Planning to Shelter in Place



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Our Thanks to the Florida Housing Catalyst Program



AFFORDABLE HOUSING CATALYST PROGRAM

Sponsored by the Florida Housing Finance Corporation



we make housing affordable™

Overview of Today's Webinar

- How do mitigation activities reduce risk and increase resilience?
- What do we mean by Shelter in Place?
- How can vulnerable populations shelter in place?
- How do we target mitigation activities?
- How do we pay for Mitigation?





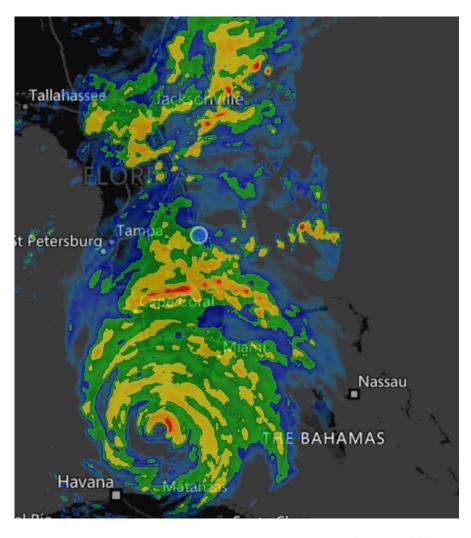
Housing Goal: Resilience

Objective: Mitigation Activities

How can mitigation activities help households including vulnerable populations safely shelter in place?

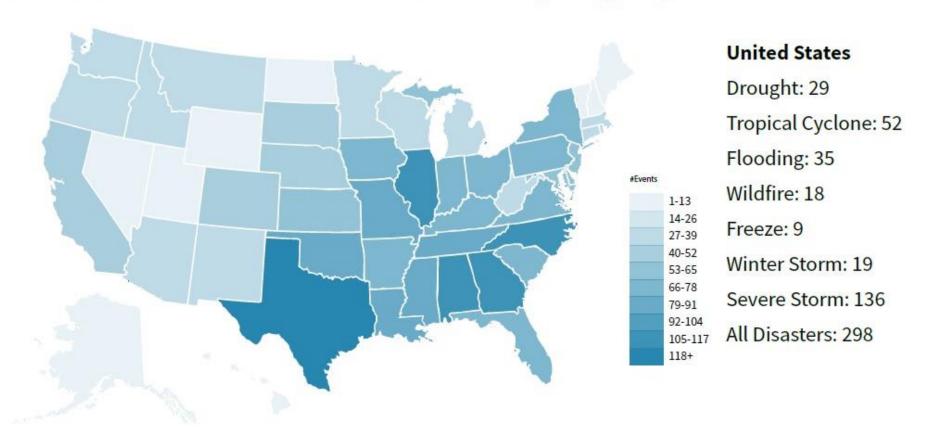


Disaster Mitigation



In Florida, it's not "IF" but "WHEN" national disasters will threaten your home

1980-2021* Billion-Dollar Weather and Climate Disasters (CPI-Adjusted)



Source: NOAA National Centers for Environmental Information

Please note that the map reflects a summation of billion-dollar events for each state affected (i.e., it does not mean that each state shown suffered at least \$1 billion in losses for each event). Also, the map only captures major events, and smaller events still adversely affect people and property.

Disaster Mitigation Programs

 FIRST: Monitor SHIP rehab & new construction for code compliance

 NEXT: Mitigation involves Hardening, Resiliency, and Sustainability

 Seek funding beyond SHIP



What are the Mitigation Features of Your Housing Assistance Programs?





Incorporating Mitigation into SHIP Work



Wind Mitigation Features



Key components of protecting structural integrity:

- Roofing protections
- Protect Openings
- A continuous load path







SHIP for Mitigation

- Acquisition Rehabilitation
- Homeowner Rehabilitation
- Multifamily Rehabilitation
- Accessibility
- Emergency Repairs
- Relocation
- Elevation
- Replacement



Mitigation Objectives

- Meet Insurance 4 Point Test: Roof, Electric, Plumbing, HVAC
- MEET INSURANCE PREMIUM DISCOUNTS
- OBTAIN CERTIFICATION
 - FLORIDA GREEN BUILDING COALITION
 - ENTERPRISE GREEN
 - FORTIFIED STANDARDS
- SHELTER IN PLACE





