**MANAGER'S MESSAGE** 

The Department of Transportation and Environmental Services Public Works Division is actively preparing for the challenges ahead as warmer climates bring more frequent and severe storms to the City of Alexandria. We are closely monitoring forecasts from the National Weather Service, which indicate that this upcoming hurricane season may be the most severe on record for the National Oceanic and Atmospheric Administration (NOAA).

**ENEWS** 

To safeguard the City's infrastructure and ensure proper drainage, the Stormwater Maintenance and Inspection Program offers comprehensive services. These include proactive inspection in areas prone to flooding, regular maintenance of retention ponds and detention basins, repairing and maintaining culverts to ensure proper water flow, removing debris and sediment buildup from water channels, and implementing erosion control measures along water channels to prevent flooding.

Additionally, we continue working to keep all the City's stormwater infrastructure in a good state of repair and to address stormwater related service requests. During critical events, the City underscores the importance of our partnership with the community. By working together to report and address issues, such as clogged inlets or ponding areas in a timely manner, we can collectively enhance our preparedness and resilience during this challenging hurricane season. Your efforts and attention are vital for keeping our City safe and operational, especially during challenging weather conditions.

For any inquiries related to flooding or clogged inlets, or if you notice blockages or slow drainage, please report to the City's Alex311 website.

Mary Alice Winston, Division Chief, Public Works 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 Design Review Underway for Commonwealth, Ashby, Glebe Flood

Mitigation Project

Residents can tour presentation boards and learn more about the project at the virtual open house Project leaders are preparing to receive the 90 percent design submission of the Commonwealth, Ashby, Glebe Flood Mitigation Project, expected to be complete this fall. The project is a combination of the two priority large capacity projects and is being designed to provide flood relief for the neighborhood near the intersections of Commonwealth Avenue and E. Glebe Road, and Ashby Street and E. Glebe Road. As part of the project, the City will install new parallel relief sewers to increase stormwater capacity. Designs also include a new outfall to discharge flows to Four Mile Run. The total project cost is estimated at \$50 million. have reviewed the plans and submitted feedback to ensure the design aligns with City need to be made before finalizing the 90 percent submission later this year.

In May, the team completed the 60 percent project design milestone. Since then, City staff standards and project goals. The team is now working to determine if any additional changes The City also hosted a public open house in May to present details on the project and what impact residents can expect during construction. City staff were onsite to answer questions and hear feedback on the project. Meeting presentation boards are still available on the virtual open house. The project team is now compiling frequently asked questions (FAQs) from the public open house and those submitted online. Once complete, they will be available on the project webpage. Those in attendance at the May meeting, as well as listed stakeholders, will be notified when the FAQs are available.

**City Staff Continue Planning for the Hooffs Run Culvert Bypass Project** 

City staff continue to develop solutions for the <u>Hooffs Run Culvert Bypass Project</u>.

An exposed section of the Hooffs Run culvert can be seen off of E. Linden Avenue

Currently in the planning phase, the project will bring flood relief to neighbors and businesses near the Hooffs Run and Timber Branch culverts, which carry streams underground and

beneath nearby roadways. The existing culverts become overwhelmed by intense rainfall events and cause flooding in the area. With more intense and frequent storms brought on by climate change, the existing culverts are not large enough to carry stormwater flow as needed. The project design team is investigating potential solutions for this complex and multifaceted project. Several factors play a role in developing possible solutions: - Aging Infrastructure: The existing culverts are very old and do not have the capacity to handle the runoff from large storm events the City has experienced in recent years. - Relocation of Underground Utilities: Underground utilities, such as water, gas, power, and communication lines need to be relocated before construction begins. Combined with limited space, this poses challenges in planning and execution. infrastructure systems, including the King Street Metro station, Metrorail lines, and other

- Complex Infrastructure Systems: The new drainage system must intersect with multiple transportation networks. This requires coordination with multiple agencies to not disrupt essential services. - High Cost: The engineering challenges of constructing within a limited space, relocating utilities, and ensuring safety and low disruption for public services contribute to high costs of the project. City staff are working to design a system that can effectively handle increased stormwater flow while integrating with the existing sewer system. This work requires careful planning and advanced engineering solutions to improve the City's resilience to flooding. See More Large Capacity Projects →

