

Program Description

The Stormwater Management Capital Program includes three capital program areas: Stormwater Infrastructure/ Capacity Improvements, Streams & Water Quality, and Maintenance Capital. These programs address both infrastructure (replacement and rehabilitation to address system condition, capacity, and flood risk reduction); and regulatory requirements (state/federal compliance and environmental quality projects).

The overall goals of the program are:

1. Reduce the potential for stormwater threats to public health, safety, and property.
2. Reduce the impacts of new and existing urban development on Arlington streams, the Potomac River, and Chesapeake Bay.
3. Comply with State and federal water quality mandates,
4. Floodplain management regulations and programs; and
5. Manage risk for near- to long-term community resilience.

Program Summary

Climate change has increased storm intensity patterns and impacts across the nation and over the past several years created repetitive flooding and loss in the Mid-Atlantic region. The County's geological factors and development legacy reaching as far back as the 1940s have exposed Arlington to public, commercial, infrastructure, and operational risk resulting from storms of dramatically increased intensity. At the same time, the County must maintain aged stormwater network and related assets, expand the system's capacity to manage floods, and meet regulatory benchmarks to improve water quality locally and downstream in the Chesapeake Bay. As laid out in the 2014 Stormwater Master Plan and updated in this CIP, the program strives to execute responsive and responsible investments that are balanced between water quality, and capacity improvements, and maintaining assets in a state of good repair (SGR).

In response to these challenges, the County has taken action to address the growing urgency for near-term upgrades and long-term resiliency. By way of example:

- The County pivoted to an over-arching mission to establish Flood Resilient Arlington.
- Established a Stormwater Inter-Departmental Working Group to develop key recommendations for risk and emergency planning, communications, diversifying engineering options and strategies, and developing climate and resiliency criteria and standards.
- Updated the Land Disturbance Activity (LDA) Program.
- Updated stormwater engineering to include distributed detention assets (such as the recently completed Cardinal Elementary School Detention Vaults), addition of tertiary infrastructure, acquisition of property to provide overland relief, and co-location and multi-purposing of projects (where project design and performance can serve other County master plans, programs, and initiatives).
- In FY 2024, the County completed a comprehensive stormwater Risk Assessment and Management Plan (RAMP), which serves as a decision support tool for long-term capital planning.

SUBSTANTIAL INVESTMENTS IN STORMWATER INFRASTRUCTURE

The investment laid out in this CIP reflects the significant effort that will be required to update the County's stormwater infrastructure to manage urgent needs and long-term resilience. The Adopted FY 2025 - FY 2034 CIP includes over \$334 million, driven primarily by watershed scale projects to minimize the risk of flooding. Given the significant funding required for Stormwater over the next 10 years, the County Board has directed staff to implement a stormwater utility as a more equitable and fair way to recover costs. A stormwater utility is billed based on each parcel's impervious area. It offers an alternative funding mechanism for recovery of the costs related to the County's stormwater program than the previous sanitary district tax based on assessed value. The County engaged a consultant, Raftelis, to perform the utility implementation. The utility was adopted by the County Board in December 2023 and is effective starting in Calendar Year 2024. Information about this project, timeline, and ways to engage can be found here: [Stormwater Utility Fee](#)

It is anticipated some of this investment could be offset with future stormwater mitigation and flood prevention grant programs at either the State or Federal level. Arlington County has been awarded State and federal grants reflected in the CIP and staff will continue to pursue these funding sources, as it could partially offset utility fee increases necessary to fund investments into Arlington's Stormwater infrastructure.

To fund the near-term projected need, the County received approval from voters for a \$50.84 million Bond Referenda in November 2020 and \$39.76 million Bond Referenda in November 2022 which provided the authority to issue bonds to fund Stormwater capital projects that will be constructed over several years. Future bond referenda will be necessary to fund the entirety of this ten-year plan. These are

substantial, long-term investments in the County's stormwater management system, with multiple generations of taxpayers benefiting so utilizing bonds to spread the costs over the life of the assets is appropriate. Approval of the increased investment level in this Adopted 10-year CIP will require corresponding increases in the Stormwater Utility fee level over the 10-year period.

STORMWATER INFRASTRUCTURE/ CAPACITY IMPROVEMENTS PROGRAM

The Stormwater Infrastructure/ Capacity Improvements program (previously named "Storm Drainage Improvements") funds capital improvements which increase system capacity and minimize the risk of flooding. This component of the CIP was created pursuant to the Stormwater Master Plan (2014) and includes programs and projects that increase system capacity (both pipes and open channels) and establishes overland relief pathways to reduce the risk of residential and commercial flooding. The Stormwater Master Plan (2014) identified initial critical flood risk locations to prioritize system capacity projects.

Many areas of the County's risk-designated watersheds are served by a legacy system that does not meet current storm standards under increased occurrence of high-intensity storm events, sometimes equal to or more than the 100-year storm event. This CIP recognizes that no reasonable amount of investment can prevent all flooding during all high intensity rainfall events in all types of topography. To achieve a reasonable balance of risk sharing between public and private interests, County staff is utilizing blended design strategies that considers both the industry standard 10-year storm and the 100-year flood plain. Staff will at a minimum design to the 10-year standard, updated for more intense rainfall events associated with climate change. Ultimately, the goal of these public investments, when combined with private investments, is to reduce flooding so that it does not impact building or home integrity, impede commercial/ business activity, threaten personal safety, damage other infrastructure, or interfere with the safe and timely transportation of people, goods, and services. It is important to note that flood mitigation improvements will vary in immediate impact as the phases of the watershed scale projects progress and that full watershed-scale improvements will take place over several years.

