



Climate Risks and Spotlighting Housing Solutions

Flood Adaptation Symposium 1:30 Session, October 29, 2024

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Flood Resilient Housing Matters

Increasing frequency and severity of extreme weather events — driven by climate change — damages millions of homes, exacerbates housing crisis, displaces residents and disrupts our local economies.

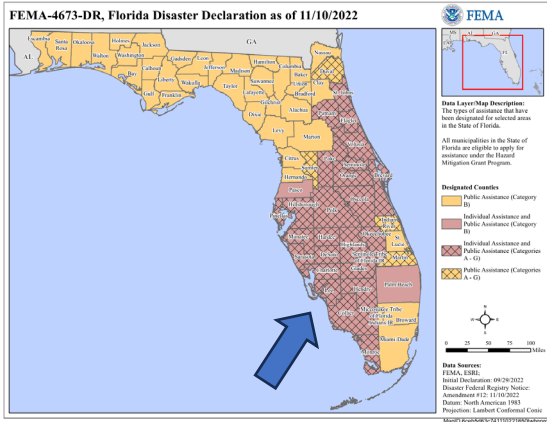
- Design and construction standards and materials and technology are evolving.
- Housing that is built to higher standards is more resilient to extreme weather and disasters – saving money and better protecting residents.
- Affordable housing planning that is integrated with other disciplines – landscape, infrastructure, capital improvement projects, resilience, economic development and emergency management will support more rapid and holistic community recovery.
- FEMA supports Code Plus Up. What would that look like for housing in Florida?



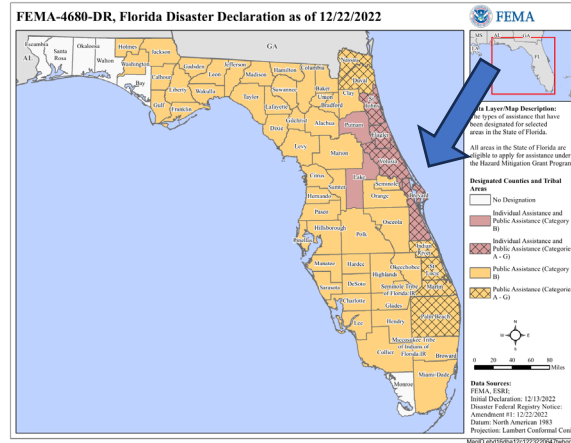
NOAA NCEI Hurricane Ian most costly disaster in 2022: \$112.9B

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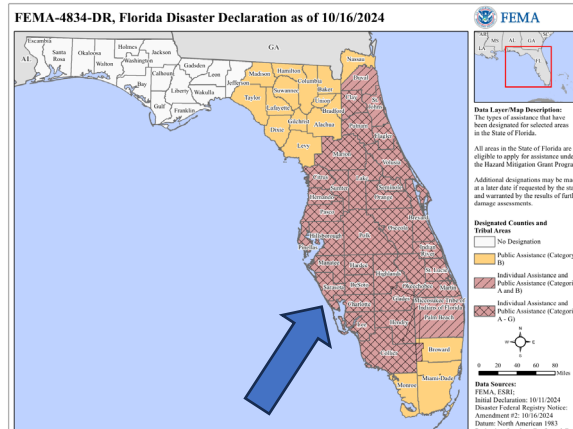
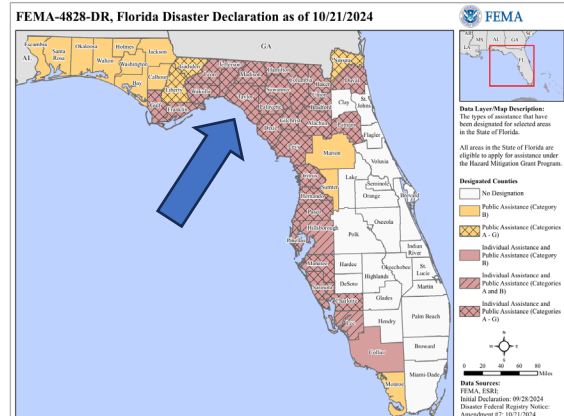
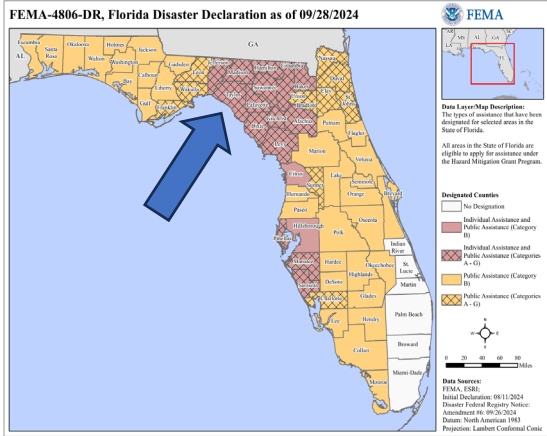
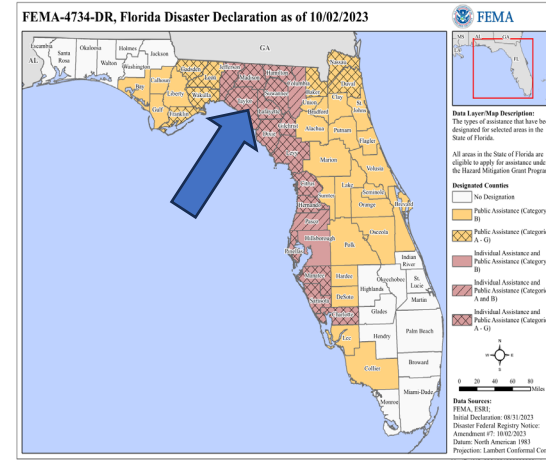
Hurricane Ian 2022
Landfall Cat 4 (155 mph)
Lee County 9/28/2022



