



Ad Hoc Stormwater Utility and Flood Mitigation Advisory Group

September 20, 2023 Meeting



Tonight's Agenda

1. Welcome and introductions (6:00pm, 5 min)
2. Approval of minutes (6:05pm, 5 min)
3. Project update by City staff (6:10pm, 20 min)
4. Community engagement –Update by staff and group members (6:30pm, 20 min)
5. Flood mitigation grant –Update by staff (6:50pm, 10 min)
6. Discussion of sensor network to measure "overflow" events (7:00pm, 20min)
7. Workplan for the 2023-24 year, by Chair and Vice Chair (7:20pm, 15min)
8. Public comment (5 min, 7:35pm)
9. Adjourn (7:40pm)



Welcome and Introductions

AGENDA ITEM #1



Approval of Minutes from Last Meeting

AGENDA ITEM #2



Update on Flood Action Alexandria Program

AGENDA ITEM #3



Flood Action Progress Report: Large Capacity Projects & CSS

- Large capacity projects
 - Commonwealth/Ashby/Glebe (est. \$50M) 30% Concept Submission scheduled for end of September. Crews have been performing geotechnical borings, which started on 8/2. Scheduled for 9/21 completion. Public Open house scheduled for 9/28
 - Hooffs Run Culvert Bypass (est. \$60M) Data collection and field survey along Russell Road started in early August. Currently refining existing model and exploring proposed solution set. Joint Open House with City, AlexRenew, VRPA, and VRE scheduled for 10/4 at King St. Amtrak Station
- Combined sewer system (CSS) area projects
 - Pitt & Gibbon (\$20-25M) Planning Phase – Finalizing preferred alternative to upsize the combined sewer. Limits of upsizing are still being explored from a construction feasibility and permitting standpoint. Survey team will mobilize once these limits are set.
 - Nethergate (\$5M) Planning Phase – Alternative selected. Had pre-application meeting with National Parks (NPS). Survey team engaged and mobilizing in the next couple of weeks.

Flood Action Progress Report: Updates to Stormwater Program Schedule

Project Schedule Extended

- Lloyd's Lane (Construction Procurement)
- Oakland Terrace Timber Branch (Construction Procurement)
- Mt. Vernon Cul-de-sac Inlets & Alley (Design)
- N. Overlook Drainage (Design)
- Carlisle Drive Alley (Planning)
- Hume Ave Stormdrain Bypass (Design)
- Edison Street Cul-de-sac Drainage Improvements (Design)
- W. Reed Curb Inlets (Design)
- Clifford Fulton & Manning (CFM) Green Alley (Planning)

Project Delivery Expedited

- 100 Hume Ave SD Bypass (ARPA* Funding Secured)
- Edison St. Drainage Improvement (CFPF* Funding Secured)
- 100 W. Reed Curb Inlets (CFPF Funding Secured)
- 100 Dale Rd. Overland Relief Channel (CFPF Funding Secured)
- Mt. Vernon and Edison Dual CMP Replacement (CFPF Funding Secured)
- 00 E. Linden Ave. Alleyway Improvements
- CFM Green Alley (HUD* Funding secured)

ARPA* – American Rescue Plan Act
CFPF* – Community Flood Preparedness Fund
HUD* – Housing and Urban Development

Flood Action Progress Report: Updates to Stormwater Program Schedule

Milestones

- T. Branch Culvert Headwall Modifications at W. Glendale (Compete)
- Mt. Vernon and Edison Dual CMP Replacement (Alternatives Assessment)
- 100 Hume Ave Stormdrain Bypass (60% Design Complete)
- W. Reed Curb Inlets (30% Design Complete)

Recategorized Projects

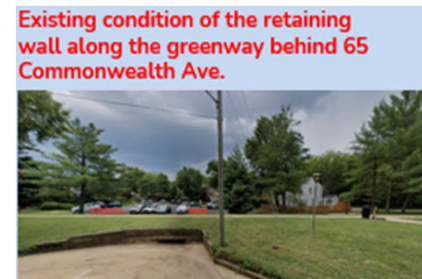
- Carlisle Drive Alley (On Deck)
- Walleston Court Erosion (On Deck)
- Skyhill Rd. Stormdrain Extension (On Deck)

Start Date contingent on Hoofs Run Culvert Bypass

- 300 E. Mason Curb Inlets
- E. Monroe Ave. & Newton St. Curb Inlet
- E. Alexandria Ave. & E. Luray Ave Curb Inlets
- 500 E. Alexandria Ave. Alleyway Stormdrain Extension
- 300 E. Mason Ave. Stormdrain Extension
- 300 E. Mason Ave. & 200 E. Duncan Ave Stormdrain Connection

