

Stormwater Utility and Flood Mitigation Advisory Committee

March 14, 2024 Meeting





Tonight's Agenda

1. Welcome back, opening remarks from Councilman Chapman (6pm, 5 min)
2. Approval of minutes (Committee) (6:05pm, 5min)
3. Summary of outreach to City Council (Katie, Janette, Skip) (6:10pm, 15 min)
4. Update on Flood Action program (City Staff) (6:25, 15 mins)
5. Snapshot summary of FY2025 Stormwater CIP (John) (6:40, 10 min)
6. Preparation for Committee Report to City Council (Committee) (6:50pm, 30 min)
7. Election of Officers (Committee) (7:20pm, 15 min)
8. Establish subcommittee to draft bylaws (Committee) (7:35, 10 min)
9. Public comments (7:45pm, 5 min)
10. Adjourn (7:50 pm)



Welcome back, opening remarks

AGENDA ITEM #1



Approval of Minutes

AGENDA ITEM #2



Summary of outreach to City Council

AGENDA ITEM #3



Update on Flood Action Alexandria Program

AGENDA ITEM #4



Flood Action Progress Report: Large Capacity Projects & CSS

- Commonwealth/Ashby/Glebe (est. \$50M) Large capacity flood mitigation. Progressing towards 60% design. Continued coordination with utilities for relocation. Geotechnical report based on site borings underway. Traffic Management Plan under development. Began preparation for third public meeting in Spring.
- Hooffs Run Culvert Bypass (est. \$60M) Large capacity flood mitigation. Fieldwork component of field survey along Russell Road is complete. Developed model to investigate possible solutions and determine feasibility. Two flow monitoring sites selected. The data collected will allow improvement of the hydraulic model.
- Pitt & Gibbon (\$20-25M) CSO surcharge mitigation. Site meeting held to finalize survey limits. Contractor submitted hydraulic modeling report. The city is reviewing and coordinating with AlexRenew to identify a solution for the 10-year.
- Nethergate (\$5M) CSO Surcharge mitigation. Field survey complete end of last month. Studies underway to evaluate alternatives. Gathering information for NPS permit process.
- North Overlook Drive (\$875K) Inlet and storm sewer improvements to mitigate flooding for the 10-year storm. Currently undergoing construction. Ting telecommunications started relocation of cables to make way for the construction. All temporary traffic control devices are in-place.

Flood Action Progress Report: Updates to Stormwater Program Schedule

Milestones

Hume Ave Stormdrain Bypass

- 90% Design Received & Review Complete

Edison St. Cul-de-Sac Drainage Improvements

- (90% Design Received)

N. Overlook Drainage Improvements

- Construction NTP
- Mobilization

W-Reed Ave Curb Inlets & Dale St. Drainage Improvements

- Solicitation issued for additional geotechnical investigation

Oakland Terrace Stabilization

- ITB issued. Contractor selection underway

Lloyd's Lane

- Complete

Program Schedule Update

- Alexandria's new project management system

Project Schedule Changes

Hume Ave. Stormdrain Bypass

- Requires additional utility coordination
- Proposed work requires additional geotechnical investigation

W-Reed Ave Curb Inlets & Dale St. Drainage Improvements

- Found conditions require additional geotechnical investigation

F. Hammond Culvert Headwall Modifications

- Utility relocations must complete first

Mt. Vernon Cul-de-Sac Inlets & Alley

- Revisions to contract bid documents underway

Sanitary Sewer Asset Renewal Program: Del Ray East Rehabilitation Project

- **Summary of Work:**

- Contractor issued Notice to Proceed Oct 16, 2023
 - Contract period = 1 year
- Work generally moving from south to north
- 150 pipe segments to be rehabilitated using ultraviolet (UV) cured-in-place pipe (CIPP) technology
 - Approximately one-third completed
- 111 manholes to be rehabilitated
 - Work started in late February
- Residents will be provided with a 2-week and 48-hour notification if the sewer main serving their home is to be rehabilitated
- No parking signs to be posted 72 hours in advance of work



Communications

- 9 Total Flood Action/ Stormwater social media posts in February.
 - Impressions decreased by 53%. (61,859)
 - Engagement decreased by 65%. (1,802)
- *These numbers compare to January when multiple snow events occurred. These events cause these numbers to greatly fluctuate.
- 3,331 Stormwater Management webpage views
 - Average web user engagement is 32:03
 - Most popular stormwater webpages:
 - Flood map= 404 views
 - Stormwater Utility Fee = 318 views

Maintenance Activities

- Hooffs Run Culvert Inspection
 - Pre and post storm inlet inspections and cleaning ongoing.
 - The culvert CCTV Inspection has been completed.
 - Findings:
 - The quantity of sediment is much less than the prior inspection.
 - The sediment deposits are located at the Duke Street outfall.
 - Staff is developing a sediment removal package.



