

Arlington WPCP Capital Projects

Category: Stormwater/Sewer Utility

Department Lead: Public Works

Type: Ongoing Project

Project Description, Benefit, and Schedule

The City of Falls Church is a wholesale customer of the Arlington Wastewater Pollution Control Plant (WPCP). As an Inter-Jurisdictional (IJ) partner, the City contributes to Capital Improvements on a cost-share basis according to the City's reserved capacity at the Plant (0.80 MGD). The City attends IJ meetings to discuss required plant improvements and upgrades, which are needed to maintain a state required level of operation and effluent discharge. The City's portion (based on reserved capacity / total plant capacity) of the improvements is 2.0% of the total costs. The Arlington WPCP's Capital Projects include the following:

- Building improvements to Eads Street
- Non-Expansion Maintenance
- Technology enhancements
- Odor Control
- Secondary clarifier rehab/replacement
- Solids management planning
- Capital master planning



Capital Funding Plan

Funding Source	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028-31	10-YR Total
Local (Debt)	\$ 384,000	\$ 490,000	\$ 786,000	\$ 999,000	\$ 958,000	\$ 286,000	\$ 222,000	\$ 4,125,000
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total:	\$ 384,000	\$ 490,000	\$ 786,000	\$ 999,000	\$ 958,000	\$ 286,000	\$ 222,000	\$ 4,125,000

Funding Notes: The numbers above are based on Arlington County's Forecast for Capital Projects with IJ Partner Funding Based on FY2021 plan. The City is currently completing a sewer rate study update that will include this information in determining revenue requirements.

**if no activity per City Charter (Section 6.19) in 3 years note as re-appropriation action*

Impact on Operating Costs

Conformity with Comprehensive Plan and Council Strategic Plan

The upgrade of the Arlington Water Pollution Control Plant meets goals of the Comprehensive Plan's "Community Facilities, Public Utilities and Government Services" chapter such as:

- Ensure that a sufficient level of public facilities utilities services are available to meet the needs of the community
- Identify and prioritize facilities that require upgrading
- Ensure the most efficient and effective management of sanitary sewer systems

FY 22-27 Equity Lens Review

<p>Falls Church 2040 Vision, adopted April 10, 2017 <i>In the year 2040, the City of Falls Church is a welcoming and inclusive community – a special place in the heart of Northern Virginia. Involved citizens are key to the City's long-term success as a leader in education, environmental sustainability, multi-modal transportation, and vibrant economic development. By investing in neighborhoods, community services and facilities, schools, and parks the City preserves small-town character and history while honoring a deep commitment to progress and a growing community. The continual rejuvenation of robust commercial areas supports the City's high quality of life for all citizens.</i></p>				Burden or Benefit those under stress	Reduce current disparities	Avoiding Implicit Bias or Increased Inequities
				<p>(Q1) Does the proposed project benefit communities of color, low-income neighborhoods, persons with disabilities and/or underserved? Could it be adjusted to avoid or mitigate the burden and/or to realize a higher benefit? How?</p>	<p>(Q2) Does the request help reduce disparities and inequities? If not, could it be adjusted to do so? How?</p>	<p>(Q3) If Q1 and Q2 do not directly apply to this project describe how it does not worsen disparities and inequities?</p>
Department	Project(s)- listed in priority order	Funding Request	City Mgr Recommended Funding	Rank: Low (L)/ Medium (M)/ High (H)	Rank: Low (L)/ Medium (M)/ High (H)	Rank: Low (L)/ Medium (M)/ High (H)
DPW	Arlington WPCP Non-Expansion Capital			NA	NA	As an Inter-Jurisdictional (IJ) partner, the City contributes to Capital Improvements on a cost-share basis according to the City's reserved capacity at the Arlington Wastewater Pollution Control Plant (WPCP). This project provides non expansion improvements to the Arlington WPCP to ensure fiscally responsible treatment alternatives and up keep of the facilities. NA

Alexandria Wastewater Treatment Upgrades

Category: Stormwater/Sewer Utility

Department Lead: Public Works

Type: Ongoing Project

Project Description, Benefit, and Schedule

The City of Falls Church is a wholesale customer of the Alexandria Renew Wastewater Treatment Plant. When improvements to the treatment process are required to maintain the level of service specified by the plant's discharge permit the City is responsible for its share of the costs based on the City's reserved capacity at the plant. The City currently has 1.0 million gallons per day reserved, which equates to a 3.1% share of the cost to improvements. The City attends IJ meetings to discuss required plant improvements and upgrades.

