FLOODACTION ALEXANDRIA

DECEMBER 2023 ISSUE 16

MANAGER'S MESSAGE

Are We There Yet?

A question that we get asked often is why it takes so long to design a new storm sewer. It is a valid question: our large capacity projects can take two to three years to design.

Sometimes the next question we get asked is why design takes longer than construction. I like to use the analogy of a free kick in a soccer match. The goalie is telling the defenders where to stand and where to form the barrier. The attackers are deciding who is going to kick and what maneuvers they will use to trick the rivals. The referee is making sure no one is standing in an illicit position. Finally, one of the strikers kicks the ball in hopes of scoring a goal. All this preparation takes a few minutes, but the kick itself is a matter of seconds.

Loosely, this is what happens when we design a new storm sewer system. These are complex projects with numerous variables and, more importantly, numerous unknowns. Like the free kick, we need to do quite a bit of work upfront to ensure the success of the project.

The main source of unknowns is what we cannot see, for example buried utilities such as water and gas lines, electric wires, sanitary sewers, telecommunications, fuel lines- even an archeological site is a possibility in Alexandria. These utilities need to be relocated in order to have space for new storm sewers, and everything must fit within the right-of-way, which often is a tight squeeze because the new pipes are very large.

Sometimes the City needs to acquire an easement for construction access and future maintenance. Careful attention is paid to maintenance of traffic for residents and businesses to move about during construction. In addition, we must conduct environmental surveys to investigate whether there are hazardous materials, and inventory trees in the project areas to minimize potential impacts. All solutions to these problems need to be carefully documented in engineering drawings and standards that a construction contractor can use to implement the project. Finally, all permits must be secured to be able to construct the project.

These are some of the issues we encounter when we are designing flood control infrastructure. It all takes time. Moreover, each project is one of a kind; therefore, we cannot recycle much of the design work we do in other projects.

In the end, all this preparation is carefully done so that the free kick- construction- results in scoring a goal.

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 City of Alexandria.

PROJECT UPDATES

LARGE CAPACITY PROJECTS

Commonwealth, Ashby, and Glebe

City of Alexandria project leaders recently joined consultants touring the area of Commonwealth Ave., E. Glebe Rd., and Ashby St. as they continue the project's design phase.

Team leaders behind the Commonwealth, Ashby, Glebe Flood Mitigation Project have reached a significant step forward as 30 percent of the project's design submission is complete.

This phase of the design includes a more comprehensive perspective at the project and its location, including information on topography, existing utilities, and property boundaries. City staff says this will provide a more detailed understanding of construction feasibility and potential impacts. The plans will also be used to coordinate utility work, right-of-way-, and construction methodology.

This flood mitigation project is a combination of the top two prioritized 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. 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 is estimated at $50 million.

Team leaders are now looking ahead to the project's next milestone, when the design submission will reach 60 percent. City staff anticipate that to take place by spring of next year and will be accompanied by a public outreach event to discuss with stakeholders.

Hooffs Run Culvert Bypass Project

Staff from the City of Alexandria, Virginia Passenger Rail Authority (VRPA), and Virginia Railway Express (VRE) shared information and answered questions from the public on upcoming and ongoing infrastructure projects during an October open house meeting.

Plans continue to move forward on the Hooffs Run Culvert Bypass Project. Project leaders have completed a site survey along Russell Road and the proposed project area.

The bypass project will provide flood relief for neighbors, homeowners, and businesses along the Hooffs Run and Timber Branch culverts while sustaining conditions in other locations in the City. Models are currently considering installing new parallel stormwater pipes under Russell Road to increase stormwater capacity, provide storage, and reduce flooding.

Project leaders continue to consider multiple metrics for its design, which measure how effective the project will be at reducing flooding, its complexity, cost, and impact to residents.

The design team is beginning to review potential alternatives for the project. They are asking residents in the area of Hooffs Run and Timber Branch who have experienced or witnessed flooding to complete a short questionnaire. Feedback will be used to provide the City with information as design alternatives are being considered.

The questionnaire is available online and will be open through December 8.

