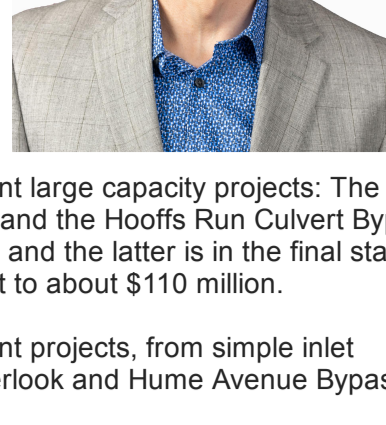


MANAGER'S MESSAGE

Time flies — and the past year in the Flood Action Alexandria program certainly went by me at blistering speed.

Our team is currently working on 35 flood mitigation projects in varying stages, from early design to construction. It's an ambitious workload, but we've made significant progress over the past year and have strategically planned a successful course to build the City's resiliency.



We launched the design of the City's two most significant large capacity projects: The Commonwealth, Ashby, Glebe Flood Mitigation Project and the Hoofts Run Culvert Bypass Project. The design for the former is already underway, and the latter is in the final stages of hiring a contractor. These two projects together amount to about \$110 million.

- We continued systematically tackling spot-improvement projects, from simple inlet replacements to more complex ones like the North Overlook and Hume Avenue Bypass projects.
- We initiated two significant projects in the combined sewer area: Pitt Street and Gibbon Street and Nethergate townhomes.
- We developed an interactive project dashboard that provides timely information about all projects in the program.
- We streamlined our Flood Mitigation Grant program to make the application process easier. Since inception, 220 applications have been submitted, with more than \$692,000 paid to homeowners.
- We secured more than \$2.4 million in grant funding to help accelerate flood mitigation projects.

These accomplishments notwithstanding, the most profound personal satisfaction has come to me from interactions with people, starting with our team of dedicated professionals across the City, our elected officials, members of the Ad Hoc group and our peers in neighboring jurisdictions.

Moreover, our flood mitigation program has attracted attention in other countries. We have hosted delegations from our peers in Austria, Germany and Spain. We've presented our work at the Stockholm Water Institute's World Water Week and the Asa Water Forum Session.

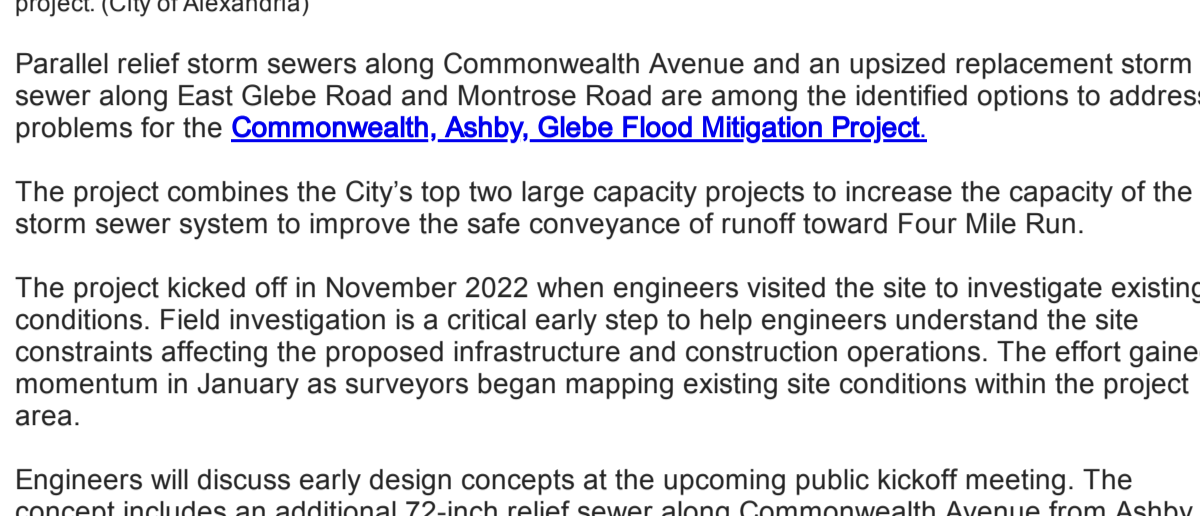
We look forward to tackling the challenges ahead and a continued partnership with residents and elected officials.

Dan Medina, Program Manager of Flood Action Alexandria

Editor's note: The Manager's Message is a periodic editorial authored by senior leaders of the Flood Action Alexandria program.

