Miami-Dade County Case Study: Emerging Partnerships – Integrating Resiliency in Multifamily Housing Capital Planning

Southeast Florida Regional Climate Change Compact
RCAP 3.0 Implementation Workshop
June 2023

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Miami-Dade County Office of Resilience
The Office of Resilience's mission is to lead Miami-Dade County to a resilient and sustainable future by identifying vulnerabilities, coordinating stakeholders, and facilitating innovative solutions.
Adaptation approaches to sea level rise and flooding

Source: Miami-Dade County Sea Level Rise Strategy


Year 2 Progress Update
Coming Soon

Build like the keys
Expand greenways and blueways
Build around transit on high ground
Build on fill
Create green and blue neighborhoods
Our 6 adaptation guiding principles for sea level rise, flooding and extreme heat

Environment

- **Reduce environmental pollution** by not adding greenhouse gas emissions or other pollutants to our air and waterways. Actions should not be implemented at the expense of the environment and human health.

- **Build with nature** by working with natural processes and natural materials to address long-term flooding hazards.

Engagement

- **Align with other initiatives** and plans such as Thrive305, the Comprehensive Development Master Plan, the Long-Range Transportation Plan, the Parks and Open Spaces System Master Plan, the Resilient305 Strategy, the Central and Southern Florida Flood Resiliency Study, and others.

Economy

- **Make us safer** over time by helping to protect lives and incrementally protecting the community from storms and multiple flood risks. Actions should not increase vulnerability to other hazards.

- **Be flexible** and able to respond to changing conditions such as faster rates of sea level rise.

Equity

- **Be equitable** by recognizing that historic, unjust discriminatory policies have led some of our residents to have fewer resources to adapt to impacts from climate change. Actions should be driven by inclusive engagement, fair policies, and direct investments and resources to target these disparities.

While specific projects and needs will change over time, our decisions about how to adapt will be shaped by the guiding principles.
Reduced access and temporary displacement
Unsanitary conditions
Failing septics
Cooling/energy needs
Stressed drainage
Heat exposure
Getting to Resilience

1. Assess hazard vulnerability & conduct energy audit of housing assets
2. Identify priority hazard mitigation and resilience projects
3. Position for implementation funding

Other Goals:
- Build internal capacity: hire staff and conduct training
- Streamline processes
- Center equity
Recent and forthcoming assessments

2018
Sea Level Rise & Storm Surge Rapid Action Plan

2021
Keep Safe Miami Pilot Assessments

2023-2024
FDEP Resilient Florida Flooding & Sea Level Rise Vulnerability Assessment of County Critical Assets

2023-2026
HUD CDBG-MIT Planning Grant ($2 million) to build staff capacity and conduct assessments
Sea Level Rise and Storm Surge
Rapid Action Plan

FINAL REPORT
June 15, 2018

Vulnerability Assessment
Determined the portion of
areas that would be affected
by each condition.

Criticality Assessment

Prioritized Projects

Highly Exposed

28 RAP Projects

Low Exposed

High Risk
Assets

Low Risk
Assets

Criticality

Vulnerability
MIAMI-DADE COUNTY OFFICE OF RESILIENCE RAPID ACTION PLAN
ASSETS VULNERABILITY EVALUATION
VULNERABILITY x CRITICALITY SCORE ORDER

PUBLIC HOUSING AND COMMUNITY DEVELOPMENT

<table>
<thead>
<tr>
<th>#</th>
<th>Department</th>
<th>Ratio</th>
<th>Name</th>
<th>Address</th>
<th>SLR Height (%)</th>
<th>Storm Surge Inundation Depth (ft)</th>
<th>% of Property Exposed to SLR</th>
<th>% of Property Exposed to Storm Surge</th>
<th>Vulnerability Score</th>
<th>Criticality Score</th>
<th>Vulnerability x Criticality Score</th>
<th>Year Built</th>
<th>Year Property Value ($)</th>
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<td>MDCDO</td>
<td>1:1</td>
<td>North Bay Village</td>
<td>123 North Way</td>
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<td>0.5</td>
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<td>South Bay Village</td>
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<td>0.7</td>
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<td>3</td>
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<td>East Bay Village</td>
<td>789 East Way</td>
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<td>0.10</td>
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</table>

