



Memorandum

Memorandum No: 25-069

TO: Honorable Mayor and Members of the Fort Lauderdale City Commission

FROM: Rickelle Williams, City Manager *RW*

DATE: June 23, 2025

SUBJECT: Flooding Initiatives Update

Since the major flash flooding caused by storms in November 2020, April 2023 and June 2024, South Florida continues to experience heavy rainfall events. On June 18, 2024, Commissioner Steven Glassman issued a memorandum outlining a multi-point plan to enhance flood resilience and reduce the associated impacts. At the encouragement of the City Commission, resilience efforts and major capital improvement projects have been prioritized and accelerated to proactively mitigate the associated impacts of heavy rainfall. Substantial funding commitments will be needed to implement these aggressive plans. This memorandum is an update to the June 22, 2024 Commission Memorandum 24-109 and summarizes the key initiatives underway to improve the resilience of City operations and the community in general.

Below is a high-level overview of the City's current efforts addressing Commissioner Glassman's multi-point plan:

- Fortify Lauderdale: Consistent with previous updates to the City Commission related to *Fortify Lauderdale* efforts and the progress of the Stormwater Master Plan, stormwater improvements delivering a higher level of service are now installed in Edgewood, River Oaks, and Durrs with construction ongoing in Dorsey Riverbend and in Progresso Village. Design work is being finalized for Melrose Manors improvements and conceptual design is being advanced for the 25 neighborhoods (an increase from the original 17 targeted neighborhoods) encompassed in Phase II of the Stormwater Master Plan. The Commission will review the proposed order of the Phase II projects at a August 2025 Conference Meeting. Public Works has increased its fleet of flood response vehicles such as jet-vector trucks and is adding both engineering and field staff to support construction and maintenance of these new drainage systems. Finally, the robust inspection program developed by Public Works will ensure that the City's stormwater management system is always ready for the next storm.

- Communication: City staff has engaged our many partners in stormwater management to improve communications, better understand vulnerabilities, and coordinate in advance of and during storm events. These partners include South Florida Water Management District, Broward County Highway and Bridge Maintenance Division, Florida Department of Transportation, Broward County Aviation Department, the Army Corps of Engineers, and the cities of Oakland Park and Lauderhill. As recently as the week of May 11, 2025, discussions with Lauderhill advanced the development of an Interlocal Agreement to clarify roles and responsibilities related to maintenance and operations of the stormwater conveyance system impacting Melrose Park. Since the initial memo on this topic, Broward County has released its county-wide Resilience Plan focused on stormwater storage and water management options to the west which can lower groundwater tables and reduce impacts of stormwater discharges to the eastern coastal communities. The City's Strategic Communications office has also produced an award-winning video to help educate the public on stormwater maintenance practices.
- Flooding Emergency Response Plan: The Public Works Department has developed a Flooding Emergency Response Plan. The plan lays out Public Works employee roles and responsibilities, highlights locations of historical flooding, and identifies available assets and contractual resources. The plan includes key contact information for external agencies and checklists to ensure a comprehensive response. The plan focuses on City-wide needs with the recognition that response will be based on the unique localized impacts of each weather system. Multiple rain events over the last two years have resulted in a more experienced City-wide executive and emergency management team, better able to coordinate and respond to community needs.
- Flood Forecasting and Monitoring: City staff takes advantage of expert forecasting from the National Weather Service, South Florida Water Management District (SFWMD), National Hurricane Center and National Oceanographic and Atmospheric Administration (NOAA) to prepare for probable and worse case scenarios for storm events. We use in-house SCADA data to monitor real time observations of rainfall as well as real time groundwater monitoring from the United States Geological Survey, real time rainfall and canal water level from SFWMD, and real time tidal observations from NOAA. The City is partnering with Broward County to install flood sensors at three (3) major county road intersections within the City's limits and with Florida Atlantic University-NOAA to install flood sensors and weather stations at six (6) additional locations.
- Resilience Leadership Structure: The recruitment process to fill the Public Works Director role is well underway. Dr. Nancy Gassman, Chief Resilience Officer (CRO), remains dedicated to cross departmental efforts that focus on advancing the City's Sustainability and Climate Resilience programs. Marco Aguilera was recently hired as the City's Chief Waterway Officer, tasked with recommending

waterway policy, applying for grant opportunities, providing operational assistance, and coordinating with external agencies such as the Coast Guard to address issues related to the City's critically important waterways.

