OCTOBER 2024 ISSUE 19

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MANAGER'S MESSAGE

As the City of Alexandria navigates through the 2024 hurricane season, I want to extend a heartfelt thank you for your support and vigilance.

On August 8, Tropical Depression Debby began moving through our area, highlighting the tremendous effort set forth by our dedicated staff. The team worked around the clock to clean inlets, flood-prone areas, and continuously cleaned and monitored the waterfront in preparation for what was expected to be a severe weather event. The Street and Sewer Maintenance crews distributed hundreds of sandbags to residents to assist in protecting their homes and businesses.

I am proud to acknowledge the continuous efforts of Street and Sewer Maintenance, Resource Recovery, Traffic Management, and RPCA, who remained on alert and worked hand-in-hand with other City agencies to tackle post-storm challenges, including debris cleanup, downed trees, and blocked roadways.

Our partnership with the community is crucial during these critical events. By promptly reporting issues such as clogged inlets or areas with standing water to Alex311, you can help the City enhance its preparedness and resilience. Your efforts are vital in keeping Alexandria safe and operational during these challenging times.

Let's continue to work together to protect the City's residents and businesses alongside its streams and infrastructure this hurricane season. Your diligence and cooperation make a significant difference.

Stay safe and thank you for your ongoing support.

Adriana Castañeda, Director of the Department of Transportation & Environmental Services

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

Frequently Asked Questions: Commonwealth, Ashby, Glebe Flood Mitigation Project

The type of parallel relief storm sewers similar to those planned to be built along Commonwealth Ave. and E Glebe Rd.

City staff members shared answers to frequently asked questions residents have about the Commonwealth, Ashby, Glebe Flood Mitigation Project to raise public awareness of project details and potential construction impacts.

This project is a combination of the top-two priority large capacity projects to reduce flooding near the intersections of Commonwealth Avenue and E. Glebe Road and Ashby Street and E. Glebe Road. The proposal for the Commonwealth, Ashby and Glebe project includes installing new parallel relief sewers to increase stormwater capacity and a new outfall to discharge flows to Four Mile Run. Green infrastructure practices will also be used to improve water quality in the area.

Following the 60-percent design submission received in May, City staff held a public open house to share information about the project's goal, the proposed design, and potential construction impacts. Project team leaders were on site to answer questions from residents.

Questions and feedback were also received during a virtual open house following the meeting.

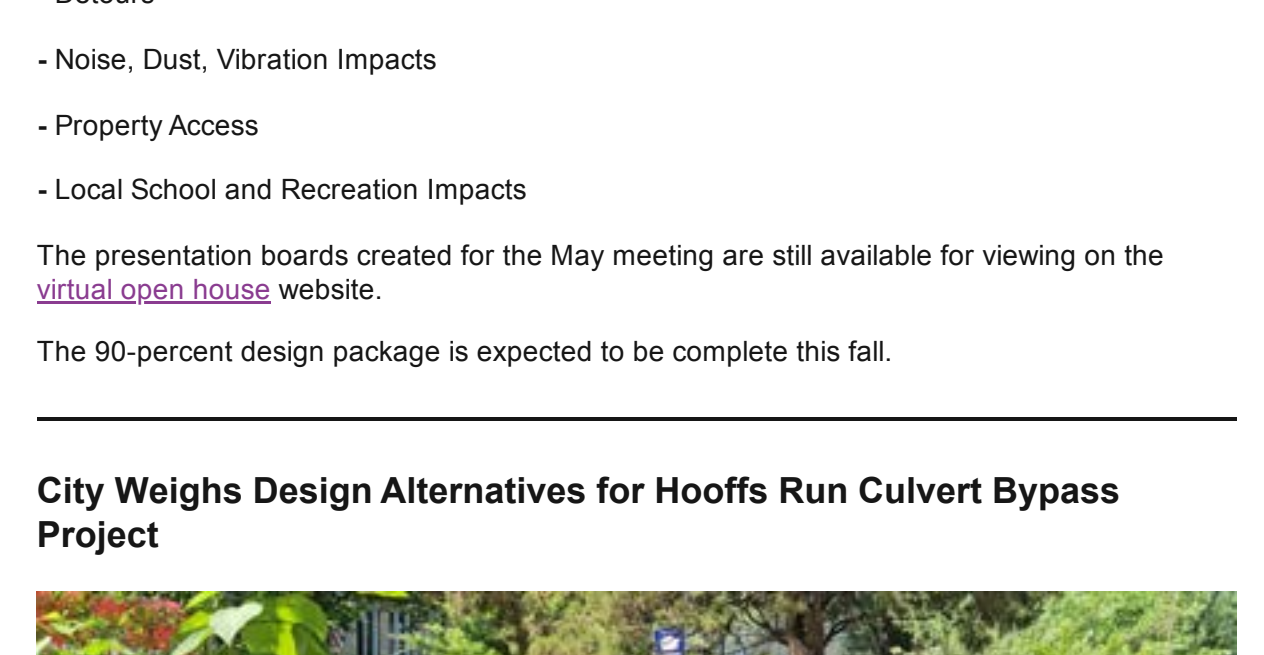
Frequently asked questions from the open houses were compiled and made available on the project webpage. Staff have addressed topics including:

- Parking
- Detours
- Noise, Dust, Vibration Impacts
- Property Access
- Local School and Recreation Impacts

The presentation boards created for the May meeting are still available for viewing on the virtual open house website.