PROJECT UPDATES

LARGE CAPACITY PROJECTS



A land surveyor contracted by the City uses a theodolite to measure angles on Montrose Avenue on Jan. 13. The data collected will be incorporated into the design of the Commonwealth, Ashby, Glebe Flood Mitigation Project. (City of Alexandria)

Parallel relief storm sewers along Commonwealth Avenue and an upsized replacement storm sewer along East Glebe Road and Montrose Road are among the identified options to address problems for the Commonwealth, Ashby, Glebe Flood Mitigation Project.

The project combines the City's top two large capacity projects to increase the capacity of the storm sewer system to improve the safe conveyance of runoff toward Four Mile Run.

The project kicked off in November 2022 when engineers visited the site to investigate existing conditions. Field investigation is a critical early step to help engineers understand the site constraints affecting the proposed infrastructure and construction operations. The effort gained momentum in January as surveyors began mapping existing site conditions within the project area.

Engineers will discuss early design concepts at the upcoming public kickoff meeting. The concept includes an additional 72-inch relief sewer along Commonwealth Avenue from Ashby Street to Glebe Road, and a 6-foot by 11-foot box relief sewer along Commonwealth Avenue from Glebe Road. The proposed concept also includes upsized pipe replacement or parallel additional pipes along West Glebe Road, East Glebe Road, Lynnhaven Drive, Montrose Avenue, Laverne Avenue and East Clifford Avenue.

Part of the proposed improvement is to add four diversion structures to the neighborhood drainage pipes. These diversion structures will route excess stormwater to parallel relief pipes during intense storms.

The project will also incorporate green infrastructure elements, which will capture and treat runoff that carries urban pollutants providing a water quality benefit, create micro-habitats to enhance biodiversity, reduce heat island effects and reduce stormwater runoff volume for smaller storms in the watershed.

Also, project engineers are coordinating potential traffic and pedestrian improvements with City transportation planners and engineers to explore opportunity to incorporate these improvements into the project.

A grant from the Virginia Community Flood Preparedness Fund awarded to the City in September 2021 will support a portion of this project. The estimated cost for design and construction is \$90 million.

City staff and the consulting team will host a meeting Feb. 21 at 7 p.m. at the City Council Workroom in City Hall (301 King St). [The meeting can be streamed online.](#)

CAPACITY PROJECTS

SPOT IMPROVEMENT PROJECTS



City Civil Engineer Ehsanullah Hayat (left) measures the depth of a new inlet on Martha Custis Drive as he meets with contractors to check progress of the project on Jan. 19. (City of Alexandria)

Crews have fanned out through the Parkfairfax community to start construction on 13 inlets — the largest spot improvement project constructed this fiscal year.

The project was identified in 2021 after the neighborhood experienced flood damage caused by intense storms. City engineers incorporated resident input with data from infrastructure maps and field investigations and determined the storm sewer pipes had enough capacity to transport the expected runoff, but the curb inlets were too small and too few to capture the stormwater and convey it to the pipes. If inlets are too small, especially along hills like on Gunston Road and Valley Drive, heavy runoff bypasses them without getting into the pipes. That runoff continues down the hill and causes flooding at Martha Custis Drive.

Some of the inlet openings will be expanded to 16-feet long to capture as much stormwater runoff as possible.

Completion is expected by the end of February.

