



# Ad Hoc Stormwater Utility and Flood Mitigation Advisory Group

September 20, 2023 | 6:00 p.m. | Hybrid (Virtual and In-Person) Meeting

## Minutes

### Advisory Group Members Present:

P	John Chapman	A	Brian Sands
P	Dino Drudi	P	Janette Shew
P	John Hill (Chair)	P	Christine Thuot
P	Cheryl Leonard	A	Katherine Waynick (Vice-Chair)

P = Present    A = Absent    V = Virtual (on call)

**Staff Present:** Anup Gautam, DPI Technical Project Manager; Brian Rahal, T&ES, Civil Engineer IV; Dan Medina, DPI Stormwater Program Manager; Felicia Montoney T&ES Management Analyst I; Jesse Maines, T&ES Division Chief, Stormwater Management; Jonathan Whiteleather, DPI Technical Project Manager; Lisa Jaatinen, T&ES Civil Engineer IV; Mitch Dillon, DPI Technical Project Manager; Terry Suehr, DPI Director

### 1. Welcome and Introductions

The meeting began at 6pm. With 6 Ad Hoc Group members present in person, quorum was met.

### 2. Project Updates by City Staff

Mr. Whiteleather provided updates for **Large Capacity Projects**.

- a. Commonwealth/Ashby/Glebe (CAG): Engineers are working on the 30% concept submission with planned submission the week of September 18, 2023. Geotechnical work started in August and finished September 20, 2023. The soil will be tested and analyzed to assist in the design. A public open house is scheduled for September 28, 2023 for further public outreach to review the 15% design and answer questions from the community.
- b. Hoofs Run Culvert Bypass (HRCB): Field crews are doing data collection and field survey, which started in August 2023. Engineers are currently refining the existing conditions model and starting to identify proposed solutions to be implemented in the alternatives analysis. A joint open house with the City, AlexRenew, Virginia Passenger Rail Authority, and Virginia Railway Express is scheduled for October 4, 2023 at the King St. Amtrak Station. Mr. Drudi asked if the project is designed based on historic flooding or anticipated future flooding. The City indicated the design considers both.
- c. Mr. Hill asked whether multiple solutions for CAG and HRCB will be presented at the open houses, or single alternatives. Mr. Whiteleather indicated that a single solution will be presented for CAG since the design is further along. The HRCB open house will not present a single alternative since the analysis is more preliminary.

Mr. Whiteleather provided updates for **Combined Sewer System Projects**.

- a. Pitt & Gibbon: The City is finalizing and will share a preferred alternative to upsize the combined sewer, which has been found to reduce flooding. Further coordination is needed with AlexRenew to



ensure that construction feasibility and permitting will not cause any issues, and the City plans to increase the project budget due to a need for expanded project limits. Survey and field analysis will begin once limits are set.