The 90-percent design package is expected to be complete this fall.

City Weighs Design Alternatives for Hooffs Run Culvert Bypass Project



The existing Hooffs Run culvert (pictured above) can become overwhelmed during intense rain events, causing nearby areas to flood.

City staff continue to explore design options for the Hooffs Run Culvert Bypass Project to provide flood relief to homeowners along the Hooffs Run and Timber Branch culverts.

Project leaders are working with consultants to develop solutions to increase capacity of the existing culverts, which are not large enough to carry the stormwater flow caused by heavy rain events.

Earlier this year, a City contractor installed two sensors to collect flow data and water levels at specified locations in the storm sewer system. The data from these sensors is being used to adjust project models and verify that the designs are effective.

City staff are considering multiple proposals, including increased stormwater storage options and installing large-capacity stormwater sewers.

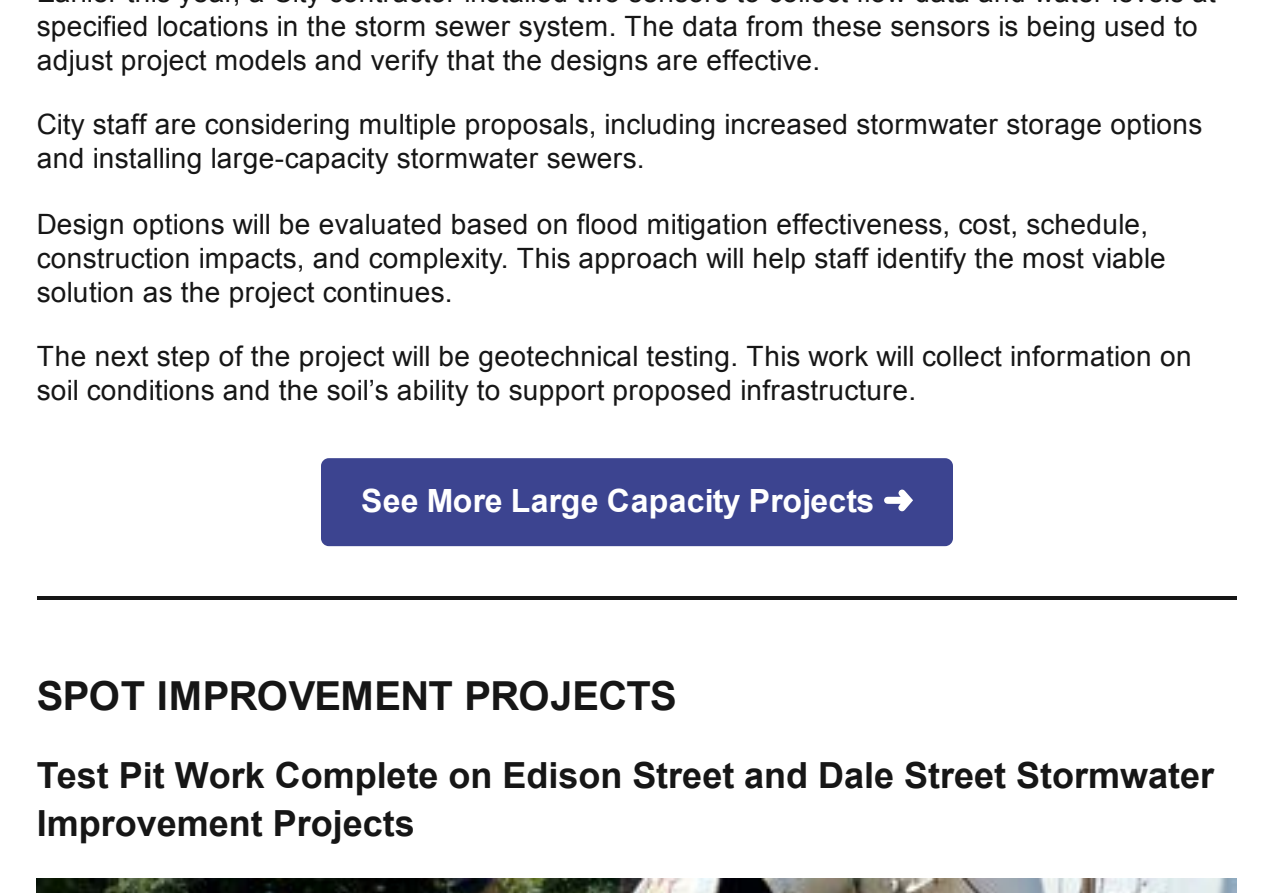
Design options will be evaluated based on flood mitigation effectiveness, cost, schedule, construction impacts, and complexity. This approach will help staff identify the most viable solution as the project continues.

