STORMWATER MANAGEMENT

Significant Project Changes in the Stormwater Management Section

This chart highlights any project funding that increased or decreased by more than 15%, or $1 million, since the last Approved CIP.

NOTE, the “Amount Changed” and “Percentage Changed” calculations do not include Fiscal Year (FY) 2024 from the Approved FY 2024 – 2033 CIP, or FY 2034 from this Approved FY 2025 – 2034 CIP, since FYs 2025 – 2033 are the years that can be directly compared between the two plans.

No projects with significant project changes meeting criteria listed.

	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2025 - FY 2034
Stormwater Management												
Stormwater Management												
Braddock and West Flood Management	198,000	-	-	-	-	-	-	-	-	-	-	-
City Facilities Stormwater Best Management Practices (BMPs)	1,733,000	-	-	-	-	-	-	-	-	-	-	-
Floodproofing Grant Program	2,308,000	809,000	830,000	851,000	873,000	895,000	918,000	941,000	965,000	900,000	922,500	8,904,500
Four Mile Run Channel Maintenance	4,411,881	300,000	300,000	-	1,251,300	2,900,000	-	300,000	300,000	300,000	300,000	5,951,300
Green Infrastructure	2,465,593	1,549,600	-	-	-	-	-	-	-	275,000	-	1,824,600
Hooffs Run Culvert Maintenance	5,364,192	-	1,616,000	-	-	-	-	2,510,000	-	-	-	4,126,000
Inlet Capacity Program	1,584,100	-	-	-	-	-	-	-	-	-	-	-
Inspection and Cleaning (State of Good Repair) CFMP	2,768,000	1,578,000	1,695,000	1,835,000	2,006,000	2,220,000	2,496,000	2,862,000	3,304,000	3,766,000	4,098,100	25,860,100
Large Capacity - Commonwealth Ave, E. Glebe Rd & Ashby St	47,534,073	-	-	-	-	-	-	-	-	-	-	-
Large Capacity - Hooffs Run Culvert Bypass	10,787,000	8,088,050	24,264,100	16,176,100	-	-	-	-	-	-	-	48,528,250
Lucky Run Stream Restoration	3,990,546	-	-	-	-	-	-	-	-	-	-	-
Mount Vernon Dual Culvert Upgrade	2,500,000	-	-	-	-	-	-	-	-	-	-	-
MS4-TDML Compliance Water Quality Improvements	4,891,000	1,800,000	2,050,000	1,750,000	2,000,000	2,575,000	1,500,000	1,000,000	1,750,000	1,000,000	1,000,000	16,425,000
NPDES / MS4 Permit	1,337,938	171,700	173,500	175,200	177,000	178,700	180,500	182,200	185,900	185,900	190,176	1,800,776
Small-Midsize Stormwater Maintenance Projects	1,695,200	649,100	685,900	724,400	765,800	809,100	854,200	901,400	922,900	944,900	967,400	8,225,100
Spot Project - Hume Avenue Bypass	4,567,216	-	-	-	-	-	-	-	-	-	-	-
Spot Project - Mt. Vernon Cul-de-sac and Alley	1,232,784	-	-	-	-	-	-	-	-	-	-	-
Storm Sewer Capacity Projects	11,349,307	-	15,950,000	15,200,000	13,702,000	6,680,000	6,343,000	4,000,000	7,000,000	5,000,000	4,000,000	77,875,000
Storm Sewer System Spot Improvements	13,646,292	4,122,000	4,228,000	4,337,000	4,540,000	4,606,000	4,688,000	4,812,000	4,937,000	5,060,425	5,187,000	46,517,425
Stormwater BMP Maintenance CFMP	1,109,500	1,575,300	1,622,500	317,100	326,600	336,400	346,500	356,900	1,792,200	365,800	375,000	7,414,300
Stormwater Utility Implementation	1,673,200	-	-	-	-	-	-	-	-	-	-	-
Strawberry Run Stream Restoration	972,728	-	-	-	-	-	-	-	-	-	-	-
Stream & Channel Maintenance	8,614,454	934,700	962,700	991,600	1,021,400	1,052,000	1,083,600	1,116,100	1,149,600	1,178,340	1,204,800	10,694,840
Taylor Run Stream Restoration	2,508,363	-	-	-	-	-	-	-	-	-	-	-
Stormwater Management Total	*139,242,367*	*21,577,450*	*54,377,700*	*42,357,400*	*26,663,100*	*22,252,200*	*18,409,800*	*18,981,600*	*22,306,600*	*18,976,365*	*18,244,976*	*264,147,191*
Stormwater Management Total	**139,242,367**	**21,577,450**	**54,377,700**	**42,357,400**	**26,663,100**	**22,252,200**	**18,409,800**	**18,981,600**	**22,306,600**	**18,976,365**	**18,244,976**	**264,147,191**

Stormwater Utility 10-Year Plan: FY 2025 - FY 2034

Stormwater Rate	Approved FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2025 - FY 2034
Stormwater Utility Rate per ERU	$ 294.00	$ 308.70	$ 324.10	$ 340.30	$ 360.70	$ 385.90	$ 412.90	$ 429.40	$ 540.00	$ 556.20	$ 572.90	
Proposed Rate Increase	5.0%	5.0%	5.0%	6.0%	7.0%	7.0%	4.0%	3.0%	3.0%	3.0%	3.0%	
New Stormwater Utility Rate	$ 308.70	$ 324.10	$ 340.30	$ 360.70	$ 385.90	$ 412.90	$ 429.40	$ 442.30	$ 556.20	$ 572.90	$ 590.10	

Revenues	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2025 - FY 2034
Billing Units	60,571	60,813	61,056	61,300	61,545	61,791	62,038	62,286	62,535	62,785	63,036	
Non Billable Units for EDTR	430	430	430	430	430	430	430	430	431	432	432	
Revenue Generation	18,698,000	19,709,000	20,777,000	22,111,000	23,750,000	25,514,000	26,639,000	27,549,000	34,782,000	35,970,000	37,198,000	273,999,000
Other Revenue Sources	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,001	21,002	21,002	210,005
General Fund Contribution for EDT	135,000	140,000	146,000	152,000	158,000	164,000	171,000	178,000	185,000	192,000	200,000	1,686,000
Revenue Stream Reductions for Im	(191,000)	(197,000)	(203,000)	(209,000)	(215,000)	(221,000)	(228,000)	(235,000)	(242,000)	(249,000)	(256,000)	(2,255,000)
New Debt Issuance	$9,320,000	$13,350,000	$45,925,000	$32,815,000	$17,570,000	$15,085,000	$13,445,000	$16,285,000	$16,295,000	$14,995,000	$16,114,000	$201,879,000
State/Federal Grants	-	-	-	-	-	-	-	-				-
Use of Fund Balance SWU	87,000	-	-	-	-	-	-	-				-
COA General Fund Loan	-	-	-	-	-	-	-	-				-
Total Revenues	28,070,000	33,023,000	66,666,000	54,890,000	41,284,000	40,563,000	40,048,000	43,798,000	51,041,001	50,929,002	53,277,002	475,519,005

Expenditures	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2025 - FY 2034
All Operating	7,946,789	8,226,386	8,520,000	8,844,000	9,203,000	9,578,000	9,901,000	10,213,000	11,112,000	11,461,000	11,821,000	98,879,386
All Capital Projects	18,570,200	23,158,850	56,072,300	44,102,900	28,461,000	24,104,100	20,317,300	20,946,300	24,330,200	21,060,665	20,391,776	282,945,391
Repayment of G/F Loan	675,000	675,000	650,000	-	-	-	-	-	-	-		1,325,000
All Debt Service	878,010	962,764	1,423,300	1,941,895	3,622,991	6,880,668	9,831,405	12,641,596	15,600,507	$18,408,560	$21,058,502	92,372,187
Total Expenditures	28,069,999	33,023,000	66,665,600	54,888,795	41,286,991	40,562,768	40,049,705	43,800,896	51,042,707	50,930,225	53,271,278	475,521,964
		4,588,650										

Operating Costs	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2025 - FY 2034
TES Personnel	4,992,884	5,007,151	5,158,000	5,313,000	5,473,000	5,638,000	5,808,000	5,983,000	6,163,000	6,348,000	6,539,000	57,430,151
Main Operating	537,810	757,972	781,000	805,000	830,000	855,000	881,000	908,000	936,000	965,000	994,000	8,712,972
BMP's Operation	279,000	288,000	297,000	306,000	316,000	326,000	336,000	347,000	358,000	369,000	381,000	3,324,000
Oronoco Outfall Maintenance	141,000	146,000	151,000	156,000	161,000	166,000	171,000	177,000	183,000	189,000	195,000	1,695,000
Additional operating impact from capital	67,000	70,000	73,000	76,000	79,000	82,000	85,000	88,000	91,000	94,000	97,000	835,000
Indirect Costs	1,720,000	1,813,000	1,911,000	2,034,000	2,185,000	2,347,000	2,451,000	2,535,000	3,200,000	3,309,000	3,422,000	25,207,000
Contingent Cash Funding	209,095	144,263	149,000	154,000	159,000	164,000	169,000	175,000	181,000	187,000	193,000	1,675,263
Subtotal, Operating Costs	7,946,789	8,226,386	8,520,000	8,844,000	9,203,000	9,578,000	9,901,000	10,213,000	11,112,000	11,461,000	11,821,000	98,879,386

Stormwater Utility 10-Year Plan: FY 2025 - FY 2034

Capital Projects	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2025 - FY 2034
Four Mile Run Channel Maintenance		300,000	300,000	-	1,251,300	2,900,000	-	300,000	300,000	300,000	300,000	5,951,300
Green Infrastructure		1,549,600	-	-	-	-	-	-	-	275,000	-	1,824,600
MS4-TMDL Compliance Water Quality Improvements	800,000	1,800,000	2,050,000	1,750,000	2,000,000	2,575,000	1,500,000	1,000,000	1,750,000	1,000,000	1,000,000	16,425,000
NPDES / MS4 Permit		171,700	173,500	175,200	177,000	178,700	180,500	182,200	185,900	185,900	190,176	1,800,776
Storm Sewer Capacity Projects *Program*	-	-	15,950,000	15,200,000	13,702,000	6,680,000	6,343,000	4,000,000	7,000,000	5,000,000	4,000,000	77,875,000
Large Capacity Projects: Commonwealth Ave & E. Glebe Rd / Ashby St & E. Glebe Rd	12,632,800	-	-	-	-	-	-	-	-	-	-	-
Large Capacity Project: Hooffs Run Culvert Timber Branch Bypass		8,088,050	24,264,100	16,176,100	-	-	-	-	-	-	-	48,528,250
Storm Sewer System Spot Improvements	1,103,000	4,122,000	4,228,000	4,337,000	4,540,000	4,606,000	4,688,000	4,812,000	4,937,000	5,060,425	5,187,000	46,517,425
Stream and Channel Maintenance	304,000	934,700	962,700	991,600	1,021,400	1,052,000	1,083,600	1,116,100	1,149,600	1,178,340	1,204,800	10,694,840
Stormwater BMP Maintenance CFMP	303,500	1,575,300	1,622,500	317,100	326,600	336,400	346,500	356,900	1,792,200	365,800	375,000	7,414,300
Small-Midsize Stormwater Maintenance Projects	613,900	649,100	685,900	724,400	765,800	809,100	854,200	901,400	922,900	944,900	967,400	8,225,100
Inspection and Cleaning (State of Good Repair) CFMP	500,000	1,578,000	1,695,000	1,835,000	2,006,000	2,220,000	2,496,000	2,862,000	3,304,000	3,766,000	4,098,100	25,860,100
Floodproofing Grant Program	789,000	809,000	830,000	851,000	873,000	895,000	918,000	941,000	965,000	900,000	922,500	8,904,500
Hooffs Run Culvert			1,616,000					2,510,000				4,126,000
Braddock and West Flood Management	-	-	-	-	-	-	-	-	-			-
DPI Personnel	1,471,000	1,534,100	1,645,900	1,695,300	1,746,200	1,798,600	1,852,600	1,908,200	1,965,400	2,024,400	2,085,100	18,255,800
Capitalized Sustainability Coordinator	53,000	47,300	48,700	50,200	51,700	53,300	54,900	56,500	58,200	59,900	61,700	542,400
Subtotal, Capital Projects	18,570,200	23,158,850	56,072,300	44,102,900	28,461,000	24,104,100	20,317,300	20,946,300	24,330,200	21,060,665	20,391,776	282,945,391

