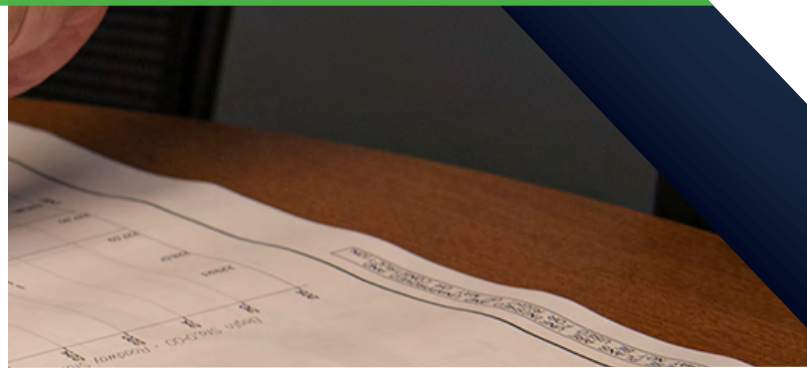
PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
8183	6932	40586	35993	17312	20840	20000	<b>149846</b>

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	30%
Repl. Fund (04) – User Rates	70%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>



Service Authority

# MISCELLANEOUS PROJECTS



**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Water and Sewer Utility System Improvement Opportunity (USIO), formerly known as Master Plan Utility Adjustment (MPUA)

**CIP Number:** MISC-100

**JDE Number(s):** Multiple

**Location:** County Wide

**Pressure Zone:** Multiple

**Sewershed:** Multiple

**Magisterial District:** Multiple

**Project Estimate:** Order of Magnitude

**Estimate By:** Engineering and Planning Division

**PROJECT DESCRIPTION**

**Project Description:** This project provides the funding for the SA to participate in the design and construction of water and sewer infrastructure and appurtenances in conjunction with new development and VDOT/County road projects. This project also covers the cost to increase pipe sizes in accordance with the utility system requirements and other studies to provide additional capacity and improve system operations and efficiencies. The funding for this program is allocated evenly between the Expansion and Replacement funds to account for the undefined betterments; however, each project shall be evaluated independently to determine the appropriate funding allocation.

**Project Benefit:** This project provides for a more efficient and effective way for the timely extension of infrastructure and improvement of system operations.

**Source Derivation:** Engineering and Planning Division; Managed by the Engineering and Planning Division.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
0	1600	1600	1600	1600	1600	0	8000

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	50%
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	50%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** PWCSA Water & Sewer Facilities Security Enhancements

**CIP Number:** MISC-101

**JDE Number(s):** 24NCWU0004, 74WHOF0001, 74NLR50001

**Location:** County Wide

**Pressure Zone:** Multiple

**Sewershed:** Multiple

**Magisterial District:** Multiple

**Project Estimate:** Order of Magnitude

**Estimate By:** Operations and Maintenance Division

**PROJECT DESCRIPTION**

**Project Description:** To mitigate risks and potential threats identified in the Vulnerability Assessment performed on the SA water distribution and sewer collection facilities by installing or upgrading security features or equipment at various SA owned and operated facilities throughout PWC. Security enhancements include, but are not limited, to fencing, security cameras, card readers, security gates, signage, security guards, bollards, locks, barriers, berms, lighting, alarms, and IT enhancements.

**Project Benefit:** This project will provide protection against unauthorized entry, vandalism, and/or destruction of facilities. The enhancements will serve to minimize potential threats to the water distribution, sewer collection systems, wastewater treatment facility and help prevent endangerment of employees and the general public. This project will comply with the Federal Mandate for security audit and security enhancement program.

**Source Derivation:** Federal Mandate of Vulnerability Study for Utility Systems, Operations and Maintenance; Managed by the Operations and Maintenance Division.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
0	300	300	300	300	300	0	1500

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Wellington Road Operations Center Expansion  
**CIP Number:** MISC-102  
**JDE Number(s):** 12NWCH0001, 14NWCH0001  
**Location:** Virginia Meadows Industrial Park  
**Pressure Zone:** GW – Gainesville  
**Sewershed:** BR – Broad Run  
**Magisterial District:** BR – Brentsville  
**Project Estimate:** Order of Magnitude  
**Estimate By:** RDA, Engineering and Planning Division

**PROJECT DESCRIPTION**

**Project Description:** Design and construction of approximately a 26,000 square foot Operations Center Building with a 13,000 square foot mezzanine and storage sheds on the Wellington Operations Center property. Proposed site improvements include the relocation of an existing storm water management pond for better space utilization, more parking spaces, and additional fuel and material storage. Additionally, the project shall assess the flow of traffic around the facility and propose improvements as necessary.

**Project Benefit:** Improve working conditions and efficiency by providing additional space for construction vehicles, materials, fuel for emergency response, day-to-day maintenance, repair, and inspection operations. The project will also improve the flow of traffic through the property.

**Source Derivation:** Engineering and Planning Division, Operations and Maintenance Division, General Conditions Facility Assessment, 2009; Managed by the Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
88	500	3000	3500	3500	0	0	10588

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	50%
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	50%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

## PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET

### PROJECT INFORMATION

**Project Name:** PWCSA Facilities Renewals and Upgrades

**CIP Number:** MISC-103

**JDE Number(s):** 24NWCU0002, 74NGWH0001, 24NSCU0102

**Location:** County Wide

**Pressure Zone:** Multiple

**Sewershed:** Multiple

**Magisterial District:** Multiple

**Project Estimate:** Order of Magnitude

**Estimate By:** Operations and Maintenance Division

### PROJECT DESCRIPTION

**Project Description:** Renovations to accommodate the expansion of staff at the Spittle Building and for improvement and modifications at facilities owned by the SA.

