FLOODACTION ALEXANDRIA

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Manager's Message

A message from the Stormwater Management Division Chief.

Jesse Maines

When future generations of Alexandria residents trace back flood-resilient improvements in the City, they'll see the journey started with all of us.

While there is still much work to be done, the City has made steady progress in building resiliency to the impacts of flooding. We started the year off strong with construction beginning on multiple neighborhood spot improvement projects and putting out a request for qualifications on two large capacity projects, both of which you'll read about below.

Alexandria is a great historic city and a great place to live and work. But this history also means the sewer systems are older, and some of these systems carry live streams. While these systems were advanced when they were first installed, I don't think they were designed to contain runoff from these intense storms that we used to call 50- or 100-year storms that we now experience once or twice a year. With a warmer atmosphere holding more moisture, precipitation drops all at once and can overwhelm our systems, so we need to build more capacity and measures to protect us from flooding.

Working with the City is particularly special to me as I get to serve the community where I live. This makes it not just a job, but a way to contribute to the community to make people and their property safer.

Like many people in the City, my family's house has experienced flooding from these more recent storms. Yes, we do have some significant challenges. However, I truly believe we can meet the challenges we face by working together.

With the support of the community and City Council, we've hired more experts, pursued more grant opportunities and devoted more time to examining problems in pursuit of solutions.

I'm proud of the team we've been building across the Department of Transportation and Environmental Services in the Stormwater Management Division, Sanitary Sewer Division and Department of Project Implementation in the past year. I'm energized about the work we've done with the community and the work that lies before us to squarely focus on infrastructure solutions that will alleviate flooding.

We've got the experts, strategy and your support. I'm looking forward to working alongside the community over the next year as we continue designing a City that future generations will be proud to call home.

Jesse Maines, Stormwater Management Division Chief

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

Storm Sewer Capacity Updates

Three large capacity projects to mitigate flooding are on track to enter the design phase in Fiscal Year 2022.

Construction of these projects, estimated at $87.6 million, will begin in fiscal year 2025. Requests for qualifications were issued in late January.

In the Four Mile Run watershed, two projects in adjacent neighborhoods have been combined to streamline the design process. The projects at Commonwealth Avenue and East Glebe Road and East Glebe Road and Ashby will increase the capacity of the system to allow stormwater to be stored and released slowly over time. The project will also incorporate green infrastructure practices to allow the stormwater to soak into the ground, reducing runoff.

A grant from the Community Flood Preparedness Fund awarded to the City in October will support parts of these projects.

The third project is the Hooffs Run Culvert Bypass, which will carry water from Timber Branch in a new stormwater management system that involves conveyance to improve the performance of the system and reduce flooding.

STORM SEWER CAPACITY PROJECTS

Information is provided to ensure transparency. Schedule and budget estimates include contingenices and subject to change. Information is updated as projects are refined.

PRIORITY	PROJECT	PROPOSED SOLUTION	COST	YEAR TO BE FUNDED	STATUS
1	Commonwealth Avenue and Glebe Road	Conveyance	$34 million	FY 2023	Design Procurement
2	Ashby Street and Glebe Road	Storage/Conveyance	$16 million	FY 2024	Design Procurement
3	Hooffs Run Culvert Bypass	Conveyance	$60 million	FY 2025	Request for Qualifications

Track updates here.

Spot Improvement Project Updates

A crew worked on a spot improvement project to install larger inlets on Hume Avenue on Jan. 19. The crew constructed forms for each basin that catches water as it moves from the street, through inlets and into the storm drain network below ground. The next part of the installation includes concrete pouring. Spot improvement projects are designed to address localized flooding. (City of Alexandria)

Two neighborhood spot improvement projects designed to address localized flooding began last month.

Installation of larger inlets at Hume Avenue and the neighborhood of Clifford, Manning and Fulton streets began in late January. Inlets are one piece of the stormwater management network that carries stormwater runoff from streets into the storm sewers that lead to nearby streams.

By increasing inlet capacity, stormwater can clear the streets more quickly to help reduce flooding.

"Hume Avenue was prioritized for flood mitigation projects based on the number of homes impacted and severity of flooding, and opportunity for quick action," said Brian Rahal, a civil engineer and project manager for this project.

"Folks should notice the difference right away," Rahal said. "This will help convey runoff from small to medium storms without causing much flooding in the street. Within five years, we'll have our first big capacity projects done

and that will further improve the entire system so there will be less flooding."

