MIAMI-DADE COUNTY, FLORIDA

Miami-Dade Back Bay

COASTAL STORM RISK MANAGEMENT

Final Integrated Feasibility Report and Environmental Assessment

Public Coordination

Appendix A-6

July 2024

US Army Corps of Engineers ®
Norfolk District

MIAMI-DADE COUNTY

Table of Contents

INFORMAL PUBLIC COMMENTS RECEIVED BETWEEN AUGUST 2022 AND MARCH 2024 A6-1

MULTIPLE LINES OF DEFENSE CONCEPTS A6-38

FINDING OF NO PRACTICABLE ALTERNATIVE A6-43

FORMAL COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND RESPONSES A6-46

SEMINOLE TRIBE RESPONSE 30 MAY 2024 - NO COMMENT A6-227

Informal Public Comments Received between August 2022 and March 2024

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
1	31-Oct-22	Jeff Wade	Email	The Corps needs to incorporate the following specific components into the alternative plan: • Investments in stormwater retrofits to improve retention areas, treatment and filtration • Investments in septic to sewer conversion, especially in Little River and Arch Creek areas • Fortifications of the County's sewage treatment plants • Living shorelines/green infrastructure • Coral restoration of the only near-shore coral reef in the continental U.S. • Protection for the Turkey Point nuclear power plant • Must consider groundwater impacts and canal management • Must not make sea level rise-based flooding worse while addressing storm surge • Also, they need to incorporate the following planning criteria: • Plan for using the highest sea level rise curves produced by the National Oceanographic and Atmospheric Administration • Base cost-benefit analysis on social vulnerability and human impacts, over property values, so as not to exacerbate inequity. • Avoid disrupting neighborhoods • Avoid creating environmental damage by constructing and operating massive structures in our sensitive Bay and waterways. • Leverage existing, community-based resiliency plans, such as Resilient305 and others Thank you.

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
2	1-Nov-22	Vivian Belzaguy	Email	Hello, as a Miami-Dade County resident and sustainability consultant, I am concerned for the environmental and social impacts of the projects resulting from the Back Bay Study. Please incorporate the following specific components into the alternative plan: • Investments in stormwater retrofits to improve retention areas, treatment and filtration • Investments in septic to sewer conversion, especially in Little River and Arch Creek areas • Fortifications of the County's sewage treatment plants • Living shorelines/green infrastructure • Coral restoration of the only near-shore coral reef in the continental U.S. • Protection for the Turkey Point nuclear power plant • Must consider groundwater impacts and canal management • Must not make sea level rise-based flooding worse while addressing storm surge • Also, please incorporate the following planning criteria: • Plan for using the highest sea level rise curves produced by the National Oceanographic and Atmospheric Administration • Base cost-benefit analysis on social vulnerability and human impacts, over property values, so as not to exacerbate inequity. • Avoid disrupting neighborhoods • Avoid creating environmental damage by constructing and operating massive structures in our sensitive Bay and waterways. • Leverage existing, community-based resiliency plans, such as Resilient305 and others THANK YOU for allowing residents to provide feedback on this study. We appreciate you!
3	14-Nov-22	N/A	Email	instead of erecting an unsightly and view-killing 10 foot wall, raise the sidewalk ten feet.

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
4	14-Nov-22	Felipe P Manteiga	Email	Please, appoint a task force of capable residents to identify options, oversee rigorous and transparent contracting procedures, and implementation. In similar challenges the suggested TF are integrated by architects, structural engineers, landscape artists, risk management auditors, community organizers, trusted real state developers and municipal financial specialist with] proven major infrastructure experience. TFs like the proposed one usually need good communication services. Please, I beseech you to learn from the flood protection measures in Amsterdam and the rest of Holland. Their reputation in this field is well deserved. Most experts in this dynamic and challenging field have been well impressed by their flexible harmony of infrastructure, organization, community engagement, public finances and esthetics. Thank you
5	15-Nov-22	Bruce Brownlee	Email	Need natural barriers- mangrove islands, Electric to sacrificial metal to help corals, Adding chemical to water for alkalinity etc.m
6	15-Nov-22	Fernando Naranjo	Email	Dear Sirs, thank you for the magnificent study. In addition to the enhanced costal vegetation proposals; we should look at prior practices performed here in Miami (Venetian Islands, Sunset Islands, Brickell Key, big areas of the case-way in Key Biscayne, to name a few of the areas where the city was created on top of the ocean) and we should also look at other successful practices abroad in places like Dubai (where they have hundreds of new kilometers of new man made islands, in former ocean space), Singapore (all the downtown used to be ocean), Hong Kong (the airport) or Doha in Qatar (half of the city is in former ocean space). Most of these cities embraced the ocean, filling the ocean and creating new cities on top of former ocean space. Dubai is really impressive; not only how they "elevated the city on top of the ocean", but how they use the ocean to generate fresh water for crops and millions of people that leave there. What we did at West Avenue in Miami Beach a few years ago, is what we should do all over the city gradually. Elevate the City in a 30-50 year process.
7	16-Nov-22	Alina Campos-Vega	Email	Building rock piers every so many meters in florida beaches. there are tons of examples in other beaches in the world. It avoids beach erosion and they are not expensive to build

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
8	3-May-23	Daniel Kaslick, Director of Operations, Fisher Island Community Association	Email	Please see attached letter.
9	11-Aug-23	Henry Flax	Email	Dear The Miami-Dade Back Bay Coastal Storm Risk Management Study, Florida is on the front lines of climate change. As a result, the need for long-term solutions to protect us against future storms and flooding has never been more pressing. As you consider a variety of structural (storm surge barriers, seawalls, and pump stations) and non-structural components (elevation and floodproofing) to protect our homes, businesses and communities — I implore you to prioritize investments into smart nature-based solutions in the Army Corps Miami-Dade Back Bay and other resilience projects. Our community realizes that natural and nature-based solutions (NNBF) can provide a multitude of benefits including the protection we deserve, in addition to improving water quality, sequestering carbon, creating jobs and economic impact and providing additional fish and wildlife habitats. The integration of NNBF with traditional hard infrastructure practices such as seawalls, can provide enhanced protection against storm surge and sea level rise than they could on their own. It makes more economic sense to invest in NNBFs compared to traditional solutions as the costs of implementing features like mangroves and wetlands can be two to five times cheaper. The compounding effects of sea level rise and storm surge should be evaluated and incorporated into resilience planning to develop smart and long-term solutions that will serve future generations. To do this: 1. Florida leaders must prioritize natural and nature based solutions like mangroves over hardened infrastructure alternatives like seawalls. 2. Allow the private sector to identify innovative mechanisms to diversify resilience funding and improve designs that residents support. 3. Let communities have direct involvement in developing solutions that create a more resilient future. Miami can't afford to invest in a solution that only addresses one piece of the puzzle and won't be sustainable in the long

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
				run. Our community must choose smart investments now so that its taxpayers are not paying for it later on. I look forward to your response
10	23-Aug-23	Truly Burton	Email	I have an idea for some coastal protections as well. I'll raise the idea at the meeting during the Q&A portion. I have attached an (extremely crude) idea of what I'm thinking about. I have had the honor of living on the intracoastal for the past 40 years (first a private home and now, overlooking the Intracoastal in Aventura, in a high-rise building). I watch the bay regularly. I thought of protecting the shoreline using rip-rap in the non-navigable portions of the Intracoastal, in small to medium sized "rock piles". The "piles" could be covered with a mesh fencing and proper signage for boaters and swimmers and jet-skiers to "Stay off the rocks." The concept is that, instead of building a concrete wall, on top of the existing sea walls, groups of rock rip-rap "piles" could be strategically placed, with mesh fencing to reduce rocks from moving around. They would not be placed in the navigable parts of the water way or near inlets or marina entrances. I hope this makes sense! Toward that end, based on my fourth-grader style drawing. Thx, TB (See attachment)
11	12-Oct-22	Deborah A Stander	Online Tool*	Thank you for the Zoom presentation offered to the public today. I live in the Little River area (demarcated in blue). One of the main concerns that residents had the last time this plan was under consideration was that we were not kept well enough informed of what was being proposed. Would like to suggest that the City of Miami, USACE and the County please plan to hold in-person meetings with residents as that is the most effective way of communicating what is planned and getting feedback.
12	17-10-2022	Alcaide, Aurora	Online Tool	Please take into account other climate impacts such of sea level rise when planning something this massive. Look further out than just 50 years, you'll realize that designs may look very different then. I would also suggest looking at it at the regional level. Otherwise may be just throw away money.

*Online Tool refers to Online Crowdsource Reporter Tool

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
13	17-Oct-22	Stoddard, Philip	Online Tool	Back Bay Coastal Storm Risk Mgmt Study. We face flooding from rain, surge, and king tides. Waves create additional damage. Nature-based barriers, such as mangroves, reduce wave energy and reduce the distance storm surge can penetrate inland. Hard barriers can trap water inland, increasing the flood hazard from heavy rainfall and slowing drainage when storm waters overtop barriers. Hard barriers seriously degrade the biological productivity of estuaries. For these reasons, nature-based solutions and elevation of properties are the preferred solutions for neighborhoods adjoining Biscayne Bay.
14	26-Oct-22	Wall, John	Online Tool	The timetable for even completing the study (5 years?) is absurd, given the rate of sea level rise & associated risks. By my estimations, given the research already available several years back, we are looking at major sustained impacts by 2030. Serious 'intervention' must occur much sooner than what is likely under this timetable.
15	26-Oct-22	Wall, John	Online Tool	Miami-Dade must act now to avoid a catastrophic financial meltdown. At some point in the not-too-distant future, banks & insurance companies will stop, or significantly reduce, the offering of insurance coverage or mortgage loans. The cost of trying to physically protect ALL the necessary infrastructure & property is beyond any practical means. The decision makers must act now to implement a fair plan for 'retreat' that will eliminate the threat to the most vulnerable properties and buy time to implement other, longer-term solutions.
16	27-Oct-22	Harrison, Bryan	Online Tool	Given the timeframe of the study, Miami may expect to experience impacts much earlier than the time for completion of the study. It would be even longer for the time to plan, build, and implement projects. The solutions proposed today may not be adequate or may be outdated in terms of technology and methodology by the time it is implemented. Interim solutions should be considered, as should evolving solutions. Smaller tasks groups may be quicker to respond and produce viable ideas tailored to a neighborhood or site.
17	28-Oct-22	Gomez, Albert	Online Tool	Could we consider the Bay walk and River walk Sea Level Rise/Storm Surge mitigation & unification effort within City of Miami and Miami-Dade County as an opportunity to trial nature based solutions with a lifted natural berm with integrated bio-requirement enabling hybrid coastal marine infrastructure?

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
18	28-Oct-22	Gomez, Albert	Online Tool	With the past and present fish kills, the ongoing RAP-Reasonable Assurance Plan process, and the ongoing Federal Consent decree, can we use a nature based solutions approach that incorporates flood water ground containment, polishing and infiltration/exfiltration as an integrated design solution in main water release ares, such as Little River, Arch Creek and the Miami River to achieve intersectional concurrent federal laws, mandates and decrees?
19	28-Oct-22	Gomez, Albert	Online Tool	Has a potential surge conveyance multiplier effect been considered? If storm surge protection structure or nature based surge mitigating topology are put in place, it will most certainly increase surge in areas South and North of the deployment areas, Since storm surge damage will be increased in these areas due to the surge protection structures, will the Army Corps help to mitigate those adversity impacted areas? If so, How?
20	28-Oct-22	Alvarez, Antony	Online Tool	Please strongly consider more nature based solutions for a healthier Miami
21	29-Oct-22	Silverstein, Rachel	Online Tool	Coral reefs have been shown to reduce wave energy by over 90%. Coral reef restoration can help to slow down waves and thus the amount of water reaching the shoreline as part of a multi-faceted defense mechanism.
22	29-Oct-22	Silverstein, Rachel	Online Tool	Septic tanks are a major risk factor during storms. This are has many, low lying, vulnerable septic tanks. Septic to sewer conversion should be a tool to reduce storm surge risk.
23	29-Oct-22	Silverstein, Rachel	Online Tool	Many areas could have mangrove features to increase resiliency -- including in the urban environment
24	29-Oct-22	Silverstein, Rachel	Online Tool	This project must also consider high water table risks and flooding from the group-up. While I understand that this is not the focus of the project, this cannot be ignored in any proposed solutions.
25	29-Oct-22	Silverstein, Rachel	Online Tool	Septic tanks are a risk during storm surge and should be converted as part of this risk reduction. Projects like these which are needed and fit the objective are screened out by the Corps' focus on property values as the only benefit
26	29-Oct-22	Silverstein, Rachel	Online Tool	Stormwater systems are not functioning even after regular rains now. Please address the functioning of stormwater systems during storms to keep the streets dry -- but without relying on polluting pumps.

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
27	29-Oct-22	Silverstein, Rachel	Online Tool	The Turkey Point nuclear power plant is one of our biggest vulnerabilities to storm surge and should be considered in this proposal.
28	29-Oct-22	Silverstein, Rachel	Online Tool	Living shorelines that provide multiple benefits must be considered throughout the county. DERM, DEP, Corps, NOAA should all agree on a path forward with respect to living shorelines.
29	29-Oct-22	Silverstein, Rachel	Online Tool	Our 3 wastewater treatment plants are all coastal and are very vulnerable to storm surge. Any study to protect Miami from storm surge must examine enhancements to these plants.
30	29-Oct-22	Silverstein, Rachel	Online Tool	More "resilient streets" should to seek to find ways to implement resiliency and stormwater storage in urban environments. "Blue streets" and "green streets" can provide multiple benefits for the community.
31	29-Oct-22	Silverstein, Rachel	Online Tool	Proposals for storm surge should not ignore or make sea level rise based flood risk worse.
32	29-Oct-22		Online Tool	Resource investments should be equitable and should not consider property values as the primary "benefit"
33	29-Oct-22	Silverstein, Rachel	Online Tool	Project proposals must consider water quality implications for Biscayne bay
34	29-Oct-22	Silverstein, Rachel	Online Tool	Consider whether a temporary storm surge barrier could work -- in conjunction with offshore reef restoration and mangroves
35	29-Oct-22		Online Tool	Consider whether SFWMD salinity control structures could be made into flood barriers to avoid having to construct new structural elements
36	30-Oct-22	Audrey Siu	Online Tool	Please consider coral reef restoration for storm surge attenuation. This could be the most important first line of coastal defense. A 2014 meta-analysis found that coral reefs, on average, reduce wave energy by 97% (https://www.nature.com/articles/ncomms4794). A 2021 study found that trapezoidal artificial coral reefs, using staghorn coral, reduced up to 98% of wave energy in an experiment (https://www.mdpi.com/2077-1312/9/9/1007). Reef restoration and enhancement would have multiple benefits beyond wave mitigation.
37	30-Oct-22	Fulton, John	Online Tool	I live at mouth of the Little River Canal and expereinced the second significant fish kill event in as many years. The time for talk is behind us! We need Action Now to save Biscayne Bay!!!

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
38		Audrey Siu	Online Tool	Unless something has changed since SACS was available for public comment, I understand that the Corps implements ER 1100-2-8162, updated on 15 JUN 19. This circular states that "At this time, no certain effects of climate change on tropical cyclone (TC) activity in terms of frequency, intensity, and rainfall across all global basins has been identified as changes to the variability of TC activity expected from natural causes [Knutson et al., 2010] As a result, the current science related to the climate effects on TC activity relevant to the United States has not reached the point of standard consensus necessary to inform a change in storm analysis baselines." Yet, In the article “Climate Change is probably increasing the intensity of tropical cyclones” (Knutson et., al 2021), the authors indicate that the rainfall rate of TC’s is projected to increase with human-caused global warming, and expected to exacerbate TC flood risk, with general consistency among models. In the North Atlantic basin, an +8 to +17% increase in rainfall rate is projected for U.S. landfalling tropical cyclones under a medium future emissions scenario and a +24% increase using a high future emissions scenario. Despite any engineer circular prescribing “guidance” and referencing an 11-year-old study (Knutson et. al 2010), the Corps should plan for wetter, stronger TC’s exhibiting slower translational speed that will compound with SLR, as informed by the best available science; this should be incorporated into the Corps’ common operating picture of coastal risk.
39	30-Oct-22	Doebler, Dave	Online Tool	Any designs or strategies from this process must consider the health of Biscayne Bay and align with the recommendations of the Biscayne Bay Task Force Report.
40	30-Oct-22	Doebler, Dave	Online Tool	Julia Tuttle Causeway has 2 miles of net new Mangrove planting opportunity, which will increase water quality, habitat and protection of a major evacuation corridor. FDOT land, City of Miami Beach has landscaping contract, so all we need is FDOT's approval (which they won't give up to now)
41	30-Oct-22	Doebler, Dave	Online Tool	Turkey Point should be included in the scope of this project, as the cooling canals, spent fuel storage and other components are at sea level, and a significant surge or rise could affect the safety of the population, functioning critical infrastructure and the health of Biscayne Bay.

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
42	30-Oct-22	Doebler, Dave	Online Tool	Pump Stations - Biscayne Bay Task Force report: 3H. Eliminate direct and indirect stormwater discharges to Biscayne Bay through a combination of infrastructure modifications (e.g., treatment technologies) to retain more stormwater at the property-level via increased stormwater management in retention and infiltration and to conduct monitoring. Eliminate discharge of untreated stormwater into canals, creeks, rivers, and lakes, including from the streets. Ensure basic design criteria for stormwater system management are met and documented to include: 1) grates to block debris from entering the storm drains and smart water sensors, 2) more regular maintenance of stormwater systems to prevent discharge of debris and sediment, 3) more regular cleaning of storm drainage system, and 4) standards that account for higher groundwater levels and the reduced efficacy of exfiltration systems.
43	30-Oct-22	Doebler, Dave	Online Tool	Biscayne Bay Task Force Report: 3K. Ensure that new infrastructure projects to address coastal flooding and storm surge that are cost-shared by the County adhere to the recommendations of this Task Force and prioritize Biscayne Bay health and resilience. This includes such information as USACE Back Bay Coastal Storm Risk Management (CSRM) Feasibility Study and any future flood control projects.
44	30-Oct-22	Doebler, Dave	Online Tool	Biscayne Bay Task Force Report: 4D. Identify vulnerable properties along the coastline and partner with municipalities to focus on public properties and private property owners to create a voluntary Mangrove Protection and Restoration Zone Program (e.g., mangrove planter box initiative) in flood-prone coastal communities to designate protection zones, plant mangroves based on the “A Living Shoreline Guide,” and monitor and report progress after storm events. In this effort, the County should include: data collection, review and consideration of opportunities for converting flood-damaged properties from willing sellers participating in current and future buy-out programs; and increasing buffer areas via vegetated easements or as projects for listing in the Miami-Dade County Local Mitigation Strategy (LMS).

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
45	30-Oct-22	Audrey Siu	Online Tool	The Corps needs to take into account the Miami Harbor channel deepening and other any geometric changes to the harbor, to understand how proposed changes would alter tides and storm surge as relates to the Back Bay Study. The Corps should compare the benefits of port deepening with the costs of adapting to storm surge hazards. Will the the cost of adapting to greater surges and higher tides that would not occur but for port expansion outweigh the economic gains of accommodating larger size classes of vessels in our port?
46	30-Oct-22	Doebler, Dave	Online Tool	4E. Prioritize existing and identify new green and blue infrastructure approaches and restoration projects, including projects identified in existing plans like the Miami-Dade County Department of Parks, Recreation, and Open Spaces Parks and Open Space System Master Plan, using data to help inform projects with significant potential for improving water quality. In addition, each new seawall permit application should be evaluated for natural and hybrid alternatives.
47	30-Oct-22	Doebler, Dave	Online Tool	Biscayne Bay Task Force Report: 4F. Continue to work with SFWMD and to have the State of Florida allocate the funds necessary to ensure the timely commencement of construction of the Cutler Flow Way (C1 Canal enhancements in order to restore the sheet flow of water through wetlands to Biscayne Bay) in accordance with the project timeline in the Integrated Delivery Schedule.
48	30-Oct-22	Doebler, Dave	Online Tool	Biscayne Bay Task Force Report: 4G. Continue to advocate for the Biscayne Bay Southern Everglades Ecosystem Restoration (BBSEER) project (also known as the BBCW / C-111). The County should continue to actively participate and coordinate as part of the Project Delivery Team during the planning process with the USACE and SFWMD and other agencies of the Program Delivery Team (PDT) to ensure that the quantity, quality, timing and distribution of water are adequate for the complete, full scale salinity restoration of the portions of the Bay proposed for restoration under the BBCW and BBSEER projects.
49	30-Oct-22	Doebler, Dave	Online Tool	Biscayne Bay Task Force Report: 4I. Accelerate green infrastructure solutions for flooding, resiliency and water quality that include a review of watershed habitat restoration opportunities in repetitive loss areas and future flood hazard areas. Evaluate and allocate cost savings of Community Rating Systems (CRS) benefits

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
				into the Biscayne Bay watershed water quality restoration plan.
50	31-Oct-22	Haus, Brian	Online Tool	There should be a serious exploration of the use of temporary barriers to protect vulnerable coastal areas. These can be used in combination with nature based or hybrid systems that protect from waves and surges. This will provide protection from extreme flood events while not having long term impacts on ecosystems, recreational uses etc. With appropriate pre-planning and staging this can protect much larger percentages of Southeast US coastline at much lower cost than permament hardening.
51	31-Oct-22	Jazmin Locke-Rodriguez	Online Tool	Increased nutrient runoff in our urban areas and into canals and public water have little opportunity for treatment outside of nature-based solutions. If we hope to help curb future fish kills and aquatic habitat degragation, then we must look to integrate wetland functions throughout our urban areas. Sediment and trash screening/pick up is not enough. Biolgoical treatment using traditional wetland plants or non traditional in floating wetlands enables water treatment at the source of contamination with a multitude of other ecosystem services. This include for storm surge, fish habitat, improved sea grasses for manatees survival and more. We must invest in the long term resiliency of our county now by embracing the opportunities nature based infrastructure provides us before our only solution is to surround ourselves in concrete walls.
52	31-Oct-22		Online Tool	The Corps should evaluate more nature-based solutions relating to the impacts of the study. It is 2022, we are more than aware that green-grey infrastructure will always be better than just one or the other. Restore reefs, restore mangroves, restore seagrass beds.
53	31-Oct-22	Frankel, Judith	Online Tool	Nature-based solutions to the pressing issues of storm surge, king tides and increasingly powerful hurricanes should be a main focus of any plan for protection of our urban environments. Dunes, mangroves, protection of natural areas is key in maintaining our overall ecosystem.

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
54	31-Oct-22	Renee Mazurek	Online Tool	Natural Nature-Based Features are proven methodologies to create more resilient cities and communities. Not only do they contribute to the overall reduction of flooding but also they can create healthier environments for the residents in the community. Also keep in mind that low-income, communities of color are at a high risk for severe impacts from storms and increasingly receiving funding to improve resiliency measures. Without an intentional approach, the same communities are then vulnerable to displacement. Any environmental mitigation measures should also include economic and social benefits to create a holistic picture of resilience. Also consider that critical infrastructure, like fire stations and emergency shelters, have the opportunity to work as resilience hubs where natural and nature-based solutions can be implemented along with other programs and services (http://resilience-hub.org/).
55	31-Oct-22	Spector, Jaimee	Online Tool	We must consider the value of human life when determining the ROI of an investment. Focusing only on property values exacerbates existing inequities.
56	31-Oct-22	Garriga, Marbelys	Online Tool	Although one of the project's main goal is to implement nature based solutions, the current plan does not significantly apply them across study areas. Cutler Bay, which is less urbanized than the rest of targeted shorelines, already has natural mangrove infrastructure. Hybrid shorelines should be considered on all areas of the project, prioritizing long-term ecological function of the implemented infrastructure.
57	31-Oct-22	Savino Miller Design Studio	Online Tool	• It is critical to identify potential areas for mangrove restoration and living shorelines in the Back Bay Study area. Nature-based solutions can also be more cost-effective because they are self-adaptive to sea-level rise unlike storm surge barriers, seawalls, and levees, which will become increasingly difficult to maintain as sea-levels rise.
58	31-Oct-22	Savino & Miller Design Studio	Tool	Research is required to understand the potential for living shorelines, barrier islands and coral reefs to mitigate the impact of storm surge and rely less on hard infrastructure, such as floodwalls. It has been argued that in South Florida, there is no effective way to wall off the ocean because the sea will simply flow under levees through the highly porous limestone bedrock. Meanwhile, it has been shown – and demonstrated in laboratory experiments - that mangrove forests in Florida provided significant flood annual damage

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
				reduction benefits over a period of multiple storms and during catastrophic events like Hurricane Irma
59	31-Oct-22	Savino & Miller Design Studio	Tool	Implementing Mangrove restoration not only will help shoreline protection, but it will additionally oxygenate the water and bring back life into the Bay.
60	31-Oct-22	Savino & Miller Design Studio	Online Tool	Adopt a streetscape strategy to raise streets from 12" – 18" per phase, commensurate to their anticipated "lifespan" of 25-30 years, and in concert with adjacent properties and building floor levels that anticipate sea level rise projections. Gradual raising of streets will lessen issues of "harmonization" and flooding on private property. • In concert with the street-raising strategy, streetscape design shall consider the replacement of non-pervious fossil-fuel based asphalt to surface roadways to a pervious concrete paver systems, which can be reclaimed when the roadway is raised again. This is especially relevant in low-lying, flood prone areas.
61	31-Oct-22	Savino & Miller Design Studio	Online Tool	• Adopt structural measures and strategies to mitigate sunny-day flooding, heavy rainfall flooding and sea-level rise. While we understand the need to address storm surge, other issues need to be considered as part of the feasibility study.
62	31-Oct-22	Savino & Miller Design Studio	Online Tool	Create a fundamental open space/park strategy that prioritizes stormwater retention and aquifer recharge – preventing polluted runoff to Biscayne Bay – with lakes, rain gardens, retention/detention spaces, etc. that is coupled with a street construction strategy that re-plumbs stormwater runoff to these spaces.
63	31-Oct-22	Savino Miller Design Studio	Online Tool	Increase pervious space in the public right of way through pervious paving systems, narrowing street lanes, and construction of rain gardens, prioritizing the streets most vulnerable to flooding.
64	31-Oct-22	Savino & Miller Design Studio	Online Tool	We hope that all protective measures, will enhance or add to the region's social, cultural, and environmental assets that increase economic activity, community-connectedness and general health, safety, and welfare. Nature-based solutions can provide this holistic approach because they reduce risk, while at the same time provide additional valuable ecosystem services as carbon sequestration, contribution to fisheries production, and water quality regulation. These solutions help absorb large quantities of water and disperse it back into the environment in a slow manner. Permeable roads and sidewalks, green roofs, lakes,

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
				parks, rain gardens, wetlands and natural vegetation absorb, infiltrate, store, purify, drain and manage rainwater.
65	31-Oct-22	Ducci, Aldo	Online Tool	About the Money being used to fund all of this. Where is coming from or who is funding all the study. In what part of the Miami Dade Budget 2023 is being allocated?
66	31-Oct-22	Savino & Miller Design Studio	Online Tool	If walls and other major infrastructural projects are built, they should be limited to strategic locations where other nature-based technologies will not work (e.g. the mouths of rivers and canals). Any hard infrastructure should not adversely impact existing and healthy habitat and should allow for connectivity, water views from the shoreline and increased wildlife.
67	31-Oct-22	Savino & Miller Design Studio	Online Tool	Prioritize the planting of large, native canopy trees for increasing uptake of stormwater runoff while mitigating “heat island” effects.
68	31-Oct-22	Savino & Miller Design Studio	Online Tool	Consider, where applicable, “on-site” retreat strategies, that carve into existing properties while avoiding environmental permitting/disturbance issues.
69	31-Oct-22	Savino & Miller Design Studio	Online Tool	Prioritize Repetitive Loss Properties and land transfers that could allow for the creation of a linked open space/park and drainage system.
70	31-Oct-22	Savino & Miller Design Studio	Online Tool	Create a Transfer Development Credit (TDC) funding source for “retreat” from the most vulnerable “Repetitive Loss Properties” (RLPs) towards Affordable Housing tracts on higher – or raised – topography.
71	31-Oct-22	Savino & Miller Design Studio	Online Tool	Funds should be used to study efficacy of propagation and relocation of Johnson Seagrass (through a “seagrass” mitigation strategy), enabling more robust protective biological infrastructure, such as barrier islands and living shorelines, to contribute to both seawall/surge protection and ecological restoration.

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
72	31-Oct-22	Savino & Miller Design Studio	Online Tool	Reduce weighting of “property value” based on tax-base levels, which tend to favor and target protective measures in higher income areas, as these levels have begun to shift into “climate-gentrified” land with higher elevation levels.
73	31-Oct-22	Savino & Miller Design Studio	Online Tool	The study should explore long term consequences of any solution and the impact for example, in the potential savings (damage, insurance) gained by the gradual evacuation of the first one/two stories of buildings in the study area, converting these spaces to non-habitable, service or covered open space.
74	31-Oct-22		Online Tool	I have concerns about how these solutions are handled.
75	31-Oct-22	Cruz, Elvis	Online Tool	Mangroves do not stop storm surge. That's a popular myth, as shown in the Miami Herald article of April 13, 2022, which quoted three experts. Said one: “Even one mile of mangroves, I don’t think it will significantly decrease the surge,” Li said. Read more at: https://www.miamiherald.com/news/local/environment/article259496044.html#storylink=cpy Wanting something to be true doesn't make it true.
76	31-Oct-22	Laurencia Strauss	Online Tool	We need nature-based solutions like mangrove restoration and living shorelines. We need to prioritize investments in septic to sewer conversion. We need to protect or relocate Turkey Point nuclear power plant.
77	31-Oct-22	Prall, Ethan; Dario, Carlie	Online Tool	Stakeholders in Miami-Dade County would benefit from the expansion of study areas to include Key Biscayne, parts of southern Miami-Dade County that may be more susceptible to afforestation or other nature-based solutions, and marine areas off of Key Biscayne and Miami Beach that could benefit from coral restoration and enhancement. It is important for stakeholders to understand why the current study areas have been selected and more remote areas excluded. The current areas do not appear to consider key areas of the coastal zone, such as Elliott Key, Sands Key, the northern keys of Biscayne Bay, and areas south of Miami (but not necessarily within the National Marine Sanctuary), each of which would seem to be key to mitigating storm surge risk. Studying marine areas within the zone would be possible with coordination with other federal agencies, such as NOAA, as necessary.

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
78	31-Oct-22	Prall, Ethan and Dario, Carlie	Online Tool	Coral reefs have the capacity to dramatically reduce wave action and reduce damages to property from storm surge by many billions of dollars (Beck et al. 2018, Nature). They also provide significant co-benefits for biodiversity and related values. The Corps should consider the exploring natural and/or artificial reef structures, for example in the waters of Miami Beach or Key Biscayne. The Department of Defense's DARPA program is already using reefs for storm surge protection in the lower Keys, and interagency coordination may be warranted to generate solutions. Recovering existing coral reef locations is another plausible pathway, with significant co-benefits to coastal communities and natural ecosystems, including fish, crustaceans, other benthic species, and others.
79	31-Oct-22	Dario, Carlie & Prall, Ethan	Online Tool	The Draft Feasibility Study and PEIS appears to rely on Public Law 84-71 (1955) as authorization for the study and as a reason for cabining consideration only to coastal storm risk and storm surge impacts, without addressing closely related concerns, including favoring resilience methods that promote co-benefits like conservation of biodiversity and mitigation of emissions through blue carbon. However, Pub. L. 84-71 does not prevent USACE and the federal government from taking a holistic approach to managing the impacts of storms on communities and ecosystems in Miami-Dade County or Biscayne Bay. This might include (consistent with the holistic approach adopted by the President in EO 14008) considering mitigation of emissions using ecosystems, integrating multiple measures of biophysical health, general "co-benefits" from natural resilience measures to ecosystems (such as mangrove afforestation/coral restoration that enhances fish nurseries) and economies (coral reef tourism), and non-market values recognized by stakeholders in natural ecosystems and nonhuman species (and individuals). Rather, the statute authorizes a broad survey of the coastal zone, and associated possible paths for protecting the coastline, without imposing significant limitations. It does not prevent USACE from considering holistic solutions given the interdependencies between resilience, economic and ecological productivity, climate mitigation, and respect for natural systems and biodiversity. Including nature based solutions can meet other environmental goals. The President in EO 14008 has mandated an overall

ID	Date of Receipt	Name	Format	Comment
				government-wide goal of addressing climate change mitigation and adaptation that can be addressed partially with blue carbon, for example. The Corps with stakeholders can engage in a more thorough review of the co-benefits arising from nature-based or hybrid solutions in Biscayne Bay, and should include non-economic valuation and respect for nonhuman species in its consideration of revised proposals. Nature-based or hybrid solutions may help the federal government hit other targets as well, such as 30X30 goals for conservation.
80	31-Oct-22	Dario,Carlie & Prall, Ethan	Online Tool	Planning for and implementing both structural and non-structural strategies to mitigate coastal damages implies the involvement of stakeholder input and the modification of community space. Revisiting the feasibility plan invites the opportunity to include the full suite of human and nature values of these strategies, not just addressing economic or aesthetic concerns. Nature-based solutions are well positioned to provide additional ecosystem and equitable services (Cousins, 2020), but hybrid solutions do so as well. Now working with the Corp's Engineering with Nature team, the feasibility study could look to other examples in Florida for such solutions (e.g. Palm Beach County which has several nature-based solution projects that incorporate a variety of design, habitat, and recreational aspects).
81	31-Oct-22	Dario, Carlie and Prall, Ethan	Online Tool	Mangrove reforestation or afforestation should be a first priority solution for addressing coastal resilience to storm surge in Miami-Dade, and we request that the Corps consider multiple, additional sites for reforestation or afforestation (where feasible) beyond the Cutler Road site in the proposed design. In areas that are more hardened, planters and other hybrid options can be considered. Mangroves should be prioritized over other hard infrastructure solutions because they have multiple co-benefits, including providing fish nursery and other keystone marine and terrestrial habitat, and providing dramatic carbon sequestration potential (consistent with President Biden's EA 14008 implementing a whole government approach to fighting climate change). The Corps has the authority to consider all such impacts under NEPA, the ESA, and Pub. L. 84-71 (see other comment). Concerns over mangrove maintenance, trimming, and aesthetics can be further streamlined in design, siting, and permitting.

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
82	31-Oct-22	Dario, Carlie & Prall, Ethan	Online Tool	As the USACE pursues a locally preferred plan with MDC, the Corps and its interdisciplinary team would benefit from aligning goals with other local comprehensive plans addressing climate change such as 1) The Biscayne Bay Task Force Report, 2) Resilient305 Strategy, and 3) The County's Sea Level Rise Strategy. In addition, these documents provide additional recommendations concerning social-ecological impacts (e.g. the Biscayne Bay Task Force Report provides guidance on improving water quality while supporting resilience). Moreover, because these documents reflect county experiences and values, incorporating such recommendations in the feasibility study and further charettes would create more local, meaningful and inclusive impact.
83	31-Oct-22	Prall, Ethan and Dario, Carlie	Online Tool	The environmental impacts contemplated by the draft PEIS are significant and adverse with respect to federally-listed and other important species under the Endangered Species Act and other state and federal law, and these types of adverse impacts on important and beloved species (e.g., corals, sea turtles, manatees, various fish, and terrestrial species) should be avoided in the new proposal. In the revised analysis, the Corps can consider nature-based solutions–in lieu of hard infrastructure–that will in some cases help to foster greater biodiversity and reduce potential adverse impacts on threatened species. Nature-based solutions do not necessarily require eliminating benthic or other habitat, for example creating mangrove habitat where it does not currently exist by burying other habitat, but instead can and should involve solutions that enhance existing habitat (while also providing for storm resilience). Hard infrastructure that, for example, destroys or imperils critical habitat for manatees or other listed species should not be considered pursuant to the Endangered Species Act. Many impacts on terrestrial wildlife and benthic organisms also are significant and adverse in the draft proposal, and the revised design should avoid these types of impacts. If that is not possible under a given proposal, then it should not be considered further.
84	1-Nov-22	K r lipne	Online Tool	Pumps, pumps &more pumps…pipes to get water from north Florida to south Florida

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
85	1-Nov-22	Cruz, Elvis	Online Tool	The word "recreation" appears in almost none of these comments from the public. There should be an emphasis on promoting and enhancing the public's recreational enjoyment of the public waterfront. Blocking the view of the bay with a narrow planting of mangroves will not provide protection from sea level rise or storm surge, but it will effectively harm the public's recreational enjoyment of the bay. See what happened when the City of Miami planted mangroves at Kennedy, Meyers and Peacock parks.
86	1-Nov-22	Thomas	Online Tool	We should look for expertise in Europe with hundreds of years of efficient solutions to very low price marks. Let's not waste time and tax payers money to re-invest the wheel.
87	1-Nov-22	Teri D	Online Tool	Super concerned with the reality of sea level rise. It seems we are years behind addressing real issues we can see happening now. The kick the can policy just isn't working and we will pay the price dearly, unless all constituents get in this together. It is going to be painful for all - what is the best way to mitigate/hold off dire circumstances coming everyone's way !
88	1-Nov-22	Julia	Online Tool	Use nature to help with solutions. Also seek solutions from other countries that are facing sea level rise with a more sustainable solutions other than making more concrete which would essentially contribute to a new problem.
89	1-Nov-22	Pezeshk, Sara	Online Tool	• Does the plan incorporate nature-based solutions, such as the restoration of mangroves or seagrass? As is well known, the mangrove and seagrass plan protects the coast from hurricanes and serves as an excellent habitat for fish, oysters, and crabs, among other species.
90	1-Nov-22	William Quinlan	Online Crowdsource Reporter Tool	I would also like to see reef installations considered off the coast of the barrier islands, where the historic Florida Reef Tract once thrived. It would be an opportunity to test or feature hybrid or climate-resilient corals for warmer and more acidic waters. If living corals cannot survive or form the bulk of mass needed to absorb wave energy, artificial reefs are also an option. But either way, offshore reefs would serve to absorb both storm surge activity as well as regular tidal energy, diminishing the need to ongoing and costly beach renourishment.

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
91	1-Nov-22	William Quinlan	Online Tool	I would echo concerns with structural storm surge barriers like seawalls or bulkheads. In addition to closing off access to the water during calm times and possibly, dangerously redirecting surge waters elsewhere up and down the coast, they would also fail to address the problems of water infiltration through the limestone bedrock, potentially literally undermining the seawalls themselves. Given the role that the natural and artificial freshwater inlets (navigable creeks, canals, and rivers) to Biscayne Bay serve in directing the County watershed, I would be more open to bulkheads specifically at the mouths of these inlets and protect them from being used as funnels to direct storm surge inland. The County ought to match this effort with measures to reduce reliance on the inlets for flood or stormwater management, including through permeable pavements and conversion of repetitive loss properties into green spaces and parks.
92	1-Nov-22	William Quinlan	Online Tool	The Turkey Point cooling canal system presents the most obvious and immediate threat of storm damage in the County. Even if the reactors themselves and their backup generators are capable of withstanding many feet of Sea Level Rise and many categories of hurricanes, the cooling canals are impossible to accept as resilient. If the canal walls are blown or washed away, the hyper-salty water they retain will scour and possibly contaminate the landscape. I suppose I would prefer federal taxpayers to foot the bill of a cooling tower construction over the local ratepayers of FPL, but would prefer most of all for the FPL shareholders to have to pay.
93	1-Nov-22	William Quinlan	Online Tool	All critical infrastructure, especially hurricane shelters, EOCs, hospitals, and nursing homes, should be equipped with onsite renewable energy generation and battery storage. It is not a measure that protects against the storm surge impacts of hurricanes, but does protect against power and diesel outages. The County is exploring a solar pilot project at a water treatment plant, but all critical infrastructure should build it.
94	1-Nov-22	William Quinlan	Online Tool	The limited scope of the focus areas is probably too late to change at this point, and the areas were selected with good reason. But I would like to see some basic identification and estimating of the total property in the county that is vulnerable to sea level rise and storm surge, even if adaptation measures are not feasible

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
95	1-Nov-22	Abby Ape	Online Tool	Please use nature incorporated solutions for the wall
96	1-Nov-22		Online Tool	Completely against this wall solution, there are other solutions out there that are better for our environment. Stop this study!
97	1-Nov-22	Jessica	Online Tool	The issue of storm surge must be addressed by avoiding creating more environmental damage. Constructing and operating massive structures in our sensitive Bay and waterways does just that. Building a massive wall is not a sustainable nature based solution and will be a waste of taxpayer money. Where are the considerations of protecting turkey point nuclear power plant and coral restoration in this plan? This plan does not address canal management or ground water impacts at all. The failure of septic tanks also needs to be addressed and investments need to be made for converting septic into sewer systems. This plan does not address any of the above and will do more harm than good.
98	1-Nov-22	Montgomery Bannerman	Online Tool	Natural dunes and vegetation combined with kinetic defenses powered by resilient renewable energy infrastructure provide the abilities to monitor and take mitigating action during extreme weather and tidal events and provide emergency power and communications in the aftermath.
99	1-Nov-22	Iannelli, Fabio	Online Tool	need to incorporate living shorelines and green infrastructure
100	1-Nov-22	Sardinas, Anabella	Online Tool	The implementation of nature based solutions is essential is resorting coastline resiliency. Incorporating mangroves and indigenous species to our coastlines will boost hurricane/flood resiliency by creating natural buffers and allowing natural water ways to drain appropriately
101	1-Nov-22	Garcia, Luis	Online Tool	Plant more mangroves in coastal areas to reduce wave action and damage from flooding. Likewise, restore coastal ecosystems in general that have evolved to prevent coastal erosion and protection from storms. Do not develop these natural areas to build warehouses that will be destroyed due to lack of protection by mangroves.
102	1-Nov-22	Leigh Emerson Smith	Online Tool	No walls please. Walls will probably hold in water they had been designed to keep out. Mangroves MUST be increased substantially. Invasive Scaevola MUST be removed. Taking over Matheson Hammock. We have warned the EEL group & Mayor's office. MUST ban fertilizers & gasoline powered blowers.

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
103	1-Nov-22	Lago, Daniel	Online Tool	If the UDB is expanded and there is further urban development (concrete roads), it'll low the county's resilience to withstand flooding. Hialeah is especially at risk since it has more developed terrain than it's neighboring cities. It could also be argued that us as Floridians have a moral imperative to prioritize our natural gift, the Everglades, for future generations instead of meeting the immediate gratification of developers when more affordable housing is what's need in a city with high-rises that house vacant spaces.
104	1-Nov-22	Reynolds, Laura	Online Tool	This entire area south represents an oppertunty to purchase lands that are needed for restoration that we know are critical for flood attenuation, storm surge protection and aquifer recharge to stave off sealevel rise. The town of Cutler bay would like to see more than just planing mangroves but a serious look at this area in coordination with the BBCW and BBSEER projects to ensure this entire coast is protected to ensure the buikt environment in this very lowlying area has nature based solutions to prtoect these invesments. Current alternatives being evaluated in BBSEER should be reviewed and discussed at the potential overlap and planned together. A meeting to discuss all of these concurent projects would be great, incuding the southern study. We look forward to working with the County and Fedeal Government to ensure the best project outcome for the Toen of Cutler Bay and all ajoining costal municipalities.
105	1-Nov-22	Padilla Ochoa, Daniel	Online Tool	Utilizing existing geomorphological features to build enhanced breakwater features would be a great opportunity to install blue/grey structures that provide wave attenuation and enhanced ecological performance.
106	1-Nov-22	Padilla Ochoa, Daniel	Online Tool	Building a north-south string of breakwater features within Biscayne Bay would present an opportunity to build blue/grey infrastructure with meaningful surge attenuation and significant environmental benefits.

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
107	1-Nov-22	Kearney, William	Online Tool	The previous plan's wall would have cut my neighborhood in half, leaving some homes on the vulnerable side, and some on the protected side. That's unacceptable. A wall would leave no where for storm surge to go, and actually deepen the surge on the eastern side closest to the ocean. Managing surge makes more sense than stopping it in some places at a cost to others. Intensive green infrastructure, from mangrove and oyster buffers to grey/green design, such as regenerative coral reefs, must be implemented. The city/state/fed probably needs to buy certain areas out, and turn them into parks/buffer zones. Some homes and businesses will need to be elevated. But damming surge will utterly destroy areas east of the dam/wall.
108	1-Nov-22	Mikolji, Yelka	Online Tool	Walls won't work because the water will be coming in from underneath. Please include additional ways to incorporate nature and nature-based features, consider nonstructural measures, and protection of additional critical infrastructure
109	1-Nov-22	Troxler, Tiffany	Online Tool	Align the project goals, objectives, implementation, and monitoring & evaluation with other strategies incl. SLR strategy, R305 strategy, BBSEER, SFWMD C&FS flood resilience study
110	1-Nov-22	Troxler, Tiffany	Online Tool	Develop alternatives for each identified area rather than combining areas. Each area is unqiue and should be evaulated based on its specific context.
111	1-Nov-22	Troxler, Tiffany	Online Tool	Hold meetings within each study area to gather input on alternatives and vet evaluation once available
112	1-Nov-22	Troxler, Tiffany	Online Tool	Incorporate environmental and social costs as part of BCA in development and evaluation of alternatives
113	1-Nov-22	Troxler, Tiffany	Online Tool	Consider ways in which the larger MDC watershed can be used to reduce flooding and thus storm surge impacts
114	1-Nov-22	Troxler, Tiffany	Online Tool	1. Incorporate buyout of RL and SRL properties as part of flood easements and incorporate costs of equivalent housing & housing assistance within specific study areas and 2. reassess areas/builidng conditions to identify where structures can be elevated

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
115	1-Nov-22	Knowles, Amy	Online Tool	Miami Beach has more than 50-miles of seawalls, with 95% privately owned. LIDAR results show seawalls are low and vulnerable to overtopping, even in today's high tides. Investing in seawalls with hybrid living shorelines will also add shoreline stabilization and environmental benefits such as improved water quality and marine habitat.
116	1-Nov-22	Knowles, Amy	Online Tool	Continued investment in the dune system is critical to protect upland properties for storm surge and sea level rise. Recommend funding to expand and strengthen the dune system.
117	1-Nov-22	Knowles, Amy	Online Tool	Recommend property elevation or adaptation in-place to protect homes, businesses, with special focus on Miami Beach historic districts as cultural and historic resources. Many are naturally occurring workforce housing neighborhoods.
118	1-Nov-22	Knowles, Amy	Online Tool	Incremental adaptation of both public and private infrastructure is critical to ensure the long-term viability of our community. The City of Miami Beach is encouraged that the non-structural solutions for private properties and critical infrastructure are an integral component to the U.S. Army Corps of Engineers (USACE) study
119	1-Nov-22	Andrew Baker	Online Tool	Consider the development of hybrid (green-grey) reef infrastructure to mitigate impacts along key stretches
120	1-Nov-22	Knowles, Amy	Online Tool	Adapting roadways to current and future flood conditions is critical for public safety and to preserve access to homes, especially evacuation routes. Funding for holistic infrastructure investments is essential to reduce the impact of storm surge with sea level rise.
121	1-Nov-22	Andrew Baker	Online Tool	Consider reef restoration and/or hybrid approaches to reduce storm surge in key areas. These approaches can provide immediate coastal protection (artificial substructures) which can increase over time (active coral restoration and interventions). They also have attendant ecosystem benefits and additional long-term benefits
122	1-Nov-22	Karim, Aliza	Online Tool	Coral reef restoration projects, along with seagrass and mangrove habitata restoration, would synergistically reduce wave action and alleviate sea level rise pressures

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
123	1-Nov-22	Karim, Aliza	Online Tool	Army corp needs to work with SFWMD to enhance the critical infrastructure of the salinity control gates. These gates need better flow controls and flow dissipation technology to prevent flooding and other ecological impacts. Combining efforts would save taxpayer dollars
124	1-Nov-22	Karim, Aliza	Online Tool	Army corps should work with FDOT and MDC to raise causeways. This can be incorporated into this back bay project in order to save tax payer costs, instead of leaving it to MDC alone. These causeways pose a safety concern for storm evacuations - especially after seeing how badly the Sanibel Causeway was damage after hurricane Ian. This would also help restore basin to basin flow in northern Biscayne Bay which will reduce issues with wave action and surge
125	1-Nov-22	Karim, Aliza	Online Tool	We are already seeing issues with sea level rise and the groundwater storage space that is available during the end of the rainy season/king tides season. We need to come up with natural solutions restoring groundwater flow to the bay.
126	1-Nov-22		Online Tool	Provide living sea wall for Baywood Park in Bayside Historic District. Upgrade pump station #55 in neighborhood which DERM has identified as needing to be replaced by Dec 2022. Buy up empty lots in area to keep needed greenspace for flood control rather than threatening homeowners with eminent domain. No more walls, build up mangroves in Biscayne Bay and stop toxic canals from polluting it.
127	1-Nov-22	Beber, Karen	Online Tool	Critical to success is working with local stakeholders, local experts and local residents to determine natural, nature-based solutions, including non-structural measures. Also important: Coral reef, seagrass and mangrove habitat restoration. We need investment in stormwater retrofits, in septic-to-sewer conversions, and in fortifying the county's aging and fragile sewage treatment plants. Our infrastructure simply cannot handle the massive construction and population explosion in South Florida. In the process of solving, you must avoid creating greater environmental damage by constructing massive structures in/around Biscayne Bay and our waterways. The environmental and marine-life damage will be too much. Please leverage existing resiliency plans.
128	1-Nov-22	Steckley, Adam	Online Tool	Investments must be made in septic to sewer conversion throughout Miami-Dade County but especially in Little River and Arch Creek areas to ensure a reduction in nutrient pollution entering the bay.

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
129	1-Nov-22	Steckley, Adam	Online Tool	Fortify the County's sewage treatment plants and aging pipe system to prevent unnecessary contamination to local waters.
130	1-Nov-22		Online Tool	There should be a living sea wall, oysters and mangroves. Monitor and fix the pollution coming out of the Little River canal industrial area. Fix pump station 55 and the related infrastructure. Monitor and heighten sea wall along the bay
131	1-Nov-22	Collazos Andres	Online Tool	We need to implement nature based solutions!
132	1-Nov-22		Online Tool	Living sea wall
133	1-Nov-22		Online Tool	Upgraded pump station
134	1-Nov-22	Fata Carpenter, Elizabeth	Online Tool	Focus on using living shores lines and natural or nature based infrastructure. Multiple smaller projects combined can contribute to an overall larger combined benefit.
135	1-Nov-22	Fata Carpenter, Elizabeth	Online Tool	Consider reef restoration to reduce wave energy before impacts even reach the shore.
136	1-Nov-22		Online Tool	Consider the complicated underground hydrology in this area and the relationship between the canal levels and flood levels. In the Little River and El Portal neighborhoods, the flood water and ground water levels of properties boarding the C-7 (and other canals) are directly related to the water levels in the canals. Moreover, the underground hydrology in this area is very complicated and often models do not accurately reflect the existence of unique underground conditions (such as historic spring pathways) and thus do not accurately reflect the extend of flooding issues in this area. Community feedback and involvement will be crucial in this area to truly understand the existing conditions.
137	1-Nov-22	Fata Carpenter, Elizabeth	Online Tool	Invest in septic to sewer conversions in areas that experience repeated flooding to not only protect the environment, but also to avoid further human health issues.
138	1-Nov-22	Fata Carpenter, Elizabeth	Online Tool	Ensure that municipal stormwater infrastructure is retrofitted or improved to work with future infrastructure improvements rather than inhibiting them

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
139	2-Nov-22	Umpierre, Diana	Online Tool	Whatever the next phase, it is CRITICAL that there is meaningful and intentional engagement of the community members that are typically left behind by our govt agencies. For instance, as much as I love GIS and using this tool, this map-based tool on the Internet is a perfect example of how we can leave some behind. We have community members that don't even know how to use the Internet, or that have other barriers for which some forms of public engagement don't work for them. Will some of the public mtgs take place in the communities most impacted by storm surge? will they be at locations where public transportation is available, in the evening, on the weekend?? will you have someone to translate to Spanish, Creole? I'm looking forward to seeing a process that's truly inclusive and equitable. Thank you.
140	2-Nov-22	Victoria	Online Tool	Flood and electrical damages after storms
141	14-Nov-22	Lushine, James	Online Tool	I suggest that a reef both natural and artificial be constructed a short distance offshore from south beach northward to as far as necessary. The reef would help break up the storm surge just like the Keys have some protection with there reef
142	15-Nov-22	Amilhat, Loreline	Online Tool	Raise the roads, the sewage systems and any cables which is underground but can be damaged in floods
143	15-Nov-22	Amilhat, Loreline	Online Tool	Make funding available for houses and buildings that can be equipped for rain water collection.
144	15-Nov-22	Amilhat, Loreline	Online Tool	Bring mangrove back to the coast to lower the risk of storm surge flooding the coast
145	15-Nov-22	Amilhat, Loreline	Online Tool	Equip the city of Miami with desalination machines (e.g. Watermaker)
146	15-Nov-22	Natalia Ortiz	Online Tool	You need to restore our green spaces to deal with storm surge. Engineers and architects from around the world have done this in other flood prone areas. Stop asking the army core of engineers- they need to go back to school and learn about climate change and green infrastructure. They destroyed our Everglades and now they’re going to destroy our beautiful skyline!
147	23-Nov-22	Rosenblum, Paula	Online Tool	Hi. The last round of proposals by the Army Corps of Engineers put my house on the "other side of the wall." That's tacky, and a wall, in general is not in our best interest. Please be more asthetically creative this time.