- Private Property Adaptation: The City engaged a consultant to research and develop recommendations for improving resilience on commercial and private properties. In addition, the consultant will provide private resilience cost-share and grant program recommendations. A Resilience Outreach Coordinator, currently being hired by the City, will support outreach and education of our residents on resilience efforts to support flood risk reduction on private properties.
- Flood Insurance and Community Rating System: Through City efforts related to the Community Rating System (CRS), City of Fort Lauderdale residents receive a 15% premium discount on National Flood Insurance Program (NFIP) policies for being a Class 7 community. CRS discounts result in savings of \$2,505,297 on the 34,764 NFIP policies issued within the City. Between CRS review cycles, the City is working with the Federal Emergency Management Agency (FEMA) to address some outstanding issues. While the current changes at FEMA are slowing the agency's review, if and when resolved, the City intends to apply for a Class 5 rating with an anticipated 25% discount on premiums as a result of this effort. The City is also developing a certified Watershed Master Plan, a prerequisite to earn a Class 4 rating. The City has also engaged a CRS consultant who will begin work this June to review our CRS program and make recommendations to move forward with new ordinances and CRS activities. While an improved CRS rating will lower costs, it should be noted the FEMA actuarial rate increases will continue to put upward pressure on premiums and that may supersede the associated discount factors the City is seeking.
- Addressing the Causes of Climate: Reducing our carbon footprint can slow future climate impacts on the City. In addition to completing a Vulnerability Assessment in compliance with Florida Statute Section 380.093(4), the Net Zero Plan to address reduction of greenhouse gas emissions has also been finalized. A presentation to the Commission occurred on June 17, 2025 to identify key initiatives, costs and next steps. A Commission-funded initiative to install electric vehicle charging infrastructure at City facilities has gained momentum this year with 14 EV chargers planned at six (6) City facilities throughout the summer. This is complemented by a similar activity by the Transportation and Mobility Department to increase the number of EV chargers at City parking facilities. Staff has also presented a solar panel pilot program as part of the Preliminary Fiscal Year 2026 Budget.

The City will continue to address the Commission's Infrastructure and Resilience priority by bringing the City's ongoing and future flood response into focus.

If you have any questions, please contact Assistant City Manager Anthony Fajardo at afajardo@fortlauderdale.gov

Attachment

1. Letter from Commissioner Steven Glassman dated June 18, 2024
2. Commission Memorandum No. 24-109 dated June 22, 2024

c: D'Wayne M. Spence, Interim City Attorney
David R. Soloman, City Clerk
Patrick Reilly, City Auditor
City Manager's Office
Department Directors



Memorandum

Date: June 18th, 2024

To: Susan Grant Acting City Manager
Alan Dodd, Director of Public Works
Dr. Nancy Gassman, Assistant Public Works Director

CC: Honorable Mayor and Members of the City Fort Lauderdale City Commission

From: Vice Mayor Steven Glassman, District 2

Re: **Commission Report Comments Regarding Flooding and Multi-Point Plan**

Last week's rainstorm once again challenged our community. And while our response was very good, we need to focus on being more proactive. We must call on Fort Lauderdale's innovative spirit.

Parts of Broward saw nearly 20 inches of rain in a two-day period. This is not the 1,000-year storm we saw last year, but more like a 200-year storm with a half percent chance of occurring each year.

Still, these events seem to be happening more frequently.

And this is without the expected 2 feet of sea level rise by 2060, which will greatly reduce the effectiveness of our stormwater system and create other challenges for our community.

Dr. Obey, who leads FIU's Sea Level Solutions Center called this, "... a sign of things to come." More rain in a shorter amount of time is exactly what science tells us we should expect to see more of – and regardless of the science, as we grow, we must do a better job of finding smart places for water to go.

I know we are in the process of completing our Flood Vulnerability Assessment, and that is a great start, but we cannot wait for a study to take action on flooding.

It's time to innovate and lead – becoming the beacon of how you should prepare for and respond to flooding.

Today, I am sharing a multi-point plan to start improving our flood resilience and reduce flood risk. BUT I want this to be a discussion item and this to become our plan. Let's work together, amend this plan, and show our residents that their safety and security is our #1 priority.

Our \$500M Fortify Lauderdale Plan, is ambitious and vital, but we must also take immediate actions, and communicate what we are doing. Our residents deserve to understand our plans.

While the County is working on large-scale planning efforts, it will still be up to us to find and implement solutions. We also cannot wait for them to act on our economic drivers. How many times does the airport have to close due to flooding until you realize it's a real problem and start actually doing something about it? How many times does the airport employee parking lot need to flood for them to realize that they are impacting our residents?

All of this must be a priority as we move into budget season.

People live here because of the water, and frankly, with climate change and sea level rise, it will get worse. But that means we must act now, be bold, and not afraid to lead.

