

Annual Report To Alexandria City Council

April 22, 2025



Intersection of Commonwealth Avenue & Glebe Road, August 14, 2023

Stormwater Utility and Flood Mitigation

Advisory Group

Council Member John Chapman

Mr. Chris Ferrara

Mr. John Hill, Chair

Ms. Christine Thuot

Ms. Katherine Waynick, Vice Chair

Mr. Dino Drudi

Mr. Brian Sands

Mr. Howard “Skip” Maginniss

Ms. Cheryl Leonard

Ms. Janette Shew

Question 1: Is the City's investment in stormwater mitigation directed at the most urgent problems?

The Facts



For the past several years, the most severe stormwater flooding in Alexandria has occurred around the intersections of Commonwealth Avenue and Glebe Road, Pitt and Gibbon Streets, and along Hooff's Run.

The engineering design of the Commonwealth/Ashby/Glebe project is nearing completion, and the procurement of the construction contractor will begin later this year.

The Hooff's Run Culvert Bypass is proving to be considerably more difficult than originally thought; no viable design has yet emerged. Nonetheless, the recent culvert cleaning and repair has considerably increased its capacity to drain stormwater during severe rainstorms.

The design of a solution for the flooding at the intersection of Pitt and Gibbon Streets will begin within the next year.

The City's commitment to these three large capacity-building projects is reflected in the proposed budget. The annual budget for FY2026 contains funding for the construction of the Commonwealth/Ashby/Glebe project and the design of the project at the intersection of Pitt and Gibbon Streets. The 10-year Capital Improvement

Program (CIP) shows funding commitments in future years for the completion of the three large projects.

Opinion of the Committee

The Committee agrees that the Flood Action Program is starting with the most urgent flooding problems facing Alexandria. The CASSCA study of 2016 identified the Four Mile Run (East) and Hooff's Run watersheds as the city's most flood-prone areas. That was evident during the severe rainstorms of 2020, 2021, and 2023.

The Committee members from these watersheds acknowledge that the Flood Action Program is making visible progress in their neighborhoods. The rapid completion of smaller "spot projects"

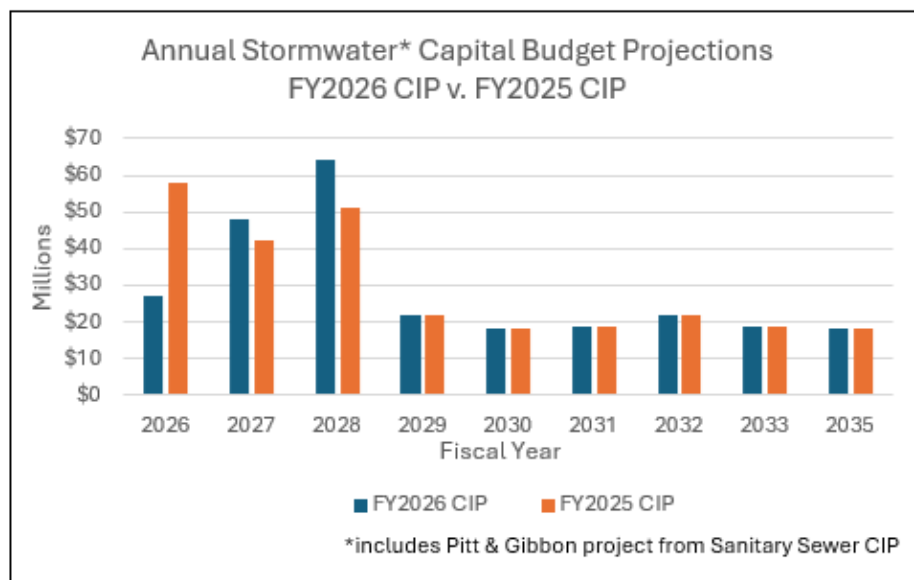
has created a sense that things are getting done. The multiple public meetings on the Commonwealth/Ashby/Glebe project in the Lynnhaven neighborhood have signaled that even more activity is on the way. In Rosemont, residents approve of the considerable maintenance improvements to the existing Hooff's Run culvert.

The Committee does, however, suggest that City engineers look beyond the CASSCA Study to identify the next set of large capacity-building projects. The Committee noted that the 2016 study focused solely on sewer pipe diameters and not actual flooding patterns. In identifying future projects, the City should evaluate areas that may have been overlooked in the CASSCA Study, such as the area around the Braddock Metro Station and the Combined Sewer Area.

In addition, the impact of the most recent projects such as Commonwealth/Ashby/Glebe, Hooff's Run, and the River Renew tunnel will invariably change how stormwater drains in Alexandria. The impact of which should also be monitored to ensure that fixing flooding in one area does not produce unintended consequences in other areas nearby.

Question 2: Are the planned expenditures adequate to address the stormwater flooding problem?

The Facts



The City Manager is proposing a slight decrease in Alexandria's investment in stormwater infrastructure over last year's ten-year Capital Improvement Program (CIP).

Last year's CIP called for a total of \$269 million in stormwater capital projects for the period FY2026 through FY2035.

The proposed CIP in the FY2025 budget calls for a total of \$257 million over the same period.

This slight decrease is probably due to fact that over half of the funds already allocated to stormwater projects are currently unexpended or uncommitted. As of December 2024, over \$107 million in unexpended or uncommitted funds are available for stormwater capital projects.

