



Creating More Resilient Florida Coastlines

Whitney Gray
Administrator, FRCP
March 1, 2019



Building on a strong foundation

Community Resiliency Initiative

- **Starting in 2011, in partnership with NOAA/CZMA, DEP funded DEO to provide technical assistance to coastal communities for innovative planning and development strategies:**
 - Funding opportunities
 - Statewide Focus Group
 - Development and piloting of Adaptation Action Areas
 - Vulnerability Assessments and Adaptation Plans for three pilot areas
 - Development of technical assistance documents





Florida Resilient Coastlines Program

Vision and Mission

Synergizing community resilience planning, natural resource protection tools, and funding to prepare Florida's coastal communities for the effects of climate change, especially coastal flooding, erosion, and ecosystem changes from sea level rise.

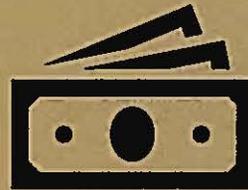


Florida Resilient Coastlines Program



RESOURCES

Florida Adaptation Planning
Guidebook & Technical
Assistance



FUNDING

Resilience Planning Grants



COORDINATION

Quarterly Coastal
Resilience Forum





Adaptation Planning Guidebook

PURPOSE: Provide a framework to develop an initial adaptation plan, or update an existing plan based on current Florida law, requirements, and recommendations

AUDIENCE: Planners in cities and counties of any size; local government officials; local and state elected officials; non-governmental organizations





Adaptation Planning Guidebook

Topics

Establishing Context

Vulnerability Assessment (VA)

Adaptation Strategies

Implementation of Adaptation Strategies

Specialty Topics

Economic Value of Adaptation Planning

Community Rating System and Adaptation

Historic and Cultural Resources

Adaptation Action Areas to Protect Natural Resources

Funding Opportunities

Example VA and Adaptation Plan





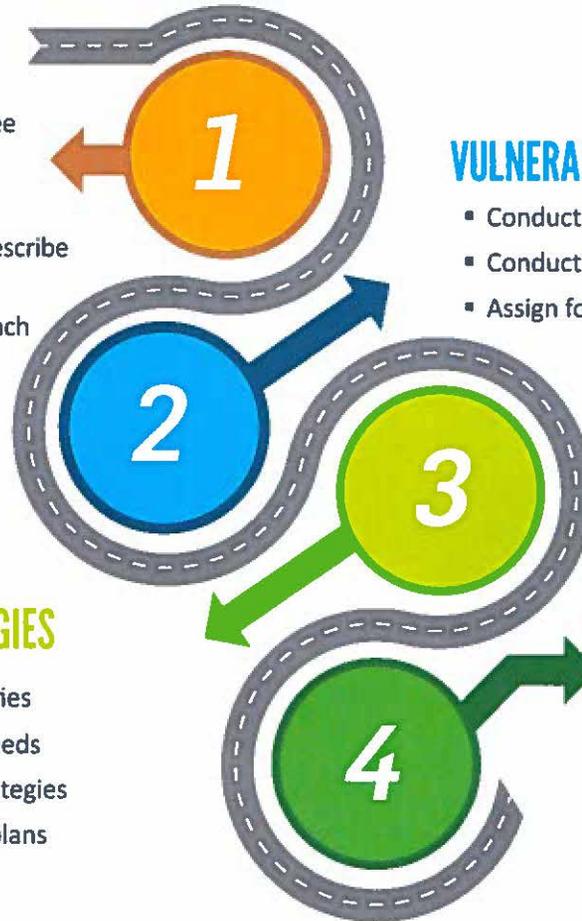
Steps to Creating Adaptation Plans

CONTEXT

- Assemble a steering committee
- Set guiding principles and motivations
- Establish planning area and describe geographic context
- Define public outreach approach and opportunities for community participation

ADAPTATION STRATEGIES

- Assess adaptive capacities
- Prioritize adaptation needs
- Identify adaptation strategies
- Integrate into existing plans



VULNERABILITY ASSESSMENT

- Conduct an exposure analysis
- Conduct a sensitivity analysis
- Assign focus areas

IMPLEMENTATION STRATEGIES

- Assess implementation capabilities
- Create a schedule of activities, actions, and actors
- Monitor and evaluate