The proposed CIP includes estimated costs to:

- Complete the nitrogen and phosphorus removal upgrades (SANUP)
- Implement a wet weather management strategy
- Upgrade UV disinfection system and scum system
- Replace blower system for biological reactor and settling basins



Capital Funding Plan

Funding Source	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028-31	10-YR Total
Local (Debt)	\$ 602,642	\$ 489,587	\$ 373,473	\$ 591,585	\$ 538,780	\$ 546,986	\$ 563,450	\$ 3,706,504
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total:	\$ 602,642	\$ 489,587	\$ 373,473	\$ 591,585	\$ 538,780	\$ 546,986	\$ 563,450	\$ 3,706,504

Funding Notes: Project cost estimates and expenditure schedule were confirmed by Fairfax County on January 20th, 2021 and are based on FY21 projections. The City is currently completing a sewer rate study update that will include this information in determining revenue requirements.

**if no activity per City Charter (Section 6.19) in 3 years note as re-appropriation action*

Impact on Operating Costs

Conformity with Comprehensive Plan and Council Strategic Plan

The upgrade of the Alexandria Wastewater Plant meets goals of the Comprehensive Plan's "Community Facilities, Public Utilities and Government Services" chapter such as:

- Ensure that a sufficient level of public facilities utilities services are available to meet the needs of the community
- Identify and prioritize facilities that require upgrading
- Ensure the most efficient and effective management of sanitary sewer systems

FY 22-27 Equity Lens Review

<p>Falls Church 2040 Vision, adopted April 10, 2017 <i>In the year 2040, the City of Falls Church is a welcoming and inclusive community – a special place in the heart of Northern Virginia. Involved citizens are key to the City's long-term success as a leader in education, environmental sustainability, multi-modal transportation, and vibrant economic development. By investing in neighborhoods, community services and facilities, schools, and parks the City preserves small-town character and history while honoring a deep commitment to progress and a growing community. The continual rejuvenation of robust commercial areas supports the City's high quality of life for all citizens.</i></p>				Burden or Benefit those under stress	Reduce current disparities	Avoiding Implicit Bias or Increased Inequities
				(Q1) Does the proposed project benefit communities of color, low-income neighborhoods, persons with disabilities and/or underserved? Could it be adjusted to avoid or mitigate the burden and/or to realize a higher benefit? How?	(Q2) Does the request help reduce disparities and inequities? If not, could it be adjusted to do so? How?	(Q3) If Q1 and Q2 do not directly apply to this project describe how it does not worsen disparities and inequities?
Department	Project(s)- listed in priority order	Funding Request	City Mgr Recommended Funding	Rank: Low (L)/ Medium (M)/ High (H)	Rank: Low (L)/ Medium (M)/ High (H)	Rank: Low (L)/ Medium (M)/ High (H)
DPW	Alexandria Wastewater Treatment Upgrades			NA	NA	The City of Falls Church is a wholesale customer of the Alexandria Renew Wastewater Treatment Facility (WWTF). When improvements to the treatment process are required to maintain the level of service specified by the plant's discharge permit the City is responsible for its share of the costs based on the City's reserved capacity at the plant. This project provides improvements to the Alex Renew WWTF to ensure fiscally responsible treatment alternatives and up keep and upgrades to the facilities.

Alexandria Wastewater Treatment Plant Capacity

Category: Stormwater/Sewer Utility

Department Lead: Public Works

Type: Ongoing Project

Project Description, Benefit, and Schedule

The City discharges sewage flows to Fairfax and Arlington Counties in accordance with allocated capacity rights defined by their respective Inter-Jurisdictional (IJ) agreements. Per agreement, the City now owns 1.0MGD capacity in the Fairfax (Alex Renew) system and 0.8MGD capacity rights at Arlington (WWTF). During late 2019 and early 2020, the City analyzed the most recent flow meter data (March 2018--March 2020) captured for flows going to Fairfax and Arlington Counties. Results of the analysis quantified present flows to Fairfax at **0.964MGD** (after subtracting pass-through flows originating in Fairfax County) while present flows to Arlington were determined to be **0.44MGD**.