Structural Mitigation

- Roof/Wall/Foundation Connections
- Opening Protection
- Re-Roofing

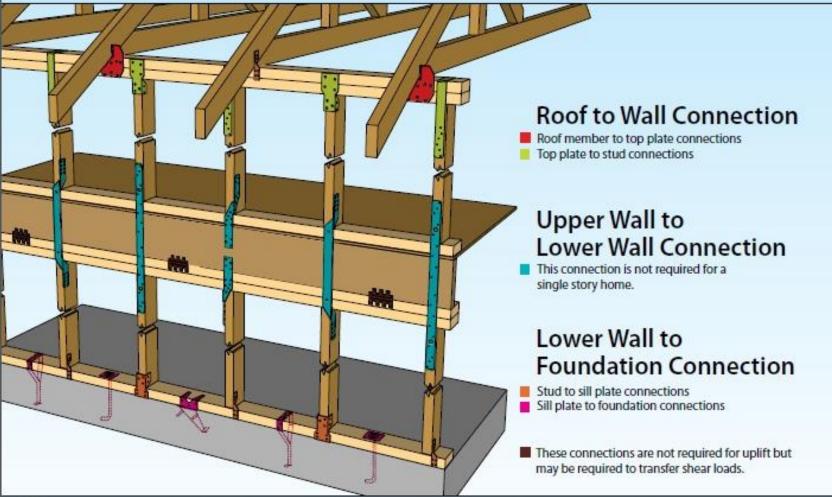






Structural Mitigation

Continuous Load Path To Resist Uplift Forces







Structural Mitigation: Garage Doors







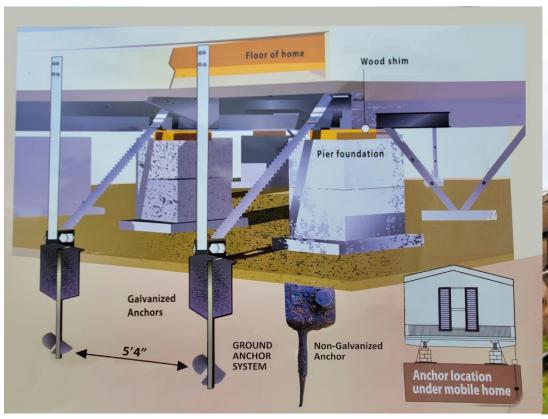
Retrofit



- Whole House
- Partial Rehabilitation
- Structure
- Roof
- Garage Doors
- Windows
- Doors
- Utilities



Mitigation for Manufactured Homes



Overturned - No Tie Downs!



Hurricane Film to Protect Windows







Carport Gone - Roof Severely Damaged

Carport Upgraded to Mitigate Wind Damage





Manufactured Home Replacement







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Elevation of Site and Site Utilities





Accessibility







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Generators for Supportive Housing Properties





Example of Disaster Mitigation on a Group Home

- ARC Group Homes in Marion County
- Two buildings renovated in 2010 & 2012 with CDBG funding
- 2019 Mitigation paid with SHIP Funds





Generators can help with sheltering in place but after initial expense they require maintenance

- Single Family
- Congregate
- Multi-Family







Relocation



- Repetitive Flooding
- Most likely a project listed in Local Mitigation Strategy



Relocation

Best Mitigation Practices

Best Practice Mitigation: Pasco County. One major disaster mitigation initiative in Pasco County was the relocation of an affordable housing development to avoid future disaster damage. Dade Oaks Apartments was built in 1977 on top of the low spot of a 160-acre drainage basin, which caused the apartments to suffer from chronic flooding. Under new leadership, the Pasco County Housing Authority relocated

the property to higher ground and fittingly re-named it Hilltop Landings. Maintaining the affordability of the units required several layers of financing, including state HOME funds and \$500,000 in SHIP funds. The housing authority not only relocated these units, they constructed them to have energy efficient features and appliances, front porches, and an old-time Southern feel.





Voluntary Buyout- Repetitive Damage Recording with details: https://vimeo.com/633169808





Replacement



- Mixed sources of subsidy
- Duplication of Benefits Provisions
- 100 Year Flood Plainvalue of improvements must be below 50% of value of structure.
- If cost exceeds 50% of value, project must meet all flood and construction codes.
- This may require demolition/replacement, or elevation



Replacement Considerations

- May involve temporary relocation assistance for household
- Elevation may require a ramp or lift for accessibility
- FINISH promptly IN BLUE SKIES!