**Project Benefit:** This project will improve the functionality of SA facilities by providing additional space for the expansion of staff, change of functions at facilities, reduce energy costs, and ensure a safe and comfortable work environment for SA staff.

**Source Derivation:** Engineering and Planning Division; Managed by the Operations and Maintenance Division.

### PROJECT PICTURE



### PROJECT FUNDING

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
0	400	400	400	400	400	1660	3660

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Administrative Office Space Expansion  
**CIP Number:** MISC-112  
**JDE Number(s):** 12NSCH0009, 14NSCH0009  
**Location:** TBD  
**Pressure Zone:** TBD  
**Sewershed:** TBD  
**Magisterial District:** TBD  
**Project Estimate:** PER  
**Estimate By:** Engineering and Planning Division

**PROJECT DESCRIPTION**

**Project Description:** Space planning, design and construction of additional office space to accommodate the current and future space needs of the SA. This project will recommend potential location for expansions. Proposed funding covers only the study phase.

**Project Benefit:** This project shall improve the functionality of SA facilities by providing additional space for staff, reduce energy costs, and ensure a safe and comfortable work environment for SA staff.

**Source Derivation:** Engineering and Planning Division; Managed by the Engineering and Planning Division and Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
951	150	300	0	0	0	0	1401

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	50%
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	50%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

<b>PROJECT INFORMATION</b>		<b>PROJECT DESCRIPTION</b>	
<b>Project Name:</b>	System Wide Master Plan	<b>Project Description:</b>	Preparation of a comprehensive, system-wide master plan that includes sewer collection, wastewater treatment, water distribution, and water source and supply options. This study covers the evaluation of existing systems and shall provide recommendations on system improvements necessary to meet future projected demands and regulatory requirements. This project accounts for the capitalized portion of the Master Plan cost with the balance covered in the operational budget.
<b>CIP Number:</b>	MISC-114	<b>Project Benefit:</b>	The goal of this study is to establish long range utility needs in order to maintain service levels to existing customers and to plan for meeting future growth and demand.
<b>JDE Number(s):</b>	22NCWE0101	<b>Source Derivation:</b>	Engineering and Planning Division, Environmental Services and Water Reclamation Division; Managed by the Engineering and Planning Division and Project Management Office.
<b>Location:</b>	County Wide		
<b>Pressure Zone:</b>	Multiple		
<b>Sewershed:</b>	Multiple		
<b>Magisterial District:</b>	Multiple		
<b>Project Estimate:</b>	Contract Award		
<b>Estimate By:</b>	Engineering and Planning Division		

<b>PROJECT PICTURE</b>		<b>PROJECT FUNDING</b>																					
		<b>Proposed Funding Sources</b>																					
		<table border="1"> <thead> <tr> <th>PRE-FY23</th> <th>FY23</th> <th>FY24</th> <th>FY25</th> <th>FY26</th> <th>FY27</th> <th>POST- FY27</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td align="center">600</td> <td align="center">100</td> <td align="center">0</td> <td align="center">0</td> <td align="center">0</td> <td align="center">0</td> <td align="center">0</td> <td align="center">700</td> </tr> </tbody> </table>								PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL	600	100	0	0	0	0
PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL																
600	100	0	0	0	0	0	700																
		Exp. Fund (02) – Availability Fees						100%															
		Commit. Fund (03) – Availability Fees						-															
		Repl. Fund (04) – User Rates						-															
		Other Contrib. – Development Contributions						-															
		<b>PROJECT TOTAL</b>						<b>100%</b>															

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** English Gardens Property Building & Site Improvements  
**CIP Number:** MISC-116  
**JDE Number(s):** Not Assigned  
**Location:** 14195 Dumfries Rd.  
**Pressure Zone:** OR – Oak Ridge  
**Sewershed:** PC – Powells Creek  
**Magisterial District:** CO – Coles  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Engineering and Planning Division

**PROJECT DESCRIPTION**

**Project Description:** Design and construction of a new centralized auxiliary and operations building up to 50,000 square feet with associated infrastructure, plus the demolition of an existing onsite building.  
**Project Benefit:** This project will improve the functionality of SA facilities by providing additional and redefined space for staff and ensure a safe and comfortable work environment for SA staff.  
**Source Derivation:** Engineering and Planning Division; Managed by the Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
70	135	750	5000	5000	5000	4045	20000

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	50%
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	50%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Studies and PER's – Organization Wide  
**CIP Number:** MISC-117  
**JDE Number(s):** Multiple  
**Location:** County Wide  
**Pressure Zone:** Multiple  
**Sewershed:** Multiple  
**Magisterial District:** Multiple  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Engineering and Planning Division

**PROJECT DESCRIPTION**

**Project Description:** This project provides the funding for studies and preliminary engineering reports (PER's) organization-wide to evaluate existing business systems or facility assets, and provide recommendations on improvements, upgrades, or replacements as necessary to increase efficiencies, improve employee safety, meet future projected demands, or satisfy regulatory requirements. Assessments of the large diameter water and sewer mains are planned for FY23.

**Project Benefit:** The goal of these studies is to identify alternatives for improvements to move into detailed design to maintain service levels to existing customers and to plan for meeting future growth and demand.