Examination of future flow projections to both municipalities concluded that future developments will increase flows beyond the **1.0 MGD** allocation to the Fairfax system by **0.16MGD as of 2025**. Simultaneously, the City retains **0.36MGD** excess capacity at Arlington with projected flows not expected to exceed **0.8 MGD** capacity allotment until after 2045. These circumstances provide the basis for a potential trade in FY22 of **0.16MGD** of the City's Arlington capacity to Fairfax in an effort to satisfy capacity needs at Alex Renew through 2025. Fairfax County has quoted **\$13.30 per gallon** while Arlington quotes **\$19.30 per gallon** for the acquisition of additional capacity within their respective systems. Trade negotiations are pending. Based on projections, it is anticipated that we will need purchase capacity at Alex Renew in FY2025.



Capital Funding Plan

Funding Source	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028-31	10-YR Total
Sewer Availability Fees	\$ -	\$ -	\$ -	\$ 4,000,000	\$ -	\$ -	\$ -	\$ 4,000,000
Debt	\$ -	\$ -	\$ -	\$ 2,000,000	\$ -	\$ -	\$ -	\$ 2,000,000
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total:	\$ -	\$ -	\$ -	\$ 6,000,000	\$ -	\$ -	\$ -	\$ 6,000,000

Funding Notes: Cost estimate based on correspondence with Fairfax County staff, Arlington County Staff, and Cost Benefit analysis performed by Greeley and Hansen. Funding Source Other: These funds will be allocated from the Sanitary Sewer Rehabilitation deferred funds from FY22-FY25.

**if no activity per City Charter (Section 6.19) in 3 years note as re-appropriation action*

Impact on Operating Costs

Associated O&M costs will increase.

Conformity with Comprehensive Plan and Council Strategic Plan

The upgrade of the Alexandria Wastewater Plant meets goals of the Comprehensive Plan's "Community Facilities, Public Utilities and Government Services" chapter such as:

- Ensure that a sufficient level of public facilities utilities services are available to meet the needs of the community
- Identify and prioritize facilities that require upgrading
- Ensure the most efficient and effective management of sanitary sewer systems

FY 22-27 Equity Lens Review

<p>Falls Church 2040 Vision, adopted April 10, 2017 <i>In the year 2040, the City of Falls Church is a welcoming and inclusive community – a special place in the heart of Northern Virginia. Involved citizens are key to the City's long-term success as a leader in education, environmental sustainability, multi-modal transportation, and vibrant economic development. By investing in neighborhoods, community services and facilities, schools, and parks the City preserves small-town character and history while honoring a deep commitment to progress and a growing community. The continual rejuvenation of robust commercial areas supports the City's high quality of life for all citizens.</i></p>				Burden or Benefit those under stress	Reduce current disparities	Avoiding Implicit Bias or Increased Inequities
				(Q1) Does the proposed project benefit communities of color, low-income neighborhoods, persons with disabilities and/or underserved? Could it be adjusted to avoid or mitigate the burden and/or to realize a higher benefit? How?	(Q2) Does the request help reduce disparities and inequities? If not, could it be adjusted to do so? How?	(Q3) If Q1 and Q2 do not directly apply to this project describe how it does not worsen disparities and inequities?
Department	Project(s)- listed in priority order	Funding Request	City Mgr Recommended Funding	Rank: Low (L)/ Medium (M)/ High (H)	Rank: Low (L)/ Medium (M)/ High (H)	Rank: Low (L)/ Medium (M)/ High (H)
DPW	Alexandria WWTF Capacity Increase			NA	NA	The City has agreements in place with Fairfax County and Arlington County to treat city generated waste water. The current proposed plan to address over capacity issues at the Fairfax County Facility (Alex Renew) is to propose a capacity swap between the two plants to increase our capacity at the Fairfax County facility and decrease our capacity at the Arlington County Facility. This swap will keep the City's fiscal responsibilities to a minimum while still providing adequate capacity to treat city generated wastewater equally citywide.