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
148	28-Nov-22	Hightower, Marisa	Online Tool	A few comments: First, it is critical to engaged with the community equitably. The website and public comment tools should be made available in Spanish and in Haitian Creole. Adding a note to this page to advise users of other opportunities to submit public comment will be helpful for those who may not understand or want to use arcGIS. Secondly, the study should address the aging infrastructure and seek solutions for aging septic systems. Third, incorporate natural mitigation strategies such as artificial reefs, and mangrove restoration. The restoration of the Everglades is a serious consideration as well. Fourth, utilize flood adaptation strategies since the water not only comes in but comes up. Finally, engage with residents that will be impacted beyond the coastline.
149	26-Jan-23	Krasna, Rachel	Online Tool	The project should incorporate ecological concrete into the project design elements, where marine habitat could be maximized. Using green-grey infrastructure and nature-based measures 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 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 for the project 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.

Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study
Informal Public Comments Received between August 2022 and March 2024

ID	Date of Receipt	Name	Format	Comment
150	20-Jun-23	Martina Malka Potlach, FIU	Online Tool	Nature-based and hybrid shoreline adaptation typologies will provide greater long term resilience. Consider phasing nature-based approaches, and developing case study areas with FIU.
151	19-Nov-23	Tubbs, William	Online Tool	What does this mean for our home?
152	31-Oct-22	Spector, Jaimee	Online Tool	Agreed - human value is greater than property value
153	31-Oct-22	Savino & Miller Design Studio	Online Tool	We suggest to increase efforts to establish multiple funding sources for conversion of Septic Tanks to Sanitary Sewer systems, prioritizing locations in or near to watershed drainage topography and hydrological patterns
154	31-Oct-22	Frances MacIntyre	Online Tool	Let nature be your guide. Don't put up a wall that won't stop water rising through the ground. Plant trees and drainfields, not walls.
155	14-Nov-22	Ana Miranda	In person (public mtg)	This project needs to work in tandem with City/County on current challenges. Bayside Historic District which is partly in Little River Adaptation area has a pump station (#55) that needs replacing as it cannot handle capacity. Also, sea wall at Baywood park needs repair and replacement with living sea wall.

Comment
ID #8

FISHER ISLAND
COMMUNITY ASSOCIATION

May 4, 2023

US Army Corps of Engineers
Environmental Analysis Section, Norfolk District
803 Front Street
Norfolk, Virginia 23510
Attn: Ms. Michelle Hamor, Chief, Planning and Policy Branch
Via email: mdbb-csrmstudy@usace.army.mil

Miami-Dade County
Office of Resilience
111 NW 1st Street
Miami, FL 33128
Attn: Mr. James Murley, Chief Resilience Officer
Via email: james.murley@miamidade.gov

Re: USACE Back Bay Coastal Storm Risk Management Feasibility Study

Ms. Hamor and Mr. Murley,

Fisher Island Community Association (FICA) welcomes the opportunity to provide input into the USACE Miami-Dade County Back Bay Coastal Storm Risk Management Feasibility Study (Feasibility Study) and looks forward to collaborating with the USACE and Miami-Dade County towards selection of a viable resilience strategy to ensure a stable future for the communities along Biscayne Bay. Please consider this letter to provide comments in response to the charrette held for the re-initiation of the Feasibility Study held in February 2023. FICA respectfully requests the following be evaluated and considered in the updated Feasibility Study.

1. Consider the efficacy of the proposed solutions:
    a. Provide evidence that the proposed improvements can withstand a direct impact from a major hurricane event (i.e., Hurricane Irma, if it was a direct hit).
    b. In the case of the gate system as the potential alternative, please indicate the fate of the deflected floodwaters and waves as a result of the implementation of such a system.
    c. Justify the storm return periods evaluated in the Study and how they were determined.

d. Specify the recommended elevations and solutions for the dunes and revetments proposed along the portions of Fisher Island's shoreline outside of the control gates and ensure it is equitable to other areas protected within the control gates and along Miami Beach.
e. Assess the erosion rate of the dune and frequency and funding for dune renourishment at the proposed elevation to ensure the reinforced core is not exposed.
f. Evaluate various construction alternatives to reinforce the proposed dune core including buried sheet pile wall, rock revetment, or similar structure under the dune crest, as well as the safety of this structure when exposed.

2. Evaluate the location of the control gates and reinforced dune system with respect to potential interference with Fisher Island operations and residences.
    a. Ensure that the control gates will not adversely affect Fisher Island Ferry service operations during and after construction. The ferry service runs 24/7 and is the sole means of transportation for residents and provisioning for the Island.
    b. Consider how the proposed reinforced dune system will incorporate or impact the existing infrastructure both during and after construction, including but not limited to groins, jetties, dunes, dune walkovers, pool decks, and condominiums.
    c. Provide viewshed renderings of the control gates, which are proposed to span Government Cut and Norris Cut, as well as the reinforced dune system. Fisher Island's dunes presently range from +5 ft to +9 ft NAVD88. Potential impacts to ground level residences and infrastructure from the proposed improvements located above the aforementioned elevations should be clearly identified and evaluated.
    d. Evaluate the location of the north control structure in relation to Fisher Island's northeast shoreline and potential conflicts with existing infrastructure.
    e. Evaluate the location of the south control structure in relation to the Guest Marina and Resident's Marina. The south control structure may interfere with marina access both during and after construction. The south control structure may also affect accumulation of debris and currents within the marinas.

3. Mitigate all potential environmental and hydrological impacts during construction and with structures in place including:
    a. Evaluate the impacts the control gates will have on sediment transport affecting the condition of the beach/dune system, as well as sedimentation within the marina basins.
    b. Model water circulation with gate infrastructure in place while gates are open and during gate closure.
    c. Consider the effects on the overall water quality of Biscayne Bay including inflows from the Miami River, Little River, and the network of stormwater outfalls that discharge into the Bay.
    d. Evaluate potential outbreaks of red tide or other adverse ecological events within the Bay considering limits to tidal flushing associated with the control gate infrastructure.
    e. Assess accumulation of sargassum on both sides of the control structures, as well as within Fisher Island's two marinas and ferry terminal landings with the control gates in place.

f. Marine Resources including seagrass, hardbottom, corals, sea turtles (nesting and hatchling), and manatees.

4. Provide information relative to anticipated cost sharing for construction, maintenance, and mitigation of impacts to marine resources.

FICA is available to discuss the recommendations detailed herein with USACE and Miami-Dade County at your convenience. We look forward to providing additional input during future charrettes and in response to the Draft Feasibility Report, as well as working with USACE and Miami-Dade County to identify resilient solutions for the future.

Sincerely,

Robert Sosa
President and Chief Executive Officer

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 26, 2023

RE: Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study

Robert Sosa
President and Chief Executive Officer
Fisher Island Community Association
One Fisher Island Drive
Fisher Island, Florida 33109-0001

Dear Mr. Sosa:

This is to acknowledge receipt of your letter dated May 4, 2023 regarding the U.S. Army Corps of Engineers (USACE) Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Feasibility Study in Miami-Dade County, Florida. The Miami-Dade Back Bay CSRM Feasibility Study was re-initiated in August 2022. At that time, the Assistant Secretary of the Army for Civil Works (ASA(CW)) approved a time and funding extension of up to 60 additional months and up to $8.2 million in additional funds to further investigate integrated solutions to managing coastal storm risk in Miami-Dade County. Part 1 of the extended study timeline will conclude with a milestone meeting in August 2023 with the ASA(CW) to determine if the study will continue into a second phase, or Part 2.

Your comments were provided in response to the March 2023 charrette and requests further evaluation of the following: (1) efficacy of the proposed solutions, (2) the location of structures and potential interference with Fisher Island operations and residences, (3) mitigation of environmental and hydrological impacts during construction, and (4) requests information relative to anticipated cost sharing for construction, maintenance, and mitigation of impacts to marine resources.

Your comments will be addressed either in Part 2 of the Feasibility Study provided authorization by the ASA(CW) is given to continue the study in August 2023 or at a later date depending on the scope of the study.

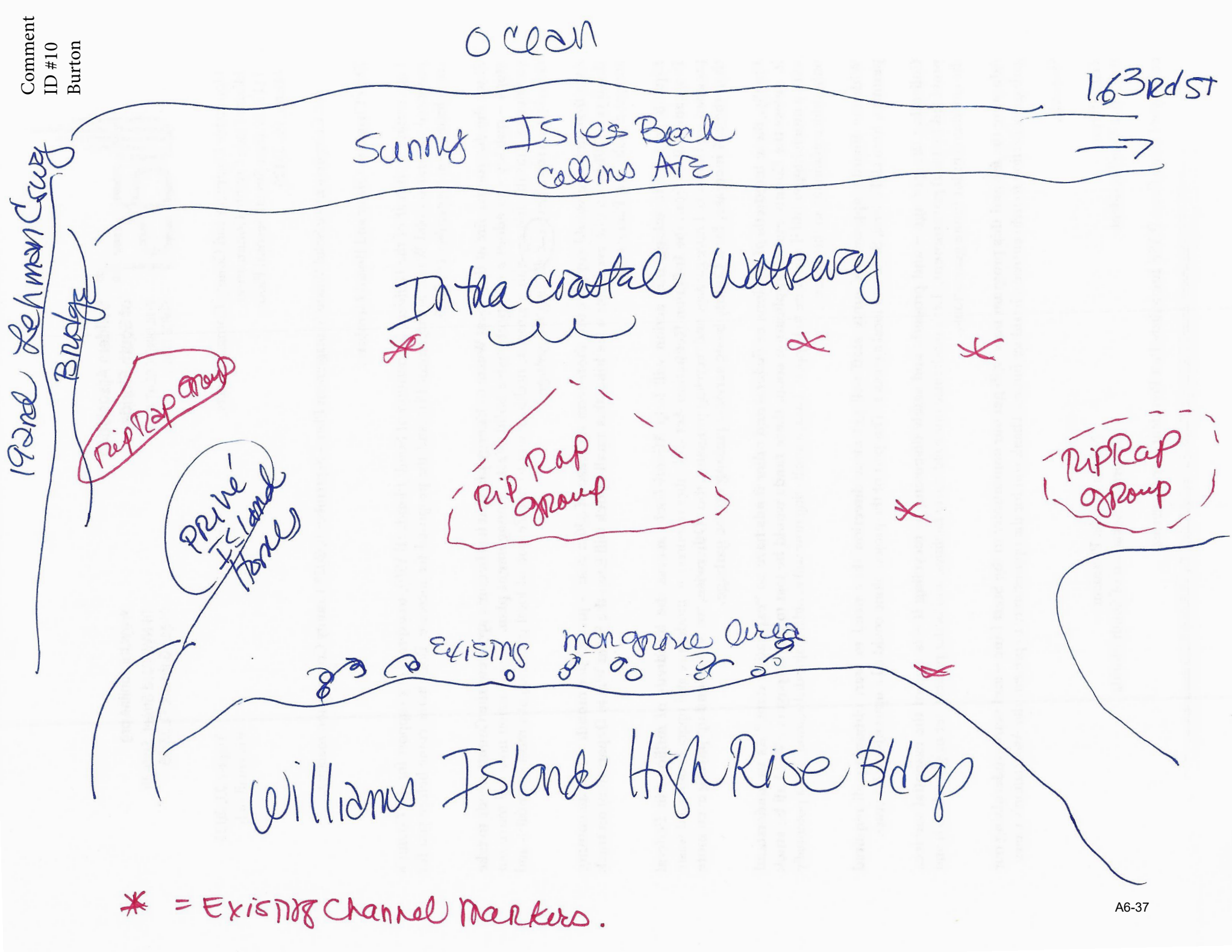
Thank you for your comments and interest in this study. If you have questions prior to the meeting, please don't hesitate to contact Justine Woodward of my staff at (757) 201-7728 or justine.r.woodward@usace.army.mil.

We look forward to continued coordination as the Miami-Dade Back Bay CSRM Study moves forward.

Sincerely,

Jim Murley	Michelle L. Hamor, CFM
Chief Resilience Officer	Chief, Planning and Policy Branch
Miami-Dade County	Norfolk, District USACE

Comment
ID #10
Burton



Multiple Lines of Defense Concepts

1 MULTIPLE LINES OF DEFENSE CONCEPTS

Miami-Dade County, in coordination with charrette attendees in November 2022, which included USACE, municipalities, stakeholders, and the public, took the lead in developing the Atlantic Coastline Alternative (ACA) concept. The key takeaway from the charrette and the ACA is the concept of needing multiple lines of defense, which emerged as the guiding principle for the formulation of coastal storm risk management measures. It included the full suite of measures from structural, nonstructural, and nature-based solutions (NBS). Figure 1 shows an early draft version of the ACA developed by Miami-Dade County.

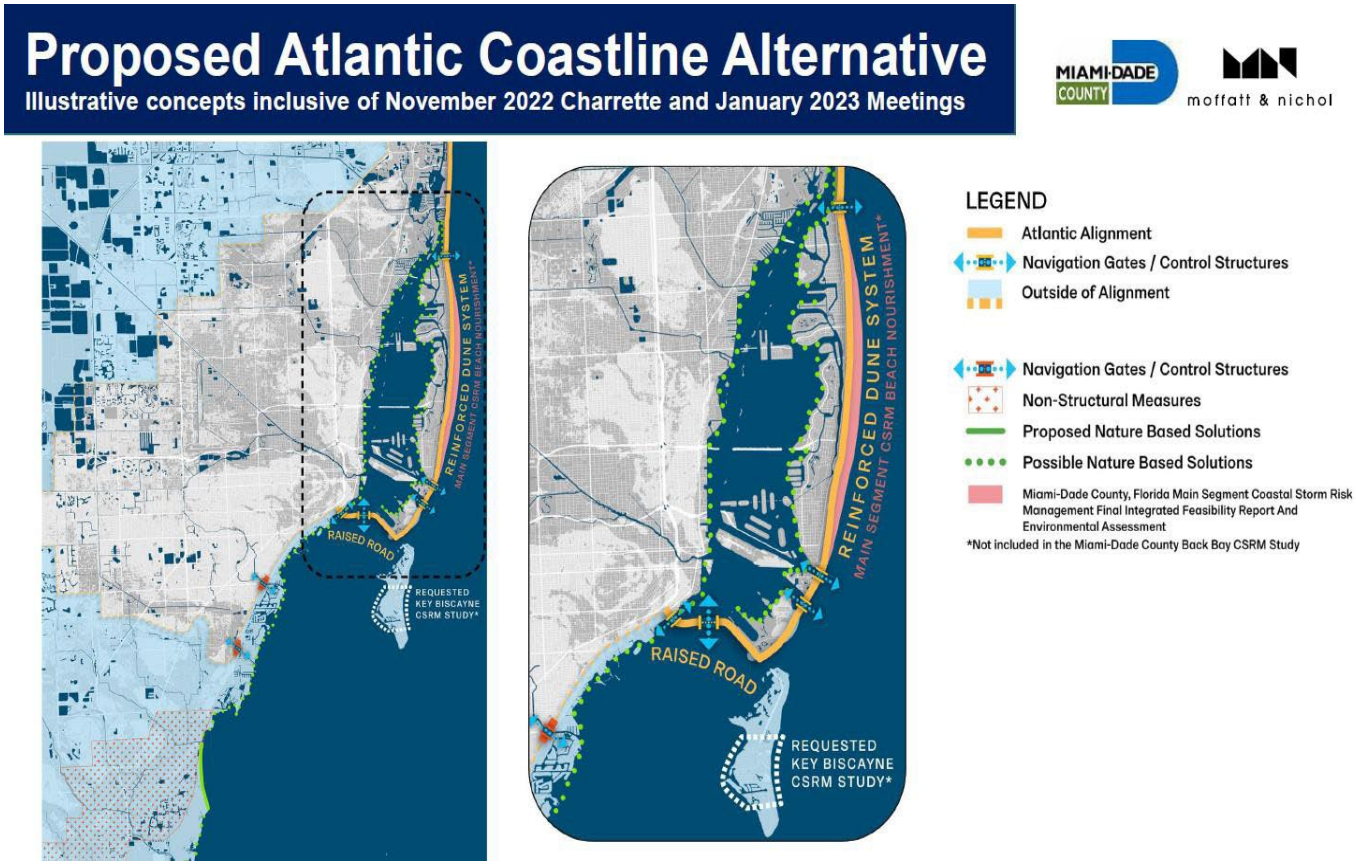


Figure 1 – Draft version of the Atlantic Coastline Alternative concept (Source: Miami-Dade County).

The measures included in the ACA were refined during the March 2023 charrette which are shown in the figures below. Measures are broken up by structural measures depicted on Figure 2, and nonstructural and NBS depicted on Figure 3. These figures are for the purposes of showing some of the concepts and ideas that came out of the charrettes and discussions; however, the scope of the future studies is not yet completed, and these measures are subject to change in the future once the additional studies are conducted.

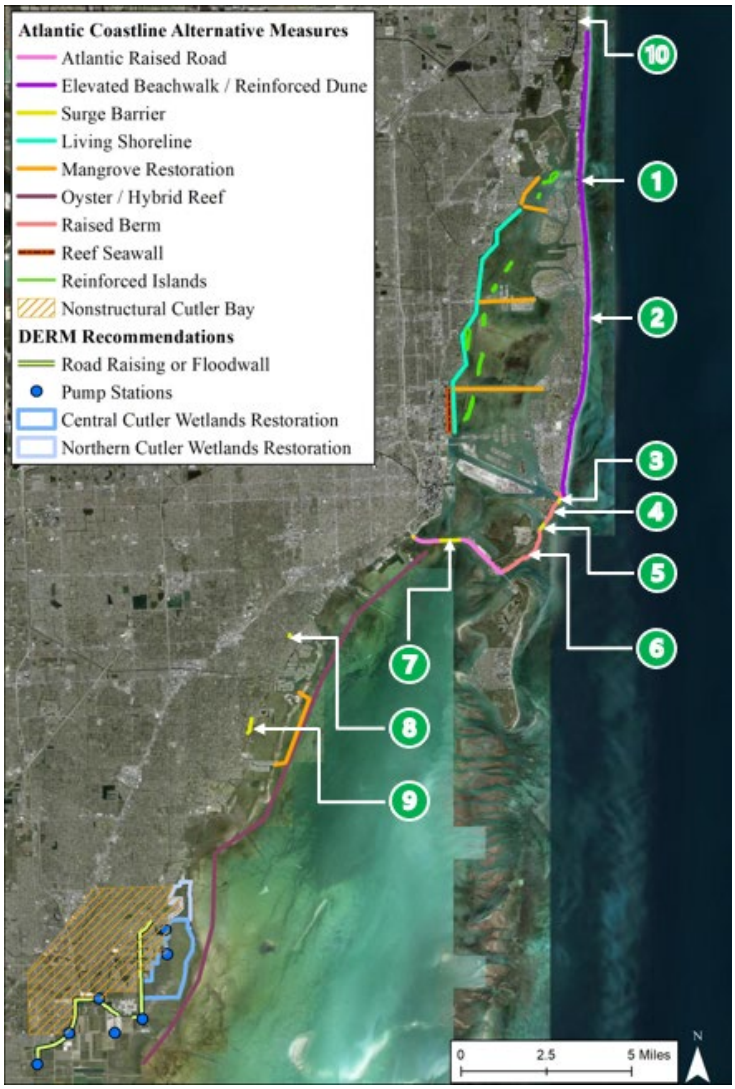


Figure 2 – Structural Components as Part of the Atlantic Coastline Alternative

Figure 2 shows some of the key structural measure concepts for further analysis as part of the ACA, which include:

1. Surge barrier gate at Haulover Inlet
2. Dune raising/reinforcing or beachwalk elevation
3. Surge barrier gate at Government Cut
4. Dune raising/reinforcing and/or seawall at Fisher Island
5. Surge barrier gate at Norris Cut (between Fisher Island and Virginia Key)
6. Floodwall at Virginia Key
7. Two surge barrier/environmental gate combinations at Rickenbacker Causeway with floodwall between
8. Surge barrier gate at Coral Gables Waterway
9. Surge barrier gate at Snapper Creek Canal
10. Additional beach and northern closure. Preliminary analysis determined a need for a structural alignment in the north going westward to high ground to prevent flooding from Port Everglades in Broward County.

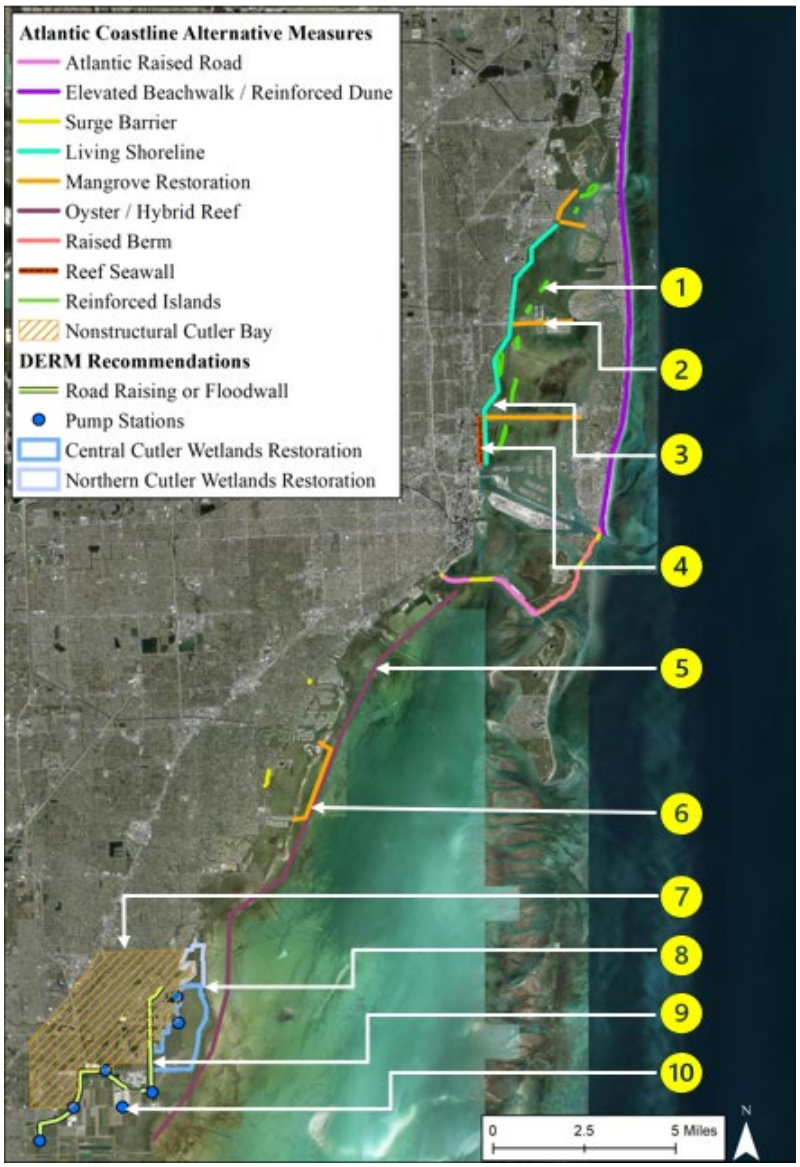


Figure 3 – Nonstructural and Nature-Based Solution Components as Part of the Atlantic Coastline Alternative

Figure 3 shows some key nonstructural and NBS measure concepts for further analysis as part of the ACA, which include:

1. Reinforced islands in Biscayne Bay
2. Mangrove restoration along causeways*
3. Living shoreline along Miami's mainland*
4. Reef seawall along Edgewater*
5. Hybrid reef structure*
6. Mangrove restoration*
7. Elevation and floodproofing at Cutler Bay

*Exact locations were not determined, and further analysis would be required.

Some additional measures for consideration from Miami-Dade County Department of Environmental Resources Management (DERM) included:

1. Wetland restoration at northern and central Cutler Bay. This concept needed further coordination with the ongoing Biscayne Bay Southeastern Everglades Ecosystem (BBSEER) and Biscayne Bay Coastal Wetlands (BBCW) Project in this area.
2. Road raising or floodwalls, which includes flood gates at canals.
3. Pump stations.

Because of the complexity of the ACA concept, it is not evaluated in the current Draft Integrated Feasibility Report/ Environmental Assessment.

Finding of No Practicable Alternative

DEPARTMENT OF DEFENSE
UNITED STATES ARMY CORPS OF ENGINEERS
FINDING OF NO PRACTICABLE ALTERNATIVE
MIAMI-DADE BACK BAY COASTAL STORM RISK MANAGEMENT FEASIBILITY STUDY
MIAMI-DADE COUNTY, FLORIDA

1. Introduction: The U.S. Army Corps of Engineers (USACE), Norfolk District conducted the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Feasibility Study to investigate coastal storm risk management (CSRM) solutions for Miami-Dade County. Miami-Dade County, Florida, is the nonfederal sponsor (NFS) for the study. The CSRM Feasibility Study seeks to address storm surge and flood risk to vulnerable populations, property, ecosystems, and infrastructure along the coast. Miami-Dade County has high levels of risk and vulnerability to coastal storms which will be exacerbated by climate change in the future.

The analysis and conclusions of the June X, 2024 Integrated Feasibility Report / Environmental Assessment (IRF/EA) for the Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study are hereby incorporated by reference. The USACE has determined elements of this proposed action must be located within the floodplain in Miami-Dade County. Therefore, this Finding of No Practicable Alternative (FONPA) addresses EO 11988, *Floodplain Management*.

The practicability of a given alternative is evaluated by determining whether it is available and capable of being done after considering pertinent factors, such as community welfare, environmental impact, statutory authority, legality, cost, technology, and engineering within the context of the project purpose. If the only practicable alternative requires siting in a floodplain, the USACE must design or modify its action to minimize harm to or within the floodplain. Thereafter, the Army must prepare and circulate a notice containing an explanation of why the action is proposed to be in the floodplain.

2. Description of the Proposed Action.

Nonstructural CSRM measures are permanent or contingent measures applied to a structure and/or its contents that prevent or provide resistance to damage from flooding. Nonstructural measures focus on reducing the risk (likelihood and consequences) of flooding. The nonstructural measures evaluated and recommended in the IFR/EA represent techniques commonly utilized for managing flood risk. The proposed nonstructural measures considered as part of the Proposed Action include floodproofing nonresidential buildings and critical infrastructure and elevating residential buildings.

The number of nonresidential buildings recommended for dry floodproofing is approximately 400. Up to 27 critical infrastructure facilities are also considered for dry floodproofing. The number of residential buildings recommended for elevation is approximately 2,100 and includes approximately 1,750 single family residences and 350 multi-family residential structures (up to 4-unit) (numbers are rounded to the nearest 50).

The purpose of the proposed action is to provide risk management measures to address storm surge, and the proposed action is needed because Miami-Dade County is extremely vulnerable to flooding from storm surge, and risk levels and vulnerability to coastal storms are expected to increase due to climate change-related impacts.

The IFR/EA also evaluates and recommends for authorization two Programs, including a Nature-Based Solutions (NBS) Pilot Program and a Nonstructural program. Both programs include the potential siting of projects in the floodplain.

3. Assessment of Direct Impact to the Floodplain: The proposed CSRM measures include improvements to existing structures only, including structures located in the 100-year floodplain. There is no new building construction associated with the proposed action. The types of structures that would be subject to nonstructural measures includes: critical infrastructure, single family residences, multi-family residences (up to 4 units), and nonresidential buildings. The critical infrastructure asset categories include fire and police stations, emergency operations centers, communication centers, a pump station, and shelter. The permanent impact areas would be only the structures themselves, and the temporary impact areas associated with staging activities include pre-disturbed areas, including lawns, driveways, and parking areas immediately surrounding the buildings.

Implementation of the Miami-Dade Back Bay NBS Pilot Program would include demonstration projects located in the floodplain, however, the pilot demonstration projects would not result in additional development in the project design floodplain. Additionally, the Nonstructural Program would consider modification to existing structures located in the floodplain; however, the activities proposed would not result in additional development in the floodplain.

Because no development is proposed in the 100-year floodplain, the proposed impacts would not result in a reduced storage capacity of the floodplain functions. The implementation of best management practices, including erosion and sediment control measures, would be incorporated to further minimize floodplain impacts.

The Army has determined there is no practicable alternative to the proposed building modifications, including building modifications that may occur under the Nonstructural Program, which would be implemented to existing buildings only that are already located within the 100-year floodplain. Based on the information available at this time, the Army has also determined there is no practicable alternative to potentially locating pilot demonstration projects implemented under the NBS Pilot Program in the floodplain.

4. Public Availability. A Notice of Availability of the Draft Integrated Feasibility Report/Environmental Assessment, and Draft FONSI was published in the *Miami-Herald* on April 23, 2024 and announced to the public through various social media sources and the Norfolk District's public notice website at: https://www.nao.usace.army.mil/Media/Public-Notices/. Pursuant to Section 2(a)(4) of EO 11988, the notice requested public comments on potential impacts and announced the availability of the documents from the project website at: https://www.saj.usace.army.mil/MiamiDadeBackBayCSRMFeasibilityStudy/. The deadline for receipt of comments was May 31, 2024.

5. Finding. Following an evaluation of the impacts associated with the proposed action and the impacts of alternatives to implement the proposed action, I find there is no practicable alternative to the proposed action located outside of the existing floodplain. Furthermore, pursuant to EO 11988, the Army will take all practicable measures to minimize impacts associated with the proposed action to the existing floodplain.

_____ _____

Date

Formal Comments Received during the Public Comment Period and Responses

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
1	4/27/2024	Lesly	Online Public Commenting Tool	what local do to help?	Thank you for expressing interest in helping further the Miami-Dade Back Bay Feasibility Study effort. The USACE and Miami-Dade County will continue to engage with community members to request comments, feedback, and participation in public meetings. To stay informed of upcoming public meetings or opportunities to participate in the study process, please refer to the project webpage at: https://www.saj.usace.army.mil/MiamiDadeBackBayCSRMFeasibilityStudy/
2	4/29/2024	Johann Moore	Email	Good morning, Can the following be addressed: Can the ongoing study clarify the number of federally defined historic districts impacted by Backbay to be considered for elevation; can the approximate number of structures within each affected historic district be made public as well aTs the percentage and raw numbers of protected("Contributing" etc.)buildings in each such district; can the number and percentage of such protected buildings deemed eligible for(as well as those deemed ineligible for)elevation in each such district be made public; can the Corps calculate the relative economic benefit to the county/region of each affected historic district as well as potential loss due to uneven elevating? Under 6.4.1 Multifamily Residential Projects, $170 million is to be made available for elevation and resilience projects. Can a defined percentage be allocated based on a given affected Historic District's economic contribution to the county/region? Can the disproportionately economically contributing SoBe Historic District be chosen for 3-4 of the diverse housing categories to be sampled, based in part on the decades of architectural patrimony concentrated there? Specifically as regards ES3: Can USACE confirm that of the ~800 Contributing buildings in the SoBe federally defined Historic District, residential buildings are included in the estimated total of 2100 residential buildings to be considered for elevation or are there height limitations(i.e. expressed as maximum number of floors, beyond which elevation becomes impractical and/or prohibitive)and can a breakdown of number of floorsXeligibility/ineligibility per affected historic district be provided?	Thank you for your interest in the Miami-Dade Back Bay CSRM Feasibility Study. The requested level of detail is beyond the scope of the IFR/ EA. USACE considers the potential environmental impacts at a general level and analyzes the alternatives and the no action alternative in the IFR/EA. The future Preconstruction, Engineering and Design (PED) Phase will document complete cultural resources surveys and the specific cultural resource effects of the selected plan with a level of detail appropriate to the plan's scope and complexity. In response to your question regarding the number and percentage of protected buildings, historic district information in the Florida Division of Historic Resources master file were obtained in February 2024. Using this dataset, only four previously documented historic districts eligible for the National Register of Historic Places (NRHP) are within the study focus areas. Those historic districts recorded as not eligible for the NRHP or unevaluated for the NRHP are not included in the requested data. The tables included below provides the requested information. An intensive cultural resource survey will not be conducted until the PED Phase. Participation in the home elevation and floodproofing program will be voluntary and be lower than the maximum estimated in the EA. Thus, additional historic districts may be identified and these totals are subject to change. The question is not clear but seems to assume that residential building elevations in historic districts within focus areas would adversely affect the historic district. Through implementing the executed Programmatic Agreement, USACE would strive to avoid and minimize adverse effects to historic properties including historic districts eligible for the National Register of Historic Places.

<table>
<tr><th>Comment Number</th><th>Date Received</th><th>Name</th><th>Method of Submittal</th><th>Comment</th><th>Response</th></tr>
<tr>
<td></td><td></td><td></td><td></td>
<td>ES 4: Can specifics of the Potential Environmental Impacts Resulting from Tentative Selected Plan under the terms of the 2021 Jacksonville District Programmatic Agreement, esp as pertain to potential for USACE acceptance of loss of protected buildings and ensuing, seeming non-compliance with obligation under 3.4.5.1 to "conserve cultural resources" be discussed? Also as relate to ES 5: "minimize adverse impacts to historic properties"

ES 6: Will the estimated project time of up to 6 months per property to elevate/render resilient require temporary vacating of all units; including furnishings; and can an estimate of time required to elevate a one, two and three-storey building Xft be provided?

Thank you</td>
<td>The affected community historic context including historical residential design patterns would be considered in assessing effects to historic properties during the PED Phase of the project.

<table>
<tr><th colspan="4">Miami River Focus Area</th></tr>
<tr><td>Historic District</td><td>No. Buildings Eligible for RP</td><td>No. Buildings Not RP Program Eligible</td><td>Total No. of Buildings</td></tr>
<tr><td>Lummus Park</td><td>9</td><td>17</td><td>26</td></tr>
<tr><td>South River Drive</td><td>0</td><td>7</td><td>7</td></tr>
<tr><td>Spring Garden</td><td>144</td><td>39</td><td>183</td></tr>
<tr><th colspan="4">South Beach Focus Area</th></tr>
<tr><td>Historic District</td><td>No. Buildings Eligible for RP</td><td>No. Buildings Not RP Program Eligible</td><td>Total No. of Buildings</td></tr>
<tr><td>Miami Beach Architectural</td><td>133</td><td>433</td><td>566</td></tr>
</table>

<table>
<tr><th>Historic District</th><th>Percent</th></tr>
<tr><td>Lummus</td><td>34.60%</td></tr>
<tr><td>Spring Garden</td><td>78.70%</td></tr>
<tr><td>Miami Beach</td><td>23.50%</td></tr>
</table>

Regarding the comment related to Section 6.4.1 under the Nonstructural Program, further details of the Program will be developed in the next phase following authorization.</td>
</tr>
</table>

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
					Enrollment in the nonstructural elevation program for residential homeowners would be voluntary, thus at this time, it is unknown what specific effects may occur. In reference to the comment regarding ES3, the requested level of detail regarding contributing buildings is not within the current scope of the IFR/EA to identify. The cultural resource surveys to identify all historic properties within the area of potential effects will not be done until later in the PED Phase. However, it is likely that some residential buildings in that historic district are within the total estimated number of residential buildings to be considered for elevation. Participation in the program is voluntary so it is not currently known which homeowners may decide to enroll. Please refer to height limitation discussed in the IFR/EA in terms of feet. Study has shown most buildings raised above 13 feet are unstable, thus only single floor residential buildings would be eligible for elevation in the nonstructural program. Regarding the comment in reference to ES4, the executed PA authorizes USACE to phase the cultural resource investigations for this study and establishes the procedures under which USACE will take into account the effects of the undertaking on historic properties. The following factors do not permit a more detailed effects assessment of the Recommended Plan (RP) on historic properties at this time: 1) the cultural resources surveys would not proceed until after the Chiefs Report is approved and the project is in design, so it is unknown what historic properties are present in the area of potential effects; 2) residential elevations would be a voluntary program that individual property owners would choose to enroll in or not; and 3) no specific Nature Based Solutions have been identified or designed at this time. As stated in section 3.4.5.1 of the IFR/EA, it is likely some adverse direct and indirect effects to historic properties would occur. Regarding the comment referencing ES6, more details will be available regarding the nonstructural measures, specifically home elevations and related requirements, as the project moves into the PED Phase. The amount of time required to elevate a building

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
					depends on multiple factors. This information will be available in the PED Phase for the nonstructural measures included in the RP.
3	5/1/2024	John Donahue	Email	Hello, We have recently joined forces with Aquafence.com to represent them in Florida (based in Boca Raton.) Aquafence specializes in deployable flood barriers as you may have seen e.g. Google Tampa General Hospital or review our website. As we are new to the Back Bay project, we have determined our products could play a role in many areas based on the draft: a) solutions for the locations subject to rejection of permanent walls; b) gaps that dont meet the criteria for a permanent elegant solution; c) need for speed a solution which can be deployed while long-term plans are settled, permits are debated, etc. d) we also supply flood barricades for residential which can again provide solutions while house raising and other issues are resolved. A deployable perimeter solution may also be a short term fix for the residential areas as we are FM approved for surge and this has to be a good solution to buy time.The barriers can also be repurposed elsewhere or resold to Keys or Fort Meyers areas if/when no longer needed. This is an everybody wins scenario. I will attend the May 02 meeting in Miami and happy to meet up for a discussion. Best Regards	Thank you for the information regarding temporary deployable perimeter floodwalls. Upon congressional approval and appropriation of the Recommended Plan, the typical process would be for the Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study to move to the Preconstruction, Engineering, and Design (PED) Phase, then ultimately to the Construction Phase. As a project moves from PED to Construction, the Government/USACE will issue a competitive request for proposals using the System for Award Management website (SAM.gov).
4	5/3/2024	Naranjo, Andre	Online Public Commenting Tool	We simply don't have time to 'study' when it comes to implementing NBS in our most vulnerable communities. There is already a vast amount of research literature on NBS as implemented across temperate and tropical areas around the world. While we can engineer our way out of fair weather flooding in the immediate term, solutions like living shorelines, sponge parks, and other flood mitigating strategies should be deployed now if we want to maintain livability in these very low areas (i.e. Bay Road in Miami Beach, North Bay Village, Little River, coastal North Miami Beach).	Thank you for the comment and interest in incorporating NBS to mitigate coastal storm risk. In the Draft Report, the USACE has proposed to include a NBS Pilot Program, which is planned to be implemented in three phases: 1) Information/Data Collection, Planning, and National Environmental Policy Act Compliance, 2) Design and Implementation, and 3) Monitoring, Evaluation, and Adaptive Management. The NBS Pilot Program would consider and implement a variety of NBS, including those mentioned in your comment, to address coastal storm risk. Specific NBS pilot projects

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
					will increase the USACE's understanding and methodology for quantitative evaluation of the effectiveness of NBS as CSRM solutions, while simultaneously achieving environmental co-benefits (enhancing public safety, restoring and protecting aquatic ecosystem habitats, stabilizing and enhancing shorelines, promoting recreation, etc.).
5	5/3/2024	Naranjo, Andre	Online Public Commenting Tool	Transitioning septic to sewer is definitely one way of increasing resiliency, but for those homes already treading water (ie coastal Miami Shores) serious consideration should be given to installing composting toilets. Sewer lines might be submerged much sooner in those low areas, thus negating any benefits of the septic to sewer transition.	The authority of this study (Public Law 84-71, June 15, 1955) authorizes an examination and survey of the coastal and tidal areas where severe damage has occurred from hurricane winds and tides; therefore, the recommendation to include septic to sewer conversions cannot be incorporated into the Recommended Plan. However, the conversion of septic to sewer lines is an important water quality issue that Miami-Dade County has sought to address via the Connect 2 Protect Program. For more information on this program, please refer to the website: https://www.miamidade.gov/global/water/connect-to-protect-septic-to-sewer.page
6	5/5/2024	Alex Adams	Online Public Commenting Tool	Bury structural wall within the dune system or behind it similar to Key Biscayne matheson park	Thank you for your interest in the NBS Pilot Program and for providing suggestions for NBS pilot projects. The NBS you've provided examples of could help inform the future site selection process under the NBS Pilot Program. Upon congressional approval and appropriation of the NBS Pilot Program, the USACE would follow the implementation framework outlined in Chapter 5, Section 5.5 through 5.5.5.4. Specifically, the Information/ Data Collection, Planning, and National Environmental Policy Act Compliance Phase, will be used to identify and engage with stakeholders to identify and inform the NBS pilot project measures and site selection process. As the NBS Pilot Program moves forward, your continued involvement will help inform future decisions jointly made by MDC and USACE.
7	5/5/2024	Alex Adams	Online Public Commenting Tool	create more transit to the beach. Remove cars, parking ,etc. Transit is built on pillings and out of the flood zones.	
8	5/5/2024	Alex Adams	Online Public Commenting Tool	create a large seagrass bed and natural preserve within the area with old pillings for man made islands that were never built. This provides a natural barrier from the public.	
9	5/5/2024	Alex Adams	Online Public Commenting Tool	Raise Old Cutler Road and improve bike trails to create a velocity wave break.	
10	5/5/2024	Alex Adams	Online Public Commenting Tool	Create artifical coral reefs, underwater breakwaters, and oyster beds, sea grass beds, mangrove islands to break high water waves.	
11	5/5/2024	Alex Adams	Online Public Commenting Tool	Create a habitat plan for after the gravel lakes are done.	

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
12	5/5/2024	Alex Adams	Online Public Commenting Tool	Restore all areas to remove TNT airport from the Everglades area.	
13	5/5/2024	Alex Adams	Online Public Commenting Tool	Buy land outside the current levee system to create a buffer to the Everglades. The underground wall is a mistake if its to allow homes to move further out west.	
14	5/5/2024	Alex Adams	Online Public Commenting Tool	Create stormwater ponds along existing canals to store large amounts of water in various areas of the canal system vs flushing all water out to the bay.	
15	5/5/2024	Alex Adams	Online Public Commenting Tool	Buy land outside the UDB especially around the coastline to convert agricultural area into wetland preserves and stormwater ponds along the canals before they empty into Biscayne Bay.	
16	5/5/2024	Alex Adams	Online Public Commenting Tool	Use gold course as a large stormeater pond for large rain events. Create a levee to hold more water in places along the canal natwork throughout Miami-Dade County.	
17	5/5/2024	Alex Adams	Online Public Commenting Tool	Create additional small islands off the coastline and incorporate small coral reefs, oyster beds and mangroves to provide places for nature based solutions and places for fish to spawn.	
18	5/5/2024	Alex Admas	Online Public Commenting Tool	Rickenbacker Causeway is a toll road and could be rebuilt by GMX expressway authority allowing 4-lane limited access roadway taller with side walls and local laes on the sides on each island until the median at Key Biscayne.	
19	5/5/2024	Alex Adams	Online Public Commenting Tool	Key Biscayne Matheson Park has a good flood solution that could be copied. They have the sand dunes and then a structural wall behind before the park. This structural wall could also be burried in the sand dunes in other areas in the county.	
20	5/9/2024	Audrey Siu, Miami Waterkeeper	Online Public Commenting Tool	Unless something has changed since SACS was available for public comment, I understand that the Corps implements ER 1100-2-8162, updated on 15 JUN 19. This circular states that "At this time, no certain effects of climate change on tropical cyclone (TC) activity in terms of frequency, intensity, and rainfall across all global basins has been identified as changes to the variability of TC activity expected from natural causes [Knutson et al., 2010] As a result, the current science related to the climate effects on TC activity relevant to the United States has not reached the point of standard consensus necessary to inform a change in storm analysis baselines." Yet, In the article “Climate Change is probably increasing the intensity of tropical cyclones” (Knutson et., al 2021), the authors indicate that the rainfall rate of TC’s is projected to increase with human-caused global warming, and expected to exacerbate TC	The USACE is committed to using the best available science and approved modeling to inform the planning of water resources projects. The USACE derived 0.5 percent annual exceedance probability (AEP) stillwater level from the year 2089 using FEMA’s South Florida Storm Surge Study was used as a starting point for the DWSE. It includes astronomical tide, storm surge, wave overtopping, and USACE High Curve for sea level change. Additionally, the USACE has developed, U.S. Army Corps of Engineers Guidance for Incorporating Study-Specific Projections of Climate-Changed Meteorology and Hydrology (EC 1100-1-113), published 26 June 2023, to consolidate and build upon previous

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
				flood risk, with general consistency among models. In the North Atlantic basin, an +8 to +17% increase in rainfall rate is projected for U.S. landfalling tropical cyclones under a medium future emissions scenario and a +24% increase using a high future emissions scenario. Despite any engineer circular prescribing “guidance” and referencing an 11-year-old study (Knutson et. al 2010), the Corps should plan for wetter, stronger TC’s exhibiting slower translational speed that will compound with SLR, as informed by the best available science; this should be incorporated into the Corps’ common operating picture of coastal risk.	agency guidance regarding climate change and resilience. The EC 1100-1-113 acknowledges: a. The assumption of stationary hydrologic conditions no longer applies in many locations. The climatological baseline and range of natural climate variability is changing and will continue to change for the foreseeable future. Where climate is changing, solely basing long-term planning decisions on analysis generated using the observed record of climate and streamflow may no longer reliably characterize future risk. b. There is resounding evidence that changes in climate are affecting USACE's missions. Changes in hydroclimatic conditions have been observed including changes in rainfall extremes, snowmelt characteristics, drought frequency/intensity, seasonal and annual water yield, and flood frequency. c. USACE's overarching guidance accounting to climate change impacts to inland hydrology is published in ECB 2018-14 (rev 2). ECB 2018-14 and EC11-00-1-113 are relevant to all USACE civil works applications. d. Specific to project design, ECB 2018-14 requires that climate change and variability be characterized across a project's life cycle or lifetime. The long lifetime of water resources infrastructure requires that projects be designed to include the flexibility to adapt to changing conditions. e. Potential climate change-induced hazards and resulting consequences should be identified using the latest actionable science. In response to EO 14008, Tackling the Climate Crisis at Home and Abroad, the USACE developed the 'USACE Climate Action Plan' in 2020, which was followed up by a 2022 Progress Report.
21	5/14/2024	Dr. Alexandra Suma, CEO and Founder, Nexuma	Email	Dear Sir/Madam, Hope this email finds you well. I have been closely following the developments around resiliency solutions for	Thank you for your interest in the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Feasibility Study. Unlike the 2021 Integrated Feasibility Report (IFR)/Environmental Impact Statement, which included structural measures along the Back Bay Coast of

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
				Miami in light of the rising sea level, and would like to inform you that we are working on a solutions to solve the issue of urban compound flooding through the underground coral limestone. In perspective, as I am Dutch myself, without the permeable coral limestone, the situation in Florida would be similar as in the Netherlands where the rising sea level effects can be solved with traditional solutions like dykes, raised beaches on a clay underground, sea walls together with wave breaking solutions like coral reefs etc. We are working around the clock to make the solution available, but are still in confidentiality phase. We would love to share more details, but only if we can sign a CDA till the moment that our IP has been filed. I hope you understand our limitations. Nevertheless, I wanted to inform you of our aims and ongoing work as I believe it is important for you to be aware of upcoming solutions as part of the resiliency plan for South Florida and elsewhere. I hope we can stay in touch as we are working towards solutions for the same challenge and can combine our strengths to solve it. Best regards,	Miami-Dade County (MDC), the 2024 IFR/Environmental Assessment (EA) is focused on the identification of actionable, nonstructural measures within Environmental Justice Communities affected by frequent flooding in MDC. This includes elevating residential buildings, floodproofing nonresidential buildings, and floodproofing critical infrastructure.
22	5/14/2024	Alexander Suma	Public Commenting Tool	We are working on a solution to prevent compound flooding through the coral limestone underground of South Florida. We cannot share all details yet, but our first tests are positive. Compound flooding is the main issue in South Florida as any sea wall or dyke will be useless as water will just flow through underground.	Thank you for your interest in the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Feasibility Study. Unlike the 2021 Integrated Feasibility Report (IFR)/Environmental Impact Statement, which included structural measures along the Back Bay Coast of Miami-Dade County (MDC), the 2024 IFR/Environmental Assessment (EA) is focused on the identification of actionable, nonstructural measures within Environmental Justice Communities affected by frequent flooding in MDC. This includes elevating residential buildings, floodproofing nonresidential buildings, and floodproofing critical infrastructure.
23	5/15/2024	Dries Darrow	Public Commenting Tool	Sea level rise does not equal storm surge, we should integrate a solution that addresses the real problem: compound flooding. We believe we can reduce the impact of sea level rise with a holistic approach that does more than protect the coastline. We are happy to discuss where our thoughts are.	Thank you for your interest in the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Feasibility Study. Unlike the 2021 Integrated Feasibility Report (IFR)/Environmental Impact Statement, which included structural measures along the Back Bay Coast of Miami-Dade County (MDC), the 2024 IFR/Environmental Assessment (EA) is focused on the identification of actionable, nonstructural measures within Environmental Justice Communities affected by frequent flooding in MDC. This includes elevating

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
					residential buildings, floodproofing nonresidential buildings, and floodproofing critical infrastructure.
24	5/16/2024	C.S.	Public Commenting Tool	Hello, firstly thank you for all your work in this report to help Miami not sink. My comment was in regards to simple wide spread nature based solutions that can be implemented to help water absorption by plants during storms. My thought is: instead of investing in just tree planting to increase canopy cover, (which is amazing), why not simply scatter a mixture of native wildflowers and plant seeds along roadways, and any area with greenery? as well as reducing the amount of times mowing is done, if at all, and only keeping it to areas that are essential for visibility or safety. Simply having more flowers in our parks is a great start, there is no reason our parks can not become gardens, or that our sidewalks need to wait till we have full grown trees ready to transplant. This seams like a simple, low cost solution that could be implemented everywhere with the savings from reduced mowing. While it is nice to have structured parks, a little wilderness might just help save us, you do not even need landscape designers, merely have volunteers scatter assortments of seeds in green non essential areas, only the cost of the seeds would be required..	Thank you for your interest in NBS and for the suggestion to include dispersal of native seed mix in the planning and implementation of NBS pilot projects. Upon congressional approval and appropriation of the NBS Pilot Program, the USACE would follow the implementation framework outlined in Chapter 5, Section 5.5 through 5.5.5.4. Specifically, the Information/ Data Collection, Planning, and National Environmental Policy Act Compliance Phase, will be used to identify and engage with stakeholders to identify and inform the NBS pilot project measures and site selection process. As the NBS Pilot Program moves forward, your continued involvement will help inform future decisions jointly made by MDC and USACE.
25	5/16/2024	Truly Burton on behalf of Builders Association of South Florida	email/standard mail	See corresponding Letter submitting 5/16/2024 via email and standard mail.	Please refer to response letter prepared on letterhead.
26	5/17/2024	oneclick-politics - submitted on behalf of 339 users, Mary Seabrook (5/20/2024), Maria G (5/22/2024), Vivian Brown (5/22/2024), Adam Steckley	email	This is a message from OneClickPolitics.com You've received a communication from a voter outside of your district. Rather than forward each of them to you, we've compiled them into a summary: 7 users sent the message: 'I am writing both to express support and provide suggestions for the April 2024 Back Bay Study Report that is currently under consideration for inclusion in the Army Corps' Water Resource Development Act bill (WRDA). I appreciate the efforts to address the critical issue of storm surge impacts in Miami. I also believe that the current proposal for the Back Bay Study requires further consideration and refinement. 1. Address multiple flood hazards: The feasibility study needs to address compound flooding using all available avenues. I urge the County to request an 8106 analysis under the authority of the 2022 Water Resources	Thank you for your support of the Miami-Dade Back Bay Coastal Storm Risk (CSRM) Management Feasibility Study and for your comments. The following numbered list aims to address your comments and feedback in the order they were provided. 1. The authority of this study (Public Law 84-71, June 15, 1955) authorizes an examination and survey of the coastal and tidal areas where severe damage has occurred from hurricane winds and tides; as such, it is not within the study authority to address compound flooding. To date, USACE has not received a 8106(a) request from the nonfederal sponsor (NFS), Miami-Dade County.