The next step of the project will be geotechnical testing. This work will collect information on soil conditions and the soil's ability to support proposed infrastructure.

See More Large Capacity Projects ➜

SPOT IMPROVEMENT PROJECTS

Test Pit Work Complete on Edison Street and Dale Street Stormwater Improvement Projects



Contract workers complete test pit operations on Dale St. to collect soil samples beneath the street surface.

The City of Alexandria has completed an important part of the design phase on a set of projects to mitigate flooding in the Hume Springs neighborhood.

In August, a City contractor conducted test pit operations on W. Reed Avenue, the Edison Street Cul-de-Sac, and Dale Street. Crews were on site drilling into the pavement to collect soil samples underneath. The holes were then filled and packed back to operational conditions.

This work is a critical part of the design phase to locate utility, gas, and sewer lines in the project area. The soil samples will also be tested to determine whether the soil can support the infrastructure upgrades proposed in the project.

Test pit operations on Edison St. confirmed the City's proposed design will not require the relocation of any utility mains. These results allow the project to move on to final design stage.

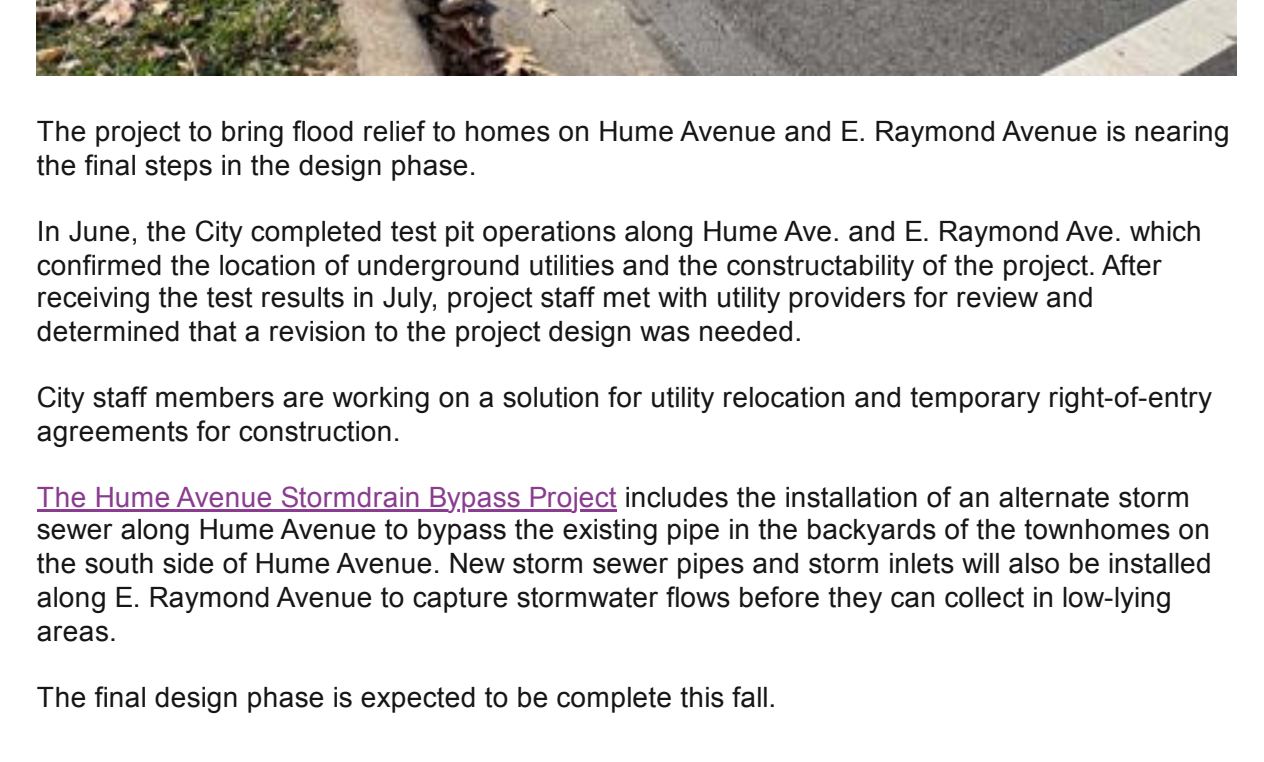
Operations on W. Reed Ave. and Dale St. also confirmed utility locations at critical locations to support the City's proposed storm sewer upgrades.

The Edison St. Drainage Improvement Project will reduce flooding along the lower northern half of Edison St. The City will install a larger pipe to collect stormwater from the Edison cul-de-sac compared to the current drainage pipe and install additional inlets at the intersection of Edison St. and Mark Dr.

The W. Reed and Dale St. Stormwater Improvement Project includes installing additional inlets along W. Reed Ave. and upgrading pipes running under Hume Spring Park and Dale Street Community Garden. This work will capture stormwater runoff and reduce surface flooding along W. Reed Ave. and alleviate flooding impacts to downstream residents.