- Ms. Thuot asked whether the proposed sewer upsizing is different than the past sewer work that has occurred in the project area. Mr. Whiteleather indicated the previous project was not an upsizing project, but diverted separate stormwater flow from one area to another. This new proposed solution targets the entire combined system watershed.
  - Ms. Thuot asked whether storm sewer separation was considered. Mr. Whiteleather indicated yes, but upsizing was found to be more effective.
  - Mr. Drudi asked how the pipe will be upsized. Mr. Whiteleather indicated the preliminary pipe sizing converts a 7'x5' box culvert to a 12'x5' (smaller than the Hooffs Run Culvert). This is subject to change pending survey and other information still being collected. The project is still under the planning phase.
  - Ms. Thuot asked if the design schedule can be shortened. The City indicated this may be possible.
  - Mr. Hill asked if a separate contract will be created for construction after the design is complete. The City confirmed yes. Mr. Drudi asked if the design accounts for past and future storms. The City indicated yes.
  - Mr. Hill asked if the Pitt & Gibbon project ties to the AlexRenew Commonwealth interceptor and AlexRenew Tunnel. The City indicated that the combined sewer line ties into the Royal Street Diversion structure. However, the design storm event (10-year) would be an overflow event. The City and AlexRenew are coordinating designs to find a balance of alleviating local flooding and minimizing increases to combined sewer overflows. The project does not impact permitting of overflows for AlexRenew.
  - Ms. Thuot indicated that some storms in 2021 were designated as larger storms by the City compared to the state. Ms. Thuot asked how these designations were assigned and how this influences design. Mr. Rahal indicated storms are designated by the City based on analysis of localized rainfall data. The City's 10-year stormwater design storm is larger than the state design standard and accounts for future (2070) projections. In larger storms, such as the 25- or 50- or 100-year storms, flooding will occur. Dr. Medina reminded the group that design storms are artificial. It is a guide for design, but if a storm occurs in a slightly different way (faster, shorter, periods of lull between two peaks), flooding can occur.
  - Ms. Thuot asked if the City considers shorter duration storms. Dr. Medina indicated that designing for the 24-hour storm accounts for smaller/shorter storms. The City indicated the typical design storm has a total of ~5.6" of rainfall over 24 hours. Ms. Thuot suggested that the City help residents understand what rainfall depths trigger flooding so they can look at weather forecasts and plan accordingly.
- b. Nethergate: An alternative has been selected and the City met with the Nethergate HOA prior to the June Ad Hoc Meeting. The proposed solution crosses National Park Services (NPS) land. The City met with NPS on August 24, 2023 and NPS requires additional information and an access permit. The City is mobilizing field crews to obtain topographic and utility survey.

Mr. Dillon provided an update on **Spot Improvement Projects**.

*Extended Projects (see slides for full list):*



- a. Hume Ave project complexity and project benefits have significantly increased. New scope includes installing a storm sewer on E. Raymond St., sanitary sewer improvements, and ADA crosswalk improvements near Mount Jefferson Park. Expanding the scope and services has increased the budget from \$2.5M to \$4.5M.
- b. Edison St. work previously stopped at the cul-de-sac, however the scope has been increased to include inlets at Mark Dr. and Edison St. to provide added flood mitigation. The project budget has increased from \$400k to \$1M. Since the work exceeds \$1M, a separate invitation to bid (ITB) for construction contractors is likely needed instead of using an on-call contractor. This is causing an extension in schedule.
- c. Dr. Medina indicated that not all projects address everyone's flooding equally. The projects target areas of significant flooding, and as additional funding and resources are available, additional flood mitigation projects will be added.

*Expedited Projects (see slides for full list):*

- a. The City continues to pursue grants for projects that are anticipated to help expedite schedule.
- b. Mr. Hill asked if the Dashboard is being updated regularly. The City indicated the Dashboard is being updated quarterly.

*Milestones (see slides for full list):*

- a. The Timber Branch Headwall has been completed.
- b. Mt. Vernon and Edison Dual CMP Replacement is in the alternatives assessment phase and is moving forward.
- c. 60% design has been completed for the Hume Ave. bypass project. A community outreach meeting was held September 19, 2023.
- d. 30% design has been completed for the West Reed Curb Inlets.

*Recategorized Projects and Projects Contingent on HRCB: see slides for reorganized list*

*Questions on Spot Improvement Projects:*

- a. Ms. Shew asked whether the Milestones were delivered on schedule even if they are part of a project that is extended. The City indicated yes. Sometimes, the need for increased scope is found at key milestone deliverables, which then causes an overall project delay.
- b. Mr. Hill asked whether more spot improvement projects are being identified as the City learns more about the existing system. The City indicated yes.
- c. Mr. Drudi asked whether spot improvement projects that have expanded scope are being recategorized as large-capacity projects and whether a recategorization would change funding. The City indicated the projects are not being recategorized. There remains a large difference between spot projects (a couple million dollars) and the large-capacity projects (tens of millions of dollars), even if the spot improvement projects are growing.

Lisa Jaatinen discussed the **City's Maintenance Work:**

- a. Inlet cleaning along the Hooffs Run channel is underway between Linden St. and Rosemont St.



