

FLOODACTION

ALEXANDRIA

AUGUST 2022 ISSUE 8

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[ADVISORY GROUP](#)

[ENEWS](#)

Communicator's Message

A message from the Flood Action Alexandria communications specialist.

The Flood Action Alexandria team is busier than ever – believe me, I know because I'm usually dashing from one construction site or meeting to another to gather information and take pictures of the team in action.

The program managers are engrossed on three significant capacity projects and dozens of other, smaller projects (read more below!), so I commandeered this space to introduce myself.



I'm Amanda Dolasinski, your Flood Action Alexandria communications specialist. If you catch me on our social media channels, I'm the #InfluenSewer sharing pictures that bring you inside the underground pipes moving stormwater through our historic City.

No, I can't operate a front loader and have no idea how to design storm drains to move your projects along faster.

But I can be helpful by breaking down the jargon civil engineers casually slip into conversations and explaining the complex portions of construction projects. I want to pull back the curtain to show you the challenges the Flood Action Alexandria team is up against – and how it maneuvers to find solutions.

For more than a decade, I worked as a reporter for daily newspapers, magazine, television and radio. I knew I wanted to use my communication and storytelling skills to serve my community, so although writing about sewers didn't immediately come to mind, I'm glad I found it because it's a gratifying job.

I took over this newsletter in December 2021 and constantly re-evaluated it to find the best way to present updates and information. So, what do you think?

Drop me a line over [email](#), [Twitter](#) or old-fashioned snail mail (2900 Business Center Drive, Suite B, Alexandria, VA 22304). I'd love to hear from you.

Project Updates

Updates on Capacity and Spot Improvement Projects.

Large Capacity Projects

The City's top-ranking large capacity flood mitigation projects have reached notable milestones.

The first project for **Commonwealth Avenue and Glebe Road** and **Ashby Street and Glebe Road** is being negotiated with the selected firm.

The project, which combined two projects in adjacent neighborhoods, will increase the capacity of the storm sewer system to allow stormwater conveyance. The project will also incorporate low impact development elements – commonly referred to as “green infrastructure” – to allow stormwater to soak into the ground to reduce runoff. A grant from the Virginia [Community Flood Preparedness Fund](#) awarded to the City in October will support portions of these projects. The estimated cost for design and construction is \$50 million.

For the second project – the **Hooffs Run culvert bypass** – the City has narrowed its list of qualified contractors.

The project will carry water from Timber Branch in a new stormwater management system that involves conveyance to improve the system's performance and reduce flooding. The estimated cost for design and construction is \$60 million.

Spot Improvement and Combined Sewer Projects



Contractors from D&F Construction break ground to install larger storm drain inlets on West Del Ray Avenue on July 25. (City of Alexandria)

Construction began on new, larger storm drain inlets for West Del Ray Avenue – with construction for East Del Ray Avenue not far behind.

The project, which was identified in the City’s [Storm Sewer Capacity Analysis](#), will help alleviate flooding. It costs about \$114,000 and is expected to be completed by mid-August.

“The underground storm drain pipe network has enough capacity for the expected stormwater, but the reason for the flooding in this neighborhood is due to insufficient openings in the inlets to let stormwater into the pipe network,” said Zerihun Tadele, project manager and civil engineer for the Stormwater Management Division.

