

A photograph of a flooded street in Miami-Dade County. The water is deep, reaching up to the windows of cars parked along the side. In the background, there are trees and buildings. The sky is overcast and grey.

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

Christian Kamrath, CFM
Resilience Program Manager – Adaptation Team
Miami-Dade County Office of Resilience

MIAMI-DADE COUNTY

OFFICE OF RESILIENCE

REGULATORY AND ECONOMIC RESOURCES

miamidade.gov/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.



ENERGY AND CLIMATE MITIGATION	ADAPTATION	COMMUNICATION	BISCAYNE BAY	EXTREME HEAT	FUTURE READY	ZERO WASTE
An icon showing a white cloud with "CO2" inside, and a white arrow pointing downwards from the bottom of the cloud.	An icon of a globe with wavy lines representing water rising around it, and a vertical scale on the left side.	An icon featuring a laptop, a play button, and social media icons for Facebook and YouTube.	An icon of a bay or coastline with waves and a speech bubble inside the water area.	An icon of a sun with rays and a thermometer next to it.	An icon showing three stylized figures sitting around a table, with speech bubbles above them.	An icon of a trash can with a lid and vertical lines on its body.
Reduce Sources of Climate Change	Address Sea Level Rise Impacts	Engage & Connect Stakeholders	Protect and Restore	Implement Heat Risk Reduction Efforts	Resilience Implementation & Planning	Minimize Waste & Reduce Consumption



MIAMI-DADE COUNTY | Biscayne Bay Task Force Report and Recommendations

A UNIFIED APPROACH TO RECOVERY FOR A HEALTHY & RESILIENT BISCAYNE BAY

June 2020

Biscayne Bay Task Force Members
 Irela Bagué, Task Force Chairperson, President, Bagué Group
 David Martin, Task Force Vice Chairperson, President, Terra Group
 Lynette Caradosh, Ph.D., Director of Resilience & Adaptation, Moffatt & Nichol
 Lee Hefty, Director, Division of Environmental Resources Management, Miami-Dade County
 James Murley, Chief Resilience Officer, Office of Resilience, Miami-Dade County
 John Pistorino, P.E., Principal, Pistorino and Alam
 Alyce Robertson, Executive Director, Downtown Development Authority
 Steve Sauls, Biscayne Bay Marine Health Summit Steering Committee Member
 Tiffany Troxler, Ph.D., Director of Science, Sea Level Solutions Center, Florida International University

HEAT CHECK:
 DRINK WATER
 FIND SHADE
 REST

EXTREME HEAT ACTION PLAN

MIAMI-DADE COUNTY
 OFFICE OF RESILIENCE

Connected Strategies

Adaptation approaches

to sea level rise and flooding



**Year 2 Progress Update
Coming Soon**

Source: Miami-Dade County
Sea Level Rise Strategy



Our 6 adaptation guiding principles for sea level rise, flooding and extreme heat



While specific projects and needs will change over time, our decisions about how to adapt will be shaped by the guiding principles

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.



Reduced access and temporary displacement

Cooling/energy needs



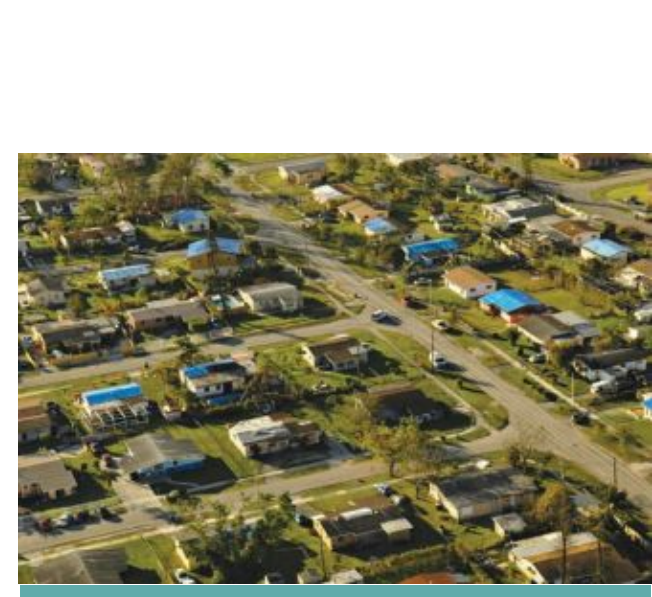
Stressed drainage



Unsanitary conditions



Failing septics



Heat exposure

Getting to Resilience



1. Assess hazard vulnerability & conduct energy audit of housing assets



2. Identify priority hazard mitigation and resilience projects



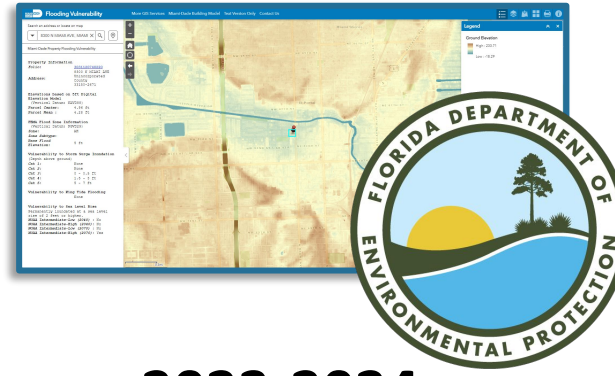
3. Position for implementation funding

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



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



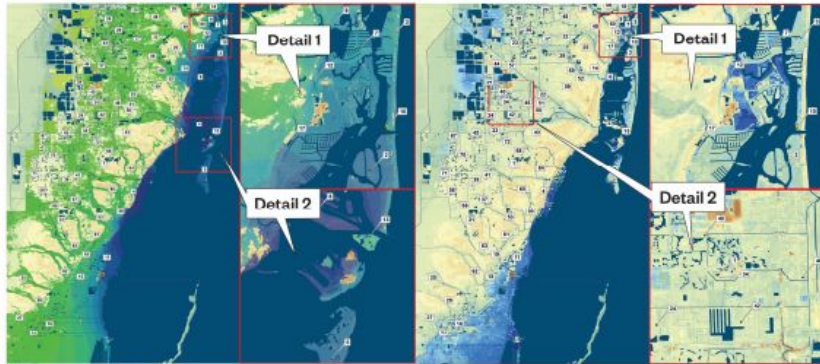
2023-2026
HUD CDBG-MIT Planning
Grant (\$2 million) to build
staff capacity and conduct
assessments