The City anticipates the final design package on the Edison St. Project this fall. The 90-percent design package on the W. Reed and Dale St. Project is expected in October, with review expected to be completed in November.

Hume Avenue Stormdrain Bypass Project Nears Final Design



The project to bring flood relief to homes on Hume Avenue and E. Raymond Avenue is nearing the final steps in the design phase.

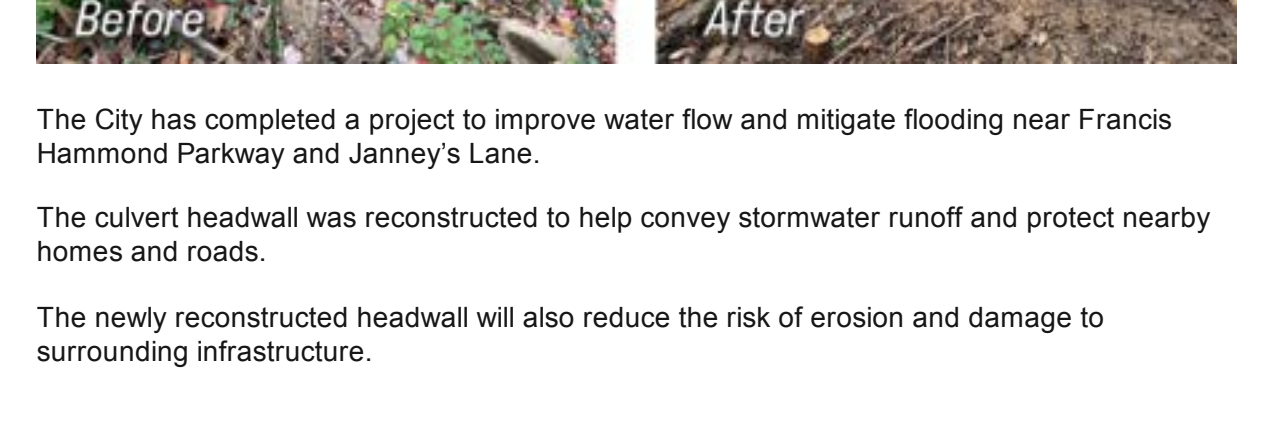
In June, the City completed test pit operations along Hume Ave. and E. Raymond Ave. which confirmed the location of underground utilities and the constructability of the project. After receiving the test results in July, project staff met with utility providers for review and determined that a revision to the project design was needed.

City staff members are working on a solution for utility relocation and temporary right-of-entry agreements for construction.

The Hume Avenue Stormdrain Bypass Project includes the installation of an alternate storm sewer along Hume Avenue to bypass the existing pipe in the backyards of the townhomes on the south side of Hume Avenue. New storm sewer pipes and storm inlets will also be installed along E. Raymond Avenue to capture stormwater flows before they can collect in low-lying areas.

The final design phase is expected to be complete this fall.

Construction Wraps on Francis Hammond Headwall Project



The City has completed a project to improve water flow and mitigate flooding near Francis Hammond Parkway and Janney's Lane.

The culvert headwall was reconstructed to help convey stormwater runoff and protect nearby homes and roads.

The newly reconstructed headwall will also reduce the risk of erosion and damage to surrounding infrastructure.

Construction Underway on Oakland Terrace Reconstruction Project

Crews have installed a pump system in place to divert water out of the project area.

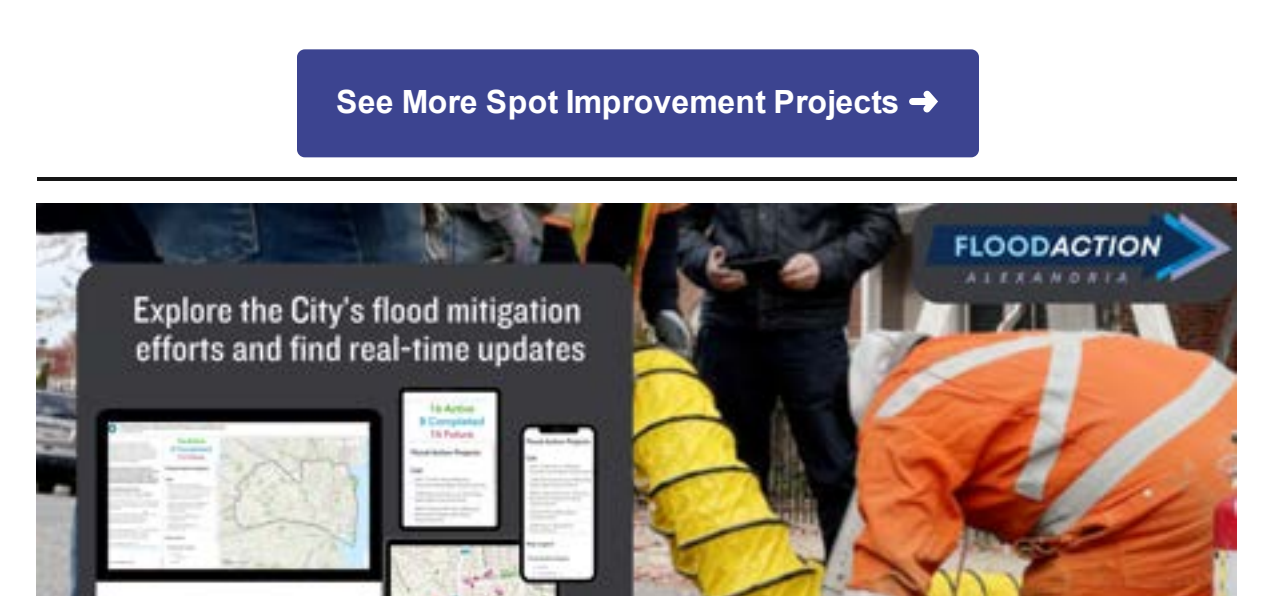
City contractors have started work on a project to replace a retaining wall along Timber Branch and stabilize the stream bank.

