

SANITARY SEWERS

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Sanitary Sewers Approved FY 2015 – 2024 Capital Improvement Program Summary of Projects

CIP Section/Subsection/Project	Unallocated (2/14)	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 15-24 TOTAL
Sanitary Sewers												
King & West Combined Sewer Diversion Structure	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Holmes Run Trunk Sewer	\$5,637,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Four Mile Run Sanitary Sewer Repair	\$1,830,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Combined Sewer Overflow 001 Planning	\$0	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$500,000
Wet Weather Management Facility	\$0	\$2,250,000	\$2,250,000	\$0	\$8,750,000	\$9,000,000	\$0	\$0	\$0	\$0	\$0	\$22,250,000
Combined Sewer System (CSS) Permit Compliance	\$1,490,690	\$0	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$2,700,000
Reconstructions & Extensions of Sanitary Sewers	\$2,095,918	\$0	\$900,000	\$900,000	\$900,000	\$900,000	\$900,000	\$900,000	\$900,000	\$900,000	\$900,000	\$8,100,000
Combined Sewer Separation Projects	\$1,300,000	\$0	\$200,000	\$200,000	\$600,000	\$200,000	\$200,000	\$600,000	\$200,000	\$200,000	\$600,000	\$3,000,000
Citywide Sewershed Infiltration & Inflow	\$9,320,000	\$0	\$3,000,000	\$2,375,000	\$3,075,000	\$2,850,000	\$4,000,000	\$0	\$0	\$0	\$0	\$15,300,000
Sewer Assessment & Rehabilitation	\$450,000	\$0	\$0	\$0	\$0	\$3,700,000	\$2,550,000	\$2,550,000	\$0	\$0	\$0	\$8,800,000
AlexRenew Wastewater Treatment Plant Capacity	\$500,000	\$0	\$0	\$0	\$0	\$0	\$11,070,000	\$11,400,000	\$11,750,000	\$0	\$0	\$34,220,000
Sanitary Sewers Total	\$22,623,608	\$2,750,000	\$6,650,000	\$3,775,000	\$13,625,000	\$16,950,000	\$19,020,000	\$15,750,000	\$13,150,000	\$1,400,000	\$1,800,000	\$94,870,000

Sanitary Sewers Ten-Year Plan Approved FY 2015 – 2024 Capital, Operating and Debt Service

Sanitary Sewer Rate	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total
Sanitary Sewer Rate (\$ per 1,000 gallons)	\$1.25	\$1.25	\$1.50	\$1.74	\$2.02	\$2.02	\$2.32	\$2.67	\$2.67	\$2.67	\$2.67
Proposed Rate Increase	0.0%	20.0%	16.0%	16.0%	0.0%	15.0%	15.0%	0.0%	0.0%	0.0%	0.0%
New Sanitary Sewer Rate	\$1.25	\$1.50	\$1.74	\$2.02	\$2.02	\$2.32	\$2.67	\$2.67	\$2.67	\$2.67	\$2.67
Revenues											
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total
Sewer Line Maintenance Fee	6,100,000	7,374,900	8,619,046	10,073,079	10,148,627	11,758,453	13,623,637	13,725,814	13,828,758	13,932,474	109,184,787
Sewer Connection Fee	1,603,945	1,652,063	1,701,625	1,752,674	1,985,780	2,249,888	2,549,124	2,888,157	3,005,828	3,128,581	22,517,665
New Debt Issuance	2,425,000	6,600,000	3,575,000	13,115,000	14,445,000	16,070,000	12,520,000	13,150,000	700,000	1,800,000	84,400,000
Reprogrammed Prior Year Funding	500,000	0	0	0	0	0	0	0	0	0	500,000
Fund Balance Carryover	291,000	34,449	167,286	1,023,698	2,099,057	1,944,268	816,561	216,002	773,789	409,833	
Total Revenues	10,919,945	15,661,412	14,062,957	25,964,450	28,678,463	32,022,609	29,509,322	29,979,974	18,308,375	19,270,888	216,602,452
	175,000										
All Operating	5,232,100	5,472,313	5,633,482	5,799,487	5,970,471	6,455,586	6,646,253	6,842,641	7,044,920	7,253,267	62,350,521
All Capital Projects	3,100,000	6,900,000	3,775,000	13,625,000	15,100,000	17,745,000	14,475,000	13,150,000	1,400,000	1,800,000	91,070,000
All Debt Service	2,553,396	3,121,813	3,630,777	4,440,907	5,663,724	7,005,462	8,172,066	9,213,544	9,453,622	9,282,113	62,537,424
Total Expenditures	10,885,496	15,494,126	13,039,259	23,865,394	26,734,195	31,206,048	29,293,319	29,206,185	17,898,542	18,335,380	215,957,945
Operating Costs											
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total
Current Personnel (T&ES)	2,267,820	2,335,855	2,405,930	2,478,108	2,552,451	2,629,025	2,707,896	2,789,133	2,872,807	2,958,991	25,998,015
Additional Personnel(T&ES)	131,957	135,916	139,993	144,193	148,519	152,974	157,564	162,290	167,159	172,174	1,512,739
DPI Personnel Charges	541,987	558,247	574,994	592,244	610,011	628,311	647,161	666,576	686,573	707,170	6,213,274
T&ES Workers Compensation	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,000,000
Indirect Costs (Tr to G.F.)	240,178	247,383	254,805	262,449	270,322	278,432	286,785	295,389	304,250	313,378	2,753,372
Sewer Jet Cleaning	242,500	249,775	257,268	264,986	272,936	281,124	289,558	298,244	307,192	316,407	2,779,991
Corrective Maintenance	100,000	103,000	106,090	109,273	112,551	115,927	119,405	122,987	126,677	130,477	1,146,388
Other Non-Personnel (Training, Utilities, Rentals, etc.)	137,226	141,343	145,583	149,951	154,449	159,083	163,855	168,771	173,834	179,049	1,573,142
Equipment Replacement	115,432	118,895	122,462	126,136	129,920	133,817	137,832	141,967	146,226	150,613	1,323,299
Sanitary Sewer Capacity Study - Flow Metering and Sewer Modeling	625,000	730,000	751,900	774,457	797,691	821,621	846,270	871,658	897,808	924,742	8,041,147
Sewer Billing	80,000	82,400	84,872	87,418	90,041	92,742	95,524	98,390	101,342	104,382	917,110
Annual CCTV of Sewers	400,000	412,000	424,360	437,091	450,204	463,710	477,621	491,950	506,708	521,909	4,585,552
Heavy Cleaning of Sewers	250,000	257,500	265,225	273,182	281,377	289,819	298,513	307,468	316,693	326,193	2,865,970
Wet Weather Management Facility Operating	0	0	0	0	0	309,000	318,270	327,818	337,653	347,782	1,640,523
Subtotal, Operating Costs	5,232,100	5,472,313	5,633,482	5,799,487	5,970,471	6,455,586	6,646,253	6,842,641	7,044,920	7,253,267	62,350,521