Debt Service	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2025 - FY 2034
Total Debt Service Payments	878,010	962,764	1,423,300	1,941,895	$3,622,991	$6,880,668	$9,831,405	$12,641,596	$15,600,507	$18,408,560	$21,058,502	92,372,187
Total Expenditures, All Categories	***27,394,999***	***32,348,000***	***66,015,600***	***54,888,795***	***41,286,991***	***40,562,768***	***40,049,705***	***43,800,896***	***51,042,707***	***50,930,225***	***53,271,278***	***474,196,964***

BRADDOCK AND WEST FLOOD MANAGEMENT

DOCUMENT SUBSECTION:	Stormwater Management	PROJECT LOCATION:	Braddock Road and West Street
MANAGING DEPARTMENT:	Transportation and Environmental Services	REPORTING AREA:	Braddock Road Metro Station
		PROJECT CATEGORY:	1
		ESTIMATE USEFUL LIFE:	3 – 5 years

Braddock and West Flood Management

	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**198,000**	**198,000**	-	-	-	-	-	-	-	-	-	-	-
Financing Plan													
Stormwater Utility Fund	198,000	198,000	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	**198,000**	**198,000**	-	-	-	-	-	-	-	-	-	-	-
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

No changes from prior CIP.

PROJECT DESCRIPTION & JUSTIFICATION

The Braddock Road & West Street intersection and adjacent properties have experienced periodic severe flooding from flash flood rain events. The area is served by storm sewers that drain under the Railroad tracks into the Hooffs Run Culvert (HRC) at E. Linden Street. The City of Alexandria Storm Sewer Capacity Assessment (CASSCA) study identified both potential conveyance and storage solutions to mitigate severe flooding.

This study will continue to evaluate the specific need, volume, and area required for the storage component. This study will consider the need for a stormwater storage facility and the potential for the availability of property not in the Right-of-Way to locate the storage facility near the Braddock Road & West Street intersection to mitigate flooding.

The project will use professional services to perform a study of existing information, verify findings of previous studies, and recommend appropriate storage volume for the sub-watershed. It will also investigate and contact potential stakeholders for public/private partnerships in the deployment of the recommended stormwater storage volume. Analysis will include feasibility of providing stormwater storage to mitigate flooding during the 10, 25, 50 & 100-year precipitation events. Planning level cost estimates for construction will also be provided as part of the study.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

City of Alexandria Storm Sewer Capacity Analysis (CASSCA); Flood Action Alexandria; Northern Virginia Flood Hazard Mitigation Plan

ADDITIONAL OPERATING IMPACTS

No additional operating impacts by completing this study.

CITY FACILITIES STORMWATER BEST MANAGEMENT PRACTICES (BMPS)

DOCUMENT SUBSECTION: Stormwater Management
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: 21 - 25 Years

City Facilities Stormwater Best Management Practices (BMPs)													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**1,733,000**	**1,733,000**	-	-	-	-	-	-	-	-	-	-	-
Financing Plan													
Cash Capital	125,000	125,000	-	-	-	-	-	-	-	-	-	-	-
GO Bonds (Stormwater)	1,133,000	1,133,000	-	-	-	-	-	-	-	-	-	-	-
Stormwater Utility Fund	475,000	475,000	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	**1,733,000**	**1,733,000**	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

No changes from prior CIP.

PROJECT DESCRIPTION & JUSTIFICATION

This program targets City-owned facilities and properties for the installation of stormwater quality best management practices (BMPs) to meet the Chesapeake Bay (Bay) Total Maximum Daily Load (TMDL) enforced by the Virginia Department of Environmental Quality (DEQ) through the issuance of the City's Municipal Separate Storm Sewer System (MS4) Permit. The MS4 permit mandates City-specific stormwater nutrient (phosporus and nitrogen) reduction targets to clean up the Chesapeake Bay enforced through three 5-year MS4 permit cycles. The 2013-2018 MS4 permit required a 5% reduction, while the 2018-2023 required an additional 35% or 40% of the total. The remaining 60% or 100% of the reduction must be met on or before the end of the third 5-year permit cycle (2023-2028), no later than 2028. Upcoming planning and analysis efforts that look at new modeling data and water quality monitoring are likely to revise the nutrient mandates with goals beyond the 2028 MS4 permit.

In October 2022, the Chesapeake Bay Executive Council has charged the Principal Staff Committee with recommending a critical path forward to meeting the Bay TMDL. The report, "The Executive Council Charge to the Principals' Staff Committee: Charting a Course to 2025 and Beyond" was published on January 17, 2024. Additionally, planned Bay modeling updates must include Climate Change predictions and other new data. Early estimates show that the current mandates will be increased and therefore are likely required beyond the 2028 date in subsequent permits.

The City's Chesapeake Bay TMDL Action Plan identifies retrofitting of regional ponds, implementing new regional ponds, BMP retrofits on City properties, retrofits in the Right-of-Way, stream restoration, and other strategies towards meeting mandated pollutant reduction goals, with this project targeting BMPs on City properties to include the Right-of-Way.

Working closely with the General Services; Recreation, Parks and Cultural Activities; and Project Implementation departments, the following locations, among others, have been identified as potential locations for stormwater retrofits that include:

- T&ES/Recreation operations at 2900 Business Center Drive,
- City Fuel Island on Wheeler Avenue,
- ACPS Mount Vernon Elementary School and Recreation Center, and
- City Traffic Control Shop on Colvin Street.

The City has identified at least 16 potential locations in addition to the above list that may treat stormwater from a total of approximately 4-8 acres of impervious surface. These sites have been selected because of the facilities' operational stormwater impacts and their relatively high percentage of impervious acreage.

This project provides for the inspection and maintenance of existing and planned BMP retrofits to ensure proper functioning to continue achieving the City's mandated water quality goals to clean up the Chesapeake Bay.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

City of Alexandria Municipal Separate Storm Sewer System (MS4) General Permit, Program Plan and Year 5 Annual Report; Chesapeake Bay TMDL Action Plan; T&ES Strategic Plan; Eco-City Charter and Action Plan

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

FLOODPROOFING GRANT PROGRAM

DOCUMENT SUBSECTION: Stormwater Management
MANAGING DEPARTMENT: Transportation and Environmental Services
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: 1
ESTIMATE USEFUL LIFE: Varies

Floodproofing Grant Program													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**11,212,500**	**2,308,000**	**809,000**	**830,000**	**851,000**	**873,000**	**895,000**	**918,000**	**941,000**	**965,000**	**900,000**	**922,500**	**8,904,500**
Financing Plan													
Stormwater Utility Fund	11,212,500	2,308,000	809,000	830,000	851,000	873,000	895,000	918,000	941,000	965,000	900,000	922,500	8,904,500
Financing Plan Total	**11,212,500**	**2,308,000**	**809,000**	**830,000**	**851,000**	**873,000**	**895,000**	**918,000**	**941,000**	**965,000**	**900,000**	**922,500**	**8,904,500**
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

Funding added for FY 2034.

PROJECT DESCRIPTION & JUSTIFICATION

The purpose of this project, initiated in FY 2022 under the Flood Action Alexandria program, is to provide grant funding to private property owners to mitigate flooding impacts to their primary residence because of recent climate change-induced flash flooding and cloudburst events. This project was recommended by the 2020 Interdepartmental Flooding Management Task Force and was supported in the City's 2020 legislative package, which was successful in revising the state code to provide clear authority to support localities dealing with the impacts of flooding to implement a jurisdictional-wide grant program to implement floodproofing measures on private property for the health and safety of the community.

The original pilot program targeted properties that had experienced past flooding by requiring documentation of past flooding. The City conducted an analysis that showed the pilot was effective at reaching property owners with prior flooding. In October 2023, the City updated the Flood Mitigation Grant Program to open eligibility to all property owners by removing the requirement to document past flooding. The update also included eligibility for associations to apply for a 50/50 matching grant, up to $25,000, on work completed on association common areas. Staff will continue to employ a continual improvement process by gathering data and information in consideration of any needed future adjustments. The program incentivizes implementation of flood mitigation measures and allows property owners to experience immediate benefits to mitigate flooding issues.

This program is administered like the City's Backflow Preventer Program, which provides reimbursement to those who have installed backflow preventers to protect against sanitary sewer backups. This program provides reimbursement for floodproofing installed to mitigate flooding issues in the near-term.

The Flooding Mitigation Pilot Program Manual document frames the program and policies, to include processes, funding level, and eligible reimbursable expenses. The grant program includes:

- Reimbursement for 50% of the cost of installed improvements, not to exceed $5,000 reimbursed to the property owner for individual applicants.
- Reimbursement for 50% of the cost of installed improvements, not to exceed $25,000 reimbursed to associations on behalf of work done for the association common area.
- Total funding for FY 2025: $809,000
- Eligible reimbursable practices and expenses include installation of floodproof doors and windows, and other measures to prevent water from entering a structure, with examples included in online materials
- Applications are processed using the City's APEX permitting system

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Eco-City Charter; Strategic Plan, MS4 General Permit; Environmental Action Plan (EAP) 2040; City of Alexandria Storm Sewer Capacity Analysis (CASSCA); Flood Action Alexandria

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

FOUR MILE RUN CHANNEL MAINTENANCE

DOCUMENT SUBSECTION: Stormwater Management
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: Four Mile Run Stream/Channel
REPORTING AREA: Potomac West
PROJECT CATEGORY: 2
ESTIMATE USEFUL LIFE: 6 - 10 Years

Four Mile Run Channel Maintenance

	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**10,363,181**	**4,411,881**	**300,000**	**300,000**	**-**	**1,251,300**	**2,900,000**	**-**	**300,000**	**300,000**	**300,000**	**300,000**	**5,951,300**
Financing Plan													
Cash Capital	315,281	315,281	-	-	-	-	-	-	-	-	-	-	-
GO Bonds	2,260,000	2,260,000	-	-	-	-	-	-	-	-	-	-	-
Stormwater Utility Fund	7,787,900	1,836,600	300,000	300,000	-	1,251,300	2,900,000	-	300,000	300,000	300,000	300,000	5,951,300
Financing Plan Total	**10,363,181**	**4,411,881**	**300,000**	**300,000**	**-**	**1,251,300**	**2,900,000**	**-**	**300,000**	**300,000**	**300,000**	**300,000**	**5,951,300**
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

Funding added for FY 2034.