**Source Derivation:** Engineering and Planning Division

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
0	1500	2500	900	900	400	0	6200

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	50%
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	50%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Vehicle Replacement Program  
**CIP Number:** MISC-200  
**JDE Number(s):** Multiple  
**Location:** County Wide  
**Pressure Zone:** Multiple  
**Sewershed:** Multiple  
**Magisterial District:** Multiple  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Operations and Maintenance Division

**PROJECT DESCRIPTION**

**Project Description:** The SA operates and maintains a fleet of vehicles in order to provide service to its customers. In addition, the SA evaluates each vehicle annually and retains vehicles that are still in good condition regardless of the replacement criteria. Vehicles identified for replacement over the next two years include tandem-axle flat beds, small high-side dump trucks, closed-circuit television vehicles, sport utility vehicles, and various equipped full and mid-sized pick-up trucks.

**Project Benefit:** This program provides guidelines for vehicle replacement that balances safety, reliability, capital costs, and maintenance costs.

**Source Derivation:** Operations and Maintenance Division; Managed by the Operations and Maintenance Division.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
0	1650	910	1058	540	205	0	4363

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Mechanical Equipment Replacement Program  
**CIP Number:** MISC-201  
**JDE Number(s):** Multiple  
**Location:** County Wide  
**Pressure Zone:** Multiple  
**Sewershed:** Multiple  
**Magisterial District:** Multiple  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Operations and Maintenance Division

**PROJECT DESCRIPTION**

**Project Description:** Replacement of single equipment unit items with a cost value of \$5,000 or greater required for SA operations to perform duties and fulfill customer requirements. These items include pumping units, channel grinders, HVAC units, variable frequency drives, and reduced voltage solid state starters.

**Project Benefit:** Reaching performance targets, compliance with regulatory requirements, maximization of the return on capital, and increased stakeholder value.

**Source Derivation:** Operations and Maintenance Division; Managed by the Operations and Maintenance Division.

**PROJECT PICTURE**




**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
0	2350	2532	1741	1066	859	0	8548

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

<b>PROJECT INFORMATION</b>		<b>PROJECT DESCRIPTION</b>	
<b>Project Name:</b>	Computer and Other Replacement Program	<b>Project Description:</b>	Purchase or replacement of single computers or other miscellaneous unit items with a cost value of \$5,000 or greater required for SA operations to perform duties, fulfill customer requirements and enhance the cybersecurity programs. These items include software, server and network hardware, network storage, phone systems, copiers and printers, and SCADA servers.
<b>CIP Number:</b>	MISC-202	<b>Project Benefit:</b>	Replaces hardware and other miscellaneous capital equipment that is approaching the end of its service life within the next 15 months.
<b>JDE Number(s):</b>	Multiple	<b>Source Derivation:</b>	Management and Budget Division; Information Technology Division; Managed by the Information Technology Division.
<b>Location:</b>	County Wide		
<b>Pressure Zone:</b>	Multiple		
<b>Sewershed:</b>	Multiple		
<b>Magisterial District:</b>	Multiple		
<b>Project Estimate:</b>	Order of Magnitude		
<b>Estimate By:</b>	Management and Budget Division		

<b>PROJECT PICTURE</b>		<b>PROJECT FUNDING</b>																							
		<table border="1"> <thead> <tr> <th>PRE-FY23</th> <th>FY23</th> <th>FY24</th> <th>FY25</th> <th>FY26</th> <th>FY27</th> <th>POST- FY27</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td align="center">0</td> <td align="center">1217</td> <td align="center">750</td> <td align="center">750</td> <td align="center">750</td> <td align="center">750</td> <td align="center">0</td> <td align="center"><b>4217</b></td> </tr> </tbody> </table>								PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL	0	1217	750	750	750	750	0	<b>4217</b>
		PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL																
0	1217	750	750	750	750	0	<b>4217</b>																		
<table border="1"> <thead> <tr> <th align="center" colspan="2">Proposed Funding Sources</th> </tr> </thead> <tbody> <tr> <td>Exp. Fund (02) – Availability Fees</td> <td align="center">-</td> </tr> <tr> <td>Commit. Fund (03) – Availability Fees</td> <td align="center">-</td> </tr> <tr> <td>Repl. Fund (04) – User Rates</td> <td align="center">100%</td> </tr> <tr> <td>Other Contrib. – Development Contributions</td> <td align="center">-</td> </tr> <tr> <td><b>PROJECT TOTAL</b></td> <td align="center"><b>100%</b></td> </tr> </tbody> </table>								Proposed Funding Sources		Exp. Fund (02) – Availability Fees	-	Commit. Fund (03) – Availability Fees	-	Repl. Fund (04) – User Rates	100%	Other Contrib. – Development Contributions	-	<b>PROJECT TOTAL</b>	<b>100%</b>						
Proposed Funding Sources																									
Exp. Fund (02) – Availability Fees	-																								
Commit. Fund (03) – Availability Fees	-																								
Repl. Fund (04) – User Rates	100%																								
Other Contrib. – Development Contributions	-																								
<b>PROJECT TOTAL</b>	<b>100%</b>																								

# INFORMATION TECHNOLOGY PROJECTS



Service Authority

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** JD Edwards Upgrade  
**CIP Number:** IT-105  
**JDE Number(s):** 14NSCG0109  
**Location:** County Wide  
**Pressure Zone:** Multiple  
**Sewershed:** Multiple  
**Magisterial District:** Multiple  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Information Technology Division