Past and Planned Maintenance Activities

- Hooffs Run Culvert Repairs
 - Repairing damage in Hooffs Run Park
 - Purpose: Make Hooffs Run Park Safe
 - Installing Hatches/Access Doors to facilitate maintenance
 - Retaining wall repair
 - Construction activities are underway
 - End date: February 2024





Past and Planned Maintenance Activities

- Holmes Run Channel Maintenance underway
 - Inlet cleaning between Linden and Rosemont Streets
- Hooffs Run Culvert Inspection
 - Pre and post storm inlet inspections and cleaning
 - Coordinating with vendor for inspection, October – December 2023
 - Cleaning will be based on the inspection findings
 - Proposing to inspect yearly



Sanitary Sewer Asset Renewal Program

- **Sanitary Sewer Rehabilitation Project-1 (Del Ray East)**
 - 165 pipe segments and 122 manholes, 20% of the system, were found have structural defects and other defects.
 - Ultraviolet (UV) cured-in-place pipe technology to rehabilitate the existing sanitary sewers and manholes .
 - City contracted AM-Liner East for construction and Greeley and Hansen for construction management and inspection.
 - Starting this Fall: Del Ray, Lynhaven, and Rosemont neighborhoods, east of Commonwealth Avenue.
- Public meeting: Thursday October 12, 7pm at City Hall, Sister Cities Conference Room & the meeting can also be attended virtually, through Zoom.
 - Register in advance for the virtual meeting:
https://zoom.us/webinar/register/WN_fMaAZFbtRrmfL4Rd3S2hGA.
 - The meeting will include a 30-minute presentation by City staff followed by a question-and-answer session.



Community Engagement

AGENDA ITEM #4

Communications

- 198 total messages were received from all social media channels with 154 of them originating from Twitter.
- Impressions increased by 26.3%.
- Engagement increased by 30.6%.
- Post link clicks increased by 130.1%.
- We have hired the new Communications Officer. Her first day was on Tuesday, September 5.

Recent and Upcoming Public Meetings

- September 28, 7-830 pm – Commonwealth/Ashby/Glebe Flood Mitigation Project: Public Open House at Leonard "Chick" Armstrong Recreation Center Multipurpose Room, 25 West Reed Avenue
- October 4, 5-7pm – Joint Public Outreach Event regarding King St. Corridor projects under coordination by the City, VPRA, and AlexRenew:
 - King St Amtrak Station, brief presentation at 6pm
 - Projects include Hooffs Run Culvert Bypass, VPRA King St. And Commonwealth Ave. Bridge Rehabilitation, AlexRenew Commonwealth Interceptor, T&ES roadway improvements, and VRE station upgrades



Update of flood mitigation grant program

AGENDA ITEM #5



Flood Mitigation Pilot Grant Program Changes for Consideration



Current Pilot Program

- Up to \$5000 per property, 50/50 match
- Provide documentation of flooding back to July 2019
- All property types include residential, commercial, and non-profit
 - Association non-residential structures are only eligible for \$5,000



Flood Mitigation Practices

- Over 25 eligible practices
- Protect property from flooding
- Not for cleanup or damage repair
- Dedicated email address, manual and website
- Intake, review, and processing by TES with Finance