2021
Keep Safe Miami
Pilot Assessments



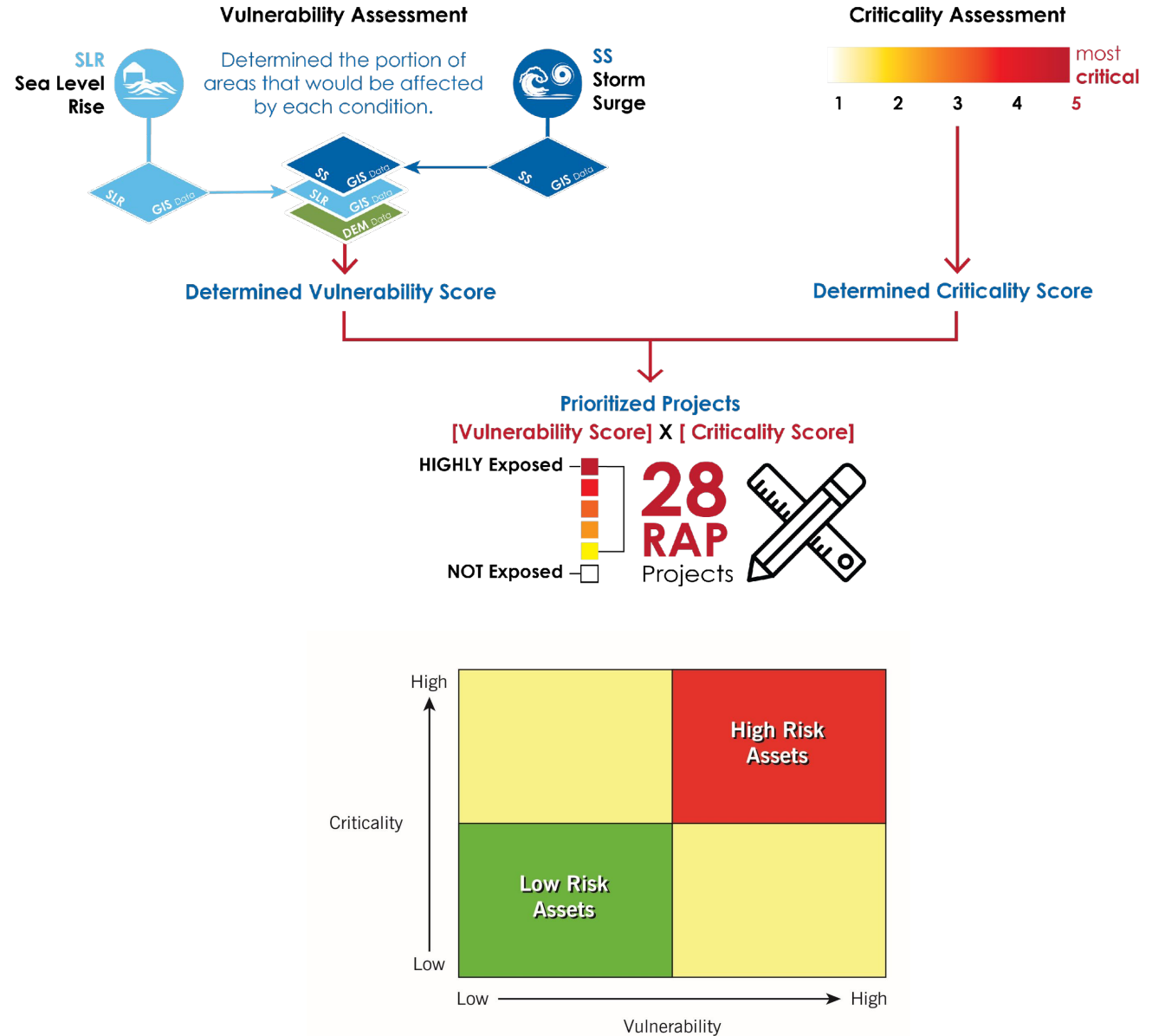


Hazen and Sawyer
999 Ponce de Leon Blvd, Suite 1150
Coral Gables, FL, 33134



Sea Level Rise and Storm Surge Rapid Action Plan

FINAL REPORT
June 15, 2018





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

#	Department	Folio	Name	Elderly Housing	Address	SLR Depth (ft)			Storm Surge Inundation Depth (ft) ¹			% of Property Exposed to SLR		% of Property Exposed to Storm Surge ¹			Vulnerability Score	Ranking Based on Vulnerability Score	Criticality	Vulnerability x Criticality	Ranking Based on Vulnerability x Criticality Score	Year Built	Host Property Value 2016 (As Per Folio)
						Min	Max	Mean	Min	Max	Mean	% Exposed between 0.01 ft and 2 ft	% Exposed >= 2 ft	% Exposed between 0.01 ft and 2 ft	% Exposed between 2 ft and 5 ft	% Exposed >= 5 ft							
1	PHCD	3031120740220	Kline Nunn	Yes	8300 N MIAMI AVE	0.00	1.00	0.09	5.87	9.28	7.48	21.5%	0.0%	0.0%	0.0%	3.22	1	5	16.08	1	1972	\$1,233,989.00	
2	PHCD	0101070101110	Jack Off Plaza	Yes	455 NW 8 AVE	0.00	0.83	0.07	4.82	9.63	7.82	21.4%	0.0%	0.0%	3.9%	3.17	2	5	15.87	2	1975	\$16,014,488.00	
3	PHCD	3031120380060	Little River Plaza	Yes	8255 NW MIAMI CT	0.00	0.82	0.03	5.43	9.23	6.97	9.7%	0.0%	0.0%	3.0%	3.10	3	5	15.48	3	1975	\$3,356,262.00	
4	PHCD	0131120480330	Gwen Cherry 20	Yes	73 NW 76 ST	0.00	0.00	0.00	5.62	7.05	6.45	0.0%	0.0%	0.0%	100.0%	3.00	4	5	15.00	4	1972	\$553,785.00	
5	PHCD	0101070901030	Harry Cam	Yes	180 NE 5 ST	0.00	0.00	0.00	5.17	6.28	5.52	0.0%	0.0%	0.0%	100.0%	3.00	5	5	15.00	5	1970	\$673,111.00	
6	PHCD	0101080501080	Parkside I & II	Yes	333 NW 4 AVE	0.00	0.00	0.00	5.00	6.04	5.52	0.0%	0.0%	0.0%	100.0%	3.00	6	5	15.00	6	1963	\$7,945,183.00	
7	PHCD	0131120480330	Ermer Turnkey	Yes	7820 N MIAMI AVE	0.00	0.00	0.00	4.84	6.36	5.63	0.0%	0.0%	0.0%	8.3%	2.92	7	5	14.58	7	1970	\$1,369,110.00	
8	PHCD	0141380031290	Riverside	Yes	950 SW 1 ST	0.00	0.00	0.00	4.30	6.32	5.50	0.0%	0.0%	13.3%	35.7%	2.87	8	5	14.33	8	1981	\$4,076,690.00	
9	PHCD	0131350192100	Helen Sawyer ALF	Yes	1150 NW 11 STREET RD	0.00	0.42	0.02	2.39	8.06	5.81	11.8%	0.0%	0.0%	34.4%	65.6%	2.77	9	5	13.87	9	1975	\$5,497,000.00
10	PHCD	0131120410010	Peters Plaza	Yes	191 NE 75 ST	0.00	0.00	0.00	3.50	7.16	5.30	0.0%	0.0%	0.0%	47.1%	52.9%	2.53	11	5	12.64	10	1971	\$3,788,355.00
11	PHCD	3031020300220	Palm Towers	Yes	1950 NW 95 ST	0.00	1.04	0.03	0.35	6.09	3.93	4.6%	0.0%	7.2%	78.6%	11.7%	2.11	14	5	10.53	11	1972	\$3,381,023.00
12	PHCD	0821220110791	Opal Locks Elderly	Yes	2329 NW 136 ST	0.00	0.00	0.00	2.85	3.42	3.15	0.0%	0.0%	0.0%	100.0%	2.00	15	5	10.00	12	1985	\$1,917,426.00	
13	PHCD	3031020300340	Palm Court	Yes	860 NW 95 ST	0.00	0.00	0.00	2.96	3.59	3.29	0.0%	0.0%	0.0%	100.0%	2.00	16	5	10.00	13	1938	\$60,966.00	
14	PHCD	0131350560010	Singer Plaza	Yes	1310 NW 16 ST	0.00	0.00	0.00	0.75	6.76	2.96	0.0%	0.0%	13.2%	84.3%	2.5%	1.89	18	5	9.46	14	1960	\$5,414,661.00
15	PHCD	0131270770010	Scattered Site 11 - D	Yes	1919 NW 29 ST	0.00	0.00	0.00	1.29	2.86	2.22	0.0%	0.0%	24.4%	75.6%	1.76	20	5	8.78	15	1970	\$1,157,855.00	
16	PHCD	0131120970010	New Haven Gdns/Site 05	No	7150 NE 2 AVE	0.00	0.00	0.00	0.00	7.92	5.34	0.0%	0.0%	11.5%	88.5%	2.53	10	3	7.59	16	1970	\$4,884,661.00	
17	PHCD	0102030031020	Myles Senior Center	No	450 SW 5 ST	0.00	0.00	0.00	8.12	5.00	0.00	0.0%	0.0%	4.8%	95.2%	2.52	12	3	7.57	17	1984	\$1,864,302.00	
18	PHCD	0101060901010	Culmer Gardens	Yes	554 NW 5 AVE	0.00	0.37	0.01	3.15	9.21	6.37	2.3%	0.0%	0.0%	93.7%	3.6%	2.39	13	3	7.18	18	1984	\$3,770,051.00
19	PHCD	1678240290270	Florida City Gardens	Yes	900 NW 6 AVE	0.00	0.00	0.00	0.00	3.40	1.84	0.0%	0.0%	57.8%	42.2%	0.0%	1.43	24	5	7.13	19	1983	\$2,041,447.00
20	PHCD	0102060901010	Joe Moretti	Yes	900 SW 2 AVE	0.00	0.00	0.00	0.00	3.06	1.95	0.0%	0.0%	50.0%	50.0%	0.0%	1.41	26	5	7.05	20	1961	\$4,403,360.00
21	PHCD	3031020300010	Twin Lakes	Yes	1221 NW 95 ST	0.00	3.72	0.13	0.00	3.90	1.61	0.9%	1.3%	3.8	96.2%	0.0%	1.36	28	5	6.82	21	1971	\$1,761,449.00