**PROJECT DESCRIPTION**

**Project Description:** As part of the SA's Organizational Strategic Plan and IT's Strategic Plan, this project involves upgrades and custom design features to the JD Edwards system.  
**Project Benefit:** This project will add mobile capabilities, reporting capabilities, budget forecasting, and Procure to Pay functionality.  
**Source Derivation:** Information Technology Division; Managed by the Information Technology Division.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
444	155	230	0	0	0	0	<b>829</b>

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Cayenta – CIS  
**CIP Number:** IT-106  
**JDE Number(s):** 14NSCG0110  
**Location:** County Wide  
**Pressure Zone:** Multiple  
**Sewershed:** Multiple  
**Magisterial District:** Multiple  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Information Technology Division

**PROJECT DESCRIPTION**

**Project Description:** As part of the SA’s Organizational Strategic Plan and IT’s Strategic Plan, this project involves upgrading Cayenta to Version 9 and replacing the Customer Self Service system components and deploying new customer-focused functionality.

**Project Benefit:** This project shall improve the SA customer experience by replacing the current bill-pay site with a modern, mobile-ready, customer portal. Additionally, the project includes upgrades to the Cayenta CIS for improved system reliability and capabilities.

**Source Derivation:** Information Technology Division; Managed by the Information Technology Division.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
278	255	332	0	0	0	0	865

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Computerized Maintenance Management System (CMMS) Implementation

**CIP Number:** IT-107

**JDE Number(s):** 14NAAG0112

**Location:** County Wide

**Pressure Zone:** Multiple

**Sewershed:** Multiple

**Magisterial District:** Multiple

**Project Estimate:** Order of Magnitude

**Estimate By:** Information Technology Division

**PROJECT DESCRIPTION**

**Project Description:** This project expands the implementation of Cityworks to provide inventory management for SA warehousing processes and work order management functionality for H.L. Mooney AWRF assets.

**Project Benefit:** Implementation of Cityworks to manage work performed on assets at H.L. Mooney AWRF shall place maintenance performed on the SA's collection, distribution, and facility assets in a single GIS-centric business system which improves operational insights and reporting to support data-driven decision making.

**Source Derivation:** Information Technology Division, Operations and Maintenance Division; Managed by the Information Technology Division.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
1860	735	1131	450	0	0	0	4176

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Document Management System Implementation  
**CIP Number:** IT-110  
**JDE Number(s):** Not Assigned  
**Location:** County Wide  
**Pressure Zone:** Multiple  
**Sewershed:** Multiple  
**Magisterial District:** Multiple  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Information Technology Division

**PROJECT DESCRIPTION**

**Project Description:** As part of the SA's Organizational Strategic Plan and IT's Strategic Plan, this project will develop a SA-wide central document repository.  
**Project Benefit:** A document management system shall provide a governed, central repository to store the organization's documents and improve document retrieval. Additionally, the Document Management System will provide improved control of document versioning and collaboration.  
**Source Derivation:** Information Technology Division; Managed by the Information Technology Division.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
115	145	205	100	0	0	0	565

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Vertical Asset Data Development  
**CIP Number:** IT-117  
**JDE Number(s):** 14NAAG0240  
**Location:** County Wide  
**Pressure Zone:** Multiple  
**Sewershed:** Multiple  
**Magisterial District:** Multiple  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Data Management Division

**PROJECT DESCRIPTION**

**Project Description:** Development of a GIS vertical asset register in support of work-order management (CMMS) and Asset Management Analytics. This project includes discovery, planning, database development, and data capture.

**Project Benefit:** GIS vertical asset data shall enable effective use of the SA's CMMS system for assets located within the H.L. Mooney AWRF and WWF facilities. Additionally, vertical asset data shall enable data-driven asset management planning.

**Source Derivation:** Data Management Division; Managed by the Data Management Division.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
95	42	208	0	0	0	0	345

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** System Integration  
**CIP Number:** IT-118  
**JDE Number(s):** 14NAAG0230  
**Location:** County Wide  
**Pressure Zone:** Multiple  
**Sewershed:** Multiple  
**Magisterial District:** Multiple  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Data Management Division

**PROJECT DESCRIPTION**

**Project Description:** This project modernizes existing legacy, point-to-point system integrations to Dell Boomi in alignment with the SA technology strategy and reduces total cost of ownership.

**Project Benefit:** Successful implementation of mature analytics that support data-driven decision making relies on the ability to efficiently access critical data stored in multiple business systems across the enterprise. This project shall provide a scalable, consistent approach to integrating business systems, automate manual workflows, and improve analytics and reporting capabilities.

**Source Derivation:** Data Management Division; Managed by the Data Management Division.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
310	285	185	0	0	0	0	780

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Asset Management Analytics  
**CIP Number:** IT-121  
**JDE Number(s):** 14NAAG0280  
**Location:** County Wide  
**Pressure Zone:** Multiple  
**Sewershed:** Multiple  
**Magisterial District:** Multiple  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Data Management Division

**PROJECT DESCRIPTION**

**Project Description:** Development of the frameworks, standards, processes, and tools necessary for data-driven asset management planning.  
**Project Benefit:** Enterprise-wide asset management analytics affords the SA the ability to plan work from an organization-wide perspective, understand cross-divisional dependencies and priorities, and develop data-driven asset management plans.  
**Source Derivation:** Data Management Division; Managed by the Data Management Division.