PROJECT DESCRIPTION & JUSTIFICATION

This project reflects the City's share of the costs to maintain the federally funded stormwater flood control channel and system of flood walls and levees on Four Mile Run to reduce potential riverine flooding. The federal Four Mile Run Flood Control project was constructed by the U.S Army Corps of Engineers (USACE) in the late 1970's, which by mutual agreement requires the City to provide regular upgrades to associated capital infrastructure. The USACE annually inspects Four Mile Run and dictates the extent of the maintenance activities that are to be completed. The City has hired a consultant to perform a detailed inspection of the flood control system and to develop recommendations for corrections. Staff is working with USACE to determine exactly what improvements the City needs to do to bring the rating up to the upgraded post-Hurricane Katrina standards that the USACE now considers acceptable. The City is currently developing revised plans for USACE to review that includes maintenance repairs to the flood walls, embankments, outfalls, and gabions.

To date, nearly $4 million in City funding has been applied to the project. Funding is programmed in the near term to address maintenance items with funding in out-years of the CIP to address future capital infrastructure requirements. As Four Mile Run maintenance is a shared responsibility with Arlington County, it is necessary for the County and the City to engage in a joint decision-making process concerning some elements of maintenance activities. Staff collaborated with Arlington County to perform dredging of the channel to remove sediment to maintain the conveyance capacity of the flood control project in FY 2023. A grant application submitted in calendar year 2021 for FEMA's Build Resilient Infrastructure and Communities (BRIC) funding was not successful. The project progressed with City funds covering the agreed cost share of the project.

Additional operations and maintenance concerns that need to be addressed were uncovered during a routine inspection, including the need for maintenance of structures, updates to the operations and maintenance (O&M) manual, design and removal of accumulated sediment, and continued vegetation removal from the levee, as requested by USACE. Routine inspection and maintenance, including design and removal of significant accumulated sediment and routine vegetation maintenance, is necessary to get this flood control channel back into conditions considered acceptable by the federal government. Achieving federal acceptance ensures that the flood control project will perform as predicted, protects our communities – along with Arlington – and properties from flooding, and provides eligibility for federal assistance in repairing any damage to the channels that storms may cause.

To address USACE concerns for annual inspections, the vegetation management will be performed annually along the entire reach between I-395 and Rt-1.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

City of Alexandria Municipal Separate Storm Sewer System (MS4) General Permit, Program Plan and Year 5 Annual Report; Chesapeake Bay TMDL Action Plan; T&ES Strategic Plan; Eco-City Charter and Action Plan; Flood Action Alexandria initiative

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

GREEN INFRASTRUCTURE

DOCUMENT SUBSECTION: Stormwater Management
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: Varies

Green Infrastructure													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**4,290,193**	**2,465,593**	**1,549,600**	-	-	-	-	-	-	-	**275,000**	-	**1,824,600**
Financing Plan													
GO Bonds (Stormwater)	1,195,000	1,195,000	-	-	-	-	-	-	-	-	-	-	-
Sanitary Sewer Fund	350,000	350,000	-	-	-	-	-	-	-	-	-	-	-
Stormwater Utility Fund	2,745,193	920,593	1,549,600	-	-	-	-	-	-	-	275,000	-	1,824,600
Financing Plan Total	**4,290,193**	**2,465,593**	**1,549,600**	-	-	-	-	-	-	-	**275,000**	-	**1,824,600**
Operating Impact	31,500	-	-	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	31,500

CHANGES FROM PRIOR YEAR CIP

No changes from prior CIP.

PROJECT DESCRIPTION & JUSTIFICATION

This project is for the identification, study, design, and construction of green infrastructure projects to address water quality and reduce the risk of flooding. It is consistent with the objective of implementing a citywide approach by installing Green Infrastructure in the combined sewer system (CSS) area and the separate storm sewer area. Completed green infrastructure projects will help address regulatory requirements and help to mitigate flooding in conjunction with the co-benefits provided by the implementation of these practices. An initial identification and prioritization study will be conducted in planning for the next green infrastructure project. Funding for additional projects, if identified, may be supplemented with funding from the MS4 Water Quality Improvements project.

Completion of these projects will provide the following benefits: increase stormwater infiltration; reduce stormwater runoff; provide stormwater treatment (nutrients and sediment); decrease the volume of discharges; and provide co-benefits, including creating habitat, reducing heat island effect, and enhancing air quality.

Projects are identified through work related to the City's Chesapeake Bay TMDL Action Plan and the Green Infrastructure Program Policy Study commenced in FY 2019 which laid out a citywide approach to implementation. Further, green infrastructure projects may be implemented as stand-alone water quality projects or in conjunction with flood control projects to mitigate flooding and/or provide water quality benefits and included in the update to the Chesapeake Bay TMLD Action Plan to be completed for the 2023-2028 MS4 Permit. Funding for projects identified through these efforts will be used for future years and supplemented, as needed, through the MS4-TMDL Water Quality Improvement CIP. Consistent with the City's planning documents that include green infrastructure as a strategy, funding has been added to the City's 10-year capital plan to continue with the implementation of green infrastructure on a citywide basis.

Upcoming planning and analysis efforts that look at new modeling data and water quality monitoring are likely to revise the nutrient mandates with goals beyond the 2028 MS4 permit.

In October 2022, the Chesapeake Bay Executive Council has charged the Principal Staff Committee with recommending a critical path forward to meeting the Bay TMDL. The report, "The Executive Council Charge to the Principals' Staff Committee: Charting a Course to 2025 and Beyond" was published on January 17, 2024. Additionally, planned Bay modeling updates must include Climate Change predictions and other new data. Early estimates show that the current mandates will be increased and therefore are likely required beyond the 2028 date in subsequent permits.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

T&ES Strategic Plan 2012-2015; City of Alexandria Municipal Separate Storm Sewer System (MS4) General Permit, Program Plan, and PY5 Annual Report; Eco-City Charter City's Combined Sewer System Permit; City's Chesapeake Bay TMDL Action Plan; Old Town North Small Area Plan; Eisenhower West Small Area Plan; Landmark Van Dorn Small Area Plan; Flood Action Alexandria

ADDITIONAL OPERATING IMPACTS

Annual inspection, minor routine maintenance, and major maintenance will be required to ensure continued proper functioning of the asset.

HOOFFS RUN CULVERT MAINTENANCE

DOCUMENT SUBSECTION:	Stormwater Management	PROJECT LOCATION:	Areas west of Commonwealth Avenue and near W. Spring Street
MANAGING DEPARTMENT:	Transportation and Environmental Services	REPORTING AREA:	King Street Metro/Eisenhower Avenue; Northridge/Rosemont; Potomac West
		PROJECT CATEGORY:	1
		ESTIMATE USEFUL LIFE:	3-6 years

Hooffs Run Culvert Maintenance

	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**9,490,192**	**5,364,192**	**-**	**1,616,000**	**-**	**-**	**-**	**-**	**2,510,000**	**-**	**-**	**-**	**4,126,000**
Financing Plan													
Cash Capital	5,016,291	5,016,291	-	-	-	-	-	-	-	-	-	-	-
GO Bonds (Stormwater)	4,473,901	347,901	-	1,616,000	-	-	-	-	2,510,000	-	-	-	4,126,000
Financing Plan Total	**9,490,192**	**5,364,192**	**-**	**1,616,000**	**-**	**-**	**-**	**-**	**2,510,000**	**-**	**-**	**-**	**4,126,000**
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

No changes from prior CIP.

PROJECT DESCRIPTION & JUSTIFICATION

This project proposes funding on a 5-year cycle for ongoing heavy cleaning of the Hooffs Run Culvert. This culvert conveys stormwater from a significant portion of Northridge, Del Ray, and Rosemont and has been subject to recurrent flooding for over 100 years. Recent climate-change induced flash flooding has placed greater emphasis on the importance of ongoing heavy cleaning of this culvert by maximizing the culvert capacity.

In June 2020, the City hired a contractor to conduct a detailed robotic inspection and survey of approximately 7,000 feet of the culvert. The survey identified overall debris levels in the range of 5% with isolated sections having debris accumulation of approximately 15-20%. The City, using prior-year funding, undertook an inspection and major heavy cleaning effort beginning in November 2020 and completed mid-2021 from West Chapman down to Duke Street. Subsequently, inspection of the northern portion of the culvert from West Chapman to West Spring Street determined that portion did not require cleaning at the time.

While the City has Operating funding to provide some routine debris removal and maintenance, this project ensures funding is set aside for ongoing inspections, heavy cleaning, and/or other capital maintenance requirements that may be identified in future structural inspections. This funding was recommended by the Interdepartmental Flooding Management Task Force and the Flood Action Alexandria initiative.

In September 2023, the City hired a contractor to conduct the second detailed robotic inspection and survey of the culvert. The survey identified some debris in the culvert but much less than the prior inspection. The City hired a contractor to clean the sediment and debris in the spring of 2024.

During FY 2022, the City completed the inspection survey and provided a report with long term rehabilitation recommendations. The City has also developed design plans for short term culvert repairs to include replacement of deteriorated drain inlets and a culvert retaining wall. In the interim, starting in FY 2023 and leading into FY 2024, the city implemented short-term culvert repairs to keep the Hooffs Run culvert in a good state of repair. The repairs were completed in FY 2024. The short-term repairs included the installation of access hatches along the culvert to facilitate future cleaning and long-term rehabilitation repairs.

A structural inspection of the culvert was completed in November 2023. The City is developing repair plans for the culvert and plans to start the repair projects in FY 2025.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Flood Action Alexandria

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

INLET CAPACITY PROGRAM

DOCUMENT SUBSECTION: Stormwater Management
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: 1
ESTIMATE USEFUL LIFE: Varies

Inlet Capacity Program

	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**1,584,100**	**1,584,100**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Financing Plan													
GO Bonds (Stormwater)	764,000	764,000	-	-	-	-	-	-	-	-	-	-	-
State/Federal Grants	764,000	764,000	-	-	-	-	-	-	-	-	-	-	-
Stormwater Utility Fund	56,100	56,100	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	**1,584,100**	**1,584,100**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

CHANGES FROM PRIOR YEAR CIP

No changes from prior CIP.

PROJECT DESCRIPTION & JUSTIFICATION

This project consists of the formal development of the Inlet Capacity and New Inlet Program, which will build on existing efforts undertaken with the Flood Action Alexandria initiative, launched in 2021, to help improve the resiliency of the City against increased precipitation and flash flooding events caused by climate change. The Inlet Program will improve drainage through increased stormwater inlet capacity by enlarging existing inlets and building new inlets leading to pipes with adequate conveyance capacity. This approach allows for greater surface runoff to enter the pipe system and mitigate flooding. The Inlet Program seeks to identify undersized inlets and identify locations for new inlets that will improve the efficiency of the City's storm sewer system. The Inlet Program also will incorporate the design and construction of both upgrading existing storm sewer inlets and the installation of new inlets, within "pilot" neighborhoods.

The City will take an initial "watershed approach" to developing the Inlet Program by systematically identifying inlet capacity within two of the City's eight local watersheds: Hooff's Run and Four Mile Run. Based on the analysis, the City will implement new and/or enlarged inlets in those watersheds to address capacity issues.