Sanitary Sewers FY 2015 – 2024 – Capital, Operating and Debt Service (continued)

Capital Projects	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total
Green Infrastructure	350,000	250,000	0	0	0	0	0	0	0	0	600,000
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	8,100,000
Wet Weather Management Facility	2,250,000	2,250,000	0	8,750,000	9,000,000	0	0	0	0	0	22,250,000
Sewer Separation Projects	0	200,000	200,000	600,000	200,000	200,000	600,000	200,000	200,000	600,000	3,000,000
Combined Sewer Overflow Planning	500,000	0	0	0	0	0	0	0	0	0	500,000
Combined Sewer Permit Compliance	0	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	2,700,000
Sanitary Sewer Rehab and I&I Red.	0	3,000,000	2,375,000	3,075,000	2,850,000	4,000,000	0	0	0	0	15,300,000
Combined Sewer Assessment and Rehab	0	0	0	0	1,850,000	1,275,000	1,275,000	0	0	0	4,400,000
AlexRenew WWTP Expansion	0	0	0	0	0	11,070,000	11,400,000	11,750,000	0	0	34,220,000
Four Mile Run Sanitary Sewer Repair	0	0	0	0	0	0	0	0	0	0	0
King/West Diversion Chamber	0	0	0	0	0	0	0	0	0	0	0
Holmes Run Trunk Sewer	0	0	0	0	0	0	0	0	0	0	0
<i>Subtotal, Capital Projects</i>	<i>3,100,000</i>	<i>6,900,000</i>	<i>3,775,000</i>	<i>13,625,000</i>	<i>15,100,000</i>	<i>17,745,000</i>	<i>14,475,000</i>	<i>13,150,000</i>	<i>1,400,000</i>	<i>1,800,000</i>	<i>91,070,000</i>
Debt Service	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total
<i>Debt Service Payments</i>	<i>2,553,396</i>	<i>3,121,813</i>	<i>3,630,777</i>	<i>4,440,907</i>	<i>5,663,724</i>	<i>7,005,462</i>	<i>8,172,066</i>	<i>9,213,544</i>	<i>9,453,622</i>	<i>9,282,113</i>	<i>62,537,424</i>
Total, All Categories	10,885,496	15,494,126	13,039,259	23,865,394	26,734,195	31,206,048	29,293,319	29,206,185	17,898,542	18,335,380	215,957,945

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King and West Combined Sewer Diversion Structure

Document Subsection: Sanitary Sewers
 Managing Department: Dept. of Project Implementation
 Supporting Department(s): Transportation & Environmental Services
 ORG: 53411866

Project Location: 100 Block of N. West St.
 Reporting Area: Old Town
 Project Category: 2 – Renovations/Existing Assets
 Estimated Useful Life: 40 years

King and West Combined Sewer Diversion Structure													
	A (B+M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Through FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total FY 2015-2024
Expenditure Budget	1,515,000	1,515,000	0	0	0	0	0	0	0	0	0	0	0
Financing Plan													
Sanitary Sewer Fees	1,515,000	1,515,000	0	0	0	0	0	0	0	0	0	0	0
Total Financing Plan	1,515,000	1,515,000	0	0	0	0	0	0	0	0	0	0	0
Add. Operating Impact													
Annual Impact			0	0	0	0	0	0	0	0	0	0	0
Cumulative Impact			0	0	0	0	0	0	0	0	0	0	0

Changes from Prior Year CIP: No changes from prior year CIP. Project was not included in last year's CIP as additional funding was not required; however, as it is about to be under construction, it will be in the CIP until the project is completed.

Project Description & Justification

The new diversion chamber will replace the existing diversion chamber which transmits low flow sewage to the Alex Renew wastewater treatment facility. The primary goal of the project is to provide better accessibility to T&ES operations staff to enable maintenance and observation with greater efficiency. The secondary goal of the new diversion structure is to allow for maximum CSO diversion capture and conveyance, without causing backups or surcharging the system during wet weather events.

This project has been incorporated into the City's combined sewer system (CSS) permit issued by the Virginia Department of Environmental Quality (VDEQ) in August 2013 and must be completed no later than February 2016. Design is complete and construction will begin in FY 2014.

City's Strategic Plan & City Manager's Performance Plan
<p>Primary Strategic Plan Goal: Goal 2 – Health & Environment</p> <p>Focus Area: Livable, Green, and Prospering City</p> <ul style="list-style-type: none"> • Improve the health of City waterways • Promote an attractive urban environment that reflects our history and provides well-functioning infrastructure <p>Focus Area: Accountable, Effective, & Well-Managed Government</p> <ul style="list-style-type: none"> • Ensure government is accountable to the community
External or Internal Adopted Plan or Recommendation
<ul style="list-style-type: none"> • Consistent with the Eco-City Charter and Eco-City Action Plan 2030, adopted by City Council June 2008 and June 2009 respectively • T&ES Strategic Plan: Key Result Area – Meet or exceed state and federal requirements of the City's MS4 and combined sewer permits • 2013 Sanitary Sewer Master Plan

Additional Operating Budget Impact
An additional impact to the operating budget is not anticipated.