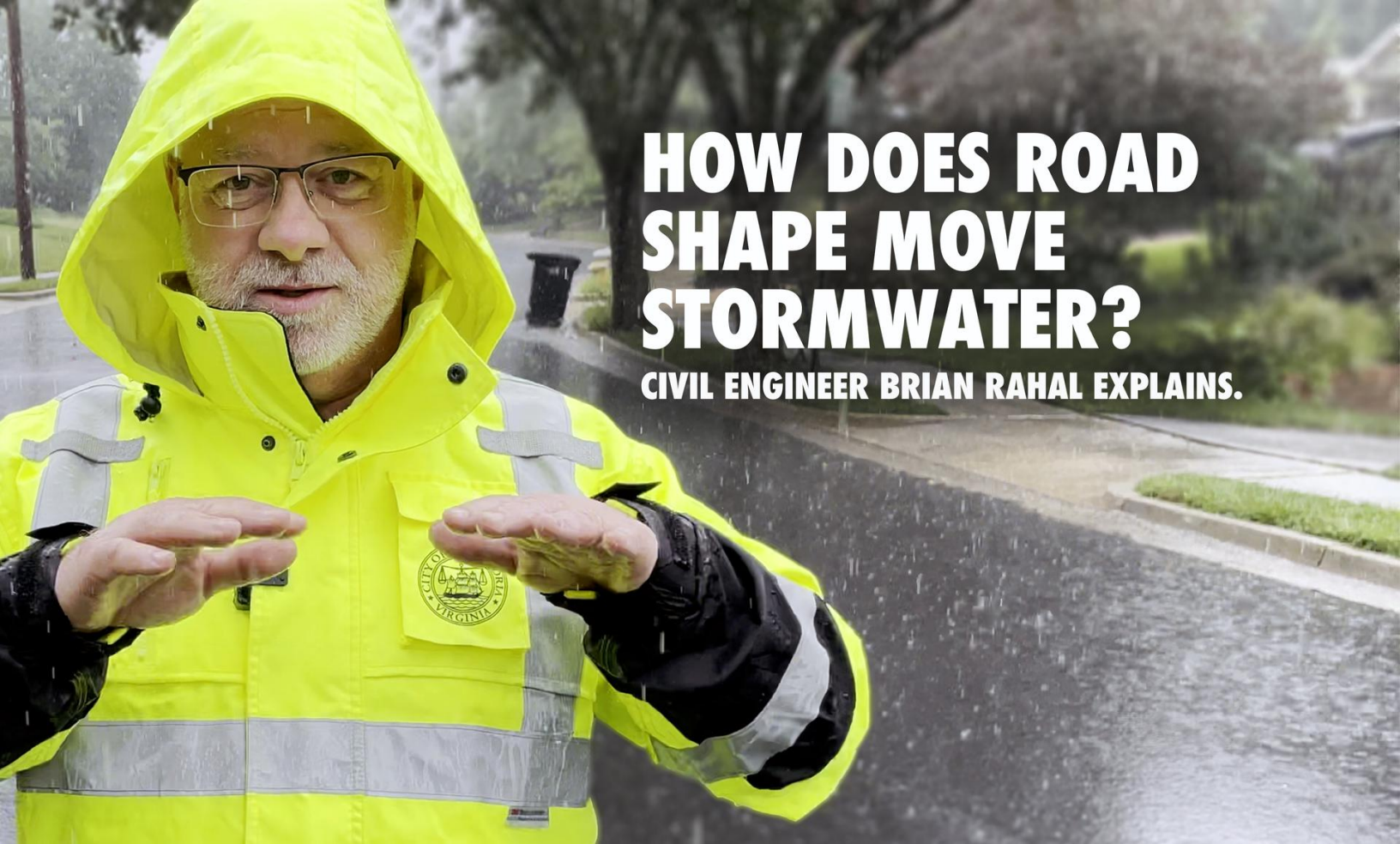
On West Del Ray Avenue, crews will install one new inlet, expand the size of two existing inlets and upgrade the cross ramps near the intersection at Commonwealth Avenue. On East Del Ray Avenue, crews will expand two existing inlets and upsize the cross pipe that connects the inlets.

The inlets will be expanded from four feet long to 16 feet long.

“These longer inflow openings will help to drain the stormwater off the street at a faster rate and reduce flooding in the area,” Tadele said. “And these improvements will not cause any risk to the nearby townhouse basements.”

The crews will also reconstruct the curb and gutter, which are a little-known part of stormwater infrastructure that guide runoff into inlets.