Construction crews are working to remove the existing concrete blocks from the stream bank while water is being pumped away from the project area. More than 200 feet of the existing wall will be rebuilt using a vegetative wall installation, which is a reinforced soil slope used as a sustainable alternative to concrete.

Once complete, the stream stabilization work will help prevent further erosion, protect the nearby sewer line and reduce flooding for homeowners near Oakland Terrace.

Construction is expected to be completed by the end of this year.

See More Spot Improvement Projects ➜



NEWS

Community Rating System Specialist Visits City of Alexandria

Stormwater Civil Engineer Ehsanullah Hayat takes photos during the 2024 annual stream inspections.

In August, the City's Stormwater Management Division hosted a specialist with FEMA's Community Rating System (CRS) as part of the program's five-year verification cycle.

The CRS is a voluntary federal incentive program recognizing communities' flood management practices that exceed minimum requirements.

Participating communities are required to renew their status every five years. The FEMA CRS Specialist met with City staff to review and verify all credited activities that could earn the City points towards its rating, such as public information, mapping and regulations, flood damage reduction, and warning and response.

The visit was also an opportunity for the City to add new points that were not credited during the last specialist visit.

The CRS Classes range from 10 to 1, with Class 1 being the highest.

The City holds a Class 6 rating, which qualifies residents for a 20 percent discount on purchasing or holding federal flood insurance.

There are currently more than 1,000 flood insurance policies in the city, covering more than $300 million in covered assets.

The City is now under review by the CRS Specialist to determine total points, which could take several months.

City Receives Grant Funding to Begin its First Flood Resilience Plan

The City is preparing to launch a new project to better understand and prepare for future flood events.

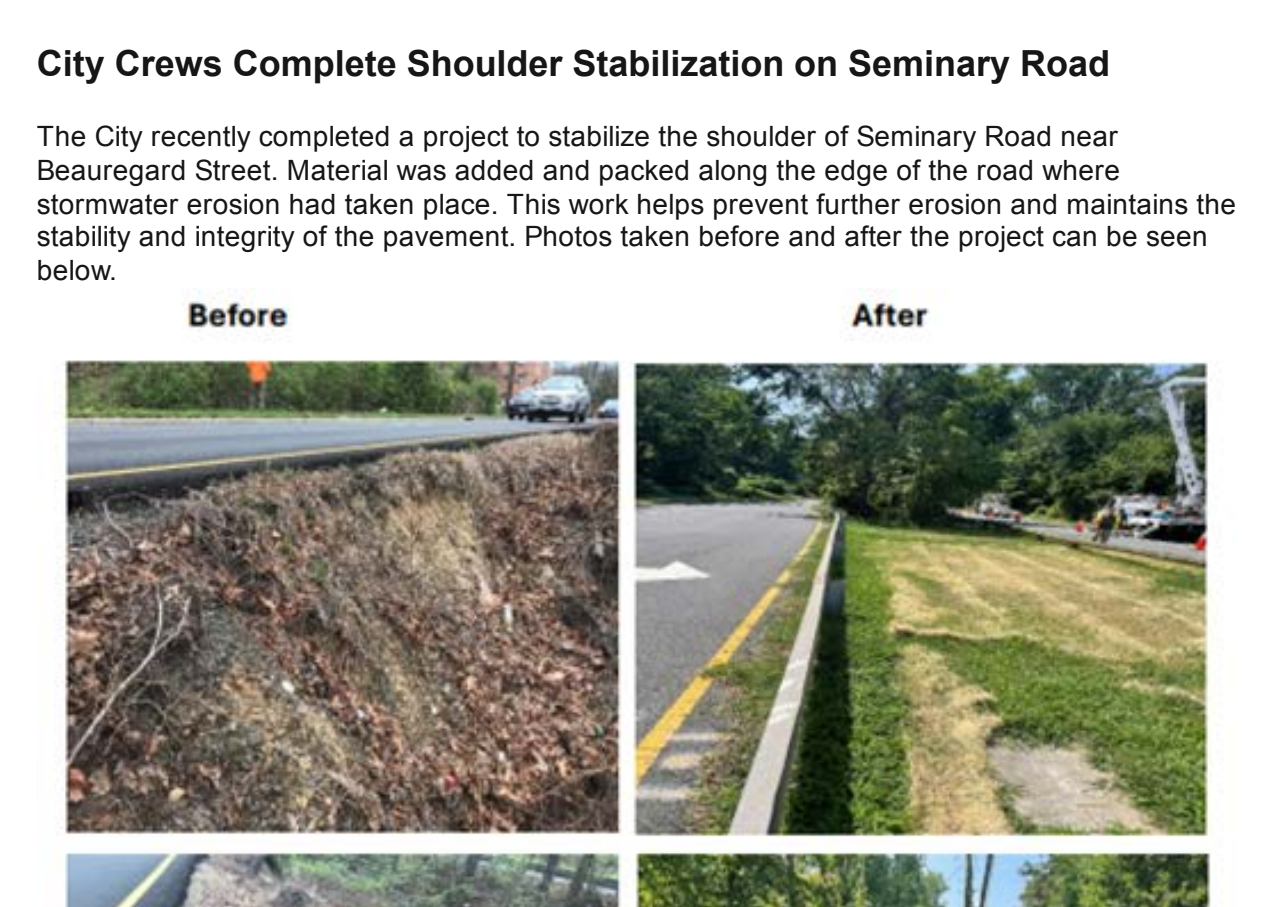
An essential component of the Flood Action Alexandria program, the Flood Resilience Plan will address hazard identification, flood mitigation, flood preparedness and response, policies and regulations, funding strategies, and communication and information dissemination. The Flood Resilience Plan will also serve as the blueprint to implement portions of the Flood Action Alexandria program.