Holmes Run Trunk Sewer

Document Subsection: Sanitary Sewers
 Managing Department: Transportation & Environmental Services

Project Location: AlexRenew Plant to the City/Fairfax Border
 Reporting Area: Landmark/Van Dorn, Seminary Hill/Strawberry Hill
 Taylor Run, Eisenhower Ave, Eisenhower East

Supporting Department(s): N/A
 ORG: 53411869

Project Category: 3 – New Facilities
 Estimated Useful Life: 40 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 FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total FY 2015-2024
Expenditure Budget	9,002,000	9,002,000	0	0	0	0	0	0	0	0	0	0	0
Financing Plan													
Prior Year City Funding	500,000	500,000	0	0	0	0	0	0	0	0	0	0	0
General Obligation Bonds - Sanitary Sewer	4,200,000	4,200,000	0	0	0	0	0	0	0	0	0	0	0
Sanitary Sewer Fees	4,302,000	4,302,000	0	0	0	0	0	0	0	0	0	0	0
Total Financing Plan	9,002,000	9,002,000	0										
Add. Operating Impact													
Annual Impact			0	0	0	0	0	0	0	0	0	0	0
Cumulative Impact			0	0	0	0	0	0	0	0	0	0	0
Changes from Prior Year CIP: No changes from prior year CIP.													

Project Description & Justification

This project provides for an increase in capacity in the Holmes Run trunk sewer line, required to support development occurring in the Eisenhower Valley, as well as future development and redevelopment in the West End. Engineering studies indicated that lining the existing sewer with specialized materials would provide the needed capacity increase with minimal environmental disruption. Relining will increase the capacity in the western portion of the sewer from Van Dorn Street to Eisenhower Avenue at Cameron Run.

Phase I of this project included relining the western portion of the trunk sewer, completed in summer 2008. Additional engineering and analysis has determined that pipe lining alone will not increase capacity sufficiently in the Phase II – East Eisenhower section. Additional engineering analysis is underway to evaluate other capacity relief options, including constructing a relief sewer from Eisenhower Avenue to the AlexRenew plant, and potential wet weather sewer storage and treatment in the Holmes Run Service Area.

A total of \$9.0 million from the Sanitary Sewer fund has been budgeted in prior fiscal years for this project. Engineering analysis which is being coordinated with Fairfax County and AlexRenew is expected to be completed in FY 2014. Upon completion of the analysis, design will begin for recommended improvements. Depending on the outcome of the current on-going study, additional funding may be required in future years.

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

City's Strategic Plan & City Manager's Performance Plan
Primary Strategic Plan Goal: Goal 2 – Health & Environment
<p>Focus Area: Livable, Green, and Prospering City</p> <ul style="list-style-type: none"> Improve the health of City waterways Promote an attractive urban environment that reflects our history and provides well-functioning infrastructure Increase the value of the real estate tax base Ensure Alexandria supports, retains, and attracts businesses <p>Focus Area: Accountable, Effective, & Well-Managed Government</p> <ul style="list-style-type: none"> Ensure government is accountable to the community Ensure the fiscal strength of the City government
External or Internal Adopted Plan or Recommendation
<ul style="list-style-type: none"> 2013 Sanitary Sewer Master Plan

Additional Operating Budget Impact
An additional impact to the operating budget is not anticipated.

Four Mile Run Sanitary Sewer Repair

Document Subsection: Sanitary Sewers
 Managing Department: Transportation & Environmental Services
 Supporting Department(s): Dept. of Project Implementation
 ORG: 53411873

Project Location: End of Commonwealth Ave. to Bruce St.
 Reporting Area: Potomac West
 Project Category: 2 – Renovations/Existing Assets
 Estimated Useful Life: 40 years

Four Mile Run Sanitary Sewer Repair													
	A (B+M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Through FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total FY 2015-2024
Expenditure Budget	2,300,000	2,300,000	0	0	0	0	0	0	0	0	0	0	0
Financing Plan													
General Obligation Bonds - Sanitary Sewer	800,000	800,000	0	0	0	0	0	0	0	0	0	0	0
Sanitary Sewer Fees	1,500,000	1,500,000	0	0	0	0	0	0	0	0	0	0	0
Total Financing Plan	2,300,000	2,300,000	0										
Add. Operating Impact													
Annual Impact			0	0	0	0	0	0	0	0	0	0	0
Cumulative Impact			0	0	0	0	0	0	0	0	0	0	0
Changes from Prior Year CIP: No changes from prior year CIP.													

Project Description & Justification

This project will fund the rehabilitation of the Four Mile Run sanitary sewer. During field inspections of the Four Mile Run Inflow and Infiltration project in FY 2001, surcharged manholes with significant solids were encountered along the 36-inch diameter trunk sewer upstream of the Four Mile Run pump station. Efforts to clean the trunk sewer were unsuccessful due to the heavy solids volume and compaction in the sewer. In FY 2008, a specialty contractor successfully removed the solids and an inspection and condition assessment was completed. Based on the condition assessment of the trunk sewer following the removal of the solids, rehabilitation is necessary.

Total project costs are estimated at \$2.3 million, and include planning, design and engineering, construction management, and construction. The project is currently in the design phase and construction is tentatively scheduled to start in FY 2015.

Completion of this project will improve the City's sanitary sewer infrastructure and extend its useful life, reducing potential pipe collapse and other emergency repairs.

City's Strategic Plan & City Manager's Performance Plan

Primary Strategic Plan Goal: Goal 2 – Health & Environment

Focus Area: Livable, Green, and Prospering City

- Improve the health of City waterways
- Promote an attractive urban environment that reflects our history and provides well-functioning infrastructure

Focus Area: Accountable, Effective, & Well-Managed Government

- Ensure government is accountable to the community

External or Internal Adopted Plan or Recommendation

- 2013 Sanitary Sewer Master Plan

Additional Operating Budget Impact

An additional impact to the operating budget is not anticipated.