22	PHCD	0131360290130	Phyllis Wheatley	Yes	1748 NW 2 AVE	0.00	0.00	0.00	0.50	3.80	1.97	0.0%	0.0%	80.8%	19.2%	0.0%	1.33	29	5	6.67	22	1984	\$1,666,163.00
23	PHCD	0131270780010	Scattered Site 9 - D	Yes	3169 NW 21 AVE	0.00	0.00	0.00	1.39	2.19	1.87	0.0%	0.0%	87.7%	12.3%	0.0%	1.32	30	5	6.63	23	1970	\$453,050.00
24	PHCD	3069350120020	Moody Gardens	Yes	2804 SW 135 AVE	0.00	0.00	0.00	0.00	2.76	1.28	0.0%	0.0%	65.3%	34.7%	0.0%	1.17	32	5	5.86	24	1983	\$1,373,613.00
25	PHCD	0131340800010	Gwen Cherry 16	No	2000 NW 19 TER	0.00	0.00	0.00	1.69	3.27	2.48	0.0%	0.0%	9.1%	90.9%	0.0%	1.91	17	3	5.73	25	1970	\$5,041,288.00
26	PHCD	307990260270	Homeownership (010)	No	15280 SW 307 RD	0.00	0.00	0.00	1.90	3.32	2.73	0.0%	0.0%	16.7%	83.3%	0.0%	1.83	19	3	5.50	26	1973	\$1,984,888.00
27	PHCD	0131270880010	Down Gardens	Yes	2891 NW 19 AVE	0.00	0.00	0.00	2.80	1.30	0.00	0.0%	0.0%	83.8%	16.2%	0.0%	1.07	38	5	5.34	27	1980	\$2,983,544.00
28	PHCD	0131270790010	Thrice Round Towers	Yes	2920 NW 18 AVE	0.00	0.00	0.00	0.04	2.81	2.71	0.0%	0.0%	96.4%	3.6%	0.0%	1.04	39	5	5.18	28	1970	\$21,157,797.00
29	PHCD	0131270690010	Abe Aronovitz	Yes	1840 NW 28 ST	0.00	0.00	0.00	0.28	2.10	0.99	0.0%	0.0%	98.6%	1.4%	0.0%	1.01	40	5	5.07	29	1962	\$2,842,661.00
30	PHCD	1078130430150	W. Homestead Gardens	Yes	331 SW 4 CT	0.00	0.00	0.00	1.22	1.45	1.32	0.0%	0.0%	100.0%	0.0%	0.0%	1.00	51	5	5.00	30	2003	\$75,579.00
31	PHCD	1079080000340	Homestead East	Yes	16500 SW 306 ST	0.00	0.00	0.00	0.00	1.41	0.60	0.0%	0.0%	97.9%	2.1%	0.0%	0.98	54	5	4.90	31	1985	\$1,227,018.00
32	PHCD	0101010102030	Culmer Plaza	No	803 NW 5 AVE	0.00	0.00	0.00	6.15	2.51	0.00	0.0%	0.0%	31.3%	68.7%	3.7%	1.60	21	3	4.81	32	1975	\$14,510,089.00
33	PHCD	3069350120010	Moody Village	No	2690 SW 135 AVE	0.00	0.00	0.00	3.60	2.12	0.00	0.0%	0.0%	80.8%	19.2%	0.0%	1.59	22	3	4.76	33	1981	\$5,696,388.00
34	PHCD	0131350210160	Robert King High	Yes	1389 NW 7 ST	0.00	3.61	0.05	0.00	9.57	1.66	2.7%	0.0%	7.6%	92.4%	12.6%	0.94	59	5	4.72	34	1963	\$29,728,930.00
35	PHCD	3069270000500	Naranja	No	13924 SW 280 ST	0.00	0.00	0.00	0.81	3.50	1.99	0.0%	0.0%	48.5%	51.5%	0.0%	1.52	23	3	4.55	35	1971	\$7,587,488.00
36	PHCD	0131270810010	Dante Fascell	Yes	2936 NW 17 AVE	0.00	0.00	0.00	0.00	1.43	0.54	0.0%	0.0%	89.8%	10.2%	0.0%	0.90	61	5	4.49	36	1973	\$4,786,111.00
37	PHCD	3031100280330	Hertli Park - Scott Carver Phase 2A & B	Yes	1175 NW 20 AVE	0.00	0.00	0.00	2.02	1.11	0.00	0.0%	0.0%	80.0%	20.0%	3.3%	0.87	63	5	4.33	37	1980	\$1,440,000.00
38	PHCD	3069340130010	Heritage Village II	No	2690 SW 142 AVE	0.00	0.00	0.00	0.93	2.34	1.80	0.0%	0.0%	81.7%	18.3%	0.0%	1.42	25	3	4.25	38	1982	\$93,888.00
39	PHCD	0821280190010	Ingram Terrace	No	3150 NW 131 ST	0.00	0.36	0.01	0.59	4.48	1.84	2.8%	0.0%	63.3%	36.7%	0.0%	1.40	27	3	4.19	39	1971	\$1,612,507.00
40	PHCD	0131350190340	Green Turnkey	Yes	1500 NW 7 CT	0.00	0.00	0.00	2.49	0.99	0.59	0.0%	0.0%	57.3%	42.7%	0.0%	0.83	65	5	4.13	40	1968	\$1,610,062.00
41	PHCD	0102060901090	Medvin Apts	Yes	945 SW 3 AVE	0.00	0.00	0.00	0.89	0.29	0.00	0.0%	0.0%	81.3%	18.7%	0.0%	0.81	67	5	4.06	41	1975	\$316,228.00
42	PHCD	0131360730050	Town Park	No	400 NW 19 ST	0.00	0.00	0.00	6.95	3.10	1.76	0.0%	0.0%	70.8%	29.2%	0.0%	1.29	31	3	3.88	42	1963	\$971,538.00
43	PHCD	3069260260300	Southridge I	No	19106 SW 112 PL	0.00	0.00	0.00	0.67	2.38	1.42	0.0%	0.0%	83.3%	16.7%	0.0%	1.17	33	3	3.50	43	1980	\$81,543.00
44	PHCD	0131130390010	Gwen Cherry 06	No	90 NW 71 ST	0.00	0.00	0.00	3.51	1.31	0.00	0.0%	0.0%	49.1%	50.9%	0.0%	1.13	34	3	3.40	44	1970	\$651,272.00
45	PHCD	0131120000730	Victory Homes	No	530 NW 75 ST	0.00	0.00	0.00	2.62	1.31	0.00	0.0%	0.0%	88.3%	11.7%	0.0%	1.12	35	3	3.35	45	1941	\$6,006,789.00
46	PHCD	0131120040010	Gwen Cherry 22	Yes	7101 NE MIAMI CT	0.00	0.00	0.00	3.98	0.73	0.00	0.0%	0.0%	53.4%	46.6%	0.0%	1.06	72	5	3.30	46	1961	\$3,836,010.00
47	PHCD	3060180200170	Goulds	No	11211 SW 221 ST	0.00	0.00	0.00	3.94	1.76	0.00	0.0%	0.0%	35.3%	64.7%	0.0%	0.88	36	3	3.24	47	1980	\$1,211,895.00
48	PHCD	3060260300300	Southridge II	No	11344 SW 190 ST B	0.00	0.00	0.00	0.49														