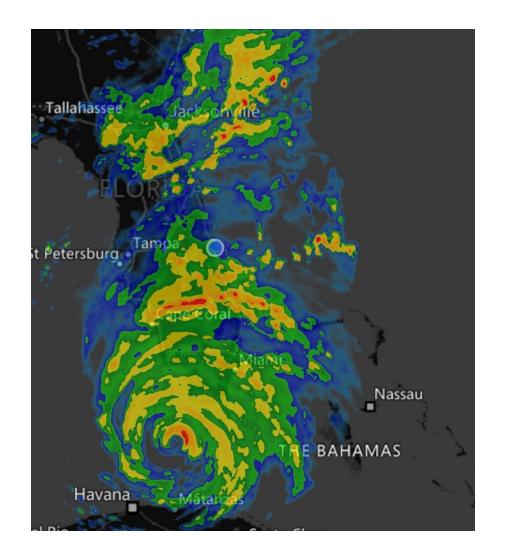




Elevation Considerations

- Cost Benefit Analysis
- Mixed sources of subsidy
- Multi-disciplinary- Multi-agency
- Permitting
- Timeframe
- Temporary relocation of household





Integrating Disaster Mitigation in Purchase Assistance

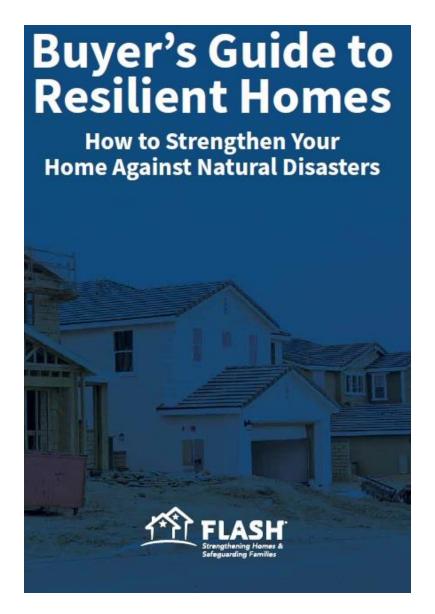


Resource for your Homebuyer Classes

- From FLASH Federal Alliance for Safe Homes
- Free guide available at:

 https://buyersguidetoresili
 enthomes.org/wp content/uploads/2021/09/9

 -7-21-Buyers-Guide-to Resilient-Homes-Final.pdf





Resilience Considerations

Hurricane: Is the home in a hurricane-prone area, windborne debris region, or storm surge
evacuation zone?
Does your state or local government require disclosure of hazards and past damages
by either the owner or realtor?
Are there any city/county/jurisdiction planning projects that could affect the resilience
of the area?
Flood: Is the home in a flood zone? If so, what type? Has the neighborhood experienced
flooding? Repetitive flooding? See FEMA Flood Service Maps in Resources (Appendix V).
Does your state or local government require disclosure of hazards and past damages
by either the owner or realtor?
Are there any city/county/jurisdiction planning projects that could affect the resilience
of the area?

Flood Maps: https://msc.fema.gov/portal/home



Become a Resilient-Smart Detective

Consider resilience as you begin the homebuying process

Questions to Ask and Things to Inspect

- Basic Resilience Checklist
- Disaster-Specific Checklists
- Finding the Right Insurance Coverage
- Recommended retrofits

Can the roof withstand high winds?

Is the decking material noncombustible?

Will the walls resist the shaking of an earthquake?



Shelter in Place Concept to Implementation



Disaster Evacuation and Sheltering in the Time of COVID-19

Three Options plus:

- Hotel/Dormitory
- Campgrounds
- Congregate
 Sheltering plus
- Shelter in Place



Sheltering in Place can have various meanings

- Emergency declaration, mandatory or voluntary order to evacuate- the opposite of sheltering in place- resorting to a public shelter or leaving the area
- Emergency declaration, no voluntary or mandatory orders to evacuate. Household will seek shelter in their home or the home of family or friends. OR household may opt to go to a public shelter or leave the area



Household Decision: Shelter in Place or Go

- Household is aware of hazard but feels their exposure to risk is low enough that they can safely ride out the storm in their home
- Household is aware of hazard, but isn't sure home will be a safe place to ride out the storm
- Household is aware of hazard, isn't sure home is safe, but fears it
 is not possible to evacuate so will ride out the storm in their house

Run from the water, hide from the wind!



Are Low Income Populations More Vulnerable to Natural Disasters?