Combined Sewer Overflow 001 Planning

Document Subsection: Sanitary Sewers
 Managing Department: Transportation & Environmental Services
 Supporting Department(s): N/A
 ORG: TBD

Project Location: CSO 001 – Pendleton St. at Potomac River
 Reporting Area: Old Town/Old Town North
 Project Category: 3 – New Facilities
 Estimated Useful Life: N/A

Combined Sewer Overflow 001 Planning													
	A (B+M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Through FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total FY 2015-2024
Expenditure Budget	500,000	0	500,000	0	0	0	0	0	0	0	0	0	500,000
Financing Plan													
Sanitary Sewer Fees	0	0	500,000	0	0	0	0	0	0	0	0	0	500,000
Total Financing Plan	500,000	0	500,000	0	0	0	0	0	0	0	0	0	500,000
Add. Operating Impact													
Annual Impact			0	0	0	0	0	0	0	0	0	0	0
Cumulative Impact			0	0	0	0	0	0	0	0	0	0	0

Changes from Prior Year CIP: Planned funding accelerated from FY 2017 to FY 2015 based on planning needed in North Old Town area.

Project Description & Justification

The City's combined sewer system (sanitary and storm sewers) comprise approximately 540 acres located in the Old Town area. During certain wet weather events, flows in excess of the sewer pipes are discharged into receiving waterways via one of four combined sewer outfalls. These discharges are permitted by the Virginia Department of Environmental Quality (VDEQ). The Hunting Creek Bacteria Total Maximum Daily Load (TMDL) requires reductions in these discharges from 3 of the 4 permitted outfalls. This project is related to the Combined Sewer System (CSS) Permit Compliance project, but focuses only on the CSO 001 area.

The CSO 001 Planning project will provide for feasibility planning at CSO 001 (Pendleton Street) with the goal of reducing CSO discharges from 30-40 events per year to about four per year at each outfall through storage of CSOs. \$500,000 is budgeted for feasibility planning in FY 2015, with design and construction TBD based on future permit requirements.

There will be an additional benefit of significantly reducing the nutrient and sediment loadings into the Chesapeake Bay. These reductions could be applied towards the Chesapeake Bay TMDL stormwater reduction requirements and may benefit the City. Finally, the redevelopment of the GenOn site in Old Town will require developer contributions towards separating the combined sewage at the site. These potential contributions can be used to fund the storage at CSO 001. Planning for CSO 001 will insure coordination with any redevelopment of the Robinson Terminal North site.

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City's Strategic Plan & City Manager's Performance Plan

Primary Strategic Plan Goal: Goal 2 – Health & Environment

Focus Area: Livable, Green, and Prospering City

- Improve the health of City waterways
- Promote an attractive urban environment that reflects our history and provides well-functioning infrastructure
- Sustain the natural quality of land within the City

Focus Area: Accountable, Effective, & Well-Managed Government

- Ensure government is accountable to the community

External or Internal Adopted Plan or Recommendation

- T&ES Strategic Plan 2012-2015: Key Result Area III: Meet or exceed state or federal requirements of City's separate storm sewer and combined sewer system permits and maintain compliance with these environmental permits
- Eco-City Charter (Water Resources) and Eco-City Action Plan, Chapter 4, Goal 4: Eliminate the harmful impact of combined sewer systems in the long-term, and minimize them in the short-term
- 2013 Sanitary Sewer Master Plan

Additional Operating Budget Impact

An additional impact to the operating budget is not anticipated.

Project Description & Justification (Continued)

For the City to stay in compliance with the future CSS permits, overflows from the Combined Sewer System need to be mitigated. This is primarily because of new regulatory requirements of the bacteria TMDL for Hunting Creek. Total cost of mitigation of these overflows can range as high as \$200 million - \$300 million over a two to three decade period and depends on the type and mix of technologies that get implemented. Through the Alternatives Analysis being conducted by the City in FY 2014 – 2018, an update to its Long-Term Control Plan will be developed. Only after completion of this analysis, and with the approval of the Long Term Control Plan update by the Virginia Department of Environmental Quality (VDEQ), will the exact costs of the resulting projects and applicable schedule will become certain. In the upcoming permit cycle, the City is required to continue implementation of Nine Minimum Controls, Area Reduction Plan. This includes implementation of several capital projects including Green Infrastructure, and select separation projects. The City will also need to continue extensive monitoring, sampling, inspections, and reporting. This budget reflects the anticipated costs of improvements over the next five years only. Costs of improvements required for implementing the approved updated Long Term Control Plan (FY 2019 onwards) are not reflected in the budget.

Wet Weather Management Facility

Document Subsection: Sanitary Sewers
 Managing Department: Transportation & Environmental Services
 Supporting Department(s): N/A
 ORG: TBD

Project Location: Near the AlexRenew Facility
 Reporting Area: Southwest Quadrant
 Project Category: 3 – New Facilities
 Estimated Useful Life: 20+ years

Wet Weather Management Facility													
	A (B+M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Through FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total FY 2015-2024
Expenditure Budget	22,250,000	0	2,250,000	2,250,000	0	8,750,000	9,000,000	0	0	0	0	0	22,250,000
Financing Plan													
General Obligation Bonds - Sanitary Sewer	21,850,000	0	2,100,000	2,000,000	0	8,750,000	9,000,000	0	0	0	0	0	21,850,000
Sanitary Sewer Fees	400,000	0	150,000	250,000	0	0	0	0	0	0	0	0	400,000
Total Financing Plan	22,250,000	0	2,250,000	2,250,000	0	8,750,000	9,000,000	0	0	0	0	0	22,250,000
Add. Operating Impact													
Annual Impact			0	0	0	0	0	309,000	318,270	327,818	337,653	347,782	1,640,523
Cumulative Impact			0	0	0	0	0	309,000	627,270	955,088	1,292,741	1,640,523	1,640,523
Changes from Prior Year CIP: No changes to total project cost or project timing. \$4.5 million for planning/design/engineering budget over FY 2015 - 2016 based on projected cash flow needs.													

Project Description & Justification

During periods of extreme wet weather, stormwater enters the City's sanitary sewer collection system. This has the potential to lead to sewer back-ups in homes and businesses throughout the City. In addition, wet weather flows in the sewer can cause sanitary sewer overflows (SSOs), where raw sewage is discharged to receiving waters before being treated. There are two SSO locations in the City - at the Four Mile Run Pumping Station and at the Alexandria Renew Enterprises (AlexRenew) wastewater treatment facility. Due to forecasted growth in the City (and Fairfax County), there is concern that this growth will lead to increased SSOs in the future and create an additional potential for sewer back-ups.