**City of Alexandria
Pilot Flood Mitigation Grant Program
APPROVED LIST OF PRACTICES**



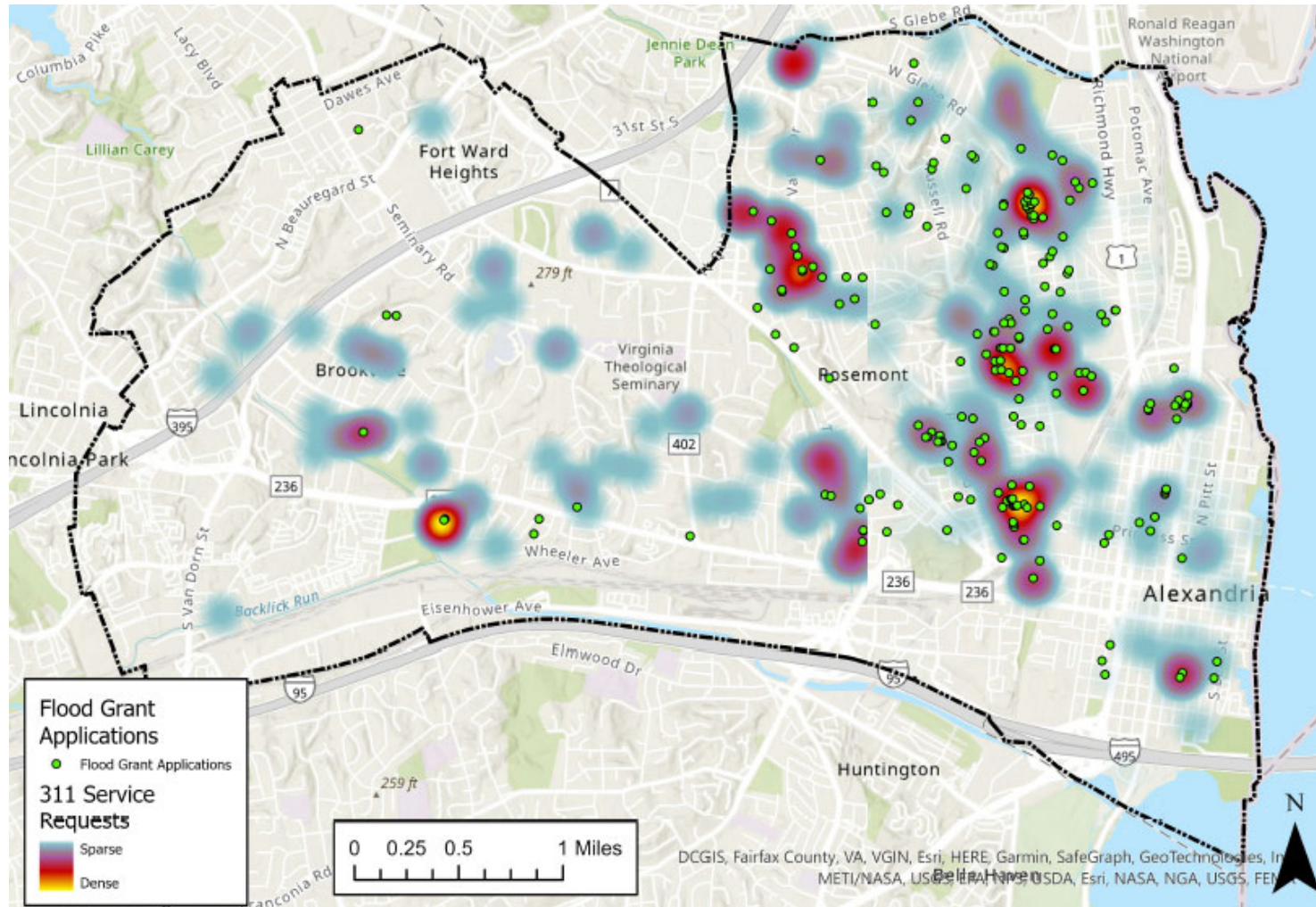

PRACTICE	DESCRIPTION	CITY REVIEW REQUIREMENTS
Windows		
Install permanent glass protection materials or floodproof windows	 <p>Permanent glass protection can prevent flood damage from flooding and other extreme weather events. Floodproof windows or those with glass protection are passive systems that protect from rising flood water and debris impact.</p>	Board of Architectural Review Code Administration
Install basement window protection	 <p>Fixed, translucent, water-tight covers installed on near grade or below grade basement windows provide increased protection against surface flooding.</p>	Board of Architectural Review Code Administration
Install custom ground floor or basement window wells	 <p>A ground floor or basement window well should have a central drain that is either connected to an interior or exterior drain tile system or to a line that runs to a stormwater drain or outside the property. Installing a new drain requires soil excavation and either reinstalling or replacing the window well liner. Also, for the best protection against flooding, a window well should be custom fit and made of steel-reinforced polycarbonate plastic.</p>	Board of Architectural Review Code Administration
Doorways		
Install permanent doorway flood gate or panel	 <p>The quickest way for surface flooding to enter a structure is through open doorways. Permanent doorway flood gates or panels are physical barriers that attach to external doorframe and can be quickly deployed to prevent floodwaters from entering a structure. Permanent floodgates can be an easier and faster alternative to sandbags; however, they require installation and, in most cases, custom fitting.</p>	Board of Architectural Review Code Administration
Install temporary doorway flood gate or panel	 <p>Temporary doorway flood gates and panels are similar to the permanent models described above; however, this type of flood gate is only deployed prior to flooding and does not require any pre-installation setup. Typically, these systems are not custom-made and can be installed in minutes. These systems are usually made of expandable steel tube frames that adjust to various sized doorways and while not completely water tight like permanent structures, they do offer excellent protection.</p>	N/A