Depending on the location and scope, spot improvement projects can cost between \$50,000 and \$1 million each. They typically can be completed in less than two years, making them an appealing option for neighborhoods while the City works on extensive infrastructure projects.



HOW DOES ROAD SHAPE MOVE STORMWATER?

CIVIL ENGINEER BRIAN RAHAL EXPLAINS.

[Brian Rahal explains how your road is actually the first part of stormwater infrastructure.](#)

News

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

Flood Action Alexandria team maneuvers to accelerate flood mitigation project

The Flood Action Alexandria team is maneuvering to get a head start on a flood mitigation project by using designated local funding while awaiting a potential federal grant to cover construction costs.

The planned project for Notabene Drive, Four Mile Road and Old Dominion Boulevard – which ranks seventh on the City's list of large capacity projects – received a portion of its local funding after unanimous support from City Council in June. City leaders approved the use of the designated Stormwater Utility Fee funding to begin the planning and design portions of the project so that if awarded the federal Community Project Funding Program grant next year, the project will be ready to move to the construction phase without delay.

"We want to do some of the preliminary work so we can just keep going on design and construction on that project," said Jesse Maines, chief of the Stormwater Management Division, [during the June 28 City Council meeting](#). "This grant funding would allow us to accelerate the delivery of key portions of a larger capacity project to help address flooding for nearby residents ahead of the current schedule."

Rep. Don Beyer (D-Va), submitted the flood mitigation project as a [candidate for the Fiscal Year 2023 Community Project Funding Program grant](#), which provides targeted funding for local projects across the country.

The project proposes to install about 660 linear feet of 42-inch pipe to replace the existing 24-inch pipe to provide additional capacity to the storm sewer drain excess water runoff and prevent water from inundating adjacent private property.

"Every resident of Alexandria is entitled to feel protected in their homes when the region experiences intense rainstorms," said Daniel Medina, program manager for Flood Action Alexandria. "This grant will help us further our commitment to finding

solutions that give our residents protection from flooding. We are pleased to receive this grant, and I want to thank Rep. Don Beyers for his support.”

SIGN OF ACTION

We're making it easier to see when flood mitigation projects are happening in your neighborhood.

New signs will be placed at spot improvement flood mitigation projects. These projects are conducted as part of the Flood Action Alexandria program. (City of Alexandria)



Engineers pursue infrastructure method that allows stormwater to seep into soil

Infrastructure mimicking natural landscape will be incorporated into a flood mitigation project planned for an alley between Fulton Street and Manning Street.

Members of Alexandria City Council unanimously endorsed the proposed method – commonly referred to as low impact development or “green infrastructure” – during a legislative meeting on June 28. Unlike traditional infrastructure projects, low impact development projects allow stormwater to infiltrate into the soil rather than the underground stormwater and sanitary network.

“We saw an opportunity to include green infrastructure improvements in this alley,” said Camille Liebnitzky, project manager and environmental engineer for the Stormwater Management Division. “I’m excited to bring green infrastructure techniques to help reduce future flooding events and improve stormwater quality.”

The project will involve potential improvements by implementing green infrastructure practices, improving the storm sewer infrastructure and considering downspout disconnections for the neighborhood. Further design and feasibility will determine the specific project elements.

The alley has experienced flooding during storms because of its proximity to the City’s main stormwater and sanitary sewer lines. To help lessen flooding in the short term, the Flood Action Alexandria team completed spot improvement projects to increase the size of storm drain inlets in the neighborhood that move stormwater from the street into the underground network faster.

Neighbors have reported success with the spot improvement project. However, the neighborhood's proximity to main stormwater and sanitary lines requires additional efforts to address flooding in the long term.

The project is in the conceptual phase, and engineers will review options for low impact development in the alley. The staff has begun considering options and is reviewing design options for feasibility.

One option is to remove the impervious asphalt and install porous pavement, generally installed in interlocking slabs or blocks with room for storage and conveyance. The porous pavement allows rain and snowmelt to seep through the surface down to underlying soil layers, with the blocks allowing for storage and conveying the water offsite when it is too much to be absorbed by underlying soils.

