

# SANITARY SEWERS

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### Sanitary Sewers Ten-Year Plan Approved FY 2022 – FY 2031 Capital, Operating and Debt Service

Sanitary Sewer Rate	FY 2021 Approved	FY 2022 Approved	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Total FY 22-31
Sanitary Sewer Rate (\$ per 1,000 gallons)	\$2.28	\$2.28	\$2.28	\$2.28	\$2.28	\$2.28	\$2.28	\$2.28	\$2.28	\$2.28	\$2.28	
Proposed Rate Increase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
New Sanitary Sewer Rate	\$2.28	\$2.28	\$2.28	\$2.28	\$2.28	\$2.28	\$2.28	\$2.28	\$2.28	\$2.28	\$2.28	
Revenues	FY 2021 Approved	FY 2022 Approved	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Total FY 22-31
Sewer Line Maintenance Fee	11,322,663	10,756,140	10,836,811	10,918,087	10,999,973	11,082,473	11,165,591	11,249,333	11,333,703	11,418,706	11,504,346	111,265,163
Sewer Connection Fee	4,000,000	6,000,000	6,180,000	6,365,400	6,556,362	6,753,053	6,955,644	7,164,314	7,379,243	7,600,620	7,828,639	68,783,276
New Debt Issuance	0	0	0	0	0	0	0	0	0	0	0	0
Fund Balance	0	0	0	0	0	0	0	0	0	0	0	0
Use of Fund Balance	36,749	5,889,496	3,080,520	1,777,269		0	0	0	0	0	0	10,747,285
<b>Total Revenues</b>	<b>15,359,412</b>	<b>22,645,636</b>	<b>20,097,331</b>	<b>19,060,756</b>	<b>17,556,335</b>	<b>17,835,525</b>	<b>18,121,236</b>	<b>18,413,647</b>	<b>18,712,946</b>	<b>19,019,326</b>	<b>19,332,985</b>	<b>190,795,724</b>
<b>All Operating</b>	7,783,270	8,923,358	9,125,547	9,333,081	9,545,183	9,762,868	9,985,154	10,215,056	10,450,591	10,692,778	10,941,635	98,975,249
<b>All Capital Projects</b>	4,898,020	11,253,000	9,199,000	5,344,000	5,392,000	5,441,000	5,493,000	5,548,000	5,605,000	5,666,000	5,729,000	64,670,000
<b>All Debt Service</b>	2,678,122	2,469,278	1,818,712	1,792,534	1,727,995	1,473,213	1,427,870	1,520,677	1,580,324	1,527,581	1,335,810	16,673,994
<b>Total Expenditures</b>	<b>15,359,412</b>	<b>22,645,636</b>	<b>20,143,259</b>	<b>16,469,615</b>	<b>16,665,178</b>	<b>16,677,081</b>	<b>16,906,024</b>	<b>17,283,733</b>	<b>17,635,915</b>	<b>17,886,359</b>	<b>18,006,445</b>	<b>180,319,243</b>
Operating Costs	FY 2021 Approved	FY 2022 Approved	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Total FY 22-31
T&ES Personnel Charges (incl. Worker's Comp)	3,455,535	4,029,228	4,150,000	4,275,000	4,403,000	4,535,000	4,671,000	4,811,000	4,955,000	5,104,000	5,257,000	46,190,228
DEC Personnel Charges	48,300	44,838	46,000	47,000	48,000	49,000	50,000	52,000	54,000	56,000	58,000	504,838
Professional Services												
Additional Consulting Services	347,270	357,688	368,000	379,000	390,000	402,000	414,000	426,000	439,000	452,000	466,000	4,093,688
Leaf Collection in CSO Areas	247,453	130,000	134,000	138,000	142,000	146,000	150,000	155,000	160,000	165,000	170,000	1,490,000
Fat, Oil, Grease (FOG Program)	200,000	206,000	209,000	212,000	215,000	218,000	221,000	224,000	227,000	230,000	233,000	2,195,000
Sanitary Sewer Capacity Study - Flow Metering, Sewer Modeling, CMOM	463,500	470,453	478,000	485,000	492,000	499,000	506,000	514,000	522,000	530,000	538,000	5,034,453
Sewer Billing	170,000	172,550	175,000	178,000	181,000	184,000	187,000	190,000	193,000	196,000	199,000	1,855,550
Infrastructure Repairs												
Sewer Jet Cleaning	260,000	263,900	268,000	272,000	276,000	280,000	284,000	288,000	292,000	296,000	300,000	2,819,900
Annual CCTV of Sewers	325,000	329,000	334,000	339,000	344,000	349,000	354,000	359,000	364,000	369,000	375,000	3,516,000
Heavy Cleaning of Sewers	315,000	318,450	323,000	328,000	333,000	338,000	343,000	348,000	353,000	358,000	363,000	3,405,450
Equipment Replacement	66,800	553,975	562,000	570,000	579,000	588,000	597,000	606,000	615,000	624,000	633,000	5,927,975
Corrective Maintenance	150,800	152,800	155,000	157,000	159,000	161,000	163,000	165,000	167,000	170,000	173,000	1,622,800
Other Non-Personnel (Training, Utilities, Rentals, etc.)	232,150	262,875	267,000	271,000	275,000	279,000	283,000	287,000	291,000	295,000	299,000	2,809,875
Building Maintenance												
Rodent Abatement in Sewers	90,000	90,000	91,000	92,000	93,000	94,000	95,000	96,000	97,000	98,000	99,000	945,000
Indirect Costs (Tr to G.F.)	1,411,462	1,541,601	1,565,547	1,590,081	1,615,183	1,640,868	1,667,154	1,694,056	1,721,591	1,749,778	1,778,635	16,564,492
<b>Subtotal, Operating Costs</b>	<b>7,783,270</b>	<b>8,923,358</b>	<b>9,125,547</b>	<b>9,333,081</b>	<b>9,545,183</b>	<b>9,762,868</b>	<b>9,985,154</b>	<b>10,215,056</b>	<b>10,450,591</b>	<b>10,692,778</b>	<b>10,941,635</b>	<b>98,975,249</b>

