

Wastewater Management Program

LOB #389:

CAPITAL IMPROVEMENT PROGRAM

Purpose

The Wastewater Management Program is a highly capitalized program. The total gross capital assets of the program as of June 30, 2015 are equal to \$2.4 billion. To maintain these capital assets, an aggressive and strict capital improvement program is critical. If any of the program's assets fails, it could generate an environmental disaster and have a potential negative impact on public health.

Description

The Wastewater Capital Improvement Program is critical in the management of the program assets in order to protect the environment, public health, and provide economic development within Fairfax County. The FY 2016 - FY 2020 Adopted Capital Improvement Program totaled \$616.5 million with an addition of \$494.2 million for FY 2021 - FY 2025 for a total of \$1.1 billion. This program is funded solely by Wastewater Management Program revenues and the sale of Sewer Revenue Bonds. The Wastewater Debt Management assesses and monitors long-term financial needs for the Wastewater Management Program and conducts financial reviews to maintain a balanced Capital Improvement Program between debt-funded capital projects and cash-funded capital projects.

There are three components to the Wastewater Management Program Capital Improvement Program. They are:

- Treatment by Contract – The program has capacity at the DC Water Blue Plains facility, Alexandria Renew Enterprise facility, Arlington County facility, Upper Occoquan Service Authority facility, and Loudoun Water Board Run Reclamation facility.
- Collection and Conveyance – The collection and conveyance system consist of approximately 3,412 miles of sewer lines, 63 sewer pumping stations, 54 metering stations, 130 grinder pumps, and 11 rain gauges. In addition, the County is responsible for the pro-rata share of the conveyance systems owned by the Treatment by Contract facilities for conveying County flows to those facilities. The average age of each of the County owned collection system assets is:
 - Sewer lines 34 years
 - Pump stations 28 years
 - Force Mains 17 years
- Treatment facilities – The NMCPCP is the only facility owned and operated by the program. The capacity of the plant is 67 mgd, with an average flow of 40 mgd. The average age of the treatment assets is 22 years.

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Benefits

The Wastewater Capital Improvement Program LOB protects public health, aquatic life and the environment within Fairfax County. This LOB implements several vision elements in the 2015 Strategic Plan to Facilitate the Economic Success of Fairfax County, as noted below. The primary correlation to County vision elements includes:

- **Building Livable Spaces** - Wastewater Capital Improvement Program allows for building livable spaces by ensuring sufficient capacity in the wastewater conveyance system and treatment facilities in order to allow for economic development and redevelopment.
- **Maintaining Healthy Economies** - Wastewater Capital Improvement Program is a key element in providing economically priced wastewater services.
- **Practicing Environmental Stewardship** – Wastewater Capital Improvement Program is a key element in wisely using and protecting the County’s natural environment. Over the years, the Program has implemented a Water Reuse Program, invested in energy saving capital assets, and implemented an Odor Control Program.
- **Exercising Corporate Stewardship** - Wastewater Capital Improvement Program by maintaining the highest level of accountability provides quality wastewater services at one of the lowest cost in the region.

Mandates

This LOB complies with the following laws and mandates:

- Clean Water Act PL 92-500
- Clean Air Act
- 33USC 1251
- Code of Virginia §15.1-160, 15.1-166, and 15.1-167
- Code of Virginia §32.1-164
- Code of Virginia §62.1-44.19.32.1
- State Water Control Board VR355-17-02
- State Water Control Board VR680-14-01
- State Water Control Board VR680-14-02
- State Water Control Board VR680-14-03

Trends and Challenges

The Wastewater Capital Project LOB trends and challenges are similar to the trends and challenges of the Wastewater Debt Management LOB. The aging infrastructure requires investment and funding a \$1.1 billion CIP, while maintaining competitive rates, will be a difficult task. Trends include: maintaining a manageable cash flow; continuation of reinvestment; and maintaining our financial planning. Challenges include: keeping the CIP financing at a manageable level; completing the projects on time; and minimizing interruptions to the plant operations.

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Resources

Category	FY 2014 Actual	FY 2015 Actual	FY 2016 Adopted
LOB #389: Capital Improvement Program			
FUNDING			
<u>Expenditures:</u>			
Capital Projects	\$120,011,186	\$90,125,917	\$99,389,000
Total Expenditures	\$120,011,186	\$90,125,917	\$99,389,000
Total Revenue	\$74,324,972	\$69,335,420	\$75,974,660
POSITIONS			
<i>Authorized Positions/Full-Time Equivalents (FTEs)</i>			
<u>Positions:</u>			
Regular	0 / 0	0 / 0	0 / 0
Total Positions	0 / 0	0 / 0	0 / 0

Metrics

Metric Indicator	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Estimate	FY 2017 Estimate
Maintain Days of Working Capital between 150-200 days	166	304	291	157	157

The Wastewater Capital Improvement Program uses metrics to improve performance and ensure regulatory compliance. The one metric used for this LOB demonstrates the commitment to maintaining a balance between debt-funded projects and cash-funded projects, and maintaining the system at the highest level of efficiency. It should be noted that the FY 2014 Actual and the FY 2015 Actual were high because the Capital Improvement Program met its projected spending levels in both fiscal years.

Grant Support

The Capital Improvement Program LOB has been awarded a grant of approximately \$23 million from the Virginia Department of Environmental Quality's Water Quality Improvement Fund for the County's share of the upgrades to the DC Water's Blue Plains facility. This grant supports Nitrogen removal environmental requirements associated with the Chesapeake Bay Program.