



# RESILIENCY PLANNING City of Miami

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# Resiliency – Definition



- **Resiliency** is the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience.
  - **Chronic Stresses** are the issues a city deal with on a day-to-day or cyclical basis. Example, housing affordability, adequate transportation etc
  - **Acute Shocks** - are sudden, sharp events that threaten a city. Examples include: earthquakes, hurricanes, sea level rise, floods, disease outbreaks, and terrorist attacks.



In 2016, the Greater Miami and the Beaches (GMB), a collaboration of 3 municipal government of the Miami-Dade County, the City of Miami and the City of Miami were selected to join the 100 resilient cities program of the Ford Foundation, a \$100 million effort of the Ford Foundation to help cities build resilience to social, economic, and physical challenges. To respond to impacts of urbanization, globalization, and climate change.





# Resiliency Planning - Preliminary Assessment

100 RESILIENT CITIES

## RESILIENT GREATER MIAMI & THE BEACHES

Preliminary Resilience  
Assessment  
#resilient305







# Resiliency Planning - Preliminary Assessment

## Together we are... Resilient

### Introduction

### Greater Miami & the Beaches

Meet some of our team members; join our efforts.



Chief Resilience Officers

Deputy Resilience Officers





# Resiliency Planning - Preliminary Assessment



Department of  
**Community & Economic Development**  
City of Miami

## Introduction

Greater Miami & the Beaches

## Our Process





# Resiliency Planning - Preliminary Assessment

## GM&B Context

### Shocks + Stresses

## Rebounding + Bouncing Forward

### Top Shocks



GROWING TRAFFIC CONGESTION



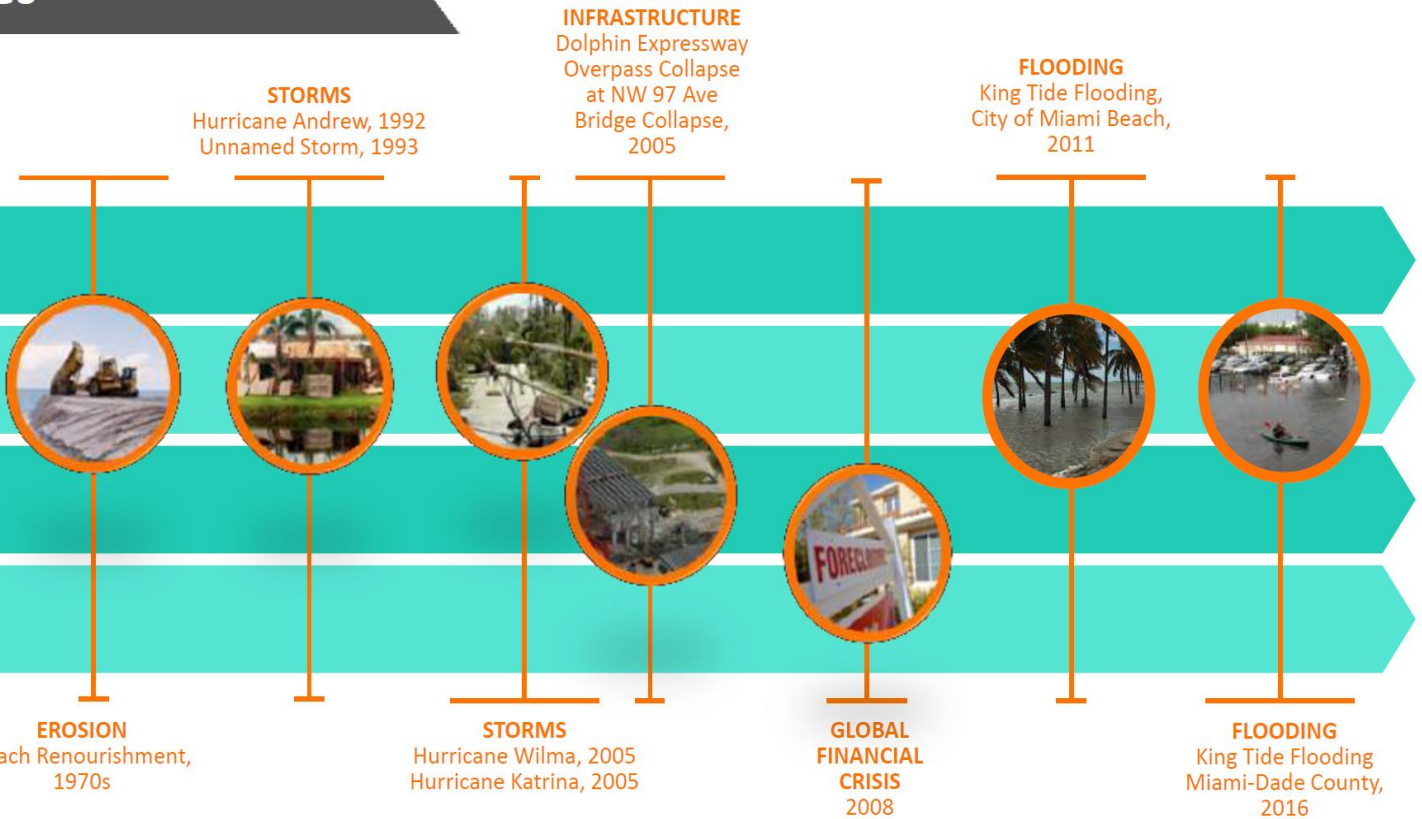
SEA LEVEL RISE + COASTAL EROSION



AGING INFRASTRUCTURE



DECREASING HOUSING QUALITY & AFFORDABILITY



### Top Stresses



# Resiliency Planning - Preliminary Assessment

## Summary of Major Shocks and Stresses

### 1. Sea Level Rise

- a. Sea level has risen about three inches since Hurricane Andrew hit and is expected to rise another three to seven inches by 2030.
- b. More than 85,000 people and 53,000 homes are located on land less than three feet above high tide. More than \$21 billion in assets are at risk

### 2. Flooding

1. King tides are becoming higher according to tidal gauges.
2. While stronger building codes have helped protect newer buildings from storm surges, risks are more costly today due to higher water levels and increased development in vulnerable areas.