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
		(5/22/2024), Ibis Van Walleghem (5/23/2024), Stacy Liu (5/23/2024), Rosa Fernandez (5/23/2024), Florence Maddox (5/23/2024), Amy CLement (5/23/2024), Janet Bowman (5/23/2024), Steve Morejon (5/23/2024), Christopher Cheek (5/23/2024), Pattricia Wynn (5/23/2024), Aaron Mencia (5/23/2024), Camilla Smith (5/24/2024), Thomas Lund-Handsen (5/24/2024), Irvans Augustin (5/21/2024),		Development Act to ensure that models incorporate the full suite of flood risks faced by South Florida. 2. Comprehensively evaluate benefits: We commend the request for a National Economic Development Policy Exception and urge the Assistant Secretary of the Army to approve this waiver. The nature-based solutions (NBS) pilot program will develop a standard for measuring benefits, making the existing national economic development benefits analysis inappropriate for this portion of the project. 3. Expand and fast-track the Nature-Based Solutions pilot program, specifically, to allocate more funding to this program and to speed up the timeline for scaling NBS. Incorporating nature-based solutions into project design—wherever possible—is crucial for enhancing coastal resilience. The report emphasizes the importance of multiple lines of defense against coastal storm risk and encourages the use of both green and gray infrastructure. Where gray infrastructure is deemed necessary, the Corps should also consider hybrid options. For example, traditionally gray infrastructure, such as a seawall, can be designed to maximize ecological benefits, effectively blending the advantages of both green and gray approaches. These “living seawalls” have been constructed elsewhere in the United States and are just one example of the expansive opportunities for hybrid green-gray projects. For the Nature- Based Solutions pilot program, we additionally ask that the Corps: 1) authorize additional funding for construction and monitoring; 2) accelerate the implementation timeline by building on existing research, as we are concerned about the Corps’ proposed 15-year timeline to gather necessary information, as there are ample studies showing the efficacy of NBS; 3) further leverage reefs for resilience as they are our first line of defense against storm surge; 4) ensure robust stakeholder engagement; and 5) work with regulatory agencies to develop a straightforward permitting process. The Corps should consult environmental regulatory agencies immediately to consider regulatory efficiencies and engage in pre-application consultation discussions early on to avoid stymieing novel approaches to storm surge attenuation.	2. Thank you for the support of our request for a National Economic Development Policy Exemption. 3. The NBS Pilot Program has received a tremendous amount of public support. This program will be used to identify, evaluate, implement, and monitor a diverse set of NBS pilot demonstration projects within Miami-Dade County to inform the methodology for quantitative evaluation of economic and comprehensive benefits. 1) Based on the construction cost of similar NBS-type projects as well as estimated planning and monitoring costs, the USACE has requested congressional authorization of the program in the amount of $180 million. 2) The request for congressional authorization of the NBS Pilot Program includes all program phases (Phase 1: Information/Data Collection; Phase 2: Planning, and National Environmental Policy Act Compliance, Design; and Phase 3: Implementation, and Monitoring, Evaluation, and Adaptive Management). As such, pilot projects would not need to be individually authorized by congress prior to construction, thereby increasing the efficiency program implementation. For clarification, the 15-year timeline mentioned in the Integrated Feasibility Report/Environmental Assessment (IFR/EA) is specific to Phase 3 of an individual pilot project; this extended monitoring and adaptive management period is due to the fact that the USACE will be using the NBS Pilot Program to gain insight into how NBS perform as CSRM measures over time. 3) & 4) Upon congressional approval and appropriation of the NBS Pilot Program, the USACE would follow the implementation framework outlined in Chapter 5, Section 5.5 through 5.5.5.4. Specifically, the Information/ Data Collection, Planning, and National Environmental Policy Act Compliance Phase, will be used to identify and engage with stakeholders to identify and inform the NBS pilot project site selection process. During this time, suggestions regarding particular NBS proposed for

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
				4. Promote housing equity and safeguard wastewater management throughout the Nonstructural Program: Miami is a metropolis of extreme wealth and poverty. Stark inequity exists here, and the Back Bay Coastal Storm Risk Management study should not perpetuate it. The Corps and County must design and communicate a collaborative, transparent, and inclusive plan. As such, I recommend 1) creating a nonstructural working group comprising members from diverse backgrounds. This working group should include neighborhood representatives and environmental justice groups; 2) ensuring a robust and equitable plan for residents displaced during home elevation; 3) considering participation in the Temporary Relocation Assistance Pilot Program as authorized in Section 8154 of the Water Resources Development Act of 2022; 4) fortifying sewage treatment plants as critical infrastructure; 5) expanding the scope of the Nonstructural Pilot Program to include a general septic-to-sewer conversion plan. The Corps and County have the opportunity to seek funding for a county-wide conversion program under Section 219 of WRDA, which could greatly address the thousands of septic tanks that will fail after a storm. 5. Center frontline communities through transparent public engagement: We applaud the inclusion of environmental justice considerations in the refinement of the Focus Areas for the tentatively selected plan. Populations with incomes at or below the federal poverty level, as well as underserved communities with limited access to public resources, typically have fewer available resources to recover from flood events. This decision aligns with the directives outlined in the Biden Administration's Executive Order 14008 and Executive Order 13985, as well as the Justice40 Initiative. I reiterate that the Corps and County should convene a non-structural working group that includes community members; this will be an essential body to ensure that the project design and implementation are truly fair. I am heartened to see that the Corps has considered public comments and is proposing a new Tentatively Selected Plan. The Back Bay Study presents a valuable opportunity to enhance resilience—one that Miami sorely needs. I urge the Corps to address these concerns and effectively incorporate community feedback into the final study to ensure the best possible	implementation will be crucial to the development of individual pilot projects. As the NBS Pilot Program moves forward, your continued involvement will help inform future decisions jointly made by MDC and USACE. 5) To ensure efficiency in the permitting process, the USACE plans to engage early and often with regulatory agencies with jurisdiction over particular resources that may be affected during implementation of individual pilot projects under the NBS Pilot Program. Interagency engagement opportunities will include, but may not be limited to, National Environmental Policy Act scoping meetings, interagency meetings, and pre-application meetings. 4. The purpose of the Miami-Dade Back Bay Nonstructural Program is to further assess, innovate, and implement nonstructural measures to vulnerable infrastructure and building for which USACE nonstructural policy is still developing. This includes multi-family housing such as four-unit dwellings, which are commonly found in Miami-Dade County's environmental justice communities. Additional infrastructure to be analyzed under the nonstructural program includes complex critical infrastructure, such as hospitals; these facilities serve the entire community and are particularly essential and vulnerable during coastal storm events. 1) & 4) During Phase 1, Planning and Environmental Compliance, of the Nonstructural Program, the USACE and Miami-Dade County will engage with the public, stakeholders, municipalities, and other interested parties to inform the alternatives and specific measures and critical infrastructure to be evaluated. To ensure equitable implementation of the NS Program, public engagement will be crucial. Engagement opportunities will include but may not be limited to, virtual and in-person national environmental policy act scoping and public information meetings where the public can provide feedback,

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
				investment in our nation's future Thank you for considering my comments and for your efforts to address this critical issue. I look forward to seeing meaningful progress toward a resilient and sustainable future for Miami.'...	comments, and suggestions regarding the Nonstructural Program. 2) & 3) The real estate appendix, Appendix A-4 describes the Uniform Relocation Assistance Act (URA), which is planned to be implemented as a part of the recommended plan. The URA will likely also be implemented under the Nonstructural Program. As the Nonstructural Program develops, additional opportunities for relocation assistance may be explored, including the Temporary Relocation Assistance Pilot Program authorized in Section 8154 of the Water Resources Development Act of 2022. 5) The authority of this study (Public Law 84-71, June 15, 1955) authorizes an examination and survey of the coastal and tidal areas where severe damage has occurred from hurricane winds and tides; therefore, the recommendation to include septic to sewer conversions is outside the scope of the current authorization. However, the conversion of septic to sewer lines is an important water quality issue that Miami-Dade County has sought to address via the Connect 2 Protect Program. For more information on this program, please refer to the website: https://www.miamidade.gov/global/water/connect-to-protect-septic-to-sewer.page 5. Several public comments received on the Draft Report recommended a nonstructural program working group be established comprised of members from diverse backgrounds to ensure the effectiveness and equity of the project's implementation. The USACE and Miami-Dade County will further consider this request and explore the potential opportunity to establish a nonstructural program working group in the future.
27	5/20/2024	Frances MacIntyre	email	I support using as many nature-based options as possible and fewer walls. The study is very thorough but now it is time to start implementing some of the solutions. Frances MacIntyre	Thank you for the support and interest in including nature-based solutions to increase the resilience of Miami-Dade County (MDC) to Coastal Storms. As the NBS Pilot Program moves forward, your continued involvement will help inform future decisions jointly made by MDC and USACE.

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
28	5/20/2024	Alexander Adams	email	Hello, I am commenting on the Miami Back Bay study: I think first the Federal, State and Local Government needs to admit the problem of global warming and provide as much funding towards the problem vs the symptoms of the real problem. We should be buying large land in flood vulnerable areas and not building more canals, flood levees, underground water walls. Utilize the existing causeways and bridges by raising these critical connectors from the beach communities to the mainland. Design these new roads on top of "levees" with express lanes raised and local lanes access for example to Key Biscayne. The local GMX expressway authority could connect I-95 to Key Biscayne providing funding and flood relief. All causeways needs mangrove, jetties, oyster beds, seagrass beds and living shorelines to provide flood control and natural resources benefits. Internal canals need large "in line" stormwater BMPs to allow water to be stored upland and not pushed into the bay as quick as possible. This could be key especially out west and south in areas that have farms, wetlands, and vacant land. Other areas include golf courses and parks that can absorb water vs shedding it. Live with water. Create graded swales along roadways where possible to collect water vs stormwater pipes. Create additional jetties between existing outer barrier islands. Southern Miami-Dade can have additional artificial coral reefs, mangrove islands and underwater break waters. between islands. We need more transit and not expanding interstates to reduce impervious areas and stormwater as well as emitting CO2. The primary airports need to be raised up (see what happened to Ft Lauderdale last year) Existing Beaches- bury flood walls into the dunes or a combination of wave breaks at the front and back of the dune structure similar to Matheson Park on Key Biscayne. This can protect the dunes and internal land areas. Keep people off the dunes.	Thank you for your interest in the Miami-Dade Back Bay Coastal Storm Risk Management Feasibility study and proposed NBS Pilot Program and for providing suggestions for resiliency and NBS pilot projects. The NBS you've provided examples of could help inform the future site selection process under the NBS Pilot Program. Upon congressional approval and appropriation of the NBS Pilot Program, the USACE would follow the implementation framework outlined in Chapter 5, Section 5.5 through 5.5.5.4. Specifically, the Information/ Data Collection, Planning, and National Environmental Policy Act Compliance Phase, will be used to identify and engage with stakeholders to identify and inform the NBS pilot project measures and site selection process. As the NBS Pilot Program moves forward, your continued involvement will help inform future decisions jointly made by MDC and USACE.

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
				Create minimum sea wall heights for South Florida that projects sea level rise and looks to private developers to provide protection of their property. Old Cutler Road is a major roadway all along South Dade. This could be enhanced to allow more bike-ped connections and flood protection internally. The coastal homes can afford insurance and flood risk.	
29	5/20/2023	George Burch	email	Did you. Consider walls in the bay? They would not have to be tall. Take the. Bottom out of waves and they loose their power. Otherwise you are depending on homes to do that.Sent from my iPad	Thank you for your interest in the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Feasibility Study. Unlike the 2021 Integrated Feasibility Report (IFR)/Environmental Impact Statement, which included structural measures, including floodwalls and storm surge barriers, along the Back Bay Coast of Miami-Dade County (MDC), the 2024 IFR/Environmental Assessment (EA) is focused on the identification of actionable, nonstructural measures within Environmental Justice Communities affected by frequent flooding in MDC. This includes elevating residential buildings, floodproofing nonresidential buildings, and floodproofing critical infrastructure.
30	5/21/2024	John Donahue	Public Commenting Tool	I believe all of the comments made are valid. Aquafence.com manufactures solutions for commercial and CI flood proofing and TEMPORARY deployable perimeter flood walls which can be set up prior to the storm quickly and efficiently. The walls are removed after the event. The walls are designed to withstand surge and are FM approved up to 9ft tall. They are environmentally friendly and are rapid deployable in the context of the many solutions proposed or ultimately replaced when the final natural solutions are ready. We also supply flood barricades for building entryways. We are happy to align with this project and USACE project plans or provide a consultation for your block or CI location including hospitals. We provided our solution to Tampa General Hospital and you are welcome to google this for more press coverage. At this time, we are fully dedicated to the Back Bay project so please call John Donahue deuceswild1961@gmail.com with an address or block or even a neighborhood to discuss permanent or interim measures. To reiterate, these	Thank you for the information regarding temporary deployable perimeter floodwalls. Upon congressional approval and appropriation of the Recommended Plan, the typical process would be for the Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study to move to the Preconstruction, Engineering, and Design (PED) Phase, then ultimately to the Construction Phase. As a project moves from PED to Construction, the Government/USACE will issue a competitive request for proposals using the System for Award Management website (SAM.gov).

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
				walls are deployed 4-5 days before the storm and removed post storm when safe. They are stored flat in a container and a four man team can install 1000ft interconnected panels in about 4 hours. I understand CI is important but our homes, work places, and economy are equally critical to us all. A priority list of e.g. shelters, police/fire/hospitals along with the nuclear facility, fuel depots, etc. I think the paradigm of paying billions post disaster vs getting a running start and prevent as much as possible is the way to go. Here to help and based in South Florida. Thank you.	
31	5/21/2024	Ellen Levinson	email	I agree that this is an important study to be had. The back bay and its towns suffer from flooding and storm surge on a regular basis. One of the issues that needs to be addressed is converting septic to sewer and upgrading our water treatment plants so that when these flooding events happen, it isn't compounded by polluted water running into the bay. I am also a big proponent of using nature-based solutions to aid in this problem. More mangroves and sea grass is imperative as well as coral reef restoration. A serious effort in this will be very impactful. Thank you for your time and efforts.	The authority of this study (Public Law 84-71, June 15, 1955) authorizes an examination and survey of the coastal and tidal areas where severe damage has occurred from hurricane winds and tides; therefore, the recommendation to include septic to sewer conversions cannot be incorporated into the Recommended Plan. However, the conversion of septic to sewer lines is an important water quality issue that Miami-Dade County has sought to address via the Connect 2 Protect Program. For more information on this program, please refer to the website: https://www.miamidade.gov/global/water/connect-to-protect-septic-to-sewer.page Thank you for your support and interest in the NBS Pilot Program and for providing suggestions for NBS pilot projects. The NBS you've provided examples of could help inform the future site selection process under the NBS Pilot Program. Upon congressional approval and appropriation of the NBS Pilot Program, the USACE would follow the implementation framework outlined in Chapter 5, Section 5.5 through 5.5.5.4. Specifically, the Information/ Data Collection, Planning, and National Environmental Policy Act Compliance Phase, will be used to identify and engage with stakeholders to identify and inform the NBS pilot project measures and site selection process. As the NBS Pilot Program moves forward, your continued involvement will help inform future decisions jointly made by MDC and USACE.

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
32 - PDF attach-ment also included.	5/22/224	Nicholas Bourdon, Director of Environmental Development, Hendrick Brothers Environmental	email	Hi there, I would like to include Reef Arches as a solution towards the Pilot Program. (www.reefarches.com) We're a private company based in South Florida. We've already conducted a successful pilot program in Palm Bay, Florida, see attached pictures. Our company already has manufacturing capacity of this new technology and shows no scouring due to our patent-pending "flow-through" design. In addition to our pilot, we have data, science, and letters of support from the largest organizations in the world about our technology. We have data & evidence to prove our biodiversity capacity & our ability to attenuate waves effectively which allowed for effective sediment accretion. We'd like to be considered as a viable & scalable technology for this program. What are the steps we need to perform to be included in this pilot? See attached video evidence in this email. ---Reef Arch Info Below ----- Reef Arches can be used for: • Fish Habitat Enhancement • Living Shorelines • Wave Attenuation Device • Oyster Restoration • & Biodiversity Our patent-pending system was given 3 grants through DEP Resilient Grant for living shorelines & oyster restoration. Super excited on those as well. We have pilot projects and test sites being conducted for oysters & corals as we speak. We were issued a 120-day USACE permit in 6 days for that pilot because of the habitat restoration components. Attached photos you'll see the following : • Letters of Support from several organizations supporting • Photos of our before/after project with Marine Resources Council (MRC) with Mara Skadden.	Thank you for the information regarding Reef Arches. Upon congressional approval and appropriation of the Recommended Plan, the typical process would be for the Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study to move to the Preconstruction, Engineering, and Design (PED) Phase, then ultimately to the Construction Phase. As a project moves from PED to Construction, the Government/USACE will issue a competitive request for proposals using the System for Award Management website (SAM.gov).

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
				• Biodiversity photos with a ton of marine life on it including oysters, barnacles, crabs, fish, algae, and even a stone grab was identified underneath a test area. Videos: - This video showcases the wave attenuation effects of the arches - Various key uses we'd like to pilot with municipalities on - This video rendering is some use cases (illustration purposes since each project is different)	
33	5/22/2024	City of Miami Beach, Amy Knowles	email	Refer to letter submitted.	Please refer to response letter prepared on letterhead.
34	5/23/2024	Bryan Harrison	Public Commenting Tool	I would question the Corps Draft Finding of No Significant Impact. Given the prior failures of the 2012-2015 dredging project to address real damage to our coral reefs, both by MDC and Corps, the environmental impacts are likely not "insignificant." That is not to say that we should not proceed, but that we need to acknowledge this, plan for it, and mitigate if needed with substantial efforts.	We understand and appreciate you voicing your concern regarding the Draft Finding of No Significant Impact for the Miami-Dade Back Bay Coastal Storm Risk Management Integrated Feasibility Report (IFR)/Environmental Assessment (EA). This IFR/EA, unlike the dredging project mentioned or the previous 2021 IFR/Environmental Impact Statement, does not involve any in-water work. As such, there are no foreseeable impacts to water quality, sensitive aquatic resources (e.g., corals, seagrasses, or mangroves), or to species that depend on those aquatic resources for survival. The IFR/EA evaluated potential impacts to the following resources: wildlife resources and terrestrial habitats; wetlands and mangroves; special status species; geology, topography, and soils; bathymetry, hydrology, and tidal processes; water quality; floodplains; cultural resources, aesthetics and visual resources; air quality, hazardous materials, and waste; noise; utilities; and socioeconomics, environmental justice, and recreation. The anticipated impacts resulting from the Recommended Plan range from adverse to beneficial and temporary to permanent. There are no significant impacts to any resource areas evaluated (Section 7.1 through 7.16).

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
35	5/23/2024	Elvis Cruz	email	Dear USACE, Regarding the Miami-Dade Back Bay plan, There are many who are advocating for measures that are not based on scientific facts. For example, planting mangroves along a shoreline as a way of decreasing storm surge. The studies have shown that a kilometer wide forest of mangroves would only decrease the height of the storm surge by 9.4 centimeters. That's 4.7 inches. (See https://www.nature.org/content/dam/tnc/nature/en/documents/Mangrove_Report_digital_FINAL.pdf, page 7, under FLOOD HEIGHT/ EXTENT REDUCTION BY MANGROVES: 4.2 to 9.4 cm per km) Mangroves are not magic. They cannot defy the laws of physics. A narrow band of mangroves planted along a shoreline would offer no protection. It would do nothing more than harm the public's enjoyment, view, and access to the bay. Stay healthy and happy,	Thank you for your comment and information regarding mangroves as a measure for coastal storm risk management. The study effort for the 2024 Integrated Feasibility Report/Environmental Assessment (IFR/EA) was to identify actionable measures that would address frequent extensive damages from storm surge inundation for Miami-Dade County's critical infrastructure and environmental justice communities, or communities that have historically and disproportionately been adversely impacted by coastal storms. As a part of the recommended plan, the USACE is proposing a Nature-based Solutions (NBS) Pilot Program, which aims to study the efficacy of NBS as coastal storm risk management measures. Upon congressional approval and appropriation of the NBS Pilot Program, the USACE would follow the implementation framework outlined in Chapter 5, Section 5.5 through 5.5.5.4. Specifically, the Information/ Data Collection, Planning, and National Environmental Policy Act Compliance Phase, will be used to identify and engage with stakeholders to identify and inform the NBS pilot project measures and site selection process. As the NBS Pilot Program moves forward, your continued involvement will help inform future decisions jointly made by MDC and USACE.
36	5/23/2024	Robert Curtis, Curtis + Rogers Design Studio	email	Hello, I am writing both to express support and provide suggestions for the April 2024 Back Bay Study Report currently under consideration for inclusion in the Army Corps' Water Resource Development Act (WRDA). I appreciate the efforts to address the critical issue of storm surge impacts in Miami. However, I believe the current proposal for the Back Bay Study requires further consideration and refinement. 1. The feasibility study must address compound flooding using all available avenues. I urge the County to request an 8106 analysis under the authority of the 2022 Water Resources Development Act to ensure that models incorporate the full range of flood risks faced by South Florida. 2. I commend the request for a National Economic Development Policy	Refer to Comment Number 26 for Response.

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
				Exception and urge the Assistant Secretary of the Army to approve this waiver. The nature-based solutions (NBS) pilot program will develop a standard for measuring benefits, making the existing national economic development benefits analysis inappropriate for this portion of the project. 3. It is essential to allocate more funding to this program and accelerate the timeline for scaling NBS. Incorporating nature-based solutions into project design—wherever possible—is crucial for enhancing coastal resilience. The report emphasizes the importance of multiple lines of defense against coastal storm risk and encourages the use of both green and gray infrastructure. Where gray infrastructure is deemed necessary, the Corps should also consider hybrid options. For example, traditionally gray infrastructure, such as a seawall, can be designed to maximize ecological benefits, effectively blending the advantages of both green and gray approaches. These “living seawalls” have been constructed elsewhere in the United States and represent expansive opportunities for hybrid green-gray projects. For the Nature-Based Solutions pilot program, we additionally ask that the Corps: 1. Authorize additional funding for construction and monitoring. 2. Accelerate the implementation timeline by building on existing research. We are concerned about the Corps’ proposed 15-year timeline to gather necessary information, as there are ample studies showing the efficacy of NBS. 3. Further leverage reefs for resilience, as they are our first line of defense against storm surge. 4. Ensure robust stakeholder engagement. 5. Work with regulatory agencies to develop a straightforward permitting process. The Corps should consult environmental regulatory agencies immediately to consider regulatory efficiencies and engage in pre-application consultation discussions early on to avoid stymieing novel approaches to storm surge attenuation. Kind Regards,	

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
37	5/23/2024	Maurizio M. Martinelli, MAS	Email	Hello! I am writing to express support and provide suggestions for the April 2024 Back Bay Study Report that is currently under consideration for inclusion in the Army Corps' Water Resource Development Act bill (WRDA). As a resident of Miami-Beach living between the coast and Biscayne Bay, and as a marine conservationist by trade, I greatly appreciate the efforts to address the critical issue of storm surge in Miami. I also believe that the current proposal for the Back Bay Study requires further consideration and refinement. Firstly, I strongly recommend expanding and rapidly implementing the Nature-Based Solutions pilot program. This should include more funding and a faster timeline for scaling this program. I believe, both personally and professionally, that nature-based solutions are critical for enhancing coastal resilience. We cannot simply build our way out of this problem – we need to integrate natural solutions. For traditional grey infrastructure, I advocate for integrating green infrastructure into a 'hybrid' approach, such as the 'living seawalls' seen elsewhere in the U.S. For the Nature-Based Solutions pilot program, we additionally ask that the Corps: 1) authorize additional funding for construction and monitoring; 2) accelerate the implementation timeline by building on existing research, as we are concerned about the Corps' proposed 15-year timeline to gather necessary information, as there are ample studies showing the efficacy of NBS; 3) further leverage reefs for resilience as they are our first line of defense against storm surge; 4) ensure robust stakeholder engagement; and 5) work with regulatory agencies to develop a straightforward permitting process. The Corps should consult environmental regulatory agencies immediately to consider regulatory efficiencies and engage in pre-application consultation discussions early on to avoid stymieing novel approaches to storm surge attenuation. In addition, I believe that more consideration needs to be made for equity in this plan, including through direct and transparent engagement with impacted communities. This should include developing working groups and soliciting feedback from neighborhood representatives and environmental justice	Refer to Comment Number 26 for Response.

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
				groups that reflect the diversity of Miami. This should also include ensuring a robust and equitable plan for residents who are displaced during home elevation, including considering participation in the Temporary Relocation Assistance Pilot Program as authorized in Section 8154 of the Water Resources Development Act of 2022. This should also include expanding the scope of the Nonstructural Pilot Program to include a general septic-to-sewer conversion plan. I commend the inclusion of environmental justice in the plan – Miami is somewhere that desperately needs more of this – and strongly advocate for doubling down on these efforts. Thank you for providing the opportunity to comment on this proposal and for considering this feedback.	
38	5/23/2024	Miami-Dade County	email	Please see attached letter.	Please refer to response letter prepared on letterhead.

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
39	5/23/2024	Bryan D. Harrison, ASLA, PLA, WEDG	email	Why are Living Shorelines, Hybrid Reef Structure, and Vegetation Mangroves/Wetlands Restoration "Screened out for 2024 Study"? This needs to be included in the plan now. Not later. Living Shorelines and Hybrid Reef Infrastructure are noted as not meeting Objectives "#1 Increase resilience by decreasing vulnerability of CI", and "#2 Reduce economic damage to buildings." I disagree. These are both shore stabilizing or wave impact mitigating interventions. We have hospitals (CI) on the coastlines that could benefit.	Thank you for your feedback and concern regarding NBS not included as a part of the Recommended Plan. Measures that were screened out (e.g., living shorelines hybrid reef structures, vegetation, mangroves, and wetland restoration) because they required additional time and effort to conduct proper analysis for future studies. The measures that were screened out for the 2024 Integrated Feasibility Report/Environmental Assessment (IFR/EA) were shifted for future additional study either as a part of a feasibility study and/or the NBS Pilot Program. The USACE received study guidance on 05 Dec 2024 directing the study team to "evaluate and recommend measures for protecting critical infrastructure from coastal flooding risks in the study area, non-structural flood risk reduction measures, and NBS, including proposed pilot project to further evaluate the effectiveness of NBS" for inclusion in the Water Resourced Development Act (WRDA) of 2024 (Appendix A-8). As such, the study team developed the Recommended Plan, which includes elevation of approximately 2,100 residential buildings, dry floodproofing of approximately 400 nonresidential buildings, and floodproofing of 27 critical infrastructure facilities. Separate from the recommended plan, but requested for authorization in WRDA 2024, is the NBS Pilot Program and NS Program. Additionally, thank you for noting an error in the IFR/EA. Table 4-1 has been updated for Living Shorelines and Hybrid Reef Structures to show that they meet Objective #1, Increase Resilience. Objective #2 has been left as-is. NBS Pilot Program aims to study and better quantify the coastal storm risk management benefits provided by NBS.
40	5/23/2024	Christia Alou, Village Manager, Village of El Portal	email	Please see attached letter.	Please refer to response letter prepared on letterhead.

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
41	5/23/2024	Coalition Comments	email	Please see attached letter on behalf of Environmental Defense Fund, The Everglades Foundation, Everglades Law Center, Miami Waterkeeper, National Parks Conservation Association, and Tropical Audubon Society.	
42	5/23/2024	Janet Bowman, The Nature Conservancy in Florida	email	Thank you for the opportunity to comment on the Draft Miami-Dade Back Bay Feasibility Study. The Nature Conservancy in Florida supports the recommendations of the Integrated Feasibility Report/Environmental Assessment. We would like to highlight our support for authorization of the Nature-Based Solutions Pilot Program described in Chapter 5 of the Feasibility Report. We suggest that the study also evaluate the risk reduction benefits of recently constructed NBS projects efforts to facilitate research into the feasibility and implementation of nature-based solutions in Miami-Dade County and Southeast Florida, including nature-based projects currently being constructed in Miami-Dade funded by the Resilient Florida Program and local government/NGO funded projects such as the Brittaney Bay project in Miami Beach. For example, the Nature Conservancy is currently conducting a “Resilient Biscayne” project to identify suitable areas along Biscayne Bay for NBS projects which is very similar to and could complement the Miami-Dade Back Bay Nature-Based Solutions Pilot Program. The First Phase of Resilient Biscayne study will include as its coastal typology assessment that will categorize coastal areas according to characteristics such as water depth; sediment type (gravel, sand); slope (gentle, mid, steep); and other characteristics (breakwaters, existing sea walls, etc.). The assessment will also consider on-land vulnerability to flooding and sea-level rise, social and economic assets, neighboring properties, and critical infrastructure, such as evacuation routes. This assessment of Biscayne Bay will allow decision-makers to quickly identify the most at-risk areas for each coastal typology. The typology approach will also be designed to be replicated—providing other local governments with an approach for analyzing hazards and designing NBS at regional scales. The Second Phase of the study will determine NBS engineering and design opportunities that align with each typology. This analysis will account for (a) existing NBS, including the associated habitat conditions and anticipated longevity considering sea level rise, and (b) habitat suitability assessments for additional NBS within each typology (e.g., beaches, dunes, marshes, mangroves, seagrass, coral reefs, and oyster reefs).	Thank you for your support of and interest in the NBS Pilot Program. Upon congressional approval and appropriation of the NBS Pilot Program, the USACE would follow the implementation framework outlined in Chapter 5, Section 5.5 through 5.5.5.4. Specifically, the Information/ Data Collection, Planning, and National Environmental Policy Act Compliance Phase, will be used to identify and engage with stakeholders to identify and inform the NBS pilot project site selection process. During this time, the USACE and Miami-Dade County (MDC) will make concerted efforts to engage and collaborate with stakeholders and gather pertinent information. This includes incorporating existing data and information suggestions regarding particular NBS types and locations proposed for implementation of individual pilot projects. Existing information on NBS as well as the results of the Nature Conservancy's "Resilient Biscayne" will be invaluable in the development of pilot projects developed under the NBS Pilot Program. The USACE and MDC look forward to your continued involvement as the NBS Pilot Program develops.

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
				Finally, the Third Phase of the project creates a framework for key stakeholders and decisionmakers to evaluate these project considerations from a menu of options. The menu will include multiple NBS renderings that reflect a variety of economic and environmental costs, benefits, and implementation requirements for each coastal typology, so that community stakeholders can prioritize NBS investments accordingly. This report will also identify and describe how multiple NBS can be prioritized and combined over time to address the most at-risk areas in the near-term, while contributing to a broader, long-term resilience strategy. The Resilient Biscayne project will be completed by the end of 2024 which will allow for the results to inform the Miami-Dade Back Bay Nature-Based Solutions Pilot Program. Thank you for your consideration.	
43	5/23/2024	Brett Bibeau, Miami River Commission	email	Please see attached letter.	Please refer to response letter prepared on letterhead.
44	5/23/2024	Sebastian Ruiz on behalf of Florida Department of Transportation (FDOT)	email	Please see attached comments.	Please refer to response letter prepared on letterhead.
45	5/23/2024	Cleo Institute	email	Hello U.S. Army Corps of Engineers Norfolk District c/o Justine Woodward, The CLEO Institute appreciates the opportunity to provide comments on the Back Bay Coastal Storm Risk Management (CSRM) Feasibility Study. We commend the U.S. Army Corps of Engineers (USACE) and Miami-Dade County for conducting this critical study to protect our vulnerable communities from future storm surge damage. However, there are several areas where the study can be strengthened to ensure a comprehensive and equitable approach to coastal storm risk management. Nature-Based Solutions and Comprehensive Benefits Evaluation	Thank you for your comments. As the project efforts advance in the future, following authorization in WRDA 2024, the USACE and Miami-Dade County will develop and implement a community engagement and outreach plan to share information with residents, community members, municipalities, and interested stakeholders regarding how the components of the Recommended Plan identified in the Final Report will be implemented and the processes associated with implementation. The details of the community engagement and outreach plan will be developed in the future; however, it is anticipated that part of outreach efforts may include informing residents of potential risks, and the

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
				The CLEO Institute strongly advocates including nature-based solutions (NBS) within the CSRM framework. While the report does recognize that it is challenging to quantify the economic benefits of these measures, it is imperative to consider the broader spectrum of benefits they provide. The recent USACE policy directive (January 2021) rightly emphasizes a comprehensive consideration of total project benefits, encompassing economic, environmental, and social categories. We urge the establishment of a consistent methodology and robust data collection to evaluate the performance of NBS. These solutions are crucial for reducing flood risk, sequestering carbon, and improving water quality. They also offer significant co-benefits, such as habitat creation, enhanced recreational opportunities, and improved human health outcomes. Community Engagement and Equitable Planning We appreciate the study's emphasis on public engagement and recognizing the need for equitable outcomes. However, we urge Miami-Dade leaders to deepen their engagement efforts by actively meeting residents where they are and understanding the unique needs of each community. Effective community engagement must go beyond identification and involve direct, meaningful participation in decision-making processes. This approach ensures that the voices of those most affected by climate change—particularly low-income communities and communities of color—are heard and integrated into planning and implementation. Youth Involvement in Climate Resilience The report notably omits the role of youth in addressing Biscayne Bay's challenges. The Miami Climate Resilience Committee's inclusion of two youth seats acknowledges the critical role young people play in climate action. Youth are not only disproportionately affected by climate change but also possess innovative ideas and a vested interest in sustainable solutions. We urge the incorporation of youth perspectives into the CSRM framework, recognizing their unique contributions and ensuring their voices shape the future of our climate resilience efforts. Support for Maximum Risk Management Plan The CLEO Institute supports Alternative 4, the Maximum Risk Management Plan, as the most comprehensive approach to addressing the imminent threats posed by climate change. Incremental or partial measures are	requirements/processes associated with elevating homes. The public comment period began on April 23, 2024 and concluded on May 31, 2024. The USACE would welcome perspectives from all members of the public, including youth, as public engagement opportunities continue in the future. Thank you for your support for Alternative 4. As stated in Section 3.6.2, the Focus Areas include populations of individuals and families with incomes at or below the federal poverty level and underserved populations that may have limited access to public resources. Community residents may speak English as a second language, or little to no English. The CEQ's Climate and Economic Justice Screening Tool (CEJST) was used to inform where census tracts with underserved populations reside in Miami-Dade County. The CEJST uses thresholds, or cutoffs, to determine whether a census tract is considered underserved. A census tract is considered disadvantaged, or underserved, if it is equal to or exceeds the threshold for at least one environmental, climate, or other burden and if it is equal to or exceeds the threshold for an associated socioeconomic burden. Some of these communities are also located in the lowest lying areas of Miami-Dade County, making them especially vulnerable during a coastal storm event. Additionally, underserved communities specifically identified by municipalities were prioritized over data from the CEJST. This included areas within City of Miami and City of Miami Beach. Tables 9-8 and 9-9 provide information on the estimated design and construction schedule and the approximate construction sequencing, respectively. Following Congressional authorization and appropriation, a Project Partnership Agreement must be signed between the USACE and the nonfederal sponsor prior to the beginning of the PED Phase at which time more details regarding the implementation and associated timeline will be developed.

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
				insufficient given the scale and urgency of the challenges we face. A robust, all-encompassing plan is essential for providing the necessary protections and ensuring the long-term resilience of our communities. Enhancing Environmental Justice While the study outlines directives from various executive orders, it lacks specificity in addressing the racial dimensions of environmental injustice. Vulnerable groups, including elderly populations, individuals with disabilities, and communities of color, must be explicitly identified and their unique vulnerabilities addressed. Gentrification and housing affordability issues further compound these vulnerabilities, necessitating a detailed approach to mitigating displacement and ensuring equitable resilience. Clear Implementation Strategies The report should include clear implementation strategies, with defined timelines and responsible agencies, to ensure accountability and transparency. This detailed action plan will facilitate the effective execution of the CSRM strategies and enhance public trust in the process. Long-Term Resilience and Sustainable Solutions While addressing immediate risks is crucial, the study must focus on long-term resilience and sustainable solutions. Investments made today should mitigate current hazards and build resilience against future vulnerabilities. This forward-looking approach is vital for ensuring the sustainability and effectiveness of our climate resilience efforts. In conclusion, The CLEO Institute urges the USACE and Miami-Dade County to incorporate these recommendations into the Back Bay study and future plans. By doing so, we can develop a more inclusive, equitable, and effective plan that safeguards our communities, protects our environment, and ensures a sustainable future for all.	Miami-Dade County is a vibrant community comprised of valuable social, cultural, and environmental assets. The 2024 study effort is an interim response that seeks to advance CSRM measures towards increasing Miami-Dade County's resilience to coastal storms in the future. Additional study efforts are anticipated in the future.
46	5/23/2024	Sonia Brubaker, Office of Resilience and Sustainability, City of Miami	Email	Please see attached letter.	Please refer to response letter prepared on letterhead.

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
47	5/23/2024	Robert Sosa, President and Chief Executive Officer Fisher Island Community Association	Email	Please see attached letter.	Please refer to response letter prepared on letterhead.
48	5/23/2024	Friends of Biscayne Bay	Email	Please see attached letter	Please refer to response letter prepared on letterhead.
49	5/23/2024	Barry Miller, ASLA, PLA and Adriana Savino-Miller, Savino & Miller Design Studio		Please see attached letter	Please refer to response letter prepared on letterhead.
50	5/24/2024	Silvio Pupo-Casco	Public Commenting Tool	Opportunity for living shorelines, mangrove board walk for recreation and education.	Thank you for your interest in the NBS Pilot Program and for providing suggestions for NBS pilot projects. The NBS you've provided examples of could help inform the future site selection process or NBS type to be implemented under the NBS Pilot Program. Upon congressional approval and appropriation of the NBS Pilot Program, the USACE would follow the implementation framework outlined in Chapter 5, Section 5.5 through 5.5.5.4. Specifically, the Information/ Data Collection, Planning, and National Environmental Policy Act Compliance Phase, will be used to identify and engage with stakeholders to identify and inform the NBS pilot project measures site selection process. As the NBS Pilot Program moves forward, your continued involvement will help inform future decisions jointly made by MDC and USACE.
51	5/24/2024	Silvio Pupo-Casco	Public Commenting Tool	Opportunity for NbS like oysters for eutrophication and mangroves could be used to capture waste,	
52	5/24/2024	Silvio Pupo-Casco	Public Commenting Tool	Coastal Parks should be used for SLR mitigation, rainwater capture, retention swales, new living seawalls, etc.	
53	5/24/2024	David Doebler	Public Commenting Tool	FDOT is considering a renovation of the Julia Tuttle Causeway - critical evacuation route. We should raise the entire road by 20+ feet and turn it into a bridge and eliminate the land underneath so it can become a mangrove forest and natural habitat. This will restore natural flow and flushing of the bay while securing a piece of critical infrastructure and creating a natural water absorbing barrier.	Thank you for your interest in the NBS Pilot Program and for providing a suggestion for a NBS pilot project. The information you've provided of could help inform the future site selection process or NBS type to be implemented under the NBS Pilot Program. Upon congressional approval and appropriation of the NBS Pilot Program, the USACE would follow the implementation framework outlined in Chapter 5, Section 5.5 through 5.5.5.4.

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
					Specifically, the Information/ Data Collection, Planning, and National Environmental Policy Act Compliance Phase, will be used to identify and engage with stakeholders to identify and inform the NBS pilot project site selection process. As the NBS Pilot Program moves forward, your continued involvement will help inform future decisions jointly made by MDC and USACE.
54	5/24/2024	Senen Garcia	Email	To whom it may concern, My comment is in regards to the nature based solutions. I understand the study calls for a pilot program involving nature based solutions. However, I would like to confirm this pilot program is not designed to determine if nature based solutions would be implemented but is designed for how nature based solutions will be implemented as it should be a required aspect of the study. Additionally, with specific reference to the coral reefs aspect of the nature based solutions, I would like to know how the army corp will ensure the beach renourishment's impact on the coral reefs and any subsequent outplanting will be minimized to ensure success and strengthening of the coral reef structure and it purpose in the study and protection of the coastline. Should you have any further questions, please do not hesitate to contact me.	Thank you for your interest in the NBS Pilot Program. You are correct in your understanding that the NBS Pilot Program is not designed to determine if NBS *should* be implemented, rather the intent of the program is to identify, evaluate, implement, and monitor the effectiveness of various types of NBS as coastal storm risk management measures in Miami-Dade County. Regarding your question about the use of coral reefs as NBS - the USACE and Miami-Dade County have not conducted site-specific planning nor selected the NBS to be implemented through the NBS Pilot Program. Upon congressional authorization and appropriation of the NBS Pilot Program, the USACE would follow the implementation framework outlined in Chapter 5. In particular, the goal of Phase 1 is to engage with the public and stakeholders, collect data/information, conduct pilot project planning, and ensure compliance with the National Environmental Policy Act. It is during this phase that NBS types, site selection, and environmental evaluation would occur to ensure pilot project success.

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
55	5/24/2024	Gabrielle Bork	Email	Good afternoon, As a lifelong Florida resident, I'm writing both to express support and provide suggestions for the April 2024 Back Bay Study Report that is currently under consideration for inclusion in the Army Corps' Water Resource Development Act bill (WRDA). I appreciate the efforts to address the critical issue of storm surge impacts in Miami. I also believe that the current proposal for the Back Bay Study requires further consideration and refinement. As an engineer who has worked in Miami-Dade County, I've personally seen how during king tides there is already saltwater intrusion in our storm drainage wells. At PortMiami, we dealt with seaweed cleanout after king tide events and it's only going to get worse. We need to act to address the major flooding in our streets because it's already affecting commuters during a regular day with a rainstorm, not even a hurricane. 1. Address multiple flood hazards: The feasibility study needs to address compound flooding using all available avenues. I urge the County to request an 8106 analysis under the authority of the 2022 Water Resources Development Act to ensure that models incorporate the full suite of flood risks faced by South Florida. 2. Comprehensively evaluate benefits: We commend the request for a National Economic Development Policy Exception and urge the Assistant Secretary of the Army to approve this waiver. The nature-based solutions (NBS) pilot program will develop a standard for measuring benefits, making the existing national economic development benefits analysis inappropriate for this portion of the project. 3. Expand and fast-track the Nature-Based Solutions pilot program, specifically, to allocate more funding to this program and to speed up the timeline for scaling NBS. Incorporating nature-based solutions into project design—wherever possible—is crucial for enhancing coastal resilience. The report emphasizes the importance of multiple lines of defense against coastal storm risk and encourages the use of both green and gray infrastructure. Where gray infrastructure is deemed necessary, the Corps should also consider hybrid options. For example, traditionally gray infrastructure, such as a seawall, can be designed to maximize ecological benefits, effectively blending the advantages of both green and gray approaches. These “living seawalls” have been constructed elsewhere in the United States and are just	Refer to Comment Number 26 for Response.

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
				one example of the expansive opportunities for hybrid green-gray projects. For the Nature-Based Solutions pilot program, we additionally ask that the Corps: 1) authorize additional funding for construction and monitoring; 2) accelerate the implementation timeline by building on existing research, as we are concerned about the Corps' proposed 15-year timeline to gather necessary information, as there are ample studies showing the efficacy of NBS; 3) further leverage reefs for resilience as they are our first line of defense against storm surge; 4) ensure robust stakeholder engagement; and 5) work with regulatory agencies to develop a straightforward permitting process. The Corps should consult environmental regulatory agencies immediately to consider regulatory efficiencies and engage in pre-application consultation discussions early on to avoid stymieing novel approaches to storm surge attenuation. 4. Promote housing equity and safeguard wastewater management throughout the Nonstructural Program: Miami is a metropolis of extreme wealth and poverty. Stark inequity exists here, and the Back Bay Coastal Storm Risk Management study should not perpetuate it. The Corps and County must design and communicate a collaborative, transparent, and inclusive plan. As such, I recommend 1) creating a nonstructural working group comprising members from diverse backgrounds. This working group should include neighborhood representatives and environmental justice groups; 2) ensuring a robust and equitable plan for residents displaced during home elevation; 3) considering participation in the Temporary Relocation Assistance Pilot Program as authorized in Section 8154 of the Water Resources Development Act of 2022; 4) fortifying sewage treatment plants as critical infrastructure; 5) expanding the scope of the Nonstructural Pilot Program to include a general septic-to-sewer conversion plan. The Corps and County have the opportunity to seek funding for a county-wide conversion program under Section 219 of WRDA, which could greatly address the thousands of septic tanks that will fail after a storm. 5. Center frontline communities through transparent public engagement: We applaud the inclusion of environmental justice considerations in the refinement of the Focus Areas for the tentatively selected plan. Populations with incomes at or below the federal poverty level, as well as underserved communities with limited access to public resources, typically have fewer available resources to recover from flood events. This decision aligns with the	

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
				directives outlined in the Biden Administration's Executive Order 14008 and Executive Order 13985, as well as the Justice40 Initiative. I reiterate that the Corps and County should convene a non-structural working group that includes community members; this will be an essential body to ensure that the project design and implementation are truly fair. I am heartened to see that the Corps has considered public comments and is proposing a new Tentatively Selected Plan. The Back Bay Study presents a valuable opportunity to enhance resilience—one that Miami sorely needs as such a diverse city. I urge the Corps to address these concerns and effectively incorporate community feedback into the final study to ensure the best possible investment in our nation's future. Thank you for considering my comments and for your efforts to address this critical issue. I look forward to seeing meaningful progress toward a resilient and sustainable future for Miami. Please do the right thing!	
56	5/27/2024	George Burch	email	Run a short wall up the bay. It will take the bottom out of the waves and remove their strength.	Thank you for your interest in the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Feasibility Study. Unlike the 2021 Integrated Feasibility Report (IFR)/Environmental Impact Statement, which included structural measures, including floodwalls and storm surge barriers, along the Back Bay Coast of Miami-Dade County (MDC), the 2024 IFR/Environmental Assessment (EA) is focused on the identification of actionable, nonstructural measures within Environmental Justice Communities affected by frequent flooding in MDC. This includes elevating residential buildings, floodproofing nonresidential buildings, and floodproofing critical infrastructure.
57	5/28/2024	Danielle Weerth ECOncrete	email	Please see attached letter.	Thank you for your interest in the NBS Pilot Program. The information provided could help inform NBS types to be considered under the NBS Pilot Program. Upon congressional approval and appropriation of the NBS Pilot Program, the USACE would follow the implementation framework outlined in Chapter 5, Section 5.5 through 5.5.5.4. Specifically, the Information/ Data Collection, Planning, and National Environmental Policy Act Compliance Phase, will be used to identify and engage with stakeholders to identify and inform the NBS pilot project measures site selection process. As the NBS Pilot Program moves forward, your continued involvement will help inform future decisions jointly made by MDC and USACE.

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
58	5/29/2024	Miami-Dade County Park, Recreation, and Opne Spaces (PROS)	email	Please see attached letter.	Please refer to response letter prepared on letterhead to Miami-Dade County (comment #38).
59	5/29/2024	Dolly MacIntyre	email	Please let us stop generating words and get to work implementing solutions. You know what to do, so DO IT!	Thank you for expressing your support in the solutions being recommended in the 2024 Integrated Feasibility Report/Environmental Assessment. The USACE looks forward to continued coordination throughout the study life cycle.
60	5/29/2024	John Donahue	Public Commenting Tool	Deployable Floodwalls provide an "elegant" and technically feasible solution without delay, obstructing views or creating a permanent wall/barrier. I believe this project is massively complicated and complex. A deployable 9ft perimeter wall set up during the storm prep phase and removed after the event passes or misses, is an immediate solution without an array of engineering permits etc. The perimeter can circumvent a city block, a group of houses, nuclear power plant, fuel depot, etc until the nature-based solutions are in place. Take a look at Aquafence.com and review the media / videos and note the USACE test videos. There are logistics involved, but the design allows for a "nature-neutral" and aesthetic solution. I believe a phase 1 including and AquaFence for any location that the solution can be applied, should be procured by the City,County and USACE. Lets do all of the nature-based, living seawalls, oyster reefs that are deployable and fill in in the gaps with an AquaFence.	Thank you for the information regarding temporary deployable perimeter floodwalls. Upon congressional approval and appropriation of the Recommended Plan, the typical process would be for the Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study to move to the Preconstruction, Engineering, and Design (PED) Phase, then ultimately to the Construction Phase. As a project moves from PED to Construction, the Government/USACE will issue a competitive request for proposals using the System for Award Management website (SAM.gov).
61	5/29/2024	John Donahue	email	I see a lot of solutions an NSB suggestions and trying to ascertain if deployable flood walls are going to be recommended at all and for which areas. I realize the high seawalls were rejected but I am interested in homing in on this project as it seems clear there will a short term and long term implementation and Aquafence could fill some gaps. I would also like to understand the procurement process, registration, etc. Aquafence is certified by FM and ERDC (USACE lab). I assume funding and bids are still aways away, but the commercial / direct approach to the private market may be something we can do now and lowers the cost to taxpayers.	Thank you for the information regarding temporary deployable perimeter floodwalls. Upon congressional approval and appropriation of the Recommended Plan, the typical process would be for the Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study to move to the Preconstruction, Engineering, and Design (PED) Phase, then ultimately to the Construction Phase. As a project moves from PED to Construction, the Government/USACE will issue a competitive request for proposals using the System for Award Management website (SAM.gov).

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
				We installed recently in Fort Lauderdale and will assign resources to other areas e.g. Texas if this project will not require our products. We believe our products are a form of NSB as they do not impact the environment at all as they are temporary walls.	
62	5/29/2024	Barbara Bisno	email	1) Since the shore line of the county is lined with multi story condominium buildings, it is a stunning omission that the plan does not include these residential buildings in the plan of the report, rather including only 2 story 4 families residential buildings in the report. 2) The intercostal which will be the source of critical storm surge follows the County coastline and the coastlines of the large islands of Miami Beach, North Miami Beach and Key Biscayne. The county mainland and these islands are connected by several causeways which are not included in the plan of the report. Granted that this report may serve as a preliminary plan, the omission of these two critical aspects of Miami Dade County - multifamily, many story condominium and apartment buildings plus the connective, evacuation route causeways - may result in no community left by storm surge and wind fueled flooding from the ocean and intracoastal. Thank you for the opportunity to comment on this resilience report.	Thank you for your engagement and for providing comments regarding the multifamily homes and critical evacuation routes in Miami-Dade County (MDC). See below for the response to your comments: 1) Because of the expedited timeline of the 2024 Integrated Feasibility Report/Environmental Analysis (IFR/EA) as well as the time and effort needed to conduct proper analysis, measures for elevating multifamily buildings with 4+ units were shifted for potential analysis in future studies or programs. Included in the 2024 IFR/EA, is the request for authorization and appropriation of $200,000,000 for a Nonstructural Program, which aims to further investigate and implement nonstructural measures for certain types of buildings that are prevalent in MDC (and other urban areas) for which the suite of current nonstructural interventions is still evolving. 2) Similar to the above comment, the expedited IFR/EA shifted several measures to future studies or programs. The methodology used in the 2024 IFR/EA included developing focus areas based on vulnerability to high-frequency flooding and social vulnerability. Within these focus areas, coastal storm risk management solutions that met study objectives were developed. Ultimately, this culminated in the recommended plan, which includes elevation of approximately 2,100 residential

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
					buildings, dry floodproofing of approximately 400 nonresidential buildings, and floodproofing of 27 critical infrastructure facilities. The USACE looks forward to your continued involvement throughout the study process!
63	5/29/2024	John Donahue	Public Commenting Tool	Aquafence.com has deployable flood walls. Contact John Donahue 561-901-7181 for Miami/Venice. Please go to Media on website and see them in action. Group discount for residential.	Thank you for the information regarding temporary deployable perimeter floodwalls. Upon congressional approval and appropriation of the Recommended Plan, the typical process would be for the Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study to move to the Preconstruction, Engineering, and Design (PED) Phase, then ultimately to the Construction Phase. As a project moves from PED to Construction, the Government/USACE will issue a competitive request for proposals using the System for Award Management website (SAM.gov).
64	5/30/2024	Diana Cimadevilla	Public Commenting Tool	Protect and preserve land for all to share. Continue monitoring sea level rise, the impact it has on riparian ecosystems, and find strategies between private and public stakeholders to combat sea level rise and its effects.	Thank you for your engagement and interest in the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Feasibility Study. The authority of this study (Public Law 84-71, June 15, 1955) authorizes an examination and survey of the coastal and tidal areas where severe damage has occurred from hurricane winds and tides; as such, it is not within the study authority to preserve land. However, construction of pilot projects under the NBS Pilot Program would examine the effectiveness of NBS as CSRM measures amidst sea level change, while also providing co-benefits, including enhancing public safety, restoring and protecting aquatic ecosystem habitats, stabilizing and enhancing shorelines, promoting recreation, supporting risk management adaptation strategies, and providing ecosystem services.
65	5/30/2024	Astrid Santini	Public Commenting Tool	Since both CSRM projects and CERP projects are coordinated by the Army Corps, why is it that the CSRM is not required to address CERP phases BBCW and BBSEER objectives, when BBSEER has it in their purpose/objective to ensure operations to not worsen any of the resiliency studies' objectives of flooding and property protection?	Thank you for your comment regarding integration and cross-project coordination. Section 1.4, Study Area, discusses the importance of project integration of multiple USACE projects within and adjacent to the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Feasibility Study. These projects include the

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
					Miami-Dade CSRM Study, Key Biscayne CSRM Study, Miami Harbor Improvements Feasibility Study, South Atlantic Coastal Study, Biscayne Bay Coastal Wetlands, Biscayne Bay and Southeastern Everglades Ecosystem Restoration, and the Central and Southern Florida Flood Resilience Study. With a successful integration effort, these projects can be implemented and work in coordination to achieve each project's objectives and improve the resilience of South Florida. Additional information can be found at: https://www.saj.usace.army.mil/Integration/.
66	5/30/2024	Astrid Santini	Public Commenting Tool	The CR analysis for the Cutler Bay focus area did not appear to have the analysis described at the same level as the other 5 focus areas.	Upon receiving your comment regarding Cultural Resources, the project Archaeologist revisited the archeological and architectural databases and found that there are no National Register of Historic Places-listed sites in the Cutler Bay Focus Area. Additionally, to fully display the extent of archeological resource surveys in Miami-Dade County, including Cutler Bay, the map captioned "Archeological and Historic Architectural Surveys in Miami-Dade County" (Figure 3-4 in the Integrated Feasibility Report/Environmental Assessment) has been updated.
67	5/30/2024	Astrid Santini	Public Commenting Tool	Biscayne National Park requests that as the Back Bay CSRM project selects nature based solutions that they reach out and consult with the NPS as an adjacent federal land manager.	Thank you for the request to engage with Biscayne Bay National Park during the development and implementation of specific NBS pilot projects under the NBS Pilot Program. Pursuant to 40 CFR § 1501.8, early in the National Environmental Policy Act Process, the lead agency (USACE) will request federal agencies with jurisdiction or special expertise to be cooperating agencies at the onset of the NBS Pilot Program. The USACE looks forward to continued coordination and cooperation with Biscayne Bay National Park.
68	5/30/2024	Diana Cimadevilla	Public Commenting Tool	Protect and preserve land for all to share. Continue monitoring sea level rise, the impact it has on riparian ecosystems, and find strategies between private and public stakeholders to combat sea level rise and its effects.	Thank you for your engagement and interest in the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Feasibility Study. The authority of this study (Public Law 84-71, June 15, 1955) authorizes an examination and survey of the coastal and tidal areas where severe damage has occurred from hurricane winds and tides; as such, it is not within the study authority to preserve land. However, construction of pilot projects under the NBS Pilot Program would examine the effectiveness of NBS as CSRM measures amidst sea level change, while also providing co-benefits, including enhancing public safety, restoring and protecting aquatic ecosystem habitats, stabilizing and enhancing shorelines, promoting

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
					recreation, supporting risk management adaptation strategies, and providing ecosystem services.
69	5/31/2024	John C. Van Leer Sc. D.	email	General Comments on Back Bay Study for Miami-Dade County: 1) Elevating Structures, as has been done in New Orleans and the Florida Keys, is a practical solution, if it is done at scale. That would mean marshalling equipment on a large scale rather than piecemeal. Best done on a neighborhood by neighborhood rather than a house at a time. 2) Add fill material to elevate roads, with adequate transverse drainage pipes under filled roads, to protect low lying properties from flooding risk, while allowing those that choose to raise structures and/or add fill on an individual basis, to maintain normal dry roadway access to their properties. 3) Instead of mining limestone for export out of state by rail, make this fill available locally with large scale trucking distribution. 4) Permit those who wish to plant mangroves on their own waterfront to manage and trim them without heavy handed regulations, which presently discourage almost all private property owners from planting mangroves on private property. 5) Make sewer connections readily available to those who would like to be freed of septic tanks and leaching fields in the older low lying coastal communities. 6) Federal require M-Dade County to elevate seawalls on county owned waterfront land so they are at least equal elevation with the surrounding private seawalls, so that M-D county is not the primary cause of street flooding in some older unincorporated neighborhoods.	Thank you for your comments and recommendations regarding the Miami-Dade Back Bay Coastal Storm Risk Management Study. The input you've provided may help inform future study efforts following the completion of the 2024 Integrated Feasibility Report/Environmental for authorization in the Water Resources Development Act of 2024. The USACE and Miami-Dade County look forward to your continued engagement through future study and implementation phases.

