



2023 SEA LEVEL RISE AND FLOOD RESILIENCY PLAN



DRAFT JUNE 2023

Public Comments

(Comment Period: May 24, 2023 - June 30, 2023)

Building Resilience and Mitigating Risks to South Florida's Water Resources

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RESILIENT ENVIRONMENT DEPARTMENT

115 S. Andrews Avenue, Room 329 • Fort Lauderdale, Florida 33301 • 954-357-6612 • FAX 954-357-8655

Drew Bartlett, Executive Director
South Florida Water Management District
3301 Gun Club Rd.
West Palm Beach FL, 33406

Re: Draft Sea Level Rise and Flood Resiliency Plan

Dear Executive Director Bartlett,

On behalf of the County's Resilient Environment Department, I would like to acknowledge the significant and continuing efforts of the South Florida Water Management District toward improving the resilience of our regional water management system for improved drainage, flood protection, water supply, water resource sustainability, and other environmental priorities under predicted conditions of climate change.

The County appreciates the positive partnership and on-going collaborations we enjoy with District staff as part of these priority projects, technical investigations, and regional programs and the opportunity provide to review and comment on the District's 2023 Draft Sea Level Rise and Flood Resiliency Plan. We recognize the extent to which the District has addressed our comments in previous years, including adjustments to project criteria, incorporation of updated finished floor elevations, and refinements to saltwater intrusion exposures.

With the District's current solicitation for stakeholder input on the 2023 Draft Plan we are pleased to provide additional comment for consideration.

The County's comments are as follows:

Consistency of Criteria and Scoring System for Ranking of Resiliency Projects

We understand the difficulty in setting a standard ranking criterion for projects that have many different purposes, and the desire to incorporate criteria relevant to grant funding. We acknowledge that more points have been distributed to categories that we view as extremely important, such as the FPLOS Phase 1 Assessment Results and Known Chronic and Nuisance Flooding Reports.

While we believe that these adjustments are in the right direction, we note that even small adjustments continue to influence the rankings of Coastal Structure Projects and Other Priority Projects as part of the 2023 Plan (e.g., Pages 8-24).

July 6, 2023

Attachment 1 provides a comparison of rankings for vulnerable coastal structures as presented in past iterations of the District's plan. Overall, our team is supportive of the improved ranking of projects located in Broward County, noting greater geographic diversity in the top-ranking projects, and projects we view as critical to Broward County's resilience. Given that construction of these projects will undoubtedly be multi-year and rely upon joint advocacy to secure necessary Federal and State funding, it will be helpful to see stabilization of process so that there is less year to year variability in where projects might fall. Ideally the work plan will clearly identify the highest priority structures and later reductions in ranking will reflect successful resilience improvements.

Finally, we appreciate the separation of Coastal Structure Resiliency Projects from others, a recommendation we provided last year. Still, we would like to better understand how these additional projects might compete for construction dollars. We maintain that projects such as EMMA, South Miami-Dade Curtain Wall and the Corbett Water Control Structures are better represented as part of CERP/FEMA efforts that extend beyond the focus and stated priority of the District's Sea Level Rise and Resilience Plan, with sizeable alternative sources of funding available. These projects are of an entirely different nature and scale; thus, it would be a great detriment if these projects were competing financially for the funds needed to immediately address the resilience of the coastal structures.

Once again, we appreciate the extensive effort reflected in the past two assessments and look forward to working with the South Florida Water Management District to help refine and advance this regional evaluation and project prioritization. We look forward to and welcome additional discussion.

Thank you for your consideration and ongoing efforts to improve the resilience of our communities.

Sincerely,



Dr. Jennifer L. Jurado

Chief Resilience Officer and Deputy Director

Cc: Dr. Carolina Maran, P.E., SFWMD Resiliency Officer

Dr. Gregory J. Mount, Assistant Chief Resilience Officer, Broward County

Attachments:

1. Comparison of Project Rankings

Attachment 1. Comparison of Rankings from 2021 through 2023 Sea Level Rise and Resilience Plan

Ranking					
Initially proposed (2021)	As provided/agreed by SFWMD on 8.27.2021 Meeting	June 2022	June 2023	Project	County
2	2	6	1	S26/S26PS	Miami-Dade
3	3	5	2	S29	Miami-Dade&Broward
1	1	2	3	S27	Miami-Dade
10	11	8	4	S21	Miami-Dade
11	5	9	5	G57	Broward
5	4	3	6	S28	Miami-Dade
20	7	22	7	S37A	Broward
7	15	4	8	S25B/S25BPS	Miami-Dade
6	18	18	8	S25	Miami-Dade
8	8	27	9	G58	Miami-Dade
9	13	19	10	G93	Miami-Dade
4	6	12	11	S22	Miami-Dade
24	25	24	13	S197	Miami-Dade
12	17	14	14	G54	Broward
16	10	7	15	S20F	Miami-Dade
18	16	20	16	G56	Broward
26	23	11	17	S13/S13PS	Broward
23	24	13	18	S36	Broward
19	20	25	19	S20G	Miami-Dade
13	9	10	20	S123	Miami-Dade
15	19	21	21	S33	Broward
25	26	28	22	S20	Miami-Dade

July 6, 2023

17	12	23	23	S21A	Miami-Dade
<u>X</u>	<u>X</u>	<u>1</u>	<u>X</u>	<u>CURTAIN WALL</u>	<u>Miami-Dade</u>
X	X	<u>15</u>	<u>X</u>	<u>EMMA</u>	<u>Miami-Dade</u>
14	14	16	X	GG1	Collier
X	X	<u>17</u>	<u>X</u>	<u>CORBETT LEVE</u> <u>E</u>	<u>Palm Beach</u>
X	X	<u>26</u>	<u>X</u>	<u>L-31</u>	<u>Miami-Dade</u>

Pena Guerra, Francisco

From: Amy Eason <aeason@martin.fl.us>
Sent: Friday, June 23, 2023 11:48 AM
To: Resiliency
Cc: Anne Murray; Samuel Amerson; Jessica Garland; James Gorton; George Dzama; John Maehl
Subject: 2023 Sea Level Rise and Flood Resiliency Plan Comments

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Dear Dr. Maran,

Thank you for leading the effort in developing resiliency to safeguard and restore South Florida's water resources and ecosystems, protecting communities from flooding, and ensuring an adequate water supply. Martin County appreciates the opportunity to comment on the South Florida Water Management District (District) 2023 Draft Sea Level Rise and Flood Resiliency Plan. Building water resource resilience and mitigating risks associated with climate change and sea level rise is a priority for Martin County. We applaud the District for its continued commitment and significant progress to address land development, population growth, and climate change impacts on regional water resources.

As a District-designated Restricted Allocation Area (RAA) that limits permitted water use, Martin County understands the vulnerability of its water supplies. The County takes steps to protect its sources through monitoring and conservation programs and investment in alternative water supplies. Martin County looks forward to working with the District to strengthen its protection programs and conduct local vulnerability assessments and modeling to understand how future conditions may impact groundwater characteristics, water management operations, and overall water availability.

Martin County supports the many programs and projects developed or in the process of development by the District, including:

Flood Protection Level of Service Assessment (FPLOS) (Phase I Studies)

These studies prioritize long-term infrastructure improvement needs in response to population growth, land development, sea level rise (SLR), and climate change. Phase I studies also characterize flood vulnerability and risks to critical assets. Martin County, designated as a moderate priority area by the District, is slated for Phase I assessment in 2023-2027. **The County has been in contact with your FPLOS coordinator, and we commit to working with the District in this upcoming study to address flood protection. Completed vulnerability assessments and adaptation planning efforts will significantly contribute to this regional effort.**

East Coast Surficial Model (ECSM)

The County understands that the East Coast Surficial Model (ECSM), which includes the Upper East Coast (UEC) planning region, is due for completion by the District in 2024. This density-dependent groundwater model will allow model runs to simulate the effects of sea level rise and the potential movement of the saltwater interface and climate change on the surficial groundwater system. **Martin County seeks partnership with the District, USGS, and academia and funding to refine the regional model to assess the impacts of SLR and climate change on local water supplies.**

Water Supply Vulnerability Assessment (WSVA)

The District has taken steps to include sea level rise (SLR) and climate change impacts in water supply planning efforts by initiating Water Supply Vulnerability Assessment (WSVA). The WSVA utilizes existing surface and groundwater modeling tools to evaluate the effects of SLR and climate on water supplies. The outputs of the model runs will identify potential impacts on water resources and support strategies and projects that can increase water supply resilience. The Lower East Coast Water Supply Plan and WSVA is the first initiative by the District scheduled for completion in 2024. **Martin**

County urges the District to conduct a WSVA in parallel with the upcoming Upper East Coast Water Supply Plan efforts beginning in 2025.

Water and Climate Resiliency Metrics Web Tool

The District has published initial water and climate resiliency metrics for tidal elevations, groundwater levels, chlorides, and evapotranspiration through an interactive web portal making real-time data accessible. The portal, supported by story boards, generates mapping, chart, and graph options to display trend results. **Martin County commends the District for making data and visualization tools accessible to the public and partner agencies. The Metrics Web Tool supports local conditions analyses and planning efforts.**

Saltwater Intrusion Monitoring

The District monitors and maps the location of the saltwater interface within freshwater aquifers. Movement of the interface is essential to water supply planning and adaptation strategies. Monitoring programs guide groundwater well operations and provide early warning of threats to the water supply. **Critical gaps in monitoring data exist in Martin County that can be resolved by installing additional monitoring wells. The County seeks District coordination and funding to strengthen its monitoring network to define the SWI interface better and provide data critical to planning efforts and protection strategies.**

Hydro-meteorological Data Monitoring

Hydro-meteorological monitoring has played an essential role in water management in South Florida. The District’s DBHYDRO tool stores and makes available critical hydrologic, water quality, and hydrogeologic data to the public and partner agencies. Seawater level, air temperature, solar radiation, rainfall, and evapotranspiration rate data support climate change predictions. Strengthened monitoring is critical to resilience and adaptation planning. **We encourage the District to use program funding to improve hydro-metrological monitoring in Martin County.**

After reviewing the 2023 Sea Level Rise and Flood Resiliency Plan, we acknowledge that the District has concentrated its efforts mainly in the Broward, Miami-Dade, and Monroe County areas, and we are encouraged that future efforts will include Martin County. We look forward to working with the District to advance resiliency in Martin County.

Should you have any questions or need any additional information, please let me know.

Thanks.



Amy Eason, PE

Coastal Engineer

Martin County Board of County Commissioners

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Pena Guerra, Francisco

From: Lucine Martens <lmartens@martin.fl.us>
Sent: Friday, June 30, 2023 8:57 AM
To: Resiliency
Subject: SFWMD Seeking Public Input on 2023 Draft - Rainfall-induced flooding

Some people who received this message don't often get email from lmartens@martin.fl.us. [Learn why this is important](#)

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Good morning,

Does the plan address rainfall-induced flooding alone without storm surge flooding?

South Florida has experienced extreme rainfall events that are occurring more frequently and want to make sure the plan does mitigate for the intensity of extreme storms?

Thank you,

Lucine C. Martens

Planner

Martin MPO

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Miami-Dade County

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Miami, FL 33128

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July 3, 2023

Executive Director Drew Bartlett
South Florida Water Management District
Contact Information
3301 Gun Club Road
West Palm Beach, FL 33406

Re: South Florida Water Management District's 2023 Draft Sea Level Rise and Flood Resiliency Plan

Dear Director Bartlett,

The collaborative approach that your agency is taking to address the large issues of climate change and sea level rise is very commendable. We appreciate the District's consideration of the comments we provided last year and we look forward to continuing our collaboration during the upcoming South Florida Water Management District Resiliency Coordination Forum Meetings. This coordinated approach should create a strong foundation to seek funding in support of the improvements that we know are needed to keep pace with rising sea levels, land use change, and water quality impacts.

With respect to this year's resiliency plan, the addition of components focused on energy efficiency, renewable energy, nature-based solutions, and ecosystem restoration is welcome. There are many components that we strongly support such as hardening coastal control structures and implementing "self-preservation" mode, increasing locally distributed and regional storage, increasing basin interconnectivity, and maximizing the integration of green infrastructure and nature-based solutions. Miami-Dade County (MDC) will continue to partner to advance these initiatives.

We also want to recognize and express continued support for expanded collaboration and coordination among key partners and studies by the South Florida Water Management District, the U.S. Army Corps of Engineers, and other regional and local entities that influence the system. It is critical the studies, assumptions and analyses are integrated and aligned as much as possible to ensure complimentary planning, design and implementation of various resilience measures. We look forward to serving as strong local partners as conditions, priorities, and opportunities evolve.

The partnership will be essential to address the larger regional adaptation needs to ensure that multiple flood protection measures are advanced. The excellent work by your agency has shown that expanding pump capacity on the primary canals may be necessary but may not be sufficient to address sea level rise, particularly for coastal areas. In some instances, it may be more effective, enduring, and cost-effective to elevate or floodproof properties. As shown in the C-7 Level of Service assessment, in some instances non-structural flood mitigation measures, such as raising the lowest-lying properties (shown in green below), may have substantially longer efficacy than forward pumps.

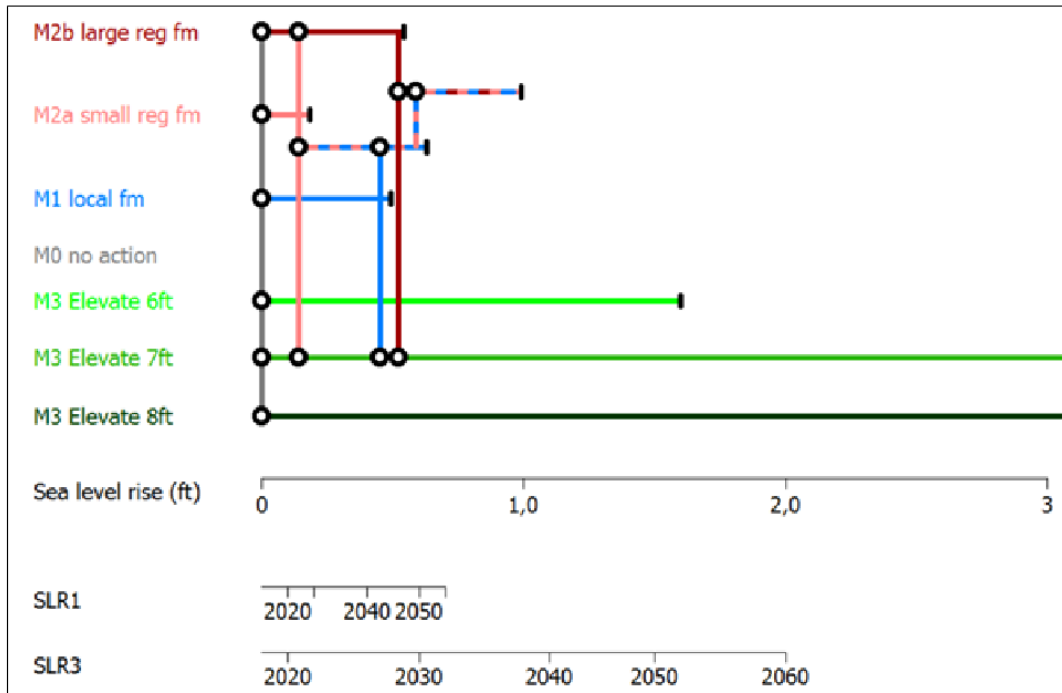


Figure 9. Adaptation Pathways map for the entire basin, based on the simulated expected annual damage for the current sea-level and the two possible future sea level rise scenarios.

Pursuing other flood protection measures in partnership with other entities may also delay or reduce the capacity needed for forward pumps. This would have the benefit of reducing energy and fuel use, reducing water quality impacts, and reducing disruption to wildlife in the canals and Biscayne Bay. While the implementation mechanisms are not yet in place, pursuing flood-proofing measures would also likely reduce the overall adaptation costs. For example, floodproofing all structures in the C-7 below six feet could cost between \$110M and \$220M.¹ It is likely that the most cost-effective approach is an optimized combination of measures. While additional pump capacity may be needed long term, greater emphasis should also be placed on protecting water resources and minimizing negative impacts to the Bay now and to include water quality improvement features or measures in forward pumping projects. In this regard, additional flood mitigation alternatives should be considered in concert with MDC and the U.S. Army Corps of Engineers to, among other opportunities, increase storage capacity, divert or otherwise reduce the volume of water conveyed through coastal structures and received by the Outstanding Florida Water body through restoration and infrastructure improvement pilot projects and implementation of innovative technologies that improve water quality. To the greatest extent possible, forward pumping features should be integrated into improved water delivery systems to the Bay similar to the ways the Biscayne Bay Coastal Wetlands project has combined pump stations to more natural delivery features. This could include identifying opportunities

¹ Based on an estimated 736 structures below that threshold and a low end estimated cost of floodproofing/elevation of \$150,000 per structure and a high-end estimate of \$300,000 per structure.