The project will create an approach that will be applied to identify, design, and implement needed increases to the storm sewer inlet capacity for neighborhoods within these two watersheds. The approach memorialized in the Inlet Program will be replicable across the remaining six watersheds and corresponding neighborhoods. The initial project is being funded by the Stormwater Utility and received a Virginia Community Flood Preparedness Fund (CFPF) grant award of $764,000 to assist in creating the Inlet Program and implementing this approach in the Four Mile Run and Hooffs Run watersheds.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

City of Alexandria Storm Sewer Capacity Analysis (CASSCA); Flood Action Alexandria; Northern Virginia Hazard Mitigation Plan

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

INSPECTION AND CLEANING (STATE OF GOOD REPAIR) CFMP

DOCUMENT SUBSECTION: Stormwater Management
MANAGING DEPARTMENT: Transportation and Environmental Services
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: 1
ESTIMATE USEFUL LIFE: Varies

Inspection and Cleaning (State of Good Repair) CFMP													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**28,628,100**	**2,768,000**	**1,578,000**	**1,695,000**	**1,835,000**	**2,006,000**	**2,220,000**	**2,496,000**	**2,862,000**	**3,304,000**	**3,766,000**	**4,098,100**	**25,860,100**
Financing Plan													
GO Bonds (Stormwater)	15,457,000	-	-	-	-	-	1,224,000	914,000	2,846,900	2,608,000	3,766,000	4,098,100	15,457,000
Stormwater Utility Fund	13,171,100	2,768,000	1,578,000	1,695,000	1,835,000	2,006,000	996,000	1,582,000	15,100	696,000	-	-	10,403,100
Financing Plan Total	**28,628,100**	**2,768,000**	**1,578,000**	**1,695,000**	**1,835,000**	**2,006,000**	**2,220,000**	**2,496,000**	**2,862,000**	**3,304,000**	**3,766,000**	**4,098,100**	**25,860,100**
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

Funding added for FY 2034.

PROJECT DESCRIPTION & JUSTIFICATION

This project provides funding annually for expanded and increased frequency of inspection and maintenance towards ensuring a state of good repair for 189 miles of pipe network and over 13,000 structures for the separate storm sewer system. Beginning in July 2020 under the Flood Action Alexandria initiative, staff expanded the inspection and repair portion of the storm sewer system. While initial expansion of the program is based on the inspections and requests from residents, staff is increasing proactive measures for inspection and cleaning based on timing and results of additional data sets to develop a Capital Facility Maintenance Program (CFMP) which will include a more detailed listing of projects with a prioritization based on these and other metrics. Some of the projects include, but are not limited to, tree and shrub removal blocking culverts and storm sewer inlets , storm sewer structure or pipe replacement or repair and video pipe inspection and debris removal in culverts and storm sewer pipes. The prioritized list of projects and areas will be addressed based on funding allocated within the CIP. These additional data will inform future budgeting decisions.

While the operating budget supports routine maintenance and inspections, this CIP reflects expanded video inspections and infrastructure repair activities (up to and including structure replacement) to ensure all conveyance and storage structures, and outfalls are functional and operating at maximum capacity.

In FY 2025, staff is pursuing a scope to formalize our approach to State of Good Repair for the storm sewer system in support of Flood Action Alexandria. Taking a proactive approach has proven improvement throughout the City's hot spot flooding areas and this expanded approach will be used to develop a more holistic program to perform preventative inspection and maintenance for the storm sewer system as part of the Flood Action Alexandria program.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

N/A

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

LARGE CAPACITY - COMMONWEALTH AVE, E. GLEBE RD, & ASHBY ST

DOCUMENT SUBSECTION: Stormwater Management
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: Four Mile Run Watershed
REPORTING AREA: Potomac West
PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: 50 – 75 years

Large Capacity - Commonwealth Ave, E. Glebe Rd & Ashby St													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**47,534,073**	**47,534,073**	-	-	-	-	-	-	-	-	-	-	-
Financing Plan													
GO Bonds (Stormwater)	36,377,100	36,377,100	-	-	-	-	-	-	-	-	-	-	-
State/Federal Grants	115,200	115,200	-	-	-	-	-	-	-	-	-	-	-
Stormwater Utility Fund	11,041,773	11,041,773	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	**47,534,073**	**47,534,073**	-	-	-	-	-	-	-	-	-	-	-
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

No changes from prior CIP.

PROJECT DESCRIPTION & JUSTIFICATION

This project is for the design and implementation of the top two priority large-scale capital projects to address capacity and flooding issues at the intersection of Commonwealth Avenue and East Glebe Road and Ashby Street and East Glebe Road and the adjoining properties under the Flood Action Alexandria program. In the Four Mile Run Watershed, a series of smaller storm sewer systems converge at the intersections of Commonwealth Avenue and East Glebe Road, and Ashby Street and East Glebe Road. During high intensity storm events, the drainage network becomes over capacity and unable to accommodate heavy discharge from multiple upstream systems in tandem, that creates flooding impacts.

The City has been experiencing widespread flooding due to the increase in high intensity precipitation events associated with climate change and its inherent low-lying nature adjacent to the Potomac. The City's 2016 City of Alexandria Storm Sewer Capacity Analysis (CASSCA), service requests received through Alex311 during large storm events, and subsequent investigations have identified segments and junctions of the storm sewer system which could be improved to better convey storm flows and help to reduce surface flooding and impacts to properties.

The project concept and design being developed is considering a mixture of storage, capacity, and green infrastructure solutions to provide flood mitigation with consideration of scenarios under varying storm intensities, including more recent flash flooding events, to create design alternatives and cost-benefit estimates for different levels of service based on varying design storms.

The Communications Plan for robust civic engagement includes interaction with the Ad Hoc Stormwater Utility and Flood Mitigation Advisory Group, the City Council, the community, and affected stakeholders to garner input, communicate expectations, and identify and report on project milestone achievements. Tools include but are not limited to a dedicated website with a project progress dashboard, frequent social media updates, inclusion in the Flood Action Alexandria eNewsletter, community meetings, and Council discussions.

Funding in the FY 2021 – FY 2030 CIP identified capacity project funding in FY 2025 and FY 2028 based on earlier planning-level estimates in CASSCA. Adjusted funding in the FY 2022 – FY 2031 CIP identified design funding appropriations in FY 2022 for the full design and FY 2024 for the full construction funding for these projects. The City continues to pursue state and federal grants to accelerate delivery of projects and offset local funding needs to soften proposed Stormwater Utility Fee increases in the 10-Year CIP.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Eco-City Charter; Strategic Plan; Chesapeake Bay Preservation Plan in the City's Master Plan; MS4 General Permit; Environmental Action Plan (EAP) 2040; City of Alexandria Storm Sewer Capacity Analysis (CASSCA); Flood Action Alexandria; Northern Virginia Flood Hazard Mitigation Plan

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

LARGE CAPACITY - HOOFFS RUN CULVERT BYPASS

DOCUMENT SUBSECTION: Stormwater Management
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: Northridge / Rosemont
REPORTING AREA: Northridge / Rosemont
PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: 50 – 75 years

Large Capacity - Hooffs Run Culvert Bypass

	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**59,315,250**	**10,787,000**	**8,088,050**	**24,264,100**	**16,176,100**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**48,528,250**
Financing Plan													
GO Bonds (Stormwater)	59,315,250	10,787,000	8,088,050	24,264,100	16,176,100	-	-	-	-	-	-	-	48,528,250
Financing Plan Total	**59,315,250**	**10,787,000**	**8,088,050**	**24,264,100**	**16,176,100**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**48,528,250**
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

Overall project costs unchanged. Timing of project funding updated to reflect most recent design and construction schedule.

PROJECT DESCRIPTION & JUSTIFICATION

This project includes the design and implementation of the third prioritized large stormwater capital project under Flood Action Alexandria which will address capacity and flooding issues associated with the Hooffs Run Culvert by creating a new bypass culvert for Timber Branch to remove that flow from the existing Hooffs Run Culvert. The project concept and design will consider a new bypass culvert to carry flows from Timber Branch, generally along Russell Road to the south, and may include a mixture of storage, capacity, and green infrastructure solutions to provide flood mitigation with consideration of scenarios under varying storm intensities, including more recent flash flooding events, to create design alternatives and cost-benefit estimates for different levels of service based on varying design storms.

In the Timber Branch / Hooffs Run Watershed, the Timber Branch stream enters a culvert near the intersection of W. Glendale and W. Timber Branch Parkway. The culvert is situated along the backyards of the properties fronting W. Glendale Avenue and Summers Drive and W. Glendale Avenue and W. Spring Street and joins the lower portion of the Hooffs Run Culvert near E. Spring Street and leads south near Commonwealth Avenue in a single culvert. During high intensity storm events, the drainage network becomes over capacity and unable to accommodate heavy discharge from multiple upstream systems in tandem which creates flooding impacts.

The City has been experiencing widespread flooding due to the increase in high intensity precipitation events associated with Climate Change and its inherent low-lying nature adjacent to the Potomac. The City's 2016 City of Alexandria Storm Sewer Capacity Analysis (CASSCA), service requests received through Alex311 during large storm events, and subsequent investigations have identified segments and junctions of the storm sewer system which could be improved to better convey storm flows and help to reduce surface flooding and impacts to properties.

The Communications Plan for robust civic engagement will include interaction with the Ad Hoc Stormwater Utility and Flood Mitigation Advisory Group, the City Council, the community, and affected stakeholders to garner input, communicate expectations, and identify and report on project milestone achievements. Tools include, but are not limited to, a dedicated website with a project progress dashboard, frequent social media updates, inclusion in the Flood Action eNewsletter, community meetings, and Council discussions.

Funding in the FY 2022 – FY 2031 CIP identified scheduled design funding appropriations in FY 2022 and full construction funding split in two separate fiscal years in FY 2025 and FY 2026 for scheduling of complete construction funding based on the current cost estimate. The FY 2024 – FY 2033 CIP spread that construction funding for this large capacity projects across FY 2025, FY 2026, and FY 2027 to reduce the impact to the Stormwater Utility rate. No grants or external funding has been secured to date; however, the City continues to pursue state and federal grants to accelerate delivery of projects and offset local funding needs to soften proposed Stormwater Utility Fee increases in the 10-Year CIP.

Staff has executed a contract for the consultant-led design services in spring FY 2023 in response to the request for qualifications (RFQU) for these services and planning and design is underway.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Eco-City Charter; Strategic Plan; MS4 General Permit; Environmental Action Plan (EAP) 2040; City of Alexandria Storm Sewer Capacity Analysis (CASSCA); Flood Action Alexandria; Northern Virginia Flood Hazard Mitigation Plan

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

LUCKY RUN STREAM RESTORATION

DOCUMENT SUBSECTION: Stormwater Management
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: 2601 Gadsby Place
REPORTING AREA: Beauregard
PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: 21-25

Lucky Run Stream Restoration													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**3,990,546**	**3,990,546**	-	-	-	-	-	-	-	-	-	-	-
Financing Plan													
GO Bonds (Stormwater)	2,735,000	2,735,000	-	-	-	-	-	-	-	-	-	-	-
State/Federal Grants	668,720	668,720	-	-	-	-	-	-	-	-	-	-	-
Stormwater Utility Fund	586,826	586,826	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	**3,990,546**	**3,990,546**	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

No changes from prior CIP.

PROJECT DESCRIPTION & JUSTIFICATION

Urban Stream Restoration is one of the major strategies in the City's Chesapeake Bay Total Maximum Daily Load (TMDL) Action Plan and referenced in the City's Eco-City Alexandria Environmental Action Plan 2040 to reduce pollution and address the Bay TMDL mandates enforced through the City's Municipal Separate Storm Sewer System (MS4) permit. However, more importantly, the project seeks to stabilize critical infrastructure and the channel, restore ecological habitats, and remove invasive vegetation and replanting with native vegetation as a sample of the planned co-benefits. The exposed portion of the sanitary sewer located along the existing stream bank is planned to be buried and that portion of the stream will be relocated farther away from the sewer.