See More Large Capacity Projects ➜

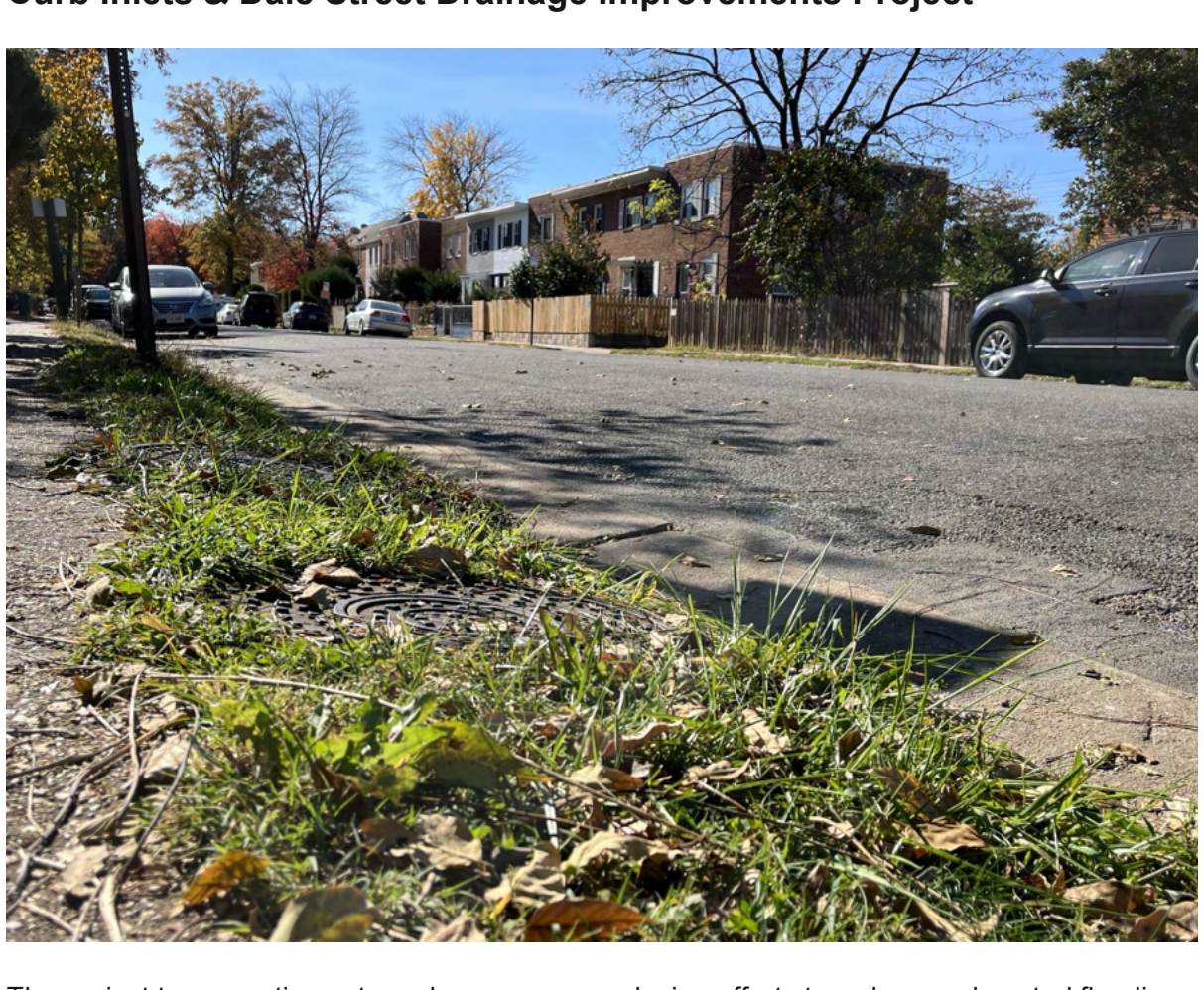
SPOT IMPROVEMENT PROJECTS

Hume Avenue Stormdrain Bypass Project

The Hume Avenue Stormdrain Bypass project has reached a milestone completing 60 percent of the design phase. The City will install new storm sewer along Hume Avenue and E. Raymond Avenue to provide flood mitigation for homes along both roadways.

The new storm sewer pipes and inlets will help capture flood water before it collects in low-lying areas and convey it safely. Construction is expected to begin in Spring of 2025 and be completed before the end of the year.