A study was completed in 2010 (and updated in 2012) which recommended a wet weather management facility to mitigate SSOs and basement back-ups. The facility also would reduce the occurrence of combined sewer overflows (CSOs) from Outfall 004. The wet weather management facility includes the following components: increasing the flow at the AlexRenew plant from 108 to 116 mgd (through primary treatment), relocation of Outfall 004 from Duke Street to just outside the AlexRenew plant, construction of a 500,000 gallon storage tunnel, and wet weather pumping to reduce the surcharging in the interceptor sewers to prevent back-ups.

Initial planning and design funding is scheduled to begin in FY 2015. The total project cost is estimated to be \$33.6 million (2012 dollars), and it is anticipated that the costs for this facility would be shared equally between Fairfax County and the City. In addition, the funding includes \$5.45 million to extend the storage tunnel upstream to capture additional combined sewage from Outfall 003.

This project provides a number of benefits including reducing sanitary sewer backups into homes and business, while reducing the impact that sanitary sewer that SSOs and CSOs have on the environment.

City's Strategic Plan & City Manager's Performance Plan
Primary Strategic Plan Goal: Goal 2 – Health & Environment
Focus Area: Livable, Green, and Prospering City
<ul style="list-style-type: none"> Improve the health of City waterways Promote an attractive urban environment that reflects our history and provides well-functioning infrastructure Sustain the natural quality of land within the City
Focus Area: Accountable, Effective, & Well-Managed Government
<ul style="list-style-type: none"> Ensure government is accountable to the community
External or Internal Adopted Plan or Recommendation
<ul style="list-style-type: none"> 2013 Sanitary Sewer Master Plan

Additional Operating Budget Impact
The annual operating and maintenance costs associated with the facility includes electricity costs associated with the wet weather pumping, labor and equipment rental for the tunnel cleaning and inspection, and equipment replacement costs. The operating costs as assumed to be shared with Fairfax County with the City being responsible for 50 percent of the costs.

Combined Sewer System (CSS) Permit Compliance

Document Subsection: Sanitary Sewers
 Managing Department: Transportation & Environmental Services
 Supporting Department(s): N/A
 ORG: 53411875

Project Location: Old Town CSO Area
 Reporting Area: Old Town
 Project Category: 1 – Asset Maintenance
 Estimated Useful Life: Varies

Combined Sewer System (CSS) Permit Compliance													
	A	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	<i>Allocated Balance (02/14)</i>	<i>Unallocated (02/14)</i>	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total FY 2015-2024
Expenditure Budget	120,610	1,490,690	0	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	2,700,000
Financing Plan													
General Obligation Bonds - Sanitary Sewer	0	0	0	300,000	100,000	300,000	300,000	300,000	120,000	300,000	300,000	300,000	2,320,000
Sanitary Sewer Fees	1,637,233	1,490,690	0	0	200,000	0	0	0	180,000	0	0	0	380,000
Total Financing Plan	1,637,233	1,490,690	0	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	2,700,000
Add. Operating Impact													
Annual Impact			0	TBD									
Cumulative Impact			0	TBD									
Changes from Prior Year CIP: Planned funding in FY 2015 reduced from \$300,000 to \$0 based on available project balances; no other changes from FY 2016 - 2023. Added funding for FY 2024.													

Project Description & Justification

The City's combined sewer system (sanitary and storm sewers) comprise approximately 540 acres located in the Old Town area. During certain wet weather events, flows in excess of the sewer pipes carrying capacity are discharged into receiving waterways via one of four combined sewer outfalls. These discharges are permitted by the Virginia Department of Environmental Quality (VDEQ). The Hunting Creek Bacteria Total Maximum Daily Load (TMDL) requires reductions in these discharges from 3 of the 4 permitted outfalls. The City received a new permit in August 2013 which requires the City to develop a Long-Term Control Plan (LTCP) update that complies with the TDML requirements, and to implement the plan no later than 2035.

In order to comply with this future CSS permit, the City must perform a number of activities. The City will be required to conduct an Alternatives Analysis envisioned to be in the upcoming permit as it was included in the City's proposal to Virginia Department of Environmental Quality. This Alternatives Analysis is a detailed study of all possible alternatives, their financial costs, and other impacts. Based on the analysis a revised Long Term Control Plan is to be developed which becomes basis of the implementation of projects at a schedule that is acceptable to Virginia Department of Environmental Quality.

The project will also fund the construction of a new weir structure at Outfall 004. This new weir structure will decrease both the number of combined sewer overflow (CSO) discharges at Outfall 004 and the total CSO volume, which will provide the benefit of improving water quality in Hooff's Run.

Completion of these initiatives will enhance the ecological integrity of waterways by maintaining and improving storm water and sanitary infrastructure and stream system health to minimize environmental impacts.

(Continued on next page)

City's Strategic Plan & City Manager's Performance Plan
Primary Strategic Plan Goal: Goal 2 – Health & Environment
Focus Area: Livable, Green, and Prospering City
<ul style="list-style-type: none"> Improve the health of City waterways Promote an attractive urban environment that reflects our history and provides well-functioning infrastructure Sustain the natural quality of land within the City
Focus Area: Accountable, Effective, & Well-Managed Government
<ul style="list-style-type: none"> Ensure government is accountable to the community Ensure the fiscal strength of the City government
External or Internal Adopted Plan or Recommendation
<ul style="list-style-type: none"> Consistent with the Eco-City Charter and Eco-City Action Plan 2030, adopted by City Council June 2008 and June 2009 respectively T&ES Strategic Plan: Key Result Area – Meet or exceed state and federal requirements of the City's MS4 and combined sewer permits 2013 Sanitary Sewer Master Plan

Additional Operating Budget Impact
Unknown at this time. Additional operating impacts will be identified as new infrastructure is installed.