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”



Little River Adaptation Action Area (AAA)

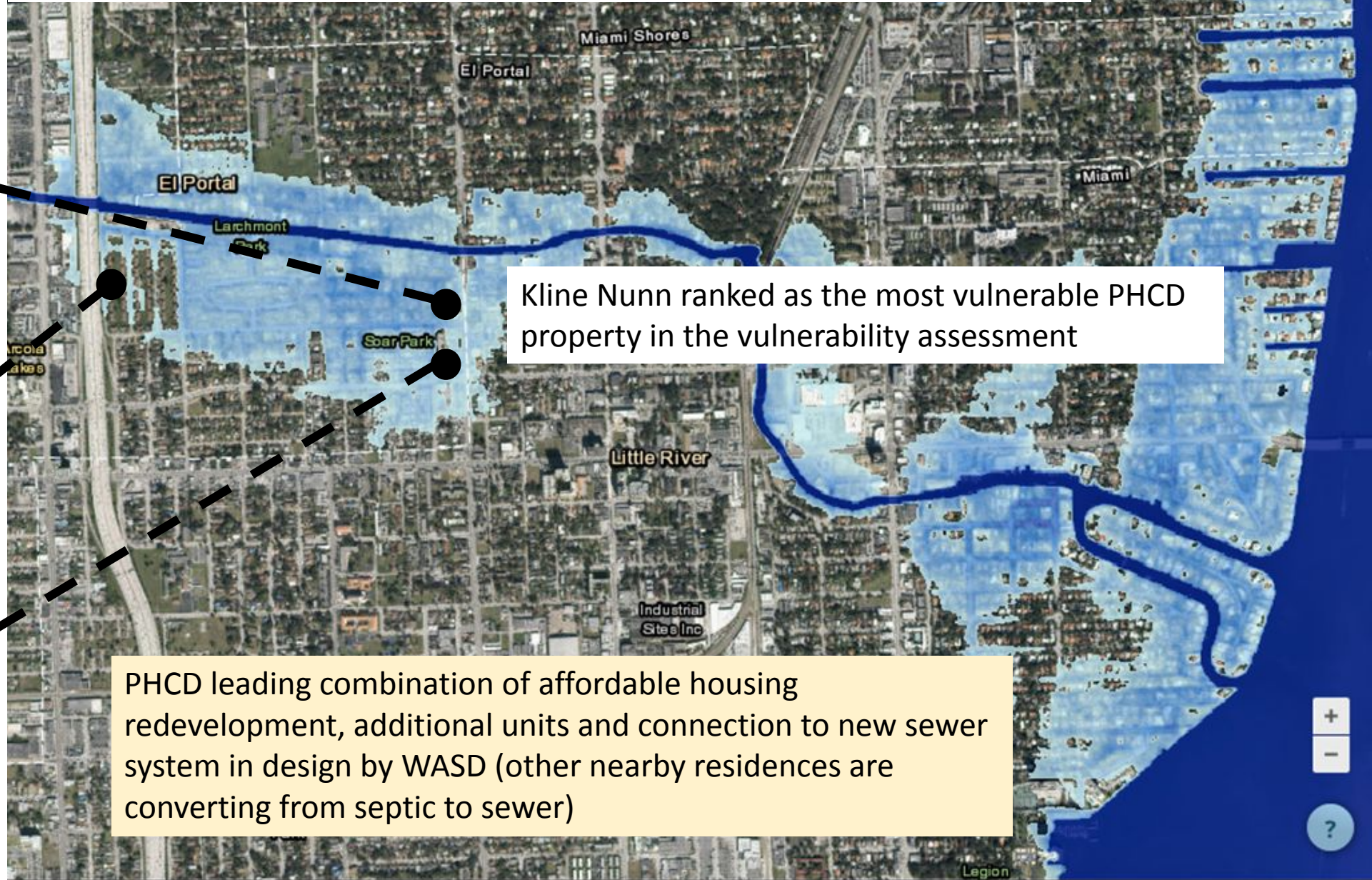
Kline Nunn (PHCD)
38 units



Little River Terrace
108 units



Little River Plaza (PHCD)
86 units

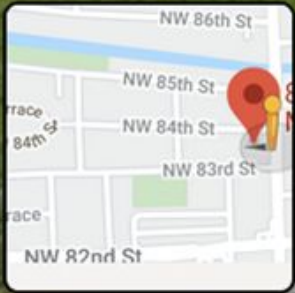


At Kline Nun water depths could be 5.9 to 9.2 feet deep on the parcel

8305 N Miami Ave
Miami, Florida
Google
Street View

Potential flood depth

Potential flood depth



Google

Getting to Resilience



1. Assess hazard vulnerability & conduct energy audit of housing assets



2. Identify priority hazard mitigation and resilience projects

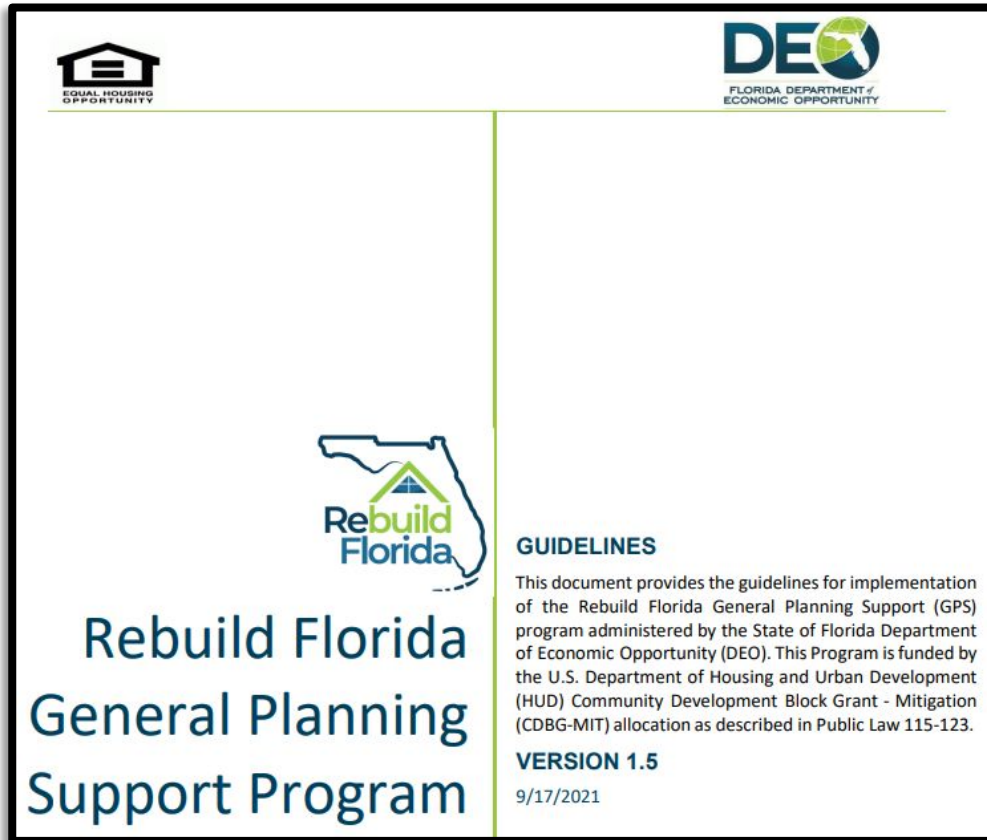


3. Position for implementation funding