The project is funded through a [federal grant of \\$420,000 secured by Rep. Don Beyer \(D-Va.\) for this project to address flash flooding issues.](#)

Liebnitzky thanked Rep. Beyer for his support in securing the grant.

"The federal grant allows the City to forge ahead faster," she said. "Rep. Beyer is a strong advocate for Alexandria. We're delighted, and we extend our thanks to Rep. Beyer for his continued support."

Rain gauges record intense rainfall during July storm



Water levels at Cameron Run from the City's stream gauge on Eisenhower Avenue on July 9. (City of Alexandria)

An early July storm dropped nearly 4 inches of precipitation on the northeast portion of the City and raised Four Mile Run to the 10-foot stage, according to data from the [City's rain gauge network](#).

The Four Mile Run rain gauge in the northeast part of the City recorded 3.92 inches of rain at the 24-hour mark of the July 9 storm, with most rainfall recorded before 7 a.m. The storm was classified as a 10%- to 12%-chance-per-year storm, meaning the rainfall produced exceeded the probability with a 10% chance of being equal in any given year.

"Fortunately, the intensities were less dramatic than in past large storm events," said Brian Rahal, civil engineer for the Stormwater Management Division who oversees the City's rain and stream gauge network. "It appears the urban flash flooding was at a minimum."

The Hooffs Run culvert at Blue Park stayed below warning depths. In the Four Mile Run watershed, more intense rain fell and raised the stream to the 10-foot stage at Shirlington Road bridge, Rahal said.

The City operates eight rain gauges and six stream gauges to measure rainfall. The gauges provide an early warning to potentially hazardous situations that can lead to flash flooding.

Monitor rain and stream gauge levels in your watershed by using the [online portal](#).

LIVE FROM BEN BRENNAN PARK



The Flood Action Alexandria team and Stormwater Management Division spoke with residents about the City's flood mitigation efforts during a [live broadcast by WUSA 9](#) at [Ben Brenman Park](#) on Monday, July 18. The news station selected Ben Brenman Park as the location to unveil its eco-friendly news vehicle since the park is home to one of the City's stormwater management ponds working to improve water quality. (City of Alexandria)

TOP: The Flood Action Alexandria team and Stormwater Management Division (left to right): Jesse Maines, chief of the Stormwater Management Division; Gavin Pellitteri, water quality compliance specialist for the Stormwater Management Division; Daniel Medina, program manager for Flood Action Alexandria; and civil engineers for the Stormwater Management Division

Haweni Gobena, Ehsanullah Hayat and Zerihun Tadele.

BOTTOM LEFT: Pellitteri and Maines chat with a resident about the City's flood mitigation and water quality efforts.

BOTTOM RIGHT: Maines explains how rain gauges are used to measure precipitation levels as he assembles a rain gauge for City Council member Alyia Gaskins.

Vegetation removal on Four Mile Run levee beginning in mid-August

Beginning Aug. 15, the Department of Transportation and Environmental Services will be managing vegetation removal along the [Four Mile Run levee](#) from the I-395 bridge to downstream of the Mount Vernon Avenue bridge at Four Mile Run.

The City of Alexandria must maintain the structural integrity and the flow capacity of Four Mile Run channel through routine maintenance practices. Associated with the channel is a levee and floodwall system constructed in the 1970s to mitigate flooding.

The upcoming work, which involves removing and cutting vegetation to flush the levee, is part of the maintenance of the levee. In a separate project planned for the fall, the City will work with Arlington County to [dredge Four Mile Run to preserve the project's capacity to carry flows during major rain events](#).

The City has contracted with the Davey Tree Expert Company to perform this work, which includes use of a woodchipper. Work is expected to continue to mid-October. Typical hours of operation are from 7 a.m. to 6 p.m., Monday to Friday. For safety, the public is advised to stay clear of crews while work is being completed.