Lucky Run was identified as being in poor condition, making it a prime candidate for a stream restoration project. The Lucky Run Stream Restoration includes multiple benefits, such as being a cost-effective strategy to address the City's pollution reduction requirements, stabilizing the critical sanitary sewer infrastructure, addressing accelerated erosion of the stream banks, and enhancing the Resource Protection Area (RPA). The project will also include major rehabilitative maintenance of the Lucky Run Pond under the BMP agreement stating that the City will perform maintenance for this regional facility to ensure proper functioning and the ability to continue claiming pollutant removal credits for the Pond as noted in the City's Phase 1 Bay TMDL Action Plan.

Initial project schedule delay was due to challenges with public engagement during the COVID-19 public health emergency and the need for more engagement with the community. Staff held a work session with City Council at the April 27, 2021 legislative meeting. At the work session, City Council instructed staff to perform soil analysis tests on the stream using the updated Expert Panel protocol, while proceeding with the Lucky Run project. The City is currently working to procure a construction contractor to complete the restoration and rehabilitation work.

The City has been awarded a $668,720 grant from the state through the Stormwater Local Assistance Fund (SLAF) by leveraging an equivalent amount of funding from the Stream and Channel Maintenance project to fund this project. This reduced the original City contribution by half of the original estimated amount for the stream restoration portion of the project. However, changes to the schedule due to COVID and increases in costs require additional available funding from the MS4-TMDL Water Quality Improvements program to supplement the initial funding. Design is completed and construction procurement was concluded in FY 2023, with an anticipated completion in spring 2024.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

City of Alexandria Municipal Separate Storm Sewer System (MS4) General Permit, Program Plan, and Year 5 Annual Report; City's Chesapeake Bay Total Maximum Daily Load (TMDL) Action Plan; Strategic Plan; Eco-City Charter; Environmental Action Plan; Green Infrastructure Program

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

MOUNT VERNON DUAL CULVERT UPGRADE

DOCUMENT SUBSECTION:	Stormwater Management	PROJECT LOCATION:	Mt. Vernon Ave north of W. Reed Ave, to the outfall east of Edison St.
MANAGING DEPARTMENT:	Transportation and Environmental Services	REPORTING AREA:	Arlandria/Chirilagua
		PROJECT CATEGORY:	1
		ESTIMATE USEFUL LIFE:	Varies

Mount Vernon Dual Culvert Upgrade

	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**2,500,000**	**2,500,000**	-	-	-	-	-	-	-	-	-	-	-
Financing Plan													
GO Bonds (Stormwater)	203,100	203,100	-	-	-	-	-	-	-	-	-	-	-
State/Federal Grants	1,250,000	1,250,000	-	-	-	-	-	-	-	-	-	-	-
Stormwater Utility Fund	1,046,900	1,046,900	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	**2,500,000**	**2,500,000**	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

Prior year funding increased by $1,250,000 via a transfer from the Storm Sewer System Spot Improvements program.

PROJECT DESCRIPTION & JUSTIFICATION

This project will help mitigate flooding in the Arlandria neighborhood by conveying larger storm events within the pipes, eliminating the surcharging occurring on Mount Vernon Avenue and greatly improving the health and safety of the community in this equity area. The project will replace existing, deteriorating, undersized dual corrugated metal pipe (CMP) leading from Mount Vernon Avenue, under the Potomac West Apartments, and leading to the outfall east of Edison Street with a larger dual CMP to convey large flows of water. This work will include the relocation of the existing sanitary sewer line and replacement and upsizing four inlets on Edison Street.

The City applied for and received a Virginia Resources Authority Community Flood Preparedness Fund (CFPF) 50/50 matching grant for Round 3 (CFPF-22-03-28) of $1,250,000 based on the April 8, 2022, application and estimate for this work.

Recently, the design consultant has completed analysis which shows that relining the existing culvert would provide the same level of flood mitigation and flood attenuation protection, and enhance the integrity of the pipe, consistent with original scope. Early cost estimates for this proposed alternate scope are less than the original scoped work. Staff has discussed this with the state, provided a revised scope for the state to review, and are awaiting a response from the state.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

City of Alexandria Storm Sewer Capacity Analysis (CASSCA); Flood Action Alexandria; Northern Virginia Hazard Mitigation Plan

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

MS4-TMDL COMPLIANCE WATER QUALITY IMPRV.

DOCUMENT SUBSECTION: Stormwater Management
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: 30+ Years

MS4-TDML Compliance Water Quality Improvements

	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**21,316,000**	**4,891,000**	**1,800,000**	**2,050,000**	**1,750,000**	**2,000,000**	**2,575,000**	**1,500,000**	**1,000,000**	**1,750,000**	**1,000,000**	**1,000,000**	**16,425,000**
Financing Plan													
GO Bonds (Stormwater)	12,509,251	1,061,401	1,139,950	1,482,900	-	-	2,575,000	1,500,000	1,000,000	1,750,000	1,000,000	1,000,000	11,447,850
Stormwater Utility Fund	8,806,749	3,829,599	660,050	567,100	1,750,000	2,000,000	-	-	-	-	-	-	4,977,150
Financing Plan Total	**21,316,000**	**4,891,000**	**1,800,000**	**2,050,000**	**1,750,000**	**2,000,000**	**2,575,000**	**1,500,000**	**1,000,000**	**1,750,000**	**1,000,000**	**1,000,000**	**16,425,000**
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

Funding added for FY 2034. Prior year funding decreased by $2,014,000 and transferred to support projects within the Storm Sewer System Spot Improvements and Inlet Capacity programs.

PROJECT DESCRIPTION & JUSTIFICATION

The Virginia Department of Environmental Quality (DEQ) issued the City's current Municipal Separate Storm Sewer System (MS4) Permit on July 1, 2013 that mandates City-specific stormwater nutrient and sediment reduction targets for the Chesapeake Bay Total Maximum Daily Load (TMDL) Action Plan required and enforced through three 5-year MS4 permit cycles. Accordingly, the permit requires the City to implement stormwater treatment best management practices (BMPs) sufficient to achieve 5% of the reduction targets during the first 5-year permit (2013-2018), to achieve an additional 35% or 40% of total reduction targets during the second 5-year permit (2018-2023) by 2023, and the remaining 60% or 100% of the reductions on or before the end of the third permit cycle (2023-2028), but no later than by 2028.

The City continues planning efforts and identifying projects from the list of strategies in the City's Bay TMDL Action Plan. These plans and options are discussed through the City's Water Quality Workgroup, and through meetings with other internal and external stakeholders. The City completed the Chesapeake Bay TMDL Compliance Analysis and Options report (August 2014) that considered options and alternatives for treating stormwater to meet the Bay TMDL regulatory mandates, along with the corresponding planning-level costs to implement these alternatives. These formed the basis of the strategies included in the City's Phase 1 Chesapeake Bay TMDL Action Plan for 5% targets and in the subsequent draft (June 1, 2018) and final Phase 2 Chesapeake Bay Action Plan, dated September 24, 2019, to meet a total 40% of the targets. The Draft Phase 3 Bay TMDL Action Plan was submitted with the new 2023-2028 MS4 permit, and the final is due 12 months after the effective date of the permit or November 1, 2024. This budget is based on funding that can be used to implement a diverse mix of strategies to include retrofit of regional stormwater management facilities, implementation of Green Infrastructure as stormwater quality retrofits of City facilities and right-of-way retrofits, and urban stream restoration. Funding is used as specific projects are identified and developed to achieve these reductions.

(Continued on Next Page)

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

City of Alexandria Municipal Separate Storm Sewer System (MS4) Permit, Program Plan, and Year 5 Annual Report; City's Chesapeake Bay TMDL Action Plan; T&ES Strategic Plan; Eco-City Charter; Eco-City Action Plan

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

MS4-TMDL Compliance Water Quality Imprv. (continued)

Strategies implemented during the second permit cycle (2018 - 2023 permit) have already exceeded the Strategic Plan goal of 45% reductions by 2022 for a total of approximately 70% through June 30, 2023 to move towards more aggressive reductions to meet 100% of the current required reductions as mandated no later than 2028. Permit requirements and other regulatory expectations are adjusted with each successive MS4 permit and with each iteration of the state's Watershed Implementation Plan (WIP). The state is currently implementing the Phase III WIP (WIP III) with plans to develop a Phase IV WIP (WIP IV) likely in the 2025-2027 timeframe. Upcoming planning and analysis efforts that look at new modeling data and water quality monitoring are likely to revise the nutrient mandates with goals beyond the 2028 MS4 permit. In October 2022, the Chesapeake Bay Executive Council has charged the Principal Staff Committee with recommending a critical path forward to meeting the Bay TMDL. The report, "The Executive Council Charge to the Principals' Staff Committee: Charting a Course to 2025 and Beyond" was published on January 17, 2024. Additionally, planned Bay modeling updates must include Climate Change predictions and other new data. Early estimates show that the current mandates will be increased and therefore are likely required beyond the 2028 date in subsequent permits.

This project funds separate, discrete projects once identified and moved to the design phase. Past completed projects include the Lake Cook Retrofit and Ben Brenman Pond Retrofit and the soon to be completed Lucky Run Urban Stream Restoration. Potential new projects may include the following:

Potential City Properties for Retrofit	Estimated Pollutant Reductions (lbs./yr.)		
	TN	TP	TSS
Maintenance Facility / Luckett Field	11	2	1,496
TES / Recreation Operations	8	1	1,113
Traffic Control Shop	3	1	485

Potential Right-of-Way Projects	Estimated Pollutant Reductions (lbs./yr.)		
	TN	TP	TSS
Braddock Rd - North of I-395	12	2	1,547
Braddock Rd - South of I-395	27	4	3,537
King St - North of I-395	8	1	1,053
King St - South of I-395	21	3	2,480
Edsall Rd	9	1	1,078
Yoakum Pkwy	9	1	1,027

NPDES / MS4 PERMIT

DOCUMENT SUBSECTION:	Stormwater Management	PROJECT LOCATION:	Citywide
MANAGING DEPARTMENT:	Department of Transportation and Environmental Services	REPORTING AREA:	Citywide
		PROJECT CATEGORY:	3
		ESTIMATE USEFUL LIFE:	Varies

NPDES / MS4 Permit

	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**2,950,776**	**1,150,000**	**171,700**	**173,500**	**175,200**	**177,000**	**178,700**	**180,500**	**182,200**	**185,900**	**185,900**	**190,176**	**1,800,776**
Financing Plan													
Cash Capital	250,000	250,000	-	-	-	-	-	-	-	-	-	-	-
Stormwater Utility Fund	2,700,776	900,000	171,700	173,500	175,200	177,000	178,700	180,500	182,200	185,900	185,900	190,176	1,800,776
Financing Plan Total	**2,950,776**	**1,150,000**	**171,700**	**173,500**	**175,200**	**177,000**	**178,700**	**180,500**	**182,200**	**185,900**	**185,900**	**190,176**	**1,800,776**
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

Funding added for FY 2034. Prior year project funding increased by $187,938 via the Supplemental Appropriation Process.

PROJECT DESCRIPTION & JUSTIFICATION

This project provides funding for the data collection, inspection and enforcement, public education and outreach, public involvement and citizen participation, GIS mapping, development of water qualtiy action plans, BMP database management, and reporting activities associated with implementation of the programs required by the National Pollution Discharge Elimination System (NPDES) permit regulations administered by the Virginia Department of Environmental Quality (DEQ) through the Virginia Stormwater Management Program (VSMP) General Virginia Pollutant Discharge Elimination System (VPDES) Permit for Discharges of Storm Water from Small Municipal Separate Storm Sewer Systems (MS4) per 9VAC25-890 et. seq.

The MS4 general permit has a duration of 5-year cycles that requires the City to develop, implement and enforce an MS4 Program Plan to reduce discharges of pollutants from the MS4, protect water quality, and satisfy the appropriate requirements of the Clean Water Act.