Other Goals:

- Build internal capacity: hire staff and conduct training
- Streamline processes
- Center equity

CDBG-MIT Planning Grant Deliverables



\$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

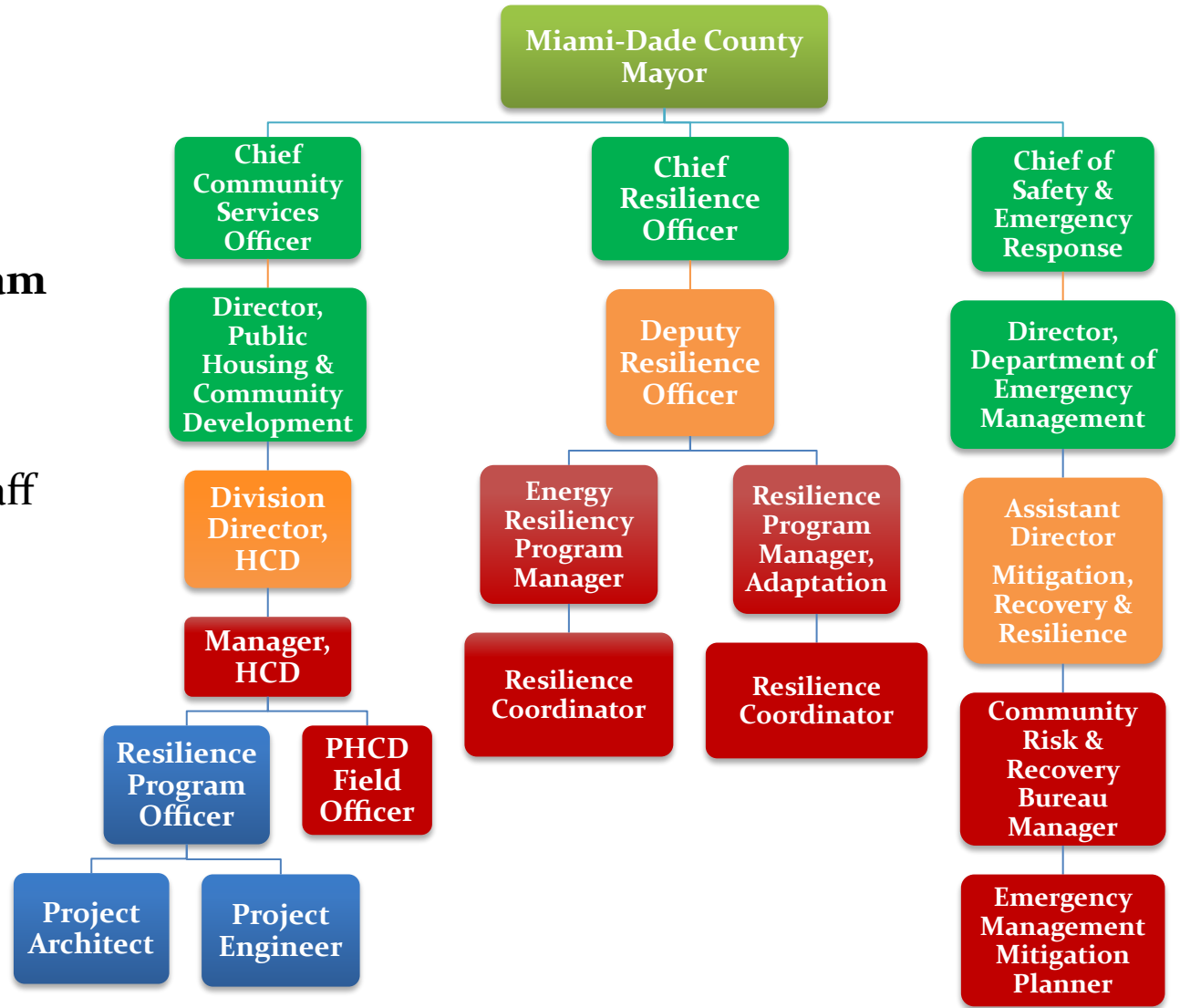
- Paperwork :)
 - Addressing state and federal requirements
 - Seeking Environmental Exemption
- In process of finalizing new positions within PHCD

Miami-Dade County CDBG-MIT General Planning Support Grant

Project

Table of Organization

Draft
Subject to change



Blue + Red = Project Team

Blue = Grant-funded positions to be hired

Red = In-kind Project Staff

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:

