



CITY OF FORT LAUDERDALE

**MEETING MINUTES
CITY OF FORT LAUDERDALE
INFRASTRUCTURE TASK FORCE ADVISORY COMMITTEE
TOWER 101 – SUITE 1100, 101 NE 3RD AVENUE
FORT LAUDERDALE, FL 33301
MONDAY, OCTOBER 7, 2024 – 2:00 P.M. TO 4:00 P.M.**

January-December 2024

Attendance

Marilyn Mammano, Chair	P	9	0
Peter Partington, Vice Chair	P	6	3
Gerald Angeli	P	9	0
Gregory Barnett	P	6	0
Shane Grabski	P	7	2
James LaBrie	P	9	0
Michael Lambrechts	P	8	1
Marta Reczko	P	8	1
Roosevelt Walters	P	9	0
Ralph Zeltman	P	9	0

As of this date, there are 10 appointed members to the Committee, which means 6 would constitute a quorum.

Staff

- Vickie Beauvais, Senior Administrative Assistant
- Anthony Fajardo, Assistant City Manager
- Alan Dodd, Public Works Director
- Chris Bennett, Assistant Public Works Director – Strategic Support
- Omar Castellon, Assistant Public Works Director -- Engineering
- Dr. Nancy Gassman, Assistant Public Works Director – Sustainability
- Jill Prizlee, Chief Engineer
- J. Opperee, Recording Secretary, Prototype, Inc.

Communication to the City Commission

None.

1. Call to Order

i. Roll Call

Chair Mammano called the meeting to order at 2:00 p.m. Roll was called and it was noted a quorum was present.

ii. Approval of Agenda

Motion made by Mr. Walters, seconded by Mr. Angeli, to approve.

Vice Chair Partington requested that Member Comments be moved to an earlier position on the Agenda prior to the Fortify Fort Lauderdale presentation. It was determined that the Vice Chair would make his comments at that time.

In a voice vote, the **motion** passed unanimously [as amended].

iii. **Approval of Previous Meeting Minutes – September 9, 2024**

Vice Chair Partington noted a correction on p.4, paragraph 9: “threshold inspections” should be changed to “Threshold Inspectors.”

Motion made by Mr. Labrie, seconded by Mr. Walters, to approve. In a voice vote, the **motion** passed unanimously.

2. **Old Business**

Vice Chair Partington recalled that an appropriation of \$2.2 million had been listed on a recent City Commission Agenda by the Public Works Department for two fixed emergency generators in the Riverwalk/Andrews Avenue area. He asked if the recent release of material in this location was related to the failure of existing pumps.

Public Works Director Alan Dodd explained that a construction site near the subject location was not properly managing dirt and debris on the site, which led to its intrusion into the stormwater system and pump stations. The City took regulatory action against the contractor to stop this intrusion; however, it took some time to determine the source of the material and shut down the site. The emergency generators to which the Vice Chair had referred were not related to the material, but were provided to ensure that stormwater pumps continue to work in the Downtown area case of a power outage.

Vice Chair Partington also requested further explanation of recent activity related to a broken line at the George T. Lohmeyer Regional Wastewater Treatment Plant, which resulted in the diversion of effluent into the Intracoastal Waterway. Mr. Dodd explained that on the previous Monday, Public Works learned that a break had occurred behind the plant, which caused a release of treated effluent. Upon further investigation, Staff determined that a subcontractor had punctured a 54 in. pipe connecting injection wells to the plant.

Mr. Dodd continued that because the flow of effluent could not be stopped, it was directed to emergency outfall in order to reduce pressure in the pipe. Due to the volume inside injection wells, it typically takes several hours for pressure to recede. This meant by the following morning, there were still roughly 200,000 gallons per day coming through the puncture.

Mr. Dodd advised that once pressure was stopped at the Lohmeyer plant, the injection wells were also isolated in order to lessen pressure and stop flow from that area as well. Staff closed off four of the five injection wells; however, the valve on the fifth wellhead did not seal properly, which prevented full closure. Staff attempted to place a line stop on a 30 in. pipe at the wellhead, which was also unsuccessful in slowing the flow. They then placed a line stop on the 54 in. pipe on the downstream side of the break, which slowed the flow but did not stop it completely. A second line stop was also unsuccessful. On Saturday, a third line stop was placed closer to the Lohmeyer facility, which isolated the pipe.