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
70	5/31/2024	Maria Eugenia Rodriguez	email	As a resident and property owner in Key Biscayne, my family and I are extremely worried about the Island's exclusion from the study. The vulnerability and the indisputable nature of the island, coupled with its enormous environmental and recreational worth, is undeniable. To the county , to the state and all millions of residents that visit Island and contribute to the parks and recreational areas, together with the people that live on the Key and own property should be part of this vast and important endeavor plan to protect us all from sea level rise. The same consideration giving to Virginia Key to the Water Treatment plan should be gibing to Key Biscayne to to its immense value . It should be in the hands of a small administration to try to fix or look for a solution We are unable to combat climate change on our own without the knowledge and experience and study done for the rest of the county . Please consider including us in the project .	Thank you for voicing your concern regarding the recommended plan for the Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study. The USACE, Jacksonville District, in coordination with the nonfederal sponsor, has started a separate feasibility study for Key Biscayne due to problems concerning: 1) Storm surge, tides and waves combined with the effects of sea level rise; 2) Erosion and wave attack, combined with the effects of sea level rise; and 3) Groundwater emergence, rainfall, and stormwater movement. They Key Biscayne Coastal Storm Risk Management Feasibility Study aims to reduce flooding caused by coastal storms, extreme high tides, and future sea level rise; and explores ways to increase community resiliency from future coastal storms. More information and project updates can be found at: https://www.saj.usace.army.mil/Missions/Civil-Works/Shore-Protection/Dade-County/Key-Biscayne-CSRM/
71	5/31/2024	Alya Singh-White, Environmental Protection Agency	email	Dear Ms. Woodward, The U. S. Environmental Protection Agency reviewed the Draft Environmental Assessment for the Miami-Dade Back Bay Coastal Storm Risk Management Project, in accordance with Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act. Miami-Dade County is extremely vulnerable to flooding from storm surge, and risk levels and vulnerability to coastal storms are expected to increase in the future. The purpose of the project is to evaluate and implement nonstructural coastal storm risk managment measures designed to reduce potential damage caused by coastal storms, including preventing loss of human life. The Draft EA examines four Action Alternatives and a “No Action” Alternative and are as follows: • Alternative 1 is the No Acton Alternative – if no federal project were recommended during the life cycle. • Alternative 2 involves dry floodproofing critical infrastructure (i.e., county and municipal fire and police stations, emergency operations centers, etc.)	Thank you for your review and comment regarding temporary relocation assistance for property owners in disadvantage communities who have elected to participate in the process of residential building elevation. For clarification, the USACE has prepared an Environmental Assessment with a Finding of No Significant Impact. However, we acknowledge that there may be a gap in current laws and policies pertaining to the temporary relocation of property owners compared to tenants, as tenants would be eligible for relocation reimbursement under the Uniform Relocation Assistance Act, while property owners may not be. Although policy changes related to relocation assistance requirements and/or changes are outside of the purview of the current study, USACE will work alongside Miami-Dade County to support the County’s efforts to establish a nonstructural program aimed at providing additional relocation assistance to displaced individuals including prioritization for socially vulnerable and underserved populations.

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
				within the study area. • Alternative 3 involves dry floodproofing nonresidential buildings and elevating residential buildings such as single-family homes and multifamily homes of four units or less. • Alternative 4 is the Tentatively Selected Plan and is a combination of Alternatives 2 and 3. • Alternative 5 is the same as Alternative 4; however, it focuses on a subset of buildings with the highest coastal storm risk management needed, whereas Alternative 4 includes all buildings regardless of level of risk. The Draft EA also proposes for authorization a Nature Based Solutions Pilot Program to provide a framework for identifying, evaluating, implementing, and monitoring a diverse set of NBS pilot demonstration projects within Miami-Dade County to inform the methodology for quantitative evaluation of economic and comprehensive benefits. Site specific pilot projects would be identified and evaluated in the future coordination with Miami-Dade County, municipalities, and other stakeholders. Based on our review of the Draft EA, the EPA has the following comments for your consideration. • Environmental Justice/Socioeconomics: According to Section 7.15.4, "The elevation of residential buildings would be voluntary for property owners and would have a permanent, beneficial effect for property owners and tenants by reducing flooding damages and increasing resilience following a storm surge event. However, there would also be temporary, moderate, adverse impacts during construction associated with residential elevations. Residents/tenants would be required to temporarily relocate for several months during construction. Restricted use of residences may occur. Relocation during construction may present hardships to socially vulnerable individuals and families and elderly individuals for whom temporary relocations may be more burdensome or challenging. Because elevation is voluntary, property owners are not considered displaced persons, and no relocation reimbursements would be anticipated under the Uniform Relocation Assistance Act. Affected tenants, however, would be compensated for relocation to comparable residences and provided relocation assistance in accordance with the URA." The EPA's EJScreen tool identifies numerous minority and low-income populations within the project's focus areas. One goal of the proposed project	

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
				is to implement measures to reduce the vulnerability of flooding to communities with environmental justice concerns. However, if property owners in communities with environmental justice concerns are unable to relocate due to financial hardships, this could adversely affect the ability of the project to meet that goal and continue to leave some residents in vulnerable flood-prone residential buildings. Recommendation: The EPA recommends the USACE evaluate laws and policies pertaining to relocation assistance that may allow for more uniformed financial assistance for disadvantaged communities, including minority and low-income populations. The EPA further recommends that a summary of the findings and/or results of the evaluation be included in the FEIS. The EPA also recommends the USACE identify in the Record of Decision any additional measures the USACE will implement based on the findings and/or results of the evaluation. Thank you for the opportunity to review and provide comments on the Miami-Dade Back Bay CSRM Draft EA. Upon completion of the Final EA, please submit an electronic copy to the EPA. If you have any questions regarding the EPA's comments, please contact me by phone at 404-562-9339 or via email at Singh-White.Alya@epa.gov.	
72	5/31/2024	Robert ohamer, Director of Sustainability Zyscovich A Stratus Team Company	email	I am writing these review comments to the USACE-MDC Back Bay Feasibility study as an interested and concerned citizen, resident of the City of Miami, Miami-Dade County, Florida, US, Co-Chair of the AIA Miami Resilience and Adaptation Committee, and Director of Sustainability at Zyscovich, LLC. First of all, I must commend those responsible for the study for two important difficult processes: 1) Continued, committed, and well documented public outreach, and 2) Having the insight and courage to listen to public feedback seriously from previous proposed sea-level rise mitigation strategies, alter course and outlook, and provide a revised strategy that this study represents. By incorporating the public feedback, the revised strategy outlined in this study will have: a. Greater chance for public acceptance, adaption, and cooperation for implementation, and b. Greater chance for mitigating not only sea level rise, but also storm surge, rain events, and improvement of quality of life.	Thank you for your engagement, support of, and suggestions for the Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study. To clarify your comment regarding pilot projects, there have been no recommendations made for implementation of nonstructural measures under a pilot program. The measures discussed in the Integrated Feasibility Report/Environmental Assessment (IFR/EA) are a part of the recommended plan to mitigate coastal storm risk in vulnerable communities, or areas of high-frequency flooding potential and that are socially vulnerable. In addition to the recommended plan is a request for authorization and appropriation of $200,000,000 for a Nonstructural Program, which aims to further investigate and implement nonstructural measures for certain types of buildings that are prevalent in MDC (and other urban areas) for which the suite of current nonstructural interventions is still evolving. The program would apply to complex structures, including, but not limited to, residential structures with 4+ units and hospitals

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
				In terms of the specifics of the study, • I support and look forward to the subsequent phases of Nature-based Solutions Pilot Program. • For the non-structural measures o I support the identification of critical infrastructure for risk mitigation strategies. However, I would recommend the addition of Schools to the list of critical infrastructure, as may school gymnasia are used during periods of evacuation as refuge areas. o I support the pilot projects within the identified areas for raising, although I would recommend that further analysis is made to help determine the greatest benefit to the greatest number of people. o Coordination with local ordinances could pave the way for greater harmonization between buildings and infrastructure resilience	
73	5/31/2024	Sam Van Leer President & Founder Urban Paradise Guild	email	Ladies and Gentlemen, Thank you for the massive amount of work that was invested in this study. Due to pressing deadlines and demands, I have not been able to give it the full attention that it deserves. Basis for my comments and offers: I founded Urban Paradise Guild (UPG) in 2008 to fight the causes and effects of Climate Change. We've become known for creating substantial impacts on a shoestring because of our effective use of Volunteers. UPG collaborated with DERM in planting thousands of Mangroves in 2009-10, as well as dunes. Over the years, we have done planting and stewardship for numerous habitats in eastern Miami-Dade. Multiple Lines of Defense I am relieved to see that this approach is being taken. 1. Resisting or reducing the energy of destructive storm surge with features in water and/or on land YES 2. Adapting vulnerable buildings and other critical assets in-place to minimize flood consequences	Thank you for your support of the Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study and for the information regarding the Urban Paradise Guild. Upon congressional approval and appropriation of the NBS Pilot Program, the typical process would be for a particular pilot project to go through the Information, Data Collection, Planning, and National Environmental Policy Act Compliance Phase, then move to the Design and Implementation Phase. In this phase, the Government/USACE will issue a competitive request for proposals using the System for Award Management website (SAM.gov).

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
				YES, but don't rebuild if destroyed. 3. Creating large-scale barriers that attempt to keep storm surge completely out of vulnerable areas Only where natural features have enough elevation to be able to stop Storm Surge. Coastal barrier islands don't have this. Money should not be expended for barriers that are higher than the highest dune. The Coastal Ridge has promise, and provides better value for any investment. ========== UPG Solutions In Development: UPG has been planting Mangroves and coastal habitats since 2009. Empirical research and innovation are baked into our approach. As new conditions create new challenges, we try to innovate solutions, and often succeed. We are currently testing (or planning to test) new methods of Mangrove planting and habitat restoration in and around North Biscayne Bay (NBB). Our 2 primary sites are Arch Creek East Preserve (North Miami) and Morningside Island (Miami), which offer a substantial variety of testing conditions. DERM is aware of our intentions, which will be formalized in the near future. Upland Mangroves: We are testing several methods to establish mangroves at 3' above sea level. This will give them substantial time to mature before SLR is challenging higher ground. Bay Calming and Wave-breaker Features: Murky water and pollution have killed hundreds of acres of sea-grass in NBB. UPG intends to test various approaches, both with and without Mangroves. These features will in general break up waves or absorb wave energy to allow turbidity to settle. They will also have value as storm surge defensive elements during hurricanes. Shallow Water Mangroves (Bay Calming) We intend to test several methods to establish Mangrove colonies on grass	

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
				flats or disturbed areas with shallow (up to 3') depth. They will function as wave-breakers in mid Bay. It is hoped that they will soak up nutrient pollution and sediment to become robust. Seawall Mangroves (Bay Calming) We hope to test several options for establishing mangroves attached to sea-walls and coastal infrastructure, even in water as deep as 6'. Seagrass Recolonization Several methods to re-establish seagrass in blighted or disturbed areas are being considered. We plan to have proven methods as Bay Calming improves water quality. Australian Pine Slow-Mo Termination In order to stabilize coastlines, Australian Pines (a Category 1 Invasive) must be terminated. Cutting them down adjacent to protected Mangroves is fraught with liability for damage, and is expensive for a small non-profit. These barriers prevent removal, denying resilience to coastal areas. Over the past 15 years, UPG has developed several effective organic methods to do this (no herbicide), killing them where they stand. They fall down over about 5 years, shedding mass steadily the whole time. The impact zone is usually surrounding the trunk, which also limits any damage. We are further refining our methods based on more recent discoveries, and intend to document and teach them. This is valuable and relevant to anyone working to harden the coastline. Possible Collaborations: With access to more funding and resources, UPG will be able to make progress on both projects and empirical research more rapidly. UPG hopes to collaborate with interested agencies as proofs of concept are refined or established. Please let us know if interested.	

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
74	5/31/2024	Andrew Baker, University of Miami	email	Healthy coral reefs provide a first line of defense against wave-driven coastal flooding, and coral restoration is now recognized as an effective strategy for risk reduction along vulnerable coastlines (Beck et al. 2018). Coral reefs can dissipate up to 97% of wave energy (Ferrario et al., 2014) and the loss of one meter in reef height may double the global built capital at risk from flooding during storm events (Beck et al. (2018). Hybrid reefs combine grey (cement-based) artificial structures with green (nature-based) coral restoration, and marry the benefits of healthy coral reefs with the instant wave attenuation benefits of artificial structures. These hybrid structures are self-building and self-repairing, able to continue to grow after deployment, keep pace with projected sea-level rise, and build long-term resilience to storms. Coral reefs found closest to areas of high human population have the highest shoreline defense scores, providing significant flood-protection savings for people and property, particularly in areas with little topographical relief. From the perspective of avoided damage to urban infrastructure from wave-driven flooding, the reefs of **Miami-Dade County represent some of the world's most valuable reefs per linear km** (Storlazzi et al. 2019). The urban coastline of Miami-Dade County, from the southern tip of Key Biscayne to the Broward County line, accounts for some 40% of the $675 million dollars per year in value that Storlazzi et al. (2019) found that reefs provide in coastal protection to the state of Florida. This amounts to some $270M in avoided damages to Miami-Dade County in an average year, with values being much higher in years where a named storm hits the coastline. Moreover, these dollar values are calculated from datasets generated in 2010. **Accounting for inflation and the development that has occurred in Miami-Dade County since 2010, these values likely easily exceed $400M per year in 2024.** Given that this stretch of coastline is less than 23 miles in length, this means that the **reefs of urban Miami-Dade provide, in an average year, at least $17 million per linear mile per year in avoided flooding damage.** This equates to more than $10 million per linear km per year, or $10,000 per linear meter, per year. Think about that: **Each linear meter of coral reef off urban Miami-Dade provides $10,000 in avoided damage per year in an average year,** with values perhaps 10 times greater during a hurricane year. Rebuilding the lost abundance, diversity, distribution/connectivity, and structure of corals and coral reefs through science-based active propagation and restoration is therefore critical to both the ecology and economy of Southeast Florida. **Deploying hybrid reefs to produce immediate wave protection is an extremely cost-effective way of protecting coastlines while**	Thank you for providing documentation supporting your interest in the use of hybrid reef structures as a NBS in Miami-Dade County. Upon congressional approval and appropriation of the NBS Pilot Program, the USACE would follow the implementation framework outlined in Chapter 5, Section 5.5 through 5.5.5.4. Specifically, the Information/ Data Collection, Planning, and National Environmental Policy Act Compliance Phase, will be used to identify and engage with stakeholders to identify and inform the NBS pilot project type(s) and site selection process. As the NBS Pilot Program moves forward, your continued involvement will help inform future decisions jointly made by MDC and USACE.

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
				also providing valuable ecosystem goods and services. Site selection for hybrid reef deployment should carefully consider the shoreline environment, among other variables, to target areas that protect vulnerable communities and highly developed valuable shorelines. **The Back Bay project should highlight hybrid reefs as an important component of its investment in nature-based approaches.**	
75	5/31/2024	Carlie Dario	Public Commenting Tool	The key questions in section 5.4 Program Framework is a great start to answer questions on efficacy, effiency, and effectiveness. However, I think another question should include answering community engagement outcomes - for example in what ways can the community help codesign NBS in their area? Proposed project should not only reflect geographic variability but also socioeconomic variability as well.	Public and community engagement will be an important component to the NBS Pilot Program. The Information/Data Collection, Planning, and National Environmental Policy Act Compliance Phase, outlined in Section 5.5 of the Final Report, will be used to identify and engage with the public and other stakeholders to identify and inform the NBS pilot project site selection process. During this time, suggestions regarding particular NBS proposed for implementation will be crucial to the development of individual pilot projects. As the NBS Pilot Program moves forward, public involvement will help inform future decisions jointly made by Miami-Dade County and USACE.
76	5/31/2024	Carlie Dario	Public Commenting Tool	I'm curious to know if 'adaptive management' includes considering not only monitoring but maintenance costs and plan for the pilot NBS? I understand that maintenance costs are shouldered by the property owner / county in the long run; however, this needs to be transparent as many NBS / restoration projects are not explicit about maintenance and monitoring resulting into shortlived projects (see Bayraktarov et. al, 2016; 2020 for restoration factors)	Phase 3 of the proposed NBS Pilot Program includes monitoring, evaluation, and adaptive management; as a part of this phase, a NBS pilot project-specific Monitoring and Adaptive Management Plan (MAMP) would be prepared to identify project-specific performance measures and success criteria, or decision-making triggers, which can be used to determine the need for potential implementation of adaptive management actions. To ensure project success, a monitoring program would be established to determine whether a particular pilot project is meeting the goals and success criteria defined in its MAMP. Monitoring and adaptive management would continue until the measures of project success are achieved or total project cost has been reached, estimated to take up to 15 years. If success cannot be determined within the total project cost, any additional required monitoring would be the responsibility of Miami-Dade County (MDC) as the non-federal sponsor (NFS). Outlined in Section 5.8, Operation, Maintenance, Repair, Replacement, and Rehabilitation (OMRR&R) is described to be conducted at no cost to the Federal government, in a manner compatible with the project's authorized

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
					purposes, and in accordance with Federal laws and regulations and any specific directions prescribed by the Federal government as specified in any future Project Partnership Agreement.
77	5/31/2024	Carlie Dario	Public Commenting Tool	We completed a study surveying 681 residents on what they value between hard structures vs. NBS - residents are generally in favor of the type of project (NBS) and the length or coverage of protection. In general, residents are supportive of coastal adaptation; however, there are those that are not in favor / want to retain the status quo (older, lower income, homeowners, lived longer in MDC > 5 years). These are the community members that need to be reached out when codesigning the NBS project to mitigate obstacles in the NBS process. (See Dario et. al, 2024; author link: https://authors.elsevier.com/a/1jAFt_,iw2IUXN)	Thank you for providing insight and documentation into the populations within Miami-Dade County (MDC) that would likely require focused outreach efforts during implementation of the NBS Pilot Program, Nonstructural Program, and future Coastal Storm Risk Management (CSRM) study efforts. Using information garnered from the research conducted by Dario et. al, as well as the efforts of other interested parties, stakeholders, municipalities, and the nonfederal sponsor, MDC, the USACE will make concerted efforts to equitably collaborate and communicate with all communities throughout future study and implementation processes.
78	5/31/2024	schubert fontes maria	Public Commenting Tool	There should be more neighborhood specific involvement. Community members expertise should be consulted throughout the planning and implementation process. Although the public comment tool captures some public input it is largely individuals with technical expertise engaging. A localized approach would allow the study to benefit from community expertise and create more community buy in.	As the project efforts advance in the future, following authorization in WRDA 2024, the USACE and Miami-Dade County will develop and implement a community engagement and outreach plan to share information with residents, community members, municipalities, and interested stakeholders regarding how the components of the Recommended Plan identified in the Final Report will be implemented and the processes associated with implementation. The details of the community engagement and outreach plan will be developed in the future, however, it is anticipated that part of outreach efforts may include informing residents of potential risks, and the requirements/processes associated with elevating homes.

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
79	5/31/2024	schubert fontes maria	Public Commenting Tool	there appears to be a gap in consulting hyper-local organizations that have intimate knowledge of the communities where planned projects are to be executed. These organizations can provide valuable insights and ensure that the projects are tailored to meet the specific needs and concerns of local residents. Moreover, larger coalitions and collaborative groups, such as the Miami Climate Alliance and the Resilient 305 collaborative, should be integral to broader engagement efforts. By involving these folks, the study will not only benefit from their expertise but also foster a sense of ownership and cooperation among community members, which is essential for the success of any long-term project.	Thank you for your comment. As the project efforts advance in the future, following authorization in WRDA 2024, the USACE and Miami-Dade County will develop and implement a community engagement and outreach plan to share information with residents, community members, municipalities, and interested stakeholders regarding how the components of the Recommended Plan identified in the Final Report will be implemented and the processes associated with implementation.
80	5/31/2024	schubert fontes maria	Public Commenting Tool	The aging infrastructure of Turkey Point, combined with its coastal location, makes it particularly susceptible to flooding and other storm-related impacts.	The study effort for the 2024 Integrated Feasibility Report/Environmental Assessment (IFR/EA) was to identify actionable measures that would address frequent extensive damages from storm surge inundation for Miami-Dade County's critical infrastructure and environmental justice communities, or communities that have historically and disproportionately been adversely impacted by coastal storms. As such, Turkey Point Nuclear Generating Station falls outside the focus areas that were identified for this IFR/EA.
81	5/31/2024	Mejia, Camilo	Public Commenting Tool	There are no specific details about plans for ensuring equity or robust community engagement as part of Miami-Dade County's Back Bay Study. Miami-Dade County, in partnership with the U.S. Army Corps of Engineers, should develop and implement a comprehensive community engagement plan for the implementation phase of the study's recommendations. This plan should prioritize equity and inclusivity to ensure that the voices and concerns of all impacted communities, especially historically marginalized and disadvantaged groups, are heard and incorporated into the study process. In order for the plan to be successful, the county should partner with local non-profit organizations, faith-based groups, and other community stakeholders to disseminate information and gather input from the more vulnerable populations.	As the project efforts advance in the future following authorization in WRDA 2024, the USACE and Miami-Dade County will develop and implement a community engagement and outreach plan to share information with residents, community members, municipalities, and interested stakeholders regarding how the components of the Recommended Plan identified in the Final Report will be implemented and the processes associated with implementation. The details of the community engagement and outreach plan will be developed in the future, however, it is anticipated that part of outreach efforts may include informing residents of potential risks, and the requirements/processes associated with elevating homes.
82	5/31/2024	schubert fontes maria	Public Commenting Tool	Septic systems, particularly in flood-prone regions, can pose environmental and public health risks during storm events. Converting these systems to centralized sewer systems can significantly reduce these risks and enhance overall resilience	The authority of this study (Public Law 84-71, June 15, 1955) authorizes an examination and survey of the coastal and tidal areas where severe damage has occurred from hurricane winds and tides; therefore, the recommendation to include septic to sewer conversions cannot be incorporated into the Recommended Plan. However, the conversion of septic to sewer lines is an important

Comment Number	Date Received	Name	Method of Submittal	Comment	Response
					water quality issue that Miami-Dade County has sought to address via the Connect 2 Protect Program. For more information on this program, please refer to the website: https://www.miamidade.gov/global/water/connect-to-protect-septic-to-sewer.page
83	6/24/2024	SFWMD	email		Comments received from the SFWMD as part of the federal consistency concurrence from the Florida Department of Environmental Protection. The federal consistency concurrence was received on 6/24/2024 and is included in the Environmental Appendix, A-3.

Builders Association of South Florida
BUILDING GREAT CITIES SINCE 1944

111 NW 183rd Street, Suite 111 - Miami Gardens, FL 33169

www.basfonline.org

Via Email and regular mail.

May 16, 2024

U.S. Army Corps of Engineers Norfolk District
c/o Justine Woodward
803 Front St.
Norfolk, Virginia 23510

Re: Builder's Association of South Florida's Comments on the Miami-Dade Back Bay Coastal Storm Risk Management Study (the "Back Bay Study")

Dear Ms. Woodward:

The Builders Association of South Florida ("BASF") represents South Florida's development and construction industries. Our 250 corporate members include developers, financial, legal, and design professionals, and trade associations. Including employees of these companies, BASF members total more than 500 of the top legal, engineering and design professionals in South Florida. The BASF would like to submit the following comments and concerns regarding the Back Bay Study on behalf of our members.

Sea level rise - and its attendant threats of flooding, storm damage, and saltwater intrusion - poses a significant danger to South Florida's built and natural environments. BASF's members have been at the forefront of developing policy, as well as practical solutions, to counter the various risks associated with sea level rise. BASF commends the U.S. Army Corps of Engineers ("Corps") for promoting a regional-level assessment and integrated, multi-faceted, response to the complex and dynamic challenges we must face.

In 2020, BASF submitted four (4) pages of detailed comments to the Corps on this issue. Our Members' follow-up questions and comments are provided below. They appreciate the opportunity to be part of this important community effort.

After participating in the Citizens Virtual meeting recently, their remaining comments are provided below.

1. Continue to ensure strong communication and outreach efforts to BASF builders and developers of shoreline properties. This will ensure they have the latest information about using the latest building materials and construction techniques to protect existing, renovated or new buildings being built along the Back Bay shorelines.

    a. This includes items like removable flood barrier walls, as one example.

2. Continue the Corps' outreach to coastal cities and their administrations, to ensure their staffs and elected officials are also up to date on these and related issues, about how to best protect their residents who live along the coastline.

Thank you for including BASF in this important process and we look forward to continued involvement and education on the latest construction techniques and building materials to safeguard life and property along Miami-Dade's back bay shoreline. If you have questions or need additional information, please contact me directly at trulyburton@basfonline.org or at my office, 305-556-6300 extension 206.

Sincerely,

Truly Burton

(Ms.) Truly Burton
Executive Vice President

Cc: Nelson Stabile, President
Jose M. Gonzalez, Immediate Past President
Joseph G. Goldstein, Esq., Legislative Chairman
Howard E. Nelson, Esq., Environmental Code Review Chairman
Spencer Crowley, BASF Representative, Biscayne Bay Management Advisory Board.

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 28, 2024

Ms. Truly Burton
Executive Vice President
Builders Association of South Florida
111 NW 183rd St, Suite 111
Miami Gardens, FL 33169-4520

Dear Ms. Burton:

Thank you for your comments submitted on behalf of the Builders Association of South Florida (BASF) regarding the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Draft Integrated Feasibility Report and Environmental Assessment prepared by the U.S. Army Corps of Engineers (USACE) Norfolk District in conjunction with Miami-Dade County, the nonfederal sponsor for the study. The purpose of this letter is to respond to your comments on the Draft Report received on May 15, 2024. A copy of your comments and the response included herein will also be included in the Final Report.

In your comments, you recommend continuing to ensure strong communication and outreach efforts to stakeholders including BASF builders, developers, and municipal staff and elected officials. This will ensure the most current information on project efforts and related issues is made available to all interested stakeholders.

As the project efforts advance in the future, following authorization in WRDA 2024, the USACE and Miami-Dade County will develop and implement a community engagement and outreach plan to continue sharing information with residents, community members, municipalities, and interested stakeholders regarding how the components of the Recommended Plan identified in the Final Report will be implemented and the processes associated with implementation.

Thank you for your feedback on this important study. If you have any additional questions, please feel free to contact Ms. Justine Woodward at (757) 201-7728 or justine.r.woodward@usace.army.mil.

Sincerely,

Sara E. Bahnson

Digitally signed by Sara E. Bahnson
Date: 2024.06.28 11:30:27 -04'00'

for Zachary P. Martin,
Chief Environmental Analysis Section
Planning and Policy Branch
Norfolk District, USACE

cc:
Angie Dunn
Chief Environmental Branch
Jacksonville District

MIAMIBEACH

City of Miami Beach, 1700 Convention Center Drive, Miami Beach, Florida 33139, www.miamibeachfl.gov

Eric T. Carpenter, P.E., Deputy City Manager
Tel: 305-673-7010

May 23, 2024

U.S. Army Corps of Engineers Norfolk District
c/o Justine Woodward
803 Front St.
Norfolk, Virginia 23510

Re: Draft Integrated Feasibility Report and Environmental Assessment for the Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study

Dear Ms. Woodward,

The City of Miami Beach welcomes proactive investment to reduce the risk of damage associated with sea level rise, storms, and storm surge. The City is in receipt of the Draft Chief's Report released on April 23, 2024 by the U.S. Army Corps of Engineers (USACE) for the Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study. The City has participated in the agency and public meetings and congratulates the USACE on this deliberate approach to help protect the 2.7 million residents that call Miami-Dade County home.

The City of Miami Beach, incorporated in 1915 (correction on page 5 of the draft report), is at the forefront of climate resilience planning and action for both public infrastructure and private property. The City is tackling challenges head-on with an integrated approach to improve the quality of life for the community today while incrementally adapting to a changing risk environment. The City has launched a variety of innovative plans, programs, and infrastructure projects that also include private property and nature-based infrastructure. However, as a low-lying barrier island with a porous limestone geology and a high-water table, the City is particularly vulnerable to compound flooding.

The City of Miami Beach is highly valuable to Miami-Dade County, the State of Florida, and the United Sates, most recently valued at $51.5 billion in taxable assessed property value. The City is a thriving economic hub and an international tourist destination. Home to a unique sense of place attracting global visitors, the City has 14 historic districts with hundreds of historic MiMo and Art Deco buildings. This is juxtaposed with newer resilient buildings reflecting the City's forward-thinking Resiliency Code to guide new development that integrates the design flood and sea level rise projections. The protection of older buildings and critical assets is vital as the City moves forward with incremental adaptation.

Overarching Considerations

Given the variety of plans and projects the City has underway, careful planning and coordination will be essential to effectively implement the Tentatively Selected Plan and New Program Authorization Requests. Key considerations include 1) Timing and coordination with existing planned projects, 2) Fulfilling comprehensive project needs such as additional funding and management needed for buildings to comply with Florida Building Code and Resilience Code, and 3) Funding, program management, community engagement and workforce development. For the New Program Authorization Requests, the City urges the USACE to

expand upon the positive economic and risk reduction impacts of Federal beach renourishment projects and include the seven-mile dune system for further nature-based studies and funding.

Miami Beach Ongoing Projects and Programs for USACE Consideration

The City has launched a variety of innovative plans and projects to address resilience and reduce flood risk, which would be valuable for the USACE to consider at it moves forward with the Chiefs Report, authorization, and implementation. The plans and projects address infrastructure, including utilities (stormwater, wastewater, and potable water), roadways, seawalls, and critical assets. The City also strives to integrate nature-based infrastructure whenever possible, seeking to implement both gray and green infrastructure.

The Stormwater Master Plan Update (2024) (summary presentation attached) contains a Gantt chart for proposed projects, including:

Neighborhood Improvement Projects

- The City has a list of 56 prioritized Neighborhood Improvement Projects (NIPs) that provide holistic updates to neighborhood infrastructure, including stormwater, potable water and wastewater, roadway, and right-of-way improvements for long-term tidal and rainfall flood mitigation. The City's projects may require design integration with the USACE building elevation and floodproofing. USACE may also draw from City learnings from these projects. The City's CIP projects will need to be considered by USACE as the North Beach Town Center/ North Shore D NIP is located within the Tentatively Selected Plan North Beach focus area. In addition, portions of the West Avenue and First Street NIPs are within the USACE South Beach focus area.

Critical Needs Projects

- The City's Stormwater Master Plan Update outlines 20 critical needs projects and water quality treatment projects. These 20 critical needs projects will be implemented in a phased approach through FY 2035 and are complementary and adaptable for future NIPs. These projects need to be considered by USACE as several are within the Tentatively Selected Plan focus areas.

Private Property Adaptation Program

The City's Private Property Adaptation (PPA) Program provides property owners with incentives to conduct flood mitigation projects on their properties. Program participants are currently exploring a range of projects that include full or partial home elevation, elevation of mechanical and electric equipment, and drainage and retention projects like rain gardens, pervious pavers, backflow prevention valves, and French drains. The program also coordinated the application for two single-family homes to be elevated through the Federal Emergency Management Agency (FEMA) Flood Mitigation Assistance (FMA) program. There are considerable learnings from the program that can be shared with USACE, particularly on educating and engaging with property owners and the considerations when elevating homes.

Tentatively Selected Plan (TSP)

Critical Infrastructure

For critical infrastructure (buildings) listed in the draft study, further coordination is necessary as many of these buildings have current or planned flood proofing improvements. The types of floodproofing and potential service disruptions will need to be further determined. Critical facilities owned by Miami Beach listed in the report include City Hall, Fire Station 1, Fire Station 2, Fire Station 4, Fire Station Headquarters, Miami Beach Convention Center, Miami Beach Police Department Headquarters, North Shore Community Center, and Scott Rakow

Youth Center. Of these facilities, the City has current plans for Fire Station 1 and Police Headquarters. Fire Station 1 is currently identified to be rebuilt in a different location, necessitating further conversations with USACE.

Elevation of Residential Buildings

In general, homeowners will require considerable education on the process of elevating a home and of the associated costs that may fall to them. USACE should consult with Miami Beach and may conduct information gathering activities, like focus groups, to tailor their education and outreach within the focus areas. A funding package may need to be identified to provide guidance and options to homeowners on how to cover the costs that are not covered by the TSP, such as the costs associated with Florida Building Code and zoning requirements. Improvement, alteration and mitigation of existing buildings must comply with the existing Florida Building Code. If total improvement and mitigation cost equals or exceeds 50% of the building (cash) value, the buildings must comply with new construction and zoning code requirements. However, historic structures may have certain types of exemptions. The City recommends that USACE coordinate with stakeholders to adapt programs and policies to provide low-income and the most vulnerable residents access to the elevation program. Relocation costs and special consideration for financial assistance should be given to homeowners that are lower income, as these focus areas have been chosen specifically to focus on environmental justice communities.

Floodproofing of Non-Residential Buildings

The report is not clear on the occupancy types of buildings that are eligible for floodproofing (See Table on the top of page 166). A dedicated outreach strategy will be required as often owners for non-residential buildings live out-of-state and may be more difficult to reach. It is recommended that maximum dry floodproofing height to be 3 ft for the existing structures. It is also highly recommended that floodproofing mitigation measurements be passive, such as self-deploying flood barriers, as opposed to active measures like bolt down flood panels that require significant lead time for manual deployment. It would be helpful to obtain the list of the residential and non-residential buildings that would be considered for elevation or floodproofing.

New Program Authorization Requests

The City urges the USACE to expand upon the positive and successful economic and risk reduction impacts of Federal beach renourishment projects and include the seven-mile dune system for further nature-based studies and funding.

Nature-Based Solutions (NBS) Pilot Program

The City has valuable information including studies and projects for nature-based solutions. The seven-mile dune system is perhaps the City's largest defense from flooding particularly associated with storm surge. While the City has recently begun projects to remove invasive species and manage existing vegetation, areas of the dunes are low and in need of fortification. Erosional areas that persist are opportunities for pilot projects.

In addition, the City integrates hybrid living shorelines/ seawalls when feasible and these plans and learnings can help support the USACE efforts. The City is implementing several living shorelines projects, including Muss Park (completed), Brittany Bay Park (completed), Collins Canal Park adjacent to the Miami Beach Convention Center (completed), and Maurice Gibb Park (underway). Additionally, the City completed a Nature Based Shoreline Assessment in 2021 identifying suitable locations for living shorelines. Three of the segments identified in that Assessment are currently in design and permitting. The City is eager to build upon these projects and study to expand nature-based solutions.

Funding, Program Management and Community Engagement

The projects identified in the Draft Report are anticipated to require extensive funding and program management. Currently, any cost share and adequate workforce to oversee and/or support these efforts are not within the City's annual budgetary allocations. City of Miami Beach residents and businesses will also require multiple touchpoints and methods of communication from program concept to implementation. The City strongly urges the USACE to consider the appropriate funding be assigned for the program management workforce. In addition, the construction, flood mitigation and building elevation industry will need to be regionally developed to deliver the scale, quantity and complexity of projects foreseen by this report.

The City is committed to working with the USACE to address coastal risk management concerns in Miami Beach. We look forward to continuing our partnership and participation in this developing Federal program.

Sincerely,

Eric Carpenter

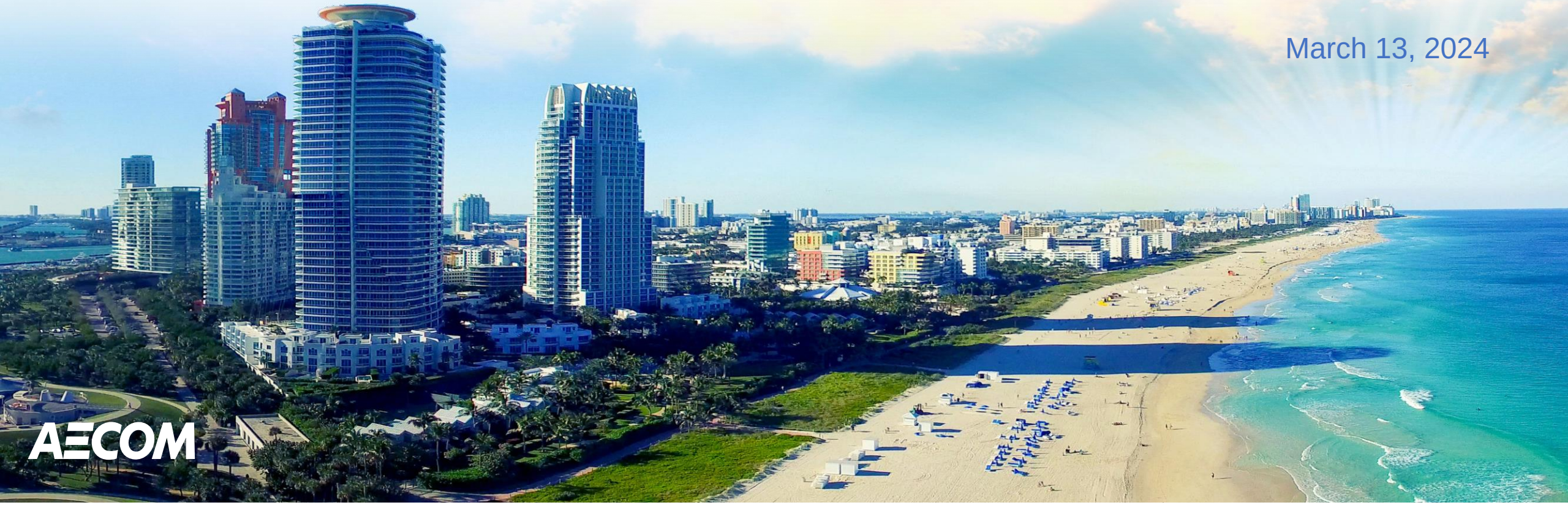
Eric T. Carpenter, P.E.
Deputy City Manager

City of Miami Beach – Public Works Department

Stormwater Modeling and Master Plan Update

Presentation to City Commission

March 13, 2024



AECOM

MIAMIBEACH

Agenda

1. Project Objectives
2. Stormwater Master Plan Approach
3. Neighborhood Improvement Projects
4. Proposed Stormwater Infrastructure Summary
5. Water Quality Treatment Approach
6. Critical Needs Projects
7. Implementation Plan

Project Objectives

Update the City's stormwater program:

- Update the Citywide Stormwater Model
- Incorporate Recent Studies and Update Water Quality Approach
- Identify Critical Needs focused on the Next 10 Years
- Update Construction Cost Estimates
- Prioritize Phasing and Create Implementation Plan

Stormwater Master Plan Tasks

Project Initiation

- ✓ **Notice to Proceed (NTP):** October 2022

Data Collection

- ✓ Stormwater geodatabase
- ✓ Miami Beach LiDAR survey
- ✓ Resident Complaints and PW Work Orders (Cityworks)
- ✓ Recent studies

Analysis

- ✓ Prioritization criteria for Critical Needs Projects
- ✓ Geospatial analysis of flooding complaints
- ✓ Public and stakeholder engagement strategy
- ✓ "Drainage toolbox" for Critical Needs Projects

Stormwater Modeling

- ✓ Updated the City's Master Drainage Model
- ✓ Stormwater infrastructure planning for the City's Neighborhood Improvement Projects

Stormwater Master Plan Tasks

We are here

Stormwater Modeling Technical Memorandum

- ✓ Detailed description of the methods used to develop the City's Master Drainage Model

Prioritized Capital Improvement Plan (CIP) Report

- ✓ Updated Construction Cost Estimates for the City's Neighborhood Improvement Projects
- ✓ Identified Critical Needs Projects to be implemented for the next 10 years (supplemental to Neighborhood Improvement Projects)

Public Outreach & Presentation to FERC

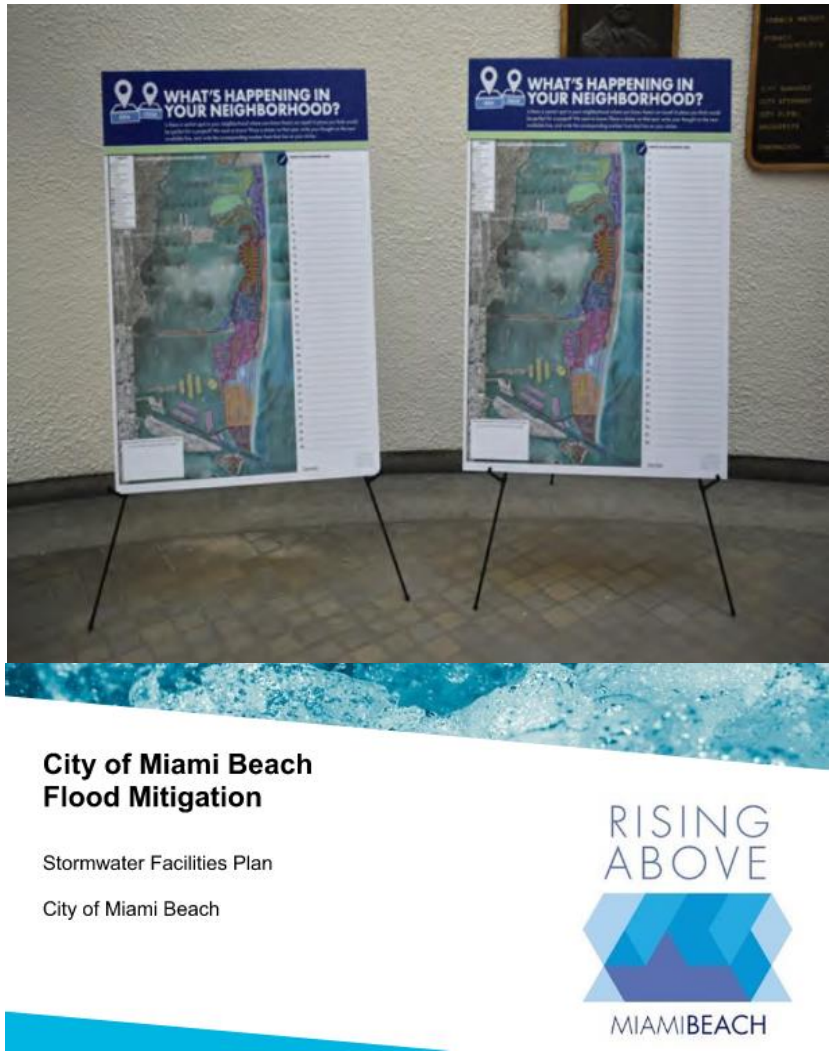
- ✓ Informed residents about Study results and obtained feedback (September 2023)
- ✓ Oct 2023 to FERC
- ✓ Incorporated feedback into Final Master Plan

Presentation to Commission

- ✓ March 2024 to Commission for Approval and Adoption for Implementation

Incorporated Recent and Ongoing Studies

- Road Elevation Strategy
- Neighborhood Project Prioritization
- Blue-Green Stormwater Infrastructure Concept Plan
- Stormwater Facilities Plan
- Seawall Prioritization Plan
- Basin Drainage Reports for Flood Mitigation Study
- Stormwater 20-Year Needs Analysis (HB 53)
- Sea Level Rise Vulnerability Assessment and Adaptation Plan (ongoing)

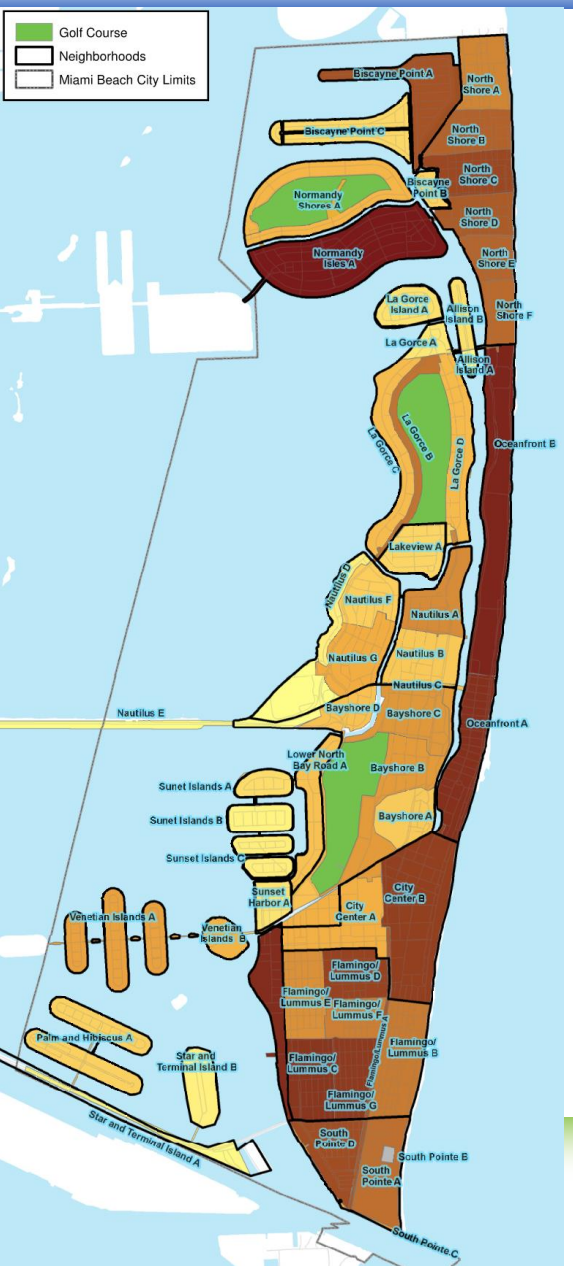


Stormwater Master Plan Approach

A combination of…

- ✓ Neighborhood Improvement Projects
- ✓ Water Quality Projects
- ✓ Critical Needs Projects

Neighborhood Improvement Projects (NIPs)



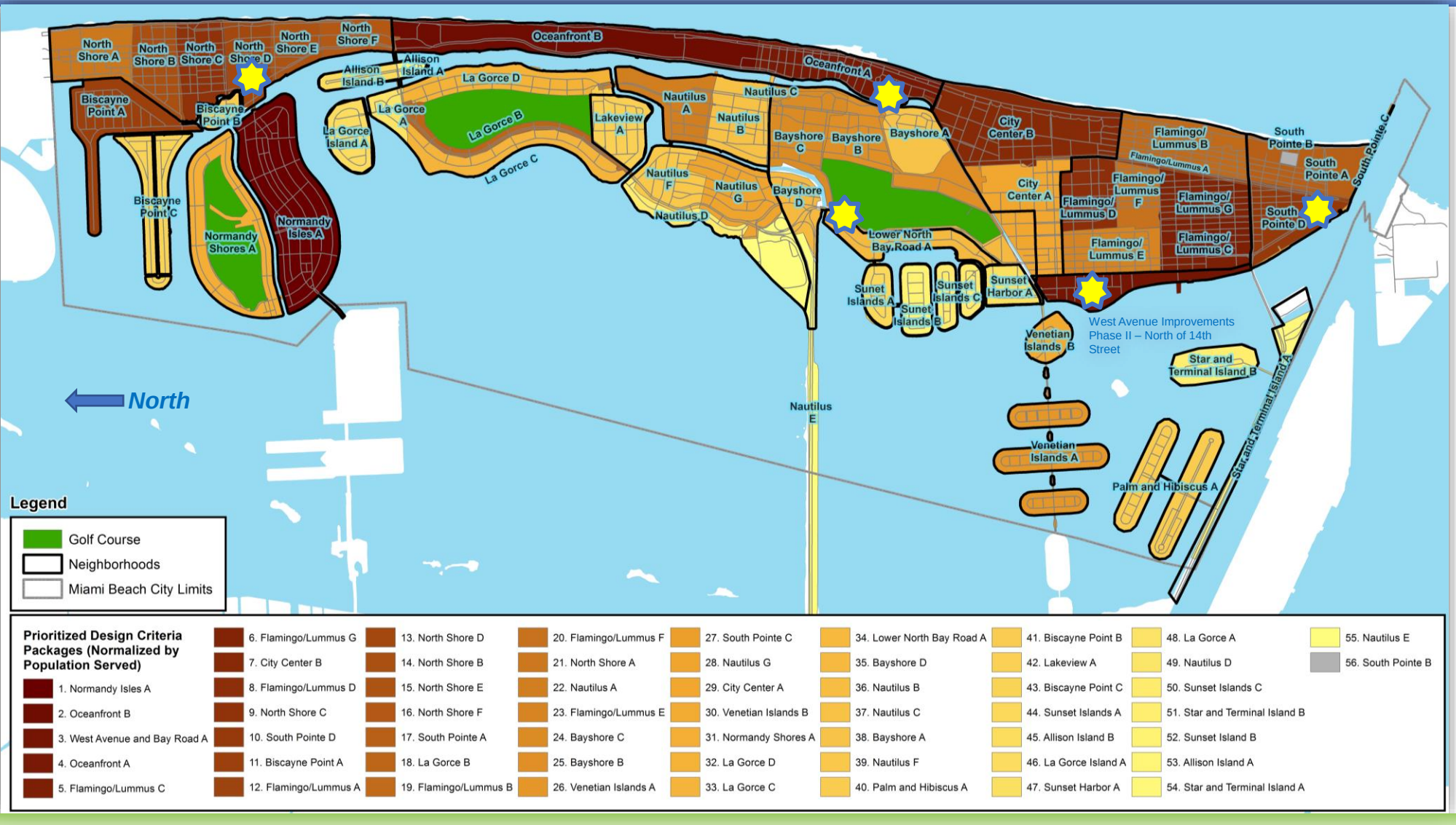
Holistic projects that involve multiple City services to enhance the quality of life in a neighborhood:

- Stormwater improvements (large pipes and pump station)
- Potable water and wastewater collection improvements
  Roadway improvements
- Aboveground components (sidewalks, street lighting, landscaping, etc.)

✓ NIPs provide comprehensive long-term tidal and rainfall flood mitigation.

✓ Prioritized NIPs List Adopted by Commission in 2020 and incorporated into this Master Plan.