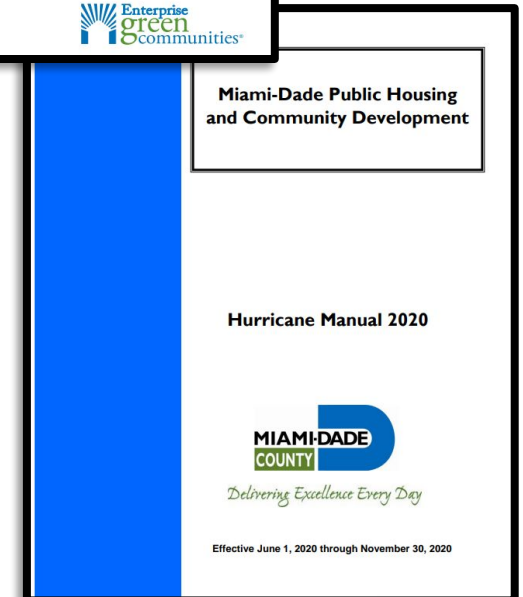
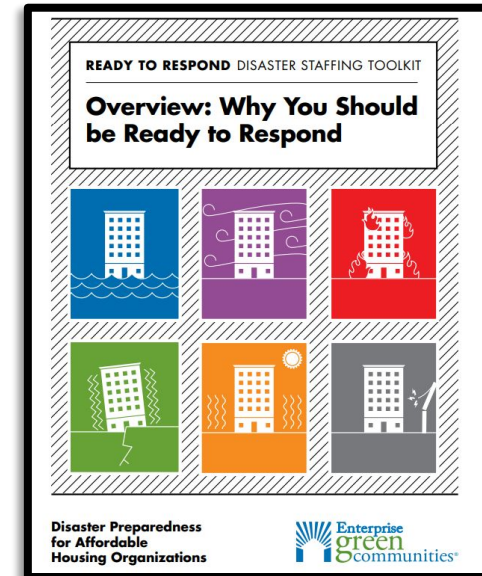
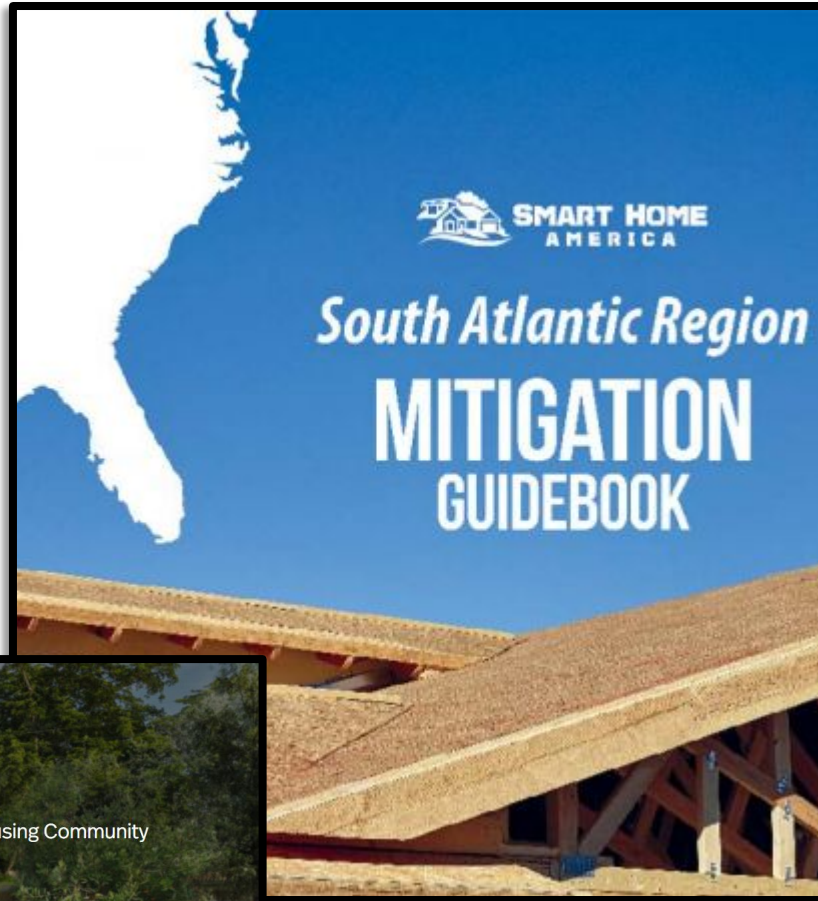
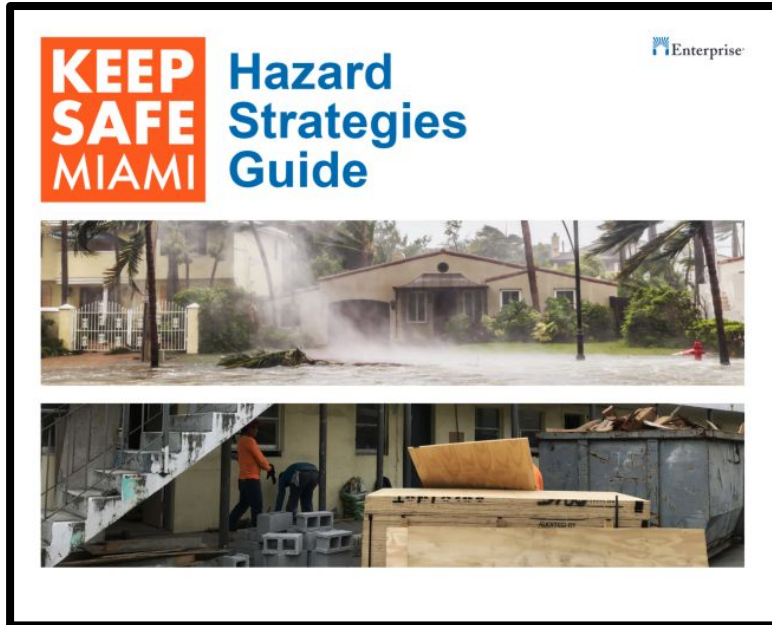
Gather relevant information on the site, conduct the resilience assessments, help identify best hazard/risk mitigation measures and develop scope of work, reports and estimates to help the property owners understand the risks and next steps.

Engineer

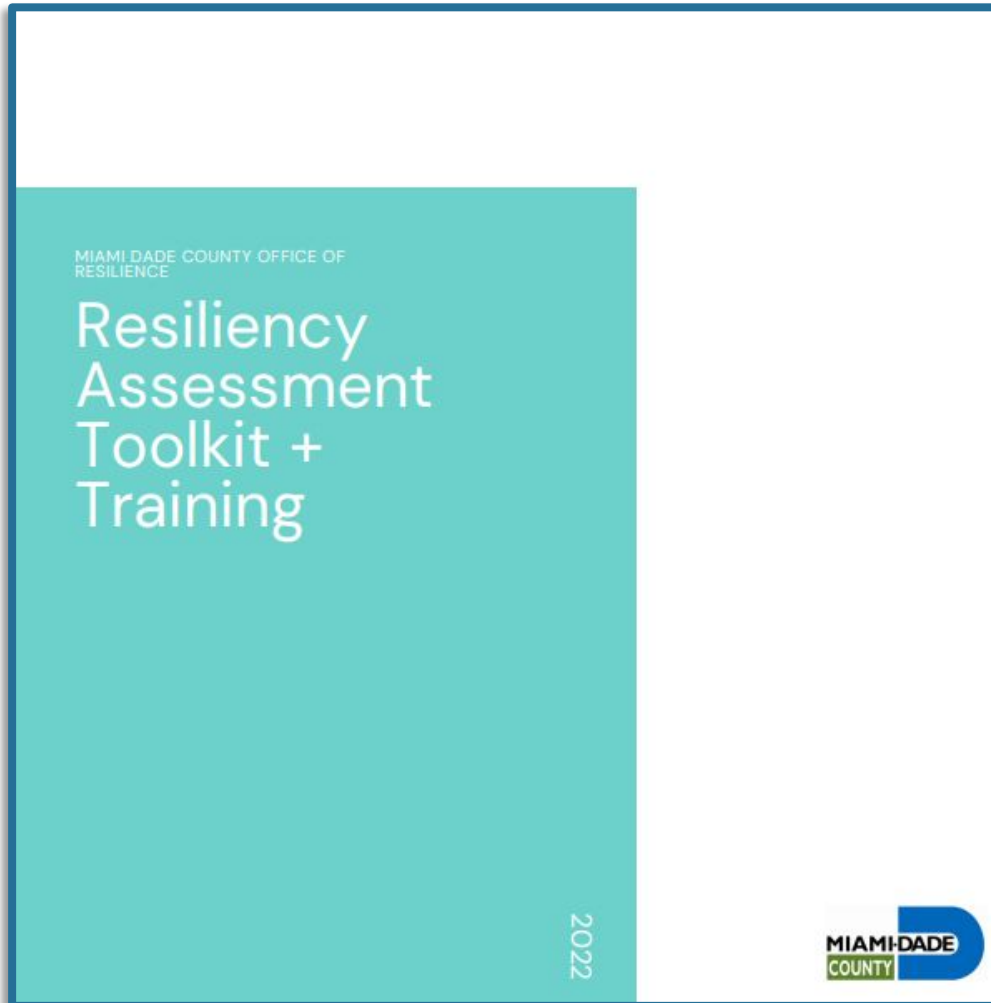
Primary Role:

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



Miami-Dade County Resilience Assessment Checklist

Answer each question with either: Yes, No, Unsure, or N/A

PROPERTY NAME: _____
 PROPERTY ADDRESS: _____
 ASSESSMENT COMPLETION DATE: _____

GENERAL

General Question
 Green spaces and lawns

- 1 What year was the building last inspected?
- 2 Is the building located in a flood zone?
- 3 Tip: to determine if a building is in a flood zone, visit <https://www.floodmaps.com/>
- 4 What is the base flood elevation (BFE) for the building?
- 5 What is the building's floor level?
- 6 Is there non-living storage in the building?
- 7 What is the building's construction type?
- 8 In the past few years, has the building experienced flooding damage?
- 9 Has the building experienced any other hazards such as mold, pests, or fire?
- 10 What types of trees are on the site? Do they provide shade?