**PROJECT PICTURE**



FY23 – FY27

**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
0	63	87	600	0	0	0	750

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Project Management Information System (PMIS) Implementation  
**CIP Number:** IT-122  
**JDE Number(s):** Not Assigned  
**Location:** County Wide  
**Pressure Zone:** Multiple  
**Sewershed:** Multiple  
**Magisterial District:** Multiple  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Information Technology Division

**PROJECT DESCRIPTION**

**Project Description:** Continue implementation of a Project Management Information System (PMIS) to automate procurement and contracts workflows, document and project management, and financial reporting associated with construction related projects. Work performed under this project shall expand system functionality delivered as part of PMIS Implementation Phase I.

**Project Benefit:** A PMIS shall provide a systematic approach to managing projects across all phases of the project life cycle from planning to project close-out. A PMIS will also afford the SA the ability to manage project documentation, schedules, and costs more efficiently.

**Source Derivation:** Information Technology Division; Managed by the Information Technology Division.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
360	775	587	0	0	0	0	1722

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	30%
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	70%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** SCADA System Upgrade  
**CIP Number:** IT-126  
**JDE Number(s):** Not Assigned  
**Location:** County Wide  
**Pressure Zone:** Multiple  
**Sewershed:** Multiple  
**Magisterial District:** Multiple  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Information Technology Division

**PROJECT DESCRIPTION**

**Project Description:** As part of the SA's Organizational Strategic Plan and IT's Strategic Plan, this project involves planning, design, deployment, and owner services for the replacement of the SA's legacy SCADA system.

**Project Benefit:** This project replaces obsolete SCADA equipment with current technology for improved SCADA system reliability and security, automation of manual processes, and real-time monitoring and reporting.

**Source Derivation:** Information Technology Division; Managed by the Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
5293	2683	4226	3605	3625	2906	0	22338

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Web Content Management System Migration  
**CIP Number:** IT-128  
**JDE Number(s):** Not Assigned  
**Location:** County Wide  
**Pressure Zone:** Multiple  
**Sewershed:** Multiple  
**Magisterial District:** Multiple  
**Project Estimate:** Order of Magnitude  
**Estimate By:** Information Technology Division

**PROJECT DESCRIPTION**

**Project Description:** This project shall migrate content on the SA’s three complex websites (pwcsa.org, h2olab.org, and the “SA Splash” Intranet) to the upgraded Content Management System (CMS) and modernize design of the public-facing website.

**Project Benefit:** Migrating content on the SA’s three websites to the newer version of the CMS is imperative as technical service of the current version of the software will be discontinued in November 2022. Websites running on older versions of the platform may be flagged as insecure during third-party scans. The newer version of CMS will strengthen the security of the websites and enhance front-end users’ experiences.

**Source Derivation:** Information Technology Division; Managed by the Information Technology Division.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
0	355	298	57	0	0	0	710

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	-
Repl. Fund (04) – User Rates	100%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>



Service Authority



# *REGIONAL UTILITY PROJECTS*

**PWCSA CAPITAL IMPROVEMENT PROJECT DATA SHEET**

**PROJECT INFORMATION**

**Project Name:** Occoquan River Crossing  
**CIP Number:** REG-1  
**JDE Number(s):** 22WFWM8104, 24WFWM8104  
**Location:** Eastern PWC, Occoquan River  
**Pressure Zone:** Eastern Water System  
**Sewershed:** Multiple  
**Magisterial District:** Multiple  
**Project Estimate:** OPCC  
**Estimate By:** Fairfax Water and the Engineering and Planning Division

**PROJECT DESCRIPTION**

**Project Description:** Design and construction of dual 700-foot long 42-inch steel water mains within a 400-foot long tunnel, 2,400 feet of 36-inch water main for redundancy to an existing transmission main, and an additional finished water pump at Fairfax Water’s Griffith Water Treatment Plant to facilitate a new subaqueous crossing of the Occoquan River. This project also includes the replacement of a deficient segment of existing 24-inch water main and a new interconnection near Horner Road along the transmission main corridor in Prince William County. This project will connect transmission facilities on either side of the river that supply the SA’s Eastern Water System and three proposed Eastern Area control valve vaults.

**Project Benefit:** This new transmission main will replace the aging, pressure restricted 30-inch concrete pipe that has been in service for over 60 years. This transmission main shall also increase capacity and enhance system reliability and availability for SA customers in the Eastern Water System.

**Source Derivation:** Engineering and Planning Division; Managed by Fairfax Water and coordinated at the Service Authority by the Project Management Office.

**PROJECT PICTURE**



**PROJECT FUNDING**

PRE-FY23	FY23	FY24	FY25	FY26	FY27	POST- FY27	TOTAL
2515	5680	5039	5038	0	0	0	18272

Proposed Funding Sources	
Exp. Fund (02) – Availability Fees	-
Commit. Fund (03) – Availability Fees	30%
Repl. Fund (04) – User Rates	70%
Other Contrib. – Development Contributions	-
<b>PROJECT TOTAL</b>	<b>100%</b>