Opinion of the Committee

When the Flood Action Alexandria Program was launched in 2021, it proposed a ten-year \$260 million investment in stormwater infrastructure. The Committee acknowledges that the proposed annual budget for FY 2026 and the 10-year CIP continue to honor that commitment.

The Committee recognizes that designing the projects to solve Alexandria's stormwater flooding problem is more difficult than originally thought when the Flood Action program was launched. The design phase of both the Commonwealth/Ashby/Glebe and Hooff's Run projects are taking considerably longer than originally estimated – causing the most expensive phase of the projects, construction, to be delayed. This is illustrated by the chart on the previous page, where capital expenditures planned for FY 2026 are pushed into FY 2027 and FY 2028.

At this stage of the Flood Action program, the Committee believes that Alexandria is adequately funding the correct level of construction activity. The large projects, especially, are disruptive to the neighborhoods and traffic of Alexandria. More than two concurrent large projects may be more disruptive than Alexandria residents are willing to accommodate.

The Committee acknowledges, however, that the ten-year CIP is based on today's best estimates of the future cost of large stormwater projects. As evidenced by the Commonwealth/Ashby/Glebe and other projects, the Committee understands that the total cost of these projects may increase as designs are further developed and total construction costs are better understood.

Question 3: Is the City making sufficient progress in addressing the problem?

The Facts

Alexandria has made considerable progress in addressing the backlog of smaller “spot improvement” projects. At the start of the Flood Action Program, twenty-seven spot improvements were identified. As of March 2024, 17 of these have been completed and ten are actively under design or construction.

The aggressive maintenance program for both the stormwater and sanitary sewer system is already having a beneficial effect. The improvement to Hooff's Run culvert was mentioned earlier. The city-wide effort to combat stormwater inflow into the sanitary system through manholes and leaky connection pipes will ultimately reduce basement back-ups during the most severe rainstorms.

In the past year, City engineers have worked on the detailed plans for the large capacity-building projects at Commonwealth/Ashby/Glebe and Hooff's Run. Both projects have proved to be more expensive and time-consuming than estimated in the original Flood Action Plan of 2021. As the design of the Commonwealth/Ashby/Glebe project nears completion, its estimated total cost has increased by \$16 million to \$64 million – and construction has not yet begun. And a solution to the flooding along Hooff's Run is proving to be especially elusive. Despite their best efforts, city engineers are unsure whether it is possible to design an expanded culvert within the \$60 million budget forecast contained in the City's 10-year capital plan.

Opinion of the Committee

The Committee applauds Alexandria's progress to date. Visible and impactful work is getting done. Nonetheless, the experience of the past year has revealed to the Committee that truly expanding Alexandria's capacity to drain stormwater in the most flood-prone neighborhoods will be far more difficult than originally thought. Building the big projects – like Commonwealth/Ashby/Glebe and Hooff's Run Bypass – will take longer and cost more than planned.

When launched in 2021, the Flood Action Program envisioned a portfolio of proactive maintenance, a number of small "spot" projects, and twelve large capacity-building stormwater projects with a total price tag of approximately \$260 million. The original plan estimated that seven of the large projects would be complete by 2033 and the remaining five would be in active construction in 2033. The Flood Action Program was conceived as an intense ten-year effort with a prescribed number of large projects and a fixed end-date. The detailed engineering work of the past year suggests that the plan was, perhaps, too optimistic.

The committee urges City Council to re-think the Flood Action Program in two important ways:

1. Making Alexandria truly flood-resilient will take longer than the 10 years originally envisioned in the Flood Action Program. The Flood Action Program should be re-thought as an on-going portfolio of flood-mitigation projects that addresses ever-worsening rainstorms and that fits within the financial constraints of the Stormwater Fee and the city's capacity to execute large construction projects. As designs of the large stormwater projects are completed and their true cost and timelines better understood, the Committee should work with City staff to continually update the ten-year capital improvement program and the Stormwater Fee needed to finance it.
2. Home and business owners in Alexandria's most flood-prone areas need more incentives to invest in flood improvement measures for their properties. Although the city's projects will address much of the flooding problem, many home and business owners will not see relief for years. And for some, the flooding will never be totally eliminated.

During Committee meetings, some residents testified that they had spent more than \$50,000 to floodproof their homes. Alexandria's floodproofing grants and stormwater fee credits are only a partial incentive for home and business owners to make necessary improvements – they provide no more than \$5,000 (for grants) or about \$300 (for fee credits). More significant relief should be provided for the most flood-prone areas. As of December 2024, the floodproofing grant program had over \$2 million in unexpended/uncommitted funds. Alexandria should explore ways to target the grant program to specific areas with the most severe and persistent flooding. Further, the City might explore property tax relief for a home or business owner's flood mitigation improvements – perhaps similar to Alexandria's existing Solar Equipment Tax Exemption program. Grants and tax relief create a "multiplier effect" that encourages private investment in flood mitigation that is several times greater than direct public expenditure.

Climate change will not stop in ten years – it is unreasonable to think of Alexandria's Flood Action Program as having an end-date. These two suggestions enable the continuous public and private investment that is necessary to meet the challenge of stormwater flooding in Alexandria.