Mr. Dodd concluded that while Staff worked to address the emergency, treated effluent continued to flow through the break and down 20th Street to approximately 10th Avenue. Once the break was isolated, Staff began work to repair the pipe, which was completed on Sunday. They began transitioning flows back to the injection wells on Sunday afternoon. All flows were returned to the injection wells by approximately 4 p.m. of that day.

Mr. Zeltman asked if there was an internal failure in the injection wells. Mr. Dodd clarified that the break occurred near the intersection of 20th Street and 14th Avenue rather than in the injection field. The punctured 54 in. pipe is located approximately halfway between the Lohmeyer facility and the injection wells.

Mr. Dodd added that there is currently no estimate on the number of gallons of spilled effluent. Factors yet to be calculated for this measurement include how much effluent was spilled through the outfall as well as through the stormwater system. The incident is being investigated by the Fort Lauderdale Police Department in an effort to collect all the facts. He emphasized that Public Works' focus has been on addressing the problem. More information will be gathered in the coming weeks.

Mr. LaBrie asked if the City is fined by the Environmental Protection Agency (EPA) when an incident of this nature occurs. Mr. Dodd confirmed that the incident will fall under the City's Consent Order, and the City will be assessed a stipulated penalty. The subcontractor who caused the puncture will be responsible for paying all associated costs, including fines and penalties.

Chair Mammano commented that the Village East neighborhood received a great deal of contaminated floodwater as a result of the puncture. The subcontractor, rather than the City, will also be responsible for cleaning streets and pumping drains in that neighborhood. Mr. Dodd further clarified that the subcontractor has hired an entity to perform this cleanup and work may begin as early as Tuesday, October 8, 2024.

i. Fortify Fort Lauderdale Presentation Status Report

Lucia Medina and Rachel Loffina, representing consultant Hazen and Sawyer, gave a PowerPoint presentation on Fortify Fort Lauderdale, which is a program to improve the City's resilience to flooding, storm surge, and storm events.

The first neighborhoods in which the program will be implemented are River Oaks, Dorsey Riverbend, Edgewood, Durrs, Progresso Village, Victoria Park, Southeast Isles, Melrose Manors, and Riverland. These communities were identified in the City's Stormwater Master Plan, which was initiated in 2016. Work has been substantially completed in Edgewood and a portion of River Oaks. Pump stations are under construction for the River Oaks, Durrs, and Dorsey Riverbend neighborhoods. Progresso, Victoria Park, Southeast Isles, Melrose Manors, and Riverland are in various stages of the design process. Fortify Fort Lauderdale also includes a seawall project in Southeast Isles.

A total of 17 neighborhoods have been consolidated into 12 projects. The consolidation was based on proximity and adjacency, as well as hydrologic characteristics and connections between the neighborhoods.

There are multiple factors of the program, including financing/funding, the City's ability to address and manage multiple construction projects, and project interdependency. Four projects are organized under three different groupings, which will be carried out in a staggered fashion beginning in 2025 and ending in 2034.

Prioritization of the projects is ongoing and is based on the severity of flooding in neighborhoods, critical assets, interdependencies, and spatial distribution. The intent is to capture the most advanced resilient design and planning tools available. The program will also update prioritization to consider factors such as increasing frequency of storm events, changes in rainfall, groundwater conditions, and regional water management operations.

Chair Mammano asked if Fortify Fort Lauderdale is being undertaken in cooperation with Broward County, which is also revisiting their models. Ms. Medina confirmed that the City and County are working together, using the same boundary conditions for their models and comparing results.

Vice Chair Partington asked if the model being used is standard or specific to the City. Ms. Medina replied that the model was developed for Fort Lauderdale beginning in 2016, using standard software known as Stormwise.

Field data has been collected in the 17 neighborhoods during both wet and dry site visits. Areas which have shown previous flooding are prioritized, as are low elevations and areas that have experienced repetitive losses.

Mr. Walters asked if the program resulted from an earlier study of flooded areas in the City. Chris Bennett, Assistant Public Works Director (Strategic Support), clarified that

there have been no reports issued in relation to the April 2023 flood event. The Stormwater Master Plan, and all its modeling efforts, take data from floods into consideration, including rainfall amounts and areas where flooding did or did not occur.