**CAPITAL IMPROVEMENT PROGRAM  
FISCAL YEARS 2023 - 2027**



**Service Authority**  
Prince William County

**SECTION C**

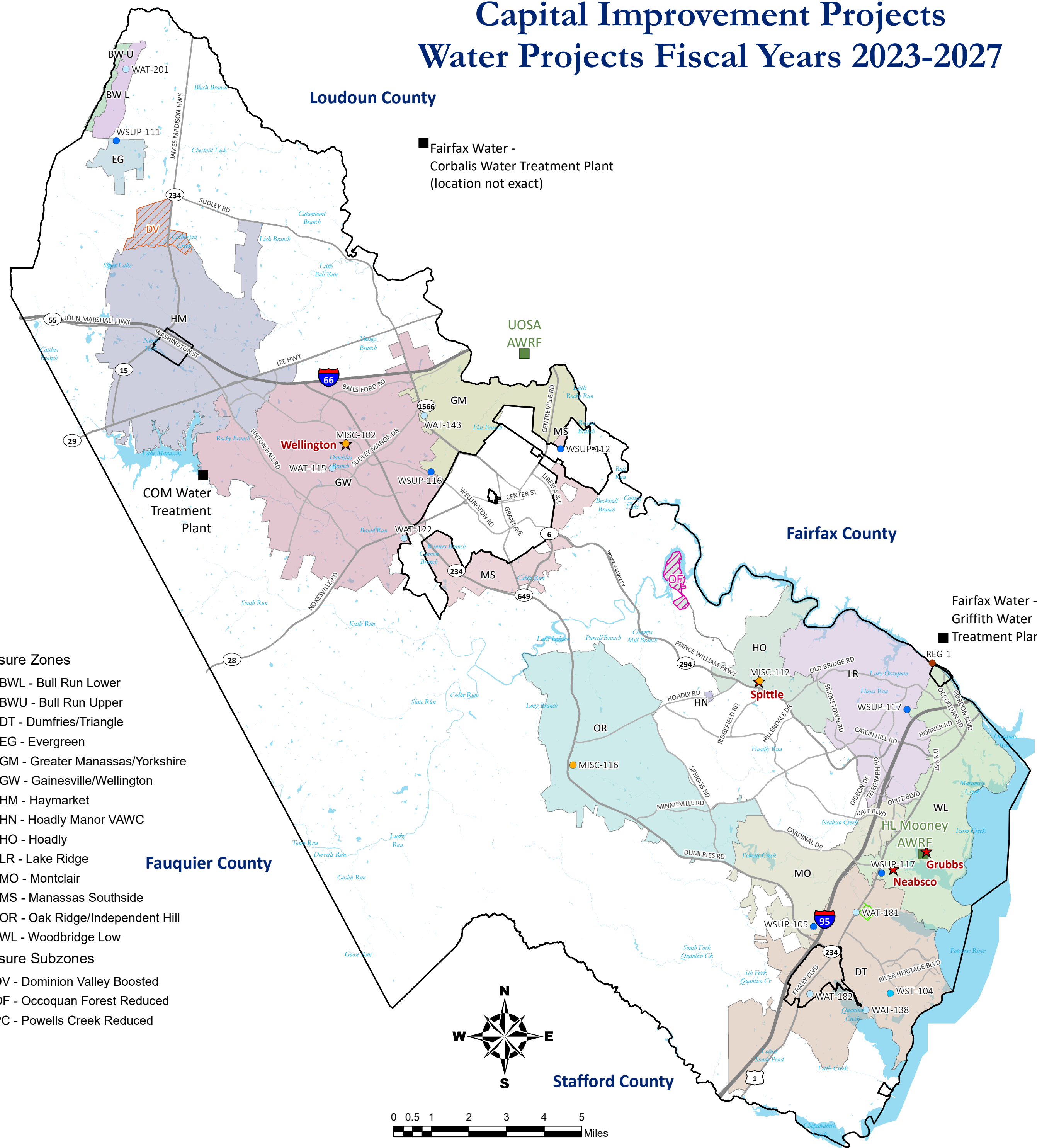
**PROJECT MAPS**

# Capital Improvement Projects

## Water Projects Fiscal Years 2023-2027



**Service Authority**  
Exceptional Water Service



### Regional Utility Projects (REG)

- REG-1 Occoquan River Crossing

### Information Technology Projects (IT)

- IT-105 JD Edwards Upgrade
- IT-106 Cayenta - CIS
- IT-107 Computerized Maintenance Management System (CMMS) Implementation
- IT-110 Document Management System Implementation
- IT-117 Vertical Asset Data Development
- IT-118 System Integration
- IT-121 Asset Management Analytics
- IT-122 Project Management Information System (PMIS) Implementation
- IT-126 SCADA System Upgrade
- IT-128 Web Content Management System Migration

### Miscellaneous Projects (MISC)

- MISC-100 Water and Sewer Utility System Improvement Opportunity (USIO)
- MISC-101 PWCSA Water & Sewer Facility Security Enhancements
- MISC-102 Wellington Road Operations Center Expansion
- MISC-103 PWCSA Facilities Renewals and Upgrades
- MISC-112 Administrative Office Space Expansion
- MISC-114 System Wide Master Plan
- MISC-116 English Gardens Property Building & Site Improvements
- MISC-117 Studies and PER's - Organization Wide
- MISC-200 Vehicle Replacement Program
- MISC-201 Mechanical Equipment Replacement Program
- MISC-202 Computer and Other Replacement Program

### Water Supply Projects (WSUP)

- WSUP-103 Water Meter Vault Improvements
- WSUP-105 Montclair/Four Seasons Water System Improvements
- WSUP-111 Bull Run Mountain Well Upgrades
- WSUP-112 Manassas Southside Booster Pumping Station Upgrades
- WSUP-114 Capital Meter Program
- WSUP-116 Unity Reed (F14) Booster Pumping Station and Discharge Main
- WSUP-117 Eastern Area Pressure Reducing Valves