SPOT IMPROVEMENT PROJECTS Geotechnical Investigation to Begin on Edison Street and Dale Street **Stormwater Improvement Projects** 

the infrastructure proposed in the project design. These investigations are done to anticipate potential issues before construction begins and traffic detours are implemented. The City is also working on additional geotechnical investigation on the W. Reed and Dale Street Storm Sewer Improvement Project, which is expected to be completed this month. The Edison Street Drainage Improvement Project will reduce and control flooding along the

The City will be upgrading the existing outfall pipe collecting stormwater from the Edison Cul-de-Sac

The City is nearing the final design phase on a pair of projects to upgrade infrastructure and

Last month, the City issued a contract to begin geotechnical investigation on the Edison Street Drainage Improvement Project. This work helps to locate utilities, gas, and sewer lines in the project area. Contractors will also be conducting a test pit, which includes digging holes to collect soil samples. This testing determines the type of soil present and whether it can support

lower northern half of Edison Street. The City will be upgrading the existing pipe collecting stormwater from the Edison Cul-de-Sac to a larger size, as well as installing additional inlets at

the intersection of Edison Street and Mark Drive. The project is in the 90 percent design

The W. Reed and Dale Street Storm Improvement Project, also in the 90 percent design phase, includes installing additional inlets along W. Reed Ave. and upgrading pipes running under the 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

mitigate flooding in the Hume Springs neighborhood.

impacts to downstream residents.

Improvement Project Schedule.

move through each phase.

and construction is underway.

**SANITARY SEWERS** 

sewer system during rain events.

complete.

South irlingtor

construction.

deadlines.

allowed the City to accelerate these components, which were initially scheduled for FY2026. Public notices will be distributed to homes in the project area before the geotechnical investigations begin. **Design Milestones: What Do They Mean?** Flood Action Alexandria engineers are collectively working on more than a dozen different

infrastructure projects. There are currently 17 projects listed in the City Stormwater Capital

These range from small spot projects to large capacity infrastructure projects. Among those, the projects can be in one of three phases of execution, including planning, design, and

Some of these projects, more notably the large capacity projects, can take several years to

Throughout the extensive design phase, project managers measure progress by breaking down significant milestones: 30 percent, 60 percent, and 90 percent design completion. These milestones can help streamline collaboration among stakeholders and set expectations for

The reason? Dedicated, thoughtful design can prevent hiccups when earth is being overturned

The combined projects will cost approximately \$3.2 million. The projects are funded using a <u>Virginia Community Flood Preparedness Fund (CFPF) grant</u> and local <u>Stormwater Utility Fee.</u> The projects are components of the Edison and Dale Large Capacity Project, and the grant

But what do those milestones mean? - 30 Percent: This milestone provides the foundation for project design moving forward. The submission will include a comprehensive assessment at the proposed location of the project, including what utilities may exist, boundaries, and topography. It will also include more details on construction feasibility, cost, and potential impacts. The 30 percent plans will be used to coordinate utility work, right-of-way, and construction methodology. - 60 Percent: At 60 percent, any questions about project feasibility submitted during the 30 percent phase will be addressed. This stage also includes a more detailed set of construction drawings, and additional project details, including structural design, erosion and sediment control, stormwater management facility design, landscaping, and traffic mitigation plans during construction. More accurate cost estimates are developed at this stage as well. - 90 Percent: Once reviewed, the City will provide comments on the 60 percent design, which will be addressed in the 90 percent phase. During this phase, much of the project plans will be

complete. Modeling, final drawings, and documents, will be included in the submission. Following this phase, allowing for minor tweaks, no substantial changes to the project should

Stormwater Capital Improvement Schedule. This information is updated each quarter.

To learn more information about stormwater projects, details on each project are listed on the

See More Spot Improvement Projects →

be made. Cost estimates at this stage are as accurate as possible.