Flood Grant Reimbursements to Date

- 250 total applications and \$772,000 paid since program start in August 2021
- \$589,000 paid FY 2022
- \$168,000 paid FY 2023
- \$15,000 so far in FY 2024



Flood Grant Applications - Targeted



Program Changes to Consider



Remove requirement to document past flooding events



Photo Credit: CBC.ca



Add grant option for Association Common Areas



Photo Credit: City of Alexandria

Consider Grant Option for Association Common Areas

- 50/50 match up to \$25,000 for the association (up to \$50,000 spent for eligible voluntary practices)
- Floodproofing practices to protect common area primary structures
 - Clubhouse, parking garage, pool area, doorways leading to multiple units, flood mitigation practices on shell of building, etc.
- Strongly urged to consult with staff prior to starting work or applying for completed work
 - Required floodproofing not eligible

Typical Condo Grant Example 1

- Condo Association has 10 townhomes
- Only one townhome wants to put a floodproof doorway at the front entrance of their specific townhouse
 - A Floodproof doorway costs \$600
 - Grant per doorway \$300 ($\$600 \times 50\% = \300)
 - Condo Owner applies for themselves
 - Practice only protects the one unit, then the \$5000 grant formula will be used for that unit
 - \$5,000 grant max - \$300 grant reimbursement = \$4700 grant amount left over for the unit to use towards other flood mitigation practices on their unit

Association Grant Example 2: Common Entrance

- 40 condos in 10 blocks of 4 units that want to put a floodproof doorway at the common front entrance of each block
 - Each Floodproof doorway costs \$600 x 10 doorways= \$6000
 - Total \$6000 *50% =\$3000 Grant reimbursement
 - Condo Association applies on behalf of residents for common areas
 - \$25,000 grant max - \$3,000 grant reimbursement = \$22,000 grant amount left over for the Association to use towards other flood mitigation practices on other common areas

Association Grant Example 3: Common Entrance

- Association floodproofed entrance to the common underground parking garage
- Spent about \$250,000 on floodproofing
- Association would be eligible for the full \$25,000 reimbursement match

Association Grant Example

4: "Bundling"

- Condo Association with 10 townhomes wants to put a floodproof doorway at the front entrance of each townhouse
 - Each Floodproof doorway costs \$600
 - Total per doorway \$600, Grant per doorway \$300 ($\$600 \times 50\% = \300)
 - Condo Association applies on behalf of residents towards the individual unit grants
 - Since each floodproof doorway only protects the one unit, then the \$5000 grant formula will be used for each unit.
 - \$5,000 grant max - \$300 grant reimbursement = \$4700 grant amount left over for each unit to use towards other flood mitigation practices on their unit.

Outreach

- Ad Hoc Stormwater Utility and Flood Mitigation Advisory Group
 - February discussion on Association Grant
 - April discussion on Association Grant
 - June discussion on Association Grant
- Public outreach and listening session
 - Held August 15th
 - Planned second September 25th
 - Communication plan – social, eNews, web, etc.
- City Council Legislative docket planned for October 24
- **Staff request: Ad Hoc recommendation for docket**

A photograph showing a flooded area viewed through a window or opening. A black barrier with a white dashed line is in the foreground. Two yellow bollards are visible on either side of the barrier. In the background, there is a brick wall, a grassy area, and a fence. The water is turbulent and white with foam.

Questions?