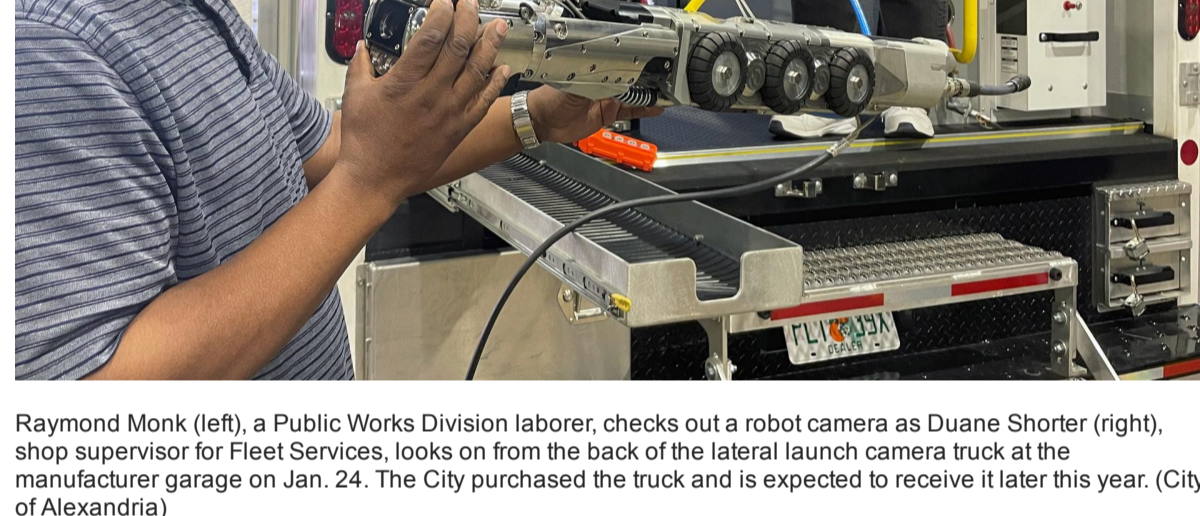
SPOT IMPROVEMENT PROJECTS



Explore the City's flood mitigation projects and our interested partners: alexandriava.gov/floodaction

NEWS

Advanced technology to help fast-track inspections of sanitary sewers



Raymond Monk (left), a Public Works Division laborer, checks out a robot camera as Duane Shorter (right), shop supervisor for Fleet Services, looks on from the back of the lateral launch camera truck at the manufacturer garage on Jan. 24. The City purchased the truck and is expected to receive it later this year. (City of Alexandria)

A lateral launch camera will help City crews inspect sanitary sewer infrastructure to identify locations of defects faster, giving residents valuable information on their lateral connection pipes.

The City is replacing its closed-circuit television inspection vehicle, which is limited to maintain sanitary sewer inspections, with an inspection vehicle with lateral launch camera capabilities. The new technology allows crews to drop the robot camera into the main sanitary sewer line and deploy a second camera from its side to inspect lateral lines that connect homes and businesses to the City's sanitary sewer infrastructure.

"Some of the repairs we make are where the lateral and mainlines meet," said Derek Claytor, superintendent of sewers and hydrant maintenance. "The lateral launch technology will help enhance our maintenance response to protect our residents' properties."

The truck will be operated by staff from the Public Works Services Division in coordination with the Sanitary Infrastructure Division and maintained by staff in Fleet Services.

Since the older mainline truck doesn't have the technology to inspect lateral lines, City staff have previously coordinated with on-call contractors for inspections, which can take several days. The new truck will fast-track inspections by removing the need to coordinate with the on-call contractor so that crews can instantly respond and drop the lateral launch camera for the inspection.

Depending on the location of the defect, the responsibility for repair will either be the property owner or the City.

The City proactively inspects sections of sanitary infrastructure throughout the year. Over the past 10 years, Claytor said he recalls two inspection campaigns that covered the entirety of the City's 240 miles of sanitary and combined sewers.

Property Owners Have 90 Days to Appeal FEMA's Special Flood Hazard Area Revised Preliminary Maps

Property owners have 90 days to appeal the revised preliminary Special Flood Hazard Area maps drafted by the Federal Emergency Management Agency (FEMA) that determine the obligation for flood insurance.

This is the second round of appeals for the preliminary maps.

FEMA published preliminary Flood Insurance Rate Maps (FIRM) and a Flood Insurance Study (FIS) report on September 30, 2020. The City submitted appeals citing five mapping locations during the appeal process last year. Three of the appeals were accepted by FEMA, and FEMA reverted their proposed changes to the current mapping in those areas. Six individuals submitted appeals through the City, all of which were rejected. Based on the accepted appeals, FEMA revised its preliminary maps and sent them to the City with a second 90-day appeal window that began on December 15.

The revised preliminary maps include proposed flood hazard information for certain locations in the City that will be the basis for the floodplain management measures the City must adopt and serve as evidence for homeowners to participate in the National Flood Insurance Program (NFIP).

According to FEMA's revised preliminary maps, locations included in the FIRMs are near Holmes Run, Backlick Run, South Lucky Run, Four Mile Run, Marine Drive, Strawberry Run, Cameron Run, Old Cameron Run Channel, Hoofts Run and Union Street.

FEMA last made changes to Alexandria's effective maps in 2011. About 20% of the City is mapped as a floodplain.

FEMA flood maps help communities to build safely and resiliently by informing communities about local flood risk and setting minimum floodplain standards. Map changes occur to reflect how water flows and drains, such as increased flood risk with natural forces like warming climates and decreased flood risk as communities build levees and dams.