Beverley

Warwick

Mt Ida

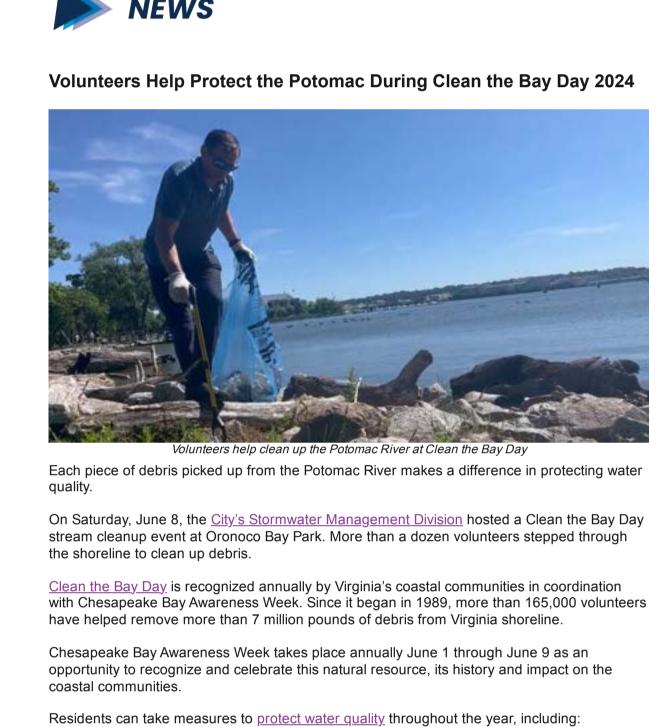
Legend

500 1.000

New Phase to Begin on the Sanitary Sewer Asset Renewal Program

The above map indicates sanitary sewers, manholes, and City-owned laterals to be inspected Sanitary sewer inspections in the Arlandria, Parkfairfax, and Braddock Heights neighborhoods will begin this fall as part of the next phase of the City's Sanitary Sewer Asset Renewal Program. The program was created for the inspection and rehabilitation of all City sanitary sewers, manholes, and City-owned portions of lateral sewers. The inspections provide useful data on the condition of existing sewers and manholes to determine where rehabilitation of existing assets is needed. The program will assist in reducing infiltration and inflow into the sanitary

Inspections in the above area will begin this fall and are expected to take about one year to



- Keep pet waste out of the City's storm drains, which causes bacteria contamination. Pick up

- Keep the City litter-free, as waste dropped on streets, sidewalks, or parks ends up in local

- Reduce or eliminate fertilizer use on home lawns. Excess fertilizer causes poor water quality. Bonus: Residents who take the 'no fertilizer pledge' can apply for a Stormwater Utility Fee

The City's Stormwater Management hosts several stream clean-up events through the year.

Stay tuned on the <u>T&ES social media</u> sites or sign up to receive <u>T&ES eNews alerts</u>.

and properly dispose of pet waste in a trash can.

waterways and the Chesapeake Bay.

reduction through the SWU Credit Program.

Free soil tests are available at the Lee Center

The pledge reads as follows:

using any fertilizers."

listed on the box.

outlive the next 275.

ALX275 website.

Are You Using Excess Fertilizer? Test Your Soil to Find Out Healthy soils grow healthy plants, but adding fertilizers may not be the answer to a thriving garden, or a thriving pocketbook. In fact, using too much, or using the wrong kind of fertilizers, can have negative impacts on the environment. That's why taking the 'no fertilizer pledge' can help save money on your Stormwater Utility Fee (SWU) while helping improve water quality. "Many times, our native soils already have the necessary nutrients to provide for healthy plant food," said Stormwater Principal Planner Gavin Pellitteri. "Excess fertilizers can run off our land and into our ecosystems and harm our waterways." Soil tests can assess soil health and provide insight into what types of fertilizer, if any, should be used. They measure aspects such

"I pledge to maintain a dense cover of grass, gardens, or conservation landscaping without

By upholding this declaration property owners can receive a 10 percent credit on their SWU

Residents can pick up a soil test from the Lee Center (1108 Jefferson St) Virginia Cooperative Extension office. Once collected, samples can be mailed to the Virginia Tech Soil Testing Lab

275th Tree Planted in Recognition of City Birthday

as pH, nutrient levels, organic matter percentages, and soluble salt level. This information can also be used to determine which plants are best suited for different

Soil tests can also encourage property

owners to take a 'no fertilizer pledge,' and apply for a SWU Credit to receive a reduction

areas of a lawn and garden.

in their SWU fee.