Miami-Dade County

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for additional wetlands rehydration projects that can improve wetland habitat and function while providing additional water storage and water quality improvement prior to discharging to Biscayne Bay.

As part of the decision-making process, it should also be considered which measures will help protect our water quality, which our economy and community depends upon. In many canals, including the C-7 and C-8, existing water quality is compromised and is already stressing the health of Biscayne Bay and other water bodies. Moving toward a system that relies upon extensive forward pumping could compromise the health of the Bay through the accelerated delivery of increased volumes of water containing low concentrations of dissolved oxygen and elevated concentrations of nutrients. Given the current water quality conditions, it may be very difficult to design a forward pumping system that does not incidentally increase turbidity and pulsed discharges of nutrients and bacteria. This would be counterproductive to several on-going water quality initiatives funded locally and with state funding support. Understanding that the District understands the importance of the local water quality issues, MDC values the District's partnership and commitment to the implementation of projects and activities related to the Biscayne Bay Reasonable Assurance Plan once it is developed to address issues of degraded water quality and verified impairments in many segments of the watershed.

The SFWMD has determined that a gravity-driven system may not be able to continue indefinitely, MDC requests that the District fully consider and implement other flood mitigation and water quality programs in advance of moving toward an extensive forward pumping approach. As the SFWMD's draft plan states, projects that "slow the flow" including retention, infiltration, and evaporation/evapotranspiration to reduce runoff should be prioritized and MDC is committed to working together with SFWMD to find opportunities to fulfill these goals. Other measures such as optimizing operations, non-structural flood mitigation, increasing basin interconnectivity, distributed storage, emergency detention basins, raising canal banks, canal dredging, and nature-based solutions could be pursued aggressively in the short term ahead of deployment of multiple forward pumps. We also encourage further exploration and consideration of potential strategies like voluntary home buyouts for the most vulnerable areas which could be paired with environmental restoration, creation and expansion of water storage areas and other nature-based features to help restore more natural floodplain functions and reduce reliability on mechanical pumping systems. In many instances, this type of approach will require coordination with other entities to implement flood mitigation measures that are outside the District's purview, and MDC stands ready as a dedicated partner to pursue those projects. Regardless of potentially selected options, final plans should not negatively impact important natural areas including Miami-Dade County's Environmentally Endangered Lands (EEL) and SFWMD could work with the County in acquiring and managing EEL parcels and other key parcels adjacent to canals to support efforts to "slow the flow" as priority projects of note in the SFWMD's tentative 2023 plan. Additionally, MDC recognizes SFWMD's commitment to partner on resiliency efforts at the S-27 and other structures, consistent with the recommendations of the Biscayne Bay Task Force and SFWMD's own commitment to Biscayne Bay health through the development and implementation of its Surface Water Improvement and Management (SWIM) Plan. The SWIM Act's express concern was that "... the declining quality of the state's surface waters has been detrimental to the public's right to enjoy these surface waters and it is the duty of the state, through the state's public agencies and subdivisions, to enhance the environmental and scenic value of surface waters." Contributing factors listed for the decline are the input of point and non-point sources of pollution and the destructions of natural systems." SFWMD has a responsibility to ensure that its actions are consistent with any applicable surface water standards and do not further degrade water quality received by the state's Outstanding Florida Waters downstream.



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To address the County's and District's shared concerns related to risks to the water supply as the result of reduced groundwater flow to the southernmost wellfields which may lead to increased saltwater intrusion and reduced freshwater flows into Biscayne Bay, the County suggests incorporating mitigating strategies that would provide both hydraulic and water quality measures to protect our water supply and natural resources.

In support of the County's Climate Action Strategy and Southeast Florida Regional Climate Action Plan 3.0, the County strongly support any and all actions that the District can take to help increase energy efficiency, achieve third-party certifications, and use renewable solar energy. Maximizing actions such as energy efficient design and sizing of infrastructure, inclusion of comprehensive automated demand response, intelligent pumping controls and data benchmarking will help save money on operations, reduce overall energy use and greenhouse gas emissions, and create a more resilient system overall. The County encourages the SFWMD to seek and require, at a minimum, certifications of LEED Silver for all building development projects and ENVISION Silver for all infrastructure projects to maximize sustainability and resilience of future projects. In addition, the SFWMD should consider how any thermal energy needs can be addressed through solar energy and how battery storage can help manage peak demand and demand response.

Again, we would like to thank your agency for taking our previous comments into consideration and for working so diligently, proactively, a collaboratively to identify innovative and creative approaches to minimize water quality impacts. Our team recognizes that this is a difficult challenge and there are few easy solutions, but our teams are ready and willing to continue a partnership to identify the best path forward that helps us achieve our collective climate adaptation, climate mitigation, environmental, and resiliency goals.

Sincerely,

A handwritten signature in black ink, appearing to read "James F. Murley", written over a vertical line.

James F. Murley
Chief Resilience Officer
Miami-Dade County
James.Murley@miamidade.gov

A handwritten signature in black ink, appearing to read "Irela Bague", written in a cursive style.

Irela Bague
Chief Bay Officer
Miami-Dade County
Irela.Bague@miamidade.gov

A handwritten signature in blue ink, appearing to read "Lisa Spadafina", written in a cursive style.

Lisa Spadafina
RER-DERM Director
Miami-Dade County
Lisa.Spadafina@miamidade.gov

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South Florida Water Management District
Resilience Planning Team
3301 Gun Club Road
West Palm Beach, FL 33406

June 22, 2023

RE: ST. LUCIE COUNTY comments -- Draft SFWMD 2023 Sea Level Rise and Flood Resiliency Plan

Dear Resilience Project Team,
Thank you for the opportunity to provide comments to the Draft SFWMD 2023 Sea Level Rise and Flood Resiliency Plan. We appreciate and applaud all the work the District is doing to ensure the resilience and sustainability of the South Florida region.

St. Lucie County is a low-lying coastal community that is highly vulnerable to the impacts from sea level rise and flooding. We are focused on creating a community-wide resilience plan that involves multiple jurisdictions and public and private partnerships to take a collaborative data-driven approach to ensuring the welfare and safety of our citizens, the vitality of our economy, the integrity of our critical infrastructure and the health of our environment. We consider the SFWMD a primary and integral partner in this endeavor.

Below please find St. Lucie County's input into the SFWMD 2023 Sea Level Rise and Flood Resiliency Plan.

1. St. Lucie / Indian River Basin FPLOS -- As indicated in our previous input, the St. Lucie / Indian River System FPLOS Phase I study is imperative to both the District's and County's adaptation and mitigation planning, including identification of priority projects in the near-term to reduce the impacts of sea level rise and flooding from a local and regional perspective.

The County is currently updating its Stormwater Master Plan and the lack of a hydrologic and hydraulic analysis and Flood Protection Level of Service Assessment for the St. Lucie / Indian River System presents a critical gap in creating a comprehensive Stormwater Master Plan. On page 3-11 of the 2023 SFWMD Report, it indicates that the "*St Lucie / Indian River System ... [is scheduled in] the upcoming Phase I studies included in the FPLOS implementation schedule.*" Are you able to provide an estimated date to initiate this Study?

2. Data enhancement strategies -- Increasing data development is important for science-based analysis and implementation of successful projects that reduce risks to

citizens, businesses, and the health of our environment. The SFWMD, working in partnerships with state and federal agencies, private entities and local governments has made great strides in data collection and modeling tools that help inform resilience plans.

At a local level, there is a lack of automated data collection that would help all parties coordinate efforts. Key data is lacking in many areas, including groundwater elevations, surface water elevations, land subsidence, saltwater interface monitoring and enhanced weather data collection that are critical to understanding water supply and water-holding capacity of our communities. A greater effort in identifying public-private partnerships and advanced technologies (eg: INSAR) that can capture increased granular and broad scale data and changes over time are needed for stormwater management and potable water supplies. Local governments and private entities can assist in enhancing data development, and a greater focus on taking a collaborative approach and identification of funding opportunities for this expansion would be of value to our coordinated efforts.

3. **North Fork St. Lucie River / 10-Mile Creek / 5-Mile Creek** -- More data is needed to accurately understand existing conditions in St. Lucie County. In addition to the SFWMD Canals (C23, C24, & C25, among others) installed as components of the Central and Southern Florida (C&SF) project, St. Lucie County relies on two larger natural waterways, Ten Mile Creek and Five Mile Creek, which become the North Fork of the St. Lucie River (NFSLR) to drain nearly 100 square miles of the County. Long-term tidal influences should be studied by the District to determine the effects of sea level rise on these systems, as well as including consideration of the increased basin rainfall patterns. There is value to include support and needed funding for the continued restoration of the NFSLR, its floodplain, and the western lands/natural storage components of Comprehensive Everglades Restoration Plan (CERP).
4. **Collaborative / Coordinated Inter-Agency Adaptation Planning** – Large areas are outside the District’s Priority Basin Map, particularly in southeastern St. Lucie County. This includes areas where District-controlled primary infrastructure may not exist, and DEP or other agencies play a primary role in regulating and planning for resilience. The District previously indicated that the coordination of these areas will be addressed in FPLOS Phase II. We would like to understand the process whereby local government can play a role in this coordination and identifying non-SFWMD projects to be considered for the Statewide SLR & Flood Resilience Plan.
5. **Northern Diversion detailed plan** -- Modeling and operations of the Northern Diversion detailed design plan should be included in the District’s Resiliency Plan. St. Lucie County supports the water quality benefits of the large reservoirs and stormwater treatment areas (STAs) for the storage and abatement of excess fresh water being discharged to the Indian River Lagoon and the St. Lucie Estuary. However, St. Lucie County has concerns about flooding from the redirection of water from the C23/C24 system into the Ten-Mile Creek basin (the Northern Diversion). Ten Mile Creek is a severely overgrown FDEP-regulated waterway with documented severe response to high-flow events. An operational plan and model for the C23/24 system has not been provided to the County that demonstrates that this additional flow into the system will not cause undue harm.
6. **Beach, Dune, Back Bay Coordination** -- A critical aspect of resiliency planning is recognizing how Florida’s coastal beach and dune system function and abate damages associated with future storm events and sea level rise. Barrier Islands rely heavily on this coastal feature for storm protection, and Florida’s beaches and dunes play a vital role in preserving our barrier islands, intracoastal waterways and back bay areas. We acknowledge that beach and dune systems are outside of the District’s direct responsibility and appreciate that the SFWMD will coordinate with FDEP and local governments to assist in addressing

primary issues associated with beach, dune, Lagoon and back-bay resilience. We look forward to identifying the best avenues for coordinating efficient and effective resilience measures.

7. **Critical and Regionally Significant Asset graphic** -- Why do Figures 8-16 and 8-18 not have any Critical or Regionally Significant Assets identified in St. Lucie County?

Sincerely,



George Landry
St. Lucie County Administrator

Cortez, Nicole

From: Paul Linton F. <PLinton@pbcgov.org>
Sent: Friday, June 30, 2023 2:55 PM
To: Resiliency
Cc: Colangelo, David; Maran, Ana Carolina; Natalie Freundberg; Megan Houston
Subject: Edit of 2023 Resiliency Document
Attachments: Review_of_SFWMD_2023_Resilience_Plan.docx

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David

My most substantive comment/issue is that the document does not provide the details on which basin have SFWMD structure located at distances from the Intracoastal Water Way (ICW)/Atlantic Ocean Inlets/Biscayne Bay (BB) that conveyance and potential impact to areas down stream complicate/limit project at the SFWMD structure. It should be clear whether each project includes conveyance improvements. I am assuming that we are design changes to mitigate for the combination of sea level rise and increase intensity and volume of rainfall events. Remember for the same cross section it only takes a 40% increase in flow to result in twice the head loss.

Paul F. Linton
Water Resource Manager
Palm Beach County
2300 North Jog Road
West Palm Beach, FL 33411
561-355-4600 office
561-718-2830 cell

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The FPLOS Program assesses future conditions sea level scenarios. For that, three scenarios were defined relative to the 2015 or a more current year conditions depending on a project starting year, assumed as current sea level (2015 CSL):

- CSL +1 ft
- CSL +2 ft
- CSL +3 f

According to Section 380.093 (5) F.S., flood vulnerability assessments should be performed accounting for at least two local sea level rise scenarios, including the NOAA intermediate-low and intermediate-high sea level rise projections, and two planning horizons for the years 2040 and 2070.

- Sea level rise from 2000 to 2015 was about 0.24 feet at Virginia Key and 0.33 feet at Key West
- NOASS SLR Intermediate low projection is 0.75 feet at Virginia Key and 0.79 feet at Key West for 2040
- NOASS SLR Intermediate low projection is 1.44 feet at Virginia Key and 1.44 feet at Key West for 2070
- NOASS SLR Intermediate high projection is 0.88 feet at Virginia Key and 0.92 feet at Key West for 2040
- NOASS SLR Intermediate high projection is 2.59 feet at Virginia Key and 2.62 feet at Key West for 2040

House Bill 7053

Governor DeSantis signed Executive Order 23-103 06 to direct funding and strategic action to continue to support the Resilient Florida Program

Recommend changing assure to ensure.throughout the document

Ensure means “make certain that something will occur.” Assure means “convince” or “give confidence to.”

Executive Summary Line 97

FROM

The District continues to seek for funding alternatives

TO

The District continues to seek funding alternatives

Chapter 1 Lines 51 and 52

FROM

Future conditions within each project impact area (drainage basin) are important to consider when deciding if a project is viable

TO

Sufficiently determining future conditions within each project impact area (drainage basin) are required to identify the basin problems and determine effective solutions and evaluate their feasibility.

Chapter 1 Lines 55 and 56

FROM

...including SLR, frequency and intensity of rainfall extreme events, increasing groundwater elevations, and other related variables.

TO

...including SLR, frequency and intensity of rainfall extreme events, increase in rainfall volume, increasing groundwater elevations, and other related variables.

Chapter 1 Lines 62 and 63

FROM (Confusing/Unclear)

Effective resiliency projects have community-wide benefits and should identify the populations that will be impacted, both positively and negatively.

TO

Effective resiliency projects should identify the populations that will be impacted and develop solutions which have community-wide benefits and no unmitigated negative changes.

Chapter 1 Lines 113 and 114

This statement would have more value if there was a commitment to providing set amount of renewable power in a set time.

Chapter 2 Line 7

FROM

the United States Army Corps of Engineers (USACE) in partnership with South Florida Water Management

TO

the United States Army Corps of Engineers (USACE) in partnership with what is now the South Florida Water Management

Chapter 2 Line 19

FROM (purposes are not changing function is changing)

The C&SF system is facing significant changes that are challenging the purposes of the system

TO

The C&SF system is facing significant changes that are challenging the function/performance of the system

Chapter 2 Line 22

FROM (extreme rainfall events are not new)

area population and consequent change in land use over time, compounded by extreme rainfall events and

To

area population and consequent change in land use over time, compounded by increase in the intensity and volume of extreme rainfall events and

Chapter 2 Line 46

FROM

The District's CIP infrastructure investments go beyond addressing needs identified in inspection reports.

TO

The District's CIP infrastructure investments go beyond addressing maintenance, repair, rehabilitation, or replacement needs identified in inspection reports.

Chapter 2 Line 61

FROM (unsupported, inaccurate, overstatement)

management infrastructure and facilities are operating at peak efficiency.

TO

management infrastructure and facilities are operating effectively

Chapter 3 Line 17

FROM "8- to 10-" to "8 to 10" remove dashes

Chapter 3 Lines 47-49

FROM

This aspect of the program allows decision makers to make smart near-term decisions that do not foreclose on other options, should longer term projections change from what is currently anticipated.

TO

These tools decision makers to make informed near-term decisions that do not foreclose or prohibitively increase the cost of other options should longer term projections change from what is currently anticipated.

Chapter 4 Line 6

FROM

Communities, in general, have a strong desire to integrate NBS with traditional gray stormwater infrastructure

TO

Communities, in general, are interested in an support NBS by themselves or integrated with traditional gray stormwater infrastructure

Chapter 4 Line 151 change viability to feasibility

Chapter 5 Lines 133 to 134 Figure is unlabeled and not referenced in text

Chapter 5 Lines 197 to 198

FROM (uninformative slang)

To dial in 198 the carbon uptake and storage calculations

TO

To provide quantitative information on carbon uptake and storage calculations

Chapter 6 Lines 26 -30

Will the modeling runs of the ECSM include transient model runs with multi-year droughts and the reduce water supply provide by LOSM

No mention of the state requirement for reliable water supply up to a ten year drought.

FROM

...Currently, fresh ground water system models can evaluate drawdowns associated with those withdrawals. The East Coast Surficial Model (ECSM) is a density-dependent groundwater model that is currently under development by the District and will allow model runs to explicitly simulate the effects of SLR and potential movement of the saltwater interface, and climate change on the surficial groundwater system.