Neighborhood Improvement Projects



Ongoing Projects:

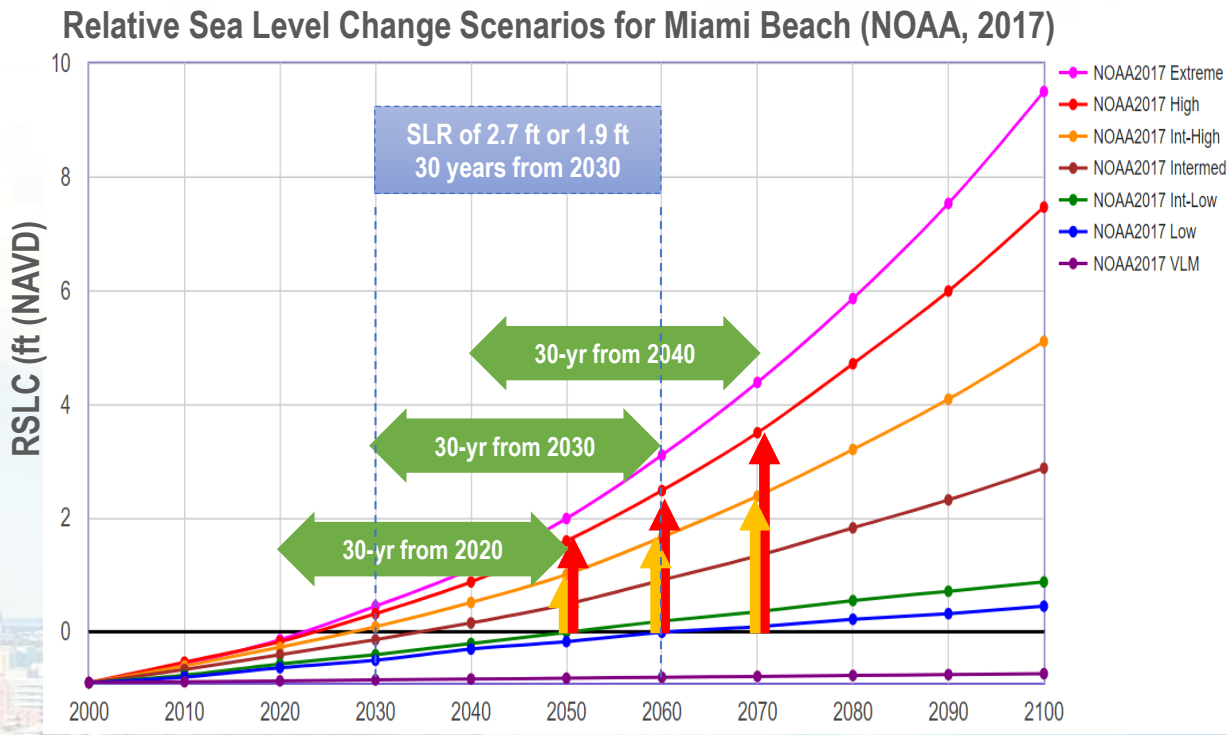
1. Indian Creek Improvements
2. West Avenue Improvements Phase II – North of 14th St
3. FDOT Alton Road (Michigan Avenue to 43rd Street)
4. First Street and South Pointe Stormwater Improvements
5. North Shore D & Town Center Improvements

Level of Service

DESIGN STORM
10-year, 24-hour Storm

ROADWAY DESIGN LIFE/RESILIENCE
30 years

SEA LEVEL RISE PROJECTION
NOAA Intermediate High

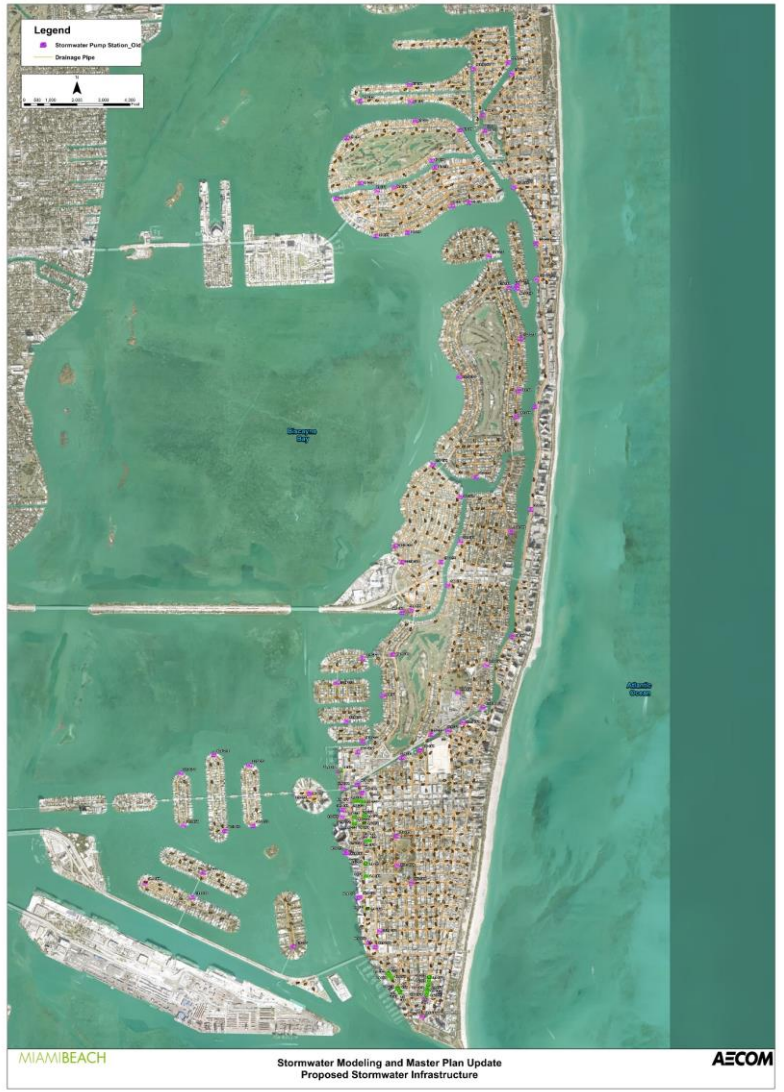


	Proposed Edge of Pavement Elevation		
Road Type / Construction Start	2025	2030	2035
Arterial and Local Roads*	4.2’	4.5’	4.9’
Emergency (FDOT) Roads	5.2’	5.7’	6.2’

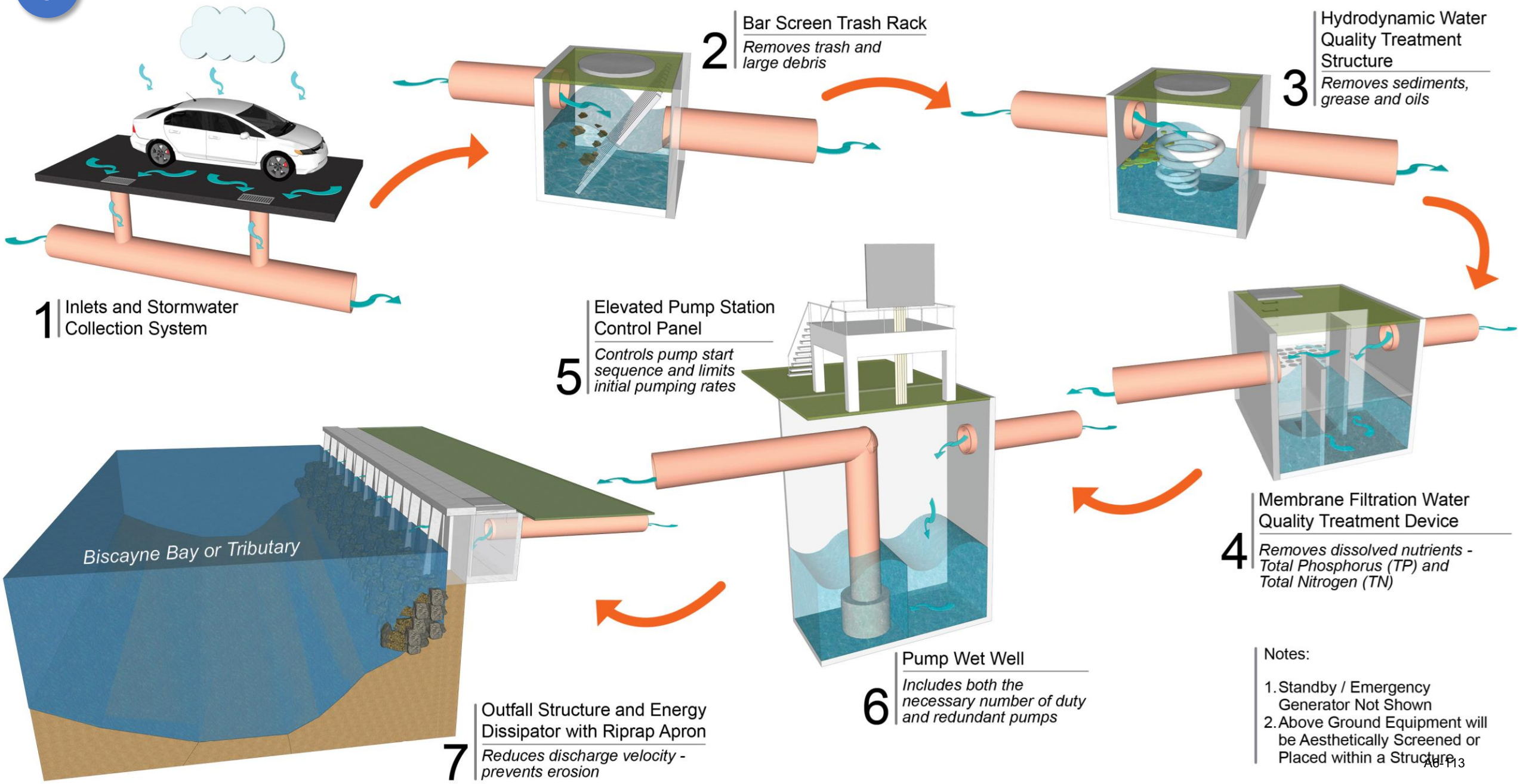
** 1 ft road thickness above bottom of road base.*

Proposed Stormwater Infrastructure Summary

- 48 existing, with 33 stormwater pump stations proposed to remain
- Proposed 83 stormwater pump stations
  - Including Best Management Practices (BMP) water quality treatment
- Approx. 104 miles of proposed large stormwater pipes
- 2024 budgetary estimate for the proposed NIPs: **$3.7 Billion** *(City ROW)*



5 Water Quality Treatment Approach (*doubles nutrient removal*)



Notes:

1. Standby / Emergency Generator Not Shown
2. Above Ground Equipment will be Aesthetically Screened or Placed within a Structure

Ongoing Water Quality Projects

Ongoing

1. PS #24 Water Quality Improvements
2. Portable **Treatment** Devices *(for rainy season temp. pumps)*
3. Park View Outfall Water Quality Improvements
4. PS #32 Water Quality Improvements
5. PS #10 Odor and Water Quality Improvements

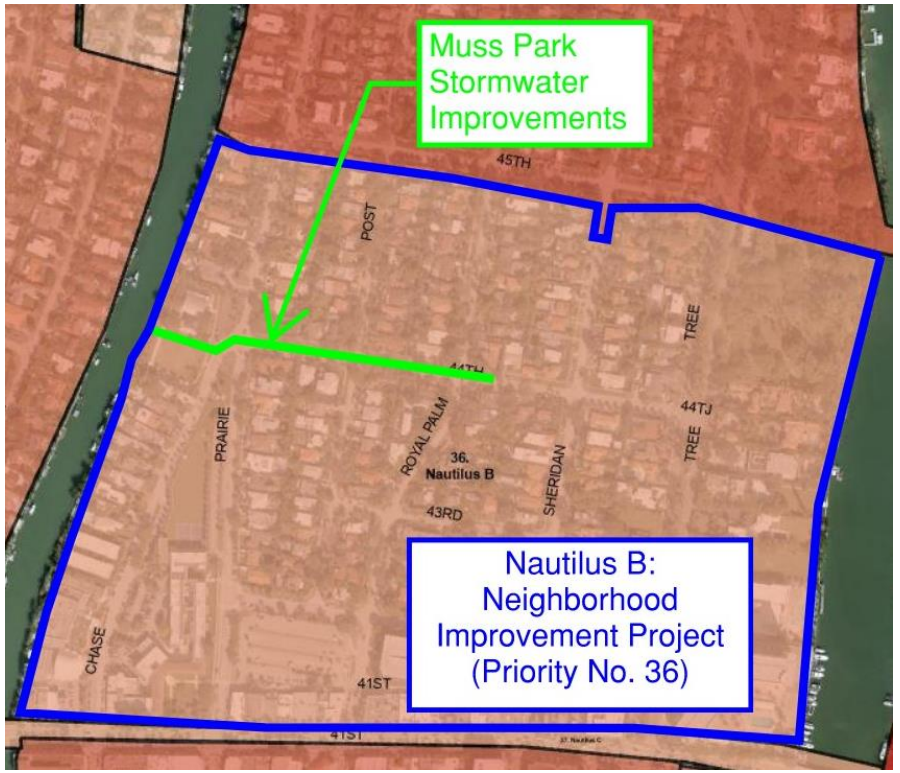
What is a Critical Needs Stormwater Project?

- Smaller project aimed at addressing nuisance flooding to provide both **beneficial** and **cost-effective** solutions within targeted areas.

- **Complimentary** and **adaptable** to the future NIPs (not throw-away…)

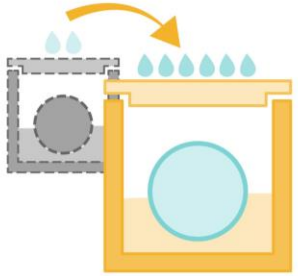
- Includes a variety of solutions available in the “Drainage Toolbox”.

For Example:

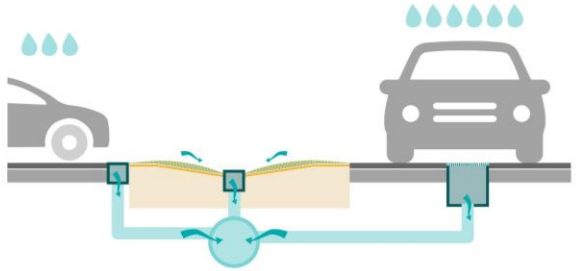


Drainage Toolbox for Critical Needs Projects

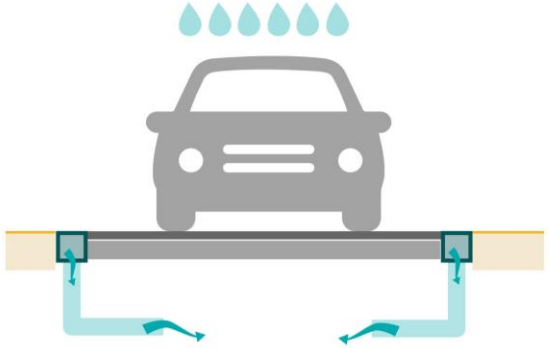
Regrading, Repaving, and Minor Road Raising



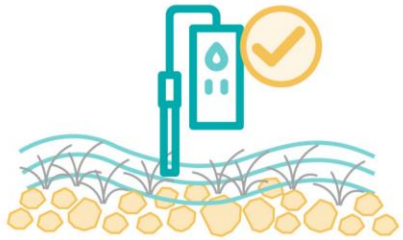
Upsizing Infrastructure



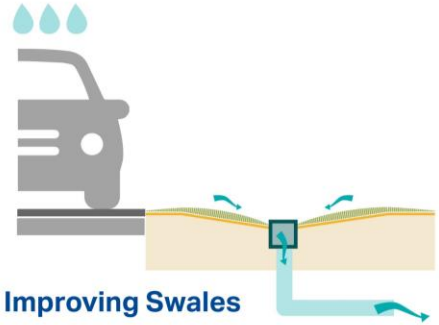
Connecting Drainage Areas



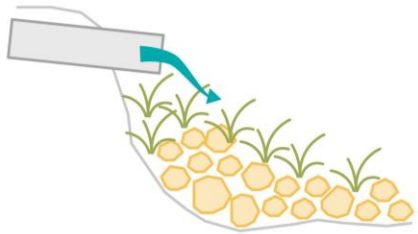
Adding Catch Basins



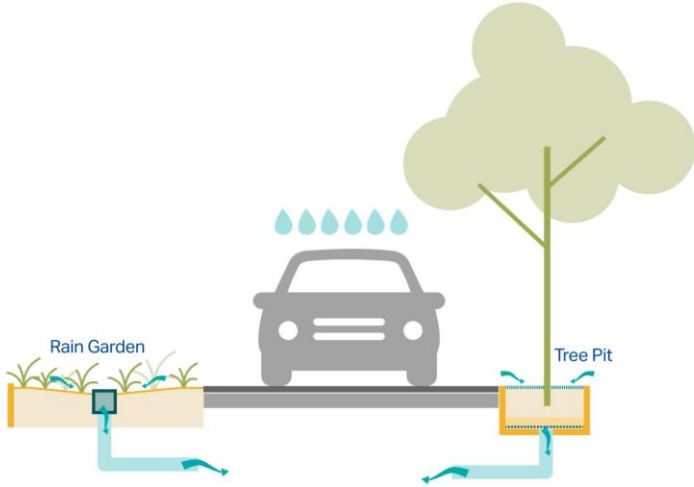
Water Quality Improvements



Improving Swales



Enhance Existing Outfalls



Implementing Blue-Green Infrastructure

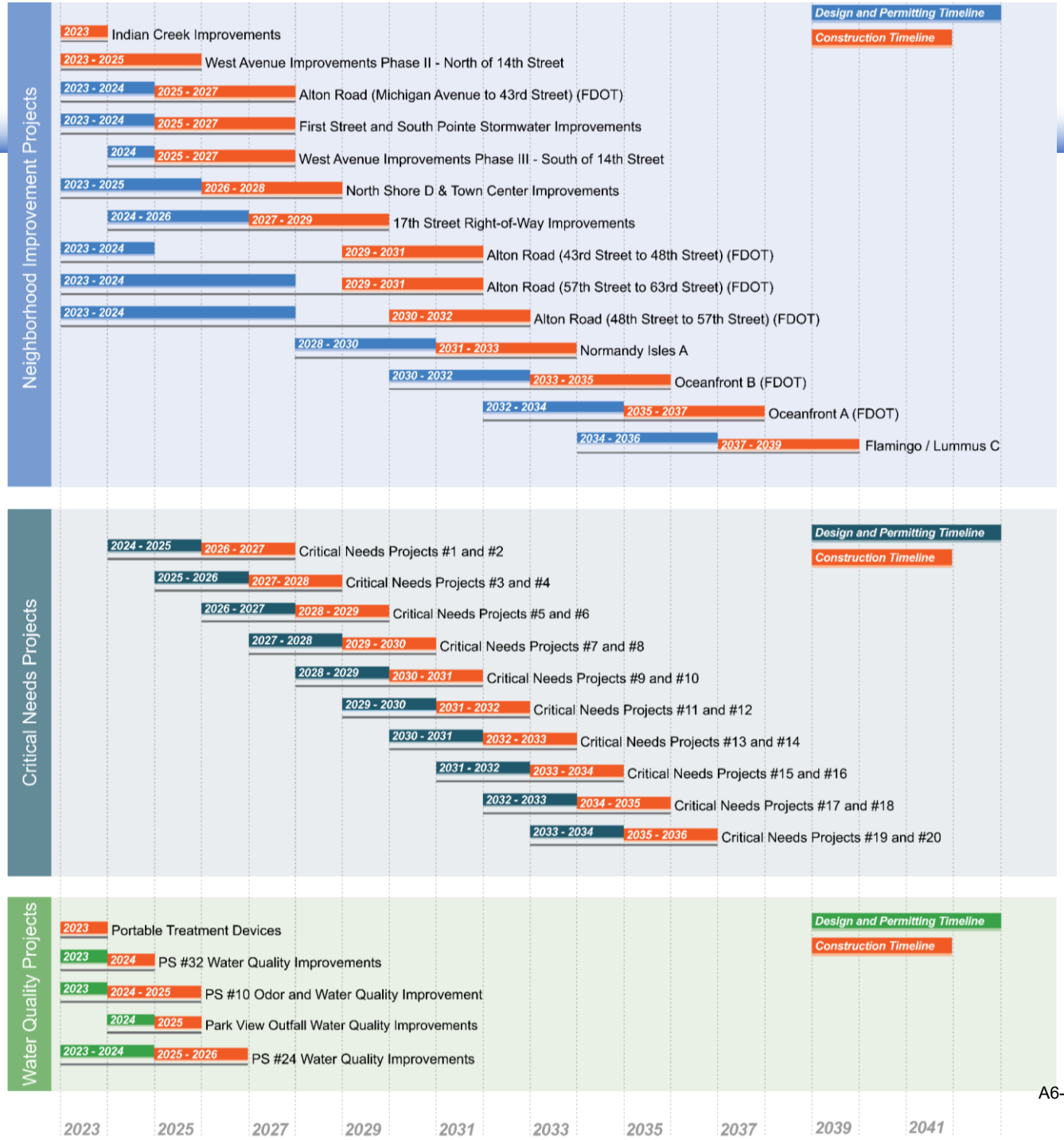
Prioritization of Critical Needs Projects

Criteria	Criteria Weighting
• Temporary Pumps Historically Deployed	7
• Low Topography / Tidal Inundation	7
• Flooding Complaints	7
• Constructability/ Ease of Implementation	7
• Neighborhood Improvement Project Ranking	6
• No Improvements in the Last 10 Years	6
• Insufficient Drainage	4
• Exfiltration Trenches	4
• Drainage Wells	4
• Historic District	3
• Community and Emergency Facilities	3
• No Permitting Complexity	3
• No Connection to Outfalls	1
• 10-Year Design Storm Flooding	1

Recommended Critical Needs Projects

Critical Needs Rank	NIP Rank	Critical Needs Project Name	FY 2023 Budgetary Estimate	Anticipated Construction Commencement	Escalated Budgetary Estimate	Critical Needs Score
1	39	Nautilus F (North)	$ 4,000,000	FY 2026	$ 4,900,000	Ongoing
2	36	Nautilus B - Muss Park	$ 4,300,000	FY 2026	$ 5,300,000	Ongoing
3	33	La Gorce C - N Bay Rd 1	$ 4,300,000	FY 2027	$ 5,400,000	247
4	48	La Gorce A	$ 3,000,000	FY 2027	$ 3,800,000	243
5	33	La Gorce C - N Bay Rd 2	$ 4,000,000	FY 2028	$ 5,200,000	239
6	29	City Center A - Palm View	$ 4,800,000	FY 2028	$ 6,200,000	236
7	23	Flamingo/Lummus E - Lenox Ave	$ 1,300,000	FY 2029	$ 1,800,000	216
8	39	Nautilus F - Nautilus Dr	$ 800,000	FY 2029	$ 1,000,000	216
9	9	N Shore B & C - Dickens Ave	$ 2,600,000	FY 2030	$ 3,700,000	202
10	6	mingo/Lummus A - Jefferson Aven	$ 1,900,000	FY 2030	$ 2,600,000	200
11	21	North Shore A - Byron Ave	$ 5,900,000	FY 2031	$ 8,600,000	194
12	49	Nautilus D - N Bay Rd	$ 3,500,000	FY 2031	$ 5,100,000	192
13	5	Flamingo/Lummus C - Lenox Ave	$ 3,100,000	FY 2032	$ 4,600,000	187
14	22	Nautilus A - Royal Palm Ave	$ 2,400,000	FY 2032	$ 3,600,000	187
15	42	Lakeview A (North)	$ 3,200,000	FY 2033	$ 5,000,000	185
16	28	Nautilus G - N Bay Rd	$ 3,400,000	FY 2033	$ 5,300,000	175
17	25	Bayshore B (North)	$ 4,200,000	FY 2034	$ 6,700,000	170
18	31	Normandy Shores A - Shore Lane	$ 1,200,000	FY 2034	$ 1,900,000	170
19	34	Lower North Bay Rd A	$ 1,800,000	FY 2035	$ 3,000,000	167
20	36	La Gorce Island A	$ 6,800,000	FY 2035	$ 11,300,000	164
		TOTAL	**$ 66,500,000**		**$ 95,000,000**	

Master Plan Proposed 10-Year Implementation Schedule



**The Master Plan recommends to continue implementing Neighborhood Improvement Projects at the same time as Critical Needs and WQ Projects.*

Questions?

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 28, 2024

Eric T. Carpenter, P.E.
Deputy City Manager
City of Miami Beach
1700 Convention Center Drive
Miami Beach, Florida 33139-1819

Dear Mr. Carpenter:

Thank you for your comments submitted on behalf of the City of Miami Beach regarding the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Draft Integrated Feasibility Report and Environmental Assessment prepared by the U.S. Army Corps of Engineers (USACE) Norfolk District in conjunction with Miami-Dade County, the nonfederal sponsor (NFS) for the study. The purpose of this letter is to respond to your comments on the Draft Report received on May 23, 2024. A copy of your comments and the response included herein will also be included in the Final Report.

To accomplish and provide significant near-term CSRM for Miami-Dade County, the feasibility report focuses on risk management measures that can be carried forward in time for the 2024 Water Resources Development Act (WRDA). The USACE and Miami-Dade County intend to partner on additional studies and further analyses to continue to address the extent of existing CSRM and associated flooding problems in the county.

We acknowledge the key considerations documented in your letter which include (1) timing and coordination with existing planned projects, (2) fulfilling comprehensive project needs, and (3) funding, program management, community engagement, and workforce development. Additionally, we acknowledge your request for further evaluation of the seven-mile dune system in the City of Miami Beach. Since site-specific locations are not identified in the 2024 Report for the Nature-Based Solutions (NBS) Pilot Program, the study team will continue coordination efforts on this important initiative following programmatic authorization in WRDA 2024. The identification, evaluation, and National Environmental Policy Act compliance of site-specific pilot projects designed to mitigate for storm surge impacts will be an essential component of the next phase of the NBS Pilot Program.

Thank you for providing the summary presentation for the City of Miami Beach's Stormwater Master Plan Update (2024). As the City of Miami Beach's project efforts move forward, USACE and Miami-Dade County will continue to coordinate with municipalities on local projects to ensure efforts are integrated. Your letter specifically mentions 56 neighborhood improvement projects and 20 critical needs projects included in the City's Stormwater Master Plan update. Some of these projects are located within the focus areas identified; therefore, close coordination between USACE, Miami-Dade County, and the City of Miami Beach will be necessary in the future. Lastly, we acknowledge your comments

regarding critical infrastructure, specifically the City's plans for Fire Station 1 and Police Headquarters, and we concur regarding the need for additional conversations.

As the project efforts advance in the future, following authorization in WRDA 2024, the USACE and Miami-Dade County will develop and implement a community engagement and outreach plan to share information with residents, community members, municipalities, and interested stakeholders regarding how the components of the Recommended Plan identified in the Final Report will be implemented (i.e., home elevations) and the processes associated with implementation.

We appreciate your acknowledgement of the need for the Nature-Based Solutions (NBS) Pilot Program and potential opportunities for pilot project sites to be considered. The study team will continue to leverage expertise from municipalities, local stakeholders, university faculty and staff, and other leading experts involved with advancing NBS to manage coastal storm risk.

Lastly, we note your comments regarding funding and program management. In accordance with the cost share provisions in Section 103 of the Water Resources Development Act (WRDA) of 1986, as amended (33 United States Code [U.S.C.] 2213), project design and implementation are cost-shared 65 percent federal and 35 percent nonfederal.

Miami-Dade County is a vibrant community comprised of valuable social, cultural, and environmental assets. The 2024 study effort is an interim response that seeks to advance CSRM measures towards increasing Miami-Dade County's resilience to coastal storms in the future. Thank you for your feedback on this important study. If you have any additional questions, please feel free to contact Ms. Justine Woodward at (757) 201-7728 or justine.r.woodward@usace.army.mil.

Sincerely,

Sara E. Bahnson

Digitally signed by Sara E. Bahnson
Date: 2024.06.28 11:35:48 -04'00'

for Zachary P. Martin,
Chief Environmental Analysis Section
Planning and Policy Branch
Norfolk District, USACE

cc:
Angie Dunn
Chief Environmental Branch
Jacksonville District

DANIELLA LEVINE CAVA
MAYOR
MIAMI-DADE COUNTY

May 23, 2024

Colonel Brian P. Hallberg
District Commander, Norfolk District
U.S. Army Corps of Engineers

Dear Colonel Hallberg:

Thank you for the opportunity to review the groundbreaking Miami-Dade Back Bay Coastal Storm Risk Management Draft Integrated Feasibility Report and Programmatic Environmental Assessment (Draft Report) that helps address Miami-Dade County's (County) extreme exposure to catastrophic storm surge damage caused by hurricanes and tropical storms.

As the official non-federal sponsor, Miami-Dade County supports both the traditional and more innovative elements of this Draft Report. Attached to this letter are the County's top recommendations to ensure the final report fully addresses any major issues and reflects the key priorities of our exceptionally vulnerable, diverse and dynamic community. Building on lessons learned during the original suspended 3-year study, we deeply appreciate the collaborative approach the U.S. Army Corps of Engineers (USACE) has taken to listen to and respond to local stakeholders by charting a joint path forward that is more proactive, comprehensive, and integrated with comparable efforts throughout the County.

On December 5, 2023, Assistant Secretary of the Army for Civil Works (ASA-CW), Michael Conner, issued study guidance for preparing the Draft Report. The County supports urgent action to advance a signed Chief's Report for congressional authorization in the 2024 Water Resources Development Act while laying a foundation for continued feasibility study efforts. Recognizing our increasing seasonal risk to hurricanes exacerbated by sea level rise, we strongly support the USACE's continued efforts to proactively develop and advance actionable projects described in the Tentatively Selected Plan (Section 9) that aim to maximize net public benefits and go beyond economic benefits alone.

To build greater regional resilience, it is essential that the final report be as inclusive as possible of our most critical infrastructure, especially in cases where damage to regional facilities or disruption of service could lead to severe, cascading economic, social, and environmental consequences. Specific assets at our Central District Wastewater Treatment Plant at Virginia Key are at risk in this category and merit further consideration for the final report. In addition, the design of future projects and programs to elevate residential buildings and floodproof non-residential buildings must further prioritize environmental justice, community cohesion, and integration across various scales and initiatives.

We also strongly support the further development and joint implementation of the Comprehensive Study Framework (Section 2) and its three pillars that 1) define our vision for multiple lines of defense that emphasize Nature-Based Solutions (NBS), 2) outline a flexible, long-term, and adaptive management decision-making process, and 3) commit to expanded integration across USACE studies as well as local, regional and state resilience initiatives. We believe it is imperative for the USACE to fully adopt this new framework and continue making decisions with the County and other local and regional leaders as we work collaboratively to further define its structure and implementation processes. The County is committed to continue its close coordination with our municipalities and other key stakeholders to ensure local efforts complement related USACE projects.

The County is also highly supportive of advancing requests for two new program authorizations for NBS pilot projects and Nonstructural measures (Sections 5 and 6). As highlighted by the April 22, 2024, ASA-CW memorandum, the County understands that "U*SACE's role is to identify, evaluate, and incorporate NBS in potential solutions for CW projects that meet the federal objectives to the maximum extent practicable.*" We also strongly support the need to "*consider water resources problems holistically and consider comprehensive solutions that may include alternatives beyond USACE's missions*" and "*consider use of Indigenous Knowledge*" in the design and implementation of NBS in Miami-Dade County.

From designing and testing hybrid reefs and reinforcing dune systems to restoring the function and health of our seagrasses, mangroves and other wetlands, we know that we can both reduce risks to and provide quantifiable, intrinsic co-benefits for our residents, economy and environment. We have a world-class network with decades of experience and a growing capacity among our local government experts, university and college institutions, community-based and environmental organizations, the private sector, and many others that stand ready to make Miami-Dade County the home of innovative, effective, and transformative NBS.

The proposed Nonstructural Program is yet another opportunity to go beyond traditional USACE strategies and collaboratively identify and equitably address flood risks to complex critical infrastructure and other buildings or facilities important to our community. The County strongly supports ensuring the eventual design and implementation of the program is flexible and responds directly to Miami-Dade County's priorities. We welcome expanded investments in our series of interconnected local challenges knowing that these financial resources will further advance the knowledge and effectiveness of the entire USACE enterprise, thereby providing comprehensive indirect yet vital benefits for communities across the United States.

Please find attached a complete list of comments, concerns, and technical questions provided by our County scientists, engineers, and subject-matter experts. The County looks forward to working closely with the USACE on addressing these valuable comments to produce the best final report possible.

Sincerely,

Daniella Levine Cava

Daniella Levine Cava
Mayor, Miami-Dade County

General Comments

- The County encourages the Draft Report to more clearly emphasize the USACE's commitment to the future phases that fulfill the study authority and study guidance, and to pursuing future studies by leveraging the adopted Comprehensive Study Framework.
- This interim report is the initial step to address coastal storm risk in the County. However, a large portion of the County remains at risk. Actively pursuing future phases and future studies is necessary to address storm surge risk for the county as a whole. Additionally, there are many more vulnerable critical infrastructure facilities in environmental justice communities and beyond that require further analysis for potential floodproofing or other risk reduction measures.
- The NBS Pilot Program starts from a position of strength given there is much known about NBS in South Florida, particularly in Miami-Dade County. In general, the knowledge base on NBS is large; this pilot project has more focused goals and study questions. The pilot projects will be specifically geared towards increasing the knowledge on the storm surge risk reduction properties and their overall performance.
- It is recommended to incorporate new information, like the South Atlantic Coastal Study (SACS) study, into future phases of this feasibility study and future studies. Doing so allows the recommendations to be based on the most current science and knowledge in alignment with Pillar #2 of the Comprehensive Study Framework and allows the County and USACE to better identify risk and the vulnerability of the community. This also supports ensuring maximum inclusion of locally identified critical infrastructure assets.
- This study only addresses one form of flooding – storm surge. As a County with flood risk from a variety of sources and that are exacerbated by climate change impacts such as sea level rise, it is incumbent to integrate the various studies to provide combined flood risk reduction for residents. It is recommended to incorporate a more robust discussion about how this study will integrate with other studies across the County that analyze rainfall events.
- The study focus areas were chosen to provide risk reduction to the most vulnerable in the County. Because of that, and other uncertainties, the benefit-cost ratios reflect the lower property values and the high contingencies that are included in the costs. We applaud USACE for the emphasis on the social benefits that are derived from this study and the dedication to fulfilling the shared goal of equity for Miami-Dade County.

Main Report

- (pg. 104) USACE must accelerate the timeline of the NBS pilot program by building on existing research and through timely coordination with Miami-Dade County and other local stakeholders with expertise in NBS. There are ample studies showing the efficacy of NBS in reducing coastal storm surge. While we understand design and engineering will require time for the NBS pilot program post-authorization, reducing risk quickly and providing more comprehensive benefits could include considering the incorporation of nature-based solutions into all project designs where possible. Where gray infrastructure contributes to coastal storm

risk benefits such as a seawall, the USACE should prioritize evaluation of hybrid nature-based alternatives, such as planting mangroves in support of a more comprehensive living shoreline.

- (pg. 104) The $180 million for the NBS pilot program should consider as eligible costs the acquisition of land in cases where there is a demonstrated high potential for successful design and implementation of NBS. This could also provide additional flexibility for better integration with local, regional, state or federal efforts while ensuring that the individual pilot project is independently justified and in alignment with the program purpose.

Appendices

- (A7-3) In addition to elevation of residential buildings, the USACE should consider evaluating as a potential non-structural measure the elevation of critical equipment such as HVAC systems to the Design Water Surface Elevation to reduce the total damages for single family and multi-family residential buildings. In instances where elevating the entire first floor or building is not feasible because the foundations of the building are not structurally sound or other limiting factor, evaluating and recommending other cost-effective non-structural flood risk reduction strategies would provide additional coastal storm risk management, social equity and other benefits to residents in the most vulnerable areas.
- (A7-8) In addition to renters who are displaced during future project construction receiving required relocation assistance, the USACE should explore changing policies or allow for and support the non-federal sponsor in designing a non-structural program that provides similar relocation assistance with possible amendments or additions as determined through extensive public engagement that serves displaced property owners that occupy the structure being recommended for elevation or floodproofing. We recommend that this additional assistance be designed to prioritize low- to moderate- income property owners and other demographic population groups considered socially vulnerable or otherwise part of an environmental justice community.
- (A7) To be more transparent about the potential timelines of the design and implementation of measures, the Final Report should include a general description of how the process would work from the perspective of a willing and eligible homeowner or renter as the 10-year implementation window is too vague and not representative of the actual experience of a participant. The description of the scenario would assume that the residential building is included as part of the earliest possible phase of the project and advanced along typical path for authorizations, appropriations, agreements, etc. The description should outline the following at a minimum:
    - a general timetable rounded to the nearest year with necessary clarifications
    - how the process is affected should their property value change over the time period prior to final construction and project completion

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 28, 2024

Mayor Daniella Levine Cava
Stephen P. Clark Center
111 N. W. First St., 29th Floor
Miami, Florida 33128-1930

Dear Mayor Cava:

Thank you for your comments submitted regarding the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Draft Integrated Feasibility Report and Environmental Assessment prepared by the U.S. Army Corps of Engineers (USACE) Norfolk District in conjunction with Miami-Dade County staff. The purpose of this letter is to respond to your comments on the Draft Report received on May 23, 2024. A copy of your comments and the response included herein will also be included in the Final Report.

In your comments, you note that it is essential that the final report be as inclusive as possible of Miami-Dade County's most critical infrastructure, and specific assets at the Central District Wastewater Treatment Plant (WWTP) located on Virginia Key are at risk in this category and merit further consideration for the final report. The Central District Wastewater Treatment Plant was evaluated as part of the modeling and economic evaluation in support of the 2024 study effort. The results of the analysis document minimal damages to this facility under Future Without Project Conditions; therefore, it was not included as one of the 27 critical infrastructure facilities in the Recommended Plan. However, the study team intends to re-evaluate the Central District WWTP which will likely involve using water levels from the South Atlantic Coastal study and looking at the entire WWTP system as a whole part of the ongoing study efforts post Water Resources Development Act (WRDA) 2024. The additional economic modeling and analysis that would be necessary to re-evaluate this critical facility cannot be accomplished in time to meet the stringent timeline associated with inclusion in WRDA 2024.

The study team concurs with your assessment that the design of future projects and programs to elevate residential buildings and floodproof non-residential buildings must further prioritize environmental justice, community cohesion, and integration across various scales and initiatives. Thank you for your support in the further development and implementation of the Comprehensive Study Framework, and the two proposed programs, the Nature-Based Solutions (NBS) Pilot Program and the Nonstructural Program. USACE looks forward to continued collaboration on these important initiatives post WRDA 2024 authorization.

The USACE remains committed to advancing the principles of the Comprehensive Study Framework in the context of future study efforts within the existing study authority. The study team will continue to prioritize communities that are the most vulnerable to the damaging effects of storm surge and historically under-served. Additionally, new information will be incorporated, where appropriate, to ensure analyses and recommendations are based on the most current science. The USACE will continue integration efforts with other regional Corps studies/projects. The USACE will also continue to coordinate with other agencies, such as the South Florida Water Management District, and municipalities to ensure the integration of other relevant studies, projects, and initiatives.

The USACE will ensure timely coordination with Miami-Dade County and other stakeholders regarding the NBS Pilot Program. USACE acknowledges the tremendous amount of public support for the program and the requests to accelerate the NBS Pilot Program. Efforts to develop an overall timeline regarding the NBS Pilot Program will occur after WRDA 2024 authorization and will be coordinated with Miami-Dade County.

Following Congressional authorization of the NBS Pilot Program, a Project Partnership Agreement (PPA) will be signed by USACE and the nonfederal sponsor. In accordance with the PPA, the nonfederal sponsor will be responsible for, at no cost to the United States, acquiring or ensuring the acquisition of all lands, easements, and rights-of-way required for the construction, operation, and maintenance of the pilot projects. Additionally, based on comments received during the USACE Legal and Policy Compliance Review of the document, the criteria stating that ‘proposed pilot projects should be located on lands in public ownership’ has been removed from the Final Report.

During the Pre-construction, Engineering, and Design (PED) Phase, the USACE will further consider evaluating critical equipment (such as heating, ventilation, and air conditioning (HVAC) systems) associated with residential building elevations identified as part of the Recommended Plan. Although policy changes related to relocation assistance requirements and/or changes are outside of the purview of the current study, USACE will work alongside Miami-Dade County to support the County’s efforts to establish a nonstructural program aimed at providing additional relocation assistance to displaced individuals including prioritization for socially vulnerable and underserved populations.

We acknowledge the limited information in the report regarding the potential timelines of the design and implementation of measures for residential elevations. A description of the timeline will be developed early in the PED Phase and will be disseminated as part of the community engagement and outreach plan designed to share information with residents, community members, municipalities, and interested stakeholders regarding how the components of the Recommended Plan identified will be implemented and the processes associated with implementation.

The following comments are provided in response to the comments received from Miami-Dade County Parks, Recreation, and Open Spaces (PROS) Planning, Design & Construction Excellence Division, which were submitted during the public comment period under separate cover.

In response to the request to consider park sites as critical infrastructure, priority critical infrastructure was identified in coordination with Miami-Dade County's Office of Resilience for the 2024 Report. Additional consideration will be given to other types of critical infrastructure as part of post WRDA 2024 study efforts. Proposed measures considered in the future must prioritize coastal storm risk management. In light of this, however, consideration may be given CSRM measures that provide health, safety, public access, and amenities for residents while also enhancing green infrastructure.

Miami-Dade County is a vibrant community comprised of valuable social, cultural, and environmental assets. The 2024 study effort is an interim response that seeks to advance CSRM measures towards increasing Miami-Dade County's resilience to coastal storms in the future. Thank you for staff's continued coordination and collaboration on this important study. If you have any additional questions, please feel free to contact Ms. Justine Woodward at (757) 201-7728 or justine.r.woodward@usace.army.mil.

Sincerely,

Sara E. Bahnson

Digitally signed by Sara E. Bahnson
Date: 2024.06.28 11:51:39 -04'00'

for Zachary P. Martin,
Chief Environmental Analysis Section
Planning and Policy Branch
Norfolk District, USACE

cc:
Angie Dunn
Chief Environmental Branch
Jacksonville District

VILLAGE HALL
500 NE 87TH ST
EL PORTAL, FL 33138
CHRISTIA E. ALOU, ESQ.
VILLAGE MANAGER

May 23, 2024

mdbb-csrmstudy@usace.army.mil
U.S. Army Corps of Engineers Norfolk District
c/o Justine Woodward
803 Front St.
Norfolk, Virginia 23510

Dear Ms. Woodward:

The Village of El Portal municipal leadership is pleased that areas of the municipality are included in the April 2024 Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study -Draft Integrated Feasibility Report and Environmental Assessment - Little River Focus Area, as one of the six focus areas that were identified based on high-frequency flooding potential and social vulnerability in the County study area. The recommended projects, like elevating 2,100 residential buildings and 427 dry floodproofing of nonresidential/critical infrastructure facilities, can provide the Village residents and Miami-Dade County with coastal storm risk management solutions that are desperately needed.

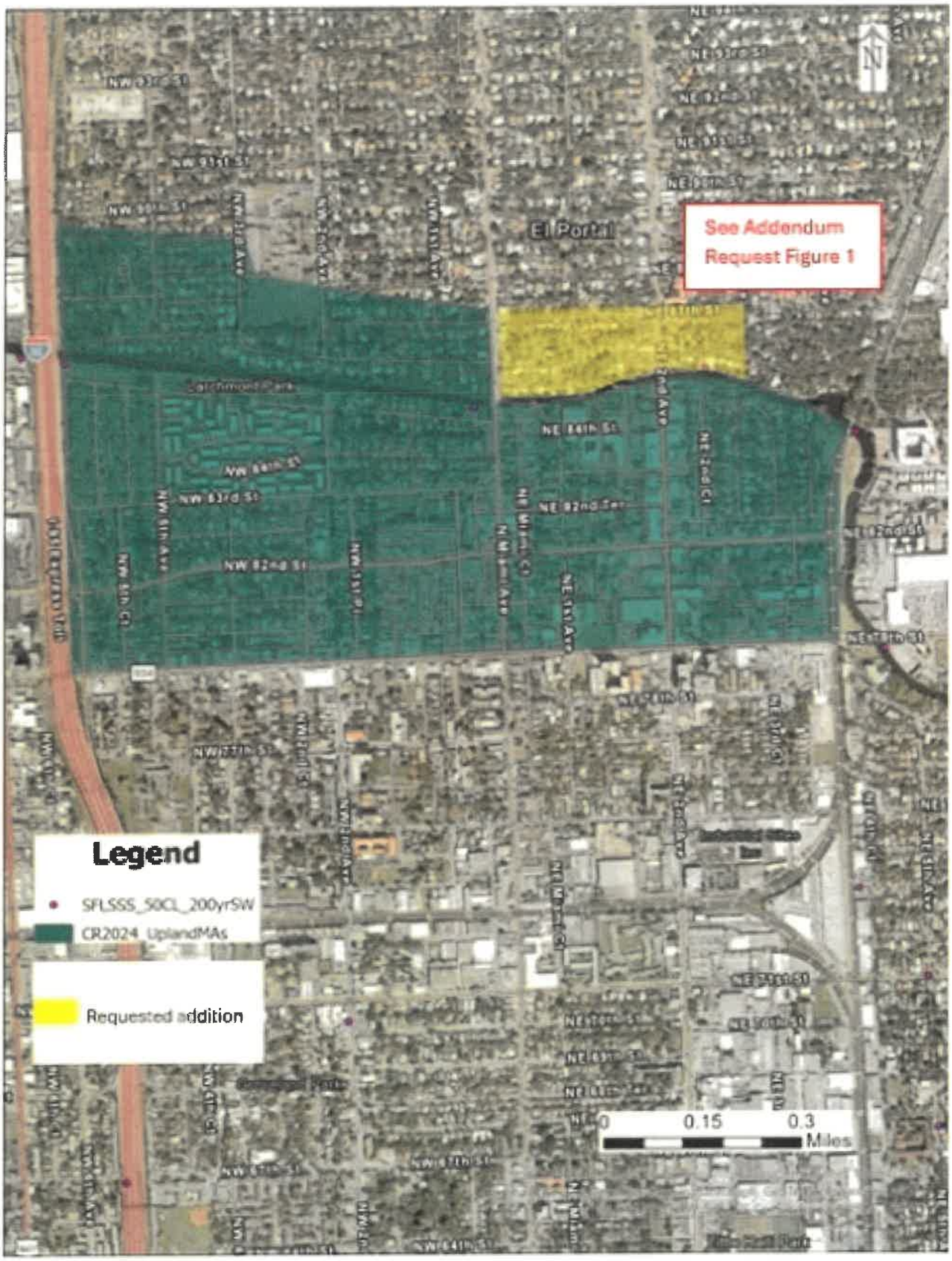
As the Village Manager for over six years, I have witnessed the excessive flooding and vulnerability of low-lying areas along the C-7 Little River Canal. I had an opportunity to review the draft with the Village of El Portal Sustainability and Resiliency Taskforce Chair, Mayor Omarr Nickerson and our Public Works Director and we have a serious concern that in El Portal, only those properties along the west of North Miami Avenue are included for improvements in the report (see Figure 1-13 in main draft report with its larger map with more detail map excerpted from Appendix A-1 Engineering Appendix). In fact, our consistent observations and experience have been that the canal front area east of North Miami Avenue up to NE 3rd Avenue (see highlighted area in Addendum Request Figure 1) should also be included because it is just as vulnerable to flooding. Our recommendation for addition to the April 2024 draft report is that the additional area we highlighted 86 Street from N. Miami Avenue to NE 3rd Avenue which consists of just a few short blocks be included in the recommended projects for the Little River Focus Area. We also ask that you please ensure that the municipality and its residents are made aware through an educational campaign about this effort.

Please feel free to contact me directly at villagemanager@villageofelportal.org, or at (305)795-7880 if you have any questions or concerns. I look forward to continued success on this project with the US Army Corps of Engineers Norfolk District.

Sincerely,

Christia E. Alou, Esq.
Village Manager

- Focus area of Little River. The current focus area is shown in the picture below:



Village of El Portal

May 21, 2024

Addendum Request Figure 1- Add highlighted area into Little River focus area.

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 28, 2024

Ms. Christia E. Alou, Esq.
Village Manager
Village Hall
500 NE 87th St.
El Portal, FL 33138-3517

Dear Ms. Alou:

Thank you for your comments submitted on behalf of the Village of El Portal on the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Draft Integrated Feasibility Report and Environmental Assessment prepared by the U.S. Army Corps of Engineers (USACE) Norfolk District in conjunction with Miami-Dade County, the nonfederal sponsor for the study. The purpose of this letter is to respond to your comments on the Draft Report received on May 23, 2024. A copy of your comments and the responses included herein will also be included in the Final Report.

In your comments, you note concerns that only the properties along the west of North Miami Avenue are included in the Little River Focus Area. Additionally, you recommend expanding the Little River focus to include areas from 86th Street from North Miami Avenue to NE 3rd Avenue because these areas are also just as vulnerable to flooding.

To accomplish and provide significant near-term CSRM for Miami-Dade County, the feasibility report focuses on risk management measures that can be carried forward in time for the 2024 Water Resources Development Act (WRDA). The USACE and Miami-Dade County intend to partner on additional studies and further analyses to continue to address the extent of existing CSRM and flooding problems in the study area. An expansion of the Focus Area would require additional economic modeling and analysis that cannot be accomplished in time to meet the Water Resources Development Act (WRDA) 2024.

Although expanding the Focus Area cannot be incorporated into the current 2024 Report, the area recommended for inclusion can be further considered as the study team begins to scope out the efforts for future biennial WRDA-authorized studies in 2026 and/or 2028.

As the project efforts advance in the future, following authorization in WRDA 2024, the USACE and Miami-Dade County will develop and implement a community engagement and outreach plan to continue sharing information with residents, community members, and municipalities regarding how the components of the

Recommended Plan identified in the Final Report will be implemented and the processes associated with implementation.

If you have any questions regarding the response provided herein, please feel free to contact Ms. Justine Woodward at (757) 201-7728 or justine.r.woodward@usace.army.mil.

Sincerely,

Sara E. Bahnson

Digitally signed by Sara E. Bahnson
Date: 2024.06.28 11:47:48 -04'00'

for Zachary P. Martin,
Chief Environmental Analysis Section
Planning and Policy Branch
Norfolk District, USACE

cc:
Angie Dunn
Chief Environmental Branch
Jacksonville District

May 23, 2024

Justine Woodward
Biologist
Environmental Analysis Section
U.S. Army Corps of Engineers Norfolk District
803 Front St.
Norfolk, VA 23510

Dear Ms. Woodward,

The Miami-Dade Back Bay Coastal Storm Risk Management (Back Bay CSRM) Feasibility Study identifies strategic approaches to address flood risks from storm surge flooding and their impact on the County's residents and economic activity. We thank the U.S. Army Corps of Engineers (Corps) and Miami-Dade County (MDC), the local sponsors, for the opportunity to submit public comments for the Draft Integrated Feasibility Report and Environmental Assessment (IFR/EA), dated April 2024. We, the undersigned, represent a coalition of non-profit organizations and advocates closely engaged with the MDC Back Bay Study since 2018 to ensure comprehensive disaster risk resilience based on the principles of effective risk reduction, environmental and economic sustainability, equity, and justice. This public comment in response to the April 2024 IFR/EA presents our shared positions based on our collective place-based knowledge and scientific, legal, and policy expertise.

We thank the Corps leadership for reinitiating the Back Bay CSRM study in 2022 and commend the Corps, Mayor Levine-Cava, and the MDC Office of Resilience for the changes made in the 2024 IFR/EA, These changes include: (i) conducting more meaningful engagement process with local stakeholders to shape the 2024 study; (ii) incorporating MDC stakeholders' proposals for multiple lines of defense, nature-based solutions, and equity inclusion to design a comprehensive approach; (iii) selecting the Tentatively Selected Plan (TSP) based on a wider range of risk reduction, social, and economic benefits over the conventional choice of economic benefits alone; and, (iv) prioritizing risk reduction measures for socioeconomically vulnerable and underserved communities. The decision to model the Back Bay CSRM on the robust ecological and risk-informed science, adaptive management principles, and collaborative approaches as exemplified by the Comprehensive Everglades Restoration (CERP) will strengthen Miami-Dade's resilience. We support the overall more comprehensive and equitable approach in the 2024 IFR/EA of the Back Bay CSRM study and urge its finalization into the Chief's report as soon as possible. However, our analysis of the 2024 IFR/EA identifies significant gaps that impair the current plan's potential to achieve comprehensive disaster risk resilience as envisioned in the South Atlantic Coastal Study (SACS)[1].

[1] U.S. Army Corps of Engineers. October, 2021. *South Atlantic Coastal Study* main report.

Even though the Back Bay CSRM represents a critical opportunity to address the urgent climate risks faced by vulnerable communities in MDC, it has failed to: address the complexity of the multiple flood risks that prevail in the study area, adopt an accelerated project implementation schedule for timely risk reduction, and plan the concurrent implementation of diverse solutions—nature-based, structural, and nonstructural—as hybrid and integrated solutions for a far more practical approach to risk reduction and benefits optimization.

In this letter, our insights for improving the Back Bay CSRM plan are condensed into **five broad action items:**

Action 1: Address multiple flood hazards using all available avenues.

Action 2: Comprehensively evaluate benefits.

Action 3: Prioritize frontline communities through transparent public engagement.

Action 4: Expand and fast-track the Nature-based Solutions (NBS) Pilot Program.

Action 5: Strengthen community well-being in the Nonstructural Program.

We provide details for each of these action items in the sections below, along with a list of outstanding questions. We look forward to the incorporation of these constructive recommendations and to meaningful discussions with the Corps and MDC Office of Resilience to make Miami-Dade resilient into the future.

Detailed Recommendations for Action Items

1. Address multiple flood hazards using all available avenues.

We urge Miami-Dade County, as the non-federal sponsor of this study, to *immediately* request the consideration of comprehensive flood risk under the authority of the 2022 Water Resources Development Act Section 8106 for the *next phases of the study planned for WRDA 2026 and beyond*. This request will ensure that hazard models address the multifaceted flood risks facing South Florida.

The 2020 Back Bay CSRM[2] proposal to construct storm surge walls could have exacerbated flood risk from rainfall and rising groundwater for residents behind the wall. However, the current plan maintains the same narrow focus on storm surge hazard alone and neglects other known flood drivers including sea level rise, tidal inundation, and extreme rainfall that will compound with storm surge and confer additional risk. As such, the project does not meet the intent stated on page ES-3 of the 2024 IFR/EA to "fully address the extent of existing Back Bay CSRM and flooding problems in the study area and to evaluate the feasibility of more complex structural measures." Moreover, the 2024 IFR/EA does not address a critical recommendation in the 2021 South Atlantic Coastal Study (USACE, 2021)[3] to "improve understanding and application of compound flooding effects on existing and future coastal storm risk". The narrow focus of the 2024 IFR/EA will likely affect nearly all elements of the projects from scope, infrastructure, risk assessment, ecosystem impacts, community engagement, and climate change adaptation.

The current study authority, dating back to 1955, is inadequate. To this end, SACS 2021 recommends revising Public Law 84-71 (the 1955 CSRM study authority)[4] to explicitly allow for consideration of coastal storm-induced compound flooding effects and management of risk to vulnerable environmental resources and other related purposes. Updating Public Law 84-71 requires an act of Congress; the Corps has not yet indicated if or when the study authority will be modified per the SACS recommendation, which makes the 8106 request all the more valuable at this time. Additionally, the current plan recommends integrating the Back Bay CSRM study with ongoing and future projects, but this coordination is not an adequate substitute for addressing compound flooding in the next phase of planning and design in WRDA 2026 and beyond. Moreover, using the Corps' High Curve to anticipate future sea level rise, though a more cautious approach, is inadequate in serving as a long-term framework for Miami-Dade's vulnerability to sea level rise. In addition to failing to address current multiple flood hazards, the 2024 MDC CSRM neglects the multifaceted risks faced by future generations of MDC residents.