Camille Liebnitzky (SWM) and Scott Graham (RPCA) stand next to the 275th tree planted at Oronoco Bay Park

The legacy of the City of Alexandria has outlived 275 years of history. Over the last four months, the City's Stormwater Management Division has been working to plant seeds to

Last month, staff members completed a project to plant 275 trees in designated locations across the city to recognize Alexandria's 275th birthday. Located near Oronoco Bay Park, the

The project is funded through the Stormwater Utility Fee. The trees help improve water quality, reduce nutrient runoff, and absorb stormwater to mitigate flooding. Locations were selected to focus on adding shade trees in high heat index areas, replacing empty tree wells, and to

T&ES staff partnered with Recreation, Parks, and Cultural Activities (RPCA) Urban Forestry in

An interactive map is available on the City website to see locations for all 275 trees and to read

STORMWATER AND SEWER

**MAINTENANCE** 

2024 FISCAL YEAR IN REVIEW

**COMMUNITY MAINTENANCE WORK** 

SANITARY SEWER MAINTENANCE 169,250 FEET OF SEWER MAINS CLEANED

55 SEWER MAINS AND LATERALS REPAIRED

126 COMBINED CATCH BASINS CLEANED

107,460 FEET OF CCTV COVERAGE IN SEWER

597 COMBINED INLETS CLEANED

more about the project. Residents can read more about the City's 275th Birthday on the

final tree was included in the 275th Alexandria Birthday Celebration on July 13.

replenish community locations with canopy cover.

STORMWATER MAINTENANCE

323 STORMWATER MAINTENANCE REQUESTS

79,819 UNITS OF STORM INLET DRAIN REPAIRS

5,200 LINEAR FEET OF STORMWATER LINES

34 STORMWATER HOTSPOTS INSPECTED

INVESTIGATED AND RESOLVED

16 SMALL/MID-SIZE STORMWATER MAINTENANCE PROJECTS COMPLETED

AND MAINTAINED

INSPECTED

selecting locations, project development, and tree planting.

SANITARY SEWER ASSET RENEWAL PROGRAM 63,200 FEET OF MAINLINE SANITARY SEWER INSPECTED 976 LATERAL SEWERS INSPECTED 305 MANHOLES INSPECTED 24,000 FEET OF SANITARY SEWER REHABILITATED **Stormwater Engineers Complete Annual Inspections of City Rivers** and Streams Civil Engineers Haweni Gobena and Ehsanullah Hayat inspect Holmes Run Every year, engineers with the City Stormwater Management Division walk along streambeds and banks to inspect nearly 25 miles of rivers and streams. Holding clipboards stacked with maps, they take note of any deficiencies or maintenance that may be required. This work, completed earlier this summer, is one condition of the <u>National Flood Insurance</u> Program (NFIP) Community Rating System (CRS), a voluntary incentive program that recognizes communities for going above and beyond the Federal minimum requirement for floodplain management.

"We look for debris, blockages to culverts that go underneath roadways, and accumulated sediment in the stream that can restrict capacity," said Senior Stormwater Management Engineer Brian Rahal. "We catalog the condition of the stream and report that to our CRS representative every year, to show the work that we've done in the program." This effort

In October 2023, the City received recertification of a Class 6 Rating from the CRS, which helps keep flood insurance premiums more affordable for Alexandria residents and property

The program verification cycle takes place every five years, requiring a site visit by a CRS specialist to determine a community's CRS class. This specialist will review any documentation

2024 Fiscal Year in Review Stormwater Spot Projects

<u>Planning</u>

<u>Design Procurement</u>

Four Mile Run and Hooffs Run Inlet

Bellefonte Ave. Storm Drain

Edison St. Storm Sewer

Sewer Improvements

Culvert Replacement

Mt. Vernon Cul-de-Sac

Inlets & Alley Storm Sewer

Mt. Vernon & Edison Dual

W. Reed Ave. & Dale St. Storm

Upgrades

Improvement

Installation and Enhancement

Valley Drive Storm Sewer Improvement

The City will host its CRS specialist for program verification at the end of August.

contributes to maintaining lower flood insurance premiums for residents.

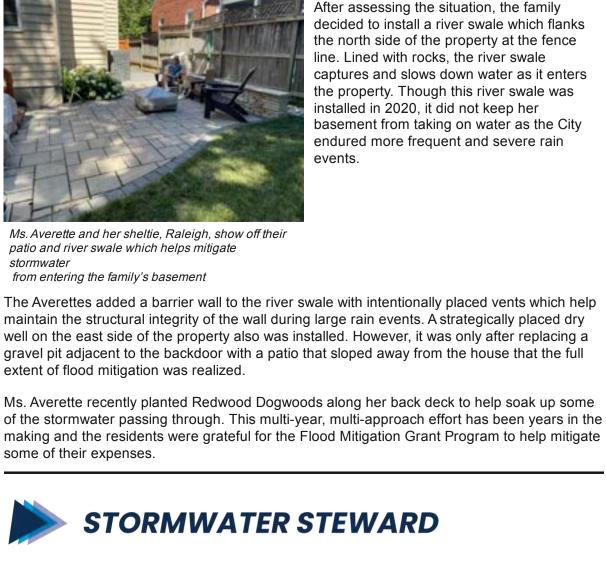
provided by that community.