TO

...Currently, the single density (freshwater) ground water system models can estimate drawdowns associated with those withdrawals which can be useful in identify areas of concern for salt water intrusion but can not model salt water intrusion. The SFWMD is currently developing the East Coast Surficial Model (ECSM) which is a density-dependent groundwater model. The ECSM will be able to properly simulate the effects of SLR and potential movement of the saltwater interface, and climate change on the surficial groundwater system.

Chapter 6 Line 141 Remove extra spaces and period

Chapter 6 Line 175. The description should include the capacity of the Oasis Water Reclamation Facility in terms of mgd

Chapter 6 SAVING FOR A NON-RAINY DAY

No discussion on the efficiency of ASR at long term (multi-year to decade). The limited duration of storage in shallow storage should be mentioned “natural areas and shallow reservoirs are only able to carry over water from a single wet season into the following dry season”

Chapter 6 Figure 6-5 is not referenced

Chapter 6 A-2 Reservoir description should include the area (acres) and depth (feet) of the reservoir. And then describe how the large depth will allow water to be store during the wet season and sued for the entire following dry season as evaporation (e.g. 2 feet) will be small compared to the storage depth (e.g. 20 feet).

Chapter 6 Lines 248 – 250 Check that the reservoir stores 240,000 acre-feet and that the current cost estimate is 2 billion dollars

FROM

The USACE began construction in 2023 and is estimated to be completed in 2030. The total project cost is expected be just over \$2 Billion

FROM

The USACE began construction in 2023 and finish. The total project for the reservoir is expected be just over 2 Billion dollars.

Figure 8-2 labeling and description of figure are inadequate

Figure 8-9 Why is a large portion of ENP include in a pollution map for CEJST Regionally Disadvantaged Communities.. Why the big rectangular area of Health in Collier County

Figure 8-10 Should the “Proposed L31” be “Propose L-31E” as the L-31 is much further west

Chapter 9 1736 (G539) The description of the replacement pumps (three or six and single versus two stage lift) needs to be more detailed

Chapter 9 1889 There should be two projects. On for the Corbett Levee and Culverts and the other for Replacement of the Four Corbett Culverts Located along the L-8 Canal. Looks like this section is for the Corbett Levee and Culverts

Chapter 9 2126. The cost number in this section for Replacement of the Four Corbett Culverts Located along the L-8 Canal seem correct (total of \$17,771,277 for all four culvert) . The \$25,000,000 total in PBC LMS is almost twice as high.

Chapter 9 Line 2401 Why is there a gap in the seepage barrier between S357 and S331; in the figure

There needs to be more information and discussion on the potential downstream impacts on basins with substantive distances from the SFWMD structure to the intracoastal waterway (ICW), Ocean Inlet (OC), Biscayne Bay (BB). The basins with substantive distance should be evaluated for insufficient conveyance capacity. Note in only takes a 40% increase in flow to approximately double the stage rise.

- S46 4.7 miles to ocean via Southwest Fork of the Loxahatchee
- S44 2 miles to ICW via C-17 Canal (6.1 miles to Palm Beach Inlet)
- S-155 0.6 miles to ICW via C-51 Canal (8 miles to Boynton Inlet 10 miles to Palm Beach Inlet)
- S41 0.4 miles to ICW via C-16 canal (1.4 miles to ocean Boynton Inlet)
- S40 0.5 miles to ICW via C-15 (6.7 mile to Ocean to Boca Raton Inlet 9.7 miles to ocean at Boynton Inlet)
- G56 4.0 miles to ICW via Hillsboro Canal (6.5 miles to Ocean)
- G57 2.1 miles to ICW via Pompano Canal
- S37A 3.1 miles to ICW via C-14 Canal
- S36 8.1 miles to ICW via the middle river
- S33 6.3 miles to ICW via North Fork of the New River Canal
- G54 10.7 miles to ICW via Dania Cut-Off Canal 9.0 miles to ICW via New River Canal
- S-13 6.3 miles to ICW via Dania Cut Off Canal
- S-29 2.1 miles (ICW)
- G58 1.2 miles (BB)
- S28 1.1 miles (BB)
- S27 1.2 miles (BB)
- S26 5.5 miles (BB)
- S25B 5.5 miles (BB)
- S25 4.0 miles (BB)
- G93 4.3 miles(BB)
- S12 1.5 miles (BB)
- S123 0.1 miles (BB)
- S21 2.0 miles (BB)
- S21A 1.1 miles (BB)
- S20G 0.6 miles (BB)
- S20F 0.4 miles (BB)

Pena Guerra, Francisco

From: Richard Earp <REarp@apopka.net>
Sent: Monday, April 3, 2023 11:06 AM
To: Resiliency
Cc: Valerie Seidel; Deodat Budhu
Subject: RE: Resilience

Some people who received this message don't often get email from rearp@apopka.net. [Learn why this is important](#)

[Please remember, this is an external email]

Good morning,

Would it be possible for you to provide me with a copy or point me in the right direction to obtain a copy of the Final USGS Report described on page 5 of this study: [2022_SFWMD_TM_Adoption_of_Future_Extreme_Rainfall_Change_Facotrs_for_Resiliency_Planning_in_South_Florida_rev2.0.pdf](#) ?

On page 5 the report indicates,

“This technical memorandum delineates the SFWMD’s adoption of future extreme rainfall change factors (scenario formulation) as part of its flood resiliency planning efforts, based on the preliminary results published in a data release by Irizarry-Ortiz and Stamm (2022). A final report of the USGS component of this project is expected to be published in 2022.”

Thank you very much for your help.

Richard.

Richard W. Earp, PE, CFM
City Engineer
Public Services Department
748 East Cleveland Street
Apopka, FL 32703
office: 407-703-1627



From: Valerie Seidel <VSeidel@balmoralgroup.us>
Sent: Tuesday, May 10, 2022 9:37 AM
To: Richard Earp <REarp@apopka.net>
Subject: Resilience

CAUTION: This Email originated from a source outside the City of Apopka. Do not click on links or open attachments unless you recognize the sender and you know the content is safe.

See charts p 6 (pdf)

[2022_SFWMD_TM_Adoption_of_Future_Extreme_Rainfall_Change_Facotrs_for_Resiliency_Planning_in_South_Florida_rev2.0.pdf](#)



Valerie Seidel
President
The Balmoral Group
165 Lincoln Avenue | Winter Park, FL 32789
Phone: 407-629-2185 x 104 | Fax: 407-629-2183
Visit our [website](#) for more information!

Pena Guerra, Francisco

From: Nancy Gassman <NGassman@fortlauderdale.gov>
Sent: Friday, June 23, 2023 9:04 AM
To: Resiliency
Cc: Maran, Ana Carolina; Alan Dodd
Subject: Public Comment: SFWMD Draft 2023 Sea Level Rise and Flood Resiliency Plan

Some people who received this message don't often get email from ngassman@fortlauderdale.gov. [Learn why this is important](#)

[Please remember, this is an external email]

The recent April 12 Flash Flood has highlighted how discharges from the west in Broward County have a profound impact on the ability of coastal communities to drain when they are dependent on gravity system.

Current SFWMD structure operational protocols are set up to meet the drainage needs of the western municipalities without a thorough understanding of the impact of these discharges to the coastal communities, especially with regard to tidal state and tailwater elevations at the time of discharge.

Any plans to allow greater flows from the west or to replace salinity control structure with pump stations must pay attention to the downstream impacts into tidally-influenced communities.

The City of Fort Lauderdale is planning to install numerous new pump stations into tidally-influenced waters to ensure the ability to drain our communities in the face of higher tides, extreme rainfall, and sea level rise. The SFWMD and adjacent communities are planning their own new pump stations into SFWMD primary canals that discharge through SFWMD structures through our City OR pump stations downstream of the structures on tidal water bodies. This will set up a competition for discharge capacity between areas with pumps and those with gravity outfalls.

It is unclear if a comprehensive modeling effort or coordinated permitting is recognizing the potential impact to upstream and downstream neighborhoods which continue to rely on gravity and lower waterway elevations (as dictated at the time of design and installation of the stormwater management systems) to drain.

Thank you for your consideration of these comments.

Nancy J. Gassman, Ph.D., CC-P, LEED Green Associate
Assistant Director of Public Works – Sustainability
City of Fort Lauderdale
954-828-5769



Pena Guerra, Francisco

From: Van Vliet, Christopher <CVan@hallandalebeachfl.gov>
Sent: Friday, June 23, 2023 4:29 PM
To: Resiliency
Subject: Comments on the 2023 Draft District Resiliency Plan

Some people who received this message don't often get email from cvan@hallandalebeachfl.gov. [Learn why this is important](#)

[Please remember, this is an external email]

My concern is with the “equitable” discharge of water, whether it be rainfall (stormwater) or seawater (storm surge). Eastern communities in Broward County have been faring poorly due to a lack of capacity in their waterways. During severe rainfall events like we witnessed on April 12, 2023, eastern communities, particularly Ft. Lauderdale, were unable to discharge floodwater through their gravity systems. Western communities have been benefitting from the District’s flood control structures, as the eastern communities have been receiving their discharges. If this process continues, the eastern communities will incur additional costs and be forced to build and operate more stormwater pumps. The City of Ft. Lauderdale discussed this disproportionate burden at the May 24th Coordination Meeting and the District’s CRO acknowledged that they are aware of the problem.

Please consider this as you move forward with the C&SF Study and the District’s Resiliency Plan and prioritize flood control projects. I’m hoping that better methods of holding water and moving water north and south are analyzed and implemented to mitigate the impacts of discharges to downstream (eastern) communities.

Thank you.

Chris Van Vliet
City of Hallandale Beach

Sent from [Mail](#) for Windows



June 22, 2023

South Florida Water Management District
resiliency@sfwmd.gov

RE: 2023 Draft District Sea Level Rise and Flood Resiliency Plan
Town of Jupiter Comments

To Whom It May Concern:

As requested, we recently reviewed the South Florida Management District's (SFMWD's) 2023 Draft Sea Level Rise and Flood Resiliency Plan with respect to the Town of Jupiter's (Town's) future plans for evaluating and addressing sea level rise and flood resiliency planning. Our comments and suggestions for consideration in finalizing the District's Draft Plan are discussed below.

Flood Protection Level of Service Program (Chapters 3 & 10)

The S-46 structure is the only coastal structure in proximity to the Town that will be evaluated by the District for their Flood Vulnerability Assessment (Phase I) under the Flood Protection Level of Service Program (FPLOS) during the 2023-2027 timeframe. While potential improvements would enhance flood protection for the areas upstream of the S-46, increased headwater/tailwater elevations and/or flows, should they occur, may impede drainage and flood protection for downstream areas that rely on gravity conveyance for discharge. It is not clear from the Draft Plan whether the SFWMD's FPLOS program assessment and implementation phases consider the impacts to downstream areas.

The Town recommends that the SFWMD's FPLOS Program consider inclusion of downstream areas of SFWMD's flood control assets that may be negatively impacted by planned improvements. Planning and implementation phases should consider inclusion of criteria that are protective of downstream areas while also improving performance of SFWMD flood control structures. The Town also requests to be included as the District progresses on the Phase I FPLOS for the Loxahatchee System and future planning and implementation phases.

Water Supply Resiliency (Chapter 6)

The SFWMD should consider including discussion on EPA's proposed PFAS for drinking water supplies. While not directly related to climate change and SLR, the proposed PFAS regulations may shift current, observed utilization of the surficial aquifer and alternative water supplies including reclaimed water and brackish groundwater.

Chapter 6, Water Supply Resiliency should include discussion on the historical, observed degradation of brackish groundwater supplies. Planning and implementation projects should consider inclusion of criteria to ensure the continued availability of this resource as it represents a critical, alternative water supply for many water utilities in Southeast Florida.

The Town requests that SFWMD consider inclusion of the Town's existing recharge system, permitted by the SFWMD, as another available water storage project designed to capture surplus freshwater from the C-18 canal, for conveyance through a system of existing control structures, flow-ways and salinity barriers to increase surface water storage and surficial aquifer recharge utilizing freshwater that would otherwise be wasted to tide through the S-46 structure. The Town has invested over \$3,000,000 in infrastructure (ditches, pump stations, conveyance systems, control structures) in the surface water recharge system in collaboration with the SFWMD. on the basis of the Lower East Coast Water Supply Plan. The existing recharge system permit provides up to 12 cubic feet per second (CFS) of surplus freshwater from the C-18 canal into a regional water storage system that replenishes the surficial aquifer system, however permit conditions to direct flow from the C-18 to the recharge system are so stringent that it is rarely used. It has long been the goal of the Town, and at one time it was the goal of the District, to secure up 25 CFS of recharge flows to the surficial aquifer recharge system. It is important to note that surplus flows from the C-18 canal are otherwise be wasted to tide.

The Town's existing recharge system should be included in the Draft Report as another available system designed to capture surplus water, and convey through a system of control structures, flow-ways and salinity barriers intended to increase surface water storage and surficial aquifer recharge utilizing freshwater that would otherwise be wasted to tide through the S-46 structure. The Town welcomes continued and enhanced collaboration with SFWMD to improve utilization of this system.

Loxahatchee River Watershed Restoration Project (Chapter 9)

Concerning the Loxahatchee River Watershed Restoration Project (LRWRP), the SFWMD should consider inclusion of additional discussion on the expected timing and volume of restorative flows to the Loxahatchee River or reference to information should it be published elsewhere. The Town welcomes enhanced collaboration with SFWMD through this implementation project, or similar mechanisms, to improve utilization of the Town's surficial aquifer recharge system.

Water Supply Vulnerability Assessment (Chapter 10)

The SFWMD should consider including discussion on the need to evaluate vulnerabilities to brackish groundwater sources including the UFA in Southeast Florida. Planning and implementation projects should consider inclusion of criteria to ensure the continued availability of this resource as it represents a critical, alternative water supply for Southeast Florida. The Town would like to remain engaged in and have the opportunity to review the SFWMD's progress with the Water Supply Vulnerability Assessment (WSVA) and Model including future findings and impacts of sea level rise to the surficial aquifer system.

Planning for Increased Extreme Rainfall Event Frequency (Chapter 10)

The Draft Plan includes discussion of a document produced by SFWMD, the U.S. Geological Survey, Florida International University (FIU) called "Extreme Rainfall Change Factors for Flood Resiliency Planning in South Florida", April 27, 2022. The SFWMD should consider translating the results of this study (or others) into an update of the 1990-era rainfall frequency distribution isohyetal maps with corresponding updates to its Environmental Resource Permit (ERP) Information Applicant's Handbook Volume II. County and city municipalities as well as private development would benefit from this update and provide a framework for consistent application of the updated rainfall frequency, intensity and duration

in establishing critical flood elevations for applicable projects. Prescriptive change factor criteria may also encourage municipalities to revise and update flood LOS, which often guides design criteria for systems within jurisdictional boundaries.

We appreciate the SFWMD's proactive approach to tackling challenges posed by sea level rise and other flood resiliency on South Florida's water resources. We look forward to collaborating with the District as they continue to finalize and implement their Sea Level Rise and Flood Resiliency Plan.

Kind Regards,



Amanda Z. Barnes, P.E.
Interim Director of Utilities

AZB/

cc: David, Rotar, Martin Schneider, John Sickler, Stephanie Thoburn – TOJ
Rebecca Wilder, Eric Stanley, Rob Taylor, Kurt A. Pfeffer - Hazen

V:\Utilities\Water\Mngmt\Amanda\Stormwater\Sea Level Rise\SFWMD SLRFRP

Pena Guerra, Francisco

From: DeAngelo, Jacquelyn <Jacquelyn.DeAngelo@dot.state.fl.us>
Sent: Thursday, June 22, 2023 3:57 PM
To: Resiliency
Cc: Pulido, Nathaniel; Shivers, Kylie; Michel, Marceau
Subject: FDOT, D6 Drainage Office Comments - Seeking Public Input on 2023 Draft Sea Level Rise and Flood Resiliency Plan

[Please remember, this is an external email]

Good afternoon,

Thank you so much for the opportunity to review the SFWMD 2023 Draft Sea Level Rise and Flood Resiliency Plan. Please see the comments provided below by the FDOT, D6 Drainage Office and let us know if you have any questions or would like additional explanation.