Sanitary Sewer Rehabilitation

Category: Stormwater/Sewer Utility

Department Lead: Public Works

Type: Ongoing Project

Project Description, Benefit, and Schedule

A systematic approach to sewer line rehabilitation is being pursued throughout the City's sanitary sewer system. Based on consultant recommendations, a 30-year program has been developed. This is an on-going project to rehabilitate pipes with a process for reconstructing aged, damaged and deteriorated sewer lines. A new cured-in place pipe is formed inside of the existing sewer pipe by using water pressure to install a flexible tube saturated with a liquid thermosetting resin. The water is then heated to harden the resin. This process increases the sewer capacity (due to the smoothness of the new interior surface). It also results in a continuous, tight fitting, pipe-within-a-pipe and reduces infiltration and inflow (I&I). This is a relatively non-invasive and cost-effective process because there is little excavation required. This on-going project, begun in FY2004, will continue until the entire system is rehabilitated. Smoke testing and video inspection are performed to guide the decision process for selecting sewer mains for rehabilitation. In some cases a new sewer main may be a proposed solution to a localized capacity issue. Over the last 15 years, the City has relined 21.5 miles of our total system length of 49 miles (43%).

**Capital Funding Plan**

Funding Source	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028-31	10-YR Total
Local (PAYGO)	\$ -	\$ -	\$ -	\$ -	\$ 750,000	\$ 750,000	\$ 3,000,000	\$ 4,500,000
Sewer Availability Fees	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total:	\$ -	\$ -	\$ -	\$ -	\$ 750,000	\$ 750,000	\$ 3,000,000	\$ 4,500,000

Funding Notes: There is currently a surplus in the sanitary sewer rehabilitation lining fund; therefore, contributions from FY22-FY25 will be directed to other CIP projects to keep debt and rates to a minimum.

**if no activity per City Charter (Section 6.19) in 3 years note as re-appropriation action*

Impact on Operating Costs

Purposes of program are:

1. Long-term cost savings in maintenance of pipe network and,
2. Reduced treatment costs due to reduction of infiltration.

Conformity with Comprehensive Plan and Council Strategic Plan

The continued needed maintenance of the sewer system meets goals of the Comprehensive Plan's "Community Facilities, Public Utilities and Government Services" chapter such as:

- Ensure that a sufficient level of public facilities utilities services are available to meet the needs of the community
- Identify and prioritize facilities that require upgrading
- Explore new technology to update and operate the City's utilities system

FY 22-27 Equity Lens Review

<p>Falls Church 2040 Vision, adopted April 10, 2017 <i>In the year 2040, the City of Falls Church is a welcoming and inclusive community – a special place in the heart of Northern Virginia. Involved citizens are key to the City’s long-term success as a leader in education, environmental sustainability, multi-modal transportation, and vibrant economic development. By investing in neighborhoods, community services and facilities, schools, and parks the City preserves small-town character and history while honoring a deep commitment to progress and a growing community. The continual rejuvenation of robust commercial areas supports the City’s high quality of life for all citizens.</i></p>				Burden or Benefit those under stress	Reduce current disparities	Avoiding Implicit Bias or Increased Inequities
				(Q1) Does the proposed project benefit communities of color, low-income neighborhoods, persons with disabilities and/or underserved? Could it be adjusted to avoid or mitigate the burden and/or to realize a higher benefit? How?	(Q2) Does the request help reduce disparities and inequities? If not, could it be adjusted to do so? How?	(Q3) If Q1 and Q2 do not directly apply to this project describe how it does not worsen disparities and inequities?
Department	Project(s)- listed in priority order	Funding Request	City Mgr Recommended Funding	Rank: Low (L)/ Medium (M)/ High (H)	Rank: Low (L)/ Medium (M)/ High (H)	Rank: Low (L)/ Medium (M)/ High (H)
DPW	Sanitary Sewer Rehabilitation			NA	NA	<p>A systematic approach to sewer line rehabilitation is being pursued throughout the City’s sanitary sewer system. This is an on-going project to rehabilitate pipes with a process for reconstructing aged, damaged and deteriorated sewer lines and address FOG issues. Maintenance of existing infrastructure does not worsen disparities and inequities as the program focus is to re-line and renew the areas most in need.</p> <p>NA</p>