The City is launching the project after receiving a $525,000 grant through the Virginia Community Flood Preparedness Fund (CFPF) Program through the Virginia Department of Conservation and Recreation (DCR), via CFPF 24-04-38. The grant provides a 75% match to the City's local 25% match of $175,000 for an estimated project total of $700,000.

City staff will collaborate with the Stormwater Utility and Flood Mitigation Advisory Committee and residents to develop the plan, which will help support future efforts of the Flood Action Alexandria program to mitigate flooding across the community. The first of its kind in Alexandria, the plan was identified in the 2023 Energy and Climate Action Plan as critical to create a more resilient City.

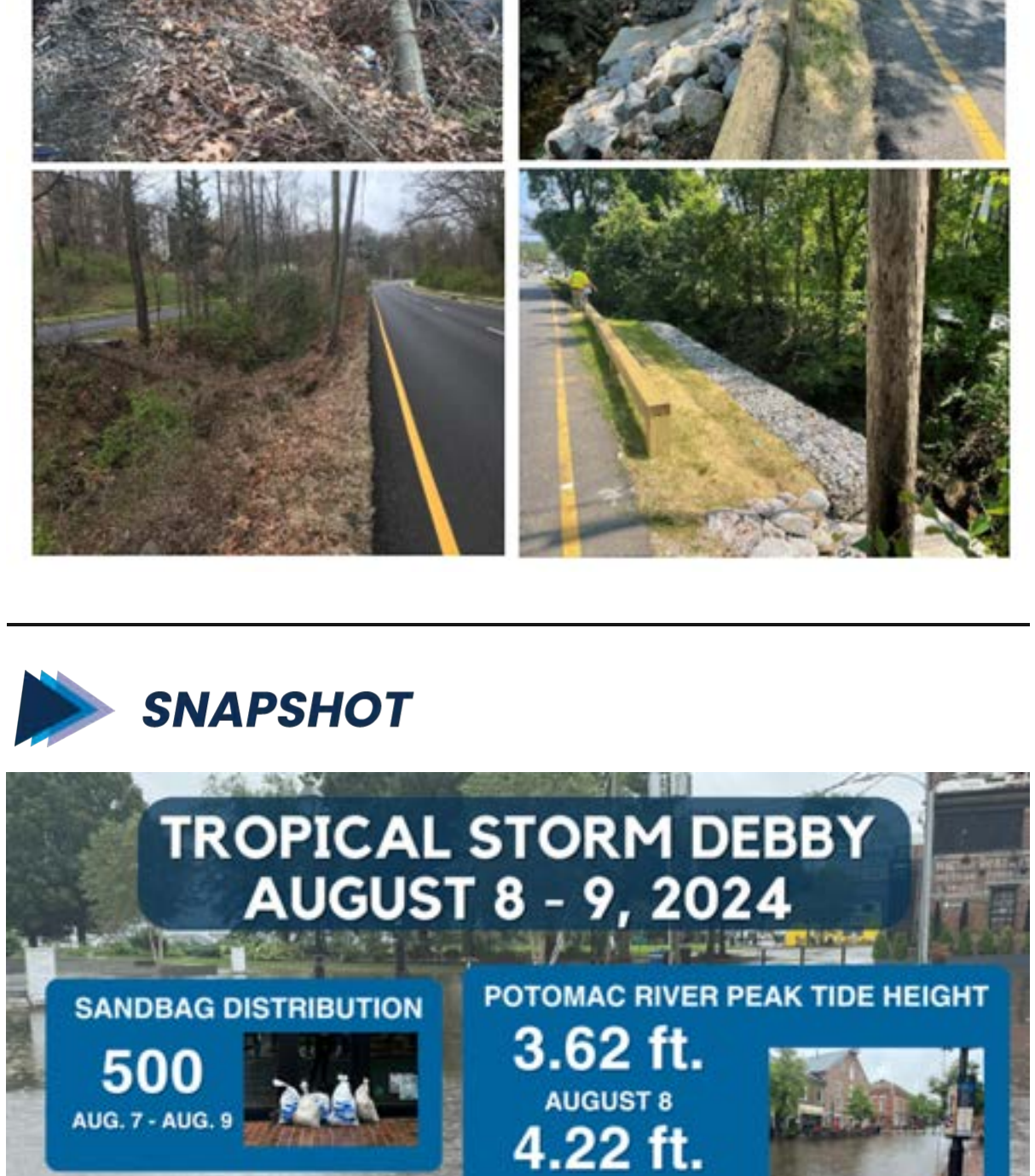
Part of the plan will include new engagement efforts to communicate with residents, to learn about their first-hand experience with flooding, and reach communities that may have barriers due to language, lack of technology access, or have been historically underserved. The CFPF grant program is administered by the Virginia DCR and provides support for Virginia communities to reduce the impacts of flooding. It also helps empower communities to build flood preparedness and increase resiliency. The CFPF is funded through the auction of carbon allowances through the Regional Greenhouse Gas Initiative (RGGI). A total of $53.9 million was awarded during this round.

