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## Manager's Message

*A message from the Director of the Department of Transportation & Environmental Services.*

Summertime is a chance to take stock of City's commitment to Flood Action

A city budget, it is often said, is a value statement.

If that is the case, then Alexandria has again demonstrated we are determined to make City infrastructure more resilient to climate change-induced flooding.

In May, City Council completed its annual budget process without a tax rate increase but with a sensible increase in the fee to fund flood mitigation projects and maintain our stormwater infrastructure.

As the City Manager and Council considered trade-offs necessary to adopt a balanced budget, some consensus themes emerged. One of those was an unwavering commitment to the Flood Action program.



As a result, just one year after a significant reinvestment in stormwater management, the City is preparing to award major design contracts for three [large capacity projects](#) totaling \$110 million in new infrastructure. Multiple [spot improvement projects](#) are underway, the [dredging of Four Mile Run](#) will soon begin, and the City will soon rehabilitate dozens of miles of [sanitary sewers](#) to tackle a root cause of basement backups in homes and businesses. The City has also been actively seeking federal and state grants to supplement City resources, and Council this year set aside special funds for climate initiatives.

Unfortunately, all this won't happen right away. We'll need to keep our collective noses to the grindstone for years to come.

Alexandria's annual budget continues to reflect the citywide consensus about climate change. And more than just an accounting exercise, the yearly budget demonstrates that we value Flood Action as a shared public improvement initiative that will have benefits for generations.

*Yon Lambert, 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.*

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# Project Updates

*Updates on Capacity and Spot Improvement Projects.*

## CAPACITY PROJECTS



Proposals were evaluated and shortlist interviews were conducted for the combined **Commonwealth Avenue and East Glebe Road and Ashby Street and East Glebe Road** project. The combined projects, located in the Four Mile Run watershed, will increase the size of stormwater pipes, create opportunities for stormwater to be stored and released slowly over time and incorporate green infrastructure practices, such as permeable pavement and urban bioretention that allow stormwater to soak into the ground and reduces runoff. The estimated combined cost is \$50 million.

The **Hooffs Run Culvert/Timber Branch Bypass** project is at the Request for Qualifications phase and will be followed by a proposal evaluation phase. Under this project, located in the Hooffs Run watershed, a new storm infrastructure system will be constructed to transport stormwater from Timber Branch away from the Hooffs Run Culvert. The bypass system should better manage flows from the Timber Branch watershed. The estimated cost is \$60 million.

Capacity Projects

## SPOT IMPROVEMENT PROJECTS





A crew from D&F Construction works on a project to increase inlet capacity on Manning Street on April 16. (City of Alexandria)

Construction is expected to begin on curb inlets on **East and West Del Ray Avenue** in late May. Inlets are one piece of the stormwater management network that carries stormwater runoff from streets into the stormwater infrastructure system that leads to nearby streams. By increasing inlet capacity, stormwater can clear the streets more quickly to help reduce flooding.

Last month, the City completed inlet capacity projects on Clifford Avenue, Manning Street and Commonwealth Avenue.

Spot Improvement Projects

# News

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





Haweni Gobena (left), Brian Rahal (center) and Zerihun Tadele (right), engineers from the Stormwater Management Division, inspect Holmes Run on April 28. (City of Alexandria)

## City inspects streams For FEMA's Community Rating System program

Civil engineers with the Stormwater Management Division are working to enhance public safety by conducting annual inspections of city streams prone to flooding and floodways.

The inspections are part of the National Flood Insurance Program's [Community Rating System \(CRS\)](#), a voluntary federal floodplain management incentive program that recognizes communities implementing flood management practices that exceed federal minimum requirements. City engineers inspect 24.8 miles of local streams each year.

"We keep an eye on the streams because they're the source of the floodplains," said Brian Rahal, a civil engineer and the City's CRS program coordinator. "If there are blockages and obstructions, it can increase the risk of flooding; therefore, maintenance crews will remove those blockages and obstructions noted in the inspections to help maintain capacity in the streams."

Maintaining a stream's capacity to convey stormwater keeps the flows in the channel.

During inspections, engineers examine the stream's ability to convey water properly. They look for dead trees, woody debris and vegetation near bridges and culverts that could threaten public safety by clogging the waterway.

Engineers recently completed inspections of Holmes Run, Four Mile Run and Cameron Run. They will finish inspections on Backlick Run, Strawberry Run, Taylor Run and Lucky Run later this spring. They make note of any potential blockage and evidence of severe erosion and schedule work for issues that need to be corrected.

Alexandria became the first community in Virginia to receive a CRS Class 6 rating in October 2013. Inspections must be completed every five years to renew certification through the CRS program, enabling property owners to receive a discount of up to 20% on flood insurance premiums.

