

July 23<sup>rd</sup>, 2020

Board of County Commissioners, Miami-Dade County  
Stephen P. Clark Government Center  
111 NW 1st Street, Suite 220  
Miami, Florida 33128  
*Sent electronically*

Cc: U.S. Army Corps of Engineers

Re: USACE Back Bay Coastal Storm Risk Management Feasibility Study.

Dear Miami-Dade County Commissioners,

Miami requires major investments to improve our resilience to storm surge and sea level rise. The climate crisis is escalating. Storms are slowing down and have been getting more intense – a dangerous trend that will continue until we take action to build our clean energy economy. As the County weighs in on the proposed Back Bay Coastal Storm Risk Management Feasibility Study by the U.S. Army Corps of Engineers (USACE), our organizations --along with our millions of members and supporters --, are writing to strongly recommend that the proposal by USACE pivot to develop and advance a locally preferred plan. While we welcome, encourage, and support investments in our community to address storm surge, the currently-proposed 4.6 million-dollar plan is too harmful to the environment, creates equity problems, exposes certain areas to increased flood risk, and does not address – and perhaps worsens – chronic flooding from sea level rise.

This new locally preferred plan would prioritize natural and nature-based features (NNBFs) and equitable, people-centered solutions that benefit Miami-Dade County's under-resourced communities on the frontlines of the climate crisis. **We need a holistic approach solution that is equitable, inclusive, realistic, and beneficial to our natural environment.** These solutions do exist, and we outline here several options to achieve desired storm surge risk reduction while benefiting our community at large. We therefore support a locally-preferred plan that includes: 1) fortifications for our sewage treatment plants, 2) stormwater retrofits, 3) septic to sewer conversion, and 4) green infrastructure components.

### **Equity Concerns with the Tentatively Selected Plan**

Some aspects of this plan are encouraging, such as the Corps' reliance on the "high" end of the sea level rise projection curve for planning purposes. We support fortifying critical infrastructure and other non-structural suggestions; however resources must be allocated equitably. We want to ensure that the Back Bay proposed plan is truly fair and that investments are made first in the communities that need it most. Equity, must be defined in the plan as to "fairly distribute all benefits across city and income levels, maintaining the cohesiveness of the City's social fabric and diversity". The proposed plan calls for large concrete floodwall features that will create

divisions within community neighborhoods creating “winners” and “losers” inevitably disrupting low income communities’ neighborhoods and increasing inequalities.

As over 60% of Miami-Dade renters pay more than 30% of their salary on housing – a percentage frequently used to account for affordability – the area is the third least affordable city in the country. The region’s economy depends on a workforce that has access to affordable housing stock. Historic hurricane recovery efforts demonstrate the necessity of viable housing stock across all socioeconomic groups in order to support economic recovery and development. It is unclear these considerations were included in the cost-benefit analysis.

Additionally, we are concerned that high-value properties are more likely to benefit from the above protection features, often at the expense of historically vulnerable communities resulting in chronically inequitably distributed federal investments (i.e. areas with higher property values get more flood protection). This disparity is shown by the proposal to elevate 184 private residences in Golden Beach, where the average home value exceeds \$4 million.

While we appreciate the use of the social vulnerability index in the identification of geographic priority areas for the non-structural features, it is unclear whether these criteria were also applied to structural features or how they were factored in as benefits. Vulnerable populations are often more difficult to evacuate in the face of a hurricane. As such, life safety concerns will be better managed when the most vulnerable populations receive comparable infrastructure level protection from storm impacts based on the number of residents that would be protected, rather than real estate value.

### **Environmental concerns**

Biscayne Bay is the economic and aesthetic jewel that our city is built around. It fuels a clean water-based economy that (supporting over 137,000 jobs and generates over than \$600 million in tax revenue to Miami-Dade every year). Protecting our Bay and our coastline makes economic sense. But disconnecting the community from our waterways while inflicting environmental, economic, and cultural damage through the construction of walls does not. The Brickell floodwall is proposed within the footprint of Biscayne Bay and will cause unacceptable impacts to habitat, recreation, viewscapes, and wildlife.

Further, this proposal fails to adequately consider nature and nature-based solutions. Living shoreline opportunities, coral reef and dune restoration, and construction of mangrove barrier islands were prematurely screened out of the process. NNBFs provide numerous ecosystem service benefits. In addition to natural flood and erosion control, NNBFs improve air and water quality; enhance habitats for birds, fish and other wildlife; increase recreational opportunities and land values; recharge groundwater; and sequester carbon pollution, among other benefits. NNBF solutions to increasing our resiliency has been a clear preference of stakeholders and the public<sup>1</sup>. Additionally, NNBFs have been proven to provide benefits at significantly lower costs, particularly when considered over the lifetime of the project. We request that NNBFs form the basis for a

<sup>1</sup> City of Miami surveys ; County surveys, Catalyst Miami community visioning workshops, Resilient 305 plan, public comments on this study

locally-preferred plan, focusing on projects identified by community-based strategies like Resilient305 and others. These opportunities include living shorelines, coral reef restoration, dunes, mangrove installations, and more in public parks, streetscapes, bay and river walks, swales, seawalls, barrier islands, and other key locations.