Project Description and Justification (Continued)

Funding also ensures compliance with Commonwealth and Federal statutes and permits, and will continue to improve the City's combined sewer system.

For the City to stay in compliance with future CSS permits, overflows from the Combined Sewer System need to be mitigated. This is primarily because of new regulatory requirements of the bacteria TMDL for Hunting Creek. Total cost of mitigation of these overflows can range as high as \$200 - \$300 million and depends on the type and mix of technologies that get implemented. Through the Alternatives Analysis being conducted by the City in FY 2014 – 2018, an update to its Long-Term Control Plan will be developed. Only after completion of this analysis, and with the approval of the Long Term Control Plan update by the Virginia Department of Environmental Quality (VDEQ), will the exact costs of the resulting projects and applicable schedule will become certain. In the upcoming permit cycle, the City is required to continue implementation of Nine Minimum Controls, Area Reduction Plan. This includes implementation of several capital projects including Green Infrastructure, and select separation projects. The City will also need to continue extensive monitoring, sampling, inspections, and reporting. This budget reflects the anticipated costs of improvements over the next five years only. Costs of improvements required for implementing the approved updated Long Term Control Plan (FY 2019 onwards) are not reflected in the budget. These costs over two to three decades could be in the \$200 million - \$300 million range.

Reconstruction and Extension of Sanitary Sewers

Document Subsection: Sanitary Sewers
 Managing Department: Transportation & Environmental Services
 Supporting Department(s): Dept. of Project Implementation
 ORG: 53411872

Project Location: Citywide
 Reporting Area: Citywide
 Project Category: 1 – Asset Maintenance
 Estimated Useful Life: 50 years

Reconstruction and Extension of Sanitary Sewers													
	A	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	<i>Allocated Balance (02/14)</i>	<i>Unallocated (02/14)</i>	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total FY 2015-2024
Expenditure Budget	282,112	2,095,918	0	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	8,100,000
Financing Plan													
General Obligation Bonds - Sanitary Sewer	0	0	0	900,000	900,000	540,000	900,000	900,000	400,000	900,000	375,000	900,000	6,715,000
Sanitary Sewer Fees	282,112	2,095,918	0	0	0	360,000	0	0	500,000	0	525,000	0	1,385,000
Total Financing Plan	282,112	2,095,918	0	900,000	8,100,000								
Add. Operating Impact													
Annual Impact			0	0	0	0	0	0	0	0	0	0	0
Cumulative Impact			0	0	0	0	0	0	0	0	0	0	0
<small>Changes from Prior Year CIP: Planned funding in FY 2015 reduced from \$900,000 to \$0 based on available project balances; no other changes from FY 2016 - 2023. Added funding for FY 2024.</small>													

Project Description & Justification

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

Prior year allocated and unallocated balances of \$2.37 million along with annual funding of \$900,000 beginning in FY 2016 will be utilized to fund multiple projects in this request. Several projects are in early planning stages, while others are currently under design. 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 tentatively scheduled for construction in FY 2015 include:

- North Alfred and Pendleton Streets manhole additions
- Beaugard Street Sanitary Sewer Rehabilitation (included with King & Beaugard street intersection improvement project)
- West Uhler Sewer Construction
- Groves Sewer Replacement
- Hooff's Run (Chapman to Maple Steets) Sewer Lining
- Sewer lining projects in to be identified areas
- Miscellaneous or emergency repairs as required

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

City's Strategic Plan & City Manager's Performance Plan

Primary Strategic Plan Goal: Goal 2 – Health & Environment

Focus Area: Livable, Green, and Prospering City

- Improve the health of City waterways
- Promote an attractive urban environment that reflects our history and provides well-functioning infrastructure
- Sustain the natural quality of land within the City

Focus Area: Accountable, Effective, & Well-Managed Government

- Ensure government is accountable to the community

External or Internal Adopted Plan or Recommendation

- 2013 Sanitary Sewer Master Plan

Additional Operating Budget Impact

An additional impact to the operating budget is not anticipated.

Combined Sewer Separation Projects

Document Subsection: Sanitary Sewers
 Managing Department: Transportation & Environmental Services

Project Location: Old Town CSO Area
 Reporting Area: Old Town, Old Town North,
 Braddock Road Metro

Supporting Department(s): Dept. of Project Implementation
 ORG: 53411876

Project Category: 3 – New Facilities
 Estimated Useful Life: 50 years

Combined Sewer Separation Projects													
	A	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	<i>Allocated Balance (02/14)</i>	<i>Unallocated (02/14)</i>	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total FY 2015-2024
Expenditure Budget	1,437,711	1,300,000	0	200,000	200,000	600,000	200,000	200,000	600,000	200,000	200,000	600,000	3,000,000
Financing Plan													
General Obligation Bonds - Sanitary Sewer	0	0	0	200,000	200,000	600,000	200,000	200,000	600,000	200,000	25,000	600,000	2,825,000
Sanitary Sewer Fees	1,437,711	1,300,000	0	0	0	0	0	0	0	0	175,000	0	175,000
Total Financing Plan	1,437,711	1,300,000	0	200,000	200,000	600,000	200,000	200,000	600,000	200,000	200,000	600,000	3,000,000
Add. Operating Impact													
Annual Impact													0
Cumulative Impact			0	0	0	0	0	0	0	0	0	0	0
Changes from Prior Year CIP: Planned funding in FY 2015 reduced from \$600,000 to \$0 based on available project balances; no other changes from FY 2016 - 2023. Added funding for FY 2024.													

Project Description & Justification

This project provides funding for the City to proactively separate small areas of combined sewers. Areas of opportunity exist for separation of combined sewer systems where construction of additional sewers in a few blocks due to new development may result in completing the separation of a larger area. Opportunities may also arise in conjunction with redevelopment in the combined sewer area.

In 2011 City staff identified portions of the King and West combined sewershed where separation may be achieved by disconnecting sanitary sewers from the combined sewer system and reconnecting to the Potomac Yards Trunk Sewer, which was designed to accommodate separated sanitary flow from this area. Field investigations were conducted to collect survey data, confirm sewer connectivity, and to provide sewer separation recommendations and planning level design and construction costs.