Legend:
- Open Water
- VC Score
- Ground Elevation (feet)
- SLR Inundation (ft)
- Depth, ft
- More than 6.5
- Less than 2.0
- 2.0 - 6.0
- 6.1 - 10.0
- 10.1 - 15.0
- 15.1 - 20.0
- 20.1 - 30.0
- 30.1 - 50.0
- 51.0 - 150.0
- More than 150.0

MIA-MI DADE COUNTY OFFICE OF RESILIENCE
RAPID ACTION PLAN: PUBLIC HOUSING AND COMMUNITY DEVELOPMENT DEPT
ASSETS VULNERABLE TO SEA LEVEL RISE INUNDATION

DATE: APRIL 2018

Page 3
Other Grants

• DEP Resilient Florida
  • $15 million to support Rental Assistance Demonstration (RAD) program redevelopment in Little River Adaptation Action Area
  • $1.15 million –”Enhancing the Resiliency of PHCD’s Ingram Terrace Affordable Housing by Reducing Flood Risks with Stormwater Infrastructure and Other Improvements”
Kline Nunn (PHCD)
38 units

Little River Terrace
108 units

Little River Plaza (PHCD)
86 units

PHCD leading combination of affordable housing redevelopment, additional units and connection to new sewer system in design by WASD (other nearby residences are converting from septic to sewer)

Kline Nunn ranked as the most vulnerable PHCD property in the vulnerability assessment
At Kline Nun water depths could be 5.9 to 9.2 feet deep on the parcel.
Getting to Resilience

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Other Goals:
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- Center equity
$2 million planning grant

1. Fair Housing Assessment
2. Hazard Mitigation Assessment Toolkit
3. Hazard Mitigation Assessments for 40 County properties
4. Energy audits at 19 community development properties
5. Final Report

Current Status

- Paperwork :
  - Addressing state and federal requirements
  - Seeking Environmental Exemption
- In process of finalizing new positions within PHCD
Miami-Dade County CDBG-MIT General Planning Support Grant Project

Table of Organization

Blue + Red = Project Team

Blue = Grant-funded positions to be hired
Red = In-kind Project Staff

*Draft*
Subject to change
Grant-funded Staff Roles

Resilience Program Manager
Primary Role:
Serve as the primary liaison with the funder (state) and ensure project is meeting all grant requirements staying on time and within budget.

Architect
Primary Role:
Gather relevant information on the site, conduct the resilience assessments, help identify best hazard/risk mitigation measures and develop scope of work, reports and estimates to help the property owners understand the risks and next steps.

Engineer
Primary Role:
Determine appropriate hazard/risk mitigation measures based on known hazards and develop preliminary designs and cost estimates.
Consolidate and Tailor Resources
Draft Toolkit and Checklists tailored to Miami-Dade County and Stakeholders

Work completed by Miami-Dade County OOR interns Camilla Zablah and Perla Aquino.
Protection
Strategies to reduce a building’s vulnerability to extreme weather

1. Wet Floodproofing
2. Dry Floodproofing
3. Site Perimeter Floodproofing
4. Resilient Elevators
5. Backwater Valves
6. Sump Pumps

Adaptation
Strategies that improve a facility’s ability to adapt to changing climate conditions

7. Envelope Efficiency
8. Elevated Equipment
9. Elevated Living Space
10. Surface Stormwater Management
11. Window Shading
12. Distributed Heating and Cooling

Backup
Strategies that provide critical needs for when a facility loses power or other services

13. Maintaining Backup Power to Critical Systems
14. Emergency Lighting
15. Access to Potable Water

Community
Strategies that encourage behavior which enhances resilience

16. Building Community Ties
17. Creating Community Resilience Spaces
19. Organizing for Community Resilience

https://www.climatesafehousing.org/
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Miami-Dade County Local Mitigation Strategy (LMS)

• Get projects on the LMS
• Creates eligibility to apply for various grant programs

Home: https://www.miamidade.gov/global/emergency/projects-that-protect.page
Dashboard: https://www.arcgis.com/apps/dashboards/50e1db23f56e4f6a81d47f415cbbf18e
• County to be engaged along with other communities
• Kick-off call this week
• Exploring how to build capacity within Local Mitigation Strategy (LMS) Working Group to seek BRIC and other resilience grants