The City successfully renewed its Class 6 rating in 2021 – and remains vigilant by conducting inspections annually.

"I commend you on your community actions and your determination to lead your community to be more disaster-resistant," according to the FEMA certification letter dated Feb. 12, 2021. "This commitment enhances public safety, property protection and protects the natural functions of floodplains and reduces flood insurance premiums."

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## Spot improvement project submitted for federal grant funding

A flood mitigation project aimed to convey and drain stormwater away from properties has been named among 15 selections for federal grant funding.

The spot project planned for the area of Notabene Drive, Four Mile Road and Old Dominion Boulevard was submitted as a candidate for a \$1.12 million [Community Project Funding \(CPF\) Program federal grant by Rep. Don Beyer, D-Va.](#) The program targets funding for local projects across the country.

"In Alexandria, these frequent, severe flooding events impact our City far beyond our well-known Potomac River waterfront area – and our residents and business owners are looking to us to do everything we possibly can to implement short-range and long-term flood mitigation measures to reduce and resolve the impacts of this recurrent flooding in our community," said Sarah Graham Taylor, assistant City manager/legislative director. "These improvements make our neighborhoods more resilient to climate change and flash flooding."

The roadway and adjacent private properties at the intersection of Notabene Drive and Four Mile Road were identified as an area with capacity issues in the [City of Alexandria Storm Sewer System \(CASSCA\)](#) study. Engineers determined the neighborhood is prone to periods of inundation from precipitation, and runoff from the alley onto private property during extreme storms has caused private property damage to accessory structures.

The grant, if awarded, will accelerate a critical portion of the larger capacity project identified in the City's 10-year plan CIP to be funded in FY 2028.

Spot improvement projects can cost between \$50,000 to \$1 million each, depending on the location and scope. 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.

The City plans to spend \$5.9 million in FY 2023 to deliver six projects. If awarded, the grant would support construction of one of the six shovel-ready projects.

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## Hurricane season 2022: What should you expect in Alexandria?

As forecasters predict another active hurricane season, local leaders encourage Alexandria residents and businesses to prepare by considering flood-proofing measures and emergency kits.

"The arrival of the hurricane season may be unsettling, but we are not powerless," said Dan Medina, program manager for Flood Action Alexandria. "There are many actions that city residents can take to reduce their exposure the floods."

In Alexandria, heavy rains produced by hurricanes can overwhelm the drainage infrastructure and waterfront areas and cause flooding in several neighborhoods.

Medina said residents should remove valuable belongings from basements that could flood, elevate utilities such as air conditioning units, avoid encroaching into City easements that carry floodwaters, remove and properly dispose of vegetation debris that could clog storm drain inlets, report blocked inlets to the City, move vehicles to high ground and install flood-proofing technology, such as flood gates and flood barriers. The City offers a [flood mitigation grant program](#) that reimburses residents 50% - up to \$5,000 – if they take flood mitigation measures on their property.

"It is critical to listen to hurricane reports and use Alex311 to report issues to the City," he said. "Finally, it's essential to have an emergency kit packed to hold you over for at least 72 hours."

The Atlantic hurricane season begins June 1 and lasts until Nov. 30. This season, forecasters predict an average to age to an above-average number of named storms.

"The past two hurricane seasons were extraordinarily active with the historic 2020 season reaching unprecedented levels and setting a new record for the number of named storms with 30," [according to a statement from AccuWeather.](#) "The 2021 tropical year was almost as prolific with 21 named storms, making it the third most active on record in terms of named systems. It also forced meteorologists to use the entirety of the designated storm name list for the second straight season."

Stay in the know by signing up for emergency alerts in Alexandria at [alexandriava.gov/eNews](#) and selecting "Severe Weather Warnings" and "Emergency Management News & Tips."





# 7 ITEMS TO KEEP IN A HURRICANE KIT

- Water
- First Aid kit
- Batteries
- Toilet Paper
- Notebook
- Flashlight
- Pliers

## Snapshot

*A visual look at information.*

# 2022

# FISCAL YEAR

# in REVIEW



## 88,999

LINEAR FEET OF  
MAIN LINE  
INSPECTED AND  
CLEANED

## 34

FLOOD MITIGATION  
PROJECTS STARTED



## \$82,640

REIMBURSED THROUGH  
BACKFLOW PREVENTOR PROGRAM



## 601

MANHOLES INSPECTED

# \$491,776.88

REIMBURSED THROUGH FLOOD MITIGATION PILOT GRANT PROGRAM



LINEAR FEET  
OF INFRASTRUCTURE IN-  
SPECTED BY CCTV AND  
CLEANED

## 279,874.4

## 2,632

LINEAR FEET  
LATERAL SANITARY  
SEWER LINES INSPECTED



# \$3.87 MILLION



SECURED FOR FLOOD MITIGATION PROJECTS  
THROUGH COMMUNITY FLOOD PREPAREDNESS FUND





# Community Maintenance Work

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

## TIMBER BRANCH CULVERT



Crews completed repair work on West Braddock Road over Timber Branch culvert in May. (City of Alexandria)

Repairs completed on sidewalk and storm infrastructure in a highly traveled area of the City will enhance public safety and safeguard City

stormwater infrastructure.