3. Heavy rain events or high water levels can strain storm water systems and lead to flooding.





# Resiliency Planning - Preliminary Assessment

## King Tide in Miami Beach





# Resiliency Planning - Preliminary Assessment II

## 3. Housing

- a. Housing cost burdens have risen dramatically
- b. Average rents increased 65% (from \$1,505 in 2009 to \$2,501 in 2015)
- c. In 2014, over 66% of renter households, and over 50% of owner households were cost-burdened, making it the third least affordable housing market in the nation
- d. The local housing market is affected by external, often seasonal/absentee buyers
- e. Housing rights for tenants are lacking.
- f. Homelessness has increased 2% since 2015 and 9.5% since the beginning of 2017.

## 4. Mobility

- a. GM&B is the sixth most congested county in the U.S.
- b. Connected, reliable transportation is needed between residential areas and jobs
- c. Perceptions about transit need to change for more widespread ridership; “transit is for the disenfranchised.”



# Resiliency Planning - Preliminary Assessment II

## 4. Mobility (continued)

- a. Rideshare is disrupting existing travel services/patterns.
- b. Public transit concerns include safety, cleanliness, and reliability
- c. Pedestrians and bicyclists feel unsafe competing with vehicles
- d. Transit ridership is declining in many areas
- e. Transportation is planned and managed by multiple organizations
- f. Funding is needed for operations and maintenance of transportation infrastructure.





# Resiliency Planning - Preliminary Assessment II



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## GM&B Context

### Shocks + Stresses

## Mobility

**Commuters Coming In**

**Commuters Staying Within**

**Commuters Going Out**

Miami-Dade County

**248,782**

**743,205**

**201,163**

City of Miami

**219,626**

**46,798**

**94,025**

City of Miami Beach

**39,893**

**9,212**

**25,530**



# Resiliency Planning - Preliminary Assessment II



## 5. Storms and Recovery

- a. GM&B is vulnerable to hurricanes and tropical storms.
- b. National Climate Assessment (2014) predicts increased intensity and frequency of hurricanes in the region
- c. Increased development and population over the last 11 years without a major storm creates uncertainties of evacuation, response, and long-term community recovery.
- d. Power and utility redundancy is critical and unknown.
- e. Communication and access to residents are key.
- f. Residents and governments lack funding preparedness.
- g. Storm and flood insurance rates are increasing.
- h. Absentee owners contribute to delayed recovery.