The City was originally issued General Permit VAR040057 on July 8, 2003, and the most recent permit was issued on November 1, 2018 and is effective through October 31, 2023. Each successive permit contains increased regulatory requirements which necessitate more resources. The 2018 – 2023 MS4 general permit was no exception, with increased requirements for public education and outreach, staff training, revisions to Total Maximum Daily Load (TMDL) plans, implementation of Stormwater Pollution Prevention Plans (SWPPPs), enhanced inspections, and additional reporting. The 2023-2028 follows suit with additional requirements under Pollution Prevention and Good Housekeeping and Post Construction Stormwater Management. The permits also continue to contain increasingly stringent mandates to address the Chesapeake Bay Total Maximum Daily Load (TMDL).

The 2023-2028 MS4 permit was promulgated effective November 1, 2023 with the required MS4 permit registration statement as an application for coverage to include a draft of the City's Phase 3 Chesapeake Bay Total Maximum Daily Load (TMDL) Action Plan containing strategies to achieve 100% of the reductions in nutrients and sediment. The general permit requires additioanl standard operating procedures and new programmactic compliance, with MS4 annual reports covering compliance activities and other permit reporting requirements carried out for each fiscal year. Planned capital projects to meet the Bay TMDL reductions are budgeted as separate, specific projects under the "Stormwater Management" section of the CIP.

Finally, new broad requirements under the Virginia Watershed Implementation Plan Phase III (WIP III) and changes to guidance documents continue to translate into additional compliance activities.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

City of Alexandria Municipal Separate Storm Sewer System (MS4) Permit; MS4 Program Plan; MS4 Annual Report; City's Chesapeake Bay TMDL Action Plan; T&ES Strategic Plan; Eco-City Charter; Eco-City Action Plan

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

PHOSPHORUS EXCHANGE BANK

DOCUMENT SUBSECTION: Stormwater Management
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: 30+ Years

Phosphorus Exchange Bank													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	-	-	-	-	-	-	-	-	-	-	-	-	-
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

No changes from prior CIP.

PROJECT DESCRIPTION & JUSTIFICATION

Virginia Stormwater Management Program (VSMP) regulations, as incorporated into Article XIII of the Alexandria Zoning Ordinance - the Environmental Management Ordinance (EMO) – require properties that undergo development or redevelopment to reduce the amount of phosphorous in stormwater runoff that leaves the site in the post-construction condition. The amount of phosphorus that must be reduced is based upon several factors such as disturbed area, increases in impervious area, land cover types, etc. Owners of development sites may use applicable "offsite compliance options" to meet these requirements pursuant to 62.1-44.15:35 of the Code of Virginia and the attendant VSMP regulations per 9VAC25-875-610-. The City can 'exchange' phosphorus reductions between projects occurring on city-owned properties under the current VSMP regulations.

Small-scale City-funded construction projects and City projects with unfavorable site conditions face difficulties in meeting stormwater management requirements on-site through the installation of stormwater quality structural best management practices (BMPs) due to lack of space and/or cost of construction that make installation infeasible. As such, these projects regularly use offsite compliance options to meet their regulatory phosphorous reduction requirements. Most often, this requirement is met by purchasing nutrient credits from the state's Nutrient Credit Exchange for practices implemented outside the City within the Potomac River basin. In effect, these purchases send funds outside of the City and provide no benefit to local water quality.

The Transportation and Environmental Services, Stormwater Management Division (T&ES-SWM) created this policy alternative for City projects that allows offsite compliance options that provide benefits to local water quality and keep funds within the City. The policy was developed with input across city agencies, revised given that input, shared and approved by the Virginia Department of Environmental Quality, and executed via signature by the director of Transportation and Environmental Services. This project was initially seeded with $100,000 to supplement the installation of BMPs that go beyond stormwater quality requirements that may be used on other projects. The project seeding also includes five (5) pounds of phosphorus that may be purchased by other City departments for small capital projects where installation of BMPs are not feasible.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

City of Alexandria Municipal Separate Storm Sewer System (MS4) Permit, Program Plan and Year 5 Annual Report; City's Chesapeake Bay TMDL Action Plan; T&ES Strategic Plan; Eco-City Charter; Eco-City Action Plan

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

SMALL-MIDSIZE STORMWATER MAINTENANCE PROJECTS

DOCUMENT SUBSECTION: Stormwater Management
MANAGING DEPARTMENT: Transportation and Environmental Services
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: 1
ESTIMATE USEFUL LIFE: Varies

Small-Midsize Stormwater Maintenance Projects													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**9,920,300**	**1,695,200**	**649,100**	**685,900**	**724,400**	**765,800**	**809,100**	**854,200**	**901,400**	**922,900**	**944,900**	**967,400**	**8,225,100**
Financing Plan													
Stormwater Utility Fund	9,920,300	1,695,200	649,100	685,900	724,400	765,800	809,100	854,200	901,400	922,900	944,900	967,400	8,225,100
Financing Plan Total	**9,920,300**	**1,695,200**	**649,100**	**685,900**	**724,400**	**765,800**	**809,100**	**854,200**	**901,400**	**922,900**	**944,900**	**967,400**	**8,225,100**
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

Funding added for FY 2034.

PROJECT DESCRIPTION & JUSTIFICATION

This project provides annual funding for small and midsize stormwater maintenance projects to accelerate infrastructure repairs beyond maintenance. These small to mid-size stormwater maintenance projects would not be associated with other Spot Improvement projects and would not require in-depth design to mitigate flooding issues.

Typical small to midsize projects include repair/replacement of structure tops, inverts, gutter pans and pipe in the City's 189-mile storm sewer network and over 13,400 associated catch basin structures. Work may also include rehabilitation of pipe with trenchless technology or dig and replace based on the inspection and condition of the pipe. Work may also include cleaning or replacement of components of outfall structures and any other maintenance activity that keeps structures in satisfactory operating condition. Some of the projects include small stream stabilization projects, flap gate valve replacement along the Potomac River, and pipe replacement projects.

Currently, the City is in the early stages of compiling data from the enhanced inspections. Based on the data that has been collected to date, it is anticipated that the projects will be completed will fall under the following areas:

Cleaning of Structures	50%
Repair of Structures	20%
Replacement of Structures	5%
Replacement of Pipe Sections	15%
Lining of Pipe Sections	10%

It is noted that these percentages may change, based on requests from citizens, findings from City Staff, findings from closed circuit television inspections, and prioritization of work.

This project was recommended by the City's Interdepartmental Flooding Management Task Force and performed under the Flood Action Alexandria initiative. A list of headline progress indicators is under development.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

N/A

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

SPOT PROJECT - HUME AVENUE BYPASS

DOCUMENT SUBSECTION: Stormwater Management
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: Hume Avenue
REPORTING AREA: Potomac West
PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: 11 - 15 Years

Spot Project - Hume Avenue Bypass													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**4,567,216**	**4,567,216**	-	-	-	-	-	-	-	-	-	-	-
Financing Plan													
Cash Capital	1,514,034	1,514,034	-	-	-	-	-	-	-	-	-	-	-
GO Bonds (Stormwater)	3,053,182	3,053,182	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	**4,567,216**	**4,567,216**	-	-	-	-	-	-	-	-	-	-	-
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

No changes from prior CIP.

PROJECT DESCRIPTION & JUSTIFICATION

This project included in the Flash Flooding and Spot Improvements project received funding from the American Rescue Plan Act (ARPA) and is being delivered under the City's Flood Action Alexandria initiative. Severe urban flash flooding occurred in this area on Hume Avenue during more recent severe storm events. The existing storm sewer trunk line passes through private property where the city has no access easements. Approximately 15 properties are impacted by flooding when this trunk line is surcharged. This storm sewer improvement re-routes a section of storm sewer away from private property to the right-of-way. Hume Ave will be resurfaced, and the curb & gutter will be replaced under the Flood Action Alexandria initiative.

The project will address a section of storm sewer pipe that does not have capacity to pass the city's 10-year design storm. The project will disconnect the trunk line at the point it enters private property, and the end will be capped. A new trunk line will traverse Dewitt Ave and continue down Hume Ave where it will re-enter the main line serving the area. The pipe on private property will remain in place and continue to serve the adjacent properties that have low yards with inlets connected to the pipe. At a minimum, the bypass pipe system will be designed to handle the 10-year standard design storm. The curb and gutter and pavement will also be replaced in Hume Ave to improve street drainage. However, additional data collection in the Four Mile Run watershed associated with the Commonwealth, Ashby, and E. Glebe large capacity projects that is adjacent to Hume Avenue has identified modeled deficiencies that may arise based on the current scope. Staff is working with the consulting team to explore further scope options to alleviate this modeled flooding for the larger storm events to be consistent with the design storm chosen for the large capacity project. Early cost estimates that expand the scope and extent of this project to the E. Raymond and Commonwealth area that may include another new bypass in that area, has increased the current cost estimate for this project by two-fold to around $3 to $5 million.

The neighborhood in this area was part of the Alexandria Flood Action neighborhood outreach program and is currently engaged by staff. Updates to progress is through the city Flood Action website, the Stormwater Utility and Flood Mitigation Advisory Group, and direct outreach to the affected properties.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Strategic Plan; MS4 General Permit; Environmental Action Plan (EAP) 2040; City of Alexandria Storm Sewer Capacity Analysis (CASSCA); Flood Action Alexandria; Northern Virginia Flood Hazard Mitigation Plan

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

SPOT PROJECT - MT. VERNON CUL-DE-SAC AND ALLEY

DOCUMENT SUBSECTION: Stormwater Management
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: 10-Block of Mt. Vernon Ave
REPORTING AREA: Potomac West
PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: 11 - 15 Years

Spot Project - Mt. Vernon Cul-de-sac and Alley

	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**1,232,784**	**1,232,784**	-	-	-	-	-	-	-	-	-	-	-
Financing Plan													
Cash Capital	1,232,784	1,232,784	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	**1,232,784**	**1,232,784**	-	-	-	-	-	-	-	-	-	-	-
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

No changes from prior CIP.

PROJECT DESCRIPTION & JUSTIFICATION

This project included in the Flash Flooding and Spot Improvements project received funding from the American Rescue Plan Act (ARPA) and is being delivered under the City's Flood Action Alexandria initiative. The project is primarily within the right-of-way in the 10-block of Mt Vernon Ave, east of Commonwealth Ave. The project will consist of the construction of new inlets, a storm sewer extension up a portion of Mt Vernon Ave with new inlets at the curbs. Another storm sewer extension will be constructed in the alley to reduce nuisance flooding from alley runoff. Check valves will be installed at the connection to the Hooffs Run Culvert to prevent backflow into My Vernon Ave.

The neighborhood in this area was part of the Alexandria Flood Action neighborhood outreach program and staff continues to engage with the neighborhood. Updates are provided through the city Flood Action website, the Stormwater Utility and Flood Mitigation Advisory Group, and with direct outreach to the affected properties.