The area was damaged in an extremely localized, intense rain event in August 2021. The repair work included replacement of a catch basin, sidewalk, inlets, mortaring granite capstones on top of the wing of the retaining wall and replacement of timber guard rail along the sidewalk.

Repairs were completed on May 17.

## WATER PROTECTION



A new trash rack was installed at Lucky Run in April. Trash racks are installed on the outlet structure of ponds to keep large trash and debris out of the storm drain system and local waterways. The pond associated with Lucky Run is one of the City's stormwater practices that treat water quality by removing pollutants and capturing trash to prevent it from entering the storm drain system and local waterways. (City of Alexandria)



**Do you see a trash rack that needs attention?**

You can submit a service request [online](#), on the Alex 311 app, by phone dialing 311, on social media @AlexandriaVA311 or in person at any City government building.

## Resident Success Story

*How residents found success with flood mitigation.*









ABOVE: Lt. Gen. Richard Kelly, USMC (Ret.) and his wife Mary Nell Bryant installed several different flood mitigation features at their property on Mason Street. They are among 189 applicants of the Flood Mitigation Pilot Grant Program. BELOW: Lt. Gen. Kelly demonstrates how to install a flood gate near at the basement door of his property on East Mason Street. (City of Alexandria)

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With a few cranks of a ratchet, Lt. Gen. Richard Kelly, USMC (Ret), locks in a floodgate at the basement door of his property on East Mason Street.

He tugs on it; it's firm in the doorframe. The device – plus other changes he's made – bring him peace of mind the property will be protected during intense storms.

"I'm confident that what I have in place will work," Kelly said.

Kelly is among 189 Alexandrians who have applied to the [Flood Mitigation Pilot Grant Program](#), which reimburses residents 50% – up to \$5,000 – for installing flood mitigation devices on their property. The City is the first municipality in the state to offer a grant program to residents who take measures on their private properties.

The property on East Mason Street held up well through storms when Kelly lived there in the past, he said. He rents the property now and became aware flooding was becoming an issue in recent years.

In 2019, he was on a trip to Canada when his tenant called to say there was a problem. Flooding caused major damage in the basement that forced Kelly to rip out the drywall and flooring.

Kelly said he wanted to take care of the tenant and the property so they would be prepared in the future, so he didn't take any chances.

He changed the wood floor to tile, raised the furnace and the air conditioning unit and installed glass block windows, a brick knee wall and a sump pump in the basement. The floodgate, which can be removed, adds an extra layer of protection to the permanent changes at the home.

The City's upcoming stormwater and sanitary sewer infrastructure projects should address flooding concerns in neighborhoods throughout Alexandria, but in the meantime, Kelly said he wanted to make smaller changes to protect his property.

"You have to do everything you can," he said. "I wanted to completely protect it."

Kelly received reimbursement through the grant program in May and encouraged other residents who experienced flooding on their property to apply.

"I'm glad the City went to the state to get the approval," he said. "The big projects (the City) is ultimately going to have to do are going to be years off, I understand that. They're doing spot (projects), that's good, but in the meantime, I think we all have to do the best we can."

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# Stormwater Steward

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

Without hesitation, civil engineer Mitch Dillon hurdles over woody debris to get a closer look at – well, he's not sure, but he knows whatever it is, it could be contributing to flooding problems.

Dillon, a program manager with the Department of Project Implementation, has worked on flood mitigation projects for the past year. He's often the first engineer to leap, creep and scale unknown terrain to understand what's causing flooding issues in Alexandria's neighborhoods.

In the past year, he's visited 21 neighborhoods. He chats with neighbors, jots down notes and gets up close to investigate. His work has led to recommendations to install new inlets and increase the capacity size of existing inlets.

"Mitch never says 'no' when asked to undertake an assignment," said Dan Medina, program manager for Flood Action Alexandria. "He sincerely cares for the people experiencing flooding and does everything in his power to improve the situation."



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**TALKING UNDER WATER**  
ONE WATER • ONE PODCAST

**BUILDING RESILIENCY IN ALEXANDRIA**  
Stormwater Management Division's chief Jesse Maines and senior civil engineer Brian Rahal chat about the City of Alexandria's flood mitigation efforts on an episode of Talking Under Water, a podcast from One Water Media. Stream it at [onewatermedia.com](http://onewatermedia.com).

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