Hurricane Nicole 2022
Landfall Cat 1 Indian River
County 11/10/2022



Hurricane Idalia 2023
Landfall Cat 3 Keaton Beach, Taylor
County 08/30/2023



Hurricane Debby 2024
Landfall Cat. 1 Steinhatchee,
Taylor County 08/05/2024

Hurricane Helene 2024
Landfall Cat 4, Perry,
Taylor County 09/26/2024

Hurricane Milton 2024
Landfall Cat 3 Siesta Key,
Sarasota County, 10/09/2024

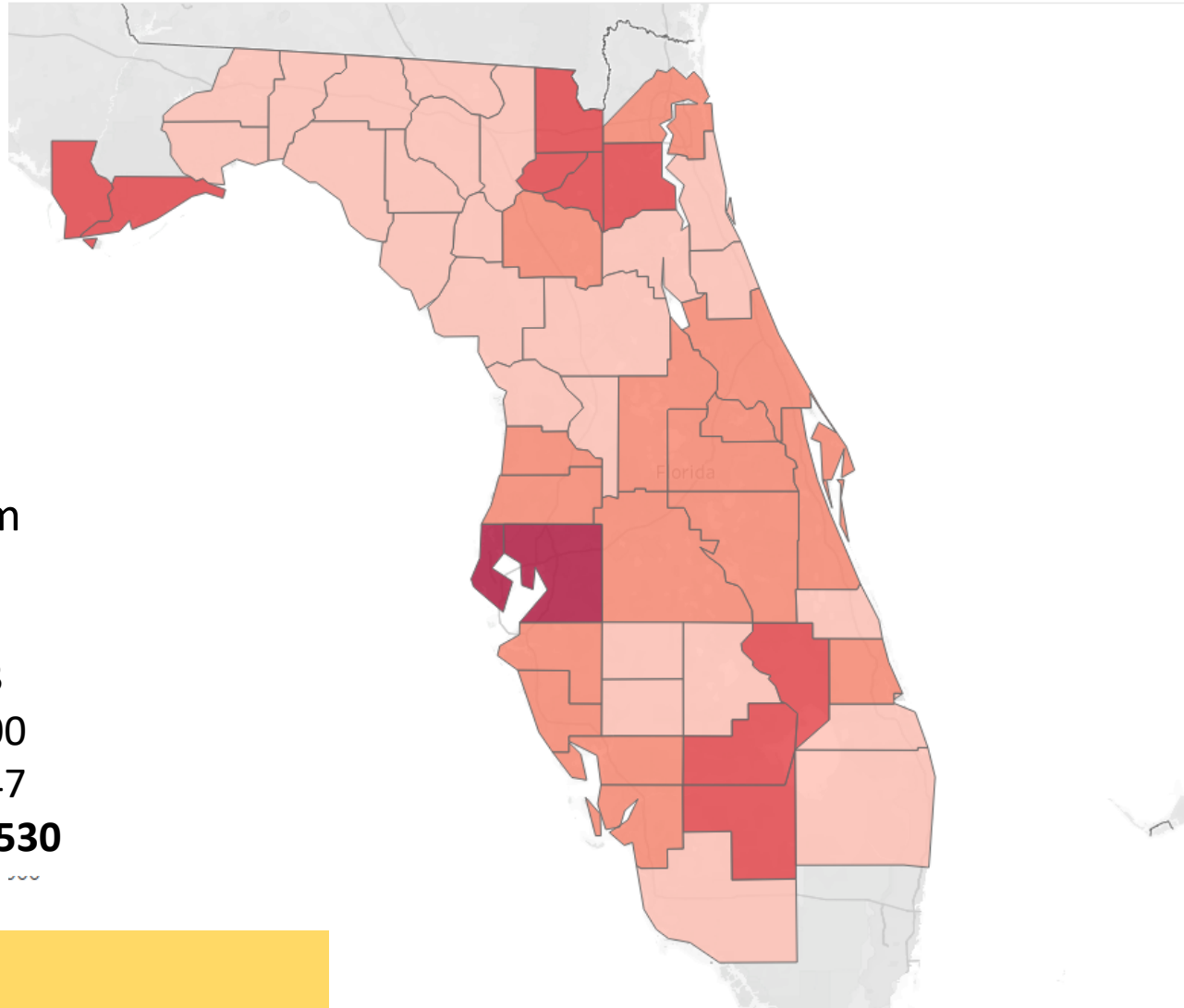


Concentrations of FEMA Individual Assistance Applications for Hurricanes Debby, Helene and Milton 2024

Total FEMA Individual Assistance Applications by Tenure and Storm

Storm	Owners	Renters	Total
Debby	19,884	21,399	41,283
Helene	135,209	121,591	256,800
Milton	442,815	380,632	823,447
Total	597,908	523,622	1,121,530

Very few have flood insurance.
Income levels reflect the local AMI.



County	Applications
Alachua (County)	10,626
Baker (County)	964
Bradford (County)	507
Brevard (County)	11,810
Charlotte (County)	19,386
Citrus (County)	8,190
Clay (County)	661
Collier (County)	8,341
Columbia (County)	9,946
DeSoto (County)	1,312
Dixie (County)	3,112
Duval (County)	14,497
Flagler (County)	4,407
Franklin (County)	149
Gilchrist (County)	1,812
Glades (County)	167
Gulf (County)	31
Hamilton (County)	2,732
Hardee (County)	1,777
Hendry (County)	751
Hernando (County)	15,163
Highlands (County)	8,353
Hillsborough (County)	277,416
Indian River (County)	5,452
Jefferson (County)	1,811
Lafayette (County)	1,412
Lake (County)	18,837
Lee (County)	41,205
Leon (County)	3,483
Levy (County)	3,726
Madison (County)	5,024
Manatee (County)	71,764
Marion (County)	7,348
Martin (County)	2,180
Miccosukee Tribe of ..	2,476
Okeechobee (County)	937
Orange (County)	45,682
Osceola (County)	13,594
Palm Beach (County)	8,200
Pasco (County)	69,511
Pinellas (County)	208,710
Polk (County)	66,673