Also on Hume Avenue, engineers will design a bypass system to install a new pipe in place of an undersized old pipe that is contributing to severe flooding. That project, estimated at $1 million, is funded through the American Rescue Plan Act of 2021.

SPOT IMPROVEMENT PROJECTS

Information is provided to ensure transparency. Schedule and budget estimates include contingenices and subject to change. Information is updated as projects are refined.

PROJECT	PROPOSED SOLUTION	STATUS ESTIMATES
Hume Avenue	Increased inlet capacity	Under construction Winter 2022
Clifford, Fulton, Manning	Increased inlet capacity	Construction Winter/Spring 2022
Hume Avenue Bypass	Storm drain bypass (new pipe)	Planning *ARPA 1st Tranche Funding*
Mount Vernon Avenue Cul-de-sac	Cul-de-Sac inlets and drainage	Design *ARPA 1st Tranche Funding*
East Mason	Increased inlet capacity	Investigating, planned Spring 2022
South Jordan Street	Inlet capacity	Planning
East Monroe Avenue	Storm drain upgrades	Planning

Track updates here.

News

News to know about the City's flood mitigation efforts.

Resilient Stormwater Projects Earn $3.7 Million in Grant Funding from State

Two projects aimed to manage and build resilience against flooding in Alexandria received funding from a competitive state grant supporting communities that implement flood control practices.

The state Department of Conservation and Recreation awarded Community Flood Preparedness Fund (CFPF) grants worth $3,241,200 to the Waterfront Implementation Project and $516,500 to a project in Arlandria. It's the second round of CFPF grant the City has received, following an October appropriation of $115,200 for a study and design to incorporate green infrastructure into the City's large capacity projects in the Four Mile Run watershed.

"The rain and tides will keep coming, and we can expect them to be exacerbated by climate change; therefore, the City is taking steps to build resilience now," said Dan Medina, Stormwater Program Manager. "This grant equips the City with a funding boost to take on projects that will benefit the City for years to come."

The framework for the Waterfront Implementation Project can be traced to an initial Flood Assessment Report from October 2007. The multi-year project incorporates natural, blue-green and hard infrastructure to stabilize the shorelines, maintain a resilient floodplain and create a recreational area. The project continues to advance with a preliminary flood mitigation analysis prepared in 2019.

A project planned for Arlandria also received funding in a separate grant award.

"The City is working with affected residents to identify fixes that will help reduce local neighborhood flooding," said Jesse Maines, Stormwater Management Division Chief. "This grant funding will accelerate the delivery of flood protection measures in this neighborhood."

The Arlandria project was identified after the City began experiencing more frequent and severe flood events, including several major floods dating back to 2019. Flash flood events damage residential and commercial properties, impact critical assets, and cause day-to-day disruptions and economic losses. The storm drains in this neighborhood generally convey collected runoff from southwest to northeast and ultimately flow into Four Mile Run and the Potomac River.

The Arlandria project is comprised of five smaller projects that focus on upgrading segments of the storm drain network in the neighborhood between Four Mile Run Park and West Reed Avenue and between Mount Vernon Avenue and Commonwealth Avenue. The individual projects include installing check valves, upsizing pipes, installing new inlets and upsizing existing inlets.

This grant funding will support the Edison Street and Dale storm sewer capacity project, scheduled with a construction date of FY2026 in the FY2022 – FY2031 Capital Improvement Program plan.

Funding for the CFPF grant program comes from the Regional Greenhouse Gas Initiative (RGGI) proceeds. RGGI is a partnership among 11 Eastern states that regulate emissions through an allowance program that collects funds from power plants. Since its inception, the initiative has reduced power plant emissions by 50% and raised more than $4 billion to invest in communities in the 11-state region.

Do You Want to Reduce Your Stormwater Utility Fee? Take These Steps

Residents can apply to the City of Alexandria's Stormwater Utility Fee Credit Program through Feb. 15.

The credit program allows businesses and residents to reduce their annual Stormwater Utility fee by taking steps to manage stormwater on their properties. The program is designed to encourage private landowners across the City to reduce the volume of runoff that their properties generate.

The fee, which began in 2018, is a dedicated funding source to mitigate flooding and protect local water quality by designing and building capital projects, enforcing local ordinances and performing operations and maintenance on the City's stormwater infrastructure. The amount billed depends on the amount of impervious surface in the property. Impervious surfaces prevent stormwater from naturally soaking into the ground; therefore, stormwater drains off the property into the stormwater sewer system and eventually into natural waterways.