- Evacuation Decision
- Housing Condition
- Information Delay
- Preparation Challenges
- Need Special Assistance
- Access to transportation
- Money for gas and hotels
- Civil Rights Issues- accessibility, evictions



Vulnerable households are disproportionately impacted by the immediate and long-term effects of a disaster. Most common factors are:

- Disability
- Persons residing in congregate settings
- Elderly
- Low income
- Racial or ethnic minority
- Head of household

- Mobile homes
- Limited English proficiency
- Transportation disadvantaged
- Homeless



How to Define and Locate Vulnerable Populations

- Social Vulnerability Index
- Medical Vulnerability Index
- Mapping tools
- Community Partners and Stakeholders



Other vulnerabilities

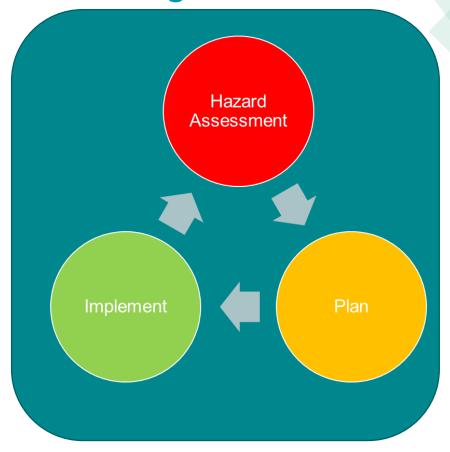
- Lack of insurance for damage, wind or flood
- Lack of clear title to homestead
- Rural remote locations

Barriers to Evacuation

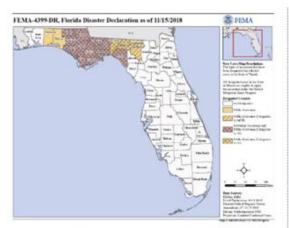
- Evacuation busses may not have wheelchair lifts
- Electrical plugs in shelters& access to medical equipment
- Transportation and accommodations for support animals
- Bussing to institutionalized facilities
- Plan information, such as written materials or sirens, may be inaccessible for people with visual or hearing impairments

- Review Past History
- Hazard Assessment
 - Natural
 - Social/Medical
 - Physical condition
- Housing Mitigation Strategic Plan
 - Data Based
 - Prioritization
 - Workplan
- Funding Sources for Implementation

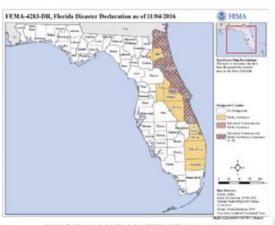
Planning Framework



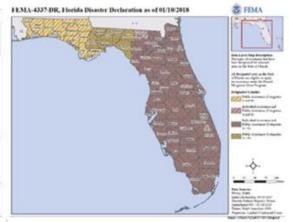
Disaster Declaration Maps for IA and PA Source FEMA



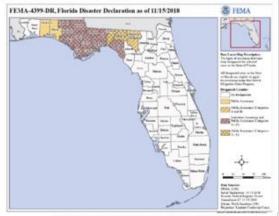
HURRICANE HERMINE 2016



HURRICANE MATTHEW 2016



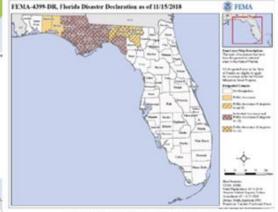
HURRICANE IRMA 2017



HURRICANE MICHAEL 2018



SUBTROPICAL STORM ALBERTO 2020



HURRICANE SALLY 2020



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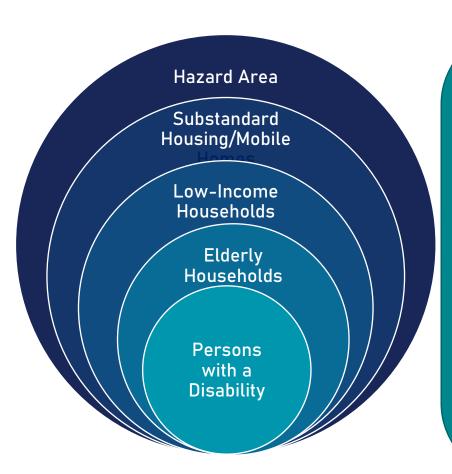
Duval County Natural Hazard Assessment, Source Duval County Local Mitigation Strategy

Duval County Natural Hazards	Frequency	Probability	Magnitude			
Overall Vulnerability			Injuries/Death	Infrastructure	Environment	
Tropical Cyclone - Winds	Very High	Very High	Moderate	Very High	High	
Severe Weather	Very Likely	Very Likely	Moderate	Moderate	Moderate	
Storm Surge	Very High	High	Moderate	Very High	High	
Extreme Heat	Very Likely	Very Likely	High	Low	Low	
Sea Level Rise	Likely	Likely	High	High	High	
Flooding	Very Likely	Very Likely	Low	Minimal	Minimal	
Human and Animal Disease	Very Likely	Very Likely	High	Low	Low	
Drought	Likely	Likely	Low	Minimal	Minimal	
Saltwater Intrusion	Very Likely	Very Likely	Minimal	Minimal	Minimal	
Wildfires	High	Moderate- High	Moderate	Moderate (localized)	Low (localized)	
Coastal Erosion	Very Likely	Very Likely	Low	Minimal	Minimal	
Winter Storm and Freezing temperatures	Low	Low	Low	Very Low	Low	