Edison Street Cul-de-Sac Drainage Improvement and W. Reed Ave. Curb Inlets & Dale Street Drainage Improvements Project



The project team continues to make progress on design efforts to reduce and control flooding in the Arlandria / North Del Ray area. Design on the Edison Street Cul-de-Sac Drainage Improvement project and the W. Reed Ave. Curb Inlets & Dale Street Drainage Improvement are at 30 percent complete.

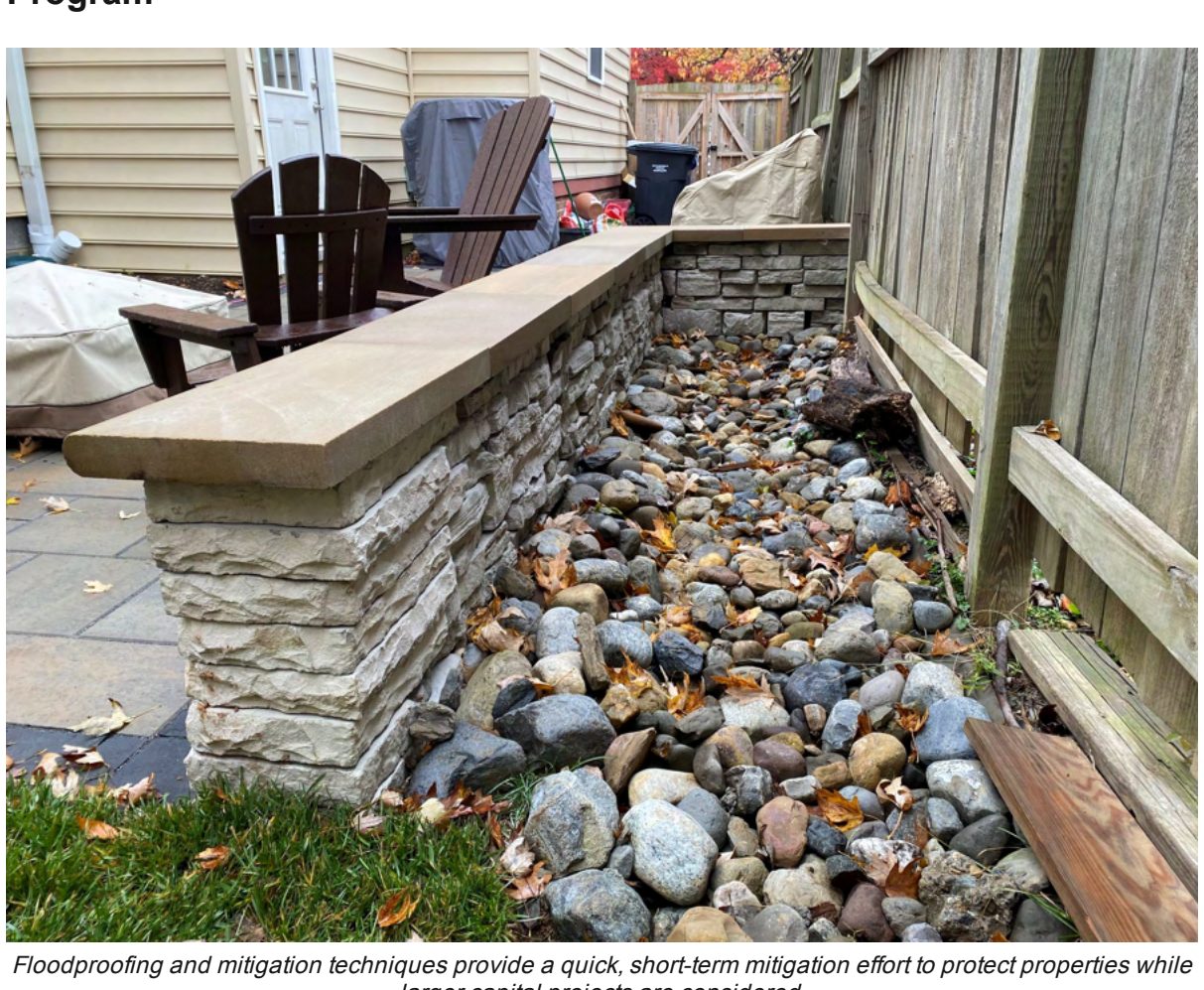
Project plans call for installing a larger outfall pipe to collect stormwater from the Edison Street Cul-De-Sac and from W. Reed Avenue. City crews will also work to add inlets to the Edison Street and Mark Drive intersection and along W. Reed Avenue to capture more stormwater runoff into the sewer system.