COMMUNITY MAINTENANCE WORK

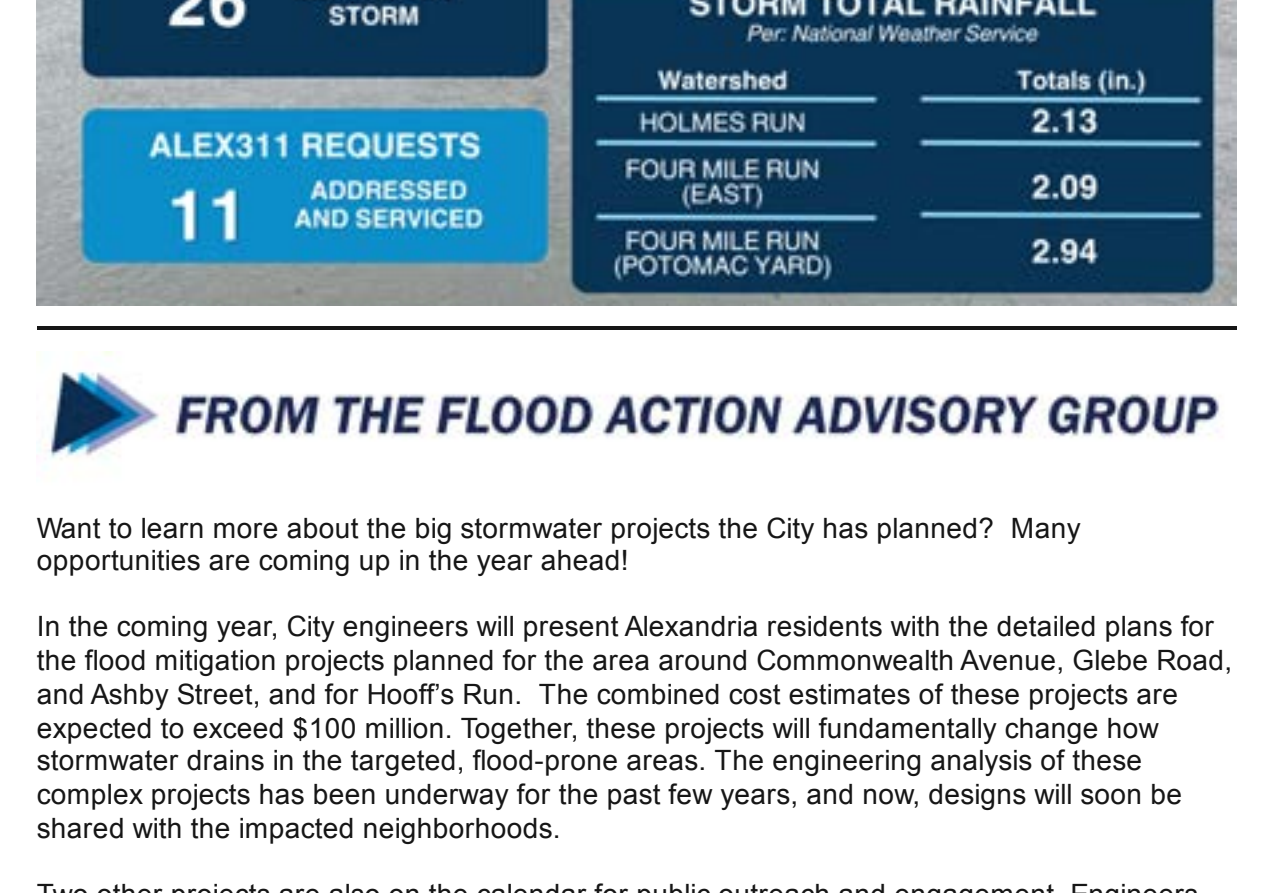


City Crews Complete Shoulder Stabilization on Seminary Road

The City recently completed a project to stabilize the shoulder of Seminary Road near Beauregard Street. Material was added and packed along the edge of the road where stormwater erosion had taken place. This work helps prevent further erosion and maintains the stability and integrity of the pavement. Photos taken before and after the project can be seen below.



SNAPSHOT



FROM THE FLOOD ACTION ADVISORY GROUP

Want to learn more about the big stormwater projects the City has planned? Many opportunities are coming up in the year ahead!

In the coming year, City engineers will present Alexandria residents with the detailed plans for the flood mitigation projects planned for the area around Commonwealth Avenue, Glebe Road, and Ashby Street, and for Hooff's Run. The combined cost estimates of these projects are expected to exceed $100 million. Together, these projects will fundamentally change how stormwater drains in the targeted, flood-prone areas. The engineering analysis of these complex projects has been underway for the past few years, and now, designs will soon be shared with the impacted neighborhoods.

Two other projects are also on the calendar for public outreach and engagement. Engineers will begin designing solutions to the flooding in Old Town at the intersection of Pitt and Gibbon and in the Nethergate area. First steps will include meeting with residents to better understand their concerns and ideas for possible solutions.

The year ahead also begins a new phase of Alexandria's Flood Action Program. Large capacity-building projects that have been underway in the design and planning stages will be presented to the public at a series of public meetings where residents can see how the projects will impact their neighborhoods.

The members of the Stormwater Committee represent Alexandria's most flood-prone watersheds. In the months ahead, committee members will work with City staff to ensure residents in the impacted neighborhoods are informed about the meetings where project designs will be made public.

John Hill

Chair, Stormwater Utility and Flood Mitigation Advisory Committee

STORMWATER STEWARD

The City of Alexandria is pleased to welcome Mujeeb Rahman Atefi, who recently joined the Department of Transportation and Environmental Services (T&ES) Stormwater Management Division as a Civil Engineer III. With over eight years of international experience in stormwater infrastructure design and project management, Atefi brings a fresh, global perspective to the team.