Mr. Zeltman asked if details related to existing exfiltration and drainage systems are considered as part of the project. He noted that rising groundwater levels may make it more difficult to maintain outflow and discharge, and suggested that more ineffective exfiltration and drainage systems may be replaced over time.

Mr. Zeltman also noted that inflow and infiltration (I&I) is an issue in Fort Lauderdale, and asked if there is a factor the program can use to determine the value of the City's improvements on this issue. Ms. Medina replied that the model does not include I&I. With regard to exfiltration trenches, she pointed out that the only two methods used by Broward County to improve water quality are exfiltration trenches and swales. Any additional measures would have to be submitted for permitting.

Ms. Medina recommended care in proposing more exfiltration trenches, as it should first be determined whether or not that method is sufficiently robust to continue to serve the City for a significant amount of time. Neighborhoods which already have these systems may wish to consider replacing or relining them to ensure effectiveness. She emphasized the importance of outreach to and partnership with residents in those neighborhoods.

Chair Mammano noted that one concern in some neighborhoods is that street storm drains are not cleaned or maintained properly, and asked if that infrastructure will be part of the program. Ms. Medina stated that the program proposes capital maintenance, which is a more concentrated effort than the City's existing regularly scheduled maintenance program. The program will identify those areas where additional maintenance will be needed.

Dr. Nancy Gassman, Assistant Public Works Director (Sustainability), advised that the Melrose Park neighborhood, for example, has a complicated drainage system. Special maintenance is currently scheduled for that system. Other examples include the Downtown storm stations, which are cleaned out on a quarterly basis. Larger infrastructure, such as large pump stations, will require a long-term maintenance schedule that is more robust than what is currently provided by the City's stormwater operations team.

Chair Mammano asked how much funding will be devoted to individual enhanced maintenance projects as well as regular ongoing maintenance. Dr. Gassman stated that as new neighborhood projects are brought online, the level of work will change. Another ongoing project is condition assessment of critical assets, which will include the cleaning of all large conveyance pipes over the next five years. This will allow closed circuit television (CCTV) cameras to be placed in the pipes to determine their conditions.

Dr. Gassman continued that as the stormwater operations team advanced into the Durrs and Dorsey Riverbend neighborhoods, those conveyance pipes were cleaned out to ensure that drainage from those neighborhoods could be maximized during the construction project. She advised that it is currently not possible to determine how much money would go toward debt service, capital improvement projects, overall operations, and maintenance. The total operating budget is estimated at \$16 million per year for maintenance of the existing stormwater system, including both regular maintenance and the condition assessment.

Chair Mammano observed that the public may not be aware of what the City is doing to maintain its systems. Dr. Gassman added that another consideration in some cases is that the drainage in front of a home is likely a private exfiltration system, which can take some time for the water to percolate down into the ground. Staff is working to ensure that people understand why exfiltration trenches might hold onto water for some time instead of draining right away.

Mr. Barnett asked how this information can be communicated to the general public. Dr. Gassman stated that she visits homeowners' and neighborhood associations to share the information, but characterized the effort as a learning process for the public.

Chair Mammano suggested that the City may wish to designate a space where information is shared with the public. Dr. Gassman pointed out that the City's budget process is transparent and the budget book is available to the public.

Ms. Reczko asked how stormwater improvements are funded. Dr. Gassman replied that in the past, a dedicated stormwater utility fee was included on every resident's utility bill, which includes water, sanitation, and wastewater. Some years ago, this fee was switched to a non-ad valorem assessment on residents' property tax bills. It is now found on that bill as a line item.

Dr. Gassman continued that in areas that have faced significant challenges with drainage, such as Melrose Park, the City advertised and held meetings via Zoom so information could be provided. She emphasized, however, that drainage issues are not simple, and there is a significant learning curve for most residents to understand how the drainage in front of their homes works.

Dr. Gassman also pointed out that the entities who own roadways also own stormwater infrastructure. On County or state roadways, the City is not allowed to do any work on that infrastructure. She noted that many residents may not be aware when the infrastructure in their neighborhoods is cleaned, concluding that messaging remains a challenge.

Ms. Medina continued the presentation, stating that a survey is conducted to note the dry conditions of swales and other existing infrastructure. Other factors considered

during dry site visits include outfall conditions and possible mitigation strategies that could be applied to individual neighborhoods.