1. On the Executive Summary Project Team Page – Highlight text and select “no background color”. Should this be cited as a figure?
2. Would recommend including a definitions section in the executive summary.
3. Executive Summary - On lines 46-47 - Switch the order to FDEP, local governments, and other State and Federal Agencies.
4. Executive Summary - On page 4 of 342, edit item “Resiliency Actions Being Proposed...” to remove background color from text.
5. Executive Summary - Line 92-96 - If meetings were recorded and are available to the public - you may want to include a link here.
6. Chapter 1 – Line 5 – Change “(District)” to “(FWMD or District)”.
7. Chapter 1 - Line 109 - First use of the acronym “FEMA” – will need to spell out.
8. Chapter 1 - Line 111 - First use of the acronym “BRIC” – will need to spell out.
9. Chapter 1 - Line 12 - If including a definitions section, the term "gray infrastructure" should be included.
10. Chapter 1 - Line 26 - Should "local" be changed to "state"?
11. Chapter 1 - Line 29 - Include "agencies" after "governments".
12. Chapter 1 - Line 59 - If including definitions section, these terms should be included.
13. Chapter 1 - Line 67 - Unsure what is meant by this sentence: "Positive impacts to vulnerable disadvantaged communities are maximized". Is there a way to rephrase this for clarity?
14. Chapter 1 - Line 80 - Keep sequence of partnering agencies consistent throughout document.
15. Chapter 1 - Line 87 - Change sequence to "local, state and federal".
16. Chapter 1 - Lines 87-91 - Include Florida Department of Transportation.
17. Chapter 1 - Line 110 - Specify whether building codes are local, state, federal, or all.
18. Chapter 3 - Lines 54-63 - Include links to these studies.
19. Chapter 3 - Line 74 - Include link to final reports.
20. Chapter 3 - Line 89 - Provide definition of “SLR2”.
21. Chapter 3 - Figure 3-1 - Is there a higher resolution version of this map available?
22. Chapter 3 - Figure 3-2 - Is there a higher resolution version of this map available?
23. Chapter 3 - Figure 3-3 - Is there a higher resolution version of this map available?
24. Chapter 3 - Table 3-1 - Close border.
25. Chapter 3 - Line 158 - Provide link to tool.
26. Chapter 3 - Line 180 - Provide definition, explanation, or links to these resources. Turn into a table.
27. Chapter 3 - Figure 3-5 - Expand figure to width of page for easier viewing.
28. Chapter 4 - Line 19 - Is it necessary to have the word gray in quotes here?

29. Chapter 4 - Lines 29-33 - Include link to more information about EWN.
30. Chapter 4 - Line 38 - Is it necessary to have the word gray in quotes here?
31. Chapter 4 - Line 47 - Include definition of "blue streets".
32. Chapter 4 - Line 84 - Change "are" to "is".
33. Chapter 4 - Table 4-1 - Provide explanation of what the gray boxes represent.
34. Chapter 4 - Table 4-1 - Provide definition of "green roofs" somewhere in the document.
35. Chapter 4 - Line 117 - Label as a table and include headers and additional information.
36. Chapter 4 - Figure 4-2 - Is there a higher resolution version of this map available? Text at bottom of map is too small to read.
37. Chapter 4 - Table 4-1 - Make capitalization of "Empirical Methods" consistent throughout the table.
38. Chapter 4 - Table 4-1 - There was some mention of artificial reefs earlier in the report. Include in Coastal Flood Control row.
39. Chapter 4 - Line 146 - Correct spacing of letters, some letters on right-hand side of page look crowded.
40. Chapter 4 - Line 158 - Include more than one example for turbidity data under multiple conditions.
41. Chapter 4 - Line 165 - Provide explanation or reword. This current item is too vague.
42. Chapter 4 - Table 4-3 - Correct spacing of letters. There appears to be extra spaces between some letters.
43. Chapter 4 - Table 4-3 - Provide context for availability. What does low vs. very low mean?
44. Chapter 4 - Line 174 - Is it necessary to have the word gray in quotes here?
45. Chapter 4 - Lines 182-189 - Provide intro to list. Explain what it is. Spell out acronyms if being used for the first time. Correct spacing and remove blue boxes around text. Include items in table with headers and explanation.
46. Chapter 5 - Line 9 - Change "defined" to "define".
47. Chapter 5 - Line 11 - Is "RECOVER" an acronym? If so, define for first use.
48. Chapter 5 - Lines 34-35 - Tamiami Trail Next Steps is a Florida Department of Transportation project. Please include FDOT in previous paragraph with FDEP and Florida Department of Agriculture and Consumer Services.
49. Chapter 5 - Lines 70-72 - Wouldn't Florida Bay be considered Southern Everglades?
50. Chapter 5 - Lines 195-235 - Who will lead these efforts? How will information be used? Where will it be reported? How will it be paid for?
51. Chapter 5 - Diagram on Lines 195-213 - Provide source of diagram. Who will lead these efforts? How will information be used? Where will it be reported? How will it be paid for?
52. Chapter 6 - Lines 25-34 - This paragraph seems jumbled and is hard to follow/understand. Is there a better way to present this information?
53. Chapter 6 - Diagram on Lines 65-86 - Provide source of diagram.
54. Chapter 6 - Lines 98-100 - Provide links to the Florida Statutes.
55. Chapter 6 - Figure 6-3 - Is there a higher resolution version of this figure available? Provide source.
56. Chapter 6 - Lines 125-126 - Provide links to resources.
57. Chapter 6 - Line 141 - Remove spare space and period.
58. Chapter 6 - Line 145 - What is this unit (mgd)? Spell it out for first use.
59. Chapter 6 - Line 188 - Make capitalization of "MGD" consistent throughout document.
60. Chapter 6 - Line 225 - Shift text to previous page.
61. Chapter 6 - Line 238 - Remove "aka".
62. Chapter 6 - Figure 6-9 - Provide source of data.
63. Chapter 6 - Figure 6-10 - Is there a higher resolution version of this figure available?
64. Chapter 7 - Lines 5-16 - Provide caption for picture.
65. Chapter 7 - Line 12 - Spell out acronym for ASCE.
66. Chapter 7 - Line 21 - Spell out acronym for LEED.
67. Chapter 7 - Lines 26-33 - Format (not all words should be all capitalized) and turn into a table with caption. One column can be action and the second column could be benefit. Make formatting consistent throughout document.
68. Chapter 7 - Page 52 of 342 - Provide link to Florida Building Code, 7th Edition.
69. Chapter 7 - Lines 39-40 - Spell out acronym with first use only (line 21).
70. Chapter 7 - Figure 7-1 - Is there a higher resolution version of this figure available? Provide source.
71. Chapter 8 - Page 55 of 342 - Is there a higher resolution version of this figure available? Provide source/caption.

72. Chapter 8 - Lines 22-23 - Revise sentence to read “The District is working closely with these Local and Federal Agencies...”
73. Chapter 8 - Table 8-1 - Format text to be consistent with rest of document.
74. Chapter 8 - Page 56 of 342 - Spell out acronym “C&SF” if used for the first time in this chapter.
75. Chapter 8 - Line 136 - Capitalize “environmental”.
76. Chapter 8 - Line 158 - Spell out acronym “C&SF” if used for the first time in this chapter.
77. Chapter 8 - Table 8-2 - Format text to be consistent with rest of document.
78. Chapter 8 - Table 8-3 - Format text to be consistent with rest of document.
79. Chapter 8 - Line 179 - Only necessary to spell out acronym for first use in chapter.
80. Chapter 8 - Figure 8-11 - Is there a higher resolution figure available?
81. Chapter 8 - Figure 8-12 - Is there a higher resolution figure available?
82. Chapter 8 - Figure 8-13 - Is there a higher resolution figure available?
83. Chapter 8 - Figure 8-14 - Is there a higher resolution figure available?
84. Chapter 9 Tables - Format so tables are consistent.
85. Chapter 9 - Line 158 - Spell out acronym “C&SF” if used for the first time in this chapter.
86. Chapter 9 - Figure 9-3 - Provide source of information.
87. Chapter 9 - Line 356 - Remove extra spaces.
88. Chapter 9 - Figure 9-4 - Is there a higher resolution version of the top plan page?
89. Chapter 9 - Figure 9-6 - Provide source of data.
90. Chapter 9 - Figure 9-8 - Is there a higher resolution version of this plan page?
91. Chapter 9 - Lines 597-598 - Format rows of table to equal widths.
92. Chapter 9 - Figure 9-10 - Provide source of data.
93. Chapter 9 - Figure 9-8 - Is there a higher resolution version of this figure available?
94. Chapter 9 - Figure 9-14 - Is there a higher resolution version of this figure available?
95. Chapter 9 - Lines 771-808 - Format text.
96. Chapter 9 - Line 839 - Remove additional space.
97. Chapter 9 - Figure 9-17 - Is there a higher resolution version of this figure available?
98. Chapter 9 - Provide captions for all pictures and figures.
99. Chapter 9 - Table 9-6 - Format table to be consistent with rest of document.
100. Chapter 9 - Lines 1665-1666 - Format text to be consistent with rest of document.
101. Chapter 9 - Figure 9-20 - Is there a higher resolution version of this figure available?
102. Chapter 9 - Figure 9-22 - Is there a higher resolution version of this figure available?
103. Chapter 9 - Figure 9-23 - Is there a higher resolution version of this figure available?
104. Chapter 9 - Lines 2496-2499 - Format table to be consistent with other tables in document.
105. Chapter 10 - Line 10 - Spell out acronym for DBHYDRO for first use in chapter.
106. Chapter 10 - Provide captions for all pictures and figures.
107. Chapter 10 - Line 119 - Only necessary to spell out acronym for first use in chapter.
108. Chapter 10 - Line 195 - Format of “DBHYDRO” should be consistent throughout document.
109. Chapter 10 - Lines 252-253 - Only necessary to spell out acronym for first use in chapter.
110. Chapter 10 - Lines 265-266 - Provide link to publication.
111. Chapter 10 - Line 292 - Include "RSMAS" with "UM" consistently.
112. Chapter 10 - Line 353 – Spell out first use of acronym.
113. Chapter 10 - Lines 265-266 - Spell out total phosphorus, total nitrogen, and total suspended solids.
114. Chapter 10 - Line 444 - Put quotes around “Swiss cheese”.
115. Chapter 10 - Line 566 - Include space between “of” and “>”.
116. Chapter 10 - Line 604- Only necessary to spell out acronym for first use in chapter.
117. Chapter 10 - Line 720 - Correct Figure Number to “Figure 10-1”.
118. Chapter 10 - Line 775 - Correct Figure Number to “Figure 10-2”.
119. Chapter 10 - Line 777 - Correct Table Number to “Table 10-1”.
120. Chapter 10 - Table 5-1 - Format table to be consistent with rest of document.
121. Chapter 10 - Table 5-2 - Correct Table Number to “Table 10-2”.
122. Chapter 10 - Table 5-3 - Correct Table Number to “Table 10-3”.

- 123. Chapter 10 - Line 853 - Spell out first use of acronym.
- 124. Chapter 10 - Line 860 - Not necessary to spell out acronym again.

Kind regards,

Jacquelyn DeAngelo, M.S.

Environmental Permits Coordinator

Florida Department of Transportation – District 6

Adam Leigh Cann Building

1000 NW 111 Avenue – Room 6211

Miami, FL 33172

Office: 305-470-5281

Jacquelyn.DeAngelo@dot.state.fl.us



Pena Guerra, Francisco

From: Polatel, Ceyda CIV USARMY CESAJ (USA) <Ceyda.Polatel@usace.army.mil>
Sent: Friday, June 23, 2023 1:49 PM
To: Maran, Ana Carolina; Resiliency
Cc: Bredesen, Amanda T CIV USARMY CESAJ (USA); Reynolds, Melissa J CIV USARMY CESAJ (USA); Vega-Liriano, Zulamet Z CIV USARMY CESAJ (USA); Jason A. Engle; Fischer, Matthew P CIV USARMY CESAJ (USA); Todaro, Gabriel F CIV USARMY CESAJ (USA)
Subject: Comments on SFWMD Sea Level Rise and Flood Resiliency Plan

[Please remember, this is an external email]

Hello Carolina,

Thanks for the opportunity to review and provide comments on the Draft SLR and Flood Resiliency Plan. The report is an excellent collection of valuable information that will benefit the ongoing C&SF Resiliency Study and other South Florida projects.

Here is a collection of comments from the SAJ 216 Team on the report:

1. Include a table of contents.
2. Chapter 3: It is mentioned that factors such as future rainfall are considered when identifying system deficiencies. Including more details on how future rainfall is being considered for FPLOS studies would be helpful. USACE is in the process of finalizing guidance on future climate that can be useful for identifying system vulnerabilities and answering broad questions related to projected performance. We are also investigating to what extent the future climate research can be used to inform infrastructure design.
3. Chapter 3: The SLR projections continuously improve with our understanding of related physical processes and computational capabilities. You can find how the most recent NOAA (2022) projections compare against the current USACE curves for South Florida gauges at https://climate.sec.usace.army.mil/slr_app/.
4. Chapter 9: Please clarify how the project costs were estimated. Are they based on today's pricing or estimated pricing for the future (relative to the estimated construction start date)? Are they based on similar previously constructed projects?
5. Chapter 10: Thanks for providing a comprehensive list of ongoing SFWMD projects and initiatives. USACE is committed to our continuing collaboration on ongoing and future planning and R&D studies, including future extreme rainfall and drought projections studies. Please continue to contact us with any support the SAJ team may provide.
6. Chapter 10: USACE is also interested in the results of the tidal prediction enhancement study with the University of Miami as it relates to recent Federal projects within the same area of interest.
7. Appendix A: Care should be taken when referencing USACE projects (mainly Miami-Dade back bay study) that do not have approved chiefs reports as the recommendations may be modified in the potential upcoming re-start.

Thank you and have a nice weekend!

Ceyda

From: Maran, Ana Carolina <cmaran@sfwmd.gov>
Sent: Friday, June 2, 2023 5:08 PM
To: Resiliency <resiliency@sfwmd.gov>
Subject: [URL Verdict: Neutral][Non-DoD Source] Thank you for participating in the May 24th Resiliency Coordination Forum!

Dear Resilience Partners,

Thank you for attending the [May 24th District Resiliency Forum](#). We are grateful for the opportunity to engage in meaningful dialogues, stay well-informed about the progress of resilience projects and explore additional avenues for collaboration.. Your continued input and participation are invaluable in fostering regional coordination.

We express our gratitude to all the presenters, including Eddy Bouza, FDEP Resilient Florida Program Management Director, David Colangelo, SFWMD Resiliency Plan Coordinator, Ronda Hagg, Monroe County Chief Resilience Officer, Timothy Gysan, USACE Jacksonville District Resilience Senior Project Manager, and Colin Rawls, USACE Jacksonville District Chief of Socioeconomics Section, for sharing their significant insights on the impactful work they are undertaking to foster resilience in South Florida. Their time is greatly appreciated. Please find attached a summary of the meeting highlights.

We were pleased to announce that the [Draft 2023 Sea Level Rise and Flood Resiliency Plan](#) has been published and is open for comments until Friday, June 23, 2023. This provides the public and stakeholders with an opportunity to review and provide comments, ensuring diverse perspectives and expertise are considered in the decision-making process. The comments received will be carefully evaluated. Please email your comments to resiliency@sfwmd.gov.

At our next forum meeting on Wednesday, August 30, 2023, we will share new data and updates, including information on wet and king tide flood season, tools for documenting flood extent and impacts, and collaboration with local partners.

For additional information, visit the [Resiliency Coordination Forum](#) webpage that contains links to previous meeting materials and the 2023 meeting schedule. We kindly request that you take a moment to complete a short [survey](#) to provide feedback on your forum experience and share any additional comments or suggestions.

Once again, we appreciate your engagement and commitment to resiliency in our region. We look forward to seeing you at the next forum meeting on Wednesday, August 30, 2023.

Sincerely,

Carolina

SFWMD Resiliency Coordinati

Wednesday, May 24, 2023



Ana Carolina Coelho Maran, P.E., Ph.D.

Chief of District Resiliency

South Florida Water Management District
3301 Gun Club Road, West Palm Beach, Florida 33406
Phone 561-682-6868 • Cell 561-779-3763

cmaran@sfwmd.gov www.sfwmd.gov/resiliency

Florida enjoys a broad public records law. Any emails sent to or from this address will be subject to review by the public unless exempt by law.