"Since the start of my career, I've been passionate about building resilient and sustainable communities," Atefi shared. "Stormwater management plays a vital role in preventing flooding, maintaining water quality, and safeguarding public infrastructure. The opportunity to contribute to projects that positively impact communities, and the environment is incredibly fulfilling."

Originally from Afghanistan, Atefi earned a bachelor's degree in Hydraulic Structures and Water Resource Management from Kabul Polytechnic University. He further advanced his education in Japan, earning both a master's degree and a Ph.D. in Civil Engineering from Hiroshima University. He has contributed to leading peer-reviewed journals and presented his research at major international conferences across the U.S., Europe, and Japan.

With professional experience in both Japan and Afghanistan, Atefi has worked on a diverse range of stormwater projects, from technologically advanced infrastructure in Japan to resource-efficient solutions in Afghanistan. Now, he's eager to tackle the unique challenges of Alexandria's aging infrastructure and contribute to the City's stormwater management goals.

In his role, Atefi plays a pivotal part in supporting the City's flood mitigation and drainage improvement efforts, and in addressing community concerns through Alex311. His work centers on implementing key stormwater capacity projects outlined in the City's Storm Sewer Capacity Study (CASSCA), managing both large-scale and smaller, localized infrastructure projects. He also contributes to advancing the Flood Action Alexandria initiative, coordinating the planning, design, and construction of both major capacity projects and spot improvement projects that address localized flooding issues. Atefi's contributions are instrumental in ensuring these solutions enhance the City's long-term resilience and sustainability, while also improving Alexandria's stormwater infrastructure for future challenges.

"Alexandria's approach to stormwater management prioritizes critical infrastructure improvements, such as the construction of culverts, drainage systems, and other civil engineering solutions to mitigate flood risks and enhance resilience," Atefi explained. "In addition to these structural efforts, the City integrates Best Management Practices (BMPs) and green infrastructure, which further support the long-term sustainability of our stormwater systems. Having worked with advanced, technology-driven systems in Japan and resource-efficient solutions in Afghanistan, I'm eager to bring these diverse insights to Alexandria. My goal is to strengthen the City's infrastructure and ensure it's prepared for future challenges."

In his free time, Atefi enjoys exploring the scenic parks and hiking trails around Alexandria, appreciating the natural beauty of his new home.

The Flood Action Alexandria newsletter is produced by City staff. Email us at stormwater@alexandriava.gov.