Mr. Walters recalled there had been discussion in the past of raising roadways in some areas as a mitigation strategy, and asked if this is still part of the Stormwater Master Plan. Ms. Medina replied that raising roads is one strategy that is being considered, and staff is reviewing programs of this nature in other municipalities to determine their effectiveness.

A question was asked regarding the specific characteristics the City is looking for in its swales. Ms. Medina replied that these include whether or not the swales are paved, whether the swales are kept clean and free of parking or debris, and how they are maintained. This information will determine whether or not there are opportunities to rehabilitate swales or create them where they do not currently exist. Swales are typically the City's responsibility if they are located within rights-of-way.

Dr. Gassman recalled that some years ago, the City designed a proactive swale improvement program for specific neighborhoods that were more reliant on swales for drainage. Due to the increasing frequency of extreme rain events, however, the City has not been able to continue this program as effectively as intended. She cited the example of a swale in the Melrose Manors neighborhood which was rehabilitated and now lowers the level of flooding. Swale rehabilitation is part of the City's asset management program as well as the condition assessment for Fortify Fort Lauderdale.

Mr. Angeli suggested that the City consider compiling a list of roadways where ponding is a regular concern after rainfall. Ms. Medina stated that one goal of outreach to homeowners is to determine where they have concerns with flooding, as well as how often this occurs and at what depth of rainfall. This will be added to the information already gathered during previous outreach.

Ms. Medina briefly reviewed potential mitigation strategies, which may include rehabilitation of swales, grading improvements to convey water to existing infrastructure, raising and repairing of seawalls, upgrading existing pump stations, improving pipe capacity, installing tidal valves, capital maintenance, and private resiliency programs.

Chair Mammano requested additional information on water storage. Ms. Medina confirmed that this is also an option that has been discussed, as there may be opportunities for water storage in parks. These facilities could maintain water for a certain number of hours during storms in order to prevent the water from affecting low-lying communities.

Vice Chair Partington recalled that some developments now use injection wells, and asked if this is also a potential mitigation strategy. Mr. Bennett noted that many areas are too low to install the wellhead necessary for gravity injections. The rising groundwater table also makes it more challenging to use this method.

Ms. Medina noted that strategies must also consider the cost benefit of how much water can be moved at what expense. Green infrastructure, opportunities within parks, and underground storage systems may make more sense in some areas of South Florida than in others. All opportunities will be considered on a neighborhood-by-neighborhood basis.

Ms. Medina also reviewed a program that brings private property owners to the table to partner with the City in considering possibilities for improvement. This private resiliency program includes the following steps:

- Review and gathering of data
- Review of guidance documents and programs
- Updated stakeholder outreach
- Cost-sharing program recommendations

The team has reviewed over 50 guidance documents and programs thus far and is considering some sections which could be applicable to Fort Lauderdale. They are also conducting outreach with homeowners, including a meeting of the Council of Fort Lauderdale Civic Associations in November 2024. They have discussed business owners' perspectives with the Greater Fort Lauderdale Chamber of Commerce, and hope to schedule a meeting with the development community as well.

Chair Mammano requested additional information on cost-sharing grants associated with the private resilience program. Ms. Medina explained that there will be three deliverables for grants that can fund this partnership:

- Residential guidance
- Commercial guidance
- Cost-sharing between private owners and the City

Ms. Medina continued that the planning phase is expected to be complete for small projects during the first quarter of 2025. The program will then move forward in staggered groups, addressing four projects at a time. This will extend through 2029. The design, permitting, and construction of projects in the 17 neighborhoods is expected to be complete by 2034.

Chair Mammano expressed concern that Fortify Fort Lauderdale does not represent a significant acceleration of the Stormwater Master Plan if it will not be complete until 2034. Mr. Bennett pointed out that phases 2 and beyond will include double the original number of neighborhoods expected to be addressed in each phase. Dr. Gassman added that modeling and design work began more than one year ahead of schedule.

Mr. Bennett also stated that the original plan had called for \$200 million for every five years of bonding; this is actually going to begin one year faster, with the next bond package to be issued at \$500 million. The City does not currently know the exact price tag of the work on the specified neighborhoods, but this amount will be used as an

estimate to cover both construction costs and long-term maintenance for the neighborhoods.