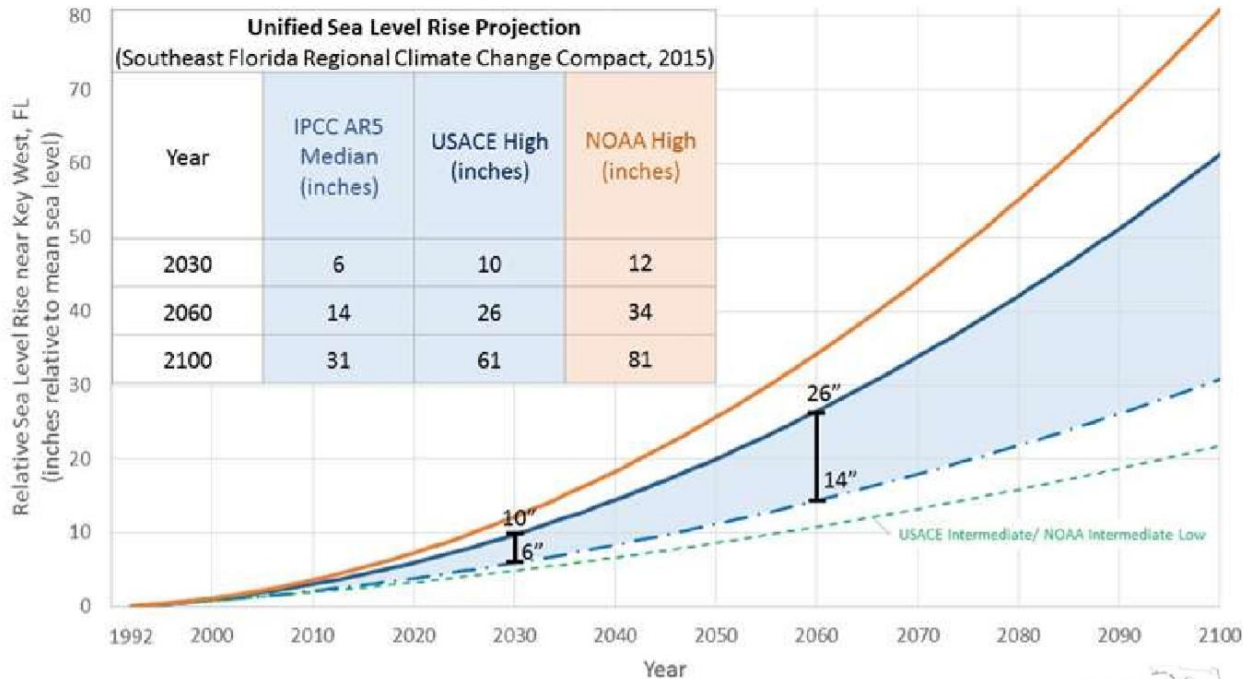


# Resiliency Planning - Current Action & Strategies



## 1. Sea Level Rise & Climate Change

- a. GM&B partners participate in the Southeast Florida Regional Climate Change Compact
- b. The Compact successfully convened scientists to develop unified sea level rise projections for Southeast Florida.