Snapshot

A visual look at information.



FISCAL YEAR

2023

APPROVED BUDGET HIGHLIGHTS

FLOODING



Flood Mitigation and Stormwater Infrastructure

\$288.4
MILLION

\$288.4 million to expand and accelerate flood mitigation and stormwater infrastructure (FY23 –\$38.5M; 10yr –\$288.4M)

FY 2023 Highlights:

\$26.4
MILLION

For two highest-priority large-capacity projects at Commonwealth/Glebe and Ashby/Glebe.

\$5.9
MILLION

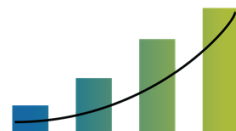
For spot improvement projects to mitigate localized neighborhood flooding citywide.

\$4.0
MILLION

In state of good repair programs; includes Four Mile Run Flood Control Project channel maintenance.

\$0.2
MILLION

Study of the Braddock and West intersection to address flooding issues.



\$280 — \$294
ANNUALLY

Stormwater Utility fee
Increased from
\$280 to \$294 annually.
(effective for November 15 payment)



Floodproofing Grant Program

\$0.8
MILLION

To reimburse residents for floodproofing installation.

Provides reimbursement for 50% of the cost of improvements, not to exceed \$5,000 reimbursed.

Eligible reimbursable practices and expenses include installation of floodproof doors and windows, and other measures to prevent water from entering a structure.

Community Maintenance Work

Stormwater and Sanitary sewer work performed by City crews and contractors.



Public Works Division employees Raymond Monk (left) and Danny Rivera (right) remove debris clogged in a storm drain on Polk Avenue on July 19. (City of Alexandria)

Public Works Division crews resolved 81 storm and sanitary sewer-related service requests in June, including repairing storm drain covers, emptying clogged inlets and draining standing water.

Additionally, crews conducted regular inspections and maintenance of the main streams and hotspots before and during heavy rain events to ensure the drains and stormwater inlets are operational to mitigate flooding.

Residents are encouraged to submit requests for service to Alex311 when problems arise in neighborhoods. When a request is received, the City will dispatch a crew to help – and the data is used to track patterns so engineers can plan improvement projects.



Submit Alex311 service requests online, by dialing 311, on social media or by reporting in person at any local government building.

SANITARY SEWER ASSET RENEWAL PROGRAM: City to procure construction contractor for rehabilitation

City staff is preparing technical documents to procure a construction contractor for sanitary sewer rehabilitation.

The first phase of the [Sanitary Sewer Asset Renewal Program](#) included inspections east of Commonwealth Avenue of 21.3 miles of mainline sewer, 2,632 lateral lines and 601 manholes. The inspection report recommended rehabilitation for about 33% of the mainline sewer, 16% of the laterals and 20% of the manholes.

The second phase of inspections – which includes inspections west of Commonwealth Avenue – started in June and will continue through February 2023.

The asset renewal program is part of the City's 10-year, \$33 million Sanitary Sewer Capital Improvement Program. The program will help to preserve and protect existing City-owned sewer infrastructure, extend its life and help reduce the amount of infiltration and inflow (I&I) into the sanitary sewer system that can cause sanitary sewer backups into homes and businesses.

The asset renewal program builds on a previous 20-year program to rehabilitate infrastructure. To date, the City has invested about \$30 million in the rehabilitation of more than 60 miles of sanitary sewer and has repaired about 3,200 manholes.

From the Ad Hoc Group

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

Ad Hoc group's first report outlines project progress, resident support and more

The resident group tasked with assisting in the oversight of the \$370 million Flood Action Alexandria program spent its first year digging into the scope and science of flooding – and applauds the City's emphasis on retaining experts to tackle problems, according to its inaugural report.

The [Ad Hoc Stormwater Utility and Flood Mitigation Advisory Group](#), which assists in oversight of the funding, timing and implementation of projects for the Flood Action Alexandria program, finalized its first report in June, summarizing how the group worked with staff members. The report recommends continuing the Ad Hoc group for at least one fiscal year.