Chair Mammano asked how much has been bonded for the Stormwater Master Plan. Dr. Gassman explained that the initial \$200 million tranche was divided so a portion is being paid through a Water Infrastructure Finance and Innovation Act (WIFIA) loan. The City has also secured \$34 million from the state in grant funding, and will receive approximately \$98 million from a bond. The next tranche is expected to be \$500 million.

Mr. Walters noted that it will not take as long for the City to reach its bonding capacity at \$500 million as it would take at \$200 million. Mr. Bennett replied that the budgeting process each year for water, sewer, and stormwater expenses considers what is needed to operate the system as well as typical capital outlay; the bonded projects would exceed that typical outlay. The City already has justification for rates or rate increases built into the models for bonded projects.

Ms. Medina concluded that a series of meetings will be held across all 17 neighborhoods before the end of 2024 to collect data from residents about flooding, including photos and videos as well as locations where the worst conditions have been seen. This information will be incorporated into data sets before the conceptual designs of the projects are finalized.

Mr. Barnett pointed out that some improvements have already been made, and asked how the City is communicating news of these improvements. Ms. Medina advised that there is a newsletter which showcases the City's progress on the original group of eight neighborhoods; however, she cautioned that these are not always like comparisons, as the same types of improvements are not being made in every neighborhood.

Ms. Reczko asked how new developments' permits are reviewed for on-site drainage requirements. Mr. Bennett replied that the on-site drainage permits for private properties and developments are managed through the City's Development Services Department, which has its own engineering division to review plans for drainage connectivity.

Mr. Grabski added that in some Broward County municipalities, these plans are modeled on the retention of a certain amount of water on-site. The developer must prove that their on-site system can accommodate the amount of water associated with a certain level of storm event, such as a twenty-five-year or hundred-year storm. Vice Chair Partington commented that because these standards can change as a result of ongoing climate change, they should also be reviewed on a regular basis.

Mr. Grabski concluded that the City is doing a good job of holding developers accountable to standards, using the tools available to them. Review is required at the Development Committee Review (DRC) level and the Building Department level, as well as the County. These reviews are a matter of public record and are included in permits issued at the City and County levels.

Dr. Gassman further clarified that before the Fortify Fort Lauderdale project began, Hazen and Sawyer studied how rainfall has changed and adjusted the City's 10-year levels of service (LOS), which refers to the average rainstorm over a 10-year period. They updated information about the kind of rainfall the City currently sees, which has included more extreme rain events.

Chair Mammano concluded that the City has begun to clarify that its job is to ensure that public rights-of-way are clear rather than to ensure that individual buildings do not flood. It was further clarified that whenever a development receives a building permit, there are follow-up inspections which ensure that they are built to the required standard before a Certificate of Occupancy (CO) is issued for the property.

Ms. Medina reviewed a timeline for the program, including modeling, conceptual design, and development, as well as neighborhood outreach. She reiterated that phase 2 will begin in 2025.

3. New Business

i. Hurricane Strategy and Plan for Reconstruction of Barrier Islands Discussion

Mr. Angeli recalled that he was asked, in his capacity as a member of the Greater Fort Lauderdale Chamber of Commerce's Government Affairs Group, if the Committee has addressed hurricane preparation, recovery, or restoration. He pointed out that Hurricane Milton is expected to make landfall near Tampa later in the week, which also has a barrier island and a bay. The concern is for what would happen if a major Category 5 hurricane were to make landfall on Fort Lauderdale.

Mr. Angeli also raised the issue of reconstruction after hurricanes, pointing out that each experience with a storm imparts its own knowledge as municipalities learn what to do or not do the next time one is anticipated. He also clarified that this knowledge differs for each storm, as no two have exactly the same effect. He concluded by asking if Fort Lauderdale and Broward County have reconstruction as well as recovery plans.

Omar Castellon, Assistant Director of Public Works (Engineering), advised that the City has a document which can be sent to the Committee members.

4. Public Works Update

i. CIP Financial Report

ii. Water & Sewer Breaks Report w/Mapping

5. General Discussion and Comments

i. Committee Members

None.

ii. Public Comments

None.

6. Adjournment – NEXT SCHEDULED MEETING DATE: Monday, November 4, 2024

There being no further business to come before the Committee at this time, the meeting was adjourned at 4:00 p.m.

Any written public comments made 48 hours prior to the meeting regarding items discussed during the proceedings have been attached hereto.

[Minutes prepared by K. McGuire, Prototype, Inc.]