Construction on both projects totaling approximately $3.2 million is expected to begin by the end of 2024.

See More Spot Improvement Projects ➜

NEWS

Alexandria City Council Approves Changes to Flood Mitigation Grant Program



Floodproofing and mitigation techniques provide a quick, short-term mitigation effort to protect properties while larger capital projects are considered.

The Flood Mitigation Grant Program is increasing availability for more residents after City Council approved two changes to the program.

On October 24, Council members voted in favor of two changes to the grant program. The first approval removes the requirement for homeowners to provide documentation of past flooding back to July 2019. This allows property owners to apply for the grant regardless of whether their homes have previously flooded.

The second approval increases the maximum allowable grant match for association common areas from $5,000 to $25,000.

The program launched in August 2021 to encourage property owners to install flood mitigation efforts on their properties. Reimbursement grants up to $5,000, or 50 percent of the completed project costs, are offered to applicants implementing eligible floodproofing measures on their property.

When the "pilot" was launched, applicants were required to submit documentation of previous flooding dating back to July 2019; one of the first of a handful of flooding events which spurred the development of the Flood Action Alexandria Program. This initial requirement was an effort to target those who had flooded with the initial grant offering. The data shows that this effort has done well to target those that have flooded in the past and the removal of this requirement will expand access to more property owners at risk of flooding.

While condominium and homeowner associations were previously eligible to receive matching grant up to $5,000, associations are now eligible to receive up to $25,000, or 50 percent of the completed project costs, for floodproofing practices to protect common area primary structures. This could include projects to clubhouses, parking garages, pool areas, common doorways, or building shells.

Since it launched in 2021, the City has approved more than 250 applications and awarded more than $770,000 in matching flood mitigation grant funding.

Jesse Maines, Division Chief of the City Alexandria Department of Transportation and Environmental Services Stormwater Management Division, says the updates will allow more property owners to participate in the program, and more people to protect themselves from flooding.

"The Flood Mitigation Grant Program creates a partnership between property owners and the City to incentivize the installation of floodproofing measures," said Maines. "These practices provide more immediate protection of property and people, while staff continues working on the delivery of flood mitigation capital projects that take longer to implement."

Grant program organizers strongly encourage property owners to consult with City staff prior to starting work to ensure it complies with eligibility requirements.

There are more than 25 eligible practices to provide flood protection to properties, from flood gates, and window wells, to elevating utilities and using flood-resistant building materials.

Applications can be submitted online via APEX, the Alexandria Permitting and Land Use System. The Flood Action website has a full list of eligible practices. Questions about the program can be submitted to Floodgrant@alexandriava.gov.

The recently approved changes are now in effect. Applications are accepted on an ongoing basis.

City Staff Move Forward with Grant Applications for Flood Preparedness, Resilient Infrastructure

City Council voted unanimously at the October 24 Legislative session to approve two grant applications to help fund efforts of Flood Action Alexandria.

One of the applications approved by City Council is a $28.5 million grant for the Federal Emergency Management Agency's Building Resilient Infrastructure and Communities (BRIC) and Flood Mitigation Assistance (FMA) Grant Programs. This is a request for a 75/25 matching grant through the Federal Emergency Management Agency (FEMA) and the Virginia Department of Emergency Management. If accepted, this grant would help fund construction of the first phase of the Commonwealth, Ashby, Glebe large capacity project, a flood mitigation effort expected to cost about $50 million.

City Council also approved the application to the Virginia Community Flood Preparedness Fund (CFPF) grant program to support efforts to develop of Flood Resilience Plan for the City. The grant program is administered by the Virginia Department of Conservation and Recreation (DCR) and, if approved, will provide grant funding up to $525,000 to develop this plan.