"The group, aided by City staff, spent the majority of the past year gaining knowledge about the scope, types and science of stormwater flooding in Alexandria," according to the report. "The group applauds the effort expended by the City to retain highly

qualified personnel and launch the program – essentially from ground zero. Further, there is a demonstrated effort to implement and complete individual projects according to the current project schedule, as well as improve communication.”

Among the group’s recommendations, members asked City Council to extend the term of the group for an additional year, work with staff to explore ways to improve the Flood Mitigation Pilot Grant program and examine ways to increase engagement with residents.

Flooding has become an increasing complication in the historic City of Alexandria as warmer climates have generated more intense storms more frequently. Successive severe rainstorms in July 2018 and multiple summer storms in 2020 and 2021 caused notable damage to properties.

As a result, the City organized a strike force team bringing experts from multiple departments to address flooding issues from the waterfront to historic neighborhoods as part of the proposed 10-year Flood Action Alexandria program. Under the program, experts will plan, design and construct about \$370 million in projects to address flooding.

The Ad Hoc group was established by City Council on Jan. 26, 2021. Its members represent constituencies affected by flooding, including financial and equity interests.

Daniel Medina was hired to lead the Flood Action Alexandria program. Dozens of engineers and environmental experts in the Flood Action Alexandria program specialize in stormwater and sanitary sewer infrastructure.

One of the notable aspects of the Flood Action Alexandria program is the [Flood Mitigation Pilot Grant program](#) run through the Stormwater Management Division. Under the pilot grant program, the City reimburses property owners 50% – up to \$5,000 – if they install flood mitigation devices or practices on their property. The program has paid out more than \$490,000 to about 200 applicants.

Ad Hoc Group leaders elected for next term

John Hill, a retired financial advisor and former chairman of the board for Alexandria Renew Enterprises, has been elected as chair of the Ad Hoc Stormwater Utility and Flood Mitigation Advisory Group.

Hill is joined by Katherine Waynick, who was re-elected to serve as the group’s vice chair. Other members of the group are Cheryl Leonard, Dino Drudi, Charlotte Hall, Brian Sands, Christine Thuot, Howard “Skip” Maginniss and Councilman John T. Chapman.

“When I heard about the Ad Hoc group, I simply wanted to use my experience to help out my neighborhood,” Hill said.

Hill has lived in Rosemont since 1988 and said flooding has become noticeably more frequent and severe in recent years.

“One clear goal: Help Alexandria residents become more aware and involved in water issues in their neighborhoods,” Hill said. “City Council has greatly increased the investment in flood mitigation ... that means lots of projects – both big and small – across the City. As these projects get started, I would like to create a process where residents can learn the reason why the projects are necessary, their impact on the flooding problem, their total cost and what additional work remains.”



John Hill
Chairman



Katherine Waynick
Vice chairwoman

Stormwater Steward

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

Behind the thousands of Stormwater Utility Fee bills and receipts, a dedicated analyst crunches numbers to protect Alexandria property owners he's never met.

Ryan Zellman, a program analyst who joined the Stormwater Management Division in 2017, puts his careful attention and fact-checking into the Stormwater Utility Fee billing and payment process. In 2018, he helped implement the fee, which is the dedicated funding source for flood mitigation projects paid by all property owners in the city.



"I find it really rewarding to be able to help residents," Zellman said. "I understand the credit application process can be unpleasant, but I hope I can ease the process by breaking down complicated processes and explaining them in a way that's easy for residents to understand and empowers them to feel good about contributing to projects that will benefit everyone in the City."

Zellman recently corrected an error on a resident's bill.

"My home had been incorrectly classified and I have been paying a higher stormwater fee," the resident said. "Not only did (Zellman) fix the matter, but he called me back to let me know exactly what he had done and when to expect it to come through the City computers. I appreciate his time and effort."

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