Source: Compiled from 2020 Duval Local Mitigation Strategy

Vulnerability Indicators: Targeted Areas & Populations



- Coastal High Hazard Areas (CHHA)
- Floodplains
- Special Flood Hazard Areas (SFHA)
- Areas with older homes
- Areas with mobile homes
- Low Income Households
- Elderly
- People with disabilities





Tools for Natural Hazard Assessment

UF Shimberg Center <u>"Assisted Housing Inventory"</u>

UF Housing Coastal Flood Hazard Exposure

Vulnerability Mapping Analysis Platform (VMAP)

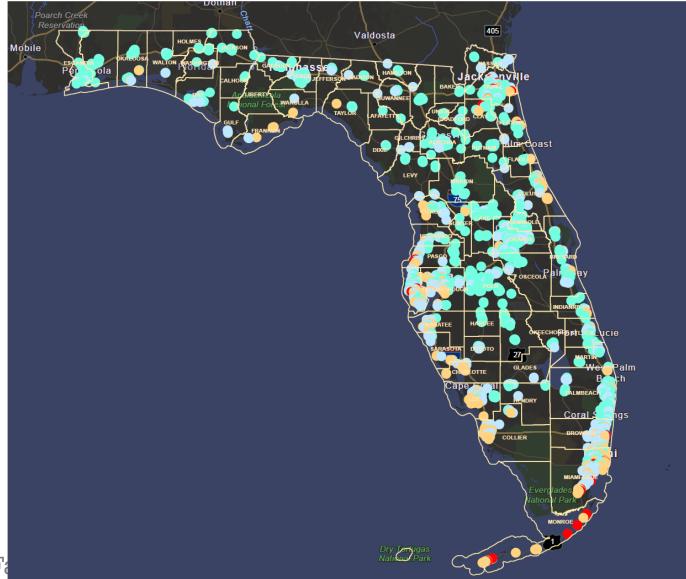
For Multifamily Properties and Portfolios

Keep Safe Miami Multifamily Housing Resilience Self Assessment Tool





Coastal Flood Hazard Vulnerability Map Assisted Housing Properties Source: UF Shimberg Center







Social Vulnerability Index Mapping



SOCIAL VULNERABILITY REPORT

2014-2018 Social Vulnerability Index (SoVI®) - Duval County, Florida

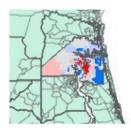








	High	Medium High	Medium	Medium Low	Low
Number of Tracts	23	13	89	27	21
Population	99,106	60,806	453,412	178,789	132,116
Housing Units	48,372	28,623	200,448	76,577	49,528







Social Vulnerability Factors ex. Duval County

- Poverty and Social Status 32.6%
- Access Barrier and Ethnicity 10.7%
- Dependence and Age 10.4%
- Household Size and Housing Type 8.2%
- Gender and Employment Type 5.8%
- Race and Housing Type 4.7%

Total Variance Explained 72.6%



Social and Medical Vulnerability Risk Factors

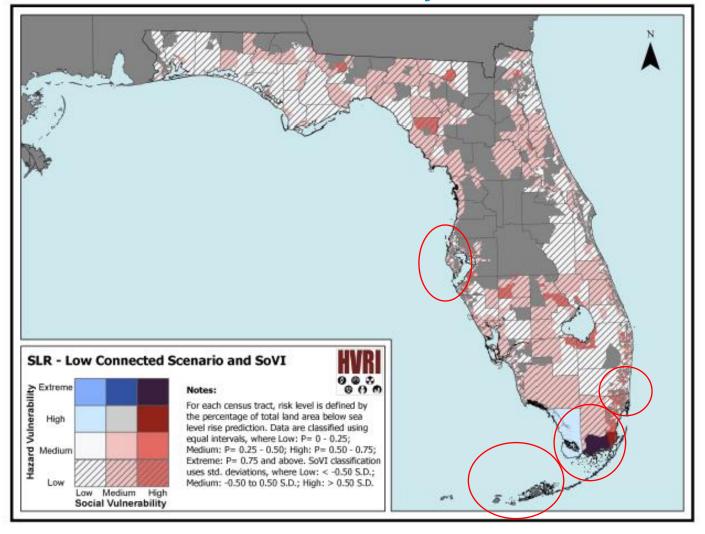


Figure 36: Bivariate representation of SoVI and low connected SLR risk in Florida.