The City-wide Flood Resilience Plan will identify flood mitigation, preparedness, response, policies, and regulations. This will help guide Flood Action Alexandria programs and projects to better serve the community and build flood preparedness.

Turn Your Flood Mitigation Practices Into Money in Your Pocket

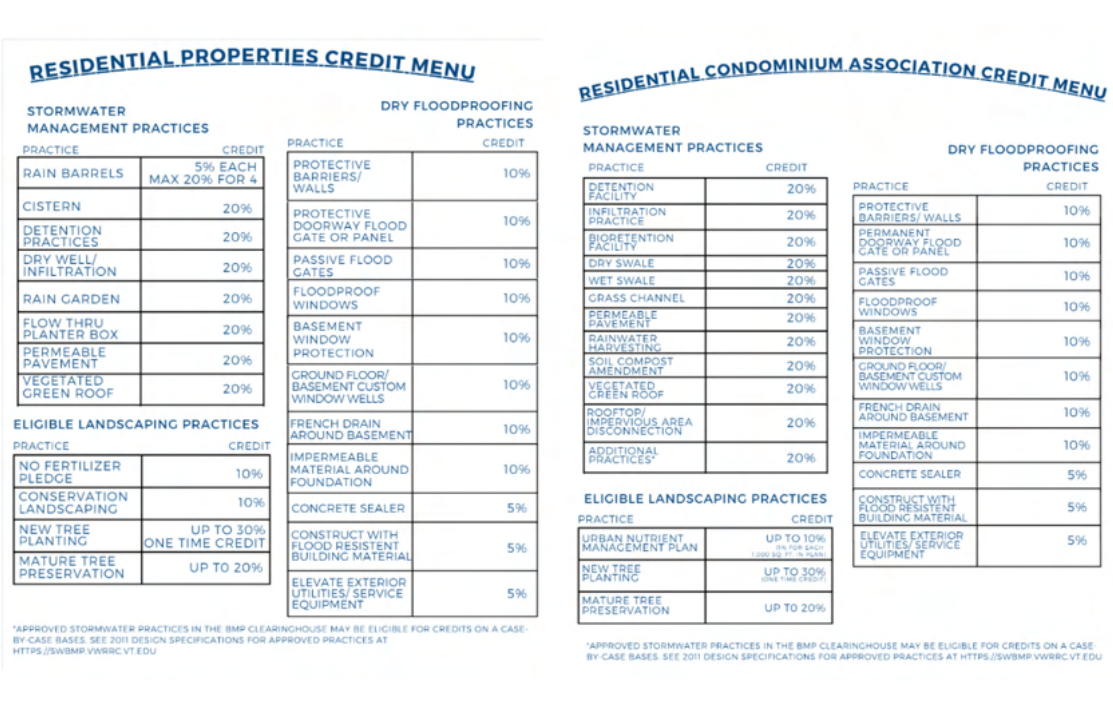
Rain barrels are installed at downspouts and capture roof runoff.

The City is accepting applications for the Stormwater Utility Fee Credit Program. Property owners can submit eligible flood mitigation practices to receive a reduction in their Stormwater Utility Fee.

The credit program is designed to encourage residents to be proactive in reducing flooding and improving water quality on their properties. Owners of single-family homes, townhomes, condominiums, or businesses and other non-residential properties may receive a reduction of up to 50 percent from their annual Stormwater Utility Fee by installing stormwater management practices based on the program's Credit Manual. Approved fee reductions are good for two years before a property owner needs to reapply.

Established in 2018, the fee provides a funding source for stormwater management services and capital infrastructure projects to Clean up the Bay by reducing nutrient and sediment pollution into the Chesapeake Bay, Potomac River, and local waterways. The funding also supports large capacity and spot improvement capital projects, operations and maintenance, and other flood mitigation efforts by the City's Flood Alexandria program. Fees are based on property type and the amount of impervious surface on the property.

The credit program was updated last year by unanimous vote by City Council to add eligible flood mitigation practices as a way to reduce the fee, make the application process easier in order to provide more access to the credit program. Below is an outline of stormwater management, landscaping, and dry floodproofing practices included in the Credit Manual for residential properties.