- b. The City is adding annual inspection of the Hooffs Run Culvert Bypass using cameras to assess the need for maintenance (removal of debris). Depending on the results of the inspection, the City will activate cleaning as needed.
- c. There is an ongoing project to repair sections of the Hooffs Run Culvert and install access doors to facilitate future access and maintenance. Repairs are anticipated to be completed February 2024.
- d. Mr. Drudi recalled ~280 tons of debris were removed from Hooffs Run Culvert the first time it was cleaned. Mr. Drudi asked whether the recent flooding that occurred from the Hooffs Run Culvert is due to blockage and is driving annual inspections. The City indicated that the decision to do annual inspections was made internally ahead of these storms.
- e. Ms. Thuot indicated that Hooffs Run Culvert Bypass, Commonwealth, Ashby, Glebe, and Pitt & Gibbon are three projects which are showing up as spot improvement projects on the City's project tracker. The City will investigate and correct. These projects are not considered spot improvement projects. Ms. Thuot indicated that the two recent storms on July 29, 2023 and August 14, 2023 should be added to the flood event history tracker.

Mr. Anup Gautam discussed the **Sanitary Sewer Asset Renewal Program**.

- a. Sanitary Sewer Rehabilitation Project 1 (Del Ray East): The City found through inspections that ~20% of the sanitary system inspected requires rehabilitation because the pipes allow for stormwater inflow and infiltration (I&I), a contributing factor for sanitary sewer flooding. The City has hired a contractor and construction manager to perform ultraviolet cured-in-place pipe lining.
- b. The City is hosting a public outreach meeting on October 12, 2023 at 7pm in the City Hall (Sister Cities Conference Room) to provide an overview of this work. See slides for the link to register for this meeting.
- c. Mr. Hill asked whether the pipes have been lined before. The City indicated no, this would be the first time they are repaired. The repairs are anticipated to last 50 years. Mr. Hill asked if the pipes flow to the Commonwealth Interceptor. The City indicated yes. The City indicated that this project is the first of multiple additional projects under the Sanitary Sewer Asset Renewal Program , that will address asset repairs in other parts of the City.

### **3. Approval of Minutes from June 7, 2023 Ad Hoc Group Meeting**

- a. Mr. Drudi asked that the title and agency be listed for each staff member present on page one. He also indicated his name is misspelled on page 4.
- b. Mr. Drudi asked Mr. Hill to clarify his observation on page 6 of the minutes that "signs in the field are highly effective". Mr. Hill indicated that physical signs, equipment, or pictures in the field are effective for communication with the public.
- c. The meeting minutes were approved unanimously with the above-mentioned changes and clarifications raised by Mr. Drudi.

### **4. Community Engagement**

Mr. Medina presented on communications updates:

- a. See slides for statistics on online engagement.



- b. The City has hired a new communications officer who will cover Flood Action Alexandria, Emma Wheeler, who started September 5, 2023.
- c. Please see slides for details on two upcoming outreach events for Commonwealth/Ashby/Glebe (September 28, 2023) and Hooffs Run Culvert Bypass/Other King St. and Commonwealth Ave. Infrastructure projects (October 4, 2023). Both events are open houses where attendees can talk to project leaders and learn more about Flood Action projects.
- d. Ms. Leonard asked if doorhanger notifications for public outreach meetings can be provided on individual doors in her condominium. The City will ask their contractor to post doorhangers on individual doors within condominium buildings.
- e. Mr. Hill provides a list of active public works projects to the Rosemont Civic Association that he has found is helpful to keep track of projects and helps clarify misconceptions by residents.
- f. Councilman Chapman asked how communications are coordinated within the City between agencies. Ms. Wheeler indicated that T&ES regularly coordinates with the City's broader communications group for consistency. However, T&ES also has access to social media channels and opportunities to provide a flexible communications approach.

## **5. Update of Flood Mitigation Grant Program**

- a. Councilman Chapman indicated that the Ad Hoc Group was originally set up as a 1-year group with 3 potential annual renewals. This past year Councilman Chapman has advocated for the group to be made permanent. The Council has asked whether a permanent group is necessary and has also heard about the need from various community members. Councilman Chapman will continue to advocate and will distribute a memorandum of support for the Ad Hoc Group to review by the October 2023 meeting.