FDOT District 6 Planning and Environmental Management Office (PLEMO)

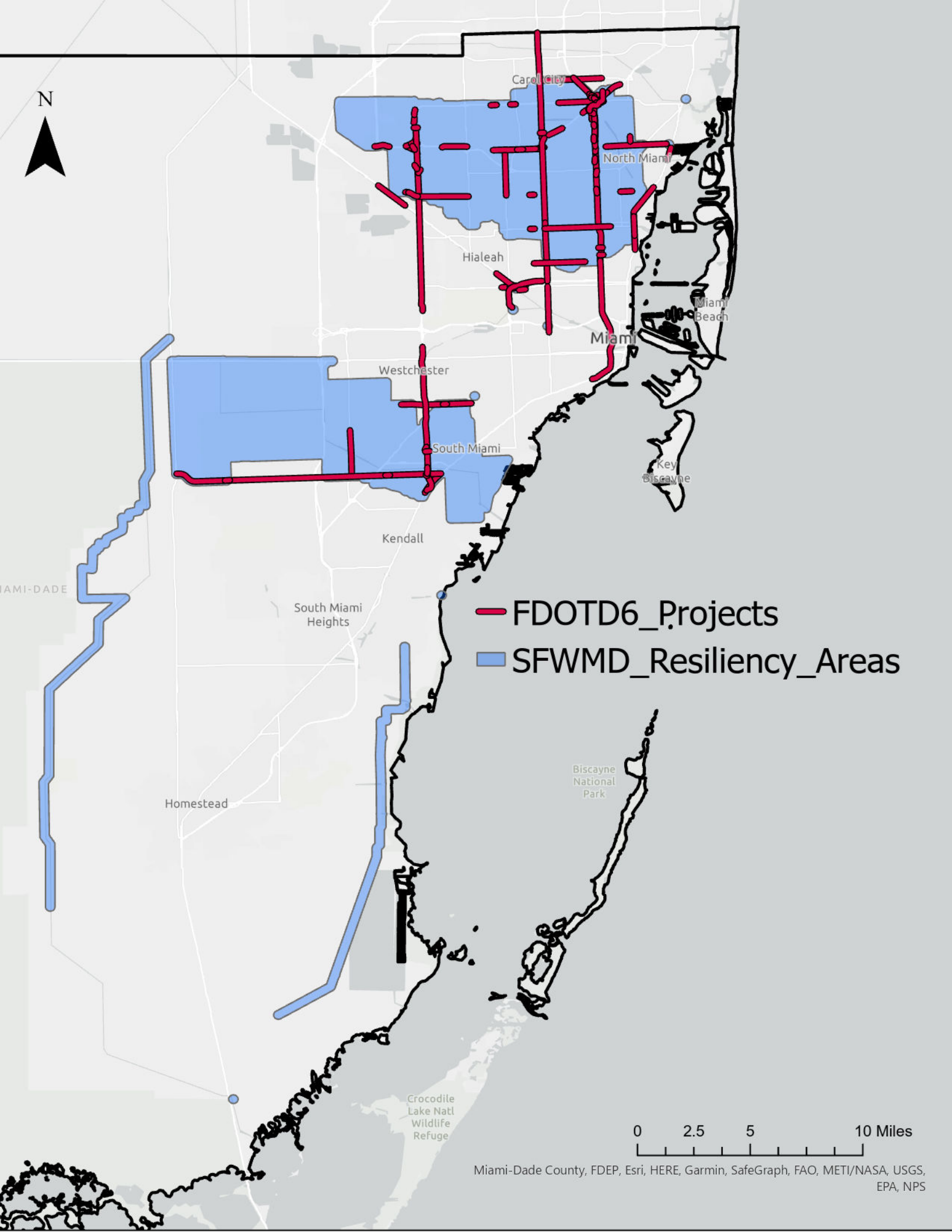
Comments on Draft 2023 Sea Level Rise and Flood Resiliency Plan

June 28, 2023

1. General: Would recommend a glossary of acronyms at the beginning of the document.
2. General: Will there be a Table of Contents? Also consider listing the tables and figures.
3. General: Would recommend adding the chapter heading to footers to help orient readers.
4. General: Make capitalizations of chapter sub-headings consistent (e.g., Chapter 4 headings are not all caps).
5. General: Ensure consistent use of Capital Improvement Program versus Capital Improvement Plan throughout document.
6. Executive Summary – 1 – Project Team page: is there an existing order the team is arranged in? If grouping by work area, move Jun Han to follow other Hydrology and Hydraulics members.
7. Executive Summary or Chapter 1: It may be helpful to have a map to contextualize the location of the District's work area in relation to the State.
8. Executive Summary – 2 – Line 38: "Sea level" is not hyphenated in most of document. Ensure consistency throughout document.
9. Executive Summary – 2 – Line 40: Remove "the" before "Florida".
10. Executive Summary – 2 – Line 47: Do not need to capitalize "agencies".
11. Executive Summary – 2 – Line 49: Perhaps introduce the plan by full name the first time?
12. Executive Summary – 3 – Text Box: Adjust heading alignment.
13. Executive Summary – 3 – Line 86: "Plan" is not consistently capitalized. Ensure consistency throughout document.
14. Executive Summary – 3 – Line 97: "For" not needed before "funding".
15. Executive Summary – 4 – Line 107: Write out "U.S. Army Corps of Engineers" since it is the first time mentioned.
16. Executive Summary – 4 – Line 109-111: FEMA and FEMA BRIC acronyms have not yet been introduced.
17. Chapter 1 – 1 – Line 13: Introduce (NBS) acronym?
18. Chapter 1 – 1 – Line 28: Do not need "the" before "South Florida's".
19. Chapter 1 – 1 – Line 39: Hyphenate to "basin-wide".
20. Chapter 1 – 2 – Line 66: How are disadvantaged populations identified/defined? According to a Federal agency's metrics?
21. Chapter 1 – 2 – Line 80: Do not need to capitalize "Agencies".
22. Chapter 1 – 2 – Line 80-84: Reword "opportunity to share provide input".
23. Chapter 1 – 2 – Line 87: "Federal" and "state" are capitalized elsewhere. Ensure consistency throughout document.
24. Chapter 2 – 1 – Line 11: "Project" is not capitalized elsewhere.
25. Chapter 2 – 1 – Line 17: May want to write out "it is" for formal document.
26. Chapter 2 – 1 – Line 27: "Coastal Structures" is not consistently capitalized. Ensure consistency throughout document.
27. Chapter 2 – 2 – Line 43-44/50: Unclear why "Building Resiliency and Mitigating Risks" is capitalized. Is that how it is included in the CIP?

28. Chapter 2 – 2 – Line 47: “Additional new components” seems redundant.
29. Chapter 3 – 3 – Line 69: Should “identity” be “identify?”
30. Chapter 3 – 3 – Line 75: Should “session” be “section?”
31. Chapter 3 – 3 – Line 76: Include BCB acronym at the top of the page when the Big Cypress Basin is first mentioned?
32. Chapter 3 – 11 – Line 146: Change “is summarized” to “are summarized”.
33. Chapter 3 – 13 – Line 175: Dash is different from the one above.
34. Chapter 4 – 2 – Line 55: Capitalize “chapter”.
35. Chapter 4 – 5 – Line 97: Do not capitalize “for” and “and”.
36. Chapter 4 – 5 – Line 98: Replace “nature base” with “nature-based”.
37. Chapter 4 – 5 – Line 117: Do not capitalize “Opportunities” to match other list items.
38. Chapter 4 – 6 – Line 118: Map border is cut off
39. Chapter 4 – 6 – Line 139: Consider rewording “professional estimates calculations”.
40. Chapter 4 – 8 – Line 169: Consistently capitalize table headings.
41. Chapter 5 – Ecosystem Restoration Efforts: May be helpful to include images/maps of projects discussed for greater context and a visual representation of the NBS used.
42. Chapter 5 – 3 – Line 87: Change “improves” and “prevents” to “improve” and “prevent” to match “reduce” in Line 86.
43. Chapter 5 – 3 – Line 104: Chapters are not bolded elsewhere.
44. Chapter 5 – 4 – Line 133: Need more context for image. Also add Figure number.
45. Chapter 5 – 5: What is the context for the image on this page?
46. Chapter 5 – 6: What is the context for the image on this page?
47. Chapter 5 – 6 – Line 204-225: Use consistent capitalization for each bullet (e.g., Soil carbon characteristics versus Eddy Flux Towers).
48. Chapter 6 – 1 – Line 13: What is the distinction between stakeholders and the public? Who makes up the stakeholders?
49. Chapter 6 – 3 – Line 58: May want to write out “we will” instead of “we’ll” or reword to “this section will highlight...”
50. Chapter 6 – 5 – Line 159: May want to write out “does not” instead of “doesn’t”.
51. Chapter 6 – 6 – Line 195: Change “its” to “it is”.
52. Chapter 6 – 6 – Line 201: “WCA” acronym is used before it is introduced in Line 210.
53. Chapter 6 – 7 – Line 250-253: “Billion” and “million” should not be capitalized.
54. Chapter 6 – 8 – Line 278: Change “barrier” to “barriers”?
55. Chapter 8 – 3: Consider explaining a “no-regret strategy”.
56. Chapter 8 – 3: Are quotes needed around “green” and “gray”?
57. Chapter 8 – 8 – Line 38-46: May want to reconsider use of term “equal” as equal treatments may not be equitable for higher need/more vulnerable communities.
58. Chapter 8 – 11 – Line 113: Capitalize “table”.
59. Chapter 8 – 15 – Line 154: Capitalize “table”.
60. Chapter 8 – 17 – Line 224: Hyphenate to “basin-wide”.
61. Chapter 8 – 18 – Line 232: Capitalization does not match other page headings.
62. Chapter 8 – 19 – Line 307: Correct spelling of “Counties”.
63. Chapter 8 – 21 – Line 353: Consider writing the date out as “August 22, 2022”.
64. Chapter 9 – 1 – Line 10: Change “is” to “has been”.

65. Chapter 9 – 2 – Line 62: Capitalize “figure”.
66. Chapter 9 – 4 – Line 125-126: “Million” is written out elsewhere in the document. Ensure consistency throughout document.
67. Chapter 9 – 6 – Line 147: Should “Resiliency” be capitalized?
68. Chapter 9 – 12 – Line 239: Replace “artery” with “arterial”? Same comment for other Transportation project sections.
69. Chapter 9 – 13 – Line 270/293: Add period to end of sentence.
70. Chapter 9 – 13 – Line 266-290: Use consistent capitalization after the colon.
71. Chapter 9 – 17 – Line 377: Label table.
72. Chapter 9 – 20 – Line 509: Add period to end of sentence.
73. Chapter 9 – 31 – Line 764: Consistently capitalize headings.
74. Chapter 9 – 35 – Line 920: May be useful to indicate the inflation factor used for all 2023 adjusted costs.
75. Chapter 9 – 50 – Line 1363: Adjust text alignment.
76. Chapter 9 – 72– Line 1991: “Total Construction Cost” is listed twice. Add clarifying language if one is adjusted to 2023.
77. Chapter 10 – 6 – Line 204-239: Consistently use “hydrometeorological” or “hydro-meteorological”.
78. Chapter 10 – 7 – Line 240: Reduce spacing.
79. Chapter 10 – 10 – Line 371: Consider writing ‘e.g.’ out as ‘for example’.
80. Chapter 10 – 12 – Line 444: Is ‘WIPE’ an acronym?
81. Chapter 10 – 16: Beginning on this page, some of the text/font looks different than the rest of the document.
82. Chapter 10 – 17 – Line 611: Consistently capitalize headings.
83. Chapter 10 – 23 – Line 796-799: Add “\$” before costs.
84. Chapter 10 – 24 – Line 807-819: Information may be better presented as a table.
85. Please see attached for a list and map of FDOT District 6 projects that are located within SFWMD Resiliency Areas. Please coordinate with FDOT District 6 regarding these projects.
86. Please coordinate with FDOT District 6 for proposed work that may have the potential to impact FDOT infrastructure.



N

- FDOTD6_Projects
- SFWMD_Resiliency_Areas

0 2.5 5 10 Miles

June 23, 2023

Dear Mr. Bartlett:

Thank you for the opportunity to comment on the South Florida Water Management District's (SFWMD) 2023 Draft Sea Level Rise and Flood Resiliency Plan (Plan). Audubon was gratified to see that many of our previous suggestions were included in the updates made this year to the Plan, not the least of which included measures to determine impacts to economically disadvantaged communities, consideration of compound flooding drivers, and comprehensive resiliency projects. In addition, we are grateful to see the inclusion of the Upper Kissimmee Basin Flood Study and the most critical infrastructure and vulnerable areas in ranking criteria in this robust update.

This Plan is an iterative process, and we trust it will become stronger with additional time, stakeholder input, and available data. We thank the SFWMD for being the forerunner in the state on resiliency planning and we offer the following suggestions to enhance future plans. Please review the addendum for details.

- 1) **Plan Structure** – We suggest organizing the Plan around high-level goals and timelines.
- 2) **Project Ranking Criteria** – Audubon recommends retaining nature-based features as a priority and ensuring important areas are assessed for flood risk in the Flood Protection Level of Service (FPLOS) Phase I Assessments.
- 3) **Nature-based Solutions** – Audubon applauds the addition of green and blended solutions, asking for larger projects in urban areas, and expansion of this concept beyond the east coast.
- 4) **Cost** – We recommend exploring sustained revenue streams for resiliency projects.
- 5) **Locations and Strategic Retreat** – Audubon proposes expanding to areas beyond lower east coast basins and developing retreat strategies for the most vulnerable areas.
- 6) **Water Quality** – Audubon is supportive of alternative water supply projects but urges the application of advanced wastewater treatment to mitigate negative water quality impacts.
- 7) **Water Supply** – Audubon recommends the SFWMD shift public water sources away from surficial aquifers, promote reduction in turfgrass use, and eliminate the agricultural drawdown practice in Miami-Dade County as a resilience measure.

Thank you for setting a precedent across the state for resiliency planning. There are several ongoing statewide resiliency planning efforts and thus a need for coordination with those efforts for the development of complementary plans. We commend the SFWMD for holding consistent and collaborative forums to engage partners, from local to federal agencies; the meaningful dialogue allows us to explore options to collaborate, share ideas, and strengthen regional coordination. We encourage SFWMD to continue to foster these relationships, especially more tribal coordination, to fortify the cooperative culture while staying apprised of relevant resiliency endeavors across the state.

Thank you for your leadership and commitment.

Sincerely,



Kelly Cox, Esq.
Director of Everglades Policy
Audubon Florida



Beth Alvi
Sr. Director of Policy
Audubon Florida

Addendum

Plan Structure

We recognize this is a complex plan encompassing a large geographic area, and therefore working sequentially, we recommend first developing overarching resiliency goals for the entire geographic extent of the SFWMD's jurisdiction and then for each basin. By organizing the Plan like the Water Supply Plans, readers can readily grasp the focal goals and takeaways.

The Plan should highlight resiliency-focused projects without including ongoing ecosystem restoration projects already underway. This more focused approach will create a resiliency-centric Plan, instead of attempting to capture every SFWMD project that also bolsters resiliency.

Project Ranking Criteria

Audubon appreciates the new and updated metrics, adopted from the Resilient Florida Program and the inclusion of a social vulnerability index. Regarding the latter, we note that many areas previously listed as high risk in the Plan's flood map now fall within economically disadvantaged areas. Therefore, these areas are dually vulnerable and should be characterized as such and reflected in the ranking criteria.

Of concern is that the updated project ranking criteria decreases weighting for certain system enhancements including nature-based solutions (NBS), ecosystem restoration, and innovative technologies. Audubon would like to understand this change and the reason behind the increase in weighting for the "Likelihood of System Deficiency" category.

Natural systems can be flooded too and are vulnerable to damage during storm events because of over-drainage of the watershed. It seems that Lake Okeechobee, the Water Conservation Areas, and Everglades National Park are not considered for flood risks to themselves or from levees/dikes. Therefore, we recommend including these areas in Phase I FPLOS studies, so the flood risks are captured in project prioritization.

Nature-Based Solutions

Audubon applauds the SFWMD for expanding green and blended infrastructure into resiliency projects, especially those with basin-wide benefits. However, there is more work to do, as most NBS are on the east coast, primarily in Miami-Dade County. There is momentum here, especially with the directive to the Army Corps of Engineers (USACE) to evaluate NBS while developing flood risk management alternatives. Therefore, we ask that the SFWMD continue to think creatively incorporating NBS principles in both large-scale projects in urban areas and in smaller features retrofitted into gray infrastructure (e.g., C-9 Basin components).

We ask that the definition of “significant benefits” not be limited to economics, but also consider ancillary benefits such as protection from threats like drought, heat and wildfire. We are concerned that the current definition of “significant benefits” may preclude the agency from pursuing NBS project options. For the next iteration of the Plan, we urge the SFWMD to reevaluate which projects truly qualify as NBS, notwithstanding those pilot studies on existing natural environments (e.g., MEME and EMMA). With respect to coastal habitats, the Plan gives precedence to studies on and protection of mangroves while excluding the other important coastal habitats such as dunes/beaches, back bays, salt marshes, etc. that are also important for wildlife and community resilience.

Lastly, while we are glad to see discussion of “artificial reefs” in the Plan, we encourage SFWMD to consider reef restoration efforts in addition to artificial reef placement to preserve our vulnerable and precious remaining reefs, including endangered species. We believe in prioritizing the protection of natural environments first in resiliency planning, as artificial reefs can damage natural ecosystems if not carefully planned and become habitats for invasive species.