MAINTENANCE CAPITAL PROGRAM

The Maintenance Capital program focuses on the re-investment in the County's 270-mile storm drainage network and its tens of thousands of stormwater structures. The Capital Maintenance component addresses projects and programs designed to rehabilitate or replace the existing storm drainage system (e.g., outfall repair/replacement, relining pipes) and mixed infrastructure assets (such as culverts that also provide transportation uses) and to address local drainage issues to resolve complaints. Maintenance of the Four Mile Run Flood Control Project is also part of this program component.

To provide a more conclusive framework for future investment decision-making, DES has undergone a Risk Assessment and Management Plan (RAMP) which is a performance-driven risk management and abatement model informed by a full asset inventory and gaps analysis. This approach will provide a more granular assessment of the system including a comprehensive system assessment (including location, scale, constructed material, sensitivities with adjacent and/or articulated community elements and infrastructure, and age of all stormwater assets. The assessment will serve as a meaningful decision-support tool for the system's programmatic, operational, and fiscal needs.

STREAMS AND WATER QUALITY PROGRAM

The projects selected and implemented under this program provide a suite of sustainability benefits, reflecting the goals and objectives of the adopted Stormwater Master Plan, including local water quality improvements throughout the County, pollutant reductions to respond to the County's MS4 Permit requirements and the Chesapeake Bay Total Maximum Daily Load (TMDL) - a regulatory pollution budget for the Bay, and multiple co-benefits including but not limited to public safety, infrastructure protection, and ecological improvements. These projects include investments in multiple forms of "green infrastructure". These include projects that improve the resiliency and environmental performance of streams, ponds, and wetlands, along with "green streets" projects that provide storage and treatment for polluted runoff in public rights-of-way. A growing emphasis of the program is creating resiliency to climate change. Projects are strategically identified to align with infrastructure protection and integrity needs and address related public safety issues resulting from failed slopes, eroded trails, exposed and broken sanitary sewer lines and collapsed outfalls.

The MS4 Permit requires the reduction of three specific pollutants-nitrogen, phosphorus, and sediment-in an accelerated approach over three, five-year permit cycles to respond to the aggressive requirements for the cleanup of the Bay. Currently, Virginia DEQ continues to require that the second (FY 2022 - FY 2026) and third (FY 2027 - FY 2031) permit cycles achieve a cumulative 40 percent and 100 percent reduction, respectively.

10 YEAR CATEGORY SUMMARY (in \$1,000s)

	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	10 Year Total
SM Maintenance Capital	10,545	6,710	3,195	3,575	3,845	4,220	4,390	4,640	4,755	4,990	50,865
Stormwater Infrastructure/ Capacity Improvements	14,870	24,250	27,095	30,350	39,715	30,865	15,125	23,095	19,990	16,830	242,185
Streams and Water Quality	4,190	6,395	5,600	1,750	5,285	2,405	5,205	2,480	5,355	2,540	41,205
Total Recommendation	29,605	37,355	35,890	35,675	48,845	37,490	24,720	30,215	30,100	24,360	334,255
Implementation Adjustment	(5,920)	(7,470)	(7,180)	(7,135)	(9,770)	(7,495)	(4,945)	(6,045)	(6,020)	(4,875)	(66,855)
Adjusted CIP	23,685	29,885	28,710	28,540	39,075	29,995	19,775	24,170	24,080	19,485	267,400

PROGRAM FUNDING SOURCES (in \$1,000s)

	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	10 Year Total
New Funding											
Federal Funding	3,540	0	0	4,000	210	0	0	0	0	0	7,750
State Funding	0	0	1,750	0	0	0	0	0	0	0	1,750
Developer Contributions	0	0	0	0	0	0	0	0	0	0	0
New Bond Issue	0	155	23,825	27,480	44,545	32,740	20,175	25,100	25,235	18,940	218,195
PAYG	0	0	0	0	0	0	0	0	0	0	0
Short Term Finance	0	0	0	0	0	0	0	0	0	0	0
Stormwater Utility Fee Revenue	3,835	3,910	3,435	3,945	3,840	4,500	4,295	4,865	4,615	5,170	42,410
Other Funding	450	250	250	250	250	250	250	250	250	250	2,700
Subtotal New Funding	7,825	4,315	29,260	35,675	48,845	37,490	24,720	30,215	30,100	24,360	272,805
Previously Approved Funding											
Authorized but Unissued Bonds	21,780	33,040	6,630	0	0	0	0	0	0	0	61,450
Issued but Unspent Bonds	0	0	0	0	0	0	0	0	0	0	0
Other Previously Approved Funds	0	0	0	0	0	0	0	0	0	0	0
Subtotal Previously Approved Funding	21,780	33,040	6,630	0	0	0	0	0	0	0	61,450
Total Funding Sources	29,605	37,355	35,890	35,675	48,845	37,490	24,720	30,215	30,100	24,360	334,255
Implementation Adjustment	(5,920)	(7,470)	(7,180)	(7,135)	(9,770)	(7,495)	(4,945)	(6,045)	(6,020)	(4,875)	(66,855)
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