Tracts with High MedV and SoVi Source Emrich et al Climate Sensitive Hazards in Florida

Table 56: Tract and population summary for counties with high MedVI and medium or greater high SLR estimate risk.

County Name	Number of Tracts	Total Population of Tracts	County Name	Number of Tracts	Total Population of Tracts	County Name	Number of Tracts	Total Population of Tracts
	Extreme Risk from High SLR Estimate							
Citrus	2	9,092	DeSoto	1	1,218	Pasco	1	1,487
St. Lucie	2	5,841		-	-		-	-
State Total	6	17,638		-	-		-	-
High Risk from High SLR Estimate								
Flagler	1	3,217	Franklin	1	1,690	Hemando	1	3,027
Hillsborough	1	1,304	Indian River	2	3,212	Pasco	3	5,754
St. Lucie	1	3,686	Volusia	4	15,470		-	-
State Total	14	37,360		-	-		-	-
Medium Risk from High SLR Estimate								
Bay	1	2,190	Charlotte	1	4,425	Escambia	1	3,978
Franklin	1	2,804	Gulf	1	4,450	Hemando	1	5,516
Hillsborough	2	6,474	Indian River	5	19,765	Lake	1	1,634
Lee	3	16,593	Levy	1	3,289	Pasco	6	16,134
Putnam	2	9,421	St. Lucie	2	4,520	Volusia	14	53,573
State Total	42	154,766		-	-		-	-



KEEP SAFE MIAMI



KEEP SAFE MIAMI includes free and easy-to-use resources!

- Portfolio Protect
- Building Protect
- Financing Resources Guide
- Resident Training

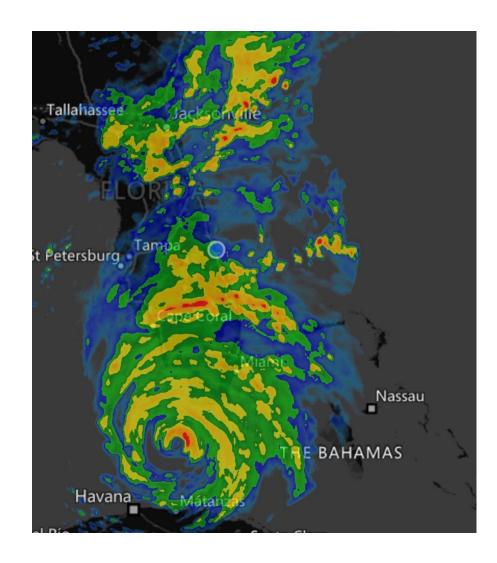
KEEP SAFE MIAMI can help you...

- Secure your investment
- Prevent damage
- Avoid costly repairs or rebuilding
- Protect your residents from harm

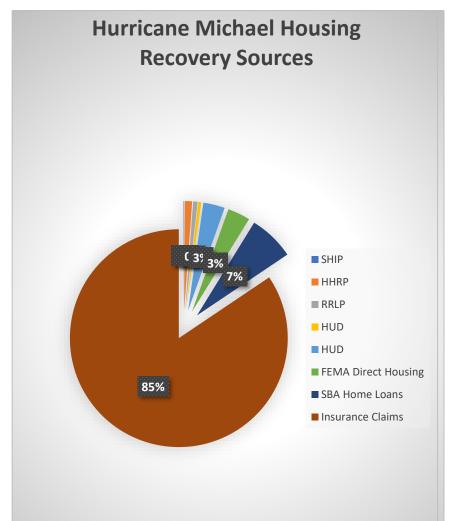
Keep Safe Miami is available! To enroll or learn more about the program <u>visit here</u>.



Mitigation Guides and Funding Sources







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SHIP	5,000,000
HHRP	85,000,000
RRLP	50,000,000
HUD HOME	33,000,000
HUD CDBG-DR	246,243,144
FEMA Direct Housing	258,000,000
SBA Home Loans	522,000,000
Insurance Claims	<mark>6,502,391,307</mark>

Total 7,701,634,451



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But first, are your Rehab Specifications Mitigation Strong?