Vice Mayor Steve Glassman's Multi-Point Plan to Enhance Flood Resilience and Reduce Impacts

1. **Communication:** It starts with communication. We must be more comprehensive on showing our residents all of the resilience and stormwater projects we are working on and communicate it in a way they understand. We are spending their dollars and should be as transparent as possible. This will also help people understand that these projects are complex and take years to fully implement. Projects are moving even when construction may not be actively occurring.
2. **Insurance:** The City of Fort Lauderdale is currently a Class 7 in the Community Rating System. I would like to see staff develop a comprehensive plan for our community to achieve a higher-class rating. I understand that there are hurdles, and it may be difficult, but we do not back away from a challenge. This will allow us to properly plan our budget to provide our expert team with the resources to provide an additional 10% savings on flood insurance to our residents. Cutler Bay has a Class 4 rating; we should be, too.
3. **Floodplain and Resilience Ordinances:** It's time for a comprehensive review of our floodplain ordinances and our code in general with respect to resilience. We should enact ordinances to assist repetitive loss properties and explore a community-wide freeboard ordinance allowing everyone to build higher within property rights. All of this can be done without creating adverse impacts on neighbors if done thoughtfully.
4. **Emergency Management:** I would like to see the development of a Flash Flood Emergency Action Plan that does not just focus on response after the fact, but a response before the flooding becomes severe. There is no reason roadways that we know are under water, too deep for cars, should not have police or other barricades to stop people from using them. We should be developing emergency flood routes and prioritizing those higher elevation roads. Also, there is modeling technology on the shelf through the uses of AI to forecast on a street-by-street basis. We should buy that **today**.
5. **Real-time Flood Forecasting:** To that end, we need technology that will help us identify low-lying areas and those expected to flood during a storm. That starts with a screening level of identifying those areas prone to flooding and connecting them back to the Flash Flood Emergency Action Plan. Then, using real-time data, we can make decisions on where to place resources.

6. **Flood Sensors:** And forecasting is only as good as data. We need to lean in on technology and flood sensors. Let's start evaluating how we can deploy a community-wide flood depth sensor network. Flagler Village and Victoria Park roadways and elsewhere were impassable and with sensors and signage, we can save people the cost of losing a car.
7. **Funding our Resilience Work and Waterways:** In our next budget, there is a proposed Chief Waterways Officer. Let's work on building sustained funding for that position and the resilience work of our waterways. I have been exploring ways to modify our existing City code to allow private residents to rent their docks *legally*, with the permit fees going into a fund that would be dedicated for waterway clean-up and resilience. After a flood, our water quality suffers, and that water often ends up on our roadways, too. Any proposal should also require pump-outs of these vessels and provide additional funding for enforcement.
8. **Elevating Roadways:** We are expecting the Urban Land Institute's report on Criteria for Raising Roadways in the City. We can be thoughtful and do it right. We must develop a plan of last resort to prioritize and raise roadways. This cannot just be guidance that sits on a shelf. I would like to see a Road Raising Prioritization Plan in next year's fiscal budget. This is a priority for me in the Las Olas Isles, among other neighborhoods.
9. **Finding more Storage:** We cannot build enough grey stormwater infrastructure for all the water our community receives in these large storms. We must look for additional storage. When our unused fields are high and dry and the neighbors next to them are underwater, that's a problem. While we are in the midst of park redesigns, let's evaluate creating stormwater parks and more retention areas. Let's do a survey of residents to find out who would be willing to let us regrade their swales to add additional storage, and let's create a program that recovers those swales. This is especially important in neighborhoods like Victoria Park.
10. **Private Property Adaptation:** Last year, our Public Works team told us they are working on guidance for Private Property Resilience. Meanwhile, Miami Beach is in year 2 of their Private Property Adaptation Program. They are providing grants to their residents and implementing solutions to help people reduce flooding; let's not reinvent the wheel.
11. **Sustainability Action Plan Implementation:** And, while we fix flooding, we also need to focus on the root cause of climate change. We need to empower our sustainability team to truly reduce the emissions of Fort Lauderdale. We need

stronger codes that encourage greener buildings, more trees and nature-based solutions, and we need to work on expanding our network of fast electric vehicle charging stations. Many of these actions can also help reduce flooding. It's time to finish our Sustainability Action Plan update and focus on implementation.

12. **Elevating Resilience:** Lastly, it's time to elevate Resilience and Sustainability beyond just Public Works. We need a dedicated staff working across all departments and implementing solutions. I am asking the City Manager to consider a structure that will elevate these issues and encourage cross-department implementation. Dr. Gassman is an amazing resource for this community, and it's time for the Chief Resilience Officer in title. This office could also house our new Chief Waterways Officer.

These floods have had a significant impact on our residents and businesses. My goal as an elected city leader is to understand why this is happening and how we can better mitigate it in the future. It is imperative that we are all on the same page regarding flood management strategies. Let's evaluate what has worked and what hasn't. Thank you for your consideration.