Putnam (County)	3,287
Sarasota (County)	54,877
Seminole (County)	15,017
St. Johns (County)	1,208
St. Lucie (County)	12,527
Sumter (County)	3,147
Suwannee (County)	7,502
Taylor (County)	6,165
Union (County)	452
Volusia (County)	36,525
Wakulla (County)	1,018



We Can Create Permanent Affordability *and* Livability

**New housing built to last 75+ years
= 2100**

1. proximity to necessities
2. proximity to amenities
3. distance from hazards
4. designed for extreme heat and flooding



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Support risk-based, place-based planning, zoning and development to protect residents, reduce impacts, costs and improve insurance availability.

FHC recommendations

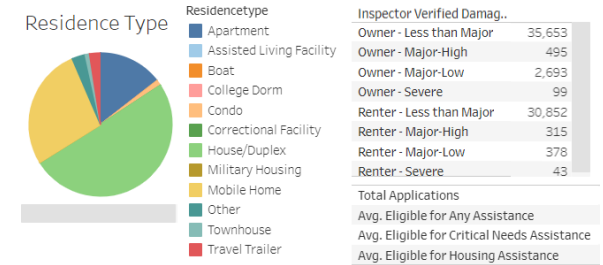
- **Public land for affordable housing** – located in low-risk areas near services/amenities, *or* built to higher standards to mitigate higher risks.
- **Incorporate higher standards into funding mechanisms**—resilience criteria for state and local RFAs to adopt voluntary heightened criteria for public investment
- **Zoning and policy** – land use analysis and update policies to guide new development to “safer ground” through density bonuses, upzoning in target areas, and greater allowances for ADUs, missing middle housing types, and multifamily housing



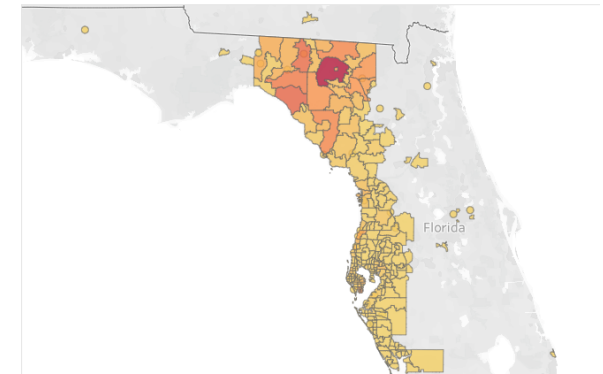
New Programs in 2024-2025

1. Create integrated resilient housing "site selection" guide and pilot project supported by a grant from GOMA
 - o Emerald Coast RPC, Texas A&M CHARM and Bay County
2. Implementing resilient construction design services for the Community Land Trust Institute and Predevelopment Loan Program
3. New portal with Disaster Housing Dashboards with FEMA data to support community recovery with data-driven decision making