Individuals may submit an appeal to the City if they believe the modeling or data used to create the revised preliminary map are technically or scientifically incorrect. The City will consolidate appeals into one appeal to FEMA.

All appeal submissions will be reviewed by consultation with officials from the City, by an administrative hearing or by submission of the conflicting data to an independent scientific body or appropriate federal agency for advice. FEMA will finalize the flood hazard information presented on the revised FIRMs and FIS report and establish an effective date in its Letter of Final Determination after the 90-day appeal period.

Until the revised FIRMs become effective, the current NFIP map in the City will be available for flood insurance policies.

Questions or appeals can be submitted via email to stormwater@alexandriava.gov or by mail to Brian Rahal, P.E., CFM, Transportation & Environmental Services, 2900 Business Center Drive, Suite B, Alexandria, VA 22314. Appeals must be received by the City of Alexandria by 5 p.m., March 1, for submission to FEMA.

Mature tree in your yard? Apply for reduction on your Stormwater Utility Fee

Mature tree preservation is helping Alexandria property owners improve water quality and soak up runoff — and save money on their annual Stormwater Utility Fee.

It's one of the most popular practices selected by property owners who have applied for the newly revamped Stormwater Utility Fee Credit Program. The application window, which closes on Feb. 15, is on track to record its highest participation rate since it launched in 2019.

"Every property owner is helping us make a difference in the Bay," said Camille Liebnitzky, PE, ENV SP, an environmental engineer and the City's Stormwater Utility manager. "By adding best management practices to your property, you are improving the quality of water that ultimately drains to the Chesapeake Bay. We encourage you to talk to your friends about implementing practices and applying for a credit."

The City adopted the Stormwater Utility Fee in January 2018 to provide a dedicated funding source for the stormwater management program services and capital infrastructure projects to address the Chesapeake Bay cleanup by reducing nutrient and sediment pollution in runoff that enters local waterways. Recent years have experienced an increase in funding for flood mitigation measures under the Flood Action Alexandria program. The City's credit program allows property owners to reduce their annual fee by installing and maintaining eligible practices on their properties.

In November, City Council unanimously approved a measure to adopt revisions to the credit program via updates to the Credit Manual, which simplifies the process, reduces the amount of documentation, changes the application cycle for every other year and expands the types of measures that property owners can claim reductions.

The new mature tree preservation option allows residents to reduce their Stormwater Utility Fee by up to 20%, which equates to about \$58 off the \$294 bill for a typical single-family home. The practice was added because established mature trees can reduce the volume of stormwater runoff and pollutants transported into local waterways for years to come.

The City has received 80 applications for the credit program so far this year, which is on track to outpace applications received in 2022. [Applications for the fee reduction](#) are available through the City's Real Estate Assessment website for all properties. Applications are due Feb. 15.

MEET MARY ALICE WINSTON

Winston named chief of the Public Works Services Division.

Mary Alice Winston, who has helped coordinate cleanups after extreme storms and managed infrastructure maintenance, is settling into her new role as Chief of the City's Public Works Services Division.

Winston, promoted in November, oversees the division's range of maintenance projects for the Flood Action Alexandria program. The Public Works Services Division staff conducts maintenance and repairs for all City sewers, stream beds and weirs, drainage tunnels and stormwater best management practices (BMPs) that remove pollution in stormwater runoff, and flood control operations, among other duties.

Winston was promoted after serving as the Capital Program Manager, where she managed the paving program, street maintenance and concrete teams. Previously, she worked as an engineering aide and utility inspector.

She has served in local government for 24 years, including eight years at the City. She earned a degree in construction management and has technical certifications in Stormwater and Erosion & Sediment Control and Asphalt and Paving best practices.

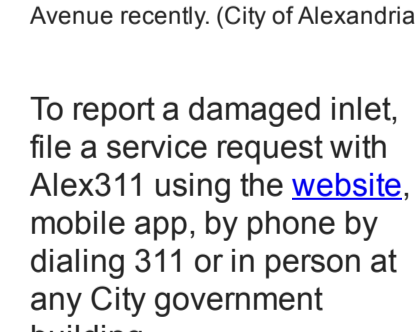
PUBLIC WORKS SERVICES

Tarrence Moorer has been named Interim Director of the Department of Transportation & Environmental Services.