### Water Storage Projects (WST)

- WST-104 Potomac Shores Water Storage Tank
- WST-110 Water Storage Tank Rehabilitation Program
- WST-111 Tank Re-Chlorination Program

### Water Transmission Projects (WAT)

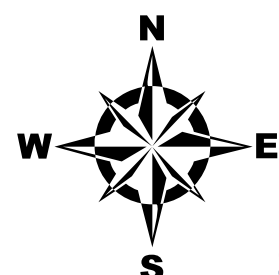
- WAT-115 Dawkins Branch Transmission Main
- WAT-122 Gainesville to Manassas South Connector
- WAT-138 Possum Point Road Water Main Replacement - Phase 2
- WAT-143 Sudley Road Water Main Improvements - Phase 2
- WAT-181 Rt. 1 Transmission Main - Phase 1
- WAT-182 Rt. 1 Transmission Main - Phase 2
- WAT-200 Water Distribution Asset Replacement Program
- WAT-201 Bull Run Mountain Distribution System Improvements

### Pressure Zones

- BWL - Bull Run Lower
- BWU - Bull Run Upper
- DT - Dumfries/Triangle
- EG - Evergreen
- GM - Greater Manassas/Yorkshire
- GW - Gainesville/Wellington
- HM - Haymarket
- HN - Hoadly Manor VAWC
- HO - Hoadly
- LR - Lake Ridge
- MO - Montclair
- MS - Manassas Southside
- OR - Oak Ridge/Independent Hill
- WL - Woodbridge Low

### Pressure Subzones

- DV - Dominion Valley Boosted
- OF - Occoquan Forest Reduced
- PC - Powells Creek Reduced