Examples of stormwater management practices that are eligible for the credit program are:

- Install a rain barrel
- Plant a native tree
- Install a rain garden
- Participate in a litter cleanup activity

This decorated rain barrel was installed on an Alexandria resident's property to receive a reduction on the Stormwater Utility Fee. (Courtesy)

Credit may be claimed every year for the same stormwater management practice, but an application for that practice must be submitted annually, including supporting documentation. The application window, which opened on Dec. 1, closes Feb. 15.

Applications may be filled out electronically through the credit portal on the real estate tax bill website, emailed to stormwater@alexandriava.gov or printed and mailed to Stormwater Management, 2900-B Business Center Drive, Alexandria, VA 22314.

Watch a video explaining the program here.

City Stormwater Expert Selected for Virginia's Leading Stormwater Policy Board

Jesse Maines, Division Chief of Stormwater Management in T&ES, was named to an executive position on the state's top stormwater policy association that provides guidance to more than 70 local government stormwater agencies and consulting firms.

Mr. Maines was named Secretary of the Virginia Municipal Stormwater Association (VAMSA) during a virtual meeting in January. He has been an active member of the association for more than a decade, including a board position for four years.

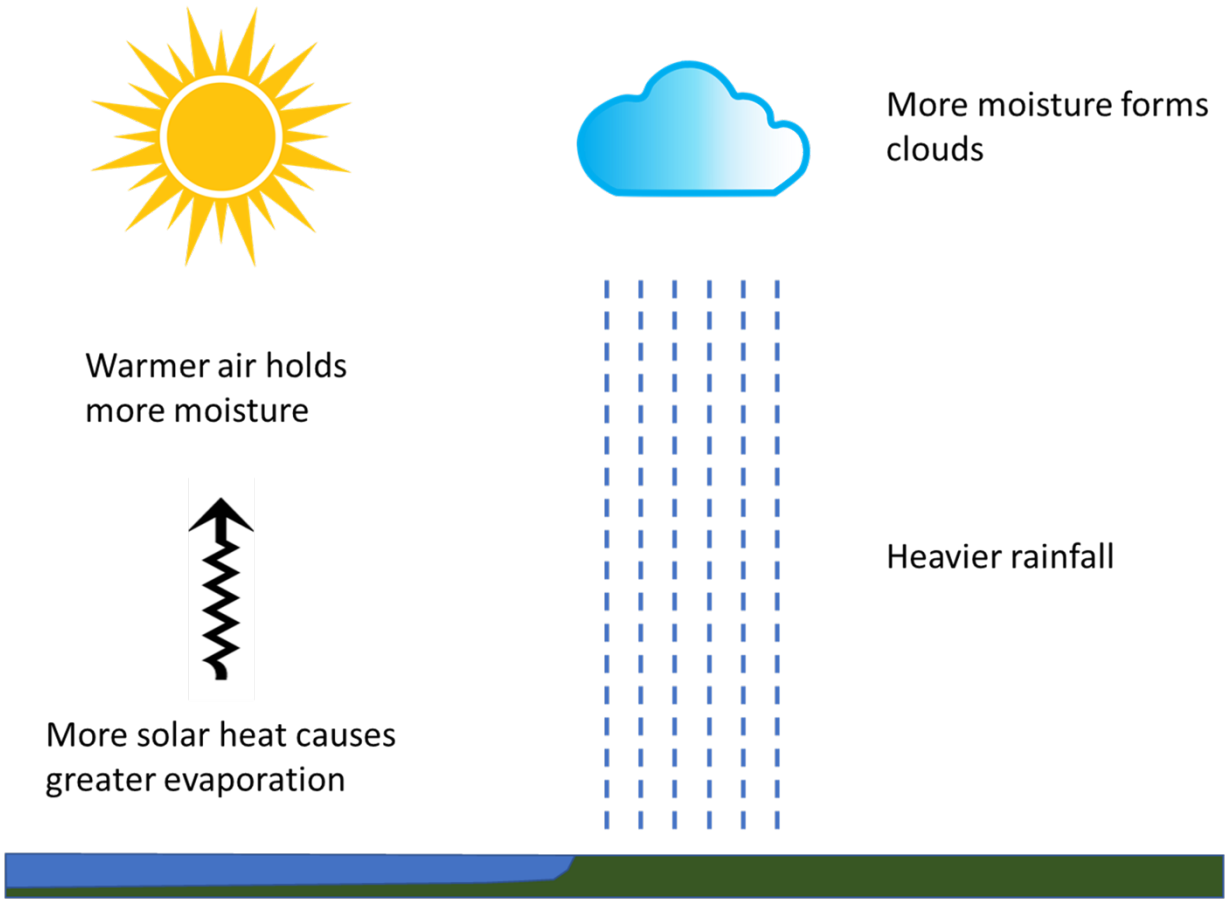
"VAMSA advocates on behalf of Virginia localities and helps localities fund water quality projects to meet regulatory mandates," Maines said. "Also, through sharing of the membership - via open forums and committees that focus on the latest stormwater topics - members can stay abreast of the latest or upcoming changes and initiatives to continue working toward the shared goal of clean water and more resilient communities."