Sanitary Sewers Ten-Year Plan  
 Approved FY 2022 – FY 2031 Capital, Operating and Debt Service  
 (continued)

<b>Capital Projects</b>	<b>FY 2021 Approved</b>	<b>FY 2022 Approved</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>FY 2030</b>	<b>FY 2031</b>	<b>Total FY 22-31</b>
Reconstruction and Extension of Sanitary Sewers	0	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	9,000,000
Sanitary Sewer Asset Renewal Program	1,250,000	4,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	36,000,000
Combined Sewer Assessment and Rehab	2,805,000	5,000,000	3,900,000	0	0	0	0	0	0	0	0	8,900,000
AlexRenew WWTP Expansion	0	0	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	0
Capitalized DPI Positions	790,730	800,000	844,000	886,000	931,000	977,000	1,026,000	1,077,000	1,131,000	1,188,000	1,247,000	10,107,000
Capitalize Sustainability Coordinator	52,290	53,000	55,000	58,000	61,000	64,000	67,000	71,000	74,000	78,000	82,000	663,000
<i>Subtotal, Capital Projects</i>	<i>4,898,020</i>	<i>11,253,000</i>	<i>9,199,000</i>	<i>5,344,000</i>	<i>5,392,000</i>	<i>5,441,000</i>	<i>5,493,000</i>	<i>5,548,000</i>	<i>5,605,000</i>	<i>5,666,000</i>	<i>5,729,000</i>	<i>64,670,000</i>
<b>Debt Service</b>	<b>FY 2021 Approved</b>	<b>FY 2022 Approved</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>FY 2030</b>	<b>FY 2031</b>	<b>Total FY 22-31</b>
<i>Debt Service Payments</i>	<i>2,678,122</i>	<i>2,469,278</i>	<i>1,818,712</i>	<i>1,792,534</i>	<i>1,727,995</i>	<i>1,473,213</i>	<i>1,427,870</i>	<i>1,520,677</i>	<i>1,580,324</i>	<i>1,527,581</i>	<i>1,335,810</i>	<i>16,673,994</i>
<b>Total Expenditures, All Categories</b>	<b>15,359,412</b>	<b>22,645,636</b>	<b>20,143,259</b>	<b>16,469,615</b>	<b>16,665,178</b>	<b>16,677,081</b>	<b>16,906,024</b>	<b>17,283,733</b>	<b>17,635,915</b>	<b>17,886,359</b>	<b>18,006,445</b>	<b>180,319,243</b>
Net Revenues and Expenditures	0	0	-45,928	2,591,141	891,157	1,158,444	1,215,212	1,129,914	1,077,031	1,132,967	1,326,541	