NOTES

EXTREME HEAT
 Please refer to page 88 (2022)

Heating and Cooling
 Extreme heat can lead to increased energy costs and equipment failure.

- 1 Have residents complained about extreme cold?
- 2 Is HVAC equipment discolored or leaking at each apartment location?
- 3 Is the HVAC equipment inspected annually?
- 4 Does the building have adequate windows and shading?
- 5 Are window frames or screens in good condition?
- 6 Do south, east, and west windows have been installed with low-E glass?
- 7 Is the roof material adequate for the climate?
- 8 What is the roof insulation R-value?
- 9 Is the site surrounded by trees that provide shade?
- 10

NOTES

EXTREME WIND
 Please refer to page 89 (2022)

Structure and Foundation
 The building's structure and foundation should be able to withstand wind and debris impact.

- 1 Has the building been inspected for wind damage?
- 2 Is the building's exterior in good condition?
- 3 Does the building have wind debris protection?
- 4 Tip: Use the following resources for more information: <https://www.fema.gov/> and <https://www.floodmaps.com/>
- 5 Is the roof engineered for wind loads?
- 6 Has rooftop equipment been secured?
- 7 Does the rooftop equipment have wind ballast, loose fasteners, or other debris?
- 8 Does the building have adequate connections, flood elevation, and wind resistance?
- 9 Do elevators have wind resistance?
- 10 Is there fixed exterior signage?

NOTES

FLOODING
 Please refer to page 90 (2022)

Site and Landscaping
 Green spaces and lawns can help reduce flooding risk.

- 1 Has the building been inspected for flooding damage?
- 2 Is most of the building's floor level above the BFE?
- 3 Are there any gardens?
- 4 Does the building have adequate drainage?
- 5 Does the building have adequate connections, flood elevation, and wind resistance?
- 6 Are there any trees on the site?
- 7 Are the exterior walls damage resistant?
- 8 Does the building have adequate connections, flood elevation, and wind resistance?
- 9 Do elevators have wind resistance?
- 10 Is there fixed exterior signage?

Interior Flood Protection
 All water must be contained and removed.

- 11 Has the property been inspected for flooding damage?
- 12 Are there interior flood barriers?
- 13 Is there a sump pump installed and supplied with power?
- 14 Building Foundation: The building's foundation should be able to withstand flooding.

NOTES

UNHEALTHY HOUSING

HOUSING
 Please refer to page 91 (2022)

Emergency Management
 Equipment and materials should be available for use during an emergency.

- 1 Are there battery-powered emergency lighting systems?
- 2 Are pathways for emergency exits clear?
- 3 Is there sufficient fire alarm transmission?
- 4 Does the building have adequate connections, flood elevation, and wind resistance?
- 5 Are there any trees on the site?
- 6 Is combustion equipment properly vented?
- 7 Are there any electrical safety hazards?
- 8 A Is there any electrical safety hazards?
- 9 Do you use chemical cleaning products? If yes, which ones?
- 10 Is there any evidence of mold or pests?
- 11
- 12
- 13
- 14

NOTES

OPERATIONS AND COMMUNICATION
 Please refer to page 92 (2022)

Emergency Management
 Having a clear emergency plan will guarantee an effective response when there is a disaster.

Does the building have an emergency management plan covering building protection, resident engagement, and business continuity?

- 1 a. <https://businesscontinuity.enterprisecommunity.org>
 b. Has the emergency management plan been revised or tested in the last 3 years?
 Yes No Unsure N/A
- 2 Would residents be asked to evacuate if a hurricane was approaching?
 a. If yes, where would they be directed to go?
 b. If yes, are there plans to assist residents with disabilities/mobility challenges?
 Yes No Unsure N/A
- 3 Would any staff be expected to remain on site during a hurricane?
 Yes No Unsure N/A
- 4 If residents may remain on site during a storm, is there a plan in place to help elderly residents evacuate if there is a power outage and heat becomes a health risk?
 Yes No Unsure N/A
- 5 Is emergency exit signage and wayfinding in place and highly visible?
 Yes No Unsure N/A
- 6 Is the building emergency alarm system functional and audible from all units?
 Yes No Unsure N/A
- 7 Are there instructions for tenants to relocate or protect their vehicles in the event of a storm or emergency?
 Yes No Unsure N/A
- 8 Are mechanical systems manuals and shut-down procedures available and stored in a safe and convenient location?
 Yes No Unsure N/A
- 9 Is there a backup potable water supply or potable water storage on site?
 Yes No Unsure N/A

Energy and Water Usage
 Energy and water consumption should be regularly monitored and reduced.

Work completed by Miami-Dade County OOR interns Camilla Zablach 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
- 18 Developing an Emergency Management Manual
- 19 Organizing for Community Resilience