FloodGrant@alexandriava.gov

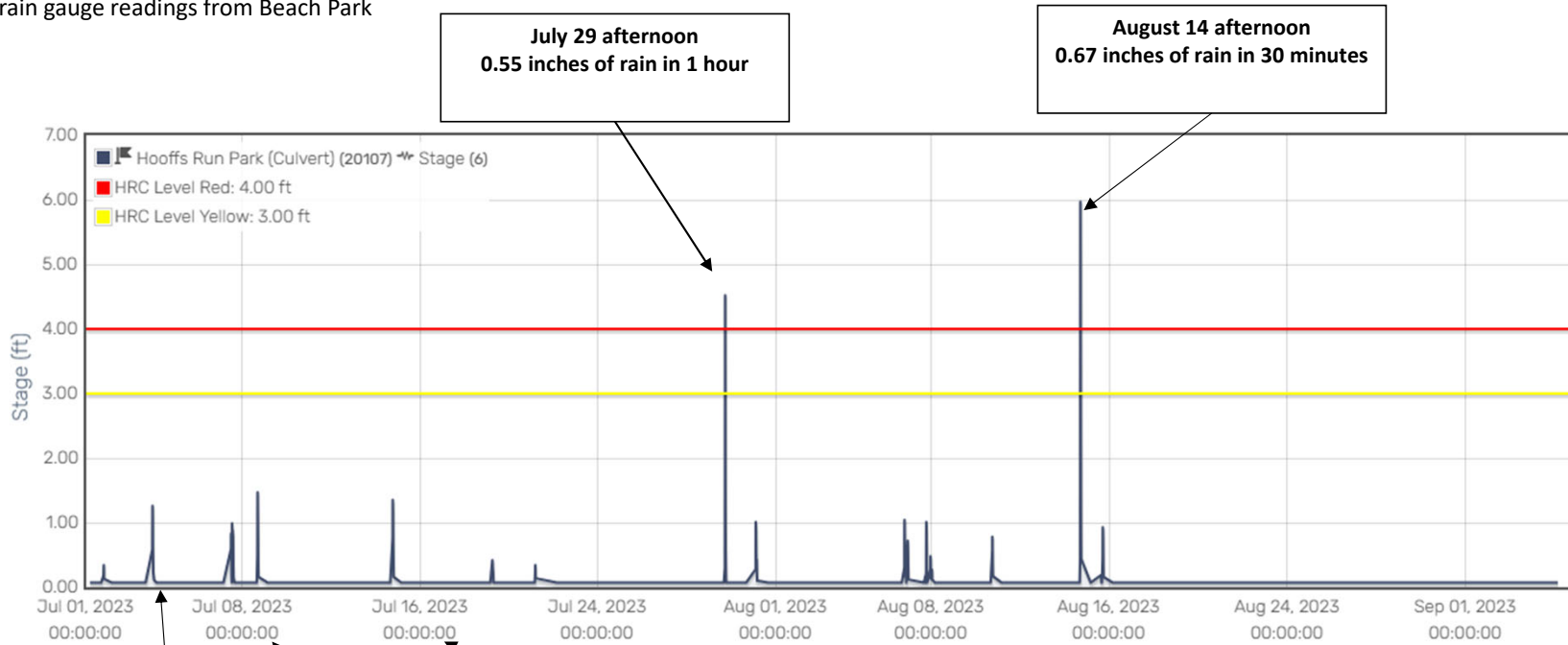


Sensor network

AGENDA ITEM #6

Depth of Flow at Hooff's Run Culvert – July to September 2023

From "Rain Gauge and Stream Flow Tool" at Flood Action Alexandria website
 All rain gauge readings from Beach Park



Discussion Questions:

Does this type of graph present the "stormwater capacity" that we are trying to increase?

Is it possible to create similar graphs for other floodprone areas (e.g. Pitt&Gibbon, Commonwealth&Glebe, Braddock & West, Daingerfield & Prince, etc)?



Workplan 2023-2024

AGENDA ITEM #7



Ad Hoc Stormwater and Flood Mitigation Group Proposed Work Plan for 2023-2024



Purpose

Activities & Deliverables

Community Awareness

To increase residents' awareness of -- and involvement in -- the projects planned in their neighborhoods

Maximize resident awareness and attendance at all community meetings regarding these projects:

- Commonwealth/Ashby/Glebe
- Nethergate
- Hooff's Run Bypass
- Miscellaneous Spot projects
- Pitt & Gibbon

Place special emphasis on residents most impacted by these projects. (Throughout the year)

Business Involvement

To better understand the impact of stormwater and flooding issues on Alexandria businesses and design appropriate mitigation strategies.

Fill the "business representative" vacancy as soon as possible. (November?)

Assessing Plans & Budgets

To report to Council whether the appropriate level of funding is allocated to the most effective storm- and floodwater mitigation projects.

A statement in support of the Stormwater Fee increase that briefly summarizes past storm season and the need for continued investment (October?).

A budget season report – and testimony -- on the progress of the stormwater mitigation program overall, with an emphasis on expenditures to-date and planned investments. Answer the three questions raised in our 2023 report. (March to May?).

Informing City- and State-level Policies

To provide the perspective of residents and businesses as City staff works with Council and our state representatives in shaping policies regarding storm- and floodwater mitigation

Contribute relevant stormwater proposals to the City's legislative package to Richmond (September?)

Establish the Ad Hoc Stormwater Group as a permanent city committee (June?)



Public Comment

AGENDA ITEM #8



Adjourn

AGENDA ITEM #9