Getting this study right the first time will ensure residents' safety and save state, federal, and local resources in the long run. **We thus recommend that Miami-Dade County submit a 8106 request *now* for incorporation into WRDA 2026, to prepare for the next phase of the project and avoid unnecessary delays caused by later addressing unanticipated problems not captured in the current models.**

---

[2] U.S. Army Corps of Engineers. 2020. *Miami-Dade Back Bay Coastal Storm Risk Management Draft Integrated Feasibility Report and Programmatic Environmental Impact Statement.*

[3] U.S. Army Corps of Engineers. October, 2021. *South Atlantic Coastal Study* main report, at 4-14.

[4] *Id.*, at ES-12 and 6-12.

2. Comprehensively evaluate benefits.

We commend the Corps and the County's request for a National Economic Development (NED) Policy Exception and urge the Assistant Secretary of the Army to approve this waiver without delay. This request is in line with the 2014 Interagency Guidelines[5], which states that when evaluating a range of alternatives "environmental, economic, and social impacts are interrelated, and there is no hierarchy among their goals." Though the current plan does not maximize comprehensive net benefits, it prioritizes Other Social Effects and Regional Economic Development benefits and emphasizes the prevention of human life loss and environmental justice concerns. Further, we expect that the Nature-based Solutions (NBS) Pilot Program will develop methodologies[6] for the quantitative evaluation of the economic and comprehensive benefits of resilient solutions that include NBS. In the meantime, we extend our support to the Corps for applying an integrated valuation methodology that emphasizes economic, environmental, and social benefits through the use of cutting-edge economic techniques and the practice of procedural and distributional equity to capture the diverse values of integrated resilience measures.

3. Prioritize frontline communities through transparent public engagement

We appreciate the considerations of environmental justice in the refinement of the Focus Areas for the TSP. As discussed throughout the report, populations with incomes at or below the federal poverty level as well as underserved communities typically have fewer available resources to recover from flood events. This decision aligns with the directives outlined in the Biden Administration's Executive Order 14,008, Executive Order 13,985, and the Justice40 Initiative. **The plan should ensure that communities are included, engaged, and consulted in all aspects of the plan in this initial WRDA 2024 phase and beyond. We provide more detailed recommendations for equitable public engagement in sections 4E and 5A-B.**

4. Expand and fast-track the NBS Pilot Program

The NBS Pilot Program is a groundbreaking initiative that will pave the way for greater implementation of natural infrastructure solutions in Miami-Dade and throughout the country. We applaud the Corps for taking this important step and the Assistant Secretary of the Army for Civil Works for issuing the April 2024 NBS internal memo.[7] By institutionalizing the understanding of NBS as an effective tool for flood mitigation, this pilot program will inform necessary policy development in the realm of NBS benefits' quantification as no formal Corps' guidance currently exists as a standardized process. Additionally, MDC is home to diverse environmental resources, including protected areas such as Biscayne Bay Aquatic Preserve, Biscayne National Park, and Everglades National Park. These protected areas contribute substantial economic value with Biscayne Bay-related activities alone contributing an estimated $64 billion in economic output, $24 billion in income, 448,000 jobs, and $4 billion in tax revenue for MDC.[8] Moreover, Everglades restoration provides critical flood protection for MDC residents and forms a

[5] U.S. Army Corps of Engineers, 2014, at 27.
[6] Miami-Dade Back Bay CSRM Draft Report. April 2024, at ES-6.
[7] Of the Assistant Secretary of the Army. April 2024. Incorporation of Nature-Based Solutions in Civil Works Projects.
[8] Miami-Dade County. 2023 Biscayne Bay Economic Study Update.

significant element of the County's resilience measures. The Back Bay CSRM Study has the unique opportunity to protect and work in tandem with the County's rich natural resources and apply the evidence-based science from the restoration of Everglades ecosystems to design effective NBS. We recommend the following urgent measures for a successful, effective, and equitable NBS program:

A. **Expand the NBS Pilot Program to include hybrid solutions that combine green and gray measures for optimal risk reduction.** While the NBS Pilot Program will improve coastal resilience, it is insufficient on its own to achieve the full scope of comprehensive benefits afforded by hybridized designs that blend gray and green features. The Corps' Engineering With Nature Program has in-depth guidelines on how to use NBS to enhance the physical integrity, utility, and longevity of structural measures, increasing their adaptability to changing environments.[9] We ask the Corps to closely follow this guidance and use all opportunities available throughout this comprehensive study—not merely the NBS Pilot—to test and implement innovative hybrid technologies. For example, traditionally gray infrastructure, such as seawalls, can be designed with natural infrastructure to maximize ecological benefits, by effectively blending the advantages of both green and gray approaches. These "living seawalls" have been constructed elsewhere in the United States (see Appendix for details) and are just one example of the expansive opportunities for hybrid green-gray projects. The integrated approach of diverse measures conforms with the multiple lines of defense strategy as outlined in the public charrettes by stakeholders and in the 2024 report.

B. **Accelerate the project implementation timeline by building on existing NBS research.** We are concerned about the Corps' proposed 15-year timeline to gather necessary information. This lengthy timeline suggests that it could take over 15 years before a structural plan with NBS could even begin to be designed, let alone authorized and constructed. This timeline is incompatible with the urgency of the growing risk Miami's residents face. Therefore, we recommend that the Corps expedite the Pilot Program's objectives by utilizing the robust data from existing NBS studies. Scientific literature is replete with extensive data regarding the quantifiable benefits of reefs, mangroves, and other NBS for storm surge risk reduction. We recommend that the report expand its literature review to include a comprehensive and robust review of existing studies including an outline of missing data needed. As a starting point for the further review of existing data, we have provided five additional nature-based projects that can serve as precedents for this program (see Appendix for details), although we know many more resources exist with highly valuable information. The Corps need not reinvent the wheel when it comes to evaluating and implementing NBS, either. Conservation International and the World Resources Institute have each developed cost-benefit frameworks that could guide the Corps' development of future NBS projects.[10] We request that the Corps select NBS pilot projects that advance our understanding of NBS benefits and not merely implement projects where existing data on benefits already exists elsewhere.

---

[9] Engineering with Nature. 2021. International Guidelines on Natural and Nature-Based Features of Flood Risk Management. Chapter 14.

[10] Conservation International: Green-Gray Community of Practice, Practical Guide to Implementing Green-Gray Infrastructure (2020); World Resources Institutes, Green-Gray Assessment: How to Assess the Costs and Benefits of Green Infrastructure for Water Supply Systems (2019).

C. **Authorize additional funding for construction and monitoring.** Miami-Dade should serve as a proving ground for novel and robust NBS solutions that can also provide immense economic and social value. Therefore, we recommend that additional funding should be authorized for the construction and monitoring of NBS pilot studies.

D. **Further leverage reefs for resilience.** We strongly urge the local sponsor and the Corps to consider hybrid reefs as NBS. Reefs are the region's first line of defense against storm surges, and healthy reefs can also reduce beach erosion. We suggest the use of evidence-based science, and funding from the pilot study, to launch and scale a coral restoration facility for hybrid reef deployment.

E. **Ensure robust stakeholder engagement.** While we appreciate the specific mention of stakeholder identification and engagement during the information and data gathering phase of the NBS Pilot Program and the plan to create an Adaptive Management Team, we have the following recommendations to ensure robust and equitable stakeholder engagement:
    - Engage with local NBS project proponents and researchers to connect to new NBS concepts and pilot ideas occurring in Miami-Dade.
    - As projects are developed, we urge continued and ongoing opportunities for community input such as public comments, charrettes, workshops, and open houses.
    - Include local non-profit organizations, academia, landscape architects, local engineers, students, Miami-Dade Innovation Authority, and private businesses specializing in NBS as part of the stakeholders in the Adaptive Management Team.

F. **Streamline processes to accelerate NBS permitting.** We encourage the Corps to begin dialogue and collaboration with the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, the Florida Department of Environmental Protection (including the Biscayne Bay Aquatic Preserve), the State Historic Preservation Office, and other regulatory agencies. In particular, in-water projects may face significant delays for endangered species consultation pursuant to Section 7 of the Endangered Species Act—even when the project will have a beneficial effect on protected species and critical habitat. Moreover, innovative nature-based projects often lack precedents within existing regulatory frameworks, making it challenging to assess their potential impacts and establish appropriate permitting criteria. We therefore encourage the Corps to work with the environmental regulatory agencies to develop efficient permitting mechanisms (for instance a new general permit or programmatic biological opinion specific to publicly-funded CSRM projects) that will appropriately expedite NBS projects. We encourage the Corps to have ongoing dialogue and collaboration to develop flexible permitting mechanisms that can accommodate innovative nature-based solutions while ensuring environmental protection and regulatory compliance.

5. Strengthen community well-being in the Nonstructural Program

We support the Back Bay CSRM study's Nonstructural Program which will protect MDC residents while acting as a proving ground for the implementation of innovative nonstructural methods. To ensure the effectiveness and equity of this program, we offer the following recommendations:

A. **Create a nonstructural program working group.** The effect of nonstructural projects on local housing is a complicated issue that requires the utmost care to minimize any harm to local

communities. Forming a working group comprising members from diverse backgrounds such as the Corps' National Nonstructural Committee, research institutions like the University of Miami Housing Solutions Lab and Florida International University's Jorge Perez Metropolitan Center, local non-profits such as Catalyst Miami, the CLEO Institute, and Miami Homes For All, alongside representatives from neighborhood associations and environmental justice groups would offer invaluable guidance to ensure the effectiveness and equity of this project.

B. **Ensure a robust and equitable plan for residents displaced during property elevations.** The IFR/EA lacks a precise plan to support residents who will require temporary relocation during nonstructural measures implementation. Without precise planning, the project could inadvertently displace underserved communities that it intends to support and exacerbate current gentrification trends. **We recommend participation in the Temporary Relocation Assistance Pilot Program,** a pilot program authorized in Section 8154 of the Water Resources Development Act of 2022,[11] that assists individuals temporarily displaced by a covered water resource project. In this program, the non-Federal interest can be credited towards its project cost share for the reasonable costs associated with temporary relocation assistance. Other ongoing water resources studies such as the Norfolk Coastal Storm Risk Management Study are also considering inclusion in the Temporary Relocation Assistance Pilot Program.

C. **Fortify sewage treatment plants.** We recommend that sewage treatment plants be included in critical infrastructure for fortification during storm surges. Miami-Dade's three wastewater treatment plants are all located close to Biscayne Bay and are subject to storm surges. Multi-million-gallon sanitary sewage overflows already occur after seasonal discrete events. The effects of a "direct hit" hurricane could be disastrous.

D. **Ensure all waste management systems are included as critical infrastructure.** MDC currently relies on septic systems as a critical part of its waste management infrastructure with over 100,000 septic tanks currently in use in the County. A 2018 vulnerability analysis estimates that within 25 years of report publication, the County can expect the number of residential systems that may be periodically compromised during storms or wet years to significantly increase from approximately 56% (58,349) to more than 64% by 2040 (67,243 parcels).[12] A major storm, which could cause both overland flooding and rising groundwater, could render sanitation for thousands of residents impossible in the following weeks as that region recovers. The 2018 analysis notes: "a compromised treatment function may result in the relatively unimpeded movement of wastewater contaminants to ground and surface waters" that can pose a risk to both human and environmental health.[13] We encourage the Corps to explore whether the Environmental Infrastructure Authority could be used to offer a septic-to-sewer conversion program. This program could be implemented throughout Miami-Dade County, regardless of whether a home is elevated through the Nonstructural Pilot. Conversion to sewer is essential to ensuring Miami-Dade's wastewater systems are robust in the face of climate change. The Connect 2 Protect program estimates there will be over 10,000 failing septic systems in the

[11] Water Resources Development Act of 2022. Section 8154.
[12] Miami-Dade County RER, Miami-Dade County WASD, and Florida Dept. of Health in Miami-Dade. (November 2018). *Septic Systems Vulnerable to Sea Level Rise,* at 6.
[13] *Id*., at 14.

County by 2040, posing a significant risk of water pollution impacting both human and environmental health. The Corps and the County have the opportunity to seek funding for a county-wide conversion under Section 219 of WRDA of 1992.[14]

Questions and Clarifications

We also ask the study to consider providing clarification on the following topics:

1. The report states on page 29 that the ASA has approved a course of action to allow further investigation of the multiple-lines-of-defense approach. Does this investigation include integration with other ongoing and proposed projects, specifically the Atlantic Alignment Strategy? Furthermore, the report states on page 179 that the County "supports the ongoing USACE ERDC investigation" of a proposed "system of storm surge gate structures near the barrier islands that may significantly manage coastal storm risks." Does this statement indicate that ERDC is independently evaluating the costs and benefits of the Atlantic Alignment Strategy?
2. We are supportive of full project integration with other regional Corps efforts as outlined throughout the report. Will integration be expanded to include all relevant projects and studies, including those being undertaken by the South Florida Water Management District, Miami-Dade County, and local municipalities? If not, we specifically request that the Back Bay study include integration with all relevant non-Corps studies and projects.
3. The report mentions throughout that property owners can opt for voluntary elevation. In situations where either property owners or tenants are not interested in voluntary elevation, will the Corps and County consider a risk awareness and education outreach program and relocation support for residents' buy-in for the nonstructural program?
4. In regards to elevating properties, when property owners either choose not to voluntarily participate or when the structure of the property would not allow for elevation, will the focus area be expanded to include additional properties to ensure the same total amount of properties are elevated? Flood modeling is not always fully reflective of the complex hydrology in South Florida and therefore the full flood risk of specific properties or neighborhoods. Therefore, based on community input and engagement about resident's real lived and observed flood risks, additional homes outside the identified focus areas should be included in the plan should properties in the original focus area opt-out or be ineligible.
5. In Section 4.3 of the report, Table 4-1 examines whether project elements (1) increase resilience by decreasing Critical Infrastructure (CI) vulnerability, and (2) reduce economic damage to buildings. This table shows that the Corps has determined that neither living shorelines nor hybrid reef structures will accomplish either objective. While we appreciate the Corps' willingness to carry these measures forward for future study (presumably in the NBS Pilot Program), it is not clear why the Corps has determined they will not achieve these goals, even incrementally. Both living shorelines and hybrid reef structures have been acknowledged in Corps guidance documents to contribute to wave attenuation, reducing the severity of waves as

[14] Of the Assistant Secretary of the Army. (December 2001) Implementation of Projects Under Section 219 of the Water Resources Development Act of 1992 (WRDA 92), as Amended.

they reach the shore.[15] How did the Corps determine that living shorelines and hybrid reefs would not achieve either objective in this study? What modeling or data were used to come to this conclusion? Will additional data and further analysis be sufficient to ultimately change this determination?

6. PortMiami Geometry - The IFR/EA notes on page 177 the integration of the Back Bay Study project across other Corps' studies, including the PortMiami Navigation project. Has the Corps modeled how any future expansion of the Port's navigation channels and harbor could worsen flooding? Will large-scale channel modifications work at cross purposes with the Back Bay Study CSRM? The Corps must confirm how Phase IV dredging will change flood dynamics, and this must be discussed in the final Back Bay Study IFR/EA. Moreover, the Phase III expansion of PortMiami has severely impacted an estimated 278 acres of coral reef habitat[16]– natural infrastructure that serves as the first line of defense against storm surge. This simply cannot happen again in future Corps works.

To conclude, we reiterate our support for the immediate finalization of the 2024 IFR/EA for the Back Bay CSRM study into the Chief's report as the nonstructural solutions for critical infrastructure and vulnerable residents will protect County residents. Our recommendations reflect our concern for the comprehensiveness of risk reduction, the significance of multiple co-benefits arising from integrated solutions, and the equity issues ingrained in each step of the planning process. We would like to see thoughtful consideration for the recommendations given in the **five action items** in this letter. We invite the Corps and MDC Office of Resilience for constructive and meaningful discussions with our coalition as we progress into the next phases of resilience planning for Miami-Dade.

Sincerely,

Elizabeth Fata Carpenter, Esq.
Executive Director
Everglades Law Center

Lauren Jonaitis
Senior Conservation Director
Tropical Audubon Society

Marisa Carrozzo
Senior Coastal and Wildlife Program Manager
National Parks Conservation Association

Rachel Rhode
Manager, Climate Resilient Coasts & Watersheds
Environmental Defense Fund

Meenakshi Chabba, Ph.D.
Ecosystem and Resilience Scientist
The Everglades Foundation

Audrey Siu
Policy Director
Miami Waterkeeper

[15] For example, Engineering with Nature. International Guidelines on Natural and Nature-Based Features of Flood Risk Management at 418, 609-10. 2021.

[16] NOAA's National Marine Fisheries Service. (August 29, 2023). *Examination of Sedimentation Impacts to Coral Reef along Port Miami Entrance Channel, December 2015 and April 2016*, at 1, 11, and 20.

Appendix: Additional Examples for the NBS Pilot Program

1. Project Name: **Sunshine Skyway**
Nature-based Solution Type: Artificial/ Hybrid Reefs
Location: Tampa Bay, FL
General Project Description: Installation of 840 pyramid-shaped concrete wave attenuation devices hybrid reefs.
Project Size: ~5 miles long
Year Construction began: 2023
Link:
https://www.enr.com/articles/56833-blockbuster-breakwater-alternative-construction-method-put-to-the-test-in-tampa-bay

2. Project Name: **Maurice Gibb Park Re-design**
Nature-based Solution Type: Living Shoreline
Location: City of Miami Beach, FL
General Project Description: Park redesign with expanded living shoreline, raised seawall elevation, increased drainage capacity.
Project Size: ~3 acres
Year Construction began: 2023
Link:
https://www.miamibeachfl.gov/residents/neighborhood-affairs-division/active-projects/parks/maurice-gibb-park/

3. Project Name: **North Point Ecosystem Restoration**
Nature-based Solution Type: Mangrove Fill/Restoration (green/gray)
Location: Virginia Key, Florida
General Project Description: Restored habitat consists of hammock, coastal strand, beach dune, freshwater wetlands
Project Size: 17 acres
Year Construction began: 2014
Links:

- https://www.nature.org/media/florida/natural-defenses-in-southeast-florida.pdf
- https://www.frostscience.org/museum-volunteers-for-the-environment/restoration-projects/virginia-key/

4. Project Name: **The Emerald Tutu**
Nature-based Solution Type: Floating biomass mats
Location: Boston, Massachusetts
General Project Description: A floating network of interconnected, anchored biomass mats that dampen wave energy and reduce flooding, storm damage, and erosion on shore.
Project Size: TBD

Year Research began: 2020
Links:

- https://emerald-tutu.com/
- https://news.northeastern.edu/2023/04/28/magazine/professor-develops-emerald-tutu
- https://www.asme.org/topics-resources/content/stitching-together-coastal-defenses

5. Project Names: **Waterfront Seattle and San Francisco/Smithsonian Living Seawall Pilot Project**
Nature-based Solution Type: Living seawalls (green-gray)
Locations: Seattle, Washington and San Francisco, California
General Project Description: The Elliott Bay Seawall in the Seattle Waterfront includes habitat enhancements to restore the salmon migration corridor and improve ecosystem productivity. The Living Seawall Pilot Project in the Port of San Francisco—a joint project with the Smithsonian Environmental Research Center—aims to test new materials and design for San Francisco's seawalls to promote biodiversity and appeal to native species. Both projects use innovative seawall tile designs suited for their respective ecosystems that provide habitat for native species and may contribute to wave attenuation. These projects are just two examples of living seawalls. At least two private companies are producing living seawall technology at present: Living Seawalls, an Australian company using Reef Design Lab's tile designs with living seawalls installed in Australia, Asia, and Europe; and KindDesigns, a Miami-based company with its first living seawall installed in Miami Beach, FL.
Links:

- https://sfport.com/wrp/living-seawall
- https://waterfrontseattle.org/waterfront-projects/seawall
- https://www.livingseawalls.com.au/
- https://www.kinddesigns.com/

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

July 1, 2024

Rachel Rhode
Manager, Climate Resilient Coasts & Watersheds
Environmental Defense Fund
136 4th St. N.
Suite 317
St. Petersburg, FL 33701-3860

Dear Ms. Rhode:

Thank you for your comments submitted regarding the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Draft Integrated Feasibility Report and Environmental Assessment prepared by the U.S. Army Corps of Engineers (USACE) Norfolk District in conjunction with Miami-Dade County, the nonfederal sponsor (NFS) for the study. The purpose of this letter is to respond to your comments submitted on behalf of a coalition of non-profit organizations and advocates regarding the Draft Report received on May 23, 2024. A copy of your comments and the response included herein will also be included in the Final Report.

The following numbered list aims to address your comments and feedback in the order they were provided.

1. The authority of this study (Public Law 84-71, June 15, 1955) authorizes an examination and survey of the coastal and tidal areas where severe damage has occurred from hurricane winds and tides; as such, it is not within the study authority to address compound flooding. To date, USACE has not received an 8106(a) request from the NFS.

2. Thank you for the support of our request for a National Economic Development Policy Exemption.

3. As the project efforts advance in the future, following authorization in the Water Resources Development Act (WRDA) 2024, the USACE and Miami-Dade County will develop and implement a community engagement and outreach plan to share

information with residents, community members, municipalities, and interested stakeholders regarding how the components of the Recommended Plan identified in the Final Report will be implemented and the processes associated with implementation.

4. The Nature-Based Solutions (NBS) Pilot Program has received a tremendous amount of public support. This program will be used to identify, evaluate, implement, and monitor a diverse set of NBS pilot demonstration projects within Miami-Dade County to inform the methodology for quantitative evaluation of economic and comprehensive benefits.

a. The NBS Pilot Program, as described in Chapter 5, states that the long-term success of various adaptation strategies to address coastal storm surge risk should include a combination of both green and gray infrastructure projects that demonstrate independent utility and benefits consistent with Miami-Dade County's resilience strategy. As such, it is the intent of the NBS Pilot Program to explore and implement various NBS, potentially including hybrid features.
b. The request for congressional authorization of the NBS Pilot Program includes all program phases (Phase 1: Information/Data Collection; Phase 2: Planning, and National Environmental Policy Act Compliance, Design; and Phase 3: Implementation, and Monitoring, Evaluation, and Adaptive Management). As such, pilot projects would not need to be individually authorized by congress prior to construction, thereby increasing the efficiency of program implementation. For clarification, the 15-year timeline mentioned in the Integrated Feasibility Report/Environmental Assessment (IFR/EA) is specific to Phase 3 of an individual pilot project; this extended monitoring and adaptive management period is due to the fact that the USACE will be using the NBS Pilot Program to gain insight into how NBS perform as CSRM measures over time.
c. Based on the construction cost of similar NBS-type projects as well as estimated planning and monitoring costs, the USACE has requested congressional authorization of the program in the amount of $180 million. Although site-specific locations are not identified in the 2024 Report for the NBS Pilot Program, the study team will continue coordination efforts on this important initiative following programmatic authorization in WRDA 2024. The identification, evaluation, and National Environmental Policy Act (NEPA) compliance of site-specific pilot projects designed to mitigate for storm surge impacts will be an essential component of the next phase of the NBS Pilot Program.
d. Upon congressional approval and appropriation of the NBS Pilot Program, the USACE would follow the implementation framework outlined in Chapter 5,

Section 5.5 through 5.5.5.4. Specifically, the Information/ Data Collection, Planning, and National Environmental Policy Act Compliance Phase, will be used to identify and engage with stakeholders to identify and inform the NBS pilot project site selection process. During this time, suggestions regarding particular NBS proposed for implementation will be crucial to the development of individual pilot projects. As the NBS Pilot Program moves forward, your continued involvement will help inform future decisions jointly made by Miami-Dade County and USACE.

e. To ensure efficiency in the permitting process, the USACE plans to engage early and often with regulatory agencies with jurisdiction over particular resources that may be affected during implementation of individual pilot projects under the NBS Pilot Program. Interagency engagement opportunities will include, but may not be limited to, NEPA scoping meetings, interagency meetings, and pre-application meetings.

5. The purpose of the Miami-Dade Back Bay Nonstructural Program is to further assess, innovate, and implement nonstructural measures to vulnerable infrastructure and building for which USACE nonstructural policy is still developing. This includes multi-family housing such as four-unit dwellings, which are commonly found in Miami-Dade County's environmental justice communities. Additional infrastructure to be analyzed under the nonstructural program includes complex critical infrastructure, such as hospitals; these facilities serve the entire community and are particularly essential and vulnerable during coastal storm events.

a. During Phase 1, Planning and Environmental Compliance, of the Nonstructural Program, the USACE and Miami-Dade County will engage with the public, stakeholders, municipalities, and other interested parties to inform the alternatives and specific measures and critical infrastructure to be evaluated. To ensure equitable implementation of the NS Program, public engagement will be crucial. Engagement opportunities will include but may not be limited to, virtual and in-person NEPA scoping and public information meetings where the public can provide feedback, comments, and suggestions regarding the Nonstructural Program. Several public comments received on the Draft Report recommended a nonstructural program working group be established comprised of members from diverse backgrounds to ensure the effectiveness and equity of the project’s implementation. The USACE and Miami-Dade County will further consider this request and explore the potential opportunity to establish a nonstructural program working group in the future.

b. The real estate appendix, Appendix A-4 describes the Uniform Relocation Assistance Act (URA), which is planned to be implemented as a part of the Recommended Plan. The URA will likely also be implemented under the Nonstructural Program. As the Nonstructural Program develops, additional opportunities for relocation assistance may be explored, including the Temporary Relocation Assistance Pilot Program authorized in Section 8154 of the Water Resources Development Act of 2022.
c. Priority critical infrastructure was identified in coordination with the nonfederal sponsor, Miami-Dade County for the 2024 Report. Additional consideration will be given to other types of critical infrastructure as part of post WRDA-2024 efforts.
d. The authority of this study (Public Law 84-71, June 15, 1955) authorizes an examination and survey of the coastal and tidal areas where severe damage has occurred from hurricane winds and tides; therefore, the recommendation to include septic to sewer conversions is outside the scope of the current authorization. However, the conversion of septic to sewer lines is an important water quality issue that Miami-Dade County has sought to address via the Connect 2 Protect Program. For more information on this program, please refer to the website: https://www.miamidade.gov/global/water/connect-to-protect-septic-to-sewer.page.

Responses to the Question and Clarifications are provided below.

1. The Atlantic Coastline Alternative is a complex solution for managing coastal storm risk that will require considerable time and funding to evaluate in the future as part of a separate study. Coastal structures, such as those described in the Atlantic Coastline Alternative in Section 1.10, where coastal storm flooding and sea level change are potential risks to the community need to be modeled to assess their effectiveness. U.S. Army Engineer Research and Development Center (ERDC) Coastal and Hydraulics Laboratory (CHL) in partnership with the Norfolk District, USACE, will be analyzing impacts of these structures on coastal and inland inundation as well as on some environmental and navigation parameters. For CSRM features, this modeling will help determine:

a. Feasibility design heights of structures and levels of flood risk management.
b. Any potential areas of induced coastal flooding from the inclusion of the CSRM features.

c. How different CSRM features work together as a system and their regional impacts to hydrodynamic conditions during storm events.
d. If they will adversely impact the circulation and water quality within the system under non-storm conditions.

The results of this modeling effort will be available in 2025.

2. The USACE will continue integration efforts with other regional Corps studies/projects. The USACE will also continue to coordinate with other agencies, such as the South Florida Water Management District, and municipalities to ensure the integration of other relevant studies, projects, and initiatives.

3. As the project efforts advance in the future following authorization in WRDA 2024, the USACE and Miami-Dade County will develop and implement a community engagement and outreach plan to share information with residents, community members, municipalities, and interested stakeholders regarding how the components of the Recommended Plan identified in the Final Report will be implemented and the processes associated with implementation. The details of the community engagement and outreach plan will be developed in the future, however, it is anticipated that part of outreach efforts may include informing residents of potential risks, and the requirements/processes associated with elevating homes.

4. To accomplish and provide significant near-term CSRM for Miami-Dade County, the feasibility report focuses on risk management measures that can be carried forward in time for the 2024 WRDA. The USACE and Miami-Dade County intend to partner on additional studies and further analyses to continue to address the extent of existing CSRM problems in the study area. An expansion of the focus area would require additional economic modeling and analysis. Additional areas beyond the six focus areas identified in the current report would be further considered as the study team begins to scope out the efforts for potential future biennial WRDA-authorized studies in 2026 and/or 2028.

5. Table 4-1 has been updated in the Final Report to reflect that living shorelines and hybrid reef structures do satisfy the first objective of increasing resilience. Historically, incorporating NBS as a solution for managing coastal storm risk has been a challenge for feasibility studies because of the difficulty in quantifying the economic benefits associated with these measures and minimal agency guidance. Therefore,

Table 4-1 in the Final Report will continue to reflect that these measures do not achieve the second objective.

6. The proposed harbor deepening currently being considered as part of the Miami Harbor Navigation Improvement Study, is not anticipated to have an adverse effect on storm surge. It has been evaluated through detailed hindcast modeling and analyses during the feasibility study utilizing the ADCIRC / SWAN model and results show negligible changes in maximum water levels.

Miami-Dade County is a vibrant community comprised of valuable social, cultural, and environmental assets. The 2024 study effort is an interim response that seeks to advance CSRM measures towards increasing Miami-Dade County's resilience to coastal storms in the future. Thank you for your feedback on this important study and your continued coordination. If you have any additional questions, please feel free to contact Ms. Justine Woodward at (757) 201-7728 or justine.r.woodward@usace.army.mil.

Sincerely,

Sara E. Bahnson

Digitally signed by Sara E. Bahnson
Date: 2024.07.01 10:16:03 -04'00'

for Zachary P. Martin,
Chief Environmental Analysis Section
Planning and Policy Branch
Norfolk District, USACE

cc:
Angie Dunn
Chief Environmental Branch
Jacksonville District

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

July 1, 2024

Meenakshi Chabba, Ph.D.
Ecosystem and Resilience Scientist
The Everglades Foundation
St. Petersburg, FL 33701-3860

Dear Dr. Chabba:

Thank you for your comments submitted regarding the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Draft Integrated Feasibility Report and Environmental Assessment prepared by the U.S. Army Corps of Engineers (USACE) Norfolk District in conjunction with Miami-Dade County, the nonfederal sponsor (NFS) for the study. The purpose of this letter is to respond to your comments submitted on behalf of a coalition of non-profit organizations and advocates regarding the Draft Report received on May 23, 2024. A copy of your comments and the response included herein will also be included in the Final Report.

The following numbered list aims to address your comments and feedback in the order they were provided.

1. The authority of this study (Public Law 84-71, June 15, 1955) authorizes an examination and survey of the coastal and tidal areas where severe damage has occurred from hurricane winds and tides; as such, it is not within the study authority to address compound flooding. To date, USACE has not received an 8106(a) request from the NFS.

2. Thank you for the support of our request for a National Economic Development Policy Exemption.

3. As the project efforts advance in the future, following authorization in the Water Resources Development Act (WRDA) 2024, the USACE and Miami-Dade County will develop and implement a community engagement and outreach plan to share information with residents, community members, municipalities, and interested

stakeholders regarding how the components of the Recommended Plan identified in the Final Report will be implemented and the processes associated with implementation.

4. The Nature-Based Solutions (NBS) Pilot Program has received a tremendous amount of public support. This program will be used to identify, evaluate, implement, and monitor a diverse set of NBS pilot demonstration projects within Miami-Dade County to inform the methodology for quantitative evaluation of economic and comprehensive benefits.

a. The NBS Pilot Program, as described in Chapter 5, states that the long-term success of various adaptation strategies to address coastal storm surge risk should include a combination of both green and gray infrastructure projects that demonstrate independent utility and benefits consistent with Miami-Dade County's resilience strategy. As such, it is the intent of the NBS Pilot Program to explore and implement various NBS, potentially including hybrid features.
b. The request for congressional authorization of the NBS Pilot Program includes all program phases (Phase 1: Information/Data Collection; Phase 2: Planning, and National Environmental Policy Act Compliance, Design; and Phase 3: Implementation, and Monitoring, Evaluation, and Adaptive Management). As such, pilot projects would not need to be individually authorized by congress prior to construction, thereby increasing the efficiency of program implementation. For clarification, the 15-year timeline mentioned in the Integrated Feasibility Report/Environmental Assessment (IFR/EA) is specific to Phase 3 of an individual pilot project; this extended monitoring and adaptive management period is due to the fact that the USACE will be using the NBS Pilot Program to gain insight into how NBS perform as CSRM measures over time.
c. Based on the construction cost of similar NBS-type projects as well as estimated planning and monitoring costs, the USACE has requested congressional authorization of the program in the amount of $180 million. Although site-specific locations are not identified in the 2024 Report for the NBS Pilot Program, the study team will continue coordination efforts on this important initiative following programmatic authorization in WRDA 2024. The identification, evaluation, and National Environmental Policy Act (NEPA) compliance of site-specific pilot projects designed to mitigate for storm surge impacts will be an essential component of the next phase of the NBS Pilot Program.
d. Upon congressional approval and appropriation of the NBS Pilot Program, the USACE would follow the implementation framework outlined in Chapter 5, Section 5.5 through 5.5.5.4. Specifically, the Information/ Data Collection,

Planning, and National Environmental Policy Act Compliance Phase, will be used to identify and engage with stakeholders to identify and inform the NBS pilot project site selection process. During this time, suggestions regarding particular NBS proposed for implementation will be crucial to the development of individual pilot projects. As the NBS Pilot Program moves forward, your continued involvement will help inform future decisions jointly made by Miami-Dade County and USACE.

e. To ensure efficiency in the permitting process, the USACE plans to engage early and often with regulatory agencies with jurisdiction over particular resources that may be affected during implementation of individual pilot projects under the NBS Pilot Program. Interagency engagement opportunities will include, but may not be limited to, NEPA scoping meetings, interagency meetings, and pre-application meetings.

5. The purpose of the Miami-Dade Back Bay Nonstructural Program is to further assess, innovate, and implement nonstructural measures to vulnerable infrastructure and building for which USACE nonstructural policy is still developing. This includes multi-family housing such as four-unit dwellings, which are commonly found in Miami-Dade County's environmental justice communities. Additional infrastructure to be analyzed under the nonstructural program includes complex critical infrastructure, such as hospitals; these facilities serve the entire community and are particularly essential and vulnerable during coastal storm events.

a. During Phase 1, Planning and Environmental Compliance, of the Nonstructural Program, the USACE and Miami-Dade County will engage with the public, stakeholders, municipalities, and other interested parties to inform the alternatives and specific measures and critical infrastructure to be evaluated. To ensure equitable implementation of the NS Program, public engagement will be crucial. Engagement opportunities will include but may not be limited to, virtual and in-person NEPA scoping and public information meetings where the public can provide feedback, comments, and suggestions regarding the Nonstructural Program. Several public comments received on the Draft Report recommended a nonstructural program working group be established comprised of members from diverse backgrounds to ensure the effectiveness and equity of the project’s implementation. The USACE and Miami-Dade County will further consider this request and explore the potential opportunity to establish a nonstructural program working group in the future.

b. The real estate appendix, Appendix A-4 describes the Uniform Relocation Assistance Act (URA), which is planned to be implemented as a part of the Recommended Plan. The URA will likely also be implemented under the Nonstructural Program. As the Nonstructural Program develops, additional opportunities for relocation assistance may be explored, including the Temporary Relocation Assistance Pilot Program authorized in Section 8154 of the Water Resources Development Act of 2022.
c. Priority critical infrastructure was identified in coordination with the nonfederal sponsor, Miami-Dade County for the 2024 Report. Additional consideration will be given to other types of critical infrastructure as part of post WRDA-2024 efforts.
d. The authority of this study (Public Law 84-71, June 15, 1955) authorizes an examination and survey of the coastal and tidal areas where severe damage has occurred from hurricane winds and tides; therefore, the recommendation to include septic to sewer conversions is outside the scope of the current authorization. However, the conversion of septic to sewer lines is an important water quality issue that Miami-Dade County has sought to address via the Connect 2 Protect Program. For more information on this program, please refer to the website: https://www.miamidade.gov/global/water/connect-to-protect-septic-to-sewer.page.

Responses to the Question and Clarifications are provided below.

1. The Atlantic Coastline Alternative is a complex solution for managing coastal storm risk that will require considerable time and funding to evaluate in the future as part of a separate study. Coastal structures, such as those described in the Atlantic Coastline Alternative in Section 1.10, where coastal storm flooding and sea level change are potential risks to the community need to be modeled to assess their effectiveness. U.S. Army Engineer Research and Development Center (ERDC) Coastal and Hydraulics Laboratory (CHL) in partnership with the Norfolk District, USACE, will be analyzing impacts of these structures on coastal and inland inundation as well as on some environmental and navigation parameters. For CSRM features, this modeling will help determine:

a. Feasibility design heights of structures and levels of flood risk management.
b. Any potential areas of induced coastal flooding from the inclusion of the CSRM features.

c. How different CSRM features work together as a system and their regional impacts to hydrodynamic conditions during storm events.
d. If they will adversely impact the circulation and water quality within the system under non-storm conditions.

The results of this modeling effort will be available in 2025.

2. The USACE will continue integration efforts with other regional Corps studies/projects. The USACE will also continue to coordinate with other agencies, such as the South Florida Water Management District, and municipalities to ensure the integration of other relevant studies, projects, and initiatives.

3. As the project efforts advance in the future following authorization in WRDA 2024, the USACE and Miami-Dade County will develop and implement a community engagement and outreach plan to share information with residents, community members, municipalities, and interested stakeholders regarding how the components of the Recommended Plan identified in the Final Report will be implemented and the processes associated with implementation. The details of the community engagement and outreach plan will be developed in the future, however, it is anticipated that part of outreach efforts may include informing residents of potential risks, and the requirements/processes associated with elevating homes.

4. To accomplish and provide significant near-term CSRM for Miami-Dade County, the feasibility report focuses on risk management measures that can be carried forward in time for the 2024 WRDA. The USACE and Miami-Dade County intend to partner on additional studies and further analyses to continue to address the extent of existing CSRM problems in the study area. An expansion of the focus area would require additional economic modeling and analysis. Additional areas beyond the six focus areas identified in the current report would be further considered as the study team begins to scope out the efforts for potential future biennial WRDA-authorized studies in 2026 and/or 2028.

5. Table 4-1 has been updated in the Final Report to reflect that living shorelines and hybrid reef structures do satisfy the first objective of increasing resilience. Historically, incorporating NBS as a solution for managing coastal storm risk has been a challenge for feasibility studies because of the difficulty in quantifying the economic benefits associated with these measures and minimal agency guidance. Therefore,

Table 4-1 in the Final Report will continue to reflect that these measures do not achieve the second objective.

6. The proposed harbor deepening currently being considered as part of the Miami Harbor Navigation Improvement Study, is not anticipated to have an adverse effect on storm surge. It has been evaluated through detailed hindcast modeling and analyses during the feasibility study utilizing the ADCIRC / SWAN model and results show negligible changes in maximum water levels.

Miami-Dade County is a vibrant community comprised of valuable social, cultural, and environmental assets. The 2024 study effort is an interim response that seeks to advance CSRM measures towards increasing Miami-Dade County's resilience to coastal storms in the future. Thank you for your feedback on this important study and your continued coordination. If you have any additional questions, please feel free to contact Ms. Justine Woodward at (757) 201-7728 or justine.r.woodward@usace.army.mil.

Sincerely,

Sara E. Bahnson

Digitally signed by Sara E. Bahnson
Date: 2024.07.01 10:16:45 -04'00'

for Zachary P. Martin,
Chief Environmental Analysis Section
Planning and Policy Branch
Norfolk District, USACE

cc:
Angie Dunn
Chief Environmental Branch
Jacksonville District

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

July 1, 2024

Elizabeth Fata Carpenter, Esq.
Executive Director
Everglades Law Center
6815 Biscayne Blvd. Suite 103 #449
Miami, FL 33138-6292

Dear Ms. Carpenter:

Thank you for your comments submitted regarding the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Draft Integrated Feasibility Report and Environmental Assessment prepared by the U.S. Army Corps of Engineers (USACE) Norfolk District in conjunction with Miami-Dade County, the nonfederal sponsor (NFS) for the study. The purpose of this letter is to respond to your comments submitted on behalf of a coalition of non-profit organizations and advocates regarding the Draft Report received on May 23, 2024. A copy of your comments and the response included herein will also be included in the Final Report.

The following numbered list aims to address your comments and feedback in the order they were provided.

1. The authority of this study (Public Law 84-71, June 15, 1955) authorizes an examination and survey of the coastal and tidal areas where severe damage has occurred from hurricane winds and tides; as such, it is not within the study authority to address compound flooding. To date, USACE has not received an 8106(a) request from the NFS.

2. Thank you for the support of our request for a National Economic Development Policy Exemption.

3. As the project efforts advance in the future, following authorization in the Water Resources Development Act (WRDA) 2024, the USACE and Miami-Dade County will develop and implement a community engagement and outreach plan to share information with residents, community members, municipalities, and interested

stakeholders regarding how the components of the Recommended Plan identified in the Final Report will be implemented and the processes associated with implementation.

4. The Nature-Based Solutions (NBS) Pilot Program has received a tremendous amount of public support. This program will be used to identify, evaluate, implement, and monitor a diverse set of NBS pilot demonstration projects within Miami-Dade County to inform the methodology for quantitative evaluation of economic and comprehensive benefits.

a. The NBS Pilot Program, as described in Chapter 5, states that the long-term success of various adaptation strategies to address coastal storm surge risk should include a combination of both green and gray infrastructure projects that demonstrate independent utility and benefits consistent with Miami-Dade County's resilience strategy. As such, it is the intent of the NBS Pilot Program to explore and implement various NBS, potentially including hybrid features.
b. The request for congressional authorization of the NBS Pilot Program includes all program phases (Phase 1: Information/Data Collection; Phase 2: Planning, and National Environmental Policy Act Compliance, Design; and Phase 3: Implementation, and Monitoring, Evaluation, and Adaptive Management). As such, pilot projects would not need to be individually authorized by congress prior to construction, thereby increasing the efficiency of program implementation. For clarification, the 15-year timeline mentioned in the Integrated Feasibility Report/Environmental Assessment (IFR/EA) is specific to Phase 3 of an individual pilot project; this extended monitoring and adaptive management period is due to the fact that the USACE will be using the NBS Pilot Program to gain insight into how NBS perform as CSRM measures over time.
c. Based on the construction cost of similar NBS-type projects as well as estimated planning and monitoring costs, the USACE has requested congressional authorization of the program in the amount of $180 million. Although site-specific locations are not identified in the 2024 Report for the NBS Pilot Program, the study team will continue coordination efforts on this important initiative following programmatic authorization in WRDA 2024. The identification, evaluation, and National Environmental Policy Act (NEPA) compliance of site-specific pilot projects designed to mitigate for storm surge impacts will be an essential component of the next phase of the NBS Pilot Program.
d. Upon congressional approval and appropriation of the NBS Pilot Program, the USACE would follow the implementation framework outlined in Chapter 5, Section 5.5 through 5.5.5.4. Specifically, the Information/ Data Collection,

Planning, and National Environmental Policy Act Compliance Phase, will be used to identify and engage with stakeholders to identify and inform the NBS pilot project site selection process. During this time, suggestions regarding particular NBS proposed for implementation will be crucial to the development of individual pilot projects. As the NBS Pilot Program moves forward, your continued involvement will help inform future decisions jointly made by Miami-Dade County and USACE.

e. To ensure efficiency in the permitting process, the USACE plans to engage early and often with regulatory agencies with jurisdiction over particular resources that may be affected during implementation of individual pilot projects under the NBS Pilot Program. Interagency engagement opportunities will include, but may not be limited to, NEPA scoping meetings, interagency meetings, and pre-application meetings.

5. The purpose of the Miami-Dade Back Bay Nonstructural Program is to further assess, innovate, and implement nonstructural measures to vulnerable infrastructure and building for which USACE nonstructural policy is still developing. This includes multi-family housing such as four-unit dwellings, which are commonly found in Miami-Dade County's environmental justice communities. Additional infrastructure to be analyzed under the nonstructural program includes complex critical infrastructure, such as hospitals; these facilities serve the entire community and are particularly essential and vulnerable during coastal storm events.

a. During Phase 1, Planning and Environmental Compliance, of the Nonstructural Program, the USACE and Miami-Dade County will engage with the public, stakeholders, municipalities, and other interested parties to inform the alternatives and specific measures and critical infrastructure to be evaluated. To ensure equitable implementation of the NS Program, public engagement will be crucial. Engagement opportunities will include but may not be limited to, virtual and in-person NEPA scoping and public information meetings where the public can provide feedback, comments, and suggestions regarding the Nonstructural Program. Several public comments received on the Draft Report recommended a nonstructural program working group be established comprised of members from diverse backgrounds to ensure the effectiveness and equity of the project’s implementation. The USACE and Miami-Dade County will further consider this request and explore the potential opportunity to establish a nonstructural program working group in the future.

b. The real estate appendix, Appendix A-4 describes the Uniform Relocation Assistance Act (URA), which is planned to be implemented as a part of the Recommended Plan. The URA will likely also be implemented under the Nonstructural Program. As the Nonstructural Program develops, additional opportunities for relocation assistance may be explored, including the Temporary Relocation Assistance Pilot Program authorized in Section 8154 of the Water Resources Development Act of 2022.
c. Priority critical infrastructure was identified in coordination with the nonfederal sponsor, Miami-Dade County for the 2024 Report. Additional consideration will be given to other types of critical infrastructure as part of post WRDA-2024 efforts.
d. The authority of this study (Public Law 84-71, June 15, 1955) authorizes an examination and survey of the coastal and tidal areas where severe damage has occurred from hurricane winds and tides; therefore, the recommendation to include septic to sewer conversions is outside the scope of the current authorization. However, the conversion of septic to sewer lines is an important water quality issue that Miami-Dade County has sought to address via the Connect 2 Protect Program. For more information on this program, please refer to the website: https://www.miamidade.gov/global/water/connect-to-protect-septic-to-sewer.page.

Responses to the Question and Clarifications are provided below.

1. The Atlantic Coastline Alternative is a complex solution for managing coastal storm risk that will require considerable time and funding to evaluate in the future as part of a separate study. Coastal structures, such as those described in the Atlantic Coastline Alternative in Section 1.10, where coastal storm flooding and sea level change are potential risks to the community need to be modeled to assess their effectiveness. U.S. Army Engineer Research and Development Center (ERDC) Coastal and Hydraulics Laboratory (CHL) in partnership with the Norfolk District, USACE, will be analyzing impacts of these structures on coastal and inland inundation as well as on some environmental and navigation parameters. For CSRM features, this modeling will help determine:

a. Feasibility design heights of structures and levels of flood risk management.
b. Any potential areas of induced coastal flooding from the inclusion of the CSRM features.

c. How different CSRM features work together as a system and their regional impacts to hydrodynamic conditions during storm events.
d. If they will adversely impact the circulation and water quality within the system under non-storm conditions.

The results of this modeling effort will be available in 2025.

2. The USACE will continue integration efforts with other regional Corps studies/projects. The USACE will also continue to coordinate with other agencies, such as the South Florida Water Management District, and municipalities to ensure the integration of other relevant studies, projects, and initiatives.

3. As the project efforts advance in the future following authorization in WRDA 2024, the USACE and Miami-Dade County will develop and implement a community engagement and outreach plan to share information with residents, community members, municipalities, and interested stakeholders regarding how the components of the Recommended Plan identified in the Final Report will be implemented and the processes associated with implementation. The details of the community engagement and outreach plan will be developed in the future, however, it is anticipated that part of outreach efforts may include informing residents of potential risks, and the requirements/processes associated with elevating homes.

4. To accomplish and provide significant near-term CSRM for Miami-Dade County, the feasibility report focuses on risk management measures that can be carried forward in time for the 2024 WRDA. The USACE and Miami-Dade County intend to partner on additional studies and further analyses to continue to address the extent of existing CSRM problems in the study area. An expansion of the focus area would require additional economic modeling and analysis. Additional areas beyond the six focus areas identified in the current report would be further considered as the study team begins to scope out the efforts for potential future biennial WRDA-authorized studies in 2026 and/or 2028.

5. Table 4-1 has been updated in the Final Report to reflect that living shorelines and hybrid reef structures do satisfy the first objective of increasing resilience. Historically, incorporating NBS as a solution for managing coastal storm risk has been a challenge for feasibility studies because of the difficulty in quantifying the economic benefits associated with these measures and minimal agency guidance. Therefore,

Table 4-1 in the Final Report will continue to reflect that these measures do not achieve the second objective.

6. The proposed harbor deepening currently being considered as part of the Miami Harbor Navigation Improvement Study, is not anticipated to have an adverse effect on storm surge. It has been evaluated through detailed hindcast modeling and analyses during the feasibility study utilizing the ADCIRC / SWAN model and results show negligible changes in maximum water levels.

Miami-Dade County is a vibrant community comprised of valuable social, cultural, and environmental assets. The 2024 study effort is an interim response that seeks to advance CSRM measures towards increasing Miami-Dade County's resilience to coastal storms in the future. Thank you for your feedback on this important study and your continued coordination. If you have any additional questions, please feel free to contact Ms. Justine Woodward at (757) 201-7728 or justine.r.woodward@usace.army.mil.

Sincerely,

Sara E. Bahnson

Digitally signed by Sara E. Bahnson
Date: 2024.07.01 10:17:26 -04'00'

for Zachary P. Martin,
Chief Environmental Analysis Section
Planning and Policy Branch
Norfolk District, USACE

cc:
Angie Dunn
Chief Environmental Branch
Jacksonville District

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

July 1, 2024

Audrey Siu
Policy Director
Miami Waterkeeper
P.O. Box 141596
Coral Gables, FL 33114-1596

Dear Ms. Siu:

Thank you for your comments submitted regarding the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Draft Integrated Feasibility Report and Environmental Assessment prepared by the U.S. Army Corps of Engineers (USACE) Norfolk District in conjunction with Miami-Dade County, the nonfederal sponsor (NFS) for the study. The purpose of this letter is to respond to your comments submitted on behalf of a coalition of non-profit organizations and advocates regarding the Draft Report received on May 23, 2024. A copy of your comments and the response included herein will also be included in the Final Report.

The following numbered list aims to address your comments and feedback in the order they were provided.

1. The authority of this study (Public Law 84-71, June 15, 1955) authorizes an examination and survey of the coastal and tidal areas where severe damage has occurred from hurricane winds and tides; as such, it is not within the study authority to address compound flooding. To date, USACE has not received an 8106(a) request from the NFS.

2. Thank you for the support of our request for a National Economic Development Policy Exemption.

3. As the project efforts advance in the future, following authorization in the Water Resources Development Act (WRDA) 2024, the USACE and Miami-Dade County will develop and implement a community engagement and outreach plan to share information with residents, community members, municipalities, and interested

stakeholders regarding how the components of the Recommended Plan identified in the Final Report will be implemented and the processes associated with implementation.

4. The Nature-Based Solutions (NBS) Pilot Program has received a tremendous amount of public support. This program will be used to identify, evaluate, implement, and monitor a diverse set of NBS pilot demonstration projects within Miami-Dade County to inform the methodology for quantitative evaluation of economic and comprehensive benefits.

a. The NBS Pilot Program, as described in Chapter 5, states that the long-term success of various adaptation strategies to address coastal storm surge risk should include a combination of both green and gray infrastructure projects that demonstrate independent utility and benefits consistent with Miami-Dade County's resilience strategy. As such, it is the intent of the NBS Pilot Program to explore and implement various NBS, potentially including hybrid features.
b. The request for congressional authorization of the NBS Pilot Program includes all program phases (Phase 1: Information/Data Collection; Phase 2: Planning, and National Environmental Policy Act Compliance, Design; and Phase 3: Implementation, and Monitoring, Evaluation, and Adaptive Management). As such, pilot projects would not need to be individually authorized by congress prior to construction, thereby increasing the efficiency of program implementation. For clarification, the 15-year timeline mentioned in the Integrated Feasibility Report/Environmental Assessment (IFR/EA) is specific to Phase 3 of an individual pilot project; this extended monitoring and adaptive management period is due to the fact that the USACE will be using the NBS Pilot Program to gain insight into how NBS perform as CSRM measures over time.
c. Based on the construction cost of similar NBS-type projects as well as estimated planning and monitoring costs, the USACE has requested congressional authorization of the program in the amount of $180 million. Although site-specific locations are not identified in the 2024 Report for the NBS Pilot Program, the study team will continue coordination efforts on this important initiative following programmatic authorization in WRDA 2024. The identification, evaluation, and National Environmental Policy Act (NEPA) compliance of site-specific pilot projects designed to mitigate for storm surge impacts will be an essential component of the next phase of the NBS Pilot Program.
d. Upon congressional approval and appropriation of the NBS Pilot Program, the USACE would follow the implementation framework outlined in Chapter 5, Section 5.5 through 5.5.5.4. Specifically, the Information/ Data Collection,

Planning, and National Environmental Policy Act Compliance Phase, will be used to identify and engage with stakeholders to identify and inform the NBS pilot project site selection process. During this time, suggestions regarding particular NBS proposed for implementation will be crucial to the development of individual pilot projects. As the NBS Pilot Program moves forward, your continued involvement will help inform future decisions jointly made by Miami-Dade County and USACE.

e. To ensure efficiency in the permitting process, the USACE plans to engage early and often with regulatory agencies with jurisdiction over particular resources that may be affected during implementation of individual pilot projects under the NBS Pilot Program. Interagency engagement opportunities will include, but may not be limited to, NEPA scoping meetings, interagency meetings, and pre-application meetings.