Note: Projects with a \$0 total funding are active capital projects funded in prior CIPs that do not require additional resources.

	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2022 - FY 2031
Sanitary Sewers											
Sanitary Sewers											
AlexRenew Wastewater Treatment Plant Capacity	0	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	-
Combined Sewer Assessment & Rehabilitation	5,000,000	3,900,000	0	0	0	0	0	0	0	0	8,900,000
Holmes Run Trunk Sewer	0	0	0	0	TBD	TBD	TBD	TBD	TBD	TBD	-
Reconstructions & Extensions of Sanitary Sewers	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	9,000,000
Sanitary Sewer Asset Renewal Program	4,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	36,000,000
Sanitary Sewers Total	10,400,000	8,300,000	4,400,000	4,400,000	4,400,000	4,400,000	4,400,000	4,400,000	4,400,000	4,400,000	53,900,000
Sanitary Sewers Total	10,400,000	8,300,000	4,400,000	4,400,000	4,400,000	4,400,000	4,400,000	4,400,000	4,400,000	4,400,000	53,900,000

## ALEXRENEW WASTEWATER TREATMENT PLANT CAPACITY

DOCUMENT SUBSECTION: Sanitary Sewers  
 MANAGING DEPARTMENT: Department of Transportation and Environmental Services

PROJECT LOCATION: 1500 Eisenhower Ave.  
 REPORTING AREA: Southwest Quadrant

PRIMARY STRATEGIC THEME: Theme 8: Environmental Sustainability

PROJECT CATEGORY: 3  
 ESTIMATE USEFUL LIFE: 21 - 25 Years

AlexRenew Wastewater Treatment Plant Capacity													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Through 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Total FY 2022 - FY 2031
<b>Expenditure Budget</b>	-	0	0	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	-
Financing Plan													
Sanitary Sewer Fund	-	0	0	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	-
<b>Financing Plan Total</b>	-	0	0	0	0	TBD	TBD	TBD	TBD	TBD	TBD	TBD	-
Operating Impact	0	0	0	0	0	0	0	0	0	0	0	0	0

### CHANGES FROM PRIOR YEAR CIP

A placeholder for future funding (TBD) has been included in the 10-year CIP starting in FY 2025.

### PROJECT DESCRIPTION & JUSTIFICATION

This project will include a feasibility study and planning level engineering to be performed jointly between the City and AlexRenew, to determine whether the existing AlexRenew facility can be expanded to treat an additional 4 million gallons per day (MGD). The exact scope, timing, and feasibility of this project is to-be-determined, however the cost is likely to be significant. It is not anticipated that the City will reach its existing treatment capacity until after Year 2040, construction of additional wastewater treatment capacity will not be needed until after 2030.

As a part of the City’s 2013 Sanitary Sewer Master Plan (Master Plan) and in anticipation of future growth, it was recommended that the City seek an additional 4 MGD of wastewater treatment capacity at Alexandria Renew Enterprises (AlexRenew). This future treatment capacity was added to the FY 2014 - 2023 CIP. In 2017, state legislation was passed that required the City to accelerate the mitigation of the impacts of combined sewer overflows (CSO). Following the 2017 CSO legislation, the City transferred ownership of the combined sewer outfalls to AlexRenew. AlexRenew is currently in the preliminary design phases of its RiverRenew initiative, which will include significant construction and new facilities in order to convey combined sewer flows to the AlexRenew facility for treatment. This infrastructure which is estimated to cost approximately \$613 million must be constructed and operational by July 1, 2025 to comply with the 2017 CSO legislation. With the construction of RiverRenew, the City and AlexRenew will need to reassess options for additional wastewater treatment.

### EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Sanitary Sewer Master Plan

### ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

## CAPITAL SUPPORT OF CSO MITIGATION PROJECTS

DOCUMENT SUBSECTION: Sanitary Sewers  
 MANAGING DEPARTMENT: Department of Transportation and Environmental Services

PROJECT LOCATION: Citywide  
 REPORTING AREA: Citywide

PRIMARY STRATEGIC THEME: Theme 8: Environmental Sustainability

PROJECT CATEGORY: 1  
 ESTIMATE USEFUL LIFE: Varies

Capital Support of CSO Mitigation Projects													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Through 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Total FY 2022 - FY 2031
<b>Expenditure Budget</b>	<b>1,355,990</b>	<b>1,355,990</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Financing Plan													
Sanitary Sewer Fund	1,355,990	1,355,990	0	0	0	0	0	0	0	0	0	0	0
<b>Financing Plan Total</b>	<b>1,355,990</b>	<b>1,355,990</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Operating Impact	0	0	0	0	0	0	0	0	0	0	0	0	0

### CHANGES FROM PRIOR YEAR CIP

No changes from previous CIP.

### PROJECT DESCRIPTION & JUSTIFICATION

As part of legislation passed by the 2017 Virginia General Assembly, the City has been required to accelerate its efforts to address combined sewer discharges from all four outfalls in the City. The bill mandated combined sewer overflow (CSO) mitigation and construction at all outfalls be completed no later than July 1, 2025.

In order to meet this very aggressive mandated schedule for completion of the project, an agreement was reached with AlexRenew on May 1, 2018 that transferred the ownership of the CSO outfalls, along with the responsibility for construction and financing of future infrastructure to meet the timeline mandated by the General Assembly, to AlexRenew. AlexRenew, established as the Alexandria Sanitation Authority, is a City created, rate payer funded, public body that owns and operates the large interceptors, pump stations and wastewater treatment facility in the City. The outfall transfer between the City and AlexRenew was finalized at the June 23, 2018 City Council Public Hearing.

AlexRenew is currently in the design phase of the project, which is currently estimated at \$613 million (total program cost). AlexRenew will be funding the project through issuance of rate-payer funded revenue bonds, along with funding provided by the State.

Although AlexRenew has taken ownership of the CSO's and responsibility for the outfall mitigation projects outlined in the LTCPU, the City is still responsible for supporting AlexRenew's efforts to complete these mitigation projects on the schedule set by the General Assembly. This funding provides support for the CSO mitigation efforts, including coordination on development special use permits and other City permits, inspection and monitoring during the construction phase, stakeholder coordination, public meetings and City Council updates, data collection, historical records research and other associated work associated with regulatory review and oversight.

### EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Sanitary Sewer Master Plan

### ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

## COMBINED SEWER ASSESSMENT & REHABILITATION

DOCUMENT SUBSECTION: Sanitary Sewers  
 MANAGING DEPARTMENT: Department of Transportation and Environmental Services

PROJECT LOCATION: Old Town CSO Area  
 REPORTING AREA: Old Town

PRIMARY STRATEGIC THEME: Theme 8: Environmental Sustainability

PROJECT CATEGORY: 3  
 ESTIMATE USEFUL LIFE: 30+ Years

Combined Sewer Assessment & Rehabilitation													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Through 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Total FY 2022 - FY 2031
<b>Expenditure Budget</b>	<b>15,405,000</b>	<b>6,505,000</b>	<b>5,000,000</b>	<b>3,900,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,900,000</b>
Financing Plan													
GO Bonds (Stormwater)	6,505,000	6,505,000	0	0	0	0	0	0	0	0	0	0	0
Sanitary Sewer Fund	8,900,000	0	5,000,000	3,900,000	0	0	0	0	0	0	0	0	8,900,000
<b>Financing Plan Total</b>	<b>15,405,000</b>	<b>6,505,000</b>	<b>5,000,000</b>	<b>3,900,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,900,000</b>
Operating Impact	0	0	0	0	0	0	0	0	0	0	0	0	0

### CHANGES FROM PRIOR YEAR CIP

Project funding increased in FY 2022 from \$3.9 million to \$5.0 million to allow for the acceleration of this project.