Cost

Improving resiliency is a critical need for a state that is ground zero for being affected by climate change. We are grateful for all the work that goes into developing and implementing a Plan like this one. While some of the projects listed have reduced costs compared to last year, the overall cost of implementing this Plan has increased. With increasing operations and maintenance costs, and projected population growth, it is apparent that SFWMD needs more resources to keep our communities safe. As such, we advocate for not rolling back the millage rate to account for these resilience needs.

Locations and Strategic Retreat

Audubon appreciates the additional consideration this Plan gives to various project areas, including the Kissimmee Basin. We ask that expansion continues, ensuring that in the Kissimmee Basin region specifically, storage options are considered prior to drainage repairs. For example, the planned C-29 canal conveyance improvements could be harmful, worsening downstream conditions. The Phase I FPLOS assessments should be completed first to better inform the project goals and plans for development in flood-prone areas must be scrutinized before moving forward.

Audubon also commends the SFWMD for highlighting the Big Cypress Basin by including a new microwave communications tower project in this Plan and we would appreciate additional resilience efforts in this region. While the lower east coast basins are vulnerable, especially to sea level rise, a more balanced approach is necessary, one that includes all regions. Finally, we ask SFWMD to develop a

retreat strategy for areas where future conditions indicate resilience projects are neither feasible nor sustainable long-term.

Water Quality

We are glad to see SFWMD highlight the importance of water quality in this Plan, as it is a crucial ancillary benefit to resiliency investments. This is especially true with NBS, making water quality parameters powerful performance metrics. Audubon is a proponent of developing alternative water supply (AWS) for water conservation purposes including the use of reclaimed water. We emphasize the need for the highest level of treatment for reclaimed water, to prevent reintroducing pollutants back into the system. These sources contain elevated nutrients, as evidenced by monitoring data downstream of application sites. Minimizing pollution at its source is the best form of pollution prevention. Therefore, we recommend that all Wastewater Treatment Facilities be upgraded to meet advanced wastewater treatment requirements.

Water Supply

In order to “save for a rainy day,” SFWMD must prioritize water conservation, water supply planning, and aquifer protection as a component of this Plan. Audubon urges the SFWMD to take a leadership role in reducing turfgrass use across the District to eliminate excess water use, replacing with native plants, where possible. This would impact water quality positively, improving resiliency outcomes by reducing saltwater intrusion. Audubon is pleased to see the Bahia grass Pilot Study included in the Plan, and we are hopeful this species will become a viable alternative, reducing intensive irrigation and fertilizer use.

To prevent the over drainage or possible elimination of our valuable wetlands, we recommend the SFWMD help shift the public and agricultural water supply away from surficial aquifer sources (especially wells near wetlands), transitioning to deeper brackish water sources instead. In addition, removing the agricultural drawdown practice in South Miami-Dade County would greatly improve water supply and should be included in the next Plan as a resilience measure. We look forward to reviewing the Water Supply Vulnerability Assessment when completed.



Resiliency Team
South Florida Water Management District
3301 Gun Club Rd
West Palm Beach, FL 33406

Dear Project Team,

The Everglades Foundation appreciates the opportunity to submit comments on the South Florida Water Management District's (SFWMD) 2023 Draft Sea Level Rise and Flood Resiliency Plan (SLRFRP). We commend the SFWMD's strong commitment to building regional resilience through diligent risk assessments and collaborative partnerships while managing ongoing restoration efforts in the region. We believe that the proposed resiliency projects in the 2023 Draft SLRFRP, prioritized upon careful vulnerability analyses of critical coastal infrastructures and water supply operations, have great potential to enhance inland and coastal resiliency in the region.

We would also like to take this opportunity to emphasize the urgent need to (a) integrate the proposed resilience projects with ongoing regional restoration and resilience plans to maximize risk reduction benefits and ensure compliance with the fundamental objectives of the Comprehensive Everglades Restoration Plan (CERP) by '*keeping Everglades Water in the Everglades*' and (b) design a comprehensive and integrated risk resilience strategy that centers environmental and equity outcomes.

1. Integrate proposed resilience projects in processes and outcomes with ongoing restoration and resilience plans to maximize benefits and ensure compliance with regional protocols for ecosystem restoration.

- a) *Integrate restoration components and resiliency initiatives in the Southern Glades and Model Lands areas.* The SLRFRP report (Table 2.1) highlights the flooding vulnerability of the Southern Glades and Model Lands areas for current and future conditions. In particular, the analysis places the C-111 and the other surrounding watersheds (Miami #5) under high Flood Protection Level Of Service (FPLOS) basin assessment priorities, with the Model Lands and C-111 basins vulnerable to a mere 5-year storm event for the canal stage and a 10-year storm event for flood frequency (Figure 2.1 of the SLRFRP document). However, the Biscayne Bay and

Southeastern Everglades Ecosystem Restoration (BBSEER) project, currently in its planning phase, aims to improve the health of the coastal landscape by enhancing the quantity and timing of the freshwater distribution over the abovementioned areas. Some of the BBSEER proposed features include backfilling the C-111 south canal, removing the S-197 structure, and constructing spreader features. Owing to the identified flooding vulnerabilities and potential changes in the current water management in BBSEER, the SLRFRP should provide a coordination mechanism among the improvement initiatives that would ensure co-benefits in this valuable landscape.

- b) *Minimize seepage loss from the Everglades and relevance to the South Miami-Dade Curtain Wall project:* The South Miami-Dade curtain wall project, one of the resiliency projects identified in this SLRFRP document, is considering constructing a seepage barrier to reduce seepage loss from the Everglades. ‘The 27-mile south scenario with gaps in the curtain wall’ was chosen from various alternatives for implementation based on detailed hydrologic and hydraulic modeling efforts. The public planning process of the project is ongoing, and we support this curtain barrier project. However, the proposed seepage barrier's efficiency could change as the BBSEER project seeks water from the North Lake Belt area, routing water through the highly transmissive aquifer to provide benefits into the Biscayne Bay and Southern Glades areas. The intended modifications of existing water resources could potentially create a higher west-to-east hydraulic head gradient that may enhance seepage loss from the Everglades and would challenge the efficiency of the selected alternatives for the South Miami-Dade curtain wall project. Therefore, we recommend a reevaluation of the curtain wall alternatives through revised modeling by incorporating BBSEER project features to ensure maximized restoration and flood protection benefits.

2. A comprehensive and integrated risk resilience strategy that centers environmental and equity outcomes.

- a) *Prioritize environmental outcomes with nature-based solutions:* We are gratified by the inclusion of nature-based solutions (NBS) such as EMMA and MEME and the addition of green interventions to existing infrastructure in the C-7, C-8, and C-9 basins in the SLRFRP. These seven NBS and hybrid measures will demonstrate the increased effectiveness and lowered costs for risk reduction while providing co-benefits such as soil accretion, carbon sequestration and storage, and improved water quality. Furthermore, we are confident that the findings from these projects will help formulate associated resilience metrics, strengthen the evidence base for risk reduction benefits, and overcome the skepticism in selecting and adopting NBS over grey infrastructure for plans such as the Back Bay Coastal Storm Risk Management study.

However, we fear the limited scope and scale of NBS will also limit the scale of benefits NBS are capable of generating. We recommend a comprehensive and integrated approach for region-wide resilience, a ‘nature first’ approach that prioritizes NBS for risk reduction, combining structural and non-structural solutions as necessary, to enhance environmental and social outcomes. We suggest the SFWMD use the expertise of landscape architects to design scalable NBS at the site of existing infrastructure which can be gradually expanded to interlink and build synergies across the landscape, and support CERP and BBSEER objectives by enhancing ecological and hydrological connectivity in the region.

We propose a diversity of multifunctional NBS solutions that effectively address the primary risk of flooding and increase biodiversity while providing equitable access to the community. Flooding and urban heat risks are often co-located in South Florida, especially in underrepresented communities, and the NBS should be designed to capture both benefits for at-risk and underrepresented communities. Key steps to identify and address siting challenges such as logistics and funding must be elucidated at the outset to find equitable solutions through participatory processes. We also encourage the SFWMD to engage in multiple private-public partnerships to mobilize a diversity of financing opportunities for the sustainability of NBS.

- b) *Prioritize equity outcomes through enhanced public engagement:* While applauding the SFWMD’s effort to enhance multilevel collaboration through its Resiliency Coordination Forum, we urge the adoption of an equity-focused public engagement process to actively involve local, indigenous, and underrepresented communities in all project phases from design to evaluation, fostering ownership and empowering diverse communities for comprehensive urban resilience outcomes.
- c) *Adopt an integrated valuation approach for comprehensive benefits of resilience projects:* We greatly appreciate the progress shared by Mr. Colin Rawls, U.S. Army Corps of Engineers, in the development of economic methodologies to capture the comprehensive benefits of resilience plans that incorporate NBS. We extend our support to SFWMD in developing an integrated valuation methodology with cutting edge economic techniques that deemphasizes economic benefits based on avoided losses alone and prioritizes environmental and social equity outcomes through the practice of procedural and distributional equity and capturing the diverse values of integrated resilience measures.

- 3. **Emphasize water quality improvements and creating more storage:** We underscore the importance of incorporating water quality improvement projects into the resiliency planning to ensure that we keep sending clean water to the south. We acknowledge the ongoing efforts to identify and create storage and to raise the efficiency of stormwater treatment areas (STAs) around Lake Okeechobee. Furthermore, measures on building more storage and STAs will ensure enhanced water quality-flood protection co-benefits. We believe that the ranking criteria that are proposed to identify priority projects would be

beneficial if water quality impairments and benefits were included as categories in the 'likelihood of system deficiency,' 'consequence of system deficiency,' and 'benefit of system enhancement' criteria as described in Chapter 9 of this report.

Finally, we reiterate our appreciation of the efforts described in the SLRFRP report to build a resilient South Florida. We are thankful to the SLRFRP project team and look forward to continued engagement and collaboration with the Project Team.

Sincerely,

A handwritten signature in black ink, appearing to read "MChabba". The signature is written in a cursive, flowing style.

Meenakshi Chabba, PhD
Ecosystem and Resilience Scientist



June 23, 2023

Drew Bartlett
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, FL 33406
Sent via email: resiliency@sfwmd.gov

Subject: 2023 Sea Level Rise and Flood Resiliency Plan comments

Dear Mr. Bartlett,

Miami Waterkeeper is pleased to present its comments to the South Florida Water Management District regarding its revised draft Sea Level Rise and Flood Resiliency Plan, dated June 2023.

Priority ranking – Miami Waterkeeper continues to express its support of the District’s priority ranking of resiliency projects in urban Miami-Dade County.

Nature-Based Solutions (NBS) – We appreciate the Plan’s *Section 4: Nature-Based Solutions*. We strongly encourage the adoption of NBS over gray infrastructure where possible and practical, due to the multiple benefits discussed on page 4-9 of the plan. We also support the additional performance metrics included in the May 2023 draft of the Plan and outlined in Table 4-3.

Miami Waterkeeper understands that the District uses screening tools to ascertain areas with social vulnerability, and that this consideration is incorporated into the ranking criteria. We understand from Tier IV ranking that 5% weight is applied to “the extent to which the project assists financially disadvantaged communities” (page 8-17). It appears to us that the District is considering economic status alone in its definition of social vulnerability. We suggest the District provide a clear definition of social vulnerability in the context of its screening criteria and what threshold constitutes financially disadvantaged (for instance, 2x below the poverty threshold).

Additionally, we wish to underscore the multiple benefits of NBS in our urban area due to the co-benefits that can alleviate heat, flooding, and pollution. Hiring expertise, such as a landscape architect, to identify suitable locations in urban areas would both manage water quality and water quantity within densely populated communities while providing an array of health and social benefits. Miami Waterkeeper would be pleased to work with the District on nature-based resiliency projects in Miami-Dade and Broward counties.

Canal Maintenance Strategy: Miami Waterkeeper understands that it has been the practice of the District to control algae growth with chemical spraying of herbicides, including those that may contain glyphosate. These chemicals are toxic to wildlife and humans and contribute to poor water quality conditions in our estuaries. Nutrient runoff from the land fuels algae growth in the canals. This algae, in effect, acts like a sponge to soak up nutrient pollution and collects it in its biomass. We urge the water management district to cease the use of herbicides and instead conduct mechanical harvesting whenever possible.

We also understand from speaking with District staff that canal maintenance does not solely rely on herbicide spraying to clear unwanted vegetation but can also include mechanical means. District staff have relayed to Miami Waterkeeper that property owners abutting canal right-of-way should maintain canal frontage through mowing or mechanical removal such that District action is not necessary. We would be pleased to work with the District on an outreach campaign to engage, partner with, and educate property owners on proper maintenance of canal frontage so that canals are kept clear without any party resorting to herbicides.

Proposed South Miami-Dade Curtain Wall: Stakeholders need assurance that the curtain wall will not exacerbate the already limited groundwater flow to Biscayne Bay or be contrary to the Bay's restoration goals. We request that the District provide further information regarding the studies and future opportunities (briefly noted on page 9-90 of the draft plan) that will ensure the continued flow of fresh groundwater into the southern Biscayne Bay environment.

We respectfully request the District provide, in subsequent iterations of the Sea Level Rise and Flood Resiliency Plan, a draft copy that redlines changes to make it easier for the public to review from one year to the next.

Thank you for the opportunity to comment on the Plan. The District's efforts to keep sea level rise and increased flooding in check represent some of the most important projects in the region. We look forward to many more nature-based resilience projects beyond traditional gray infrastructure that will improve the environment while keeping our community safe.

Sincerely



Audrey Siu
Policy Director
Miami Waterkeeper
PO Box 141596
Coral Gables, FL 33114-1596



June 23, 2023

South Florida Water Management District
3301 Gun Club Road
West Palm Beach, FL 33406

Letter submitted electronically via: resiliency@sfwmd.gov

Re: Comments on the District Sea Level Rise and Flood Resiliency Plan June 2022 Draft

Dear South Florida Water Management District,

I am happy to submit brief comments on behalf of the Sanibel Captiva Conservation Foundation. We have been engaged during the continual evolution of your Sea Level Rise and Flood Resiliency Plan and broader approach including both by submitting public comments and attending your recently established quarterly resilience coordination forums.

We continue to be pleased with changes we have seen in plan updates over time including the current iteration. For instance:

- Continued and increasing commitment to nature-based solutions and hybrid options as part of your resilience strategies. This current iteration of the plan does an excellent job of further identifying the possible nature-based strategies that can be used to meet different needs and what metrics might be used to assess their function.
- Inclusion of renewable energy options and other elements that contribute to mitigating greenhouse gas emissions, as opposed to a sole focus on just adapting to climate change.
- Effort to engage and inform invested stakeholders about your current and future process to assess and update the C&SF Project in response to current and future stressors like sea level rise.
- Proposal of the carbon sequestration monitoring plan for District restoration projects will hopefully result in data that will be useful to many of your stakeholders.
- Expansion of your water supply chapter that includes a clearer description of the impacts and trade-offs of varying water-supply strategies.

For this version of the plan, we would like to offer these few suggestions:

- Currently, the purpose of Chapter 2 is not entirely clear. It seems likely the focus of Big Cypress Basin within this chapter is because of its priority on your list of basins within SFWMD boundaries due to deficiencies in delivering expected flood protection level of service as described in Chapter 3. If so, that link could be made clearer in Chapter 2, or perhaps Chapter 2 should be re-ordered to appear after the current Chapter 3.

- We submitted this public comment associated with the prior version of the plan, but it may still apply here: “The current plan suggests the District ‘The District develops saltwater interface maps at five-year intervals in our coastal aquifers.’ We recommend that the spatial and temporal variability of the saltwater interface be evaluated to ensure a 5-year window is suitable for risk assessment. Or, if this has already been done, it be clarified within the plan.”
- In assessing possible sites for installation of larger solar arrays, we hope that the District will make careful decisions about where to site these systems. For instance, there are reports like [this one from the National Renewable Energy Laboratory](#), that highlight the potential for locating these types of solar projects on contaminated or disturbed lands which simultaneously reduces the potential environmental impact to more ecologically valuable land.
- Given that you describe so many different projects within Chapter 9 and then studies within Chapter 10, it would be helpful to have a really simplified index of all projects, and another for all studies with a hyperlink to bring the reader to that project’s or study’s description.

Thank for the opportunity to stay involved in the District’s process.

Sincerely,



Carrie Schuman, Coastal Resilience Manager

Comments on the *SFWMD 2023 Sea Level Rise and Flood Resiliency Plan*

We thank the South Florida Water Management District (SFWMD) for the opportunity to provide feedback on their revised Sea Level Rise and Flood Resiliency Plan document for 2023. The South Florida Natural Resources Center (SFNRC) of the National Park Service (NPS) has special expertise in the Comprehensive Everglades Restoration Plan (CERP) hydrologic and water quality modeling to assess benefits and impacts to Everglades and Biscayne National Parks. We recognize the strong partnership between the SFWMD and the SFNRC and provide these comments as partners seeking to provide for more resilient solutions to the pressing challenges of a changing climate.