- View Housing Replacement specs at <u>Florida</u>
 <u>Green Building Coalition Checklists</u>
- View Disaster Mitigation tab in <u>FGBC Green</u> <u>Home Checklist</u>
- See FHC Guidebook: <u>Residential</u> <u>Rehabilitation Guide</u>
- See <u>Keep Safe Miami Guidebook</u> (you have to complete a form to download it and its voluminous)



Florida Residential Retrofit Guide

A resource from FDEM related to:

- Roofs
- Roofs and water intrusion
- Window, doors and shutters
- Walls- continuous load
- Porches and attached structures
- Equipment and loose objects



Multi-family Mitigation Resources

- Enterprise Community Partners
 - Are You Ready Guide
 - Keep Safe Florida Tool
 - Business Continuity Toolkit
- Multifamily Retrofit Guide 19 practical strategies to make properties more resilient
- http://www.enterprisecommunity.org/ solutions-and-innovation/greencommunities/tools-andservices/ready-to-respond





Mitigation Funding Considerations

- Multi-agency- multi-department
- Multi-jurisdictional- local funds, state funds, federal dollars- leveraging can take time and is a puzzle
- Build a strong strategic plan
- Examine time constraints and emerging risks
- Identify projects and complete a work write up for each
- Sort projects for Local Mitigation Strategy
- Sort projects for demolition/replacement
- Prioritize most vulnerable



Federal/State Specific Funding Sources

- Hazard Mitigation Grant Program (HMGP)
- BRIC
- Hurricane Loss Mitigation Program (HLMP)
- Resilient Florida DEP
- CDBG-DR

Hazard Mitigation Grant Program (HMGP)



- FEMA funding
- Goal: assisting in implementing long-term hazard mitigation measures following a major disaster declaration
- Reimbursement grant
- 75% federal cost share 25% non-federal
- Eligible applicants local governments and private non-profits
- Best to go through local govt



ELIGIBLE PROJECT ACTIVITIES – HMGP



Elevations
Acquisitions
Dry Floodproofing
Flood Risk Reduction



Structural Retrofitting
Infrastructure Retrofitting
Mitigation Reconstruction
Safe Room



Wildfire Mitigation



Critical Facility Generators Power & Communication System Retrofits



Mitigation Planning Management Costs



Building Resilient Infrastructure & Communities (BRIC)

- FEMA \$1 Billion 2021
- Local Govts Apply thru FDEM- annual appropriation- nonprofits apply through local govt.
- Reimbursement grant 75% federal, 25% nonfederal
- States receive set aside amount plus national competition
- All activities of HMGP plus scoping projects
- Disadvantaged Communities boost



BRIC Housing Related Activities

- Property Acquisition and Demolition
- Property Acquisition and Relocation
- Structure Elevation
- Mitigation Reconstruction
- Dry Floodproofing of Historic Residential Structure
- Generator/Emergency Power Pack Up

- Localized Flood Risk Reduction
- Structural Retrofitting
- Wind Retrofit
- Hazard Mitigation Planning
- Technical Assistance
- Capacity and Capability Building
- Project Scoping and Building Code projects





BRIC Disadvantaged Community as defined in NOFO

- Low income
- High and/or persistent poverty
- High unemployment and underemployment
- Racial and ethnic segregation
- Particularly where the segregation stems from discrimination by government entities
- Linguistic isolation
- High housing cost burden and substandard housing
- Distressed neighborhoods
- High transportation cost burden and/or low transportation access

- Disproportionate environmental stressor burden and high cumulative impacts
- Limited water and sanitation access and affordability
- Disproportionate impacts from climate
- High energy cost burden and low energy access
- Jobs lost through the energy transition
- Access to health care
- All geographic areas within tribal jurisdictions



Hurricane Loss Mitigation Program (HLMP)

- Funded activities include retrofits, inspections, and construction or modification of building components designed to increase a structure's ability to withstand hurricane-force winds and flooding.
- Includes Mobile Home Repair Program anchoring, window film, carport anchoring
- This is state general revenue- not FEMA
- Each grant is \$194,000 and all applicable projects must be completed within the fiscal year in which it was contracted.
- The program is in a bill to extend it to 2034 this 2022 session.
- \$3.5 million annual allocation
- \$2.8 million for mobile home program
- \$700,000 for FIU Hurricane Research Center



RESILIENT FLORIDA GRANT PROGRAM: Project Types and Funding



- 1. Peril of Flood Compliance
- 2. Vulnerability Assessments
- 3. Adaptation/resilience Plans

Planning Grants
\$20 million from Gov and
Legislature
No cost share required
Reviewed and ranked by
staff

4. Projects to adapt critical assets

Implementation/adaptation grants \$500M from ARA





Critical Assets Defined FS 380.093.(1)(2)

Critical community and emergency facilities •

 Schools, colleges, universities, community centers, correctional facilities, disaster recovery centers, emergency medical service facilities, emergency operation centers, fire stations, health care facilities, hospitals, law enforcement facilities, local government facilities, logistical staging areas, affordable public housing, risk shelter inventory, state government facilities





RESOURCES

HMGP

- https://www.fema.gov/hazard-mitigation-grant-program
- https://floridadisaster.org/dem/mitigation/hazard-mitigation-grant-program/