The Payne Street and Fayette Street separation project is currently in the design phase and construction is anticipated in fall 2014. This project will meet one of the requirements of the City's Combined Sewer System permit that requires the separation of at least 60 sanitary laterals from the Combined Sewer System.

The City is currently in the process of identifying other areas of opportunity for sewer separation. Once these areas are identified, staff will move forward with field evaluation, design and construction phases for the next project.

This project will provide water quality benefits in that the separation of sanitary sewers in the combined area will decrease the bacteria loading into Hooff's Run during rain events where combined sewer overflows are activated.

(Continued on next page)

City's Strategic Plan & City Manager's Performance Plan

Primary Strategic Plan Goal: Goal 2 – Health & Environment

Focus Area: Livable, Green, and Prospering City

- Improve the health of City waterways
- Promote an attractive urban environment that reflects our history and provides well-functioning infrastructure
- Sustain the natural quality of land within the City

Focus Area: Accountable, Effective, & Well-Managed Government

- Ensure government is accountable to the community
- Ensure the fiscal strength of the City government

External or Internal Adopted Plan or Recommendation

- Consistent with the Eco-City Charter and Eco-City Action Plan 2030, adopted by City Council June 2008 and June 2009 respectively
- T&ES Strategic Plan: Key Result Area – Meet or exceed state and federal requirements of the City's MS4 and combined sewer permits
- 2013 Sanitary Sewer Master Plan

Additional Operating Budget Impact

An additional impact to the operating budget is not anticipated.

Project Description and Justification (Continued)

For the City to stay in compliance with the future CSS permits, overflows from the Combined Sewer System need to be mitigated. This is primarily because of new regulatory requirements of the bacteria TMDL for Hunting Creek. Total cost of mitigation of these overflows can range as high as \$200 million - \$300 million and depends on the type and mix of technologies that get implemented. Through the Alternatives Analysis being conducted by the City in FY 2014 – 2018, an update to its Long-Term Control Plan will be developed. Only after completion of this analysis, and with the approval of the Long Term Control Plan update by the Virginia Department of Environmental Quality (VDEQ), will the exact costs of the resulting projects and applicable schedule will become certain. In the upcoming permit cycle, the City is required to continue implementation of Nine Minimum Controls, Area Reduction Plan. This includes implementation of several capital projects including Green Infrastructure, and select separation projects. The City will also need to continue extensive monitoring, sampling, inspections, and reporting. This budget reflects the anticipated costs of improvements over the next five years only. Costs of improvements required for implementing the approved updated Long Term Control Plan (FY 2019 onwards) are not reflected in the budget. These costs could be over a two to three decade period in the \$200 million to \$300 million range.

Citywide Sewershed Infiltration and Inflow

Document Subsection: Sanitary Sewers
 Managing Department: Transportation & Environmental Services
 Supporting Department(s): Dept. of Project Implementation
 ORG: 53411864

Project Location: Citywide
 Reporting Area: Citywide
 Project Category: 2 – Renovations/Existing Assets
 Estimated Useful Life: 40 years

Citywide Sewershed Infiltration & Inflow													
	A (B+M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Through FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total FY 2015-2024
Expenditure Budget	35,161,440	19,861,440	0	3,000,000	2,375,000	3,075,000	2,850,000	4,000,000	0	0	0	0	15,300,000
Financing Plan													
General Obligation Bonds - Sanitary Sewer	30,215,000	15,750,000	0	3,000,000	2,375,000	2,925,000	2,565,000	3,600,000	0	0	0	0	14,465,000
Sanitary Sewer Fees	4,946,440	4,111,440	0	0	0	150,000	285,000	400,000	0	0	0	0	835,000
Total Financing Plan	35,161,440	19,861,440	0	3,000,000	2,375,000	3,075,000	2,850,000	4,000,000	0	0	0	0	15,300,000
Add. Operating Impact													
Annual Impact			0	0	0	0	0	0	0	0	0	0	0
Cumulative Impact			0	0	0	0	0	0	0	0	0	0	0
Changes from Prior Year CIP: Planned funding in FY 2015 shifted to FY 2016 based on estimated cash flow needs; no changes to total funding amount.													

Project Description & Justification

This CIP program provides for evaluation, remediation and rehabilitation of infiltration/inflow and deficient conditions for the sanitary sewer system across the entire city. In the Holmes Run sewershed, which impacts the Alexandria West, Landmark/Van Dorn and Seminary Hill/Strawberry Hill reporting areas, the on-going programs will continue. In addition, this program will be phased into broader infrastructure issues across the entire sanitary sewer system to ensure dependable service into the future.

Much of the sanitary sewer system located in these areas is aging and deteriorated, and requires maintenance. During wet weather, infiltration and inflow into the sanitary sewers can result in over-capacity conditions that cause overflows into the environment or customers' basements.

During FY 2015, the Pegram & Strawberry sewersheds are scheduled for reconstruction. Manhole repairs are scheduled throughout the Holmes Run sewershed.

Completion of this project will help mitigate sanitary sewer overflows. Additionally, it will improve the City's sanitary sewer infrastructure and extend the infrastructure's useful life by reducing the potential of pipe collapse and other emergency repairs.

City's Strategic Plan & City Manager's Performance Plan

Primary Strategic Plan Goal: Goal 2 – Health & Environment

Focus Area: Livable, Green, and Prospering City

- Improve the health of City waterways
- Promote an attractive urban environment that reflects our history and provides well-functioning infrastructure
- Sustain the natural quality of land within the City

Focus Area: Accountable, Effective, & Well-Managed Government

- Ensure government is accountable to the community
- Ensure the fiscal strength of the City government

External or Internal Adopted Plan or Recommendation

- 2013 Sanitary Sewer Master Plan

Additional Operating Budget Impact

An additional impact to the operating budget is not anticipated.