Our general impression of the document is that it was well thought out, carefully balancing the needs to provide flood protection in an uncertain future while providing flexibility to allow for the implementation of the CERP. With the specific feedback below, we hope to better align those two needs, particularly emphasizing the role NPS continues to have in water management and restoration projects planning impacting the Everglades and Biscayne National Parks. Our feedback ranges from specific considerations to a broader call for cooperation between our two teams.

With that, I encourage you to review the feedback provided below and we look forward for our continued collaboration. Thank you for your dedication and hard work on this planning effort.

Consideration of Water Quality in Biscayne National Park

As part of the decision-making process, measures should be defined and implemented to protect the water quality of Biscayne National Park, which our economy and community depends upon.

Need Water Quality Performance Metrics, Basins TMDLs, and Additional Monitoring for Biscayne National Park and Biscayne Bay

Water quality performance metrics should include turbidity, chlorophyll-a, and nutrients for all constructed options and features as listed in Table 3-3. Total Maximum Daily Loads by basin (TMDLs) should be developed for all discharges to Biscayne National Park.

Biscayne Bay is an Outstanding Florida Water. Please add specific information to ensure an assessment of how the Outstanding Florida Water Quality standard will be met with the implementation of all proposed projects.

Additional water quality monitoring should be implemented in Biscayne Bay to ensure all water quality standards are met in all representative areas of the Bay. Depending on the land use and source of waters, monitoring of additional contaminants may be indicated.

Pumping and Discharges can Increase Turbidity, Nutrients, and Bacteria in Biscayne Bay

Many of the proposed actions in this plan involve adding forward pumping capacity where there is currently limited capacity or only gravity driven systems. Moving toward systems that rely upon extensive forward pumping may compromise the health of Biscayne National Park as this might result in an increase in damaging pulsed discharges with high levels of turbidity, nutrients and bacteria. While this may be deemed necessary for successful increase in flood resilience, the benefits should be weighed against the potential adverse impacts from this same action. Options to mitigate for these impacts should be considered.

Coordination with CERP Projects

We would like to ensure that the proposed projects such as the Curtain Wall, L-31E Levee, and S-197 modifications are compatible and consistent with CERP restoration projects.

Curtain Wall

The section on the Curtain Wall describes a large-scale initiative that seems to fit more accurately within a parallel public planning process, instead of a sea-level rise and flood resiliency planning effort. Impacts of additional curtain walls on Everglades and Biscayne National Parks need to be assessed, including modeling, while allowing input and rigorous review throughout the evaluation process from multiple stakeholders. This initiative needs to be evaluated at the highest planning level.

L-31E Levee

The L-31E levee project needs to be evaluated within the context of the BBSEER and BBCW projects to understand the interactions and to ensure that implementation would not interfere with any CERP project infrastructure or performance.

The L-31E levee project was not well described or referenced in the report, and the figures in this document were hard to interpret. The document would benefit from inclusion of specific references to documents and reports, and those referenced reports should be made available to the public.

S-197 Modifications

The S-197/C-111 project proposed in this document needs to be evaluated within the context of the ongoing CERP projects in the region, including BBSEER and the final implementation of BBCW Phase 1, to ensure that it does not interfere with the CERP project's infrastructure or performance. Impacts on water management operations should be evaluated and be subject to interagency review and optimization.

NPS Input and Partnering Opportunities

Explicit Consideration of Biscayne National Park

Biscayne National Park is downstream of many of the proposed projects and as such, Biscayne National Park should be more explicitly recognized throughout this document. As an example, it would be beneficial to identify Biscayne National Park boundaries in Figures 3-1 through 4 and 8-15 through 24.

Each of the proposed upstream projects should include a discussion with consideration of the potential impacts or benefits to Biscayne National Park.

Partnering and Collaboration with National Park Service

SFNRC's mandate is to optimize CERP benefits to the South Florida National Parks and Preserve. As such, we are interested in evaluating any projects that may affect quality, quantity, timing, and distribution of water going to Biscayne or Everglades National Parks. Similar to other agencies mentioned in the "Leveraging Partnerships and Public Engagement" section in Chapter 1 and the "Biscayne Bay" section in Chapter 5, we would like to contribute our expertise to help, 1) to assess the proposed resiliency strategies impacts to the National Parks and, 2) to develop performance metrics and monitoring plans to ensure projects will not adversely affect Parks resources.

The SFNRC would like to thank the SFWMD for their diligent work on planning and outreach, and for consideration of our feedback in this letter. The level of work put into the Plan is commendable, especially given the complexities of balancing the SFWMD missions of flood control, water supply planning, and ecosystem restoration.

South Florida Water Coalition

June 29, 2023

South Florida Water Management District
3301 Gun Club Road
West Palm Beach, FL 33406

RE: 2023 Draft Sea Level Rise and Flood Resiliency Plan Public Comment

To the relevant parties at the South Florida Water Management District:

The South Florida Water Coalition (SFWC) is happy to provide a public comment on this very important issue for our state and local communities, and appreciates the SFWMD for extending the ability to comment publicly on the matter.

For the last four years, the SFWC has expressed support for a number of causes regarding regional water resources: its protection, availability, and management. Advocating for solutions that better the ongoing sea level rise crisis is one such cause. During the most recent legislative session, the SFWC worked closely with elected officials who have also pushed for measures to raise attention to sea level rise, and implement strategies to better prepare not for what is coming, but for what is already here.

Having reviewed the 2023 Draft Sea Level Rise and Flood Resiliency Plan that the SFWMD has released, I am confident that many of the complexities of this crisis are being adequately prepared for. Moving a step further, the SFWC has spent a great deal of attention on the Water Supply Resiliency section of the report, and is satisfied to see that “*sea level rise (SLR), changing rainfall patterns, and drought occurrences*” are rightly acknowledged as impacts to the water supply of over 7 million residents on our Lower East Coast. In addition, the section also considers population increases and saltwater intrusion for water supply scenarios and simulations. These, together, are the right approach to ensuring supply is available in the best and worst of times.

In the “Protecting Our Existing Water Supply” section (page 40) of the draft, the following is stated:

The district maintains canal and groundwater levels in the regional water management system during the wet and dry seasons to ensure water supply demands needs are met, from urban demands to natural system.

The South Florida Water Coalition appreciates the District’s commitment to making Southeast Florida’s water supply a management priority. Like you, we are aware of the challenges that climate impacts will have directly to our area, and the risk that natural disasters create – from significant rain events to droughts. These, together, can put our water supply at risk, and your draft plan rightly seek to address them to a large degree.

However, the SFWC encourages the SFWMD to also consider incorporating further detail on ensuring that our backup water supply resources – such as Lake Okeechobee – are not wrongly managed – particularly for the parts of Palm Beach County that are closely dependent on the availability of these resources. The SFWC hopes that the SFWMD will 1) make these considerations and acknowledge the impact of these resources on the Lower East Coast water supply system, and 2) work with the

South Florida Water Coalition

appropriate entities to ensure that these are managed to the benefit of South Florida residents while alternative options are developed in the future. It is difficult to separate this ever-important fresh water resource from its role in providing backup water supply to residents, as well as providing fresh water to recharge our aquifers and the Everglades – both of which help fight saltwater intrusion caused by sea level rise.

The SFWC remains optimistic that we are working toward developing sustainable, functional resiliency plans that take into consideration the many stakeholders that will inevitably be impacted by sea level rise as this issue becomes more and more prevalent in South Florida. Millions of residents are counting on you to ensure their water is protected as our area faces this critical climate crisis.

With much gratitude,



Ryan A. Rossi
Director | South Florida Water Coalition
561.706.7921 | ryan@southfloridawatercoalition.org

Pena Guerra, Francisco

From: Zhao, Hongying
Sent: Wednesday, June 21, 2023 5:11 PM
To: Maran, Ana Carolina; Colangelo, David; Pena Guerra, Francisco
Subject: setting of Current sea level

Hi Carolina, Dave, and Francisco,

I hope this is not too late. I saw this description in the Resilience Plan. Just some clarification. The LOS don't assume 2015 as the CSL. CSL is a dynamic level depending on the year the Phase I study was initiated. For example, the BCFPLOS and SMD used 2019 as the CSL. C2C3WC5C6 and C111 & L31NS FPLOS assessment also used 2019 as the CSL. The Palm Beach County FPLOS will be using 2021 level as the CSL. The two new starts planned for this year will use 2023 level as the CSL. Although the differences are very minor from 2015 to 2019, this approach will ensure a study reflects the sea level rise that has already happened. On top of that, we will add 1ft/2ft/3ft. Please let me know if you need more discussions on this. Thanks!

FPLOS Sea Level Rise Scenarios

The FPLOS Program assesses future conditions sea level scenarios. For that, three scenarios were defined relative to the 2015 or a more current year conditions depending on a project starting year, assumed as current sea level (2015 CSL):

- CSL +1 ft
- CSL +2 ft
- CSL +3 ft

According to Section 380.093 (5) F.S., flood vulnerability assessments should be performed accounting for at least two local sea level rise scenarios, including the NOAA intermediate-low and intermediate-high sea level rise projections, and two planning horizons for the years 2040 and 2070.

Hongying

Pena Guerra, Francisco

From: Molly Biscan <mbiscan8@gmail.com>
Sent: Friday, June 30, 2023 1:21 PM
To: Resiliency
Subject: Sea Level Rise and Flood Resiliency Plan

Some people who received this message don't often get email from mbiscan8@gmail.com. [Learn why this is important](#)

[Please remember, this is an external email]

I believe the toxic LAKE needs addressed first.

You cannot let the ACOE dump when we have lots of rain, a hurricane, etc. - wouldn't it make sense to stop spraying the heck out of Lake Okeechobee (get the chemical cartel under control) FIRST?

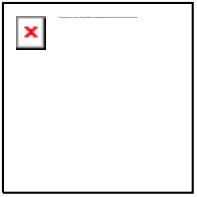
And let me tell you... I am a resident on the west coast of FL and our gulf waters are NOT the personal toilet bowl of the ACOE or anyone else.

You have had since LONG before 2018 (ecodisaster) to get this under control but nope. Hurricane Ian hits and BAM - gulf coast has to deal with the toxic stagnant petri dish crap out of Lake Okeechobee.

The ACOE and SFWMD are WELL KNOWN on our coast as to who and what caused the disaster in 2018. Know that. Moving forward there will be no "sweeping it under the rug" like you tried to do along with Mote Marine in 2018. People are well informed.

Your lack of progress is pathetic and disgusts me.





Molly Biscan

Pena Guerra, Francisco

From: Michael Joseph Cornely <cornelyj@gmail.com>
Sent: Friday, June 16, 2023 11:37 AM
To: Resiliency
Subject: Drainage structures

Some people who received this message don't often get email from cornelyj@gmail.com. [Learn why this is important](#)

[Please remember, this is an external email]

Can we please contemplate taking away all easements and giving that right and responsibilities to the property owner to manage a sea wall and grade etc? The costs could be given to the homeowner and you can directly hold responsible based on survey etc etc. Right now the county and the city don't have money and don't want to fund this. Here is an easy solution that I am sure would be supported by homeowners.

If we are spending all this money on re building the c -100 and other drainage structures can we please look at locks to allow boats out to the Biscayne bay? They have this all over lake O and the at LUCIE river etc etc.

The increased taxes and transfer of wall costs to homeowners would be an absolute win for the region. In the past decade I have only seen sfwmd use the easement to spray and run a mower that isn't even mowing anything because it is already mowed. Use some sense you don't need this contractor series. Go back to the in water boats to clear debris and give a huge win for all of South Florida and real property owners.

Give us ownership so we can care. All my neighbors don't do anything because we have no vested interest. We can help make the canal more resilient, durable and enjoyable for the community.

--

"Joe" Michael Joseph Cornely
(305) 310 - 9889

Pena Guerra, Francisco

From: brigitte smith <brigittesmith37@yahoo.com>
Sent: Thursday, June 29, 2023 3:43 AM
To: Resiliency
Subject: 2023 draft sea level rise & flood resiliency plan draft

[Some people who received this message don't often get email from brigittesmith37@yahoo.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

[Please remember, this is an external email]

Just a question regarding placing solar panels on the lake. What does that do to the health of the lake water? How much percent of the lake surface will be shaded by the solar panels and will it increase algae and kill certain plant life etc?

Thanks
Brigitte Smith
Sent from my iPhone

Pena Guerra, Francisco

From: Nichole Harris <nharris@asbestos.com>
Sent: Friday, April 14, 2023 1:44 PM
To: Resiliency
Subject: Flood Damage Resource Suggestion

Follow Up Flag: Follow up
Flag Status: Flagged

Some people who received this message don't often get email from nharris@asbestos.com. [Learn why this is important](#)

[Please remember, this is an external email]

Hi South Florida team,

I'm writing you to see if you are still actively updating resources on your page: <https://www.sfwmd.gov/our-work/central-and-southern-florida-flood-resiliency-study>.

My name is Nichole and I work with The Mesothelioma Center, a free web resource that provides information about asbestos and the dangers of asbestos exposure.

There is no known safe level of asbestos exposure. Because of this health threat, it is highly recommended that flood-damaged asbestos-containing material be repaired, enclosed, encapsulated, or safely removed.

To assist homeowners who may be unsure of what to do following a natural disaster that resulted in flood damage, we have created an Asbestos and Natural Disasters Guide:

<https://www.asbestos.com/asbestos/natural-disasters/>

I believe that this guide would be a valuable addition to your resources. Would you consider adding it to your page to help spread awareness?

Thank you for your time and consideration. I am looking forward to hearing back from you.

Nichole Harris
Outreach Coordinator
The Mesothelioma Center



6/8/2023

To: South Florida Water Management District
3301 Gun Club Road West Palm Beach, FL 33406
resiliency@sfwmd.gov

From: Rachel Krasna
rachel@econcrete.us
ECONcrete Inc.
99 Wall Street FRTN 1 Suite 2168
New York, NY 10005 USA

Subject: 2023 Draft Sea Level Rise and Flood Resiliency Plan Public Comment

The South Florida Water Management District (SFWMD) Draft Sea Level Rise and Flood Resiliency Plan should incorporate ecological concrete into future project design elements, where marine habitat could be maximized. Using nature-based features and hybrid green infrastructure significantly increases species settlement, richness, and abundance. Furthermore, nature-based design elements allow the structure to actively provide carbon sequestration and decrease the magnitude and frequency of maintenance, leading to increased structural lifespan. Using ecological concrete as a mitigation measure and design alternative supports compliance with strict environmental regulations. Within this, all marine concrete elements should be fabricated from ecological concrete. The term "ecological concrete" is an alternative to traditional concrete that enhances or encourages the growth of flora or fauna when placed in a marine environment, while providing the necessary structural integrity and protection. The draft plan stated that counties, including Miami-Dade, received enthusiastic community support for green infrastructure approaches and hybrid alternatives. Any green infrastructure improvements would support growing climate change impacts, including "SLR, along with basin-wide solutions to maximize the capacity of flood adaptation as well as achieve water quality and water supply benefits." The substantial increase in ecosystem services (i.e. carbon sequestration, water filtration, habitat enhancement) can be applied within federal and state project level cost benefit analyses to demonstrate reduction in associated costs. Specifying hybrid nature-based features such as ecological concrete would further capitalize on existing carbon goals and nature inclusive frameworks laid out by the [White House](#) and the Council on Environmental Quality (CEQ), the USACE's Engineering with Nature [report](#), and Miami Dade County's Strategic Plan, including the resiliency future climate action strategies.

www.econcrete.us

ECONcrete Inc. 99 Wall Street FRTN 1, #2168, New York, NY 10005-4329, USA | office@econcrete.us

Pena Guerra, Francisco

From: Francina Gil <fgil@go-vortex.com>
Sent: Friday, June 30, 2023 4:56 PM
To: Resiliency
Subject: Feedback on Sea Level Rise and Resiliency Plan

Some people who received this message don't often get email from fgil@go-vortex.com. [Learn why this is important](#)

[Please remember, this is an external email]

Hello,

I am writing to provide my feedback on the Sea Level Rise and Resiliency Plan. Unfortunately, due to time constraints, I was unable to thoroughly review the document. However, I have attached some screenshots highlighting specific areas of interest and concern. Please let me know if they are not visible.

I hope that my comments can contribute to the ongoing conversation on sea level rise and resiliency. While I understand the deadline for feedback is today, I remain available for further input if needed. It is important to me to be an active participant in addressing these critical issues.