### PROJECT DESCRIPTION & JUSTIFICATION

This project provides for the condition assessment of sewers in the combined sewer service area in Old Town and remediation of structurally deficient sewers.

The City will perform condition assessments including cleaning and televising lines, assessing information to determine condition of lines, and determining if rehabilitation is needed. Structurally deficient sewers will be identified, and the results of the field work will be evaluated to develop remediation projects which are expected to include the relining of sewers and manhole repairs. Project funding may be adjusted upon completion of the assessment period based on the condition of the sewers and need for rehabilitation.

In addition to the health and environmental benefits of this project, completion of this project will repair and renew the City's sewer infrastructure, extend the infrastructure's useful life, and reduce the number of pipe collapses and other emergency repairs.

The City is responsible for the ownership and maintenance of the sewers located in the combined sewer service area. The combined sewer outfalls are owned by Alexandria Renew Enterprises (AlexRenew). AlexRenew is also responsible for compliance with requirements of the combined sewer system permit issued by the Department of Environmental Quality and for complying with the legislation passed by the Virginia General Assembly in 2017, which requires that combined sewer discharges be mitigated to comply with the legislation by July 1, 2025. The City continues to work with AlexRenew to ensure this deadline is met.

### EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

N/A

### ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

## HOLMES RUN TRUNK SEWER

DOCUMENT SUBSECTION: Sanitary Sewers	PROJECT LOCATION: AlexRenew Plant to the City/Fairfax Border
MANAGING DEPARTMENT: Department of Transportation and Environmental Services	REPORTING AREA: Landmark/Van Dorn
PRIMARY STRATEGIC THEME: Theme 8: Environmental Sustainability	PROJECT CATEGORY: 3 ESTIMATE USEFUL LIFE: 30+ Years

Holmes Run Trunk Sewer													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Through 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Total FY 2022 - FY 2031
<b>Expenditure Budget</b>	<b>3,365,000</b>	<b>3,365,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>TBD</b>	<b>TBD</b>	<b>TBD</b>	<b>TBD</b>	<b>TBD</b>	<b>TBD</b>	<b>-</b>
Financing Plan													
Cash Capital	500,000	500,000	0	0	0	0	0	0	0	0	0	0	0
GO Bonds (Sanitary)	100,000	100,000	0	0	0	0	0	0	0	0	0	0	0
Sanitary Sewer Fund	2,765,000	2,765,000	0	0	0	0	TBD	TBD	TBD	TBD	TBD	TBD	-
<b>Financing Plan Total</b>	<b>3,365,000</b>	<b>3,365,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>TBD</b>	<b>TBD</b>	<b>TBD</b>	<b>TBD</b>	<b>TBD</b>	<b>TBD</b>	<b>-</b>
Operating Impact	0	0	0	0	0	0	0	0	0	0	0	0	0

### CHANGES FROM PRIOR YEAR CIP

A placeholder for future funding (TBD) has been included in the 10-year CIP starting in FY 2026.

### PROJECT DESCRIPTION & JUSTIFICATION

This project provides for an increase in capacity in the Holmes Run Trunk Sewer (HRTS) line, which is owned and operated by Alexandria Renew Enterprises (AlexRenew). Both the City of Alexandria and Fairfax County send wastewater flows to this sewer and share in the capacity of this sewer. The City has a sanitary sewer Service Agreement with AlexRenew that provides for peak flow capacities in this sewer, as well as the other AlexRenew interceptor sewers.

Increased capacity is required to support development occurring in the Eisenhower Valley, as well as future development and redevelopment in the West End. In 2008, the western portion of the trunk sewer from I-395 to Cameron Run was lined for additional capacity. Additional follow-up engineering and analysis has determined further improvements are needed to address long term capacity issues.