BRIC

- Program Support Materials: https://www.fema.gov/media-collection/resources-building-resilient-infrastructure-communities-program-bric
- FEMA Mitigation Action Portfolio: https://www.fema.gov/sites/default/files/2020-08/fema_mitigation-action-portfolio-support-document_08-01-2020_0.pdf
- FY21 NOFO (BRIC/FMA): https://www.fema.gov/grants/mitigation/fy2021-nofo#

FMA

- o https://www.fema.gov/flood-mitigation-assistance-grant-program
- https://floridadisaster.org/dem/mitigation/flood-mitigation-assistance-program/

HLMP

https://floridadisaster.org/dem/mitigation/hurricane-loss-mitigation-program/







RESILIENT FLORIDA GRANT PORTAL

https://protectingfloridatogether.gov/state-action/grants-submissions

- Portal proposals will be screened for submission to one of the 3 Resilient Florida grant types: planning, implementation/adaptation, regional resilience entity
- Applicants will be directed to flesh out the details of their project in a specific online form.
- Online forms will be reviewed according to statutory guidelines and prioritized
- Projects for the Statewide Flooding and Sea Level Rise Resilience Plan will be ranked and submitted to the Legislature by December 1, 2021.
- Contact Whitney Gray at 850-245-2098
- Whitney.Gray@FloridaDEP.gov





General Housing Funding for Mitigation

- SHIP: acquisition, repair, rehabilitation, elevation, accessibility, replacement (new construction)
- Manufactured housing limitations
- CDBG: acquisition, repair, rehab, no new construction, site work, infrastructure
- HOME: acquisition, rehab, new construction

Links to Funding Guides

- Florida Housing Coalition Affordable Housing Resources
- Keep Safe Miami Resource Guidebook
- Disaster Management Guide for Housing
- Creating a Local Housing Disaster Recovery Guide
- Residential Rehabilitation Guide

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SELF is a Florida-based non-profit Community Development Financial Institution (CDFI) that provides unsecured personal loans to low- and moderate-income (LMI) homeowners and retirees on fixed incomes to finance home repairs and improvements. Micro-loans are approved based the applicant's <u>ability to repay</u>, not credit scores or equity.

- SELF can help homeowners with resilience projects (I.e., roofs, impact windows, hurricane shutters) BEFORE the storms, and
- SELF can also help expedite the recovery process AFTER the storms with our accessible and affordable MICRO-LOANS for home repairs and improvements. SELF loans have been paired with FEMA awards and used for insurance deductibles.

Contact by calling (772) 468-1818

www.solarenergyfund.org



What Does SELF Finance?

Sustainable Home Improvements

ø	Solar Products
~ <u>~</u>	Sewer and Water
,	Storm Resilience
Û	Roofing
P	Weatherization and Insulation
0	Lighting
1	Health and Safety
E.	Disability Products
B	Air Conditioning







Types of Improvements





- Energy Conservation & Efficiency (e.g. high-efficiency AC, LED lights)
- Renewable Energy (e.g., solar PV, solar water heaters) solar attic fans, solar A/C systems)
- <u>Climate Resilience</u> (e.g., new <u>roofs/repairs</u>, impact windows, doors, hurricane shutters)
- Water Quality (e.g., septic-to-sewer conversions and lateral line replacements. Potable water hook-ups. Plumbing. Mold remediation)
- <u>Disability Modifications/Aging In Place</u> (e.g., wheelchair ramps, walk-in showers, widening doorways and hallways, assistive technologies, and more)
- <u>Miscellaneous</u> (20% of project can be for general home improvements not included above)











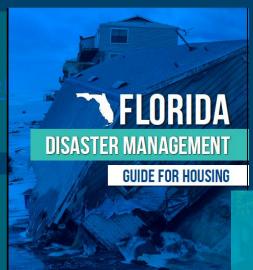
FHC DISASTER RESILIENCY AND RECOVERY TEAM

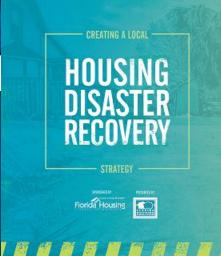
THE FLORIDA HOUSING COALITION

FHC is here for you!

https://www.flhousing.org/disasterecovery/

- Weekly Disaster Recovery Update Webinars
- Disaster Management Guidebooks
- Technical assistance
- Housing Needs Assessments
- Governors Hurricane Conference
- Community Land Trust Institute







Questions and Answers

Please complete Evaluation



Technical Assistance is Available

Available Daily: 1 (800) 677-4548

Options for Further Assistance Include:

Phone and Email consultation Site Visits

Register at www.flhousing.org for:

Workshops Webinars