Severe urban flash flooding occurs in this area. The existing storm sewer in Mt Vernon Ave is inadequate to pass the local drainage from the city standard 10-year design storm and causes nuisance flooding and compounds severe flooding when the Hooffs Run Culvert is surcharged. This project will improve the local stormwater runoff management and increase the efficiency of moving stormwater through the storm sewers, reducing the frequency of nuisance flooding, and reduce the surcharge flooding from Hooffs Run Culvert during extreme flash flood events.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Strategic Plan; MS4 General Permit; Environmental Action Plan (EAP) 2040; City of Alexandria Storm Sewer Capacity Analysis (CASSCA); Flood Action Alexandria; Northern Virginia Flood Hazard Mitigation Plan

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

STORM SEWER CAPACITY PROJECTS

DOCUMENT SUBSECTION: Stormwater Management
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: 11 - 15 Years

Storm Sewer Capacity Projects

	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**89,224,307**	**11,349,307**	**-**	**15,950,000**	**15,200,000**	**13,702,000**	**6,680,000**	**6,343,000**	**4,000,000**	**7,000,000**	**5,000,000**	**4,000,000**	**77,875,000**
Financing Plan													
Cash Capital	949,492	949,492	-	-	-	-	-	-	-	-	-	-	-
GO Bonds (Stormwater)	79,389,800	1,514,800	-	15,950,000	15,200,000	13,702,000	6,680,000	6,343,000	4,000,000	7,000,000	5,000,000	4,000,000	77,875,000
State/Federal Grants	516,500	516,500	-	-	-	-	-	-	-	-	-	-	-
Stormwater Utility Fund	8,368,516	8,368,516	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	**89,224,307**	**11,349,307**	**-**	**15,950,000**	**15,200,000**	**13,702,000**	**6,680,000**	**6,343,000**	**4,000,000**	**7,000,000**	**5,000,000**	**4,000,000**	**77,875,000**
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

Funding added for FY 2034. Prior year project funding increased by $2,717,900 from a transfer from the Storm Sewer Spot Improvements Program to support the Edison/Dale capacity project.

PROJECT DESCRIPTION & JUSTIFICATION

This project includes the aggressive design and implementation of large-scale capital projects to address capacity and flooding issues. The City has experienced repeated and increasingly frequent flooding from storm events which lead to development of the *City of Alexandria Storm Sewer Capacity Analysis* (CASSCA, 2016), a multi-year citywide storm sewer analysis and planning-level exercise to identify potential capacity issues and develop prioritized recommendations for improvements to the storm sewer system.

The City experienced four flash flooding events (July 8, 2019; July 23, 2020; September 10, 2020; and August 15, 2021) primarily as a result of climate change-induced severe rain events. Indications are that the City will continue to experience these severe rainfall events more frequently and that these large capital projects can provide a mix of conveyance and storage options to achieve long-term solutions to flooding issues.

The top 11 projects were prioritized based on planning-level cost-benefit analysis. These projects will mitigate flooding for the greatest number of residents, direct investment to areas where the most significant property damage is occurring, and provide the greatest overall system benefit.

The prioritization sequence incorporates multiple data points such as the previous storm sewer and capacity analysis (CASSCA, 2016), property impacts documented through Alex311 service requests, refinement of those priorities through recent and ongoing neighborhood engagement meetings, and infrastructure connectivity from a systems perspective. These inputs were used to further prioritize capacity issues compared against reported issues and feedback from neighborhood groups. This prioritization includes a systematic (holistic, watershed) perspective to provide the needed capacity (conveyance and storage as practicable) that must first ensure downstream capacity is adequate before upstream issues can be addressed.

(Continued on next page)

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Eco-City Charter; Strategic Plan; Water Quality Management Supplement to the City's Master Plan; MS4 General Permit; Environmental Action Plan (EAP) 2040; City of Alexandria Storm Sewer Capacity Analysis (CASSCA); Flood Action Alexandria; Northern Virginia Flood Hazard Mitigation Plan

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

Storm Sewer Capacity Projects (continued)

For these large capacity capital projects that are costly, multi-year projects at the multi-block level, there is a greater level of certainty of project sequencing for the first three to four years. The estimated funding for the top three capacity projects is as follows:

1. Commonwealth Ave and Glebe Road: Design Fully Funded in FY 2022 and Construction Fully Funded in FY 2023. Planning level estimate of $34 million.
2. Ashby Street and Glebe Road: Design Fully Funded in FY 2022 and Construction Fully Funded in FY 2024. Planning level estimate of $16 million.
3. Hooffs Run Culvert Bypass: Design Fully Funded in FY 2022 and Construction Fully Funded in FY 2025 and FY 2026. Planning level estimate of $60 million.

Dedicated, discrete projects have been created in the CIP budget book for the above large capacity projects. Given the proximity and interaction of the first two projects, they were combined into the "Large Capacity – Commonwealth Ave, E. Glebe Rd., and Ashby Street" discrete project in the CIP. The "Large Capacity – Hooffs Run Culvert Bypass" project is also a discrete project in the CIP budget.

All planning and modeling to date is based on conceptual cost estimates and preliminary assessments, so there is considerable risk that costs could be higher than anticipated. During the feasibility and design of the first three projects, staff will conduct further cost-benefit analysis of including additional flood mitigation and resiliency in the design of these and future capacity projects to determine the potential positive impact of designing these projects beyond the City's 10-year storm design standard. It should be noted that even if the City designs capacity projects for larger, more intense storm events, there is always the risk that an even more significant rain event will occur. In those situations, greater capacity will help, but it cannot eliminate the risk of flooding entirely. If a higher design standard than the 10-year storm is used, and therefore individual projects likely cost far more than projected and afforded in this model, fewer projects will be delivered overall unless additional funding can be provided.

FY 2026 to FY 2033 Projects

Project sequencing initiating from FY 2026 to FY 2033 was based on the same considerations as the earlier projects; however, these may require reprioritization as further cost-benefit analysis, feasibility, and other design considerations become more available. These projects also include funding for potential property acquisition and/or public-private partnerships. The projects for the remaining six years of the capacity project element of the 10-Year Plan will address the following areas:

1. Edison and Dale Streets
2. Dewitt Avenue
3. East Mason Avenue
4. Notabene Drive and Old Dominion Boulevard
5. Mt. Vernon Avenue, East Glendale Avenue, East Luray Avenue, and East Alexandria Avenue
6. East Monroe Avenue and Wayne Street
7. Russell Rd & W. Rosemont Ave
8. Russell Rd & W. Rosemont Ave (south)

The schedule is aggressive, based on generic stormwater construction projects, and intended for financial planning and budgetary purposes only. Until substantial feasibility and design work is completed for each specific project, the schedule and budget will only be estimates that will include significant contingencies. As additional information is collected and the design of each project is further defined, more precise construction schedules and cost estimates can be developed.

The City received an initial Virginia Community Flood Preparedness Fund (CFPF) 50% matching grant of $516,000 in March 2022 and another 50% matching grant in November 2022 of $764,000 to accelerate portions of identified issues for the Edison Street and Dale Street area to deliver portions of the Edison and Dale Streets Large Capacity project ahead of the funding schedule of FY 2026 for that project.

STORM SEWER SYSTEM SPOT IMPROVEMENTS

DOCUMENT SUBSECTION: Stormwater Management
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: 1
ESTIMATE USEFUL LIFE: Varies

Storm Sewer System Spot Improvements													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**60,163,717**	**13,646,292**	**4,122,000**	**4,228,000**	**4,337,000**	**4,540,000**	**4,606,000**	**4,688,000**	**4,812,000**	**4,937,000**	**5,060,425**	**5,187,000**	**46,517,425**
Financing Plan													
Cash Capital	3,111,492	3,111,492	-	-	-	-	-	-	-	-	-	-	-
GO Bonds (Stormwater)	44,356,970	3,025,645	4,122,000	2,612,000	1,438,900	3,868,000	4,606,000	4,688,000	4,812,000	4,937,000	5,060,425	5,187,000	41,331,325
Private Capital Contributions	9,927	9,927	-	-	-	-	-	-	-	-	-	-	-
State/Federal Grants	1,670,000	1,670,000	-	-	-	-	-	-	-	-	-	-	-
Stormwater Utility Fund	11,015,328	5,829,228	-	1,616,000	2,898,100	672,000	-	-	-	-	-	-	5,186,100
Financing Plan Total	**60,163,717**	**13,646,292**	**4,122,000**	**4,228,000**	**4,337,000**	**4,540,000**	**4,606,000**	**4,688,000**	**4,812,000**	**4,937,000**	**5,060,425**	**5,187,000**	**46,517,425**
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

Funding added for FY 2034.

PROJECT DESCRIPTION & JUSTIFICATION

This project provides funding for essential capital infrastructure under the Flood Action Alexandria program that provides localized flood mitigation to specific neighborhoods on the lot and block level. These "Spot Improvements" of the City's storm sewer system are typically small to mid-sized capital projects that alleviate localized drainage and flooding concerns and can be implemented in about 8 to 20 months from the beginning of design to final construction. These projects are typically identified through Alex311 inquiries, field observations, neighborhood engagement meetings, and onsite investigations. Given the more recent intense rainfall events and the impacts to a larger number of properties than typically encountered prior to these new rainfall patterns, the scope and cost of these spot projects may range from $30,000 to over $1 million, with many projects trending into six to seven figures.

A list of projects planned for FY 2025 – FY 2026 is included below. Due to the possibility of unexpected or emergency repairs, or if efficiencies can be achieved by staging projects together, the list is subject to change:

FY 2025
- Prince St & Dangerfield
- Key Drive Unnamed Tributary Channel
- Valley Drive Inlet Expansion
- E Bellefonte Ave
- 100 block S Jordan St
- 4300 block Loyola Ave
- Lake Cook Eisenhower Culverts
- Skyhill Rd Study

FY 2026
- E Abingdon
- North Morgan St
- 100 block E Monroe
- 500 block E Alexandria Ave Storage
- Beverly Drive
- Upper King Street Inlet Improvements
- E Alexandria Ave Inlet Expansion
- West Taylor Run Pkwy and Janneys Lane

City staff continues to identify spot projects to provide improvements in the short to mid-term timeframe while concurrently advancing system capacity upgrades to reduce flooding. Completion of these Spot projects will improve the City's storm sewer capital infrastructure while mitigating the impacts of localized flooding and drainage issues. Planning efforts related to the more recent flooding events include a wider identification and prioritization of Spot projects for consideration of scheduling and funding based on neighborhood engagement in response to flooding and further investigation of those issues. This includes maintaining and updating the ranking and prioritization for those identified projects. Note that project design is a fraction of the overall cost of the project, with construction making up around 80% of the overall project cost.

Since the further identification of additional projects in response to recent flooding, there are more projects to address than in the past. Given that the identification occurred over the last few fiscal years, many of these newly identified projects are in the design phase and will be moving to the construction phase in the near term.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Eco-City Charter; Strategic Plan; Water Quality Management Supplement to the City's Master Plan; MS4 General Permit; Environmental Action Plan (EAP) 2040; City of Alexandria Storm Sewer Capacity Analysis (CASSCA); Flood Action Alexandria; Northern Virginia Hazard Mitigation Plan

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

STORMWATER BMP MAINTENANCE CFMP

DOCUMENT SUBSECTION: Stormwater Management
MANAGING DEPARTMENT: Transportation and Environmental Services
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: 1
ESTIMATE USEFUL LIFE: 30+ Years

Stormwater BMP Maintenance CFMP													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**8,523,800**	**1,109,500**	**1,575,300**	**1,622,500**	**317,100**	**326,600**	**336,400**	**346,500**	**356,900**	**1,792,200**	**365,800**	**375,000**	**7,414,300**
Financing Plan													
Stormwater Utility Fund	8,523,800	1,109,500	1,575,300	1,622,500	317,100	326,600	336,400	346,500	356,900	1,792,200	365,800	375,000	7,414,300
Financing Plan Total	**8,523,800**	**1,109,500**	**1,575,300**	**1,622,500**	**317,100**	**326,600**	**336,400**	**346,500**	**356,900**	**1,792,200**	**365,800**	**375,000**	**7,414,300**
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

Funding added for FY 2034.