**SNAPSHOT** 

 S. Jordan St. Storm Sewer Improvement <u>In Design</u> • W. Taylor Run Pkwy and Janney's Lane 90 Percent Design

**Construction Procurement** 

Construction Contract Awarded Oakland Terrace Timber Branch Bank Stabilization Construction Substantially Complete N. Overlook Drainage Improvements FROM THE FLOOD ACTION ADVISORY GROUP Despite the recent record-setting heat, the work to make Alexandria flood-resilient continues without pause! Throughout the scorching days of July, work crews completed the drainage improvements in the area around Overlook Drive. The sight of perennial flooding, this location is in the Four Mile Run watershed. Although a spot project, this was no small matter – it was first conceived in 2022 and cost \$600,000 to construct, financed by the Stormwater Utility fee. Also, during the heat wave, crews completed the inspection of Alexandria streams to ensure they are without blockage that might impede the outflow of stormwater during a severe rainstorm. These exhaustive inspections are required by FEMA's National Flood Insurance Community Rating System. Cities that maintain their waterways are eligible for a reduction in the cost of FEMA flood insurance – and that benefits all residents who live within a floodplain. But not all the work was outside. The Open House on the project at Commonwealth-Ashby-Glebe generated dozens of comments from residents concerned about the impact of this large construction project on their neighborhood. City staff is analyzing the comments to determine how to address these concerns while still delivering on the project's benefit to one of Alexandria's most flood-prone areas. August and September generally bring severe rainstorms that flood Alexandria. Despite the summer's heat, Alexandria continues to prepare for them. John Hill Chair, Stormwater Utility and Flood Mitigation Advisory Committee RESIDENT SUCCESS STORY A river swale is one eligible floodproofing practice included in the Flood Mitigation Grant Program Since its launch in 2021, Alexandria residents have been able to implement floodproofing practices on their properties through the help of the Flood Mitigation Grant Program. Open to all property owners, the program offers a reimbursement of up to 50 percent, or \$5,000, of the total costs associated with eligible floodproofing practices. Condominium and homeowner associations are eligible to receive a grant of up to \$25,000.



The program was designed to incentivize property owners to install floodproofing measures, which can provide more immediate protection of their properties, while staff work on more

As a public-school teacher, Ms. Averette spends the summer months relishing summer break as she looks upon her landscaped backyard near George Mason Elementary School. A City resident for more than five years, Ms. Averette and her family first moved in only three months prior to the July 2019 storm that left a regional impact. Left with a flooded basement and concerns for the next storm event, Ms. Averette started looking into property improvements to

Ms. Averette is one resident who has found flood relief through the grant program.

long-term flood mitigation capital projects.

mitigate future flooding.

country.

technology.

city.

"I started my career from there, where I can contribute to building and improving City infrastructure," Eltayeb said. "Seeing the building and tangible projects, that's my inspiration." Prior to working for the City, Eltayeb gained extensive experience in stormwater management. He previously managed drainage designs on highway projects in northern Maryland, as well as floodplain studies for FEMA, analyzing floods for cities near rivers and streams across the In his new role with the City, Eltayeb says he is excited to work on projects to improve the quality of life for Alexandria residents. "Here I am a representative for the public, I advocate on behalf of the public," Eltayeb said. "We work to satisfy the public, businesses, and to build infrastructure to meet their needs." As he continues in this role, Eltayeb says his goal is to continue advancing in the field, finding innovative solutions to address localized flooding through the use of state-of-the-art

The Flood Action team has welcomed its newest member to manage stormwater improvement and infrastructure projects.

Wael Eltayeb is a Technical Project Manager for the Department of Project Implementation working on spot projects within the Flood Management Program, addressing localized flooding and neighborhood drainage issues.

Growing up in Khartoum, Sudan, Eltayeb was inspired to become a civil engineer after witnessing the impact well-planned

infrastructure has on a community's quality of

In his free time, Eltayeb enjoys touring local museums and exploring hiking trails across the The Flood Action Alexandria newsletter is produced by City staff. Email us at stormwater@alexandriava.gov.