Florida Gulf Coast Resilience Program

RESTORE Council Proposal Document

General Information

Title:
Florida Gulf Coast Resilience Program

Project Abstract:
The State of Florida, through the Florida Department of Environmental Protection (FDEP), was awarded RESTORE Act Council-Selected Restoration Component funds to establish the Florida Gulf Coast Resilience Program (Planning) in 2022.

The Florida Gulf Coast Resilience Program (FGCRP) supports the primary RESTORE Comprehensive Plan goal to enhance community resilience through activities that implement sustainable solutions to restore and improve coastal resilience. FGCRP activities include: planning and implementation of adaptation and mitigation strategies to address the impacts of flooding; living shorelines to protect against erosion and reduce wave energy; and land management and land acquisition activities to protect submerged lands and coastal ecosystems that enhance resilience.

Florida coordinates with FDEP's Florida Forever Program (FF) to identify land acquisitions and with its Office of Resilience and Coastal Protection (ORCP) for adaptation planning and mitigation, as well as activities that involve submerged lands management. Developing strategies to address resilience is critical to Florida's ability to adapt to a changing coastline. FGCRP results include resilience improvements, such as reducing repetitive loss of critical habitats and infrastructure; protecting against wave energy, erosion and storm surge; enhancing habitat protection (e.g., marshes, mangroves, seagrass, coral, and oyster reef restoration); enhancing sustainable healthy wildlife populations and fisheries, enhancing water quality benefits, and improving recreation and tourism opportunities.

FPL Category: Cat1: Planning/ Cat2: Implementation
Activity Type: Program
Program: Florida Coastal Resilience Program
Co-sponsoring Agency(ies): N/A

Is this a construction project?:
No

RESTORE Act Priority Criteria:
(II) Large-scale projects and programs that are projected to substantially contribute to restoring and protecting the natural resources, ecosystems, fisheries, marine and wildlife

habitats, beaches, and coastal wetlands of the Gulf Coast ecosystem.
(IV) Projects that restore long-term resilience of the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands most impacted by the Deepwater Horizon oil spill.

Priority Criteria Justification:
FGCRP addresses RESTORE Act Priority Criteria (II), Large-scale projects and programs that are projected to substantially contribute to restoring and protecting natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast ecosystem.

FGCRP is designed to result in large-scale environmental benefits, particularly in relation to the needs of Florida's coastal communities. Its low elevation and more than 8,000 miles of coastline (of which more than 5,000 is along Florida's Gulf Coast) makes Florida especially susceptible to the effects of hurricanes, and flooding, including impacts from sea level rise. Program activities will build on state investments that identify vulnerabilities and strategies to counteract those effects. Program activities include funding projects to improve resilience, such as planning and implementing adaptation and mitigation strategies; developing living shorelines that protect coastal areas against erosion; and acquiring and managing lands that mitigate effects of climate change. These activities will result in significant environmental benefits to coastal communities and help prepare communities most at risk for protection against storms, erosion, coastal flooding, and sea level rise.

The FGCRP addresses RESTORE Act Priority (IV), Projects that restore long-term resilience of natural resources, fisheries, marine and wildlife habitats, and beaches. Program activities help restore the long-term resilience of natural resources most impacted by the Deepwater Horizon oil spill by protecting and enhancing coastal communities and resources that were impacted by the spill. Protection of coastal marshes, mangroves, seagrass, coral, and oyster beds improves resilience by protecting communities against sea level rise and storm surge; and improves ecosystem resilience and sustainability by providing opportunities for coastal wetland migration.

Project Duration (in years): 7

Goals

Primary Comprehensive Plan Goal:
Enhance Community Resilience

Primary Comprehensive Plan Objective:
Promote Community Resilience

Secondary Comprehensive Plan Objectives:
N/A

Secondary Comprehensive Plan Goals:
N/A

PF Restoration Technique(s):

Create, restore, and enhance coastal wetlands, islands, shorelines and headlands: Protect natural shorelines

Improve science-based decision-making processes: Develop tools for planning and evaluation

Improve science-based decision-making processes: Increase environmental monitoring capacities

Protect and conserve coastal, estuarine, and riparian habitats: Land acquisition

Location

Location:

Florida coastlines and estuaries along the Gulf of America.