Mr. Maines presented updates to the flood mitigation grant program:

- a. Two changes to the Flood Mitigation Grant Program are being proposed by the City. The first is removing the requirement that eligible applicants must have experienced and documented historic flooding on their property. Removing this requirement opens the grant to more participants, however the City has seen a recent dip in the number of applicants, so they believe this change is appropriate. The second change is expanding the grant program to include multi-family buildings with the requirements and benefits discussed at the last Ad Hoc meeting and presented in the slides. The City held a public outreach meeting on these changes on August 15, 2023. The City is presenting these changes to City Council on October 24, 2023 and is requesting a letter of support from the Ad Hoc Group.
- b. Please see slides for a series of funding examples illustrating the multi-family building matches.
- c. Mr. Hill asked whether opening the grant program to non-flooding properties and giving a \$25k match to multi-family buildings will result in overly rapid depletion of available funding. The City indicated the total funding this year is ~\$800-900k, including some rollover from last fiscal year, which allows for funding for several applications.
- d. Mr. Hill asked whether there is evidence that the program is incentivizing people to floodproof. The City indicated that the fact that people are applying and that the City gives matching reimbursement supports the idea that floodproofing is incentivized.



- e. Ms. Thuot asked whether the City has investigated how much more than \$5k individual residents have spent and whether the City could raise the limit for residents who spent more. The City indicated that exceptions would require a stronger equity analysis and more research would be needed to make this determination. Ms. Thuot indicated that some residents may not be floodproofing because the cost is significantly more than \$10k. Flood insurance alone has increased substantially, so residents are seeing major financial burden. Mr. Hill encouraged annual financial analysis of the pilot program to help inform future changes.
- f. Ms. Leonard indicated that her condominium complex at Commonwealth Ave. and E Glebe St. is planning a \$4.5M waterproofing project, which is resulting in a \$20k special assessment to individuals. This demonstrates the financial burden of flooding to residents. The City indicated the \$50M Commonwealth, Ashby, Glebe project is the City's investment for flood mitigation in this area with the intent of helping on top of the grant program.
- g. Ms. Shew asked how residents are supposed to know how to best floodproof their homes. The City indicated that residents can call the City and the City can provide inspectors can look at a home and provide general guidance. However, the City cannot provide specific design or engineering recommendations, and cannot recommend contractors. The City is considering requiring a course or certification for contractors to be put on a recommended list.
- h. Ms. Shew asked whether historic buildings have additional requirements for floodproofing. The City indicated permit applications are required and applications will be reviewed for historic preservation consistency and compliance with building code requirements.
- i. Ms. Thuot asked what the outreach email address is for the pilot grant program. Mr. Maines indicated [floodgrant@alexandriava.gov](mailto:floodgrant@alexandriava.gov).
- j. Ms. Thuot asked whether there is guidance on what the Ad Hoc Group can do in terms of making flood mitigation recommendations or a public list of flood proofing products and contractors. Councilman Chapman and Mr. Maines indicated the City cannot make specific recommendations, but can provide a preliminary level of technical support. Ms. Thuot will provide what she would like to share with the community in terms of recommendations for City review.

## **6. Sensor Network to Measure “Overflow” Events**

Mr. Hill presented information about the sensor network on behalf of Ms. Waynick:

- a. Mr. Hill indicated the City provides a significant amount of rain and flow data and presented a chart showing water elevation in the Hooffs Run Culvert during recent rain events.
- b. Mr. Hill asked whether similar sensors can be installed at restricted points around the City and have this data be available to the public to maintain a level of interest, investment, and education with the Flood Action program. Ms. Thuot indicated sewer elevation monitoring is occurring near Pitt & Gibbon, but the data has not been shared. This data could be helpful to residents to understand what size storms cause flooding.
- c. Mr. Medina indicated temporary sensors are typically installed for projects to collect data to inform design, but are generally not tied to an online dashboard. Mr. Rahal indicated permanent sensors and flow meter data is available, but a significant amount of equipment and money is needed to obtain this information. Each site costs \$25k along with annual maintenance.