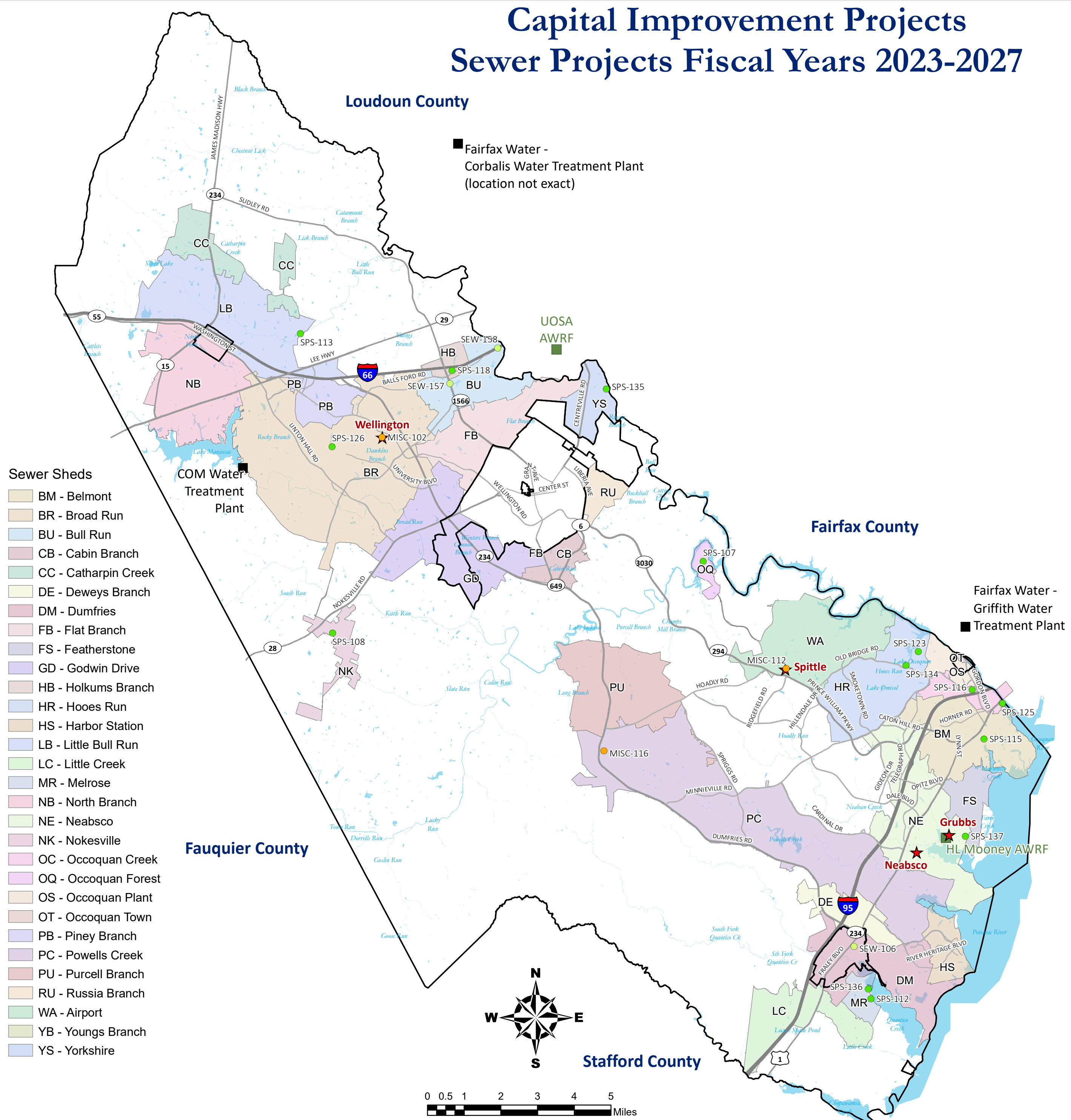


# Capital Improvement Projects

## Sewer Projects Fiscal Years 2023-2027



**Service Authority**  
Exceptional Water Service



- Sewer Sheds**
- BM - Belmont
  - BR - Broad Run
  - BU - Bull Run
  - CB - Cabin Branch
  - CC - Catharpin Creek
  - DE - Deweys Branch
  - DM - Dumfries
  - FB - Flat Branch
  - FS - Featherstone
  - GD - Godwin Drive
  - HB - Holkums Branch
  - HR - Hooes Run
  - HS - Harbor Station
  - LB - Little Bull Run
  - LC - Little Creek
  - MR - Melrose
  - NB - North Branch
  - NE - Neabsco
  - NK - Nokesville
  - OC - Occoquan Creek
  - OQ - Occoquan Forest
  - OS - Occoquan Plant
  - OT - Occoquan Town
  - PB - Piney Branch
  - PC - Powells Creek
  - PU - Purcell Branch
  - RU - Russia Branch
  - WA - Airport
  - YB - Youngs Branch
  - YS - Yorkshire

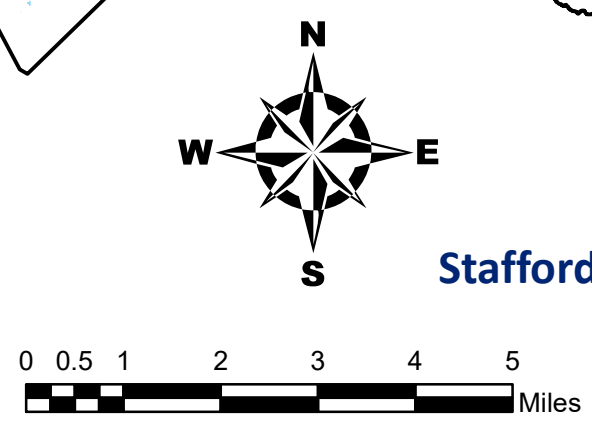
- Information Technology Projects (IT)**
- IT-105 JD Edwards Upgrade
  - IT-106 Cayenta - CIS
  - IT-107 Computerized Maintenance Management System (CMMS) Implementation
  - IT-110 Document Management System Implementation
  - IT-117 Vertical Asset Data Development
  - IT-118 System Integration
  - IT-121 Asset Management Analytics
  - IT-122 Project Management Information System (PMIS) Implementation
  - IT-126 SCADA System Upgrade
  - IT-128 Web Content Management System Migration

- Miscellaneous Projects (MISC)**
- MISC-100 Water and Sewer Utility System Improvement Opportunity (USIO)
  - MISC-101 PWCSA Water & Sewer Facility Security Enhancements
  - MISC-102 Wellington Road Operations Center Expansion
  - MISC-103 PWCSA Facilities Renewals and Upgrades
  - MISC-112 Administrative Office Space Expansion
  - MISC-114 System Wide Master Plan
  - MISC-116 English Gardens Property Building & Site Improvements
  - MISC-117 Studies and PER's - Organization Wide
  - MISC-200 Vehicle Replacement Program
  - MISC-201 Mechanical Equipment Replacement Program
  - MISC-202 Computer and Other Replacement Program

- Sewage Pumping Station Projects (SPS)**
- SPS-100 Generator Replacement Program
  - SPS-107 Replace Occoquan Forest Sewage Pumping Stations, OQL36 & OQL37
  - SPS-108 Replace Nokesville Sewage Pumping Station, L20
  - SPS-112 Replace Graham Park Sewage Pumping Station, L13
  - SPS-113 Heritage Hunt Sewage Pumping Station, L52 Replaement and Force Main Extension
  - SPS-115 Belmont Sewage Pumping Station, L17 Replaement and Force Main Extension
  - SPS-116 Hornbaker Sewage Pumping Station, L06 Rehabilitation and Force Main Replacement
  - SPS-118 Koon's Sewage Pumping Station, L28 Replacement
  - SPS-123 Spinnaker Court Sewage Pumping Station, L02 Replacement
  - SPS-125 Occoquan Creek Sewage Pumping Station, L04 Rehabilitation
  - SPS-126 Piney Branch Sewage Pumping Station, L26 Demolition and Gravity Sewer Extension
  - SPS-134 Hooes Run Sewage Pumping Station, L01 Rehabilitation
  - SPS-135 Yorkshire Sewage Pumping Station, L30 Rehabilitation
  - SPS-136 Melrose Sewage Pumping Station, L10 Replacement
  - SPS-137 Dawson Landing Sewage Pumping Station, L51 Replacement

- Sewage Collection Projects (SEW)**
- SEW-106 Dumfries Force Main and Water Main Replacement
  - SEW-157 Sudley Road Sewer Main Replacement and Upgrade
  - SEW-158 I-66 Rest Area Sewer Main Replacement
  - SEW-200 Sewer Collection Rehabilitation & Replacement Program

- Water Reclamation Facilities Projects (WRF)**
- WRF-123 Ongoing Renewal and Replacement
  - WRF-126 Dynamic Hydraulic Model and Instrumentation
  - WRF-131 FBI and Solids Building Repairs and Modifications
  - WRF-134 Bioreactor Basin Improvements
  - WRF-138 Facility Wide Improvements - Design-Build Project



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