Stormwater Flooding Remediation

Category: Stormwater/Sewer Utility

Department Lead: Public Works

Type: Ongoing Project

Project Description, Benefit, and Schedule

In response to severe flooding in a number of neighborhoods throughout the City from major storm events over the last two years the City convened in late 2019 a Stormwater Task Force to evaluate flood remediation options, prioritize flood mitigation projects and make recommendations to the City Council for implementation of a flooding remediation program. This initiative is built upon the existing Stormwater Utility, using the same enterprise fund for operations and capital improvements. The City staff and Task Force have identified six (6) priority projects (all numbers approximate):

1. W. Columbia/Trammel Branch; Begins FY21, Complete FY24	\$1,875,000
2. E. Columbia/Harrison Branch; Begins FY21, Complete FY24	\$1,752,000
3. Hillwood_2/Robertson Branch; Begins FY21, Complete FY23	\$725,000
4. Hillwood_1/Ives Branch; Project Begins FY21, Complete FY23	\$1,312,000
5. Sherrow Ave/Tripps Run; Project Begins FY21, Complete FY24	\$1,084,000
6. Lincoln Ave/Ellison Branch; Project Begins FY21, Complete FY22	\$757,000
Total:	\$7,505,000
FY21 Debt:	(\$600,000)
Total FY22-27:	\$6,905,000



Projects from FY25 through FY31 will focus on green infrastructure projects identified in the 2012 Watershed Management Plan, such as stream restoration, infiltration basins, bioretention basins, and other detention projects.

Capital Funding Plan

Funding Source	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028-31	10-YR Total
Local (Debt)	\$ 1,099,282	\$ 793,152	\$ 903,537	\$ 1,183,473	\$ 1,452,462	\$ 1,473,227	\$ 1,250,000	\$ 8,155,133
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
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	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total:	\$ 1,099,282	\$ 793,152	\$ 903,537	\$ 1,183,473	\$ 1,452,462	\$ 1,473,227	\$ 1,250,000	\$ 8,155,133

GKY & Asso. is currently completing a rate study update for the City's Stormwater Utility that will include this information in determining revenue requirements.

**if no activity per City Charter (Section 6.19) in 3 years note as re-appropriation action*

Impact on Operating Costs

Operating costs will increase due maintenance on new stormwater infrastructure. Additionally, the acceleration of design and installation of 4' x 6' box storm sewer crossing the W&OD Trail as part of the W. Columbia/Trammel Branch Project is expected to impact operations budget.

Conformity with Comprehensive Plan and Council Strategic Plan

The continued needed maintenance of the sewer system meets goals of the Comprehensive Plan's "Community Facilities, Public Utilities and Government Services" chapter such as:

- Ensure that a sufficient level of public facilities utilities services are available to meet the needs of the community
- Identify and prioritize facilities that require upgrading
- Explore new technology to update and operate the City's utilities system

FY 22-27 Equity Lens Review

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Department	Project(s)- listed in priority order	Funding Request	City Mgr Recommended Funding	(Q1) Does the proposed project benefit communities of color, low-income neighborhoods, persons with disabilities and/or underserved? Could it be adjusted to avoid or mitigate the burden and/or to realize a higher benefit? How?	(Q2) Does the request help reduce disparities and inequities? If not, could it be adjusted to do so? How?	(Q3) If Q1 and Q2 do not directly apply to this project describe how it does not worsen disparities and inequities?
				Rank: Low (L)/ Medium (M)/ High (H)	Rank: Low (L)/ Medium (M)/ High (H)	Rank: Low (L)/ Medium (M)/ High (H)
DPW	Stormwater Flooding Remediation			NA	NA	The Stormwater Task force was appointed by the City Council from a citywide pool of applicants. No more than one resident per neighborhood was appointed to the Task Force. The Task Force identified and ranked city stormwater projects addressing flood mitigation citywide ensuring that projects with the highest community benefit took priority. NA