RESIDENTIAL PROPERTIES CREDIT MENU

STORMWATER MANAGEMENT PRACTICES

PRACTICE	CREDIT
RAIN BARRELS	5% EACH MAX 20% FOR 4
CISTERN	20%
DETENTION PRACTICES	20%
DRY WELL/ INFILTRATION	20%
RAIN GARDEN	20%
FLOW THRU PLANTER BOX	20%
PERMEABLE PAVEMENT	20%
VEGETATED GREEN ROOF	20%

ELIGIBLE LANDSCAPING PRACTICES

PRACTICE	CREDIT
NO FERTILIZER PLEDGE	10%
CONSERVATION LANDSCAPING	10%
NEW TREE PLANTING	UP TO 30% ONE TIME CREDIT
MATURE TREE PRESERVATION	UP TO 20%

DRY FLOODPROOFING PRACTICES

PRACTICE	CREDIT
PROTECTIVE BARRIERS/ WALLS	10%
PROTECTIVE DOORWAY FLOOD GATE OR PANEL	10%
PASSIVE FLOOD GATES	10%
FLOODPROOF WINDOWS	10%
BASEMENT WINDOW PROTECTION	10%
GROUND FLOOR/ BASEMENT CUSTOM WINDOW WELLS	10%
FRENCH DRAIN AROUND BASEMENT	10%
IMPERMEABLE MATERIAL AROUND FOUNDATION	10%
CONCRETE SEALER	5%
CONSTRUCT WITH FLOOD RESISTENT BUILDING MATERIAL	5%
ELEVATE EXTERIOR UTILITIES/ SERVICE EQUIPMENT	5%

*APPROVED STORMWATER PRACTICES IN THE BMP CLEARINGHOUSE MAY BE ELIGIBLE FOR CREDITS ON A CASE-BY-CASE BASES. SEE 2011 DESIGN SPECIFICATIONS FOR APPROVED PRACTICES AT HTTPS://SWBMP.VWRRC.VT.EDU

RESIDENTIAL CONDOMINIUM ASSOCIATION CREDIT MENU

STORMWATER MANAGEMENT PRACTICES

PRACTICE	CREDIT
DETENTION FACILITY	20%
INFILTRATION PRACTICE	20%
BIORETENTION FACILITY	20%
DRY SWALE	20%
WET SWALE	20%
GRASS CHANNEL	20%
PERMEABLE PAVEMENT	20%
RAINWATER HARVESTING	20%
SOIL COMPOST AMENDMENT	20%
VEGETATED GREEN ROOF	20%
ROOFTOP/ IMPERVIOUS AREA DISCONNECTION	20%
ADDITIONAL PRACTICES*	20%

ELIGIBLE LANDSCAPING PRACTICES

PRACTICE	CREDIT
URBAN NUTRIENT MANAGEMENT PLAN	UP TO 10%
NEW TREE PLANTING	UP TO 30%
MATURE TREE PRESERVATION	UP TO 20%

DRY FLOODPROOFING PRACTICES

PRACTICE	CREDIT
PROTECTIVE BARRIERS/ WALLS	10%
PERMANENT DOORWAY FLOOD GATE OR PANEL	10%
PASSIVE FLOOD GATES	10%
FLOODPROOF WINDOWS	10%
BASEMENT WINDOW PROTECTION	10%
GROUND FLOOR/ BASEMENT CUSTOM WINDOW WELLS	10%
FRENCH DRAIN AROUND BASEMENT	10%
IMPERMEABLE MATERIAL AROUND FOUNDATION	10%
CONCRETE SEALER	5%
CONSTRUCT WITH FLOOD RESISTENT BUILDING MATERIAL	5%
ELEVATE EXTERIOR UTILITIES/ SERVICE EQUIPMENT	5%

*APPROVED STORMWATER PRACTICES IN THE BMP CLEARINGHOUSE MAY BE ELIGIBLE FOR CREDITS ON A CASE-BY-CASE BASES. SEE 2011 DESIGN SPECIFICATIONS FOR APPROVED PRACTICES AT HTTPS://SWBMP.VWRRC.VT.EDU

