

Program Description

These programs construct and maintain the infrastructure, facilities, and equipment which provides safe, reliable, and compliant drinking water, sanitary sewer collection, and wastewater treatment for the County's residents, businesses, and visitors. In addition to the County owned and operated systems and facilities, there are programs for the Washington Aqueduct Division (WAD) which is the potable water treatment plant owned and operated by the Army Corps of Engineers that provides Arlington's drinking water, and for the Blue Plains Wastewater Treatment Plant which treats 6.5% of Arlington County's wastewater. The County's Water Pollution Control Plant (WPCP) provides wastewater treatment for 93.5% of the County, and also treats wastewater from portions of Fairfax County, the City of Falls Church, and the City of Alexandria, collectively known as the Inter-Jurisdictional (IJ) partners. These IJ partners' flows comprise approximately 17% of the wastewater volume treated at the WPCP; therefore, they pay a portion of the capital costs for maintenance and upgrades at the Water Pollution Control Plant and for the large transmission sewer mains which convey their wastewater. The WPCP Capital Improvement Program directly supports Arlington's vision for a world class, environmentally friendly, sustainable community as well as the Water Pollution Control Bureau's (WPCB) mission of safely and cost-effectively protecting public health and the environment.

Program Summary

The Capital Improvement Programs for the water distribution and sanitary sewer collection systems are guided by Master Plans adopted by the Board in 2014 for the Water Distribution system and Sanitary Sewer adopted in 2002 (currently being updated). Programs for both systems are bifurcated into Expansion and Capital Sustainment (formerly called Non-Expansion) programs. The Expansion programs provide additional system capacity to accommodate anticipated growth through the year 2040 and are included in the Water Distribution and Sanitary Sewer Improvements Programs, while the Capital Sustainment programs are focused on asset maintenance, rehabilitation, and replacement and are included in the WS Maintenance Capital Program.

The Master Plans for both systems identify large infrastructure projects to expand capacity, improve redundancy, and replace or rehabilitate existing infrastructure, as well as identify key programs based upon core asset management principles. Many of the large infrastructure projects in the Master Plans have already been completed, others are well-underway, and others are programmed in this CIP. Likewise, most of the asset-based infrastructure programs are recurring programs which rehabilitate or replace a consistent portion of our infrastructure on a regular cycle to ensure that we are maintaining a system which is efficient, reliable, and avoids abrupt funding needs.

Funding is included in this CIP for source water reliability and assurance projects at the Washington Aqueduct, as well as significant funding for source reliability and redundancy at the Washington Aqueduct and/or with neighboring utilities. The County is conducting a study which will guide strategic infrastructure investments to assure source water redundancy and reliability.

The WPCP Capital Sustainment Program (formerly called WPCP Non-Expansion) focuses on projects that rehabilitate, replace, and/or upgrade existing WPCP infrastructure, including process control/ automation, to ensure that the facility can safely protect the public health and the environment by reliably maintaining continuity of service and simultaneously meeting the permit requirements. Also included in the Capital Sustainment program are annual repairs and replacement of current equipment and infrastructure at the plant and 15 pumping and metering stations. WPCP Capital Sustainment also funds Arlington's pro-rata share of improvements at DC Water's Blue Plains Advanced Wastewater Treatment Plant and the associated conveyance infrastructure.

The WPCP Capital Sustainment Program provides for significant investment in the Solids Handling processes at the Plant. The 2001 WPCP Master Plan identified the need to address Solids Handling, but prioritized the liquid processes and capacity issues, and thus the Solids Planning was deferred. A subsequent Solids Master Plan was adopted by the County Board in conjunction with the FY 2019 - FY 2028 CIP. The Solids Master Plan identified core criteria spanning operational, economic, environmental, regulatory, and social considerations. It evaluated the state of current technology to identify process(es) which best meets the needs of the community. This suite of projects to replace and upgrade the solids handling processes and equipment, collectively known as Arlington Re-Gen, has been broken into three phases, described below:

- Re-Gen, Phase I - Immediate project needs to replace solids handling critical equipment that are failing and costly and labor-intensive to maintain. Several of these projects are underway or completed.
- Re-Gen, Phase II - Projects that need to be completed in advance of Phase III. This may involve additional equipment replacement or demolition of underutilized facilities in preparation for the Phase III construction.
- Phase III - Implementation of technology to provide long-term sustainability of the WPCP's solids handling processes, deriving benefits of addressing any future regulatory changes while reducing the impacts on the surrounding community and increasing energy efficiency.

With the completion of the 2001 WPCP Master Plan (MP01) program, which increased treatment system capacity from 30 Million Gallons per Day (MGD) to 40 MGD, no treatment system capacity expansion projects are included in this CIP.

**WATER AND SEWER INFRASTRUCTURE PROGRAM:
PROGRAM FUNDING SUMMARY**

10 YEAR PROGRAMMED CATEGORY SUMMARY (in \$1,000s)

	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	10 Year Total
WS Maintenance Capital	29,800	26,750	22,080	23,835	23,825	23,615	22,185	24,475	22,510	25,700	244,775
Water Distribution	3,970	4,650	3,095	6,385	2,915	33,125	545	33,245	560	560	89,050
Sanitary Sewer System Improvements	2,750	3,950	260	260	265	265	275	275	280	280	8,860
WPCP Capital Sustainment	17,030	35,120	67,050	64,395	50,615	23,285	4,700	3,960	4,325	4,230	274,710
Total Recommendation	53,550	70,470	92,485	94,875	77,620	80,290	27,705	61,955	27,675	30,770	617,395

PROGRAM FUNDING SOURCES (in \$1,000s)

	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	10 Year Total
New Funding											
Federal Funding	0	0	0	0	0	0	0	0	0	0	0
State Funding	0	0	0	0	0	0	0	0	0	0	0
Developer Contributions	6,900	7,900	8,150	9,380	9,645	9,965	10,245	10,575	10,860	11,255	94,875
New Bond Issue	8,750	28,165	55,075	56,435	44,015	47,030	0	32,700	0	0	272,170
PAYG	16,725	14,810	18,300	16,030	16,705	17,830	17,820	16,520	17,320	17,275	169,335
Short Term Finance	0	0	0	0	0	0	0	0	0	0	0
Stormwater Utility Fee Revenue	0	0	0	0	0	0	0	0	0	0	0
Other Funding	3,275	6,590	11,535	11,845	8,685	4,035	945	855	865	870	49,500
Subtotal New Funding	35,650	57,465	93,060	93,690	79,050	78,860	29,010	60,650	29,045	29,400	585,880
Previously Approved Funding											
Authorized but Unissued Bonds	0	0	0	0	0	0	0	0	0	0	0
Issued but Unspent Bonds	2,895	0	0	0	0	0	0	0	0	0	2,895
Other Previously Approved Funds	15,005	13,005	610	0	0	0	0	0	0	0	28,620
Subtotal Previously Approved Funding	17,900	13,005	610	0	0	0	0	0	0	0	31,515
Total Funding Sources	53,550	70,470	93,670	93,690	79,050	78,860	29,010	60,650	29,045	29,400	617,395