5. The purpose of the Miami-Dade Back Bay Nonstructural Program is to further assess, innovate, and implement nonstructural measures to vulnerable infrastructure and building for which USACE nonstructural policy is still developing. This includes multi-family housing such as four-unit dwellings, which are commonly found in Miami-Dade County's environmental justice communities. Additional infrastructure to be analyzed under the nonstructural program includes complex critical infrastructure, such as hospitals; these facilities serve the entire community and are particularly essential and vulnerable during coastal storm events.

a. During Phase 1, Planning and Environmental Compliance, of the Nonstructural Program, the USACE and Miami-Dade County will engage with the public, stakeholders, municipalities, and other interested parties to inform the alternatives and specific measures and critical infrastructure to be evaluated. To ensure equitable implementation of the NS Program, public engagement will be crucial. Engagement opportunities will include but may not be limited to, virtual and in-person NEPA scoping and public information meetings where the public can provide feedback, comments, and suggestions regarding the Nonstructural Program. Several public comments received on the Draft Report recommended a nonstructural program working group be established comprised of members from diverse backgrounds to ensure the effectiveness and equity of the project’s implementation. The USACE and Miami-Dade County will further consider this request and explore the potential opportunity to establish a nonstructural program working group in the future.

b. The real estate appendix, Appendix A-4 describes the Uniform Relocation Assistance Act (URA), which is planned to be implemented as a part of the Recommended Plan. The URA will likely also be implemented under the Nonstructural Program. As the Nonstructural Program develops, additional opportunities for relocation assistance may be explored, including the Temporary Relocation Assistance Pilot Program authorized in Section 8154 of the Water Resources Development Act of 2022.
c. Priority critical infrastructure was identified in coordination with the nonfederal sponsor, Miami-Dade County for the 2024 Report. Additional consideration will be given to other types of critical infrastructure as part of post WRDA-2024 efforts.
d. The authority of this study (Public Law 84-71, June 15, 1955) authorizes an examination and survey of the coastal and tidal areas where severe damage has occurred from hurricane winds and tides; therefore, the recommendation to include septic to sewer conversions is outside the scope of the current authorization. However, the conversion of septic to sewer lines is an important water quality issue that Miami-Dade County has sought to address via the Connect 2 Protect Program. For more information on this program, please refer to the website: https://www.miamidade.gov/global/water/connect-to-protect-septic-to-sewer.page.

Responses to the Question and Clarifications are provided below.

1. The Atlantic Coastline Alternative is a complex solution for managing coastal storm risk that will require considerable time and funding to evaluate in the future as part of a separate study. Coastal structures, such as those described in the Atlantic Coastline Alternative in Section 1.10, where coastal storm flooding and sea level change are potential risks to the community need to be modeled to assess their effectiveness. U.S. Army Engineer Research and Development Center (ERDC) Coastal and Hydraulics Laboratory (CHL) in partnership with the Norfolk District, USACE, will be analyzing impacts of these structures on coastal and inland inundation as well as on some environmental and navigation parameters. For CSRM features, this modeling will help determine:

a. Feasibility design heights of structures and levels of flood risk management.
b. Any potential areas of induced coastal flooding from the inclusion of the CSRM features.

c. How different CSRM features work together as a system and their regional impacts to hydrodynamic conditions during storm events.
d. If they will adversely impact the circulation and water quality within the system under non-storm conditions.

The results of this modeling effort will be available in 2025.

2. The USACE will continue integration efforts with other regional Corps studies/projects. The USACE will also continue to coordinate with other agencies, such as the South Florida Water Management District, and municipalities to ensure the integration of other relevant studies, projects, and initiatives.

3. As the project efforts advance in the future following authorization in WRDA 2024, the USACE and Miami-Dade County will develop and implement a community engagement and outreach plan to share information with residents, community members, municipalities, and interested stakeholders regarding how the components of the Recommended Plan identified in the Final Report will be implemented and the processes associated with implementation. The details of the community engagement and outreach plan will be developed in the future, however, it is anticipated that part of outreach efforts may include informing residents of potential risks, and the requirements/processes associated with elevating homes.

4. To accomplish and provide significant near-term CSRM for Miami-Dade County, the feasibility report focuses on risk management measures that can be carried forward in time for the 2024 WRDA. The USACE and Miami-Dade County intend to partner on additional studies and further analyses to continue to address the extent of existing CSRM problems in the study area. An expansion of the focus area would require additional economic modeling and analysis. Additional areas beyond the six focus areas identified in the current report would be further considered as the study team begins to scope out the efforts for potential future biennial WRDA-authorized studies in 2026 and/or 2028.

5. Table 4-1 has been updated in the Final Report to reflect that living shorelines and hybrid reef structures do satisfy the first objective of increasing resilience. Historically, incorporating NBS as a solution for managing coastal storm risk has been a challenge for feasibility studies because of the difficulty in quantifying the economic benefits associated with these measures and minimal agency guidance. Therefore,

Table 4-1 in the Final Report will continue to reflect that these measures do not achieve the second objective.

6. The proposed harbor deepening currently being considered as part of the Miami Harbor Navigation Improvement Study, is not anticipated to have an adverse effect on storm surge. It has been evaluated through detailed hindcast modeling and analyses during the feasibility study utilizing the ADCIRC / SWAN model and results show negligible changes in maximum water levels.

Miami-Dade County is a vibrant community comprised of valuable social, cultural, and environmental assets. The 2024 study effort is an interim response that seeks to advance CSRM measures towards increasing Miami-Dade County's resilience to coastal storms in the future. Thank you for your feedback on this important study and your continued coordination. If you have any additional questions, please feel free to contact Ms. Justine Woodward at (757) 201-7728 or justine.r.woodward@usace.army.mil.

Sincerely,

Sara E. Bahnson

Digitally signed by Sara E. Bahnson
Date: 2024.07.01 10:18:01 -04'00'

for Zachary P. Martin,
Chief Environmental Analysis Section
Planning and Policy Branch
Norfolk District, USACE

cc:
Angie Dunn
Chief Environmental Branch
Jacksonville District

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

July 1, 2024

Marisa Carrozzo
Senior Coastal and Wildlife Program Manager
National Parks Conservation Association
4429 Hollywood Blvd.
814990
Hollywood FL, 33081-6105

Dear Ms. Carrozzo:

Thank you for your comments submitted regarding the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Draft Integrated Feasibility Report and Environmental Assessment prepared by the U.S. Army Corps of Engineers (USACE) Norfolk District in conjunction with Miami-Dade County, the nonfederal sponsor (NFS) for the study. The purpose of this letter is to respond to your comments submitted on behalf of a coalition of non-profit organizations and advocates regarding the Draft Report received on May 23, 2024. A copy of your comments and the response included herein will also be included in the Final Report.

The following numbered list aims to address your comments and feedback in the order they were provided.

1. The authority of this study (Public Law 84-71, June 15, 1955) authorizes an examination and survey of the coastal and tidal areas where severe damage has occurred from hurricane winds and tides; as such, it is not within the study authority to address compound flooding. To date, USACE has not received an 8106(a) request from the NFS.

2. Thank you for the support of our request for a National Economic Development Policy Exemption.

3. As the project efforts advance in the future, following authorization in the Water Resources Development Act (WRDA) 2024, the USACE and Miami-Dade County will develop and implement a community engagement and outreach plan to share information with residents, community members, municipalities, and interested

stakeholders regarding how the components of the Recommended Plan identified in the Final Report will be implemented and the processes associated with implementation.

4. The Nature-Based Solutions (NBS) Pilot Program has received a tremendous amount of public support. This program will be used to identify, evaluate, implement, and monitor a diverse set of NBS pilot demonstration projects within Miami-Dade County to inform the methodology for quantitative evaluation of economic and comprehensive benefits.

a. The NBS Pilot Program, as described in Chapter 5, states that the long-term success of various adaptation strategies to address coastal storm surge risk should include a combination of both green and gray infrastructure projects that demonstrate independent utility and benefits consistent with Miami-Dade County's resilience strategy. As such, it is the intent of the NBS Pilot Program to explore and implement various NBS, potentially including hybrid features.
b. The request for congressional authorization of the NBS Pilot Program includes all program phases (Phase 1: Information/Data Collection; Phase 2: Planning, and National Environmental Policy Act Compliance, Design; and Phase 3: Implementation, and Monitoring, Evaluation, and Adaptive Management). As such, pilot projects would not need to be individually authorized by congress prior to construction, thereby increasing the efficiency of program implementation. For clarification, the 15-year timeline mentioned in the Integrated Feasibility Report/Environmental Assessment (IFR/EA) is specific to Phase 3 of an individual pilot project; this extended monitoring and adaptive management period is due to the fact that the USACE will be using the NBS Pilot Program to gain insight into how NBS perform as CSRM measures over time.
c. Based on the construction cost of similar NBS-type projects as well as estimated planning and monitoring costs, the USACE has requested congressional authorization of the program in the amount of $180 million. Although site-specific locations are not identified in the 2024 Report for the NBS Pilot Program, the study team will continue coordination efforts on this important initiative following programmatic authorization in WRDA 2024. The identification, evaluation, and National Environmental Policy Act (NEPA) compliance of site-specific pilot projects designed to mitigate for storm surge impacts will be an essential component of the next phase of the NBS Pilot Program.
d. Upon congressional approval and appropriation of the NBS Pilot Program, the USACE would follow the implementation framework outlined in Chapter 5, Section 5.5 through 5.5.5.4. Specifically, the Information/ Data Collection,

Planning, and National Environmental Policy Act Compliance Phase, will be used to identify and engage with stakeholders to identify and inform the NBS pilot project site selection process. During this time, suggestions regarding particular NBS proposed for implementation will be crucial to the development of individual pilot projects. As the NBS Pilot Program moves forward, your continued involvement will help inform future decisions jointly made by Miami-Dade County and USACE.

e. To ensure efficiency in the permitting process, the USACE plans to engage early and often with regulatory agencies with jurisdiction over particular resources that may be affected during implementation of individual pilot projects under the NBS Pilot Program. Interagency engagement opportunities will include, but may not be limited to, NEPA scoping meetings, interagency meetings, and pre-application meetings.

5. The purpose of the Miami-Dade Back Bay Nonstructural Program is to further assess, innovate, and implement nonstructural measures to vulnerable infrastructure and building for which USACE nonstructural policy is still developing. This includes multi-family housing such as four-unit dwellings, which are commonly found in Miami-Dade County's environmental justice communities. Additional infrastructure to be analyzed under the nonstructural program includes complex critical infrastructure, such as hospitals; these facilities serve the entire community and are particularly essential and vulnerable during coastal storm events.

a. During Phase 1, Planning and Environmental Compliance, of the Nonstructural Program, the USACE and Miami-Dade County will engage with the public, stakeholders, municipalities, and other interested parties to inform the alternatives and specific measures and critical infrastructure to be evaluated. To ensure equitable implementation of the NS Program, public engagement will be crucial. Engagement opportunities will include but may not be limited to, virtual and in-person NEPA scoping and public information meetings where the public can provide feedback, comments, and suggestions regarding the Nonstructural Program. Several public comments received on the Draft Report recommended a nonstructural program working group be established comprised of members from diverse backgrounds to ensure the effectiveness and equity of the project’s implementation. The USACE and Miami-Dade County will further consider this request and explore the potential opportunity to establish a nonstructural program working group in the future.

b. The real estate appendix, Appendix A-4 describes the Uniform Relocation Assistance Act (URA), which is planned to be implemented as a part of the Recommended Plan. The URA will likely also be implemented under the Nonstructural Program. As the Nonstructural Program develops, additional opportunities for relocation assistance may be explored, including the Temporary Relocation Assistance Pilot Program authorized in Section 8154 of the Water Resources Development Act of 2022.
c. Priority critical infrastructure was identified in coordination with the nonfederal sponsor, Miami-Dade County for the 2024 Report. Additional consideration will be given to other types of critical infrastructure as part of post WRDA-2024 efforts.
d. The authority of this study (Public Law 84-71, June 15, 1955) authorizes an examination and survey of the coastal and tidal areas where severe damage has occurred from hurricane winds and tides; therefore, the recommendation to include septic to sewer conversions is outside the scope of the current authorization. However, the conversion of septic to sewer lines is an important water quality issue that Miami-Dade County has sought to address via the Connect 2 Protect Program. For more information on this program, please refer to the website: https://www.miamidade.gov/global/water/connect-to-protect-septic-to-sewer.page.

Responses to the Question and Clarifications are provided below.

1. The Atlantic Coastline Alternative is a complex solution for managing coastal storm risk that will require considerable time and funding to evaluate in the future as part of a separate study. Coastal structures, such as those described in the Atlantic Coastline Alternative in Section 1.10, where coastal storm flooding and sea level change are potential risks to the community need to be modeled to assess their effectiveness. U.S. Army Engineer Research and Development Center (ERDC) Coastal and Hydraulics Laboratory (CHL) in partnership with the Norfolk District, USACE, will be analyzing impacts of these structures on coastal and inland inundation as well as on some environmental and navigation parameters. For CSRM features, this modeling will help determine:

a. Feasibility design heights of structures and levels of flood risk management.
b. Any potential areas of induced coastal flooding from the inclusion of the CSRM features.

c. How different CSRM features work together as a system and their regional impacts to hydrodynamic conditions during storm events.
d. If they will adversely impact the circulation and water quality within the system under non-storm conditions.

The results of this modeling effort will be available in 2025.

2. The USACE will continue integration efforts with other regional Corps studies/projects. The USACE will also continue to coordinate with other agencies, such as the South Florida Water Management District, and municipalities to ensure the integration of other relevant studies, projects, and initiatives.

3. As the project efforts advance in the future following authorization in WRDA 2024, the USACE and Miami-Dade County will develop and implement a community engagement and outreach plan to share information with residents, community members, municipalities, and interested stakeholders regarding how the components of the Recommended Plan identified in the Final Report will be implemented and the processes associated with implementation. The details of the community engagement and outreach plan will be developed in the future, however, it is anticipated that part of outreach efforts may include informing residents of potential risks, and the requirements/processes associated with elevating homes.

4. To accomplish and provide significant near-term CSRM for Miami-Dade County, the feasibility report focuses on risk management measures that can be carried forward in time for the 2024 WRDA. The USACE and Miami-Dade County intend to partner on additional studies and further analyses to continue to address the extent of existing CSRM problems in the study area. An expansion of the focus area would require additional economic modeling and analysis. Additional areas beyond the six focus areas identified in the current report would be further considered as the study team begins to scope out the efforts for potential future biennial WRDA-authorized studies in 2026 and/or 2028.

5. Table 4-1 has been updated in the Final Report to reflect that living shorelines and hybrid reef structures do satisfy the first objective of increasing resilience. Historically, incorporating NBS as a solution for managing coastal storm risk has been a challenge for feasibility studies because of the difficulty in quantifying the economic benefits associated with these measures and minimal agency guidance. Therefore,

Table 4-1 in the Final Report will continue to reflect that these measures do not achieve the second objective.

6. The proposed harbor deepening currently being considered as part of the Miami Harbor Navigation Improvement Study, is not anticipated to have an adverse effect on storm surge. It has been evaluated through detailed hindcast modeling and analyses during the feasibility study utilizing the ADCIRC / SWAN model and results show negligible changes in maximum water levels.

Miami-Dade County is a vibrant community comprised of valuable social, cultural, and environmental assets. The 2024 study effort is an interim response that seeks to advance CSRM measures towards increasing Miami-Dade County's resilience to coastal storms in the future. Thank you for your feedback on this important study and your continued coordination. If you have any additional questions, please feel free to contact Ms. Justine Woodward at (757) 201-7728 or justine.r.woodward@usace.army.mil.

Sincerely,

Sara E. Bahnson

Digitally signed by Sara E. Bahnson
Date: 2024.07.01 10:18:44 -04'00'

for Zachary P. Martin,
Chief Environmental Analysis Section
Planning and Policy Branch
Norfolk District, USACE

cc:
Angie Dunn
Chief Environmental Branch
Jacksonville District

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

July 1, 2024

Lauren Jonaitis
Tropical Audubon Society
5530 Sunset Dr.
Miami, FL 33143-5610

Dear Ms. Jonaitis:

Thank you for your comments submitted regarding the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Draft Integrated Feasibility Report and Environmental Assessment prepared by the U.S. Army Corps of Engineers (USACE) Norfolk District in conjunction with Miami-Dade County, the nonfederal sponsor (NFS) for the study. The purpose of this letter is to respond to your comments submitted on behalf of a coalition of non-profit organizations and advocates regarding the Draft Report received on May 23, 2024. A copy of your comments and the response included herein will also be included in the Final Report.

The following numbered list aims to address your comments and feedback in the order they were provided.

1. The authority of this study (Public Law 84-71, June 15, 1955) authorizes an examination and survey of the coastal and tidal areas where severe damage has occurred from hurricane winds and tides; as such, it is not within the study authority to address compound flooding. To date, USACE has not received an 8106(a) request from the NFS.

2. Thank you for the support of our request for a National Economic Development Policy Exemption.

3. As the project efforts advance in the future, following authorization in the Water Resources Development Act (WRDA) 2024, the USACE and Miami-Dade County will develop and implement a community engagement and outreach plan to share information with residents, community members, municipalities, and interested stakeholders regarding how the components of the Recommended Plan identified in the Final Report will be implemented and the processes associated with implementation.

4. The Nature-Based Solutions (NBS) Pilot Program has received a tremendous amount of public support. This program will be used to identify, evaluate, implement, and monitor a diverse set of NBS pilot demonstration projects within Miami-Dade County to inform the methodology for quantitative evaluation of economic and comprehensive benefits.

a. The NBS Pilot Program, as described in Chapter 5, states that the long-term success of various adaptation strategies to address coastal storm surge risk should include a combination of both green and gray infrastructure projects that demonstrate independent utility and benefits consistent with Miami-Dade County's resilience strategy. As such, it is the intent of the NBS Pilot Program to explore and implement various NBS, potentially including hybrid features.
b. The request for congressional authorization of the NBS Pilot Program includes all program phases (Phase 1: Information/Data Collection; Phase 2: Planning, and National Environmental Policy Act Compliance, Design; and Phase 3: Implementation, and Monitoring, Evaluation, and Adaptive Management). As such, pilot projects would not need to be individually authorized by congress prior to construction, thereby increasing the efficiency of program implementation. For clarification, the 15-year timeline mentioned in the Integrated Feasibility Report/Environmental Assessment (IFR/EA) is specific to Phase 3 of an individual pilot project; this extended monitoring and adaptive management period is due to the fact that the USACE will be using the NBS Pilot Program to gain insight into how NBS perform as CSRM measures over time.
c. Based on the construction cost of similar NBS-type projects as well as estimated planning and monitoring costs, the USACE has requested congressional authorization of the program in the amount of $180 million. Although site-specific locations are not identified in the 2024 Report for the NBS Pilot Program, the study team will continue coordination efforts on this important initiative following programmatic authorization in WRDA 2024. The identification, evaluation, and National Environmental Policy Act (NEPA) compliance of site-specific pilot projects designed to mitigate for storm surge impacts will be an essential component of the next phase of the NBS Pilot Program.
d. Upon congressional approval and appropriation of the NBS Pilot Program, the USACE would follow the implementation framework outlined in Chapter 5, Section 5.5 through 5.5.5.4. Specifically, the Information/ Data Collection, Planning, and National Environmental Policy Act Compliance Phase, will be used to identify and engage with stakeholders to identify and inform the NBS pilot

project site selection process. During this time, suggestions regarding particular NBS proposed for implementation will be crucial to the development of individual pilot projects. As the NBS Pilot Program moves forward, your continued involvement will help inform future decisions jointly made by Miami-Dade County and USACE.

e. To ensure efficiency in the permitting process, the USACE plans to engage early and often with regulatory agencies with jurisdiction over particular resources that may be affected during implementation of individual pilot projects under the NBS Pilot Program. Interagency engagement opportunities will include, but may not be limited to, NEPA scoping meetings, interagency meetings, and pre-application meetings.

5. The purpose of the Miami-Dade Back Bay Nonstructural Program is to further assess, innovate, and implement nonstructural measures to vulnerable infrastructure and building for which USACE nonstructural policy is still developing. This includes multi-family housing such as four-unit dwellings, which are commonly found in Miami-Dade County's environmental justice communities. Additional infrastructure to be analyzed under the nonstructural program includes complex critical infrastructure, such as hospitals; these facilities serve the entire community and are particularly essential and vulnerable during coastal storm events.

a. During Phase 1, Planning and Environmental Compliance, of the Nonstructural Program, the USACE and Miami-Dade County will engage with the public, stakeholders, municipalities, and other interested parties to inform the alternatives and specific measures and critical infrastructure to be evaluated. To ensure equitable implementation of the NS Program, public engagement will be crucial. Engagement opportunities will include but may not be limited to, virtual and in-person NEPA scoping and public information meetings where the public can provide feedback, comments, and suggestions regarding the Nonstructural Program. Several public comments received on the Draft Report recommended a nonstructural program working group be established comprised of members from diverse backgrounds to ensure the effectiveness and equity of the project’s implementation. The USACE and Miami-Dade County will further consider this request and explore the potential opportunity to establish a nonstructural program working group in the future.
b. The real estate appendix, Appendix A-4 describes the Uniform Relocation Assistance Act (URA), which is planned to be implemented as a part of the Recommended Plan. The URA will likely also be implemented under the

Nonstructural Program. As the Nonstructural Program develops, additional opportunities for relocation assistance may be explored, including the Temporary Relocation Assistance Pilot Program authorized in Section 8154 of the Water Resources Development Act of 2022.

c. Priority critical infrastructure was identified in coordination with the nonfederal sponsor, Miami-Dade County for the 2024 Report. Additional consideration will be given to other types of critical infrastructure as part of post WRDA-2024 efforts.
d. The authority of this study (Public Law 84-71, June 15, 1955) authorizes an examination and survey of the coastal and tidal areas where severe damage has occurred from hurricane winds and tides; therefore, the recommendation to include septic to sewer conversions is outside the scope of the current authorization. However, the conversion of septic to sewer lines is an important water quality issue that Miami-Dade County has sought to address via the Connect 2 Protect Program. For more information on this program, please refer to the website: https://www.miamidade.gov/global/water/connect-to-protect-septic-to-sewer.page.

Responses to the Question and Clarifications are provided below.

1. The Atlantic Coastline Alternative is a complex solution for managing coastal storm risk that will require considerable time and funding to evaluate in the future as part of a separate study. Coastal structures, such as those described in the Atlantic Coastline Alternative in Section 1.10, where coastal storm flooding and sea level change are potential risks to the community need to be modeled to assess their effectiveness. U.S. Army Engineer Research and Development Center (ERDC) Coastal and Hydraulics Laboratory (CHL) in partnership with the Norfolk District, USACE, will be analyzing impacts of these structures on coastal and inland inundation as well as on some environmental and navigation parameters. For CSRM features, this modeling will help determine:

a. Feasibility design heights of structures and levels of flood risk management.
b. Any potential areas of induced coastal flooding from the inclusion of the CSRM features.
c. How different CSRM features work together as a system and their regional impacts to hydrodynamic conditions during storm events.
d. If they will adversely impact the circulation and water quality within the system under non-storm conditions.

The results of this modeling effort will be available in 2025.

2. The USACE will continue integration efforts with other regional Corps studies/projects. The USACE will also continue to coordinate with other agencies, such as the South Florida Water Management District, and municipalities to ensure the integration of other relevant studies, projects, and initiatives.

3. As the project efforts advance in the future following authorization in WRDA 2024, the USACE and Miami-Dade County will develop and implement a community engagement and outreach plan to share information with residents, community members, municipalities, and interested stakeholders regarding how the components of the Recommended Plan identified in the Final Report will be implemented and the processes associated with implementation. The details of the community engagement and outreach plan will be developed in the future, however, it is anticipated that part of outreach efforts may include informing residents of potential risks, and the requirements/processes associated with elevating homes.

4. To accomplish and provide significant near-term CSRM for Miami-Dade County, the feasibility report focuses on risk management measures that can be carried forward in time for the 2024 WRDA. The USACE and Miami-Dade County intend to partner on additional studies and further analyses to continue to address the extent of existing CSRM problems in the study area. An expansion of the focus area would require additional economic modeling and analysis. Additional areas beyond the six focus areas identified in the current report would be further considered as the study team begins to scope out the efforts for potential future biennial WRDA-authorized studies in 2026 and/or 2028.

5. Table 4-1 has been updated in the Final Report to reflect that living shorelines and hybrid reef structures do satisfy the first objective of increasing resilience. Historically, incorporating NBS as a solution for managing coastal storm risk has been a challenge for feasibility studies because of the difficulty in quantifying the economic benefits associated with these measures and minimal agency guidance. Therefore, Table 4-1 in the Final Report will continue to reflect that these measures do not achieve the second objective.

6. The proposed harbor deepening currently being considered as part of the Miami Harbor Navigation Improvement Study, is not anticipated to have an adverse effect on

storm surge. It has been evaluated through detailed hindcast modeling and analyses during the feasibility study utilizing the ADCIRC / SWAN model and results show negligible changes in maximum water levels.

Miami-Dade County is a vibrant community comprised of valuable social, cultural, and environmental assets. The 2024 study effort is an interim response that seeks to advance CSRM measures towards increasing Miami-Dade County's resilience to coastal storms in the future. Thank you for your feedback on this important study and your continued coordination. If you have any additional questions, please feel free to contact Ms. Justine Woodward at (757) 201-7728 or justine.r.woodward@usace.army.mil.

Sincerely,

Sara E. Bahnson

Digitally signed by Sara E. Bahnson
Date: 2024.07.01 10:20:25 -04'00'

for Zachary P. Martin,
Chief Environmental Analysis Section
Planning and Policy Branch
Norfolk District, USACE

cc:
Angie Dunn
Chief Environmental Branch
Jacksonville District

Miami River Commission

c/o Robert King High
1407 NW 7th Street, Office 7
Miami, Florida 33125
Office: (305) 644-0544
BrettBibeau@MiamiRiverCommission.org
www.miamirivercommission.org

May 22, 2024

Re: US Army Corps of Engineers Miami Dade County Back Bay Coastal Storm Risk Management Feasibility Study

An Army Corps of Engineers / Miami-Dade County PowerPoint, press release, feasibility study, and focus area maps were distributed and discussed at the Miami River Commission's May 6, 2024 public meeting. This Feasibility Study must be adopted by the U.S. Congress in order to become eligible for significant federal funding needed to implement the plan in order to protect the Miami River from storm risks. After becoming eligible for federal funding via adoption of this Study, then efforts may commence to secure potential funding in future Water Resources Development Acts (WRDA). The Miami River Commission has experience in this process having successfully advocated for over $40 million in previous WRDA bills to maintenance dredge the Miami River's federal navigable channel.

With thousands of new residences along the Miami River, the MRC will continue advocating for sufficient funding to protect the Miami River from the risks of storm surge

I appreciate your time and support for the Miami River District.

Sincerely,

Horacio Stuart Aguirre

Horacio Stuart Aguirre,
Chairman
Miami River Commission

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 28, 2024

Mr. Horacio Stuart Aguirre
Chairman
Miami River Commission
c/o Robert King High
1407 NW 7th St, Office 7
Miami, FL 33125-3654

Dear Mr. Aguirre:

Thank you for your comments submitted on behalf of the Miami River Commission regarding the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Draft Integrated Feasibility Report and Environmental Assessment prepared by the U.S. Army Corps of Engineers (USACE) Norfolk District in conjunction with Miami-Dade County, the nonfederal sponsor for the study. The purpose of this letter is to respond to your comments on the Draft Report received on May 22, 2024. A copy of your comments and the response included herein will also be included in the Final Report.

In your comments, you note the Miami River Commission's support for the Miami-Dade Back Bay CSRM Feasibility Study. Furthermore, you note that the MRC will continue advocating for sufficient funding to protect the Miami River from the risks of storm surge.

Thank you for your engagement and feedback on this important study. If you have any additional questions, please feel free to contact Ms. Justine Woodward at (757) 201-7728 or justine.r.woodward@usace.army.mil.

Sincerely,

Sara E. Bahnson

Digitally signed by Sara E. Bahnson
Date: 2024.06.28 11:43:04 -04'00'

for Zachary P. Martin,
Chief Environmental Analysis Section
Planning and Policy Branch
Norfolk District, USACE

cc:
Angie Dunn
Chief Environmental Branch
Jacksonville District

From:	Ruiz, Sebastian
To:	MDBB-CSRM Study
Cc:	James, Steven C.; Vogt, Victoria; DeAngelo, Jacquelyn
Subject:	[Non-DoD Source] MDBB CSRM Comments from FDOT D6
Date:	Thursday, May 23, 2024 3:07:33 PM
Attachments:	MDBB CSRM FDOT D6 Comments.docx Miami Dade Back Bay CSRM_FDOT Comments.xlsx

Good morning,

I am attaching two sets of comments for the Miami Dade County Back Bay Coastal Storm Risk Management Study from FDOT D6. We appreciate the opportunity to comment and look forward to working together in the future. Please reach out if you'd like to discuss any of the comments further.

Sebastian Ruiz
Environmental Specialist III

Planning and Environmental Management Office
Florida Department of Transportation - District 6
Adam Leigh Cann Building
1000 NW 111th Avenue, Room 6111
Miami, Florida 33172

Phone: (305) 470-5231; Fax: (305) 470-5205
E-mail: Sebastian.Ruiz@dot.state.fl.us

FDOT D6 Comments

1. Overall - Please consider justifying the text (Ctrl +J) for a neater appearance.
2. Overall - Would recommend including a glossary. Terms like "nuisance flooding" and "compound flooding" are used but not defined.
3. Overall - Make font consistent throughout document.
4. Overall - Make use of acronyms and abbreviations consistently throughout document.
5. Overall - The text switches between Sea Level Rise and Sea Level Change - one term should be used consistently.
6. Overall - Use consistent citation format throughout document.
7. Overall - Make sure spacing between paragraphs, subsections, and sections is consistent throughout document.
8. Overall - There is no mention of mitigating environmental impacts. Please include a section on how environmental impacts will be mitigated for each of the alternatives.
9. In the Executive Summary, please clarify that "The Miami-Dade County Government is the nonfederal sponsor for the study."
10. In the Executive Summary, page ES-2, correct the sentence "Miami-Dade County understands that action must be taken now to manage the growing flood risk in communities with the greatest need." No change made. It is unclear what change is needed to this sentence.
11. In the Executive Summary, page ES-3, get rid of second "integration".
12. In the Executive Summary, page ES-3, should it be "nonfederal sponsors" (plural)?
13. In the Executive Summary, page ES-3, correct spelling of "extensively".
14. In the Executive Summary, please include the acronym for Florida Department of Transportation (FDOT) and other agencies for use throughout the for use throughout the document.
15. In the Executive Summary, are statistics available for the amount of money in total trade (more recent than the 2016 statistic cited in 2019)?
16. In the Executive Summary, include source of information for the Biscayne Bay-related activities which amount to the $64 billion in economic output, etc. The term "Biscayne Bay-related activities" is vague and doesn't lend any clues to why the environment is important to our economy.
17. In the Executive Summary, spell out the first use of United States Army Corps of Engineers (USACE) and then abbreviate the rest of the document. It is abbreviated in the fifth paragraph and then spelled out in the sixth paragraph.
18. In the 6th paragraph of the Executive Summary, is Miami-Dade County made up of thousands of individual homes, businesses, and critical facilities, or millions? Maybe remove "individual homes" since this should not be grouped with "These lifeline services" referenced in the following sentence.
19. In the 6th paragraph of the Executive Summary, is Miami-Dade County made up of thousands of individual homes, businesses, and critical facilities, or millions?
20. In the 7th paragraph of the Executive Summary, spell out USGS in the first use.
21. In the 8th paragraph of the Executive Summary, why are the Category 4 and 5 hurricanes which have made landfall close to the community only referenced in the past 10 years?

22. In Section 1.4.1 - Integration with Ongoing Studies, replace the word "improving" with "enhancing".
23. In the "Tentatively Selected Plan - Nonstructural" subsection - would recommend defining what "being dry floodproofed"
24. In the "Tentatively Select Plan Costs and Benefits" section - would recommend explaining what "Project First Cost" means before providing the estimate.
25. In the "Tentatively Select Plan Costs and Benefits" section - what is a "NED Policy Exception"? Is "NED" an acronym? If so, please define.
26. In the "Potential Environmental Impacts Resulting from the Tentatively Selected Plan", please spell out the first use of "IFR/EA".
27. In the "Nonstructural Program" section - no need to use "million" after $200,000,000.00.
28. Table 1-1 - Cite source of information.
29. Figure 1-5 - Include a legend.
30. Section 1.5.1 - "Storm Damage History" - why is the information limited to 2016? Is it possible to update information for this section?
31. Section 1.5.2 - Historical Storms - In text below Figure 1-8, Reword this text or move it to a different section. The language doesn't flow, and it is confusing in its current location.
32. Table 1-6 - Format table.
33. Table 1-6 - Specify "Resist or reduce WAVE energy"
34. Section 1.10 - "Study Scope", should "Environmental Justice" be capitalized?
35. Section 3.4.4.1 - Spell out "EO" in the first use.
36. Figure 5-1 - Include a higher resolution image and correct citation.
37. Page 89 - Use of figure is redundant, can be removed.

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 28, 2024

Ms. Stacy Miller
District Six Secretary
Florida Department of Transportation
1000 N.W. 111 Avenue
Miami, Florida 33172-5800

Dear Ms. Miller:

Thank you for your agency's comments on the Miami-Dade Back Bay Coastal Storm Risk Management Draft Integrated Feasibility Report and Environmental Assessment. The purpose of this letter is to respond to your agency's comments on the Draft Report received on May 23, 2024. Please see the attached enclosure which responds to each of the comments submitted. A copy of your comments and the responses included herein will also be included in the Final Report.

Thank you for continuing to serve as a cooperating agency on this important study. If you have any questions regarding the responses, please feel free to contact Ms. Justine Woodward at (757) 201-7728 or justine.r.woodward@usace.army.mil.

Sincerely,

Sara E. Bahnson

Digitally signed by Sara E. Bahnson
Date: 2024.06.28 11:38:30 -04'00'

for Zachary P. Martin,
Chief Environmental Analysis Section
Planning and Policy Branch
Norfolk District, USACE

Enclosure

Cc:
Angie Dunn
Chief Environmental Branch
Jacksonville District

Miami-Dade County Back Bay CSRM DRAFT IFS/EA: FDOT COMMENTS

Submittal deadline: May 23, 2024

A	Administrative changes which improve readability of the document or create standardization
S	Substantive comments correcting minor content errors of more serious nature than administrative
C	Critical comments which must be addressed because the content may have negative impacts to critical infrastructure
P	Positive comment that represents FDOT interests

Comment #	Document/ Page #	Section	Comment Severity	Category (required)	Measure Type	Comment	Response
1	ES-2	ES	S	Safety / Emergency Management	Critical Infrastructure	Please consider editing the following sentence to read , "Critical facilities such as fire and police stations, wastewater water pump stations, ***evacuation routes, and the roadways and transportation infrastructure that connects them."***	change made.
2	25	1.7, Opportunities	P	Other	Critical Infrastructure	Thank you for including important transportation linkages: Problem #6. "Transportation disruptions including inundation of evacuation routes and increased risks to coastal causeways that reduce connectivity within the county" & Opportunity #4. "Reduce transportation impacts from high water events that make evacuation routes and other roadways impassable and threaten coastal causeways."	comment noted.

Comment #	Document/ Page #	Section	Comment Severity	Category (required)	Measure Type	Comment	Response
3	37	3.2	S	Other	Critical Infrastructure	Please consider editing the following sentence to read, "The Focus Areas include primarily residen□al buildings, but there are also many commercial buildings, industrial buildings, historic districts, and Miami-Dade County–designated historic sites, ***Miami-Dade County designated historic sites, and the roads and bridges that connect them all.***"	change made.
4	24	1.7	P	Other	N/A	Thank you for indentifying "*Increasing high tides and king tides resulting from sea level change result in recurrent flooding to roads …*" as one of three primary problems related to coastal storm risk that needs to be addressed. Suggest changing "roads" to "transportation systems".	change made.
5	75	4.3.6, Table 4-1	C	Other	N/A	In the table 4-1, Measure Screening, please consider Road Raising as a "Yes" for "Increase resilience by decreasing vulnerability of critical infrastructure" instead of N/A.	change made.
6	75	4.3.6, Table 4-1	C	Other	N/A	In the table 4-1, Measure Screening, indicates that road raising was screened out and not carried forward in the study. Please consider it in a future study. Catastrophic	Although road raising was screened out for the 2024 study, it may be considered in future study efforts.

Comment #	Document/ Page #	Section	Comment Severity	Category (required)	Measure Type	Comment	Response
						damage to major road corridors are a common and severe issue.	
7	70	4.2.1 Economics	S	Other	N/A	Please include a discussion of transportation systems. Please note that damage to any critical transportation corridors can have exponential economic impacts across the region due to interruption in the movement of goods and services.	Additional text discussing transportation systems has been added to Section 3.6.1.3
8	74	4.3.4	S	Safety / Emergency Management	Critical Infrastructure	The Patriot Act definition of critical infrastructure is given which includes "systems and assets," yet only "CI facilities" are mentioned for risk management. Transportation infrastructure would fall under the "systems" part of the CI definition. Please consider transportation infrastrucure for risk management.	Priority critical infrastructure was identified in coordination with the nonfederal sponsor, Miami-Dade County for the 2024 Report. Additional consideration will be given to transportation infrastructure as part of post WRDA-2024 efforts.
9	ES-4	ES-4	S	Environmental	Nonstructural	For the benefit of the reader who is not familiar with this type of work, it would be helpful to note that there are physical and non-physical non structural measures with examples of each.	The sentence was revised to read: Nonstructural measures (which can be physical or non-physical) differ from structural measures in that they focus on reducing the consequences of flooding instead of focusing on reducing the probability of flooding (USACE 2024).
10	55	3.4.6.1 Existing Conditions (Aesthetics/Visual)	A	Other	N/A	Recommend replacing "bus station" with "transit facilities" which is more comprehensive.	change made.

Comment #	Document/ Page #	Section	Comment Severity	Category (required)	Measure Type	Comment	Response
11	55	3.4.6.1 Existing Conditions (Aesthetics/Visual)	A	Other	N/A	Recommend rewording, "shipping and cruise line terminal and related loading docks" with "seaports, freight facilities and their connecting waterways" such as the Miami River.	change made.
12	55	3.4.6.1 Existing Conditions (Aesthetics/Visual)	A	Other	N/A	Recommended moving bridges after highways in this sentence, "This network includes, but is not limited to, railroads, highways, causeways, shipping and cruise line terminal and related loading docks, bridges, bus sta□ons, and airports (both civilian and military)."	change made.
13	General	ES or Introduction	C	Other	Critical Infrastructure	Please consider including information in the Executive Summary or Introduction to discuss why transportation infrastructure is not included in this study and if there are plans to study transportation infrastructure in the future.	The following sentences were added to section 4.3.4: Priority critical infrastructure was identified in coordination with the nonfederal sponsor, Miami-Dade County for this study effort. Additional consideration will be given to other types of critical infrastructure as part of future study efforts.
14	General	General	A	Other	N/A	Please continue to coordinate with the projects including but not limited to the Biscayne Bay and Southeastern Everglades Ecosystem Restoration (BBSEER), Central and Southern Florida (C&SF), Miami-Dade Coastal Storm Risk Management Project (Miami Beach Atlantic Coast only),	Coordination will continue to occur with relevant federal and state agencies regarding other project and initiates in the region.

Comment #	Document/ Page #	Section	Comment Severity	Category (required)	Measure Type	Comment	Response
						Miami Harbor Improvements Study, Key Biscayne CSRM, the Miami-Dade County Adaptation Action Areas: Feasibility Asessment and any other study that is located in the region.	
15	General	General	C	Other	Critical Infrastructure	Please consider including an evaluation of the natural geomorphology and enhancing the effectiveness of the existing change in elevation in relation to storm surge and saltwater intrustion. Protection of our freshwater resource, drinking water is a critical resource.	This may further be considered in future study efforts post WRDA 2024. There are no impacts to freshwater resources resulting from the Recommended Plan.
16	General	General	C	Other	Critical Infrastructure	Please consider Evacuation Centers, Shelters, and associated roadways that provide connectivity as critical infrastructure as these are essential during storm events.	Priority critical infrastructure was identified in coordination with the nonfederal sponsor, Miami-Dade County for the 2024 Report. Additional consideration will be given to transportation infrastructure as part of post WRDA-2024 efforts.
17	General	General	C	Other	Critical Infrastructure	Recommend adding transportation facilities as critical infrastructure, particularly the Strategic Intermodal Systems. Transportation facilities provide the connectivity between critical infrastructure and therefore should be considered as part of a network between all infrastructures.	Priority critical infrastructure was identified in coordination with the nonfederal sponsor, Miami-Dade County for the 2024 Report. Additional consideration will be given to transportation facilities as part of post WRDA-2024 efforts.

Comment #	Document/ Page #	Section	Comment Severity	Category (required)	Measure Type	Comment	Response
18	General	General	C	Other	Critical Infrastructure	Recommend including schools as critical infrastructure due to the potential of them being utilized as evacuation shelters and are critical in vulnerable areas for meal dependent communities, and are critical to the recovery of a community after a storm event.	Priority critical infrastructure was identified in coordination with the nonfederal sponsor, Miami-Dade County for the 2024 Report. Additional consideration will be given to other types of critical infrastructure as part of post WRDA-2024 efforts.
19	General	General	C	Other	Critical Infrastructure	Recommend including but not limited to the Homestead Air Force Base, U.S. Southern Command and National Guard Snake Creek Training Center and military facilities as critical infrastructure.	Priority critical infrastructure was identified in coordination with the nonfederal sponsor, Miami-Dade County for the 2024 Report. Additional consideration will be given to other types of critical infrastructure as part of post WRDA-2024 efforts.
20	General	General	C	Other	Critical Infrastructure	Please consider disaster debris management sites (DDMS), landfills, water treatment plants and sewage treatment plants and the transportation connectivity as critical infrastructure.	Priority critical infrastructure was identified in coordination with the nonfederal sponsor, Miami-Dade County for the 2024 Report. Additional consideration will be given to other types of critical infrastructure as part of post WRDA-2024 efforts.
21	General	General	C	Other	Critical Infrastructure	Please consider Hurricane Evacuation Routes as critical infrastructure as these are essential during storm events.	Priority critical infrastructure was identified in coordination with the nonfederal sponsor, Miami-Dade County for the 2024 Report. Additional consideration will be given to other types of critical infrastructure as part of post WRDA-2024 efforts.

FDOT D6 Comments

1. Overall - Please consider justifying the text (Ctrl +J) for a neater appearance. **The Report follows a Style Guide. The text will be justified for the Final Report.**
2. Overall - Would recommend including a glossary. Terms like "nuisance flooding" and "compound flooding" are used but not defined. **No change made.**
3. Overall - Make font consistent throughout document. **Report has been revised for consistency.**
4. Overall - Make use of acronyms and abbreviations consistently throughout document. **Report has been revised for consistency where appropriate.**
5. Overall - The text switches between Sea Level Rise and Sea Level Change - one term should be used consistently. **Report has been revised for consistency where appropriate. In reference to specific reports or documents, for example, Miami-Dade County's Sea Level Rise Strategy, the change was not made.**
6. Overall - Use consistent citation format throughout document. **Report has been revised for consistency.**
7. Overall - Make sure spacing between paragraphs, subsections, and sections is consistent throughout document. **Report has been revised for consistency.**
8. Overall - There is no mention of mitigating environmental impacts. Please include a section on how environmental impacts will be mitigated for each of the alternatives. **Environmental Commitments (which includes best management practices) are identified in Section 9.9.**
9. In the Executive Summary, please clarify that "The Miami-Dade County Government is the nonfederal sponsor for the study." **No change made.**
10. In the Executive Summary, page ES-2, correct the sentence "Miami-Dade County understands that action must be taken now to manage the growing flood risk in communities with the greatest need." **It is unclear what is needed to revise this sentence. No change made.**
11. In the Executive Summary, page ES-3, get rid of second "integration". **Change made.**
12. In the Executive Summary, page ES-3, should it be "nonfederal sponsors" (plural)? **Miami-Dade County is the only nonfederal sponsor for this study.**
13. In the Executive Summary, page ES-3, correct spelling of "extensively". **Change made.**
14. In the Executive Summary, please include the acronym for Florida Department of Transportation (FDOT) and other agencies for use throughout the for use throughout the document. **Change made.**
15. In the Executive Summary, are statistics available for the amount of money in total trade (more recent than the 2016 statistic cited in 2019)? **This statement referencing the Miami Customs District total trade value has been removed from the text as it was out of context with the rest of the paragraph.**
16. In the Executive Summary, include source of information for the Biscayne Bay-related activities which amount to the $64 billion in economic output, etc. The term "Biscayne Bay-related activities" is vague and doesn't lend any clues to why the environment is important to our economy. **Change made.**
17. In the Executive Summary, spell out the first use of United States Army Corps of Engineers (USACE) and then abbreviate the rest of the document. It is abbreviated in the fifth paragraph and then spelled out in the sixth paragraph. **Change made.**
18. In the 6th paragraph of the Executive Summary, is Miami-Dade County made up of thousands of individual homes, businesses, and critical facilities, or millions? Maybe remove "individual

homes" since this should not be grouped with "These lifeline services" referenced in the following sentence. **Changed text to "Lifeline services…" for clarity.**

19. In the 6th paragraph of the Executive Summary, is Miami-Dade County made up of thousands of individual homes, businesses, and critical facilities, or millions? **No change made to existing text. This text was provided by Miami-Dade County.**
20. In the 7th paragraph of the Executive Summary, spell out USGS in the first use. **Change made**.
21. In the 8th paragraph of the Executive Summary, why are the Category 4 and 5 hurricanes which have made landfall close to the community only referenced in the past 10 years? **Text has been revised to references hurricanes that have made landfall over the past several decades.**
22. In Section 1.4.1 - Integration with Ongoing Studies, replace the word "improving" with "enhancing". **No change made since enhance is previously used in the sentence.**
23. In the "Tentatively Selected Plan - Nonstructural" subsection - would recommend defining what "being dry floodproofed" No change made. **Dry floodproofing is defined in Section 4.3.2.**
24. In the "Tentatively Select Plan Costs and Benefits" section - would recommend explaining what "Project First Cost" means before providing the estimate. **No change made. Project First cost is defined in Section 9.7.**
25. In the "Tentatively Select Plan Costs and Benefits" section - what is a "NED Policy Exception"? Is "NED" an acronym? If so, please define. **Acronym has been spelled out upon first use in Executive Summary. Further discussion of NED exception is in Section 8.3 Plan Selection.**
26. In the "Potential Environmental Impacts Resulting from the Tentatively Selected Plan", please spell out the first use of "IFR/EA". **No change made. IFR/EA is spelled out in the first sentence of the Executive Summary.**
27. In the "Nonstructural Program" section - no need to use "million" after $200,000,000.00. **Text revised to $200 million.**
28. Table 1-1 - Cite source of information. **Citation added.**
29. Figure 1-5 - Include a legend. **Figure has been updated.**
30. Section 1.5.1 - "Storm Damage History" - why is the information limited to 2016? Is it possible to update information for this section? **The text and Table 1-2 include information through 2017.**
31. Section 1.5.2 - Historical Storms - In text below Figure 1-8, Reword this text or move it to a different section. The language doesn't flow, and it is confusing in its current location. **No change made. This discusses the impacts resulting from the 1926 Miami Hurricane.**
32. Table 1-6 - Format table. **Table formatting has been updated.**
33. Table 1-6 - Specify "Resist or reduce WAVE energy" **Change made.**
34. Section 1.10 - "Study Scope", should "Environmental Justice" be capitalized? **For consistency throughout document, environmental justice is not capitalized unless it is referenced to an executive order.**
35. Section 3.4.4.1 - Spell out "EO" in the first use. EO is already spelled out earlier in the chapter. **No change made.**
36. Figure 5-1 - Include a higher resolution image and correct citation. **Figure has been replaced. Citation is referenced correctly and has been added to References section.**
37. Page 89 - Use of figure is redundant, can be removed. **No change made.**

ARTHUR NORIEGA V
City Manager

May 23, 2024

U.S. Army Corps of Engineers Norfolk District
c/o Justine Woodward
803 Front St.
Norfolk, Virginia 23510

Subject: Comments from the City of Miami, FL on the April 2024 Draft Integrated Feasibility Report/Environmental Assessment for the Miami-Dade County Back Bay CSRM Feasibility Study

Dear Ms. Woodward,

The City of Miami has reviewed the U.S. Army Corps of Engineers (USACE) Draft Integrated Feasibility Report/Environmental Assessment for the Miami-Dade County Back Bay Coastal Storm Risk Management (CSRM) Feasibility Study, released April 23, 2024, and acknowledges the Tentatively Selected Plan (TSP) includes Non-structural measures, the elevation of approximately 2,100 residential buildings (single-family homes and multi-family buildings with 4 or fewer units) and dry floodproofing approximately 400 non-residential buildings and 27 critical infrastructure facilities. The TSP also includes requests for programmatic authorizations to implement two pilot programs, a different Non-structural program that will focus on analysis, design, and implementation of nonstructural measures to protect multi-family buildings with more than 4 units as well as hospitals and a Nature-based solutions program that will focus on analysis, design, and implementation of green and gray infrastructure solutions to help quantify benefits of Nature-based solutions. There are six Focus Areas in the TSP which include Aventura, Biscayne Canal, Cutler Bay, Little River, Miami River, North Beach, and South Beach. Of these, the entirety of the Miami River Focus Area is within the City of Miami and a portion of the Little River Focus Area is within the City of Miami.

The City of Miami is the largest municipality of the 34 municipalities in Miami-Dade County and is considered the urban core of the County. The City is home to half a million residents with a median household income of $60,989, compared to $67,263 in Miami-Dade County and the national average of $74,755 (2022 American Community Survey). Over 69% of Miami's residents classify as low-to-moderate income with 30% of these residents owning a home in the City. This in turn means 70% of residents are renters.

While Miami is enjoying an economic renaissance, it is also marked by lagging wage growth, surging residential rents, and a shortage of affordable and workforce housing. The neighborhoods located in the Miami River and Little River Focus Areas are experiencing this

affordability reality. In the Miami River Focus Area and the portion of the Little River Focus Area that is located within the City of Miami, the outcomes are staggering:

CDC Social Vulnerability 2020 Statistics	Miami River Focus Area	Little River Focus Area (census track located within City)
Average percentage of housing cost-burden occupied housing units with annual income less than $75,000 (30%+ of income spent on housing costs)	56.2%	68.6%
Average percentage of persons below 150% poverty	51.8%	43.9%
Average unemployment rate	6.3%	6.2%
Average Percentage of single parent households with children under 18	10.9%	13.5%
Average Percentage minority:	90.7%	99.1%
Average Percentage of households with no vehicle available	35.1%	25.9%

This affordability context is described in the City of Miami's comments on the 2024 Draft Integrated Feasibility Report/Environmental Assessment for the Miami-Dade County Back Bay CSRM Feasibility Study.

City of Miami Comments on the 2024 Draft Integrated Feasibility Report/Environmental Assessment for the Miami-Dade County Back Bay CSRM Feasibility Study

Equity Regarding Non-structural Residential Units

The City of Miami commends USACE for focusing on alleviating environmental justice inequities and prioritizing underserved communities in the TSP. However, protection of City of Miami residents and assets in the Focus Areas within the City appears to be limited from the plan's inclusion of only single-family homes and multi-family buildings with 4 or fewer units in the Non-structural residential solutions.

Multi-family Residential Buildings with Greater than 4 Units

For residential structures, the TSP focuses on single-family homes and multi-family buildings with 4 and fewer units. The Miami River Focus Area contains a sizable number of multi-family buildings with greater than 4 units that serve as naturally occurring affordable housing in the City. With over half of the residents in the focus area experiencing housing cost-burden, it's imperative that this type of housing is preserved and kept affordable.

The Miami River Focus Area shows the second highest storm surge wave height in the report (second only to the southernmost Focus Area, Cutler Bay, that is located directly on Biscayne Bay). The storm surge will rush up the Miami River at 11.1 feet NAVD88 water surface elevation and will inundate the Miami River Focus Area, namely Little Havana and the Health District. Residents living in multi-family residential buildings with greater than 4 units will not be protected from storm surge under the 2024 TSP. This excludes a substantial portion of the Focus Area. The City understands that USACE is not familiar with elevating this structure type and is requesting authorization of a Non-structural pilot program for analysis, design, and

implementation of Non-structural measures to protect multi-family buildings with more than 4 units as well as hospitals. The City strongly recommends that this new pilot program be authorized, as it highlights the fact that these types of residential buildings remain unprotected in the meantime.

Implementation of Home Elevations

The City understands that the Non-structural program for residential buildings includes buildings identified by USACE through elevation certificates and estimated first floor elevations where elevation certificates were not available. The buildings that were identified will have the opportunity to voluntarily participate in the program. Participation by building owners will be based on a few factors.