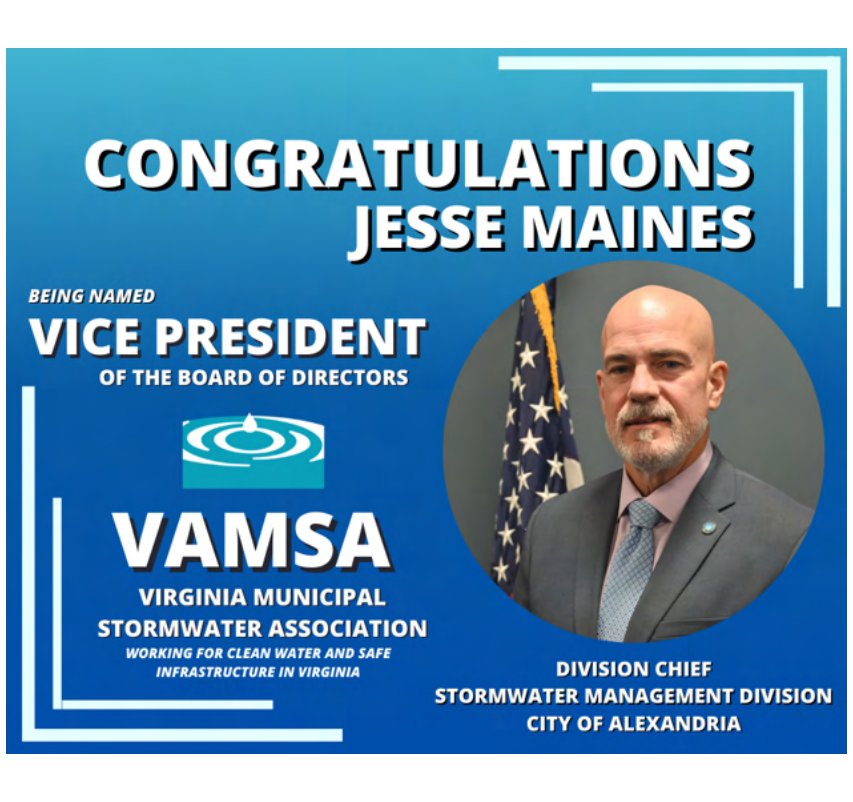
Approved credit program applicants will receive a credit reducing their Stormwater Utility Fee for two years. Property owners must then reapply in order to continue receiving credits. Online applications are available and encouraged through the City's Real Estate Assessment website. Just search for your property address and navigate to the credit application screen to fill it out electronically. Submit questions to stormwater@alexandriava.gov. The full Credit Manual can be found on the Stormwater Utility Fee website.

The application window opens December 1 each year and deadline to apply is February 15.

Stormwater Management Division Chief Jesse Maines Named Vice President of VAMSA Board of Directors

Jesse Maines, Division Chief of the City of Alexandria Transportation and Environmental Services (T&ES) Stormwater Management Division was recently selected as Vice President of the Virginia Municipal Stormwater Association (VAMSA) Board of Directors. The organization brings together more than 70 proactive local governments and leading stormwater consulting firms to work for clean water and safe infrastructure across Virginia.

Maines has represented the City of Alexandria as an active VAMSA member for more than a decade, serving the past five years as a member of the Board.