Snapshot summary of FY2025 Stormwater CIP

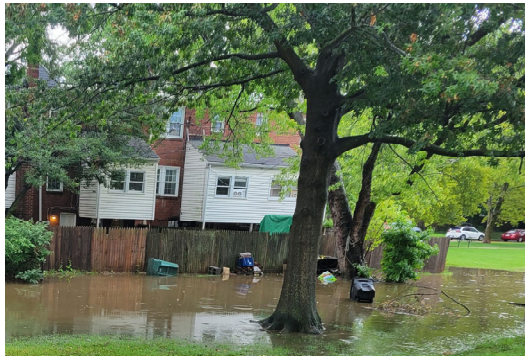
AGENDA ITEM #5

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



August 14, 2023 storm near Commonwealth & Glebe

◀ The \$50M Commonwealth/Ashy/Glebe project is directed to this problem.



August 14, 2023 storm along Hooff's Run Park

◀ The \$60M Hooff's Run Culvert Bypass project is directed to this problem.

Observation:

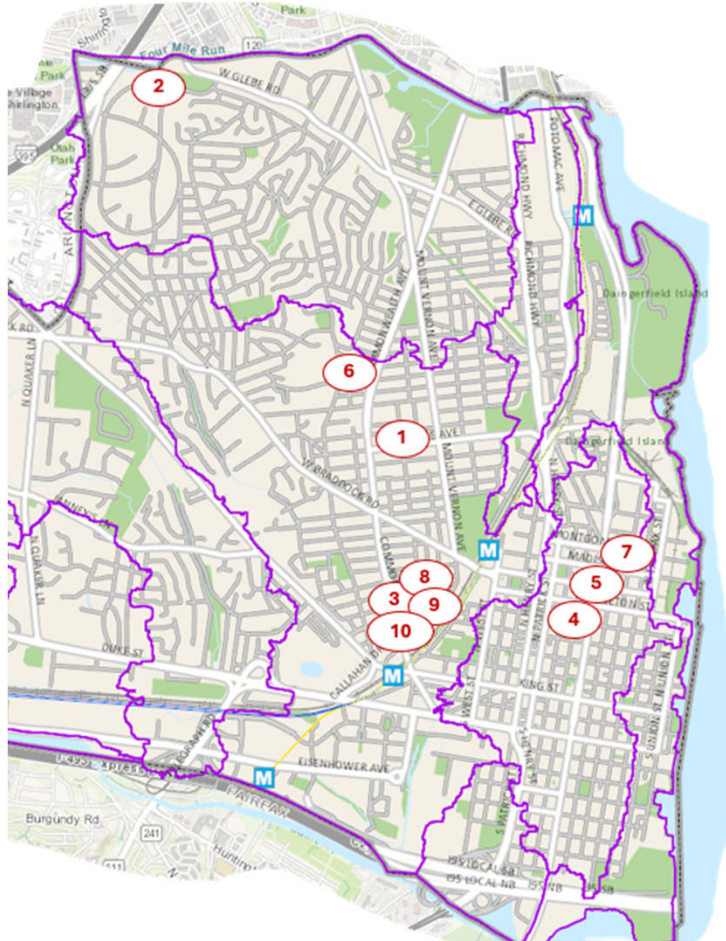
The severe rainstorms of the summer of 2023 confirmed the location of Alexandria's most flood prone areas.*

Two major capacity-building projects are currently underway in these areas with adequate current year funding. The full project costs are included in the FY2025 CIP.

**On July 29, Alexandria saw one inch of rain fall in 15 minutes. On August 14, 2023, 1.6 inches fell in 20 minutes. (rainfall measured at Mt Vernon School weather station)*

Discussion: What is the opinion of the Committee?

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



Observation:

Most flood-related 311 calls during the July and August severe storms came from locations where stormwater mitigation projects are underway or are planned.

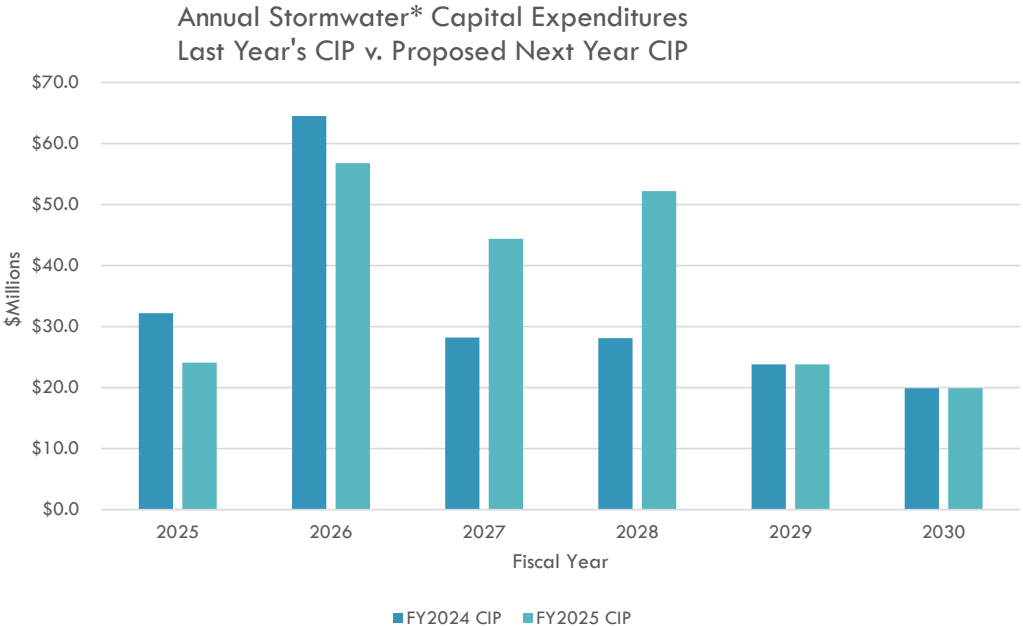
311 Call	Storm	Location	Project that addresses complaint
1	July 29	E Monroe & Wayne	E Monroe & Wayne Conveyance
2	July 29	Martha Custis Drive	Park Fairfax Inlets (complete 3/23) Caller: "it's better now"
3	July 29	W Linden & Commonwealth	Hoofs Run Culvert Bypass
4	Aug 14	1125 Prince	Caller: "street is holding water"
5	Aug 14	400 Pendleton	Caller: "storm sewer appears clogged"
6	Aug 14	2201 Russell	Hooff's Run Bypass
7	Aug 14	728 N. St Asaph	Madison & St Asaph Sewer Replacement
8	Aug 14	19 E Maple	Hooff's Run Bypass
9	Aug 14	9 E Maple	Hooff's Run Bypass
10	Aug 14	16 E Maple	Hooff's Run Bypass