In addition to his new appointment, Mr. Maines serves as the Chair of the State Grants Committee, which identifies and reviews potential funding opportunities for communities to perform stormwater management activities. The association works for clean water and safe infrastructure in Virginia based on sound science and effective public policy with the general assembly, the governor's office, the Department of Conservation and Recreation, and the Department of Environmental Quality.

Mr. Maines has more than 20 years of experience in the public and private sectors working on water resource planning, environmental science, engineering practices, regulatory compliance, policy development, and stormwater utility program implementation. He also serves on the Chesapeake Bay Program's Urban Stormwater Work Group (USWG).

Snapshot

A visual look at information.



As more moisture forms clouds, rainfall becomes heavier. (Adapted from BBC)

From the Ad Hoc Group

Action from the Ad Hoc Stormwater Utility and Flood Mitigation Advisory Group.

John Hill (right), member of the City's Ad Hoc advisory group, gives a tour of the Timber Branch section of Hooffs Run Culvert to Dan Medina, program manager for Flood Action Alexandria, on Dec. 17, 2021. (City of Alexandria)

The Ad Hoc Stormwater Utility and Flood Mitigation Advisory Group collaborates with City staff and elected officials in shaping the Flood Action Alexandria program to reduce the impact of future flood threats. Over the past couple of months, Program Manager Dan Medina has met a few members of the group one-on-one to discuss flood impacts and related issues.

Ad Hoc advisory group meetings are open to the public. The next meeting is scheduled for Feb. 16 at 7 p.m.

Sanitary Sewer Asset Renewal Program

Inspection and rehabilitation of City sanitary sewers, manholes and portions of lateral sewers over several months.

TOP: Jeff Harden (foreground), a closed-circuit television operator for Mobile Dredging and Video Pipe, Removed a robot with camera from a sanitary sewer after completing an inspection on Peyton Drive.
RIGHT: Harden uses a video game controller to move the robot through the sewer network. He watches the live camera feed and uses specialized computer software to record data on areas of sewer network that need attention. (City of Alexandria)

Stormwater Steward

Gratitude for those who go above and beyond the call of duty.

Jessica Lassetter

Jessica Lassetter listened intently as residents of the Fairlington Towne neighborhood rattled off flood impacts they've experienced during intense storms.

Lassetter, a senior environmental specialist and civil engineer for the City's Stormwater Management Division, put her expert eyes on the situation and offered recommendations for neighbors to consider. Her dedication and thoughtfulness have been noted in neighborhoods across the City, including Hume Avenue, where she's affectionately known as the 'Hume Avenue Hero.'

She has more than 20 years of experience in environmental science, policy and planning and specializes in water resources management. She earned a bachelor's in Environmental Science before completing a master's in Natural Resources from Virginia Tech. Before joining the City in 2019, Lassetter worked at the National Fish and Wildlife Foundation and served on the City's Environmental Policy Commission for six years. In addition to her work on the Flood Action Initiative, she administers the City's Municipal Separate Storm Sewer System (MS4) permit focusing on the City's contribution to improving water quality in the Chesapeake Bay.

Watch Jessica Lassetter in action here.

Do you know someone who works on stormwater mitigation practices? Send nominations for Stormwater Steward to the Flood Action Alexandria newsletter at amanda.dolasinski@alexandriava.gov.

Stay Connected

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Communications specialist Amanda Dolasinski is the editor for the Flood Action Alexandria newsletter. Email her at amanda.dolasinski@alexandriava.gov.