

MIAMI BEACH

COMMITTEE MEMORANDUM

TO: Land Use and Sustainability Committee Members

FROM: Eric Carpenter, City Manager

DATE: April 15, 2025

TITLE: DISCUSSION TO PRESENT AND DISCUSS THE DRAFT SEA LEVEL RISE ADAPTATION PLAN FUNDED BY THE RESILIENT FLORIDA GRANT PROGRAM

RECOMMENDATION

The Administration is sharing the draft Sea Level Rise Adaptation Plan for discussion and consideration of a recommendation for the Mayor and City Commission to accept the item for planning purposes.

BACKGROUND/HISTORY

On September 20, 2024, a Letter to Commission was issued, LTC # 418-2024, (Attachment A) detailing the motion made by the Neighborhood Resilience Projects Advisory Committee (NRPAC) on September 18, 2024, supporting the continued development of the draft Vulnerability Assessment and Adaptation Plan.

On October 30, 2024, Resolution No. 2024-33332 (Attachment B) was adopted by the Mayor and City Commission of the City of Miami Beach, accepting the City of Miami Beach Sea Level Rise Vulnerability Assessment and Adaptation Plan and supporting the continued development of an adaptation plan focused on changing conditions, offering a more flexible and innovative approach compared to traditional planning. The item was sponsored by Commissioner Laura Dominguez.

On February 3, 2025, the Mayor and City Commission approved item C4 S, a referral to the Land Use and Sustainability Committee to present and discuss the draft Sea Level Rise Adaptation Plan funded by the Resilient Florida grant program (Attachment C). The item was sponsored by Commissioner Laura Dominguez.

ANALYSIS

As a low-lying city surrounded by water, Miami Beach is increasingly vulnerable to flooding and the impacts of climate change, including intensifying coastal storm surges, more frequent and intense rainfall events, and higher annual king tides, which are all worsened by the addition of rising sea levels. The urgency of the issue is compounded by the City's unique porous limestone geologic setting that allows groundwater to push through the subsurface and flood interior parts of the City during high coastal water level conditions such as King Tides.

The City was awarded a \$454,000 Resilient Florida grant to develop a Sea Level Rise Vulnerability Assessment and Adaptation Plan. The first phase of the project was the Vulnerability assessment, which was completed in July 2024. The next phase is the draft Adaptation Plan, which is the current phase. The Adaptation Plan will be submitted to the State for their review by March 31, 2026.

The City's Sea Level Rise Vulnerability Assessment identified and prioritized over 67,000 assets vulnerable to flooding. Assets were evaluated using the best available data and stormwater

modeling techniques to assess exposure to flooding scenarios through 2070, sensitivity to floodwaters, and the community consequences of their failure. Assets that ranked highly across these three categories were considered highly vulnerable to sea level rise. The City will use the findings to pursue targeted project funding to address the identified vulnerabilities over time.

The draft Adaptation Plan outlines a comprehensive, forward-thinking, and flexible framework to safeguard the City's infrastructure, protect its residents, and maintain its position as a global destination for visitors. This long-term plan features a phased framework of strategies to provide flood protection through 2100. An adaptation plan differs from traditional planning in that it provides a flexible framework to respond to changing conditions of climate change, rather than a traditional, static plan with fixed assumptions.

The City is a pioneer in this field and has already carried out plans and projects for sea level rise adaptation. This Adaptation Plan builds on the City's broader resilience framework and integrates ongoing City plans and initiatives to align adaptation efforts with existing flood management, land use, and neighborhood improvement efforts. Integration with existing City plans also promotes the adoption of long-term resilience considerations into individual plan updates based on evolving climate conditions. The goal of the Adaptation Plan is to develop a holistic, coordinated path to flood resilience that addresses the complex, interconnected nature of sea level rise hazards, which often require a flexible and phased approach to adapt.

The draft Adaptation Plan identifies a range of adaptation options depending on changing conditions and decision points. The proposed strategies for flood protection fall into the following themes:

- **Keeping water out:** refers to techniques used to prevent or limit water from entering specific areas.
- **Living with water:** focuses on coexisting with water by using floodable designs rather than trying to completely prevent water from entering an area.
- **Nature-based protection:** uses natural ecosystems and processes to reduce the impacts of flooding.
- **Strategic relocation:** refers to the planned relocation of specific facilities or assets that are at risk to flooding or the modification of existing land uses to avoid infrastructure damage.
- **Plans and policies:** refers to modifications in City plans, design criteria, or ordinances to provide an enhanced level of flood protection.

The proposed strategies are organized into phased "pathways" that look at their potential lifespans based on NOAA sea level rise projections over time. These "pathways" analyze the City's current main flood protection strategy for a given category, look ahead to determine when that strategy may no longer be viable, and present other possible options.

Community engagement through workshops and focus groups has helped shape the plan by capturing flooding concerns and community priorities. Staff conducted engagement at Hispanic Heritage Festival, Culture Crawl, and Chess Challenge. Staff provided two presentations to the Miami Beach Chamber Board, and the following City of Miami Beach Committees: Sustainability Committee, Neighborhood Resilience Projects Advisory Committee, and the FEMA Program for Public Information Committee. Additionally, eight focus groups were held for residents in each area of the City (North, Mid and South) with outreach to the business community and local subject matter experts. Staff also collaborated with experts from both Florida International University (FIU) and University of Miami (UM). The draft Sea Level Rise Adaptation Plan presentation was shared with the broader community at a public meeting on February 20, 2025 and the report was available for public comment until March 21, 2025. The Adaptation Plan will be submitted to the State for their review before the grant deadline of March 30, 2026.

This initiative is part of the Resilient Florida Grant program, which supports both current efforts and positions the City to secure additional funding for future resilience projects.

FISCAL IMPACT STATEMENT

The City's budget process will be utilized to fund selected strategies over time.

Does this Ordinance require a Business Impact Estimate? Click or tap here to enter text.
(FOR ORDINANCES ONLY)

The Business Impact Estimate (BIE) was published on .

See BIE at: <https://www.miamibeachfl.gov/city-hall/city-clerk/meeting-notice/>

FINANCIAL INFORMATION

The draft Sea Level Rise Adaptation Plan was funded by a \$454,0000 Resilient Florida Grant.

CONCLUSION

The City was awarded a \$454,000 Resilient Florida grant to develop a Sea Level Rise Vulnerability Assessment and Adaptation Plan. The first phase of the project was the Vulnerability assessment, which was completed in July 2024. Phase two is the draft Adaptation Plan, which is the current phase. The plan outlines a comprehensive, forward-thinking, and flexible framework to safeguard the City's infrastructure and protect its residents. This long-term plan features a phased framework of strategies to reduce flood risk through 2100. The Adaptation Plan will be submitted to the State for their review before the grant deadline of March 30, 2026.

The Administration is sharing the draft Sea Level Rise Adaptation Plan for discussion and consideration of a recommendation for the Mayor and City Commission to accept the item for planning purposes.

Applicable Area

Citywide

Is this a "Residents Right to Know" item, pursuant to City Code Section 2-17?

Yes

Is this item related to a G.O. Bond Project?

No

Was this Agenda Item initially requested by a lobbyist which, as defined in Code Sec. 2-481, includes a principal engaged in lobbying? No

If so, specify the name of lobbyist(s) and principal(s):

Department

Environment and Sustainability

Sponsor(s)

Commissioner Laura Dominguez

Co-sponsor(s)

Condensed Title

Discussion to Present and Discuss Sea Level Rise Adaptation Plan. (Dominguez) EN