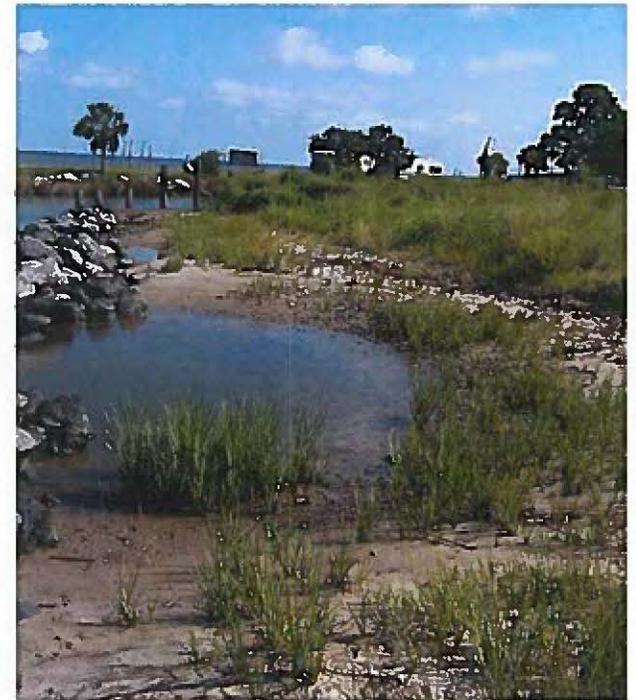




Addressing Adaptation During Long-Term Recovery

2nd Revised Edition

- **What's new?**
 - Updated links and references
 - Information about the 2015 “Peril of Flood” statute (Sec. 163.3178(2)(f))
 - More information about living shorelines
 - Updated informational resources





Addressing Adaptation During Long-Term Recovery

2nd Revised Edition

- Understanding the Impacts of Sea Level Rise
- Capacity Assessment and Plan Integration
- Economic Development Strategies
- Local Mitigation Strategies
- Transportation Considerations
- Protection/Accommodation/Relocation-Retreat
- Pre- and Post-Disaster Implementation Considerations
- Decision-Making Triggers