- d. Mr. Hill asked that the City consider these meters and the data collected as a piece of the long-term Flood Action program outreach, which can show the system functioning well and when the system is flooded.

## **7. Workplan for 2023-2024 year**

- a. Mr. Hill presented the four workstreams and associated action items for the Ad Hoc Group. The workstreams are Community Awareness, Business Involvement, Assessing Plans and Budgets, and Informing City and State Policies. Action items are presented in the slides.
- b. Mr. Drudi asked whether City Council's expectation is that the "business representative" be from the Chamber of Commerce. Mr. Hill and Councilman Chapman indicated yes.
- c. Mr. Hill would like to put more detail into the letter of support to Council regarding the Stormwater Fee and Flood Action work to date.

## **8. Public Comments**

Mr. Hill opened the meeting to comments from the public.

- a. Rose Esber: Ms. Esber is part of an 8-unit condo association at 1707 King St. She stated that flooding has caused damage both in common areas (garage) and non-common areas (private parking spots and storage units within the garage). Ms. Esber asked if would be possible to receive both the \$25k and \$5k grant for these locations under the new proposed rules for the pilot grant program. Mr. Maines indicated that the \$25k would apply to the parking garage and other common areas. Private areas can obtain up to \$5k in grants per owner, but the specifics of whether a private parking spot would overlap with common area is something that would be assessed on a case-by-case basis. Mr. Drudi indicated that a floodgate which protects both common and unit-specific areas should be eligible to receive matches from both the \$25k common area and \$5k individual matches.
- b. Ms. Esber indicated that she believes individual condo owners pay higher taxes than single-family owners, and therefore believes condo owners are subsidizing single-family owners for the grant program. Mr. Maines indicated any property (condo or single-family owner) can apply for a \$5k match. Condo associations can additionally apply for a match for common areas.
- c. Ms. Esber appreciated the Hooffs Run Culvert Bypass field walkthrough with residents. She asked for more clarification about what exactly the Hooffs Run Culvert Bypass is and whether it brings more stormwater to the Daingerfield area. The City clarified that the water from Timber Branch already connects back to the Hooffs Run Culvert, so the total amount of water coming to the Daingerfield area will not change. However, the bypass divides the flow, providing an opportunity to slow down one set of flow compared to the other, so the two sets of water do not peak, or hit, at the same time. The peaks hitting at the same time contribute to flooding.
- d. John Craig (virtual): Mr. Craig, a homeowner near the Braddock Metro Neighborhood, commented that he feels that the \$5k grant is not enough for some owners since the flooding affects properties differently and may not be enough for owners such as himself with more extreme flooding. He asked that other grant match options or tax cuts be considered for properties in these situations. He also mentioned that a flood sensor in his neighborhood would be helpful for him and other owners. He has been keeping track of flood events and offered to put together a presentation to define issues and possible solutions in the Braddock Road area. Mr. Hill asked Mr. Craig to send him this presentation.



Mr. Maines stated that a study is in progress for Braddock Rd. More details of this plan were discussed in a previous Ad Hoc Group meeting.

**9. Changes to the Grant Program**

- a. Proposed motion by Mr. Hill: the Ad Hoc Group supports amendment of the existing Flood Mitigation Grant Program with 1) removal of need for documentation of past flooding and 2) addition of grant match funding for multi-family property common areas and individual units according to the rules outlined by the City”. The motion was seconded by Ms. Shew. A few members of the Ad Hoc Group discussed that the maximum grant amounts for individuals and common area should be revisited based on public comment and review of floodproofing cost data from past applicants. Amending the motion to indicate that “the maximum grant match amounts for single family / unit owners and multi-family common areas should be subject to review and revision”, the Ad Hoc Group approved the motion unanimously.

**10. Adjourn**

Meeting Adjourned at 8:41pm by unanimous vote.