Idalia prototype



Zip Code Map

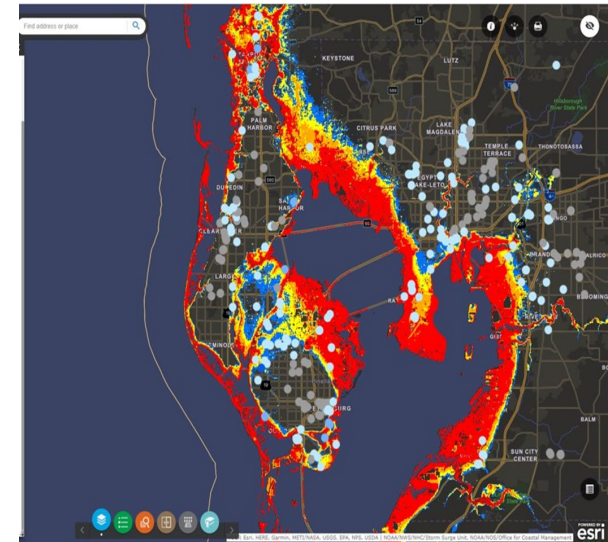


Adaption Planning for Flooding: Rising to the Challenge

1. Work more collaboratively to reduce disaster disconnects, address challenges and implement innovative solutions.
2. Create new State agency programs like Resilient Florida that elevate and integrate technical standards, policy and public funding for resilient AH housing mitigation, recovery and construction.
3. Supporting advanced landscape/green infrastructure planning with development/redevelopment and affordable housing.
4. Better planning to leverage federal post-disaster funding for reimagining resilient communities.

10 Principles for Resilient Housing Leadership

1. Know **where** your affordable housing stock is located, **types of flood risk**, and **how the building will be impacted**.
2. Know who lives in assisted housing and residents are engaged.
3. Ensure that assisted multi-family properties are **sufficiently insured**.
4. Buildings are **maintained and upgraded**: federal, state and local funding, grants and financing support pre-disaster resilience and energy improvements.
5. New development is in lower-risk areas, or built to higher standards.



10 Principles for Resilient Housing Leadership

6. **Resilient design and construction criteria are defined in state and local RFAs and procurement documents.**
7. Affordable Housing Advisory Committee (AHAC) includes resilience and sustainability goals/topics/expert.
8. Integrate affordable housing with infrastructure and capital improvements and include in the Local Mitigation Strategy (LMS) Project List.
9. **Housing Action Plan is more than growth** -- includes projected losses to disaster, actionable resilience and sustainability goals.
10. Community Disaster Recovery plan includes housing recovery.

Engineering for Flooding and Extreme Heat

Utilizing NB/green stormwater infrastructure can minimize heat exposure/gain, reduce energy consumption and reduce flooding.

Needs:

- Local/regionally appropriate strategies,
- Watershed plans and site integration
- Engineering acceptance, professional training and certification
- Proof of performance for insurance companies
- Funding mechanisms that require or incentivize
- Policy guidance
- Code language



Consensus on Design and Construction

- Elevated base /first floor...Not just for SFHA or coastal communities any more
- Flood resistant materials
- Elevated AC and other mechanicals
- Flood vents to reduce hydrostatic pressure
- Break-away walls and stairs: [FEMA Free of Obstruction Guide 2020](#)



Integrate Housing into FEMA BRIC Projects

Priorities

- Incentivize hazard risk reduction
- Mitigate risk to infrastructure, one or more community lifelines
- Prioritize benefits to economically disadvantaged communities

Housing Related Projects

- Property Acquisition and Demolition/Acquisition and Relocation
- Structure Elevation, Mitigation Reconstruction
- Emergency Power Back Up
- Localized Flood Risk Reduction
- Structural Retrofitting, Wind Retrofit
- Hazard Mitigation Planning
- Project Scoping and Building Code projects



Thank you for your leadership



Florida Housing Coalition Expertise

- Housing Resilience/Disaster Preparedness
 - Vulnerability Assessments
 - Impact analysis, recovery Plans
 - Resilient design and construction recommendations
 - Mitigation and adaptation analysis/planning
- Planning
 - Missing middle
 - Land-Use, zoning analysis
 - Revisions, updates, cross-walks
 - Guided Growth
 - HUD Consolidated planning
- Community Land Trusts
 - Certification/formation
 - Site selection/public land assessments

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