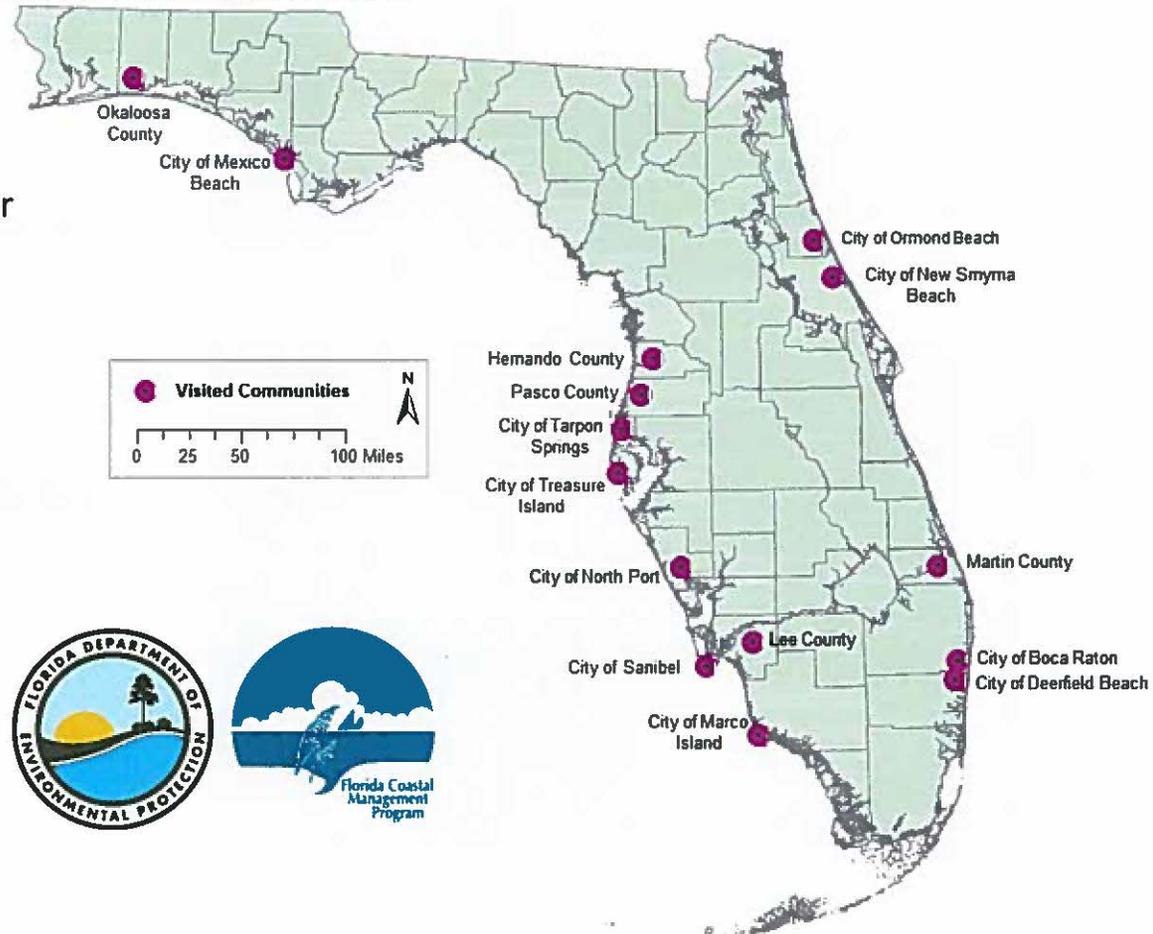




Technical Assistance

Outreach to Local Governments

- The Nature Conservancy's Coastal Resilience Mapper (<http://maps.coastalresilience.org/network/>)
- NOAA's Coastal Flood Exposure Mapper (<https://coast.noaa.gov/digitalcoast/tools/flood-exposure.html>)
- NOAA's Sea Level Rise Viewer (<https://coast.noaa.gov/digitalcoast/tools/slr.html>)
- UF GeoPlan/FDOT Sea Level Sketch Planning Tool (<http://sls.geoplan.ufl.edu/#intro>)
- GulfTREE (<http://www.gulftree.org/>)



Joseph.Bauer@FloridaDEP.gov



Funding

- **306/306A**
 - Coastal Partnership Initiative
 - State Agency Grants
- **309**
 - Adaptation Action Initiative
- **State Funds**
 - Resilience Planning Grants
 - Adaptation Implementation





306 and 306A

Coastal Partnership Initiative & State Agency Grants

City of St. Marks	Vulnerability Assessment & Policy Analysis & Options	\$25,000
Town of Indialantic	Peril of Flood	\$24,500
Melbourne Beach	Peril of Flood	\$33,000
<i>TBRPC II (Manatee)</i>	<i>Peril of Flood + Training</i>	<i>\$64,386</i>
City of Cape Canaveral	Vulnerability Assessment + Economic Modeling	\$67,000
City of Cocoa	Vulnerability Assessment + Economic Modeling	\$77,200
<i>Apalachee Resiliency</i>	<i>Peril of Flood</i>	<i>\$24,809</i>
		\$315,895

Italics indicate Gulf communities.





309

Adaptation Action Initiative

City of Indian Harbour Beach	Peril of Flood	\$20,500
City of Sebastian	Peril of Flood + Adaptation Plan	\$50,000
City of Titusville	Peril of Flood	\$40,000
<i>Dixie County Board of Commissioners</i>	<i>Peril of Flood</i>	<i>\$30,000</i>
TBRPC (Evacuation Zone Tool)	Evacuation Zone Creation Tool for GIS	\$36,198
City of New Smyrna Beach	Vulnerability Assessment + Economic Modeling	\$74,000
Martin County	Vulnerability Assessment to Improve CRS Rating	\$34,000
City of Ft Lauderdale	Peril of Flood, Resilience Plans, & Public Outreach	\$45,300
City of Fernandina Bch	Peril of Flood, and Sea Level Rise Mitigation Measures	\$35,700
FSU	Survey of Resilience Planning Needs for Florida Coastal Counties	\$50,000
		\$415,698

Italics indicate Gulf communities.





Resilience Planning Grants

- Promote community resilience planning
 - Compliance with “Peril of Flood” statute
 - Development of Adaptation Action Areas
 - Vulnerability Assessments, Adaptation Plans or Resilience Plans
 - Development of relevant decision support tools, and/or public outreach tools, products or programs that support community resilience planning efforts, including regional collaboration efforts

<i>City of Sanibel</i>	<i>Vulnerability Assessment (Peril of Flood)</i>	\$53,500
Atlantic Beach	Vulnerability Assessment	\$40,000
<i>University of Florida</i>	<i>Permitting Living Shorelines/Cedar Key</i>	\$41,024
Nassau County	Nassau County Vulnerability Assessment	\$40,000
City of Rockledge	Resilient Planning for the Future of Rockledge (Peril of Flood)	\$55,000
<i>City of Carrabelle</i>	<i>Carabelle Targeted Resilience Assistance</i>	\$23,000
SFRPC	Peril of Flood Updates/ Dania Beach & Palmetto Bay	\$36,885
<i>City of Punta Gorda</i>	<i>Climate Adaptation Plan Update & Living Shoreline Element</i>	\$74,968
<i>Dixie County</i>	<i>Coastal Resilience Adaptation Plan</i>	\$52,000
City of Marathon	Resilient Marathon (Peril of Flood)	\$55,000
City of Boynton Beach	Palm Beach County Resilience Partnership (Peril of Flood)	\$72,000
<i>Pasco County</i>	<i>Comprehensive Plan Update and PDRP (Peril of Flood)</i>	\$70,000
		\$613,337

Italics indicate Gulf communities.