Discussion: What is the opinion of the Committee?

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

Observation:

The City Manager is proposing an increase in Alexandria's investment in stormwater infrastructure over last year's Capital Improvement Program (CIP)



Last year's CIP called for a total of \$197 million in stormwater capital projects for the period FY2025 through FY2030.

The proposed CIP in the FY2025 budget calls for a total of \$221 million over the same period.

Most of that increase is for the stormwater mitigation project at the intersection of Pitt and Gibbon in the Combined Sewer Area.

*this includes the "wet weather mitigation" and "Pitt & Gibbon" projects from the Sanitary Sewer CIP

Discussion: What is the opinion of the Committee?



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

Observation:

The following is a status report as of late February 2024:

A. LARGE CAPACITY PROJECTS

- Large Capacity – Commonwealth Ashby Glebe
 - 60% design continues.
 - Determined need for easements.
 - City is waiting on better assessment of improvements at W Glebe.
 - Grant services team responded to requests for information from VDEM
- Large Capacity - Hooffs Run Culvert Bypass
 - Alternatives evaluation continues.
 - Flow monitoring task procured to install velocity sensors at two locations. The data to be collected will allow improvement of the hydraulic model
 - Design team finalized identification of alternatives and presented them to the City. City team to select alternatives to move to more detailed feasibility analysis.

C. COMBINED SEWER PROJECTS

- Pitt and Gibbon Combined Sewer Surcharging Mitigation
 - Design team continued survey work and is expected to wrap up mid-February.
 - Design team updated calculation to follow VDOT methods. Team is evaluating the impacts of this conservative change on potential solutions.
 - Team to review solution and coordinate with AlexRenew to find a way to achieve a higher level of service.
- Nethergate Sewer Mitigation
 - Design team finalizing survey and alternatives analysis and will provide back to City. City to explore additional information on sump pump discharge locations to assess viability of project.

Discussion: What is the opinion of the Committee?



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

Observation:

The following is a status report as of late February 2024:

B. SPOT IMPROVEMENT PROJECTS

- Mt. Vernon Cul-de-sac Inlets and Alley Storm Sewer
 - City provided comments on final design
 - Requisition for Construction Services to be issued
 - Draft Invitation-to-Bid under development
- Mt. Vernon Dual Culvert Replacement
 - Alternatives analysis report completed.
 - Option 1 proposed replacing the corrugated metal dual culverts from Mount Vernon Avenue to the outfall. This option may negatively impact nearby buildings.
 - Option 2 proposes lining the existing dual culverts. This option appears to be more effective, less disruptive to the neighborhood, less expensive, and poses fewer risks on the City during construction.
 - Because this is a grant-funded project, City discussed with Community Flood Preparedness Fund (CFPF) representatives and requested a formal approval for lining the existing storm sewer pipes
- Hume Ave. Bypass Neighborhood Spot Project
 - 90% design under development
 - Driveway slopes issue identified and being resolved
 - Progress meetings conducted
- W. Reed Ave & Dale St Storm Sewer
 - Continued Hume Spring Park improvements coordination with RPCA
 - Continued maintenance access coordination with Public Work Services
 - 90% Design under development
 - Progress meetings conducted
- Edison Street Drainage Improvements
 - 90% design under development
 - Data collection for expanded project limits initiated
 - Progress meetings conducted

Discussion: What is the opinion of the Committee?



Preparation for Committee Report to City Council

AGENDA ITEM #6



Election of Officers

AGENDA ITEM #7



Subcommittee to draft bylaws

AGENDA ITEM #8



Public Comment

AGENDA ITEM #9



Adjourn

AGENDA ITEM #10