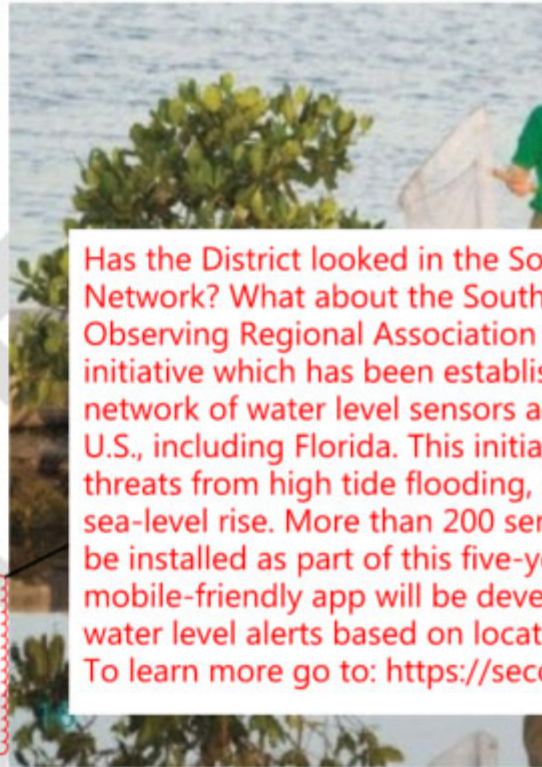
Thank you for considering my feedback, and I appreciate the opportunity to be part of this important dialogue.

Enjoy your weekend!

106 Hardening of S-2, S-3, S-4, S-7, S-8 Engine Control Panels, and L8 FEB/G-539 Pump R
107 and with Palm Beach County for the Corbett Levee. At the Federal level, the Distric
108 partnering to develop the C&SF Flood Resiliency Study, to recommend adaptatio
109 communities served by the C&SF Systems. In addition, FEMA mitigation and adaptatio
110 consideration and the District is working to finalize a grant agreement for the awar
111 received from the FEMA BRIC Program for the C-8 Basin Resiliency Project.

Provide a Table of Content
to facilitate access to relevant
content within the document, and
enhance the overall readability
and user experience.





4 The South Florida Water Management District
 5 (District) is committed to reducing the risks of
 6 flooding, sea level rise (SLR) and other climate
 7 impacts on water resources and increasing
 8 community and ecosystem resiliency in South
 9 Florida, by updating and enhancing the Central South
 10 Florida Project (C&SF Project) and Big Cypress
 11 Basin (BCB) infrastructure. This will be
 12 accomplished using traditional gray infrastructure
 13 improvements and nature-based solutions. The
 14 current plan document focuses on the most vulnerable
 15 infrastructure, recognizing that the District's entire
 16 area of operations will be covered as technical
 17 assessments and planning efforts identify additional
 18 resiliency projects and priorities each year. The
 19 Plan's vision is to reduce risk by implementing
 20 effective, resilient solutions and anticipate future
 21 conditions, while engaging the public through various
 22 outreach activities. The District's Flood Protection
 23 Level of Service (FPLOS) and Capital Improvement Program (CIP) programs ensure that
 24 assessed, designed, managed, and constructed using innovative techniques, incorporating
 25 sources of energy, and utilizing the most efficient designs available, with consideration of l

Has the District looked in the So
 Network? What about the South
 Observing Regional Association
 initiative which has been establi
 network of water level sensors a
 U.S., including Florida. This initia
 threats from high tide flooding,
 sea-level rise. More than 200 ser
 be installed as part of this five-y
 mobile-friendly app will be deve
 water level alerts based on locat
 To learn more go to: <https://sec>

2023 SFWMD Sea Level Rise and Flood Resiliency Plan

88 of Engineers (USACE), Florida Department of Environmental Protection Office of Resilie
 89 Protection, Florida Department of Emergency Management, 298 Districts, planning
 90 governments, the Southeast Florida Regional Climate Change Compact, the Southwest F
 91 Resiliency Compact, and the East Central Florida Regional Resilience Collaborative.

92 **ONGOING ECOSYS**

93 The District is working v
 94 restoration efforts, and main
 95 implemented and operation
 96 resiliency throughout South
 97 ecosystems, increasing ecosystem health and function, and allowing for increased wat
 98 flexibility to reduce saltwater intrusion in coastal groundwater. With improved ecosystem
 99 projects have decreased the impact of flooding and SLR on South Florida's communities.

SECOORA's network of water level sensors and data collecti
 provide valuable information to other stakeholders and the WI
 sea-level rise, storm surge, and high tide flooding. The data c
 SECOORA can help inform decision-making processes, impr
 forecasting capabilities, and support the development of adap

23 an average of 6 inches of observed SLR, has significantly changed the performance of the C&SF system.

24 Despite significant infrastructure investments throughout the years, critical components of the C&SF
25 system are showing deficiencies in performance. For example, gravity operated coastal structures convey
26 excess runoff from each respective watershed to the ocean to reduce flood risk, and act as salinity intrusion
27 barriers. Currently, many of these low-lying Coastal Structures cannot discharge during certain high tide
28 periods and/or storm surge events because of insufficient upstream headwater (spillway) elevations. Gate
29 overtopping, due to high tailwater events, has already been documented in the lower east coast region. As
30 part of future conditions assessments, coastal structure operations were simulated under different SLR
31 scenarios, considering both upstream canal overbank risks, as well as reduction in gravity discharge
32 capacity. Based on these advanced modeled outcomes, a number of these coastal structures were
33 characterized as highly vulnerable to SLR, reaching bank-full elevation under a 25-year or less surge
34 condition, and with 0.5 ft or less of sea level increase.

35 Also within SFWMD boundaries, the Rio Cypress Basin contains a network of 143.6 miles of primary

There is tremendous benefit in implementing the latest technology on flood sensors. They provide real-time on water levels and precipitation, allowing for early detection and warning of potential flooding events. This information can help authorities and residents take proactive measures to protect lives and property. The availability of flood sensor data can increase public awareness of flood risks and promote a sense of shared responsibility in flood preparedness. Citizens can access the information and take necessary precautions to protect themselves and their properties, fostering a more resilient and engaged community. Finally, The data collected from flood sensors can support scientific research on flood patterns, climate change impacts, and hydrological modeling. This information can contribute to the development of more accurate prediction models, better urban planning, and informed decision-making on infrastructure development and use.

Figure 3-5: Block Diagram of SFWMD-FIAT tool.

185 shapefiles), including overall damage costs associated with combined structures and roads or by
186 aggregation categories such as sub-basin, land use, tax use, census block, poverty level or critical
187 infrastructure. The recommended projects within this Plan will have an associated cost-benefit ratio as part
188 of the next planning round. The SFWMD-FIAT user manual is linked [here](#).

182

The output files include post-processed summarize damages and risk in overview detail levels (Excel spreadsheet or

187

Line 183 and 184 are not visible

120 surrounding the project. An initial placeholder of \$7M for real estate costs, as well as \$2M for tying the
127 structure back to higher elevation were included in all the structure cost estimates and will be refined during
128 the pre-design stage. Cost estimates for forward pumps and respective backup generators (at 10% of pump
129 total costs) are also included, but forward pumps may not be recommended for all the structures. Feasibility
130 studies, conducted as part of FPLOS Phase II efforts, will confirm the need for forward pumps. All cost
131 estimates have been updated for 2023 according to SFWMD Engineering and Construction
132 recommendations, based on the building structure cost index adjustment from January 2022 to June 2023
133 of 2% lower than the 2022 estimates.

134 All new developed structures and components will exceed existing and expected future flood related
135 codes. The State of Florida Building code established the minimum floor elevation by determining the
136 Baseline Flood Elevation (100-year flood line) per ASCE 24-14, plus 1 (one) foot. The Miami-Dade County
137 Code (Chapter 11C) is at regulatory flood elevation (100-year flood).

2023 cost estimate is lower
than 2022 by 2%? Is this
correct?

680 **Community-Wide Benefits**

681 SFWMD and Miami Dade County have been shifting to incorp
682 (social, environmental, operational) into their projects to consider equi
683 of the proposed project, “community-wide” refers to the historic, cultur
684 Florida residents share. This project is aligned with the SFWMD Sea L
685 (https://www.sfwmd.gov/sites/default/files/2022_SFWMD_SLRFRP_
686 County’s goals of promoting resilience in a way that goes bey
687 (<https://www.miamidade.gov/global/management/strategic-plan/home>
688 jurisdictions to take a holistic approach for resilience efforts across fou
689 Strategy, Economy and Society, Health and Wellbeing, and Infrastruc
690 is “Delivering excellent service today and tomorrow”. The SFWMD,

Need to update these

The colors in the legend don't match the colors in the map. They seem to be a darker version of the colors in the map. It took me some time to visualize the sea level rise and inundation levels.

1599

1600

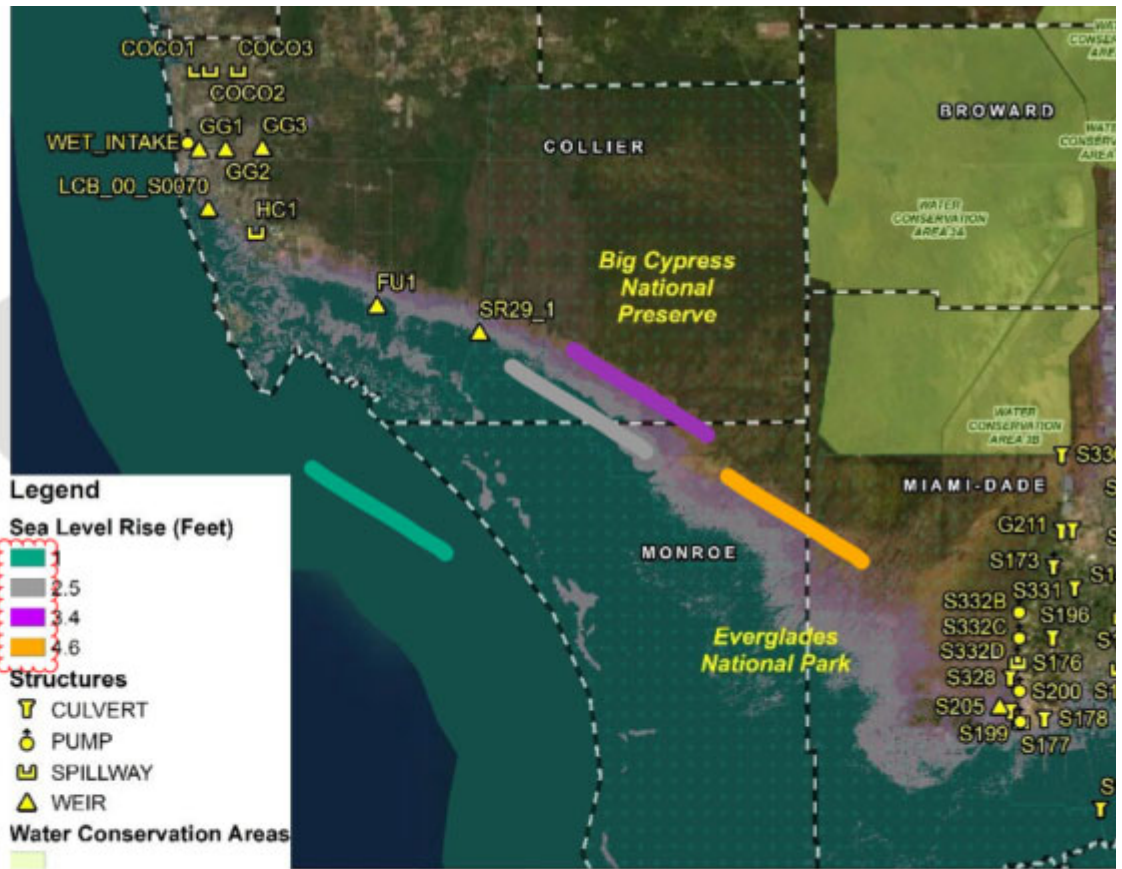


Figure 9-19. Potential impacts of rising sea levels in South Florida to water control

2289 **Figure 9-27.** Pocket Site study design.

2290 **Permanent Benchmarks and Soil Elevation Surveys**

This link may need updated

2291 Permanent benchmarks will need to be installed in and around the study area to pres
 2292 SL and SLR. Six Class "B" (Stainless Steel rod driven to refusal) NGS stability standard
 2293 be established. The work will include, but not limited to, processing the data, Quality Assu
 2294 typing, and reconnaissance. If no published NGVD 29 elevations were available at the
 2295 elevations will be derived from the NAVD 88 elevations by means of applying a site-wid
 2296 shift, or offset value, of -0.456 meter (-1.496 feet). The sense of the algebraic sign of thi
 2297 88 elevation minus NGVD 29 elevation. This value will be obtained from the NGS VER'
 2298 was computed by both the NGS VERTCON Online
 2299 (<http://www.ngs.noaa.gov/TOOLS/Vertcon/vertcon.html>, accessed May 2007, version 2.0
 2300 the software CORPSCON version 6.0.1 (which itself uses the NGS-developed VERTCO

Regards,

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Disadvantaged Business Enterprise (DBE)

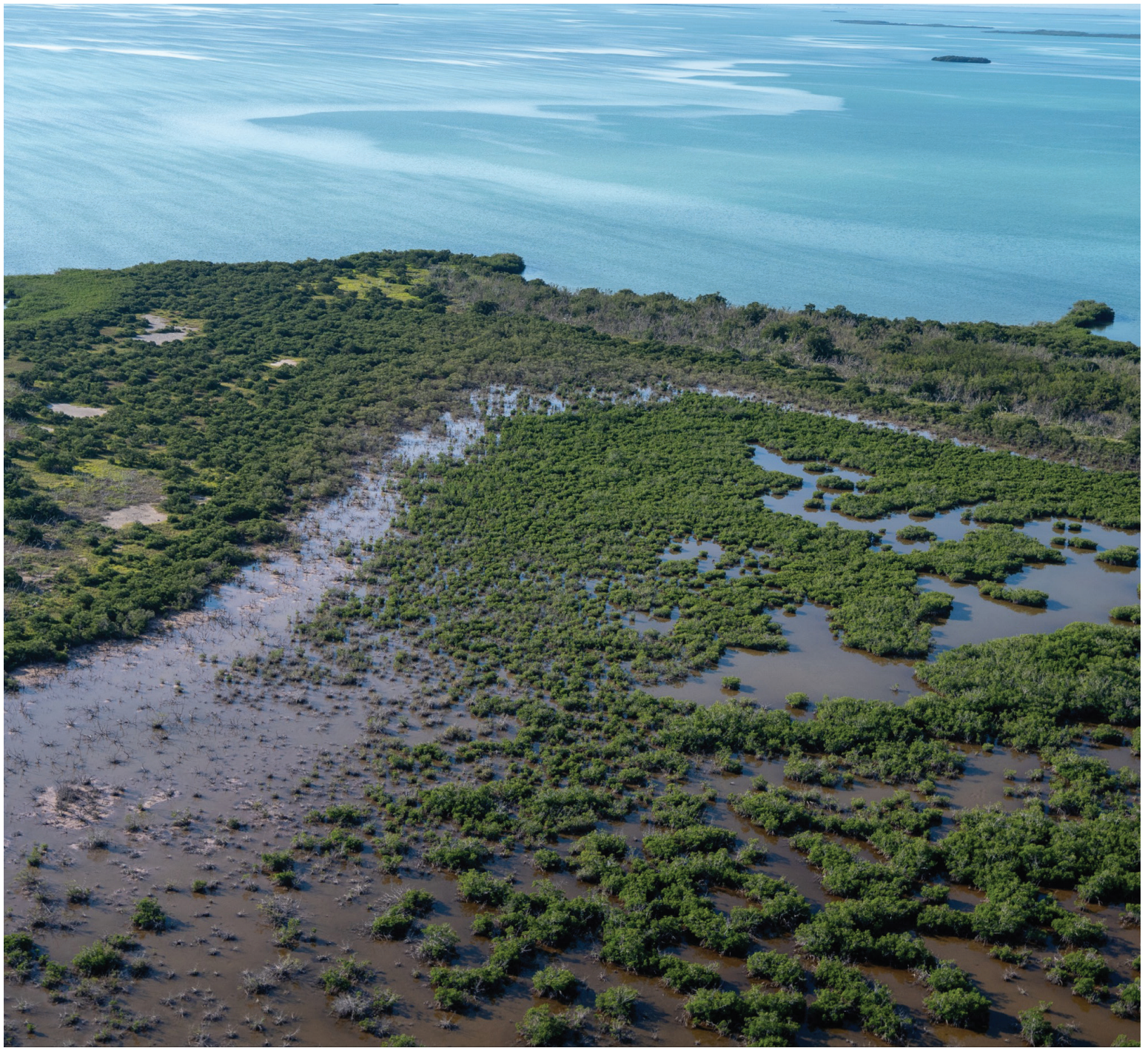
Small Business Enterprise (SBE)

Women Business Enterprise (WBE)

Minority Business Enterprise (MBE)

Specializing in the design of stormwater infrastructure, with over 45 years of combined experience.

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