Office of Vice Mayor Steven Glassman
1 East Broward Boulevard, Fort Lauderdale, Florida 33301
Suite #444



Memorandum

Memorandum No: 24-109

Date: July 22, 2024

To: Honorable Mayor, Vice Mayor, and Commissioners

From: Susan Grant, Acting City Manager *Susan Grant*

Re: Heavy Rainfall and Flash Flooding Initiatives

Over the past few years, South Florida has experienced an increasing number of heavy rainfall and flash flooding events. The City of Fort Lauderdale is recovering from two major flash flooding events in the past 18 months, April 2023 and June 2024. At the conclusion of the last event, the City Commission challenged the City Manager to prioritize resiliency efforts to proactively mitigate the associated impacts of heavy rainfall.

On June 18, 2024, Vice Mayor Glassman issued a memorandum outlining a multi-point plan to enhance flood resilience and reduce the associated impacts. City leadership concurs with many of the memorandum objectives and is happy to report that many are actively being addressed. For those not being addressed, additional industry research, community involvement, or substantial funding commitments are needed to gain consensus on the appropriate next steps.

Below are high level overview examples of the City's current efforts that were included in Vice Mayor Glassman's memorandum:

- **Flash Flood Action Plan:** The City of Fort Lauderdale has a Comprehensive Emergency Management Plan as well as multiple specific emergency response plans but does not have a specific flash flood action plan. Given the increase in heavy rainfall events, staff will begin to develop a specific action plan that includes communications standards, key contact information for external agencies, contracts for City vendors, and establish par levels for heavy equipment. The plan will include a checklist for pre-storm and post-storm considerations. The plan will be broad and focused on citywide needs as each weather system has unique localized impacts. Staff anticipates completing the first draft in the next 3 – 4 months.
- **Resilience Leadership Structure:** The City's Proposed Fiscal Year 2025 budget includes a new position of *Chief Waterway Officer (CWO)*. The position will report directly to the City Manager's Office and be responsible for managing the

City's 165 miles of navigable waterways. The CWO will be tasked with recommending waterway policy, applying for grant opportunities, providing operational assistance, and coordinating with external agencies such as the Coast Guard.

In addition, Dr. Nancy Gassman will assume the subtitle of Chief Resilience Officer (CRO) and continue to carry out the CRO duties in Public Works. Dr. Gassman will remain dedicated to cross departmental efforts that focus on advancing the City's Sustainability and Climate Resilience programs.

- Insurance Community Rating System: The City of Fort Lauderdale continues to strive to improve the Community Rating System (CRS). The City of Fort Lauderdale receives a 15% premium discount for being in Class 7. The City is working with the Federal Emergency Management Agency (FEMA) to address some outstanding issues that need to be resolved before the City can apply to improve the CRS. Once resolved, the City will apply at one of the two defined application periods per year and any change will be reflected in the following year. Therefore, any potential change in the CRS rating is likely 16 – 24 months away. It's important to note that even with an improved CRS, the FEMA actuarial rate increases will continue to put upward pressures on premiums and supersede the associated discount factors.
- Roadway Elevations: The City has an active initiative with the Urban Land Institute (ULI) to deliver a report on *Developing Criteria for Road Elevation*. This effort has included cross departmental and cross community input. ULI is expected to deliver the final report in the next 4-6 weeks. Staff anticipates that the chair of the ULI Advisory Services panel will present its findings to the City Commission in October 2024. Following this Conference briefing, the Commission will be encouraged to discuss the criteria and provide policy direction for prioritizing roads for elevation. The established policy can then be used to develop a prioritized list of roadways to elevate. Funding source(s) for this long-term resilience program will need to be identified to implement the program.
- Save Our Swale Program: The Public Works Department offers a program to rehabilitate swales fronting residential properties to enhance stormwater drainage and recharge of the surficial aquifer. Residents can apply for swale installation once per residence by submitting a completed swale agreement. After installation, the resident is responsible for the ongoing swale maintenance. For more information, residents can visit <https://ftlcity.info/sosp>.
- Repurposing of Surplus Property: The City has excess and surplus property across the City. Through our current Stormwater Master Plan efforts, staff will

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evaluate the feasibility of using surplus properties to improve the stormwater system and increase capacity during the design phase. At the July 2, 2024, Regular Commission meeting, the City Commission passed an ordinance approving a public purpose use and structure for a stormwater pump station and associated facilities within a residential area on a vacant, City-owned property generally located at 515 NW 15th Avenue. The pump station is being designed to mitigate any audible or visual impacts associated with the improved infrastructure.

The City will continue to address the Commission's Infrastructure and Resilience priority by bringing the City's ongoing and future flood response into focus.

c: Anthony G. Fajardo, Assistant City Manager
Laura Reece, Acting Assistant City Manager
Ben Rogers, Acting Assistant City Manager
Thomas J. Ansbro, City Attorney
David R. Soloman, City Clerk
Patrick Reilly, City Auditor
Department Directors
CMO Managers