Sewer Assessment and Rehabilitation

Document Subsection: Sanitary Sewers
 Managing Department: Transportation & Environmental Services

Project Location: Old Town CSO area
 Reporting Area: Old Town, Old Town North,
 Braddock Road Metro

Supporting Department(s): N/A
 ORG: TBD

Project Category: 2 – Renovations/Existing Assets
 Estimated Useful Life: Varies

Sewer Assessment & Rehabilitation													
	A (B+M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Through FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total FY 2015-2024
Expenditure Budget	8,800,000	0	0	0	0	0	3,700,000	2,550,000	2,550,000	0	0	0	8,800,000
Financing Plan													
General Obligation Bonds	4,400,000	0	0	0	0	0	1,850,000	1,275,000	1,275,000	0	0	0	4,400,000
General Obligation Bonds - Sanitary Sewer	1,480,000	0	0	0	0	0	1,480,000	0	0	0	0	0	1,480,000
Sanitary Sewer Fees	2,920,000	0	0	0	0	0	370,000	1,275,000	1,275,000	0	0	0	2,920,000
Total Financing Plan	8,800,000	0	0	0	0	0	3,700,000	2,550,000	2,550,000	0	0	0	8,800,000
Add. Operating Impact													
Annual Impact			0	0	0	0	0	0	0	0	0	0	0
Cumulative Impact			0	0	0	0	0	0	0	0	0	0	0
Changes from Prior Year CIP: No changes from prior year CIP.													

Project Description & Justification

This project provides funding from both the Sanitary Sewer and Stormwater Management funds for the condition assessment of all of the sewers (sanitary, storm, combined) 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 of the 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.

Funding is not planned until FY 2019, and totals \$8.8 million with 50% coming from the Sanitary Sewer Fund and 50% from City funds.

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.

City's Strategic Plan & City Manager's Performance Plan
Primary Strategic Plan Goal: Goal 2 – Health & Environment
Focus Area: Livable, Green, and Prospering City
<ul style="list-style-type: none"> Improve the health of City waterways Promote an attractive urban environment that reflects our history and provides well-functioning infrastructure Sustain the natural quality of land within the City
Focus Area: Accountable, Effective, & Well-Managed Government
<ul style="list-style-type: none"> Ensure government is accountable to the community
External or Internal Adopted Plan or Recommendation
<ul style="list-style-type: none"> 2013 Sanitary Sewer Master Plan

Additional Operating Budget Impact
An additional impact to the operating budget is not anticipated.

AlexRenew Wastewater Treatment Plant Capacity

Document Subsection: Sanitary Sewers
 Managing Department: Transportation & Environmental Services
 Supporting Department(s): N/A
 ORG: TBD

Project Location: 1500 Eisenhower Ave.
 Reporting Area: Southwest Quadrant
 Project Category: 3 – New Facilities
 Estimated Useful Life: 20+ 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 FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total FY 2015-2024
Expenditure Budget	34,220,000	0	0	0	0	0	0	11,070,000	11,400,000	11,750,000	0	0	34,220,000
Financing Plan													
General Obligation Bonds - Sanitary Sewer	34,220,000	0	0	0	0	0	0	11,070,000	11,400,000	11,750,000	0	0	34,220,000
Total Financing Plan	34,220,000	0	0	0	0	0	0	11,070,000	11,400,000	11,750,000	0	0	34,220,000
Add. Operating Impact													
Annual Impact			0	0	0	0	0	0	0	0	0	0	0
Cumulative Impact			0	0	0	0	0	0	0	0	0	0	0

Changes from Prior Year CIP: Initial planning and design work was performed by City staff, so \$500,000 budgeted in FY 2014 will not be required for the project and is removed from prior year funding. The \$500,000 will be reprogrammed in FY 2015 for other sanitary sewer projects. No changes to planned funding in FY 2020 - 2022.

Project Description & Justification

The City's Department of Planning and Zoning (P&Z) has developed growth forecasts for build-out conditions (post year 2040) as presented in the Sanitary Sewer Master Plan. Based on these forecasts, the City is projected to exceed its wastewater allocation at the Alexandria Renew Enterprises (AlexRenew) Water Resource Recovery Facility by approximately 4 million gallons per day (mgd) beginning incrementally sometime after 2040.

AlexRenew has indicated that their facility can be expanded / upgraded to treat this additional 4 mgd at a total capital cost of \$34.22 million (increased for inflation). This cost is based on hydraulically expanding the plant at the same time as other anticipated upgrades are needed (as existing process equipment reaches the end of its useful life). Thus, although the need for an additional 4 mgd is not anticipated until after 2040, it would be more cost-effective to perform the hydraulic expansion while other upgrades are occurring based on the timeline provided by AlexRenew.

The costs provided do not include any additional nutrient (phosphorous and nitrogen) loads associated with these flows, which the City will reach around 2040. Options for addressing these added nutrient loadings have been identified in the Sanitary Sewer Master Plan and will continue to be evaluated. Funding for this project is not planned until FY 2020 – 2022. With the hydraulic expansion, the agreements between the City and AlexRenew and AlexRenew and Fairfax County would have to be renegotiated.

Another option for an additional 4 mgd is to purchase 4 mgd of wastewater treatment capacity from Fairfax County at AlexRenew, estimated to be approximately \$56.0 million (2011 dollars). This option would not require any offset of nutrient loadings since the design flow at AlexRenew wouldn't change, but the City may be expected by Fairfax County to finance the entire \$56.0 million now for capacity the City will not need for 30 years. Additionally, this option is contingent on Fairfax County acquiring additional treatment plant capacity at DC Water Blue Plains facility. The City will be continuing discussions with Fairfax County concerning this option.

City's Strategic Plan & City Manager's Performance Plan

Primary Strategic Plan Goal: Goal 2 – Health & Environment

Focus Area: Livable, Green, and Prospering City

- Improve the health of City waterways
- Promote an attractive urban environment that reflects our history and provides well-functioning infrastructure
- Increase the value of the real estate tax base
- Ensure Alexandria supports, retains, and attracts businesses

Focus Area: Accountable, Effective, & Well-Managed Government

- Ensure government is accountable to the community
- Ensure the fiscal strength of the City government

External or Internal Adopted Plan or Recommendation

- 2013 Sanitary Sewer Master Plan

Additional Operating Budget Impact

An additional impact to the operating budget is not anticipated.