Engineering analysis between the City, Fairfax County, and AlexRenew was completed in FY 2017 which evaluated capacity issues in the HRTS, and provided a recommendation to enlarge an existing parallel, Fairfax County Holmes Run Sewer so that flows from the AlexRenew HRTS could be diverted to this sewer. Enlargement of the Fairfax County Holmes Run Sewer are proposed from the City/County line to Cameron Run, where the Fairfax sewer discharges in the the AlexRenew HRTS. A subsequent study was completed in FY 2019 that confirms construction of this sewer will have sufficient capacity to serve the proposed growth as anticipated in the Eisenhower West Small Area Plan. This study also included analysis of the Fairfax County Backlick Sewers, located in the City, and concluded that no infrastructure improvements would be required. The timing of the capacity upgrades is anticipated sometime after 2025. Design of the capacity upgrades is anticipated to be completed in two years and construction in three years.

The FY 2019 study also identified portions of the HRTS in the East Eisenhower Valley where the City will eventually exceed its peak flow capacities as stated in the Service Agreement. Development forecasting and hydraulic modeling show that the City will not exceed its Service Agreement capacities in this section of the HRTS until after 2035. Capacity improvements in this section of the HRTS have not yet been determined.

A total of \$9.0 million from the sanitary sewer fund has been budgeted in prior fiscal years for this project. The City will coordinate with AlexRenew and Fairfax County regarding implementation of projects, along with cost sharing to resolve remaining capacity issues on the Holmes Run Trunk Sewer. Depending on the outcome of these discussions, additional funding may be required in future years for both design and construction.

Completion of this project will improve the City’s sanitary sewer infrastructure, which will help mitigate any potential sanitary sewer overflows during periods of wet weather. Additionally, the project will improve the City’s readiness for accommodating quality economic growth.

#### EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Sanitary Sewer Master Plan

#### ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

## RECONSTRUCTIONS & EXTENSIONS OF SANITARY SEWERS

DOCUMENT SUBSECTION: Sanitary Sewers  
 MANAGING DEPARTMENT: Department of Transportation and Environmental Services

PROJECT LOCATION: Citywide  
 REPORTING AREA: Citywide

PRIMARY STRATEGIC THEME: Theme 8: Environmental Sustainability

PROJECT CATEGORY: 1  
 ESTIMATE USEFUL LIFE: 30+ Years

Reconstructions & Extensions of Sanitary Sewers													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Through 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Total FY 2022 - FY 2031
<b>Expenditure Budget</b>	<b>24,492,959</b>	<b>15,492,959</b>	<b>900,000</b>	<b>900,000</b>	<b>900,000</b>	<b>900,000</b>	<b>900,000</b>	<b>900,000</b>	<b>900,000</b>	<b>900,000</b>	<b>900,000</b>	<b>900,000</b>	<b>9,000,000</b>
Financing Plan													
Cash Capital	2,146,105	2,146,105	0	0	0	0	0	0	0	0	0	0	0
GO Bond Interest Earnings	250,000	250,000	0	0	0	0	0	0	0	0	0	0	0
GO Bonds (Sanitary)	3,473,708	3,473,708	0	0	0	0	0	0	0	0	0	0	0
Sanitary Sewer Fund	18,623,146	9,623,146	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	9,000,000
<b>Financing Plan Total</b>	<b>24,492,959</b>	<b>15,492,959</b>	<b>900,000</b>	<b>900,000</b>	<b>900,000</b>	<b>900,000</b>	<b>900,000</b>	<b>900,000</b>	<b>900,000</b>	<b>900,000</b>	<b>900,000</b>	<b>900,000</b>	<b>9,000,000</b>
Operating Impact	0	0	0	0	0	0	0	0	0	0	0	0	0

### CHANGES FROM PRIOR YEAR CIP

Funding added to project for FY 2031.

### PROJECT DESCRIPTION & JUSTIFICATION

This project provides for the construction of new sewer mains, the replacement and rehabilitation of old sewer lines as needed, repairs to City streets disturbed by sewer line repairs, and reconstruction and funds for the City's share of the cost of sewer extensions required for development.