Building Inspections

One factor includes the requirement of a building inspection, conducted by USACE, to assess the structural integrity of the building and ensure that it does not have signs of actual or potential significant structural defects, distress, or failure. This includes no water or insect damage to wood framing. Through the City's various home rehabilitation programs that provide financial assistance to homeowners seeking to improve the condition of their homes, such as replacing roofs and installing impact windows and doors, the City has seen that some properties, while initially eligible, were not able to move forward due to extensive termite damage to the trusses in the homes. Termites are prevalent in southeast Florida and many homes are affected, with tenting needed at regular intervals to prevent and eradicate infestations. Tenting is costly, approximately $2,000, and many low to middle-income or fixed income homeowners are not able to afford this measure, causing their homes to sustain structural damage from termites. The City foresees a number of homes in the Miami River and Little River Focus Areas within the TSP to have these issues. Additionally, it is important to consider that the exclusion of properties with such damages would predominantly benefit upper-income homeowners, who are more likely to afford the necessary termite prevention and remediation measures. This inadvertently disadvantages low-income homeowners, further widening the gap in housing equity.

Building Code Compliance

USACE also ensures that the building complies with the building code and floodplain management codes under which the building was originally permitted prior to determining if the building can be elevated. As elevating a structure would require a permit, it will most likely trigger the substantial improvement requirements in the City of Miami. Although the USACE proposed NAVD88 heights are generally higher than the minimum standards in Miami, it would still require compliance of the Florida Building Code, Existing Buildings, and depending on the use or amount of units, it must comply with the Section 1612 or Section R322 of the Florida Building Code. These compliance costs must be considered by a homeowner prior to participation in the program.

Relocation Costs

During elevation, residents will be required to temporarily relocate during construction and restricted use of residences may occur. Homeowners who choose to participate and have their buildings elevated are not compensated for the temporary relocation costs. This will likely present a hardship to the homeowners, many who are lower or fixed income, in the Focus Areas.

Tenants however, can be reimbursed through the program. Many of the residents within the City of Miami do not own the home in which they reside and are tenants. The TSP includes that in Section 11 Uniform Relocation Assistance (Public Law 91-646), the cost incurred by the Non-federal sponsor to provide temporary relocation assistance is part of its Lands, Easements, Rights-Of-Way And Relocations, And Disposal Areas (LERRD) responsibilities and is incorporated into the overall costs of the TSP.

Elevate vs Rebuild

With many of the structural challenges of buildings and the income challenges of residents in the Focus Areas located in the City of Miami as outlined above, the City strongly recommends considering alternative approaches to ensure consideration of rebuilding new affordable housing in lieu of elevating current multi-family buildings.

Rebuilding will enable the ability to increase affordable and workforce housing while both keeping the cultural character of the community and building for future sea level rise and hurricanes. This approach will benefit this area economically and provide the best level of protection from storm surge. Currently, the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Grant Program (HMGP) funds mitigation reconstruction that reconstructs a damaged dwelling on an elevated foundation to prevent and reduce future flood losses. While this funding is available after a presidentially-declared disaster, this policy lever to mitigate future disaster should be considered as an alternative in this program, especially if it is found to be a more cost-effective and feasible alternative than the current recommendations.

The City recognizes that building new buildings rather than rehabilitating existing buildings will take a longer timeframe to complete and that relocation costs for affected tenants will need to be taken into account. The City strongly recommends that this strategy be considered, determining if this approach will be more cost effective than the current approach, and assessing the economic development value this could bring to the Focus Areas.

Critical Infrastructure

The City understands that three critical assets were identified in the City for dry floodproofing, two of which are owned by the City (City of Miami Department of Fire & Rescue Station #3 and the Emergency Operations Center (EOC) / City of Miami Department of Police Station) and one is located in the City and owned and operated by Miami-Dade County (WASD Pump Station 1 (4th St)). The City appreciates the inclusion of critical assets within the City and will determine the efficacy of floodproofing these structures at a time closer to plan implementation. Factors the City will consider are if the buildings have been recently hardened to strengthen resilience from hurricanes and if there is a potential for those building functions to change locations within the City. The Participation Agreement and restrictive covenants will need to be reviewed prior to Non-structural measures being implemented.

Financial Responsibility

Municipal Financial Responsibility

The City of Miami understands that the financial responsibility for implementation of the Selected Plan is with the Non-Federal Sponsor and that USACE does not expect, nor will accept, funds from any City for this effort.

The City of Miami understands that remaining funding under the existing authority to develop this 2024 TSP can be utilized to expand on the TSP and develop additional measures of multiple lines of defense that can be protective of the Back Bay. The City does not believe another authority, similar to how the Key Biscayne CSRM Study was developed, is warranted to focus on specific Focus Areas.

Private Property Financial Responsibility

The City requests successful practices USACE has seen, and/or a series of charettes focused on identifying actionable solutions, on how to alleviate homeowner financial challenges for Non-structural elevation programs that occur in low-income, underserved communities. This includes ways to fund the costs to:

- Repair the structural integrity of buildings (due to termite damage, etc.)
- Bring homes up to City Code (due to making substantial improvements, etc.)
- Temporarily relocate (for homeowners)

Pilot Programs

Non-Structural Pilot Program

The City agrees that there is a need to address multi-family residential buildings greater than 4 units. This building type is prevalent in the Focus Areas within the City of Miami.

Nature-Based Solutions Pilot Program

The City agrees that there is a need to incorporate Nature-based solutions as a protection measure for the Miami-Dade County Back Bay. The City incorporates Nature-based solutions along with grey infrastructure as part of shoreline protection and stormwater management infrastructure and welcomes using nature as natural protection.

Multiple Lines of Defense

The City of Miami agrees with USACE that multiple lines of defense are needed for protection from storm surge. The City encourages USACE to incorporate multiple lines of defense solutions to offer each Focus Area the necessary protection to prevent loss of life and loss of economic activity. The current TSP does not offer multiple lines of defense to the Miami River Focus Area or the Little River Focus Area and, without additional subsidy during program implementation, will only offer protection to those who have the ability to pay for the protection.

Thank you for your attention and consideration,

Arthur Noriega, V
City Manager
City of Miami

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 28, 2024

Arthur Noriega, V
City Manager
Office of the City Manager
P.O. Box 330708
Miami, FL 33233-0708

Dear Mr. Noriega:

Thank you for your comments submitted on behalf of the City of Miami regarding the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Draft Integrated Feasibility Report and Environmental Assessment prepared by the U.S. Army Corps of Engineers (USACE) Norfolk District in conjunction with Miami-Dade County, the nonfederal sponsor (NFS) for the study. The purpose of this letter is to respond to your comments on the Draft Report received on May 23, 2024. A copy of your comments and the response included herein will also be included in the Final Report.

To accomplish and provide significant near-term CSRM for Miami-Dade County, the feasibility report focuses on risk management measures that can be carried forward in time for the 2024 Water Resources Development Act (WRDA). The USACE and Miami-Dade County intend to partner on additional studies and further analyses to continue to address the extent of existing CSRM problems in the county.

We acknowledge your support for the Nonstructural Program and its importance for evaluating CSRM for large, multi-family units. As your letter indicates, multi-family residential buildings are prevalent in Little Havana and the Health District, which are included in the Miami River Focus Area. Additionally, several public comments received on the Draft Report recommended a nonstructural program working group be established, comprised of members from diverse backgrounds, to ensure the effectiveness and equity of the project's implementation. The USACE and Miami-Dade County will further consider this request and explore the potential opportunity to establish a nonstructural program working group in the future.

We further acknowledge your comments regarding the need for building inspections, building code compliance requirements, and relocation costs in regard to the implementation of home elevations. Your letter recommends further consideration of alternative approaches, such as rebuilding, in lieu of residential building elevations. At this time, USACE is not authorized to consider rebuilding residential buildings as an alternative to elevating them though we do recognize these needs as problems to solve to ensure fair and equitable implementation of nonstructural measures.

As the project efforts advance in the future, following authorization in WRDA 2024, the USACE and Miami-Dade County will develop and implement a community engagement and outreach plan to share information with residents, community members, municipalities, and interested stakeholders regarding how the components of the Recommended Plan identified in the Final Report will be implemented (i.e., home elevations) and the processes associated with implementation.

We appreciate your acknowledgement of the need for the Nature-Based Solutions (NBS) Pilot Program, Nonstructural Program, and a multiple lines of defense strategy to manage coastal storm risk. Furthermore, as study efforts continue post WRDA-2024, the USACE and Miami-Dade County will continue to collaborate with municipalities and other stakeholders to further identify and evaluate potential CSRM solutions in consideration of the three pillars identified in the Comprehensive Study Framework in Section 2 of the Final Report.

Miami-Dade County is a vibrant community comprised of valuable social, cultural, and environmental assets. The 2024 study effort is an interim response that seeks to advance CSRM measures towards increasing Miami-Dade County's resilience to coastal storms in the future. Thank you for your feedback on this important study. If you have any additional questions, please feel free to contact Ms. Justine Woodward at (757) 201-7728 or justine.r.woodward@usace.army.mil.

Sincerely,

Sara E. Bahnson

Digitally signed by Sara E. Bahnson
Date: 2024.06.28 11:37:20 -04'00'

for Zachary P. Martin,
Chief Environmental Analysis Section
Planning and Policy Branch
Norfolk District, USACE

cc:
Angie Dunn
Chief Environmental Branch
Jacksonville District

FISHER ISLAND
COMMUNITY ASSOCIATION

May 23, 2024

US Army Corps of Engineers
Environmental Analysis Section, Norfolk District
803 Front Street
Norfolk, Virginia 23510
C/O: Justine Woodward
Via email: mdbb-csrmstudy@usace.army.mil

Re: USACE Back Bay Coastal Storm Risk Management Feasibility Study

Dear USACE,

Fisher Island Community Association (FICA) welcomes the opportunity to provide input into the USACE Miami-Dade County Back Bay Coastal Storm Risk Management Feasibility Study, Draft Integrated Feasibility Report and Environmental Assessment, April 2024 (Feasibility Study) and looks forward to collaborating with the USACE and Miami-Dade County towards selection of a viable resilient strategy to ensure a resilient future for all communities along Biscayne Bay. We recognize the change in direction from the previous Feasibility Study and hope to participate in the mitigation of flood risk through nature-based solutions, such as the beach system along Fisher Island. Please consider this letter as FICA's formal comments to the April 2024 Feasibility Study. FICA looks forward to receipt of USACE responses to these comments.

1. Elevation and Floodproofing of residences and critical facilities
    a. Ensure Miami-Dade County critical facilities on Fisher Island are included as part of the Feasibility Study. For example, Miami-Dade County Fire Rescue Firehouse 42 is located on Fisher Island.

2. Nature-Based Solutions Pilot Program
    a. Ensure the Nature Based Solutions Pilot Program projects maximize protection opportunities for all areas of the County and not only small regions of the County.
    b. Further define potential locations for the nature based solutions and indicate how they will protect Miami-Dade County.

c. Provide offshore structures that can mitigate impacts to coastal areas, enhance marine habitat, and alleviate potential impacts from waves to the coastal community.
d. Ensure that the Nature Based Solutions do not adversely affect Fisher Island Ferry service navigation routes during and after construction. The ferry service runs 24/7 and is the sole means of transportation for residents and provisioning for the Island.
e. Mitigate all direct and indirect environmental and hydrological impacts that may result from the proposed Nature Based Solutions and ensure water quality is not negatively impacted as a result of the proposed projects.
f. Provide information relative to anticipated cost sharing for construction, maintenance, and mitigation of impacts to marine resources resulting from the nature-based solutions projects.
g. Ensure the beach system on Fisher Island is considered a potential nature based solution as part of the multiple lines of defense approach outlined in the Feasibility Study.

3. Nonstructural Program
    a. Ensure the nonstructural program is applicable to all communities and residents within Miami-Dade County.

FICA is available to discuss the recommendations detailed herein with USACE and Miami-Dade County at your convenience. We look forward to providing additional input, as well as working with USACE and Miami-Dade County to identify resilient solutions for the future.

Sincerely,

Robert Sosa
President and Chief Executive Officer

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 28, 2024

Robert Sosa
President and Chief Executive Officer
Fisher Island Community Association
One Fisher Island Drive
Fisher Island, Florida 33109-0001

Dear Mr. Sosa:

Thank you for your comments submitted regarding the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Draft Integrated Feasibility Report and Environmental Assessment prepared by the U.S. Army Corps of Engineers (USACE) Norfolk District in conjunction with Miami-Dade County, the nonfederal sponsor (NFS) for the study. The purpose of this letter is to respond to your comments on the Draft Report received on May 23, 2024. A copy of your comments and the response included herein will also be included in the Final Report.

Priority critical infrastructure was identified in coordination with Miami-Dade County's Office of Resilience for the 2024 Report. Additional consideration will be given to other types of critical infrastructure as part of post WRDA 2024 study efforts. Proposed measures considered in the future must prioritize coastal storm risk management. In light of this, however, consideration may be given CSRM measures that also provide health, safety, and welfare access and amenities for residents as well as enhancing green infrastructure projects.

Although site-specific locations are not identified in the 2024 Report for the Nature-Based Solutions (NBS) Pilot Program; the study team will continue coordination efforts on this important initiative following programmatic authorization in WRDA 2024. The identification, evaluation, and National Environmental Policy Act (NEPA) compliance of site-specific pilot projects designed to mitigate for storm surge impacts will be an essential component of the next phase of the NBS Pilot Program. We acknowledge your recommendation to consider the beach system on Fisher Island as a potential NBS location. Future NEPA documentation will evaluate potential beneficial and adverse impacts of site-specific pilot projects to environmental and socioeconomic resources as well as navigation. Avoidance and minimization of resource impacts, including navigation, will be considered in the identification of site-specific pilot projects. Additionally, mitigation requirements will be identified in the future, where applicable.

An additional section, Section 5.7, Cost Sharing, has been added to the Final Report. The cost-share requirements for the proposed NBS Pilot Program are anticipated to adhere to the standard provisions set forth in Section 103 of the WRDA of 1986, P.L. 99-662 (33 U.S.C. § 2213), as amended. For projects using nonstructural, natural, or nature-based features, 33 U.S.C. § 2213(b)(1) states that the non-Federal share of the cost of a flood risk

management or hurricane and storm damage risk management measure using a nonstructural feature or a natural feature or nature-based solution, shall be 35 percent of the cost of such measures. The non-Federal interests for any such measures shall be required to provide all lands, easements, rights-of-way, dredged material disposal areas, and relocations necessary for the project.

The purpose of the Miami-Dade Back Bay Nonstructural Program is to further assess, innovate, and implement nonstructural measures to vulnerable infrastructure and buildings for which USACE nonstructural policy is still developing, specifically measures for multifamily housing and complex hospital facilities. During Phase 1, Planning and Environmental Compliance, of the Nonstructural Program, the USACE and Miami-Dade County will engage with the public, stakeholders, municipalities, and other interested parties to inform the alternatives and specific measures and critical infrastructure to be evaluated. To ensure equitable implementation of the Nonstructural Program, public engagement will be crucial. Engagement opportunities will include but may not be limited to, virtual and in-person NEPA scoping and public information meetings where the public can provide feedback, comments, and suggestions regarding the Nonstructural Program. Several public comments received on the Draft Report recommended a nonstructural program working group be established comprised of members from diverse backgrounds to ensure the effectiveness and equity of the project's implementation. The USACE and Miami-Dade County will further consider this request and explore the potential opportunity to establish a nonstructural program working group in the future.

Miami-Dade County is a vibrant community comprised of valuable social, cultural, and environmental assets. The 2024 study effort is an interim response that seeks to advance CSRM measures towards increasing Miami-Dade County's resilience to coastal storms in the future. Thank you for your feedback on this important study. If you have any additional questions, please feel free to contact Ms. Justine Woodward at (757) 201-7728 or justine.r.woodward@usace.army.mil.

Sincerely,

Sara E. Bahnson

Digitally signed by Sara E. Bahnson
Date: 2024.06.28 11:39:54 -04'00'

for Zachary P. Martin,
Chief Environmental Analysis Section
Planning and Policy Branch
Norfolk District, USACE

cc:
Angie Dunn
Chief Environmental Branch
Jacksonville District

Friends of Biscayne Bay

1277 NE 79th St,

Miami, FL 33138-4206

May 23rd, 2024

Ms. Justine Woodward
U.S. Army Corps of Engineers
Norfolk District
803 Front St
Norfolk, VA 23510

Via email: MDBB-CSRMStudy@usace.army.mil

RE: Comments on USACE Back Bay Coastal Storm Risk Management Draft Integrated Feasibility Report and Environmental Assessment Statement

Dear Ms. Woodward,

Biscayne Bay is the blue heart and the ecological jewel of Miami-Dade County (MDC), which serves as a key economic and cultural asset, providing an astounding $64 billion in economic output, $24 billion in income, 448,000 jobs, and $4 billion in tax revenue for the County, accounting for 12.8% of the County's income and 24.4% of the County's employment. It is also a central component of South Florida's ecological heritage, and as such must be prioritized and we must strive to protect and preserve Biscayne Bay as a key priority. For about 20 years the Friends of Biscayne Bay (FOBB) has made it our mission to help preserve the ecological health of this unique system for future generations. Our mission has never been more important than at the present moment, as our bay faces both unprecedented threats and exciting new opportunities to turn the page on decades of mismanagement.

Upon publication of the Recommended Plan in 2021 by the Army Corps following the conclusion of the original Back Bay Coastal Storm Risk Management (CSRM) Feasibility Study, FOBB, along with other environmental groups and County residents expressed major concerns over the recommended features and the proposed way forward, putting the study on hold. Some of the objections previously highlighted by FOBB included under-utilization of Natural and

Nature-Based Features (NNBF's) advocated for by the public, lack of integration with other ongoing flood mitigation and/or restoration projects (e.g. Comprehensive Everglades Restoration Project [CERP] or Central & South Florida Flood Resiliency Study), proposed structural features which would directly impact Biscayne Bay's fragile aquatic ecosystem (e.g. floodwall impacts on benthic communities) and well as issues related to compound flooding and environmental injustice.

Following the re-initiation of the study we were pleased to see significantly improved degree of collaboration between the Army Corps and the County staff, municipalities and residents throughout the study period and we feel that the current Tentatively Selected Plan (TSP) has adequately addressed a lot of the concerns identified with the first iteration in 2021. While we continue to hold some reservations regarding optimal implementation of the project features within portions of the County, we are pleased that project planners will provide the opportunity for continued input from stakeholders through comprehensive planning strategy paired with phased implementation.

On behalf of our entire organization, we are excited to see continued emphasis placed on the concept of multiple lines of defense and increased utilization of natural and nature-based solutions (NBS) for storm surge management. NNBF's continue to receive overwhelming support from community members, environmental professionals and private business owners, and County Department of Environmental Resource Management (DERM) has already identified multiple areas throughout MDC with excellent opportunities for NBS deployment (e.g. North Cutler wetland restoration, Legion/Baywood Parks Living Shoreline, multiple lines of defense addressing vulnerabilities of the Julia Tuttle Causeway, etc.). The proposed Nature-Based Solutions (NBS) Pilot Program intended to test a suite of demonstration projects designed to inform a greater understanding of how NBS reduce coastal storm damage to property and infrastructure is an incredible addition to this project, which may also prove essential in advancing several current and pending local environmental projects. We would like to offer our full support and cooperation in both, the (NBS) Pilot Program as well as the Nonstructural Pilot Program, latter intended to help develop and implement nonstructural measures for which USACE policy guidance and implementation practices are still developing.

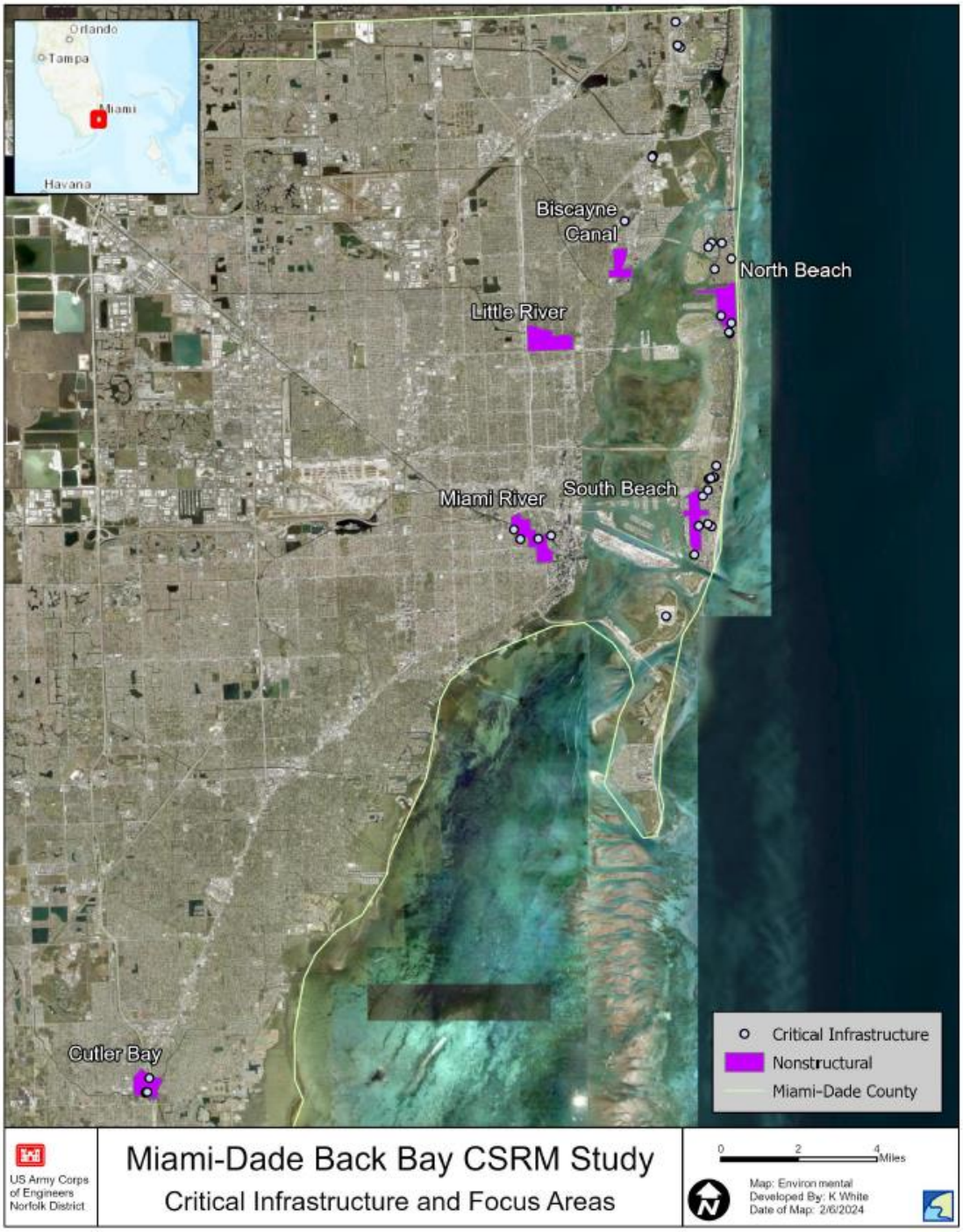


Figure 1-13. Critical Infrastructure and Focus Areas

On behalf of our entire network of members and partners, we would also like to express our appreciation for the renewed focus on integration of multiple on-going and recently authorized projects in South Florida, as building true resilience requires coordination of efforts at all government levels. Given that currently the Army Corps are engaged in one of the if not the largest number of ongoing studies in Miami-Dade County than in any other local government jurisdiction in the United States – we are glad to see Back Bay CSRM planners responding by incorporating projects to simultaneously achieve multiple objectives. Not only will this strengthen the overall impact of each individual project but will also streamline funding utilization.

We maintain that avoiding damage to Biscayne Bay's delicate ecology should be a top priority for the project delivery team, and we are happy to see project managers be more responsive to stakeholder input. If we fail to implement the project in an environmentally sustainable way – we may tip already fragile ecological health of Biscayne Bay to the brink.

Thank you for the opportunity to review and comment on Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study Draft Integrated Feasibility Report and Environmental Assessment. Please feel free to contact us so that we may stay involved in helping to formulate a locally formulated final plan.

Sincerely,

Bruce Matheson
President
Friends of Biscayne Bay

Laura Reynolds
Past Vice President and Advisor
Friends of Biscayne Bay

cc: Miami-Dade County Mayor Daniella Levine-Cava- mayor@miamidade.gov
Miami-Dade County Chairman Oliver G. Gilbert, III (District 1) - district1@miamidade.gov
Miami-Dade County Commissioner Marleine Bastien (District 2) - district2@miamidade.gov
Miami-Dade County Commissioner Keon Hardemon (District 3) - district3@miamidade.gov
Miami-Dade County Commissioner Micky Steinberg (District 4) - district4@miamidade.gov
Miami-Dade County Commissioner Eileen Higgins (District 5) - district5@miamidade.gov
Miami-Dade County Commissioner Kevin M. Cabrera (District 6) - district6@miamidade.gov
Miami-Dade County Commissioner Raquel A. Regalado (District 7) - district7@miamidade.gov
Miami-Dade County Commissioner Danielle Cohen Higgins (District 8) -district8@miamidade.gov
Miami-Dade County Commissioner Kionne L. McGhee (District 9) - district9@miamidade.gov
Miami-Dade County Vice Chairman Anthony Rodriguez (District 10) - district10@miamidade.gov
Miami-Dade County Commissioner Roberto J. Gonzalez (District 11) - district11@miamidade.gov
Miami-Dade County Commissioner Juan Carlos Bermudez (District 12) - district12@miamidade.gov
Miami-Dade County Commissioner René Garcia (District 13) - district13@miamidade.gov

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 28, 2024

Bruce Matheson
President
Laura Reynolds
Past Vice President and Advisor
Friends of Biscayne Bay
1277 NE 79th St.
Miami, FL 33138-4206

Dear Mr. Matheson and Ms. Reynolds:

Thank you for your comments submitted on behalf of Friends of Biscayne Bay regarding the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Draft Integrated Feasibility Report and Environmental Assessment prepared by the U.S. Army Corps of Engineers (USACE) Norfolk District in conjunction with Miami-Dade County, the nonfederal sponsor (NFS) for the study. The purpose of this letter is to respond to your comments on the Draft Report received on May 23, 2024. A copy of your comments and the response included herein will also be included in the Final Report.

We appreciate your expressed support for the Nature-Based Solutions (NBS) Pilot Program and the Nonstructural Program. Although site-specific locations are not identified in the 2024 Report for the NBS Pilot Program, the study team will continue coordination efforts on this important initiative following programmatic authorization in WRDA 2024. The identification, evaluation, and National Environmental Policy Act (NEPA) compliance of site-specific pilot projects designed to mitigate for storm surge impacts will be an essential component of the next phase of the NBS Pilot Program. Future NEPA documentation will evaluate potential beneficial and adverse impacts of site-specific pilot projects to environmental and socioeconomic resources. We acknowledge your comment stating that ‘avoiding damage to Biscayne Bay’s delicate ecology should be a top priority for the project delivery team.’ Coordination with federal, state, and local agencies, and many stakeholders will further inform the avoidance and minimization of valuable resource impacts in the future identification of site-specific pilot projects.

Miami-Dade County is a vibrant community comprised of valuable social, cultural, and environmental assets. The 2024 study effort is an interim response that seeks to advance CSRM measures towards increasing Miami-Dade County’s resilience to coastal storms in the future.

Thank you for your feedback on this important study. If you have any additional questions, please feel free to contact Ms. Justine Woodward at (757) 201-7728 or justine.r.woodward@usace.army.mil.

Sincerely,

Sara E. Bahnson

Digitally signed by Sara E. Bahnson
Date: 2024.06.28 11:41:19 -04'00'

for Zachary P. Martin,
Chief Environmental Analysis Section
Planning and Policy Branch
Norfolk District, USACE

cc:
Angie Dunn
Chief Environmental Branch
Jacksonville District

savinomiller
DESIGN STUDIO
LANDSCAPE ARCHITECTURE | URBAN DESIGN | ARCHITECTURE

Good afternoon,

On behalf of Savino & Miller Design Studio, we are excited to express support for the project, and provide suggestions regarding the April 2024 Back Bay Study Report that is currently under consideration for inclusion in the Water Resource Development Act.

As Miami Beach residents and professionals working in South Florida, we have seen first-hand the impacts of king tide flooding, heavy rains, storm surge and sea-level rise on our coastal region. Additionally, our professional practice has lent us insight into community issues and goals, the regulatory environment surrounding resilience infrastructure projects, and the opportunities for equitable and resilient design solutions.

We are encouraged to see that the Back Bay study has adjusted ~~its~~ course to include more green infrastructure elements. However, we would like to reiterate the importance of specific solutions and considerations that may contribute to the plan:

- Comprehensive Benefit Analysis of Nature Based Solutions (NBS) – We believe after many years of advocating for green infrastructure solutions in public spaces, that NBS in public spaces often provide a public amenity alongside its resiliency benefits. This project should prioritize the analysis of such benefits on economic and social benefits in the area.

- Street Raising - Adopt a streetscape strategy to raise streets from 12” – 18” per phase, commensurate to their anticipated “lifespan” of 25-30 years, and in concert with adjacent properties and building floor levels that anticipate sea level rise projections. Gradual raising of streets will lessen issues of “harmonization” and flooding on private property.

- Prioritization of Pervious Pavement Systems - In concert with the street-raising strategy, streetscape design shall consider the replacement of non-pervious fossil-fuel based asphalt roadway surfaces to roadways with a pervious concrete paver system. These concrete pavers are locally manufactured and can be reclaimed when the roadway is raised again. This is especially relevant in low-lying, flood prone areas.

- Identifying Most Vulnerable and Historically Under-Served Communities - Miami is a metropolis of extreme wealth and poverty. Stark inequity exists here, and the Back Bay Coastal Storm Risk Management study should not perpetuate it. The Corps and County must design and communicate a collaborative, transparent, and inclusive plan. As such, we recommend 1) creating a nonstructural working group comprising members from diverse backgrounds. This working group should include neighborhood representatives and environmental justice groups; 2) ensuring a robust and equitable plan for residents displaced during home elevation; 3) considering participation in the

Temporary Relocation Assistance Pilot Program as authorized in Section 8154 of the Water Resources Development Act of 2022; 4) fortifying sewage treatment plants as critical infrastructure; expanding the scope of the Nonstructural Pilot Program to include a general septic-to-sewer conversion plan. The Corps and County have the opportunity to seek funding for a county-wide conversion program under Section 219 of WRDA, which could greatly address the thousands of septic tanks that will fail after a storm.

- It is critical to identify potential areas for mangrove restoration and living shorelines in the Back Bay Study area. Nature-based solutions can also be more cost-effective because they are self-adaptive to sea-level rise unlike storm surge barriers, seawalls, and levees, which will become increasingly difficult to maintain as sea-levels rise. Implementing Mangrove restoration not only will help protect our shorelines, but it is also crucial in the preservation and enhancement of Biscayne Bay's aquatic habitats.

- Research is required to understand the potential for living shorelines, barrier islands and coral reefs to mitigate the impact of storm surge and reduce our dependence on hard infrastructure, such as floodwalls. In South Florida, it has been argued that there is no effective way to wall off the ocean because the sea will simply flow under levees through the highly porous limestone bedrock. Meanwhile, it has been shown – and demonstrated in laboratory experiments - that mangrove forests in Florida provided significant flood annual damage reduction benefits over a period of multiple storms and during catastrophic events like Hurricane Irma.

- Funds should be used to study efficacy of propagation and relocation of Seagrass species (through a "seagrass" mitigation strategy), to enable other innovative applications of protective biological infrastructure, such as barrier islands, living shorelines, etc. that would contribute to both seawall/surge protection and ecological restoration.

- The study should explore long term consequences of potential savings (damage, insurance) gained by the gradual evacuation of the first one/two stories of buildings in the study area, converting these spaces to non-habitable, service or covered open space.

- Adopt structural measures and strategies to mitigate Sunny-day/King Tide flooding, heavy rainfall flooding and sea-level rise. While we understand the need to address storm surge, other issues need to be considered as part of the feasibility study.

- Create a fundamental open space/park strategy that prioritizes stormwater retention and aquifer recharge – preventing polluted runoff to Biscayne Bay – with lakes, rain gardens, retention/detention spaces, etc. that is coupled with a street-raising construction strategy that re-plumbs stormwater runoff to these spaces.

- Increase pervious space in the public right of way through pervious paving systems, narrowing street lanes, and construction of rain gardens, prioritizing the streets most vulnerable to flooding.

- Work with Florida Power and Light to facilitate the undergrounding of all overhead utilities (excepting high power Transmission lines) throughout Miami-Dade County.

- Create a Transfer Development Credit (TDC) funding source for "retreat" from the most vulnerable "Repetitive Loss Properties" (RLPs) towards Affordable Housing tracts on higher – or raised – topography.

- Consider, where applicable, "on-site" retreat strategies, that carve into existing properties while avoiding environmental permitting/disturbance issues.

- Prioritize RLPs and land transfers that could allow for the creation of a linked open space/park and stormwater storage and drainage system.

- Prioritize the planting of large, native canopy trees for increasing uptake of stormwater runoff while mitigating "heat island" effects.

- Reduce weighting of "property value" based on tax-base levels, which tends to favor and target protective measures in higher income areas, as these levels have begun to shift into "climate-gentrified" land with higher elevation levels.

- Perhaps the Report, like the "Big U" project in NYC should pose the question: "How can the city plan for its resilience while also planning for its future growth?", and "Can protective measures become City attractions, which both protect and serve as regional value-added benefits (rather than devaluations) within the social and urban fabric?"

- We hope that all protective measures will enhance or add to the region's social, cultural, and environmental assets that increase economic activity, community-connectedness and general health, safety, and welfare. Nature-based solutions can provide this holistic approach because they reduce risk, while at the same time providing additional valuable ecosystem services such as carbon sequestration, contribution to fisheries production, and water quality regulation. These solutions help absorb large quantities of water and slowly disperses runoff into the environment**.** Permeable roads and sidewalks, green roofs, lakes, parks, rain gardens, wetlands and natural vegetation absorb, infiltrate, store, purify, drain, and manage rainwater.

- If walls and other major infrastructural projects are built, they should be limited to strategic locations where other nature-based technologies are not effective (e.g. the mouths of rivers and canals). Any gray/hard infrastructure should not adversely impact existing, healthy habitat and should facilitate connectivity, water views from the shoreline and increased wildlife.

We appreciate your consideration and attention to these matters and look forward to seeing this Study bring equitable and resilient solutions to Miami Dade-County and the region.

3/3

LANDSCAPE ARCHITECTURE | URBAN DESIGN | ARCHITECTURE
12345 NE 6TH AVENUE A NORTH MIAMI, FLORIDA 33161
T: 305.895.9082 F: 305.895.9083 WWW.SAVINOMILLER.COM
AA0002463 LC C00208

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 28, 2024

Barry Miller
Savino and Miller
12345 NE 6th Avenue
North Miami, Florida 33161-5513

Dear Mr. Miller:

Thank you for your comments submitted regarding the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Draft Integrated Feasibility Report and Environmental Assessment prepared by the U.S. Army Corps of Engineers (USACE) Norfolk District in conjunction with Miami-Dade County, the nonfederal sponsor for the study. The purpose of this letter is to respond to your comments on the Draft Report received on May 23, 2024. A copy of your comments and the response included herein will also be included in the Final Report.

In your comments, you provide several recommendations for specific solutions and considerations that may contribute to the study. To accomplish and provide significant near-term CSRM for Miami-Dade County, the feasibility report focuses on risk management measures that can be carried forward in time for the 2024 Water Resources Development Act (WRDA). The USACE and Miami-Dade County intend to partner on additional studies and further analyses to continue to address the extent of existing CSRM flooding problems in the study area. As part of these efforts, the study team will continue to prioritize communities that are the most vulnerable to the damaging effects of storm surge and are historically under-served. Additionally, several public comments received on the Draft Report recommended a nonstructural program working group be established, comprised of members from diverse backgrounds, to ensure the effectiveness and equity of the project's implementation. The USACE and Miami-Dade County will further consider this request and explore the potential opportunity to establish a nonstructural program working group in the future.

Future study efforts will identify and evaluate other potential CSRM measures. We note your recommendation to consider street raising and the prioritization of pervious pavement systems.

As the project efforts advance in the future, following authorization in WRDA 2024, the USACE and Miami-Dade County will develop and implement a community engagement and outreach plan to share information with residents, community members, municipalities, and interested stakeholders regarding how the components of the Recommended Plan identified in the Final Report will be implemented and the processes associated with implementation.

While site-specific locations are not identified in the 2024 Report for the Nature-Based Solutions (NBS) Pilot Program, the study team will continue coordination efforts on this important initiative following programmatic authorization in WRDA 2024. The identification, evaluation, and National Environmental Policy Act compliance of site-specific pilot projects designed to mitigate for storm surge impacts will be an essential component of the next phase of the NBS Pilot Program.

The study authority is focused on managing coastal storm risk; therefore, the following recommendations noted in your comments are not within the current study authority: adopting structural measures to mitigate for other types of flooding events, increasing pervious space, creating a Transfer Development Credit funding source, land transfers, mitigating “heat island” effects, and developing solutions to provide stormwater retention and aquifer recharge. We acknowledge, however, the complex flooding issues and ongoing water quality challenges faced in the study area and the need to ensure the integration of other federal, state, and local efforts to continue to address these challenges while also accounting for climate and sea level change.

Miami-Dade County is a vibrant community comprised of valuable social, cultural, and environmental assets. The 2024 study effort is an interim response that seeks to advance CSRM measures towards increasing Miami-Dade County’s resilience to coastal storms in the future. Thank you for your feedback on this important study. If you have any additional questions, please feel free to contact Ms. Justine Woodward at (757) 201-7728 or justine.r.woodward@usace.army.mil.

Sincerely,

Sara E. Bahnson

Digitally signed by Sara E. Bahnson
Date: 2024.06.28 11:44:00 -04'00'

for Zachary P. Martin,
Chief Environmental Analysis Section
Planning and Policy Branch
Norfolk District, USACE

cc:
Angie Dunn
Chief Environmental Branch
Jacksonville District

Date: May 28, 2024

To: U.S. Army Corps of Engineers Norfolk District
c/o Justine Woodward
803 Front St.
Norfolk, Virginia 23510

From: Danielle Weerth
danielle@econcrete.us
ECOncrete
99 Wall Street FRNT1
New York, NY 10005 USA

Subject: Draft Integrated Feasibility Report/Environmental Assessment for the Miami-Dade County Back Bay Coastal Storm Risk Management Feasibility Study (Back Bay Study)

Background:

With increased climate risk and predicted sea-level rise, the fortification of infrastructure along our coasts requires deeper evaluation and investments in nature-based solutions. Any marine construction - from pier pilings to seawalls and jetties to breakwaters- can be built with local concrete modified with ecological concrete, creating increased biodiversity and richness of species, carbon capture, water quality and other ecosystem services. In addition to the obvious qualitative and ecological benefits, economical and structural benefits also transfer to a range of various fields, improving our Nation's Blue Economy.

Ecological design alternatives should be incorporated into planned marine infrastructure projects, where habitat enhancement could be maximized. Using nature-based design elements significantly increases species settlement, richness, and abundance. Nature-based design elements and nature-based solutions allow a structure to actively provide carbon sequestration, 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. The term “ecological concrete" is an alternative to traditional concrete where material composition enhances or encourages the growth of flora or fauna when placed in the marine environment. Ecological concrete may include recycled materials, such as recycled or reclaimed concrete, resulting in reduced greenhouse gas emissions as compared to traditional concrete.

Alll concrete materials should solely be fabricated from ecological concrete in order to minimize negative impacts and create marine habitat opportunities for the Back Bay Project . Furthermore, the species that settle and grow on ecological concrete structures would create a bioprotection living layer which hardens the structure. 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 natural and nature-based features in the Back Bay Study 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, including the resiliency of future climate action strategies.

Additional information:

https://econcretetech.com/

https://youtu.be/hs16NkK7k0o https://youtu.be/hY0w_SeVeTk

https://sdgs.un.org/partnerships/we-commit-least-double-biodiversity-projects-where-concrete-technology-implemented

Perkol-Finkel, Shimrit, and SELLA, Ido (2014) *"Ecologically active concrete for coastal and marine infrastructure: innovative matrices and designs.”*
ICE publishing, 2014.
Sella, Ido, and PERKOL-FINKEL, Shimrit (2015)
"Blue is the new green- Ecological enhancement of concrete based coastal and marine infrastructure.” Ecological Engineering 84. 260-272. Elsevier, 2015.

Sella, Ido (2022), et al.
“Design, production, and validation of the biological and structural performance of an ecologically engineered concrete block mattress: A Nature-Inclusive Design for shoreline and offshore construction.” Integrated environmental assessment and management 18.1: 148-162. 2022.

May 28, 2024

Mr. Chris Stahl
Florida Department of Environmental Protection
Florida State Clearinghouse
3900 Commonwealth Blvd., M.S. 47
Tallahassee, FL 32399-2400

Subject: Comments on the Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study – Draft Integrated Feasibility Report and Environmental Assessment (April 2024) – Department of the Army, Norfolk District Corps of Engineers

Dear Mr. Stahl,

Thank you for the opportunity to comment on the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Feasibility Study – Draft Integrated Feasibility Report (IFR) and Environmental Assessment, released by the U.S. Army Corps of Engineers (USACE) – Norfolk District, and Miami-Dade County the non-federal sponsor. The Draft IFR and EA, prepared pursuant to the National Environmental Policy Act, is an interim response to address coastal storm risks from storm surge and evaluate CSRM alternatives for Miami-Dade County as part of a multi phased risk management approach. The goal after all phases is to manage risks from storm surge flooding to residents, industries, business and infrastructure that are critical to the nation's economy.

The South Florida Water Management District (District) supports the current efforts by the USACE and Miami-Dade County in addressing coastal vulnerabilities and sea level rise impacts and has worked closely with the involved agencies and stakeholders during the planning effort. After an internally coordinated review, the District offers the following comments on the Draft IFR and EA to ensure that they are ultimately addressed, if not in this phase, then in future phases:

- Central and Southern Florida Project: The CSRM recommended project plan needs to ensure the proposed measures are integrated and operated with the Central and Southern Florida (CS&F) Project and account for interior flood risks, as well as the way the current flood control system is operated and maintained. Evaluation and mitigation of system-wide effects and development of a coordinated comprehensive operational plan with the District is recommended. The ongoing C&SF Flood Resiliency Study will recommend flood risk management projects to build flood resiliency and reduce riverine flood risks that affect population, property and critical infrastructure in the communities served by the C&SF water management system. The purpose of the C&SF Flood Resiliency

Study is to identify the need to provide continued flood risk management to reduce the most immediate risk to the C&SF System due to changing conditions. While neither the CSRM nor the C&SF Flood Risk Management (FRM) study evaluate the effects of coastal and inland storm risks, the upcoming Comprehensive C&SF Study will provide opportunities for an integrated assessment of the larger drainage components of the water management system and coastal risks and provide an integrated strategy to reduce storm surge and extreme rainfall risks, along with saltwater intrusion exacerbated by sea level rise.

- Structural Coastal and Flood Risk Management Measures: A "multiple lines of defense" approach is being recommended for reducing coastal risks across a range of natural, built and hybrid environments along the shoreline and further inland. It focuses on non-structural "living with water" measures and nature-based solutions, and does not consider structural measures, as part of the current study phase. It is recommended that structural measures – including both coastal and inland strategies, such as leveraging existing elevations along the coastal ridge, along with coastal salinity control structures – are prioritized, further assessed and integrated in this CSRM Study to effectively reduce flood risks in the region.

- Ecosystem Restoration: The recommended project plan needs to ensure the proposed measures are integrated and operated with the Biscayne Bay Southern Everglades Ecosystem Restoration Project, and the overall Comprehensive Everglades Restoration Plan (CERP). The proposed measures have the potential to affect existing and ongoing ecosystem restoration in the region. Evaluation and mitigation of the potential impacts of the proposed project features on ecosystem restoration efforts is strongly recommended.

- Integration with Ongoing Studies: Section 2.1.3 identified the need for integration of programs, projects and studies as critical in making decisions in a complex environment and emphasized the integration of the CSRM measures with other ongoing planning and implementation processes. It is recommended that the proposed measures from other ongoing studies are integrated into the CSRM assessment, and vice-versa, and used for developing recommendations of the proposed non-structural and nature-based measures, as well as structure measures to be proposed in future phases of the study.

- Interior Drainage and Future Extreme Rainfall Scenarios: The analysis conducted in this CSRM study phase does not account for rainfall driven flood risks and associated inland drainage implications. Refinements to the hydrology and hydraulics analysis and characterization of compound flood risks are recommended as part of future study phases. The ongoing C&SF Flood Resiliency Study and the District's Flood Protection Level of Service studies can support a more comprehensive assessment of compound flooding impacts from surge, rainfall, sea level rise, and elevated ground water table.

- Nature-Based Features and Ancillary Water Quality Benefits: The District continues to recommend that the project plan take full advantage of innovative natural or nature-based, green infrastructure and low impact design solutions. The

proposed nature-based pilot program is promising in identifying effective solutions needed in the region and properly characterizing associated benefits.

- Pre-application Coordination: Early coordination with the District is encouraged to determine if proposed nonstructural measures or nature-based features will require an Environmental Resource Permit (ERP). The pre-application coordination provides a forum to discuss particular permitting criteria that may apply to the measures and/or features in order to successfully obtain an ERP.

The District supports the USACE and Miami-Dade County in addressing coastal vulnerabilities and will continue to be in close coordination with USACE and Miami-Dade County during report finalization, project validation and the detailed design phases of this project. Such close coordination and further details in the Draft FIR/EIS will afford an opportunity to expand the District's ability to provide additional comments, promote projects integration with other ongoing efforts – Comprehensive Everglades Plan and the C&SF Flood Resiliency Study – and formulate recommendations as the project plan is developed beyond the conceptual level currently documented in the Draft IFR/EIS. Additional technical assessments and projects recommendations not fully addressed as part of these ongoing efforts can be integrated into the upcoming C&SF Comprehensive Study, which is expected to provide opportunities for multipurpose regional assessment and characterization of comprehensive benefits.

For further details, please contact the Chief of District Resiliency, Dr. Carolina Maran, who can be reached at (561) 682-6868 or cmaran@sfwmd.gov.

Sincerely,

Drew Bartlett
Executive Director
South Florida Water Management District

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

June 28, 2024

Mr. Drew Bartlett
Executive Director
South Florida Water Management District
3301 Gun Club Rd
West Palm Beach, FL 33406-3007

Dear Mr. Bartlett:

Thank you for your comments submitted on behalf of the South Florida Water Management District (SFWMD) regarding the Miami-Dade Back Bay Coastal Storm Risk Management (CSRM) Draft Integrated Feasibility Report and Environmental Assessment prepared by the U.S. Army Corps of Engineers (USACE) Norfolk District in conjunction with Miami-Dade County, the nonfederal sponsor for the study. The purpose of this letter is to respond to your comments on the Draft Report dated May 28, 2024. A copy of your comments and the response included herein will also be included in the Final Report.

In your comments, you note that the Recommended Plan should integrate proposed measures with the Central and Southern Florida (C&SF) Project, address interior flood risks, and consider the operations and maintenance aspects of the current flood control system. Furthermore, you recommend evaluation and mitigation of system-wide effects and development of a coordinated comprehensive operational plan with SFWMD. Although this is outside of the scope of the 2024 study effort, USACE will continue to collaborate with the SFWMD and other key stakeholders as future study efforts continue. The USACE is committed to project integration, which includes coordinating the planning and implementation of multiple USACE Civil Works projects to ensure cross-project functionality. This also includes integrating communications with internal and external stakeholders and technical support across projects. As identified in Section 1.4.1.3 of the Final Report, one of the key study efforts identified is the C&SF Flood Resilience (Section 216) Study currently led by USACE, Jacksonville District, and SFWMD, the nonfederal sponsor.

We acknowledge your recommendation that structural measures, such as leveraging existing elevations along the coastal ridge, along with salinity control structures, should be prioritized and further assessed in CSRM study efforts. As indicated in the Final Report, the ‘multiple lines of defense’ approach is one of the three pillars of the Comprehensive Study Framework. Large-scale structural measures, such as a system of storm surge gate structures near the barrier islands identified in the Atlantic Coastline Alternative (Section 1.10), would not be evaluated in the current study effort and would potentially be considered in a future feasibility study.

The USACE, Norfolk District, continues to coordinate with USACE, Jacksonville District, regarding ongoing study efforts in the Miami-Dade County area, including the Biscayne Bay Southern Everglades Ecosystem Restoration (BBSEER) Project and the Comprehensive Everglades Restoration Plan (CERP). The current measures in the Recommended Plan, which include floodproofing of critical infrastructure, residential building elevations, and floodproofing of nonresidential buildings, are not anticipated to impact these project efforts. Additionally, as the measures in the Recommended Plan move into the Pre-construction, Engineering, and Design (PED) Phase, early coordination with the SFWMD will occur to determine the need for an Environmental Resource Permit (ERP).

In the future, potential projects that may be considered under the Nature-Based Solutions (NBS) Pilot Program will be coordinated with the BBSEER and CERP projects (and other ongoing study efforts in the vicinity) to identify synergies and ensure impacts are avoided or minimized. At this time, site-specific locations for NBS pilot projects have not been defined.

Miami-Dade County is a vibrant community comprised of valuable social, cultural, and environmental assets. The 2024 study effort is an interim response that seeks to advance CSRM measures towards increasing Miami-Dade County's resilience to coastal storms in the future. Thank you for your feedback on this important study. If you have any additional questions, please feel free to contact Ms. Justine Woodward at (757) 201-7728 or justine.r.woodward@usace.army.mil.

Sincerely,

Sara E. Bahnson

Digitally signed by Sara E. Bahnson
Date: 2024.06.28 11:42:32 -04'00'

for Zachary P. Martin,
Chief Environmental Analysis Section
Planning and Policy Branch
Norfolk District, USACE

cc:
Angie Dunn
Chief Environmental Branch
Jacksonville District

Seminole Tribe response 30 May 2024 - No comment

From:	Ashley Wilson
To:	Woodward, Justine R CIV USARMY CENAO (USA); Maria Ocampo Pinzon; Stacy Myers
Cc:	Stacy Myers; Paul Backhouse; Tina Osceola; Juan Cancel; Danielle Simon; Jill Horwitz; Joseph John; Miller, Susan G CIV USARMY CENAO (USA)
Subject:	[Non-DoD Source] RE: IFR/EA for the Miami-Dade Back Bay CSRM Feasibility Study
Date:	Thursday, May 30, 2024 4:11:54 PM
Attachments:	image001.png

Good afternoon Ms. Woodward,

Thank you for providing the Seminole Tribe of Florida the opportunity to comment on the Draft IFR/EA for the Miami-Dade Back Bay CSRM Feasibility Study. After further review, our staff have collaboratively determined that we have no substantial comments to provide at this time. We appreciate your correspondence and look forward to participating in consultations with your agency in the future.

Kind regards,
Ashley Wilson
Environmental Protection Manager

From: Woodward, Justine R CIV USARMY CENAO (USA) <Justine.R.Woodward@usace.army.mil>
Sent: Thursday, May 23, 2024 5:55 PM
To: Maria Ocampo Pinzon <mariaocampopinzon@semtribe.com>; Stacy Myers <StacyMyers@semtribe.com>
Cc: Stacy Myers <StacyMyers@semtribe.com>; Paul Backhouse <PaulBackhouse@semtribe.com>; Tina Osceola <TinaOsceola@semtribe.com>; Juan Cancel <JuanCancel@semtribe.com>; Danielle Simon <daniellesimon@semtribe.com>; Jill Horwitz <jillhorwitz@semtribe.com>; Ashley Wilson <ashleywilson1@semtribe.com>; Joseph John <josephjohn@semtribe.com>; Miller, Susan G CIV USARMY CENAO (USA) <Susan.G.Miller@usace.army.mil>
Subject: RE: IFR/EA for the Miami-Dade Back Bay CSRM Feasibility Study

Dear Mr. Myers,

In response to your request, the comment period has been extended to May 31, 2024. Please don't hesitate to contact me with additional questions. Thank you!

Regards,
Justine

Justine Woodward
Biologist
Environmental Analysis Section
Norfolk District, U.S. Army Corps of Engineers
803 Front Street
Norfolk, VA 23510

757-201-7728

From: Maria Ocampo Pinzon <mariaocampopinzon@semtribe.com>
Sent: Thursday, May 23, 2024 2:58 PM
To: Woodward, Justine R CIV USARMY CENAO (USA) <Justine.R.Woodward@usace.army.mil>
Cc: Stacy Myers <StacyMyers@semtribe.com>; Paul Backhouse <PaulBackhouse@semtribe.com>; Tina Osceola <TinaOsceola@semtribe.com>; Juan Cancel <JuanCancel@semtribe.com>; Danielle Simon <daniellesimon@semtribe.com>; Jill Horwitz <jillhorwitz@semtribe.com>; Ashley Wilson <ashleywilson1@semtribe.com>; Joseph John <josephjohn@semtribe.com>
Subject: [Non-DoD Source] IFR/EA for the Miami-Dade Back Bay CSRM Feasibility Study

Good afternoon, Ms. Woodward,

Please find attached a letter from Mr. Stacy Myers, Director of the External Environmental Compliance Department at the Seminole Tribe of Florida, requesting a time extension for the review of the Draft Integrated Feasibility Report / Environmental Assessment (IFR/EA) for the Miami-Dade Back Bay Coastal Storm Risk Management ("CSRM") Feasibility Study.

Thank you for your attention and consideration of this request. We look forward to your reply.

Best regards,

Angelica

EXTERNAL ENVIRONMENTAL COMPLIANCE

ANGELICA OCAMPO PINZON
PROGRAM ANALYST II
O. (954) 985-2300 EXT. 10628
M. (954) 662-4339
E. MARIAOCAMPOPINZON@SEMTRIBE.COM
A. 6363 TAFT ST. SUITE 300B
HOLLYWOOD, FL 33024