Resilience Implementation Grants



City of Miami Beach	Lake Pancoast Living Shoreline	\$34,965
<i>City of Sarasota</i>	<i>Resilient Shoreline</i>	<i>\$174,337</i>
RBNERR	<i>Fruit Farm Creek Mangrove Restoration</i>	<i>\$276,948</i>
City of Hollywood	Marina Boat Ramp Improvements	\$400,000
		\$886,250

Italics indicate Gulf communities.





Coordination

Coastal Resilience Forum



<https://floridadep.gov/fco/florida-resilient-coastlines-program/content/get-involved>

- | | | |
|-------------------------------|---|---|
| ACOE | Planning Council | NOAA/GTM |
| AECOM | Emerald Coastkeeper | NOAA/RBNERR |
| American Planning Association | FAU | North Florida Land Trust |
| Apalachee RPC | FDOT | NWFWMDC |
| Apalachicola Riverkeeper | FEMA | Palm Beach County |
| ARPC | FGCU | Pasco County |
| Audubon Florida | FIND | Pinellas County |
| BRACE | FIU | RBNERR |
| Brevard County | FDACS | RWParkinson Inc |
| Brizaga/Sea Level Rise Ready | Fla Sea Grant | Sanibel-Captiva Conservation Foundation |
| Broward County | Flagler County | Sarasota Estuary Program |
| Broward MPO | Florida League of Cities | Sea Turtle Conservancy |
| Calusa Waterkeeper | Florida Chamber of Commerce | SEFRCC |
| CFRPC | Florida Climate Institute | SFRPC |
| City of Cape Coral | Florida Earth Institute | Southwest Florida Community Foundation |
| City of Clearwater | FRCA | St. John's Riverkeeper |
| City of Crystal River | FSU | Stearns Weaver |
| City of Fernandina Beach | FSU Center for Ocean-Atmospheric Prediction Studies | Stetson University |
| City of Ft. Lauderdale | FSU Law | Suncoast Waterkeeper |
| City of Hallendale Beach | FWC | SWFRPC |
| City of Jacksonville | GCFI | Tampa Bay Waterkeeper |
| City of Jacksonville Beach | Gulf Archaeology Research Institute | Taylor Engineering, Inc. |
| City of Miami | Hillsborough County | TBEP |
| City of Miami Beach | Institute for Sustainable Communities | TBRPC |
| City of Naples | IRLNEP | TCRPC |
| City of Punta Gorda | Kennedy Space Center | The Nature Conservancy |
| City of Satellite Beach | Lake Worth Waterkeeper | TNC |
| City of St. Augustine | Martin County | Tortoise Island |
| City of West Palm Beach | Matanzas Riverkeeper | UF |
| Coastal Waterways | Miami Waterkeeper | UF (Geology) |
| Collier County | Miami-Dade County | UF (planner) |
| Collier County Waterkeeper | Monroe County | UF Geoplan |
| Conservancy of SW Florida | Nassau County | UF/IFAS Extension-Florida Sea Grant |
| Deady Law | NC Division of Coastal Management | USACE |
| DEM | NCFRPC | USF |
| DEO | NEFRPC | WFRPC |
| DEP | NOAA | Youth Environmental Alliance |
| Dewberry | NOAA/ANERR | |
| DOS | | |
| East Central Florida Regional | | |



Website – FloridaDEP.gov/resilience

Florida Department of Environmental Protection

A-Z Index Forms News Events Contact Us

About DEP How Do I? Divisions Air Lands Parks & Rec Waste Water

SEARCH...

Florida Resilient Coastlines Program

Home > Divisions > Florida Coastal Office > Florida Resilient Coastlines Program

Florida Resilient Coastlines Program Quick Links

- Home
- Funding Opportunities
- Resilience Resources
- Get Involved
- Funded Projects
- All Florida Resilient Coastlines Program Content

The Florida Department of Environmental Protection is committed to marshalling resources to prepare Florida's coastal communities and habitats for the effects of climate change, especially rising sea levels. Through the Florida Resilient Coastlines Program, DEP continues its efforts to help ensure collaboration among Florida's coastal communities, to offer technical assistance and funding to coastal communities dealing with increasingly complex flooding, erosion, and habitat shifts.

FLORIDA RESILIENT COASTLINES PROGRAM



Whitney.Gray@FloridaDEP.gov 850-245-2098