Moorer succeeds Yon Lambert, who was promoted to Deputy City Manager in January. Tarrence has served as the department's Assistant Director of Internal Services, leading the day-to-day operations of T&E's communications, human resources, fleet, facility management, information technology, finance and budget functions. He has been with the City for eight years, including two years as Principal Planner for Transportation and three years as Division Chief of Strategic Management.

COMMUNITY MAINTENANCE WORK

The Public Works Services Division replaced and repaired inlets and inlet tops at various locations around the City from November to early January.



Crews installed a new concrete top for this inlet at 4661 Kenmore Avenue recently. (City of Alexandria)

Inlets are important infrastructure because they allow stormwater to drain off the street and into the underground pipe system during a rain event. Some curb inlets have manhole covers, which provide access points for crews to clean and repair the stormwater infrastructure underground without having to go into it.

- Locations of repaired and replaced inlets:
- Enderby Drive and Wellington Road
 - 4661 Kenmore Ave.
 - 3995 Eisenhower Ave.
 - Eisenhower Avenue and South Van Dorn Street
 - 4101 Eisenhower Ave.
 - 1005 W. Braddock Road
 - East Oxford Avenue and Mount Vernon Avenue
 - North Columbus Street and Pendleton Street
 - 1407 Ruffner Road
 - 12 W. Braddock Road
 - 512 Crestwood Dr.
 - 9022 Montgomey and Wellington Road
 - 9072 Montgomery St.

To report a damaged inlet, file a service request with AtoX111 using the [webtoGo](#) mobile app, by phone by dialing 311 or in person at any City government building.

FROM THE AD HOC GROUP

The Ad Hoc Stormwater Utility and Flood Mitigation Advisory Group will assist the City staff to reach out to neighborhood to keep residents informed of developments on the Commonwealth, Ashby, Glebe Flood Mitigation project.

The project is the City's highest-priority large capacity flood mitigation project and marks the beginning of a 10-year plan for large capacity flood mitigation projects. The project includes options to expand the size of stormwater pipes underground where flooding occurs on Ashby Street south of Glebe Road and along Glebe Road east and west of Commonwealth Avenue and the adjacent properties.

The City's presentation to the Ad Hoc group on the Commonwealth, Ashby and Glebe Flood Mitigation project is online.

The next Ad Hoc group meeting is Feb. 23 at 6 p.m. at the Council Work Room at City Hall, 301 King St. [The meeting can be streamed online.](#)

SNAPSHOT

GRANTS SECURED IN 2022

2022 FLOOD MITIGATION GRANT
\$112 MILLION

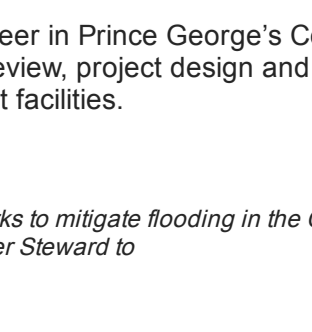
The project will replace existing deteriorating and undersized dual corrugated metal pipe from Mount Vernon Avenue under the Interstate 495 with a larger pipe to convey stormwater. This includes removing the existing stormwater pipe and replacing and updating four inlets on Edison Street.

2022 FLOOD MITIGATION GRANT
\$174,000

The Inlet Program will improve drainage through increased stormwater pipe capacity by emerging existing inlets and building new inlets leading to pipes with adequate conveyance capacity. This approach allows for greater surface runoff to enter the pipe system and mitigate flooding.

STORMWATER STEWARD

Zerihun Tadele, whom residents of East and West Del Ray Avenue may have seen monitoring an inlet project on their street in July, has passed a grueling eight-hour exam to earn his Professional Engineer (P.E.) licensure in Water Resources and Environmental Civil Engineering.



The exam tests for competency level in particular engineering disciplines and candidates must have four years' post-college work experience in their chosen career fields before they are eligible to take it. Last year, the Water Resources and Environmental Civil Engineering exam had a 63% pass rate for first-time takers.

Tadele joined the City in January 2022 and has constantly been present at construction sites where crews execute his designs for larger storm drain inlets to alleviate localized flooding. Over the past year, he has helped design and execute numerous spot improvement projects throughout the City.

Before joining the City, Tadele worked as a plan review engineer in Prince George's County, Maryland. He has experience with field inspections, project review, project design and project management focused on roads and stormwater management facilities.

Do you know someone who works to mitigate flooding in the City? Send nominations for Stormwater Steward to stormwater@alexandriava.gov.

Communications officer Amanda Dolanski is the editor for the Flood Action Alexandria newsletter. Email her at stormwater@alexandriava.gov.