PROJECT DESCRIPTION & JUSTIFICATION

The City is required to inspect and maintain stormwater facility best management practices (BMPs) installed to meet the City's Chesapeake Bay cleanup mandates. The Virginia Department of Environmental Quality (DEQ) issued the City's current Municipal Separate Storm Sewer System (MS4) Permit on November 1, 2023 that continues to mandate City-specific stormwater nutrient (nitrogen and phosphorus) reduction targets for the Chesapeake Bay Total Maximum Daily Load (TMDL). The current 2023 - 2028 MS4 permit requires that 100% reductions are achieved by June 30, 2028. Upcoming planning and analysis efforts that look at new modeling data and water quality monitoring are likely to revise the nutrient mandates with goals beyond the 2028 MS4 permit.

In October 2022, the Chesapeake Bay Executive Council has charged the Principal Staff Committee with recommending a critical path forward to meeting the Bay TMDL. The report, "The Executive Council Charge to the Principals' Staff Committee: Charting a Course to 2025 and Beyond" was published on January 17, 2024. Additionally, planned Bay modeling updates must include Climate Change predictions and other new data. Early estimates show that the current mandates will be increased and therefore are likely required beyond the 2028 date in subsequent permits.

Identification of strategies to meet these reductions, which includes the retrofit of large regional ponds, urban stream restoration, and installation of green infrastructure, are included in the City's Chesapeake Bay TMDL Action Plan.

Long-term maintenance of this new infrastructure must be performed to ensure proper functioning and reduce pollution in stormwater runoff to meet the state and federal mandates. This project funds maintenance of Stormwater Best Management Practices (BMPs) implemented throughout the City, with a focus on the maintenance of larger stormwater management capital projects implemented under the Bay TMDL Action Plan:

- Cameron Station Pond Retrofit
- City Facilities Stormwater BMPs
- Green Infrastructure
- Lake Cook Stormwater Management
- Lucky Run Stream Restoration
- MS4-TMDL Water Quality Compliance projects
- Strawberry Run Stream Restoration
- Taylor Run Stream Restoration

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Bay TMDL Action Plan, MS4 General Permit, Strategic Plan, Environmental Action Plan, Water Quality Management Supplement

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

STORMWATER UTILITY IMPLEMENTATION

DOCUMENT SUBSECTION: Stormwater Management
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: 1
ESTIMATE USEFUL LIFE: N/A

Stormwater Utility Implementation													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**1,673,200**	**1,673,200**	-	-	-	-	-	-	-	-	-	-	-
Financing Plan													
Cash Capital	1,518,200	1,518,200	-	-	-	-	-	-	-	-	-	-	-
Stormwater Utility Fund	155,000	155,000	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	**1,673,200**	**1,673,200**	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

No changes from prior CIP.

PROJECT DESCRIPTION & JUSTIFICATION

The City Council directed staff in February 2016 to develop the framework of a Stormwater Utility (SWU) to provide a dedicated funding source to more equitably distribute the increasing costs of recent state and federal Chesapeake Bay water pollution reduction mandates that require the implementation of costly infrastructure associated with stormwater management, as enforced through the City's Municipal Separate Storm Sewer System (MS4) general permit. More recently, funding has been shifted and increased to fund flooding mitigation capital projects and programmatic operations and maintenance under Flood Action Alexandria. Increasing operating and capital costs associated with the mandates exceeded the ½ cent dedication, demanding increasing contributions from the General Fund. Creation of the SWU more equitably apportions the cost obligation and provides a dedicated funding source for the City's Stormwater Management Program by shifting the burden to those properties that contribute more to stormwater runoff, thus alleviating pressure on the General Fund to support these funding responsibilities.

Following extensive public outreach, the City Council adopted the Stormwater Utility framework at its May 4, 2017, special meeting as part of the FY 2018 Budget. The City began implementing the Stormwater Utility Fee, effective January 1, 2018. First billing was sent May 2018 and second billing in October 2018, with the Real Estate bill. Every May and October thereafter, the Stormwater Utility bill was sent with each Real Estate bill, to fund these mandated stormwater improvements and the stormwater management program in an adequate, sustainable and equitable manner.

Database management, additional systems development (database modeling, integration and user interfaces), ongoing GIS data management, and other identified needs will continue, to successfully implement the utility. Extensive and ongoing robust public engagement is also key to implementation of the utility. Finally, an update to the Credit Program that expands the program to include flood mitigation practices, increased the menu of eligible options, made the application process easier, and allows for credits to be good for two years as opposed to annual was done the past year. Staff continues to administer the program and make changes based on a continuous improvement approach.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

City of Alexandria Municipal Separate Storm Sewer System (MS4) Permit; MS4 Program Plan; MS4 Year 5 Annual Report; City's Chesapeake Bay TMDL Action Plan; T&ES Strategic Plan; Eco-City Charter; Eco-City Action Plan 2040; Flood Action Alexandria

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

STRAWBERRY RUN STREAM RESTORATION

DOCUMENT SUBSECTION: Stormwater Management
MANAGING DEPARTMENT: Department of Transportation & Environmental Services
PROJECT LOCATION: Ft. Williams Parkway
REPORTING AREA: Seminary Hill/Strawberry Hill
PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: 21-25 years

Strawberry Run Stream Restoration

	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**972,728**	**972,728**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Financing Plan													
Cash Capital	50,000	50,000	-	-	-	-	-	-	-	-	-	-	-
GO Bonds (Stormwater)	625,000	625,000	-	-	-	-	-	-	-	-	-	-	-
Stormwater Utility Fund	297,728	297,728	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	**972,728**	**972,728**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

No changes from prior CIP.

PROJECT DESCRIPTION & JUSTIFICATION

This project will entail replacing the existing fence that is in a state of disrepair for safety purposes at the north end of Strawberry Run by the culvert that comes from under Fort Williams Parkway to the west where the stream flows. A new portion of fence will be installed at the southern end of this segment of Strawberry Run at the culvert that goes under Duke Street.

Staff will continue to monitor erosion along this segment of Strawberry Run. T&ES staff is working with Recreation, Parks, and Cultural Activities (RPCA) and have concluded that this area is a good candidate for fencing and/or hedges for safety and let the community know as we move forward on that work. The project budget authority that was previously focused on a stream restoration project was reduced via Special Allocation Ordinance approved by Council in spring 2023. The updated project budget will allow for the potential safety fence and hedge work to move forward without the need for additional funding. Any remaining funding will be returned to the stormwater fund for use in other stormwater projects.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

MS4 General Permit, Chesapeake Bay TMDL Action Plan, Strategic Plan, Environmental Action Plan 2040, Open Space Plan

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

STREAM & CHANNEL MAINTENANCE

DOCUMENT SUBSECTION: Stormwater Management
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: 1
ESTIMATE USEFUL LIFE: Varies

Stream & Channel Maintenance													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**19,309,294**	**8,614,454**	**934,700**	**962,700**	**991,600**	**1,021,400**	**1,052,000**	**1,083,600**	**1,116,100**	**1,149,600**	**1,178,340**	**1,204,800**	**10,694,840**
Financing Plan													
Cash Capital	3,802,125	3,802,125	-	-	-	-	-	-	-	-	-	-	-
GO Bonds	2,017,602	2,017,602	-	-	-	-	-	-	-	-	-	-	-
GO Bonds (Stormwater)	2,389,575	-	-	-	-	-	-	-	1,116,100	-	168,575	1,104,900	2,389,575
Private Capital Contributions	230,000	230,000	-	-	-	-	-	-	-	-	-	-	-
Stormwater Utility Fund	10,869,992	2,564,727	934,700	962,700	991,600	1,021,400	1,052,000	1,083,600	-	1,149,600	1,009,765	99,900	8,305,265
Financing Plan Total	**19,309,294**	**8,614,454**	**934,700**	**962,700**	**991,600**	**1,021,400**	**1,052,000**	**1,083,600**	**1,116,100**	**1,149,600**	**1,178,340**	**1,204,800**	**10,694,840**
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

Funding added for FY 2034.

PROJECT DESCRIPTION & JUSTIFICATION

This capital maintenance project preserves the capacity for City streams and channels to carry a 100-year floodwater, performs repairs to erosion damage, stream corridor degradation, grade control structures, storm sewer discharge points, and provides for stream stabilization/restoration. Projects may minimize blockages at bridges by removing and thinning excess vegetation and restoring conveyance capacity by removing sediment that accumulates more quickly due to more frequent, intense storm events. Efforts typically include sediment removal, vegetation maintenance, and in Holmes Run and Cameron Run watersheds, often include efforts in smaller tributaries to these streams.

The increasing frequency of climate-change induced intense storm events is requiring increased funding to ensure the conveyance capacity of these waterways as climate resiliency and adaption measures consistent with the City's Climate Emergency Declaration. In response to recommendations through the Flood Action Alexandria initiative, this project included a funding increase of over $0.4 million annually for a total of $10.1M over the 10-year period to perform more aggressive inspection and maintenance of the City's larger flood channels due to the impact from more frequent, intense storm events.

Sediment removal and vegetation maintenance was conducted on Cameron Run in FY 2018 and the planning phase for sediment removal has been initiated in FY 2024. Vegetation maintenance for Holmes Run occurred in FY 2023. Staff also prioritizes projects on our smaller streams, including Hooffs Run, Taylor Run, Timber Branch, Backlick, and tributaries to larger streams to ensure there are no blockages at road and railroad crossings and that conveyance capacity is maintained. A condition inspection of the Lake Cook Eisenhower Culverts – the discharge culverts from Lake Cook under Eisenhower Avenue to Cameron Run – is plannedto take place in FY 2025, along with a schedule for design and maintenance depending on the condition inspection.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Eco-City Charter; Water Quality Management Supplement to City Master Plan; MS4 General Permit and Program Plan; Chesapeake Bay TMDL Action Plan; Strategic Plan; Flood Action Alexandria

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

TAYLOR RUN STREAM RESTORATION

DOCUMENT SUBSECTION: Stormwater Management
MANAGING DEPARTMENT: Department of Transportation & Environmental Services
PROJECT LOCATION: Chinquapin and Forest Parks
REPORTING AREA: Taylor Run/Duke Street
PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: 21-25 Years

Taylor Run Stream Restoration

	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	Total FY 2025 - FY 2034
Expenditure Budget	**2,508,363**	**2,508,363**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Financing Plan													
Cash Capital	100,000	100,000	-	-	-	-	-	-	-	-	-	-	-
GO Bonds (Stormwater)	1,867,850	1,867,850	-	-	-	-	-	-	-	-	-	-	-
Stormwater Utility Fund	540,513	540,513	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	**2,508,363**	**2,508,363**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

No changes from prior CIP.

PROJECT DESCRIPTION & JUSTIFICATION

The project will stabilize the at-risk sanitary sewer infrastructure using a minimal disturbance approach for the sewer crossings, manholes, and associated at risk infrastructure.

Staff will work with the broader community during the design process as is typical for City projects, following successful procurement of a design firm. The current project budget remaining is about $1.5 million with a rough order of magnitude cost estimate of $2 million developed during discussions with the public. Given the focus of the work in on stabilizing the at-risk sanitary sewer infrastructure, the project costs may be supplemented with Sanitary Sewer funds. While this funding should be sufficient, depending upon the extent of the work, staff may need to make a request for additional funding in the FY 2026 CIP budget to complete the work. Cost estimates and work extent will be refined during the design process.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

MS4 General Permit and Program Plan, Chesapeake Bay TMDL Action Plan, Strategic Plan, Environmental Action Plan 2040, Open Space Plan

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.