COMMUNITY MAINTENANCE WORK

Hooffs Run Culvert Cleaning and Inspection

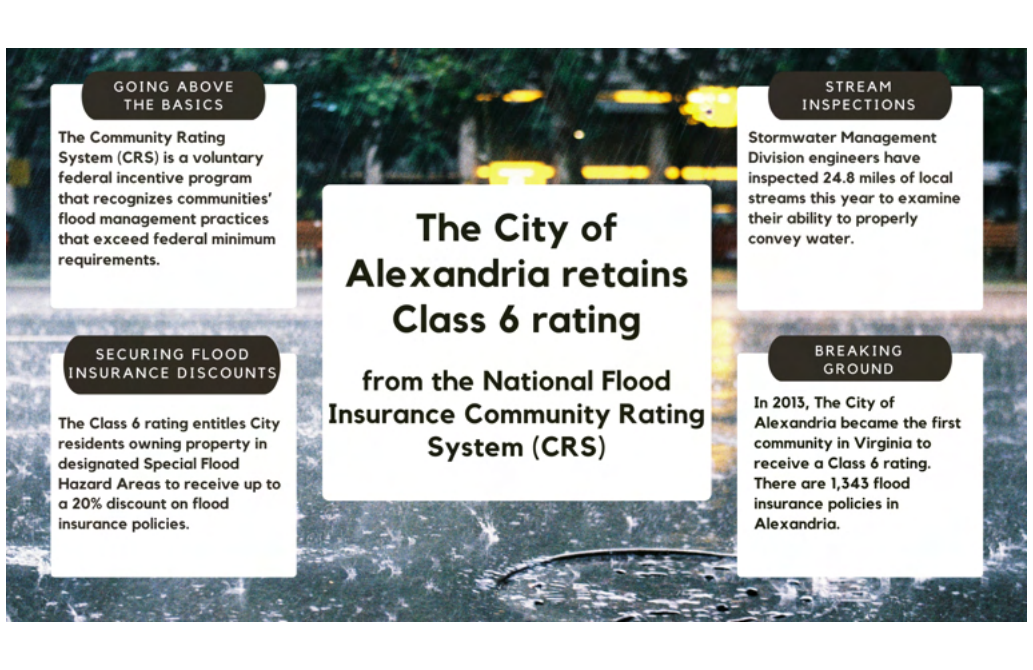
City Storm Crew cleaning inlets

The City of Alexandria Transportation and Environmental Services, Public Works Division has been working on maintenance and inspection projects along the Hooffs Run culvert.

In October 2023, crews finished cleaning the inlet openings between Linden St. and Rosemont Avenue. Once that work was completed, a contractor began inspecting the culvert using Closed Circuit Television (CCTV), a process which uses pictures and videos to determine a pipe's condition. To complete this work, crews place a rolling camera inside the culvert where it can be used to identify any potential defects or failures, or potential debris accumulation along the structure, and its exact location.

The City contractor completed inspections to the Hooffs Run Culvert in November 2023.

SNAPSHOT



FROM THE AD HOC GROUP

Ad Hoc Advisory Group Aims to Become Permanent Committee

Over the past couple of years, the Ad Hoc Stormwater and Flood Mitigation Advisory Group and City staff have developed a collegial working relationship that continues to evolve and improve. As the Flood Action Alexandria Program increases its efforts to address flooding issues and expand its scope of improvement projects, the Group hopes to continue working alongside the City as a permanent committee.

When it was first created in 2021, the Group was conceived as a temporary committee. Its goal was to serve as a stakeholder advisory group on the City's flood mitigation efforts, providing a source of communication of these efforts to neighbors, and assisting in funding and implementation oversight of projects. The ten-member group consists of representatives from residential communities, Civic Associations, and business groups with expertise on environmental, engineering, and financial matters.

The Flood Action Alexandria Program will be implemented over the next ten years, bringing large capacity projects to fruition, and completing smaller improvement projects for targeted flood relief. Staff will be presenting an ordinance on behalf of the Group to City Council in December 2023 to install a permanent committee to replace the temporary one. This measure will allow the group to continue its support of the Flood Action Program and its efforts to reduce flooding across the City.

STORMWATER STEWARD

Culverts, inlets, sanitary sewer, stormwater management, and Flood Action. These are just a few of the topics which have seldom left my mind since sitting down at my desk in the City of Alexandria Department of Transportation and Environmental Services office.

As these subjects settle into the foundation of my daily routine, I'm stepping into the shoes of the many residents who are passionate about flood resiliency and eager to learn more about the stormwater projects and developments taking place across the City.

That's why I'm here.

My name is Emma Wheeler, Communications Officer for the City's Stormwater Management Division. My goal is to bring an inside look into Flood Action Alexandria, to dive into the details of infrastructure and improvement projects, and share the story of the dedicated team making it happen.

Before joining the City of Alexandria, I spent several years working in television news as a multimedia journalist. I kept an ear to the pavement, detailed stories of community experience, and always asked the question why.

When it was time for me to step away from the world of local news, my passion for storytelling remained a driving force behind my career's next steps. That is what I hope to bring to this team of stormwater warriors. I am to shine a light on the Flood Action Alexandria story, and communicate the answers to your questions.

I'm excited to have a hand in growing this newsletter, and I can't wait to see how far it will go. If there's something you want to see, or if you would like to share your own flood management practices, email me at emma.wheeler@alexandriava.gov.

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