Prior year balances, along with annual funding will be utilized to fund multiple projects in this request. Some projects are in early planning stages, while others are currently in design and construction. Obstacles to construction may include the moving of buried utility lines, such as power, water, and gas lines by the various utility owners that if not moved would interfere with the construction.

Projects currently under study/design and scheduled for construction in FY 2022 include:

- Wheeler Avenue Sewer Lining
- Franklin Street Sewer Replacement Project
- N Saint Asaph Street/Madison Street Sewer Improvements
- Miscellaneous Sanitary Sewer Upsizing Projects (study ongoing)

Completion of these projects improves the City's sanitary sewer infrastructure while reducing the frequency of unplanned repairs due to deferred maintenance.

### EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Sanitary Sewer Master Plan

### ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

## SANITARY SEWER ASSET RENEWAL PROGRAM

DOCUMENT SUBSECTION: Sanitary Sewers  
 MANAGING DEPARTMENT: Department of Transportation and Environmental Services

PROJECT LOCATION: Citywide  
 REPORTING AREA: Citywide

PRIMARY STRATEGIC THEME: Theme 8: Environmental Sustainability

PROJECT CATEGORY: 2  
 ESTIMATE USEFUL LIFE: 30+ Years

Sanitary Sewer Asset Renewal Program													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Through 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Total FY 2022 - FY 2031
<b>Expenditure Budget</b>	<b>37,250,000</b>	<b>1,250,000</b>	<b>4,500,000</b>	<b>3,500,000</b>	<b>3,500,000</b>	<b>3,500,000</b>	<b>3,500,000</b>	<b>3,500,000</b>	<b>3,500,000</b>	<b>3,500,000</b>	<b>3,500,000</b>	<b>3,500,000</b>	<b>36,000,000</b>
Financing Plan													
GO Bonds (Sanitary)	1,250,000	1,250,000	0	0	0	0	0	0	0	0	0	0	0
Sanitary Sewer Fund	36,000,000	0	4,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	36,000,000
<b>Financing Plan Total</b>	<b>37,250,000</b>	<b>1,250,000</b>	<b>4,500,000</b>	<b>3,500,000</b>	<b>3,500,000</b>	<b>3,500,000</b>	<b>3,500,000</b>	<b>3,500,000</b>	<b>3,500,000</b>	<b>3,500,000</b>	<b>3,500,000</b>	<b>3,500,000</b>	<b>36,000,000</b>
Operating Impact	0	0	0	0	0	0	0	0	0	0	0	0	0

### CHANGES FROM PRIOR YEAR CIP

Project funding increased by \$1 million in FY 2022. Funding added to project for FY 2031.

### PROJECT DESCRIPTION & JUSTIFICATION

The City’s sanitary sewer system is comprised of over 240 miles of sewer line, some lines dating back over 100 years. This program provides for annual inspection, condition assessment, and rehabilitation of sanitary sewers, City-owned lateral sewers, and sewer appurtenances as part of an ongoing sewer asset management initiative.

This program provides for closed circuit television (CCTV) inspection of all sewers and City-owned laterals and visual inspection of all sewer appurtenances (manholes and other structures). Inspections will be performed with a goal of inspecting 10 percent of the system each year. The condition of all sewers and sewer appurtenances will be assessed using industry standards of cataloguing inspections and recommendations will be made as to which sewers and sewer appurtenances are vulnerable to breakage or collapse. Sewers and sewer appurtenances that are vulnerable will be rehabilitated primarily using trenchless technologies, which are significantly less costly than dig-and-replace repairs. A total of \$36 million is being budgeted for this program over the ten-year budget period. Funding in FY 2022 has been increased by \$1 million to accelerate implementation of the program.

Implementation of this project improves the City’s sanitary sewer infrastructure and extends the infrastructure’s useful life by reducing the potential of pipe collapse and other emergency repairs. Additionally, this project will help reduce the amount of infiltration and inflow (I&I) into the sanitary sewer system, which helps reduce the frequency and magnitude of sanitary sewer overflows and sewer back-ups into homes and businesses.

#### EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Sanitary Sewer Master Plan

#### ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.