### **Septic to Sewer Conversion**

The proposal identifies septic contamination during storms as an issue and an opportunity for beneficial outcomes, but then does not propose addressing septic-related risk. Septic tanks, particularly compromised tanks, present public health and environmental hazards. The County has over 100,000 septic tanks, over half of which are already not functioning due to sea level rise. Little River and Arch Creek, identified as priority areas in the study, have high concentrations of septic tanks -- including those on small lots and in flood-prone areas.

### **Stormwater Retrofits and Improvements**

The impact of the projects on water quality in Biscayne Bay, include increased pumping stormwater or altering flow. The tentatively-selected plan could exacerbate flooding from sea level rise and may negatively impact our stormwater system by altering drainage already failing due to sea level rise. Rain-based flooding during storms could become worse as a result of the flood barriers. The study does not adequately consider improving stormwater treatment, increasing permeability of surfaces, and alternatives for retention, treatment, and avoiding additional pumps were not considered.

### **Fortifications for sewage treatment plants**

While the study identifies the County's sewage treatment plants as vulnerable, critical infrastructure, it fails to recommend fortifications to the plants. In particular, the Central District Treatment plant which is located on Virginia Key on a barrier island in Biscayne Bay. During Hurricane Irma, for example, millions of gallons of sewage spilled.

## **LOCALLY PREFERRED PLAN: RECOMMENDATIONS TO IMPROVE THE PROPOSED PLAN.**

There are many existing opportunities and resources available to improve the proposed plan, such as the Resilient 305 strategy, Miami Dade's Local Mitigation Strategy, and the Southeast Florida Regional Climate Change Compact, and the Urban Land Institute panel report, among others. These strategies involved years of stakeholder input and expert analysis and should be relied upon in this study to advance the county's resilience. The following considerations should be incorporated in order to improve the Corps' proposed plan.

We urge the U. S. Army Corps of Engineers to:

- Use alternative valuation methodologies that do not overemphasize property value and exacerbate inequalities by adopting a more holistic analysis, inclusive of quality of life benefits, public health improvements, and likely increase in community resilience, in lieu of a traditional cost-benefit analysis that focuses on the tax base

- Provide detail on how structural project priority areas were chosen, and we ask that all features reviewed indicate the number of residents, income and race demographics that would be protected so we can ensure equitable protection of our community.
- Avoid projects that place walls in neighborhoods that create “winners” and “losers” or harm Biscayne Bay.
- Fully account for the need to protect and defend the region’s affordable housing stock and most vulnerable residents that rely upon it from storm surge in the cost-benefit calculations
- Ensure project improves -- and does not worsen -- sea level rise-based flooding conditions
- Utilize existing stakeholder-based strategic resiliency plans
- Prioritize nature and nature-based features, “green” infrastructure including, but not limited to, living shorelines and coral restoration
- Include and prioritize septic to sewer conversion in the plan, focusing on key areas, like Little River and Arch Creek
- Include Miami Dade’s wastewater plants in fortification plans for critical infrastructure projects
- Improve stormwater retention and treatment

We believe that a proposal with these elements has the potential to reduce coastal storm risk cost-effectively, while also elevating the voices and well-being of those who are most vulnerable to sea level rise, hurricanes, poverty, homelessness, and other factors that threaten our ability to be resilient and thrive as a region. As ground zero for sea level rise, we urge Miami-Dade County to adopt these recommendations. For Miami-Dade County to be truly resilient, no one must be left behind. We thank you for your consideration of our comments and look forward to working with you to develop an improved plan for this critical funding to invest towards a more climate-ready Miami-Dade. We can be reached at [info@CLEOInstitute.org](mailto:info@CLEOInstitute.org)

Sincerely,

Miami Waterkeeper  
 The CLEO Institute  
 Environmental Defense Fund  
 Catalyst Miami  
 The Miami Foundation  
 Earthjustice  
 Tropical Audubon Society  
 Miami Climate Alliance  
 Resilience Force

Underwater HOA  
 Engage Miami  
 Ocean Conservancy  
 The New Florida Majority  
 Climate Power 2020  
 Dade Heritage Trust, Inc  
 National Parks Conservation Association  
 South Florida Wildlands Association  
 Bonefish & Tarpon Trust