Getting to Resilience



1. Assess hazard vulnerability & conduct energy audit of housing assets



2. Identify priority hazard mitigation and resilience projects



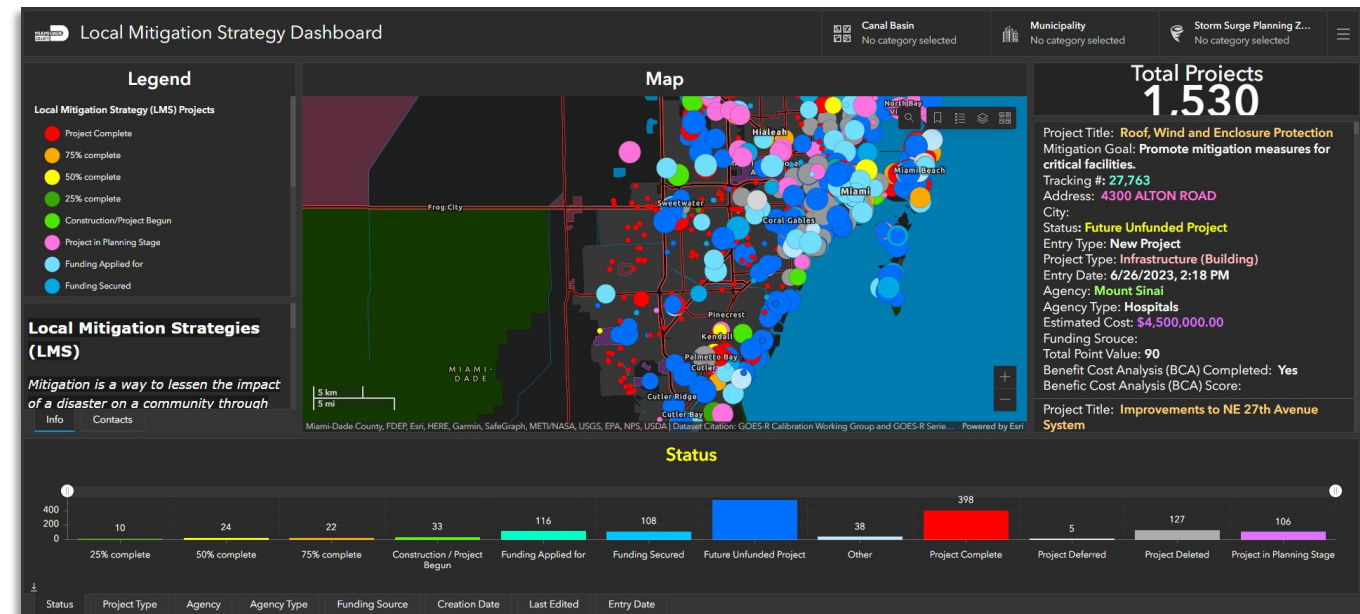
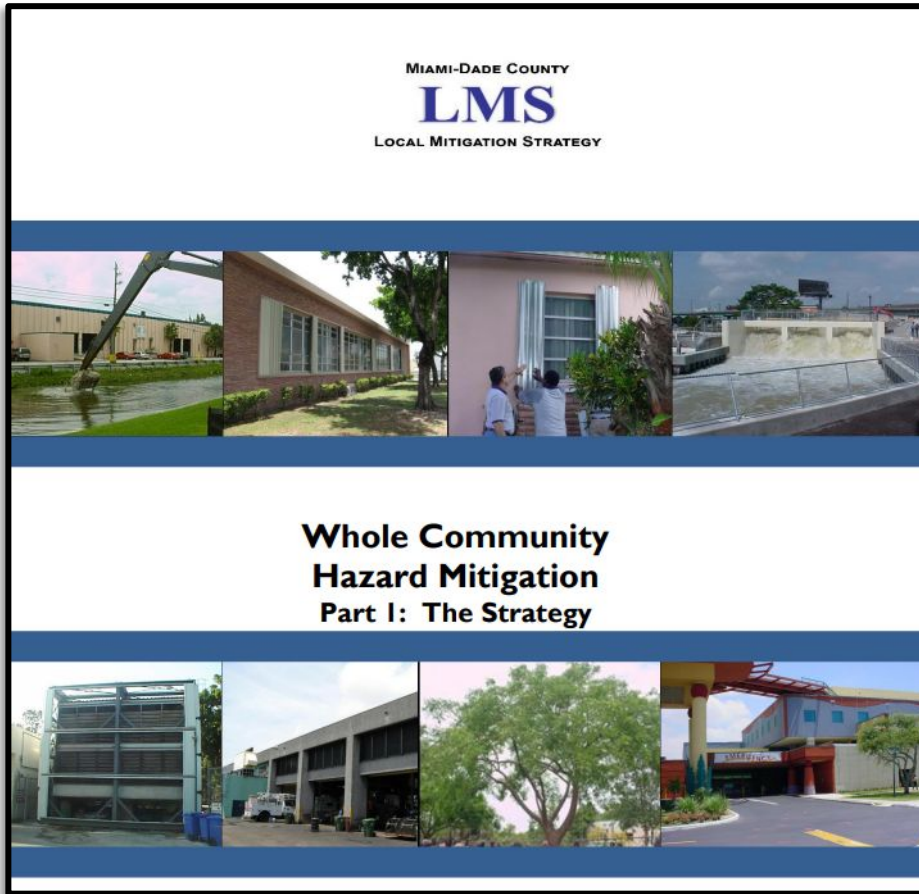
3. Position for implementation funding

Other Goals:

- Build internal capacity: hire staff and conduct training
- Streamline processes
- Center equity

Miami-Dade County Local Mitigation Strategy (LMS)

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



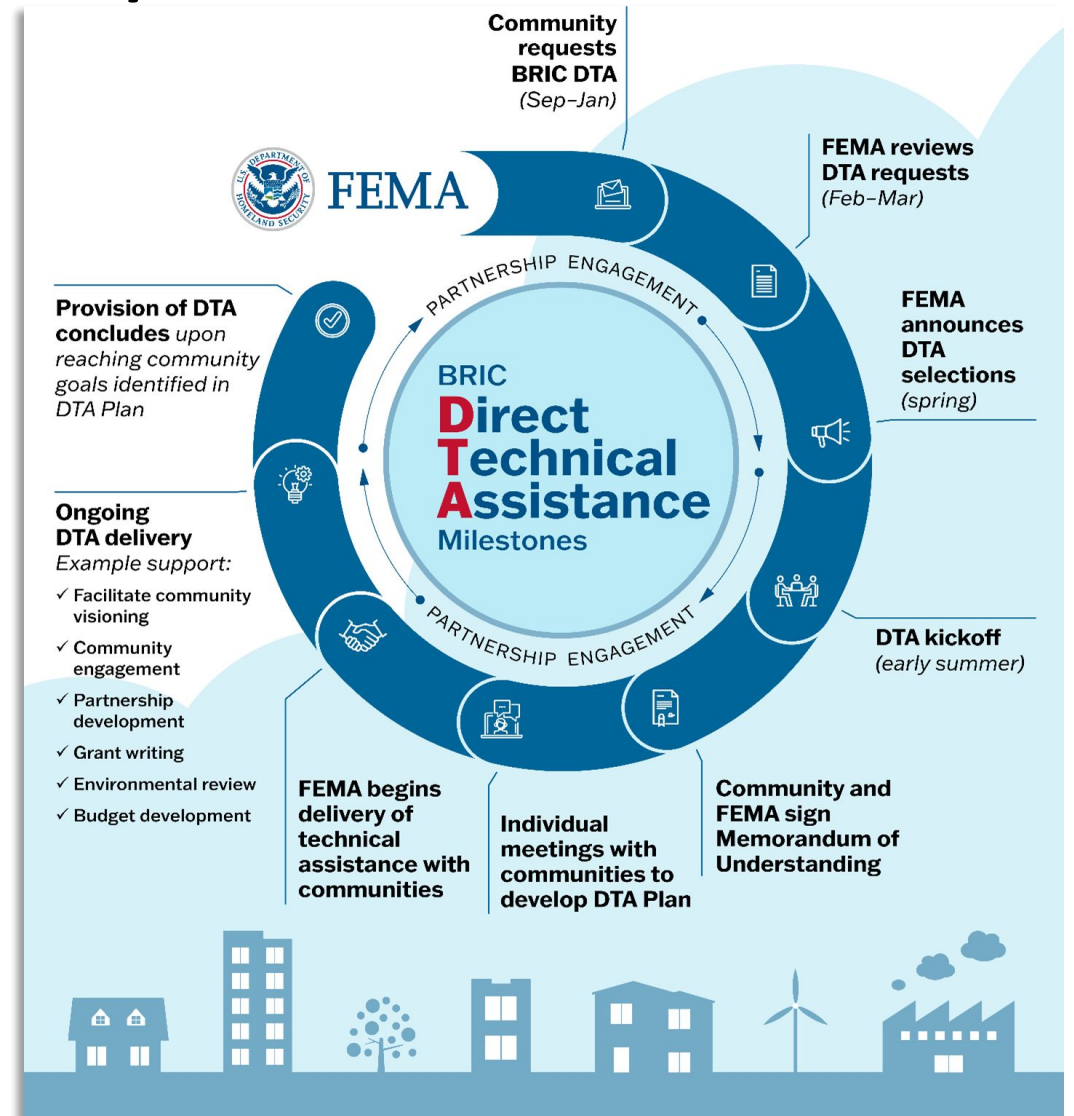
Miami-Dade Local Mitigation Strategy (LMS)

Home: <https://www.miamidade.gov/global/emergency/projects-that-protect.page>

Dashboard: <https://www.arcgis.com/apps/dashboards/50e1db23f56e4f6a81d47f415cbbf18e>

FEMA Building Resilient Infrastructure and Communities (BRIC) Direct Technical Assistance (DTA)

- 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



Thank you!

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