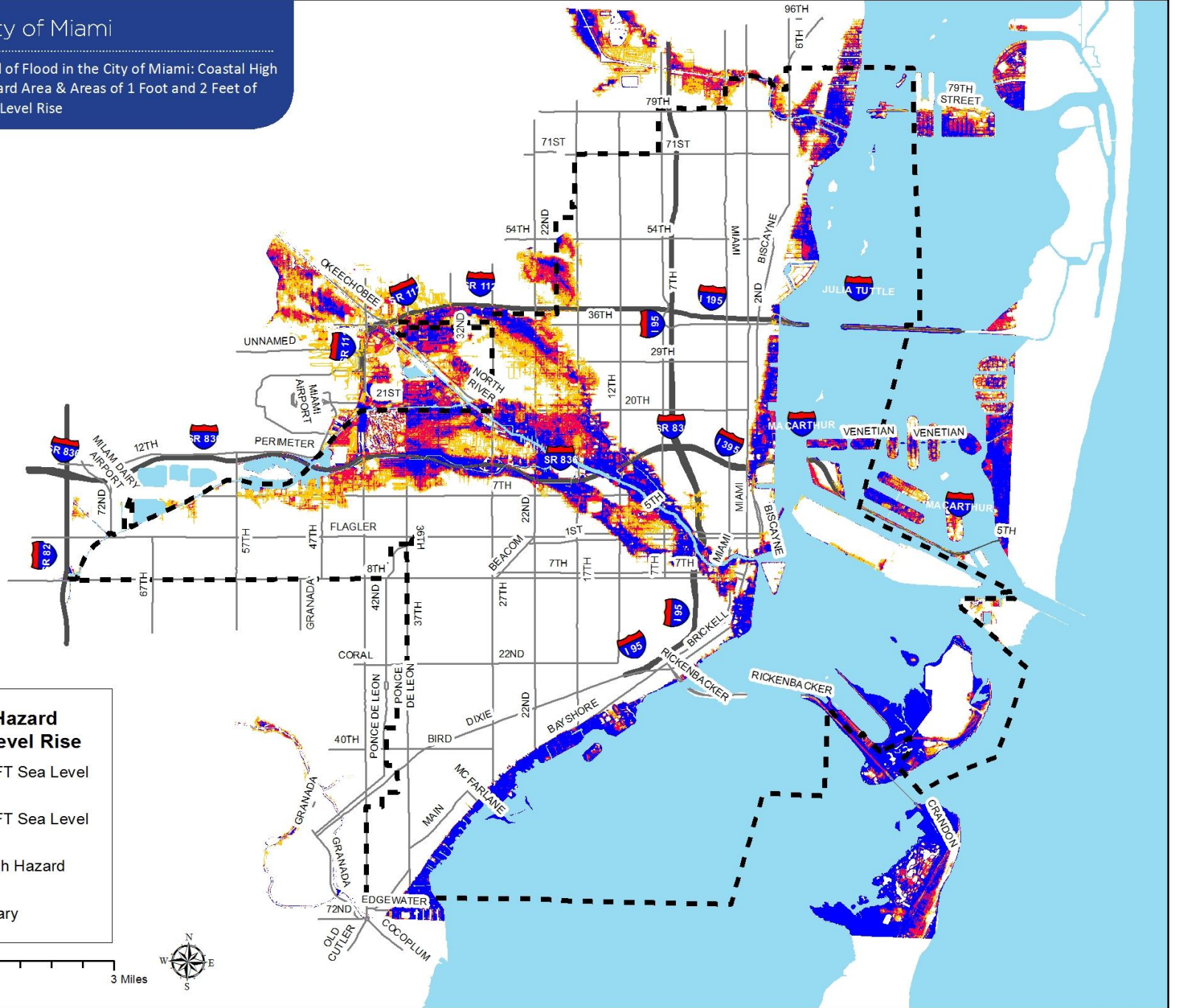






# City of Miami

Peril of Flood in the City of Miami: Coastal High Hazard Area & Areas of 1 Foot and 2 Feet of Sea Level Rise





# Resiliency Planning - Current Action & Strategies



Department of  
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City of Miami  
City of Miami  
neighborhood

## 1. Sea Level Rise & Climate Change – City of Miami specific actions

- a. Establishment of a Sea Level Rise Advisory Committee in 2015 and an interdepartmental Resilient Infrastructure Committee in 2017.
- b. Partnering on a Resilient Redesign for Shorecrest neighborhood (King Tide)
- c. Updating the City of Miami's stormwater master plan while implementing stormwater upgrades in highly vulnerable areas.
- d. Creating a rapid action plan for flood risk mitigation of critical infrastructure.
- e. Strengthening flood risk mitigation in the Future Land Use and Coastal Management elements of the City's Comprehensive Neighborhood plan.
- f. Citizens passed Miami Forever General Obligation Bond which includes \$193 million for flood risk mitigation which was approved by voters last November, 2017.
- g. The City's zoning code contains several standards aimed at maximizing natural infiltration of stormwater directly into the ground.
- h. A voluntary effort for developers to have a 5 feet freeboard above Base Flood Elevation (BFE).



## 2. Housing

- a. The Miami-Dade County Homeless Trust 10-year Plan provides framework to locally end homelessness.
- b. The Miami-Dade County Housing Surcharge Tax set aside funding for affordable housing
- c. Miami-Dade County is committed to working on a five-year plan to provide affordable housing in partnership with six entitlement cities, including the City of Miami and City of Miami Beach, by June 2018.
- d. Greater Miami Chamber of Commerce Housing Taskforce highlights opportunities for housing affordability.
- e. An Affordable Housing Plan is in the works to provide a roadmap for the City to ensure that we have adequate and equitable housing for all our residents





# Protecting Low-Income Residents



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City of Miami  
City of Miami

- All residential properties are designed to the South Florida Building Code
  - Storm windows required even for single family homes for new construction and rehabilitations
- 2 New Ordinances recently passed the City Commission to ensure health and safety of low income residents
  - Requires apartment with Low-income senior citizen to have an emergency plan which will include having emergency power and fuel for generators
  - Requires all apartments with low income residents receiving funds from the city to have emergency plan which includes emergency power and a safe air conditioned space.



# Protecting Low-Income Residents

- Discussion about the role of government in the private housing market when it comes to hurricane or disaster preparedness
  - Responsibility of owners to ensure that the rental property is secured during hurricanes – hurricane shutters, generators etc
  - When properties are located in evacuation zones, what is the responsibility of landlords?
    - There are discussions that the landlord be responsible for the evacuation of the tenant
    - Hotel cost for the tenants



# Conclusion

There are 4 ways to build a more resilient community

1. Tailor Early Warning Systems to Meet the Needs of Vulnerable People
2. Map City Services and Access to Amenities
3. Build Long-Term Resilience into Infrastructure and Planning
4. Promote an Inclusive Culture



# Questions