HUC8 Watershed(s):

South Atlantic-Gulf Region(Choctawhatchee-Escambia) - Florida Panhandle Coastal(Perdido Bay)

South Atlantic-Gulf Region(Choctawhatchee-Escambia) - Choctawhatchee(Upper Choctawhatchee)

South Atlantic-Gulf Region(Choctawhatchee-Escambia) - Escambia(Upper Conecuh)

South Atlantic-Gulf Region(Choctawhatchee-Escambia) - Escambia(Patsaliga)

South Atlantic-Gulf Region(Choctawhatchee-Escambia) - Escambia(Sepulga)

South Atlantic-Gulf Region(Choctawhatchee-Escambia) - Escambia(Lower Conecuh)

South Atlantic-Gulf Region(Choctawhatchee-Escambia) - Florida Panhandle Coastal(Perdido)

South Atlantic-Gulf Region(Southern Florida) - Southern Florida(Florida Bay-Florida Keys)

South Atlantic-Gulf Region(Southern Florida) - Southern Florida(Caloosahatchee)

South Atlantic-Gulf Region(Peace-Tampa Bay) - Peace(Peace)

South Atlantic-Gulf Region(Peace-Tampa Bay) - Peace(Myakka)

South Atlantic-Gulf Region(Peace-Tampa Bay) - Peace(Charlotte Harbor)

South Atlantic-Gulf Region(Peace-Tampa Bay) - Tampa Bay(Sarasota Bay)

South Atlantic-Gulf Region(Peace-Tampa Bay) - Tampa Bay(Manatee)

South Atlantic-Gulf Region(Peace-Tampa Bay) - Tampa Bay(Little Manatee)

South Atlantic-Gulf Region(Peace-Tampa Bay) - Tampa Bay(Alafia)

South Atlantic-Gulf Region(Peace-Tampa Bay) - Tampa Bay(Hillsborough)

South Atlantic-Gulf Region(Peace-Tampa Bay) - Tampa Bay(Tampa Bay)

South Atlantic-Gulf Region(Peace-Tampa Bay) - Tampa Bay(Crystal-Pithlachascotee)

South Atlantic-Gulf Region(Peace-Tampa Bay) - Tampa Bay(Withlacoochee)

South Atlantic-Gulf Region(Suwannee) - Aucilla-Waccasassa(Waccasassa)

South Atlantic-Gulf Region(Suwannee) - Aucilla-Waccasassa(Econfina-Steinhatchee)

South Atlantic-Gulf Region(Suwannee) - Suwannee(Lower Suwannee)

South Atlantic-Gulf Region(Suwannee) - Suwannee(Santa Fe)

South Atlantic-Gulf Region(Ochlockonee) - Ochlockonee(Lower Ochlockonee)

South Atlantic-Gulf Region(Apalachicola) - Apalachicola(Apalachicola)

South Atlantic-Gulf Region(Apalachicola) - Apalachicola(New)

South Atlantic-Gulf Region(Apalachicola) - Apalachicola(Apalachicola Bay)

South Atlantic-Gulf Region(Choctawhatchee-Escambia) - Florida Panhandle Coastal(St. Andrew-St. Joseph Bays)
South Atlantic-Gulf Region(Choctawhatchee-Escambia) - Florida Panhandle Coastal(Choctawhatchee Bay)
South Atlantic-Gulf Region(Choctawhatchee-Escambia) - Florida Panhandle Coastal(Pensacola Bay)
South Atlantic-Gulf Region(Apalachicola) - Apalachicola(Chipola)
South Atlantic-Gulf Region(Choctawhatchee-Escambia) - Florida Panhandle Coastal(Yellow)
South Atlantic-Gulf Region(Choctawhatchee-Escambia) - Florida Panhandle Coastal(Blackwater)
South Atlantic-Gulf Region(Choctawhatchee-Escambia) - Choctawhatchee(Pea)
South Atlantic-Gulf Region(Choctawhatchee-Escambia) - Choctawhatchee(Lower Choctawhatchee)
South Atlantic-Gulf Region(Choctawhatchee-Escambia) - Escambia(Escambia)
South Atlantic-Gulf Region(Suwannee) - Aucilla-Waccasassa(Aucilla)
South Atlantic-Gulf Region(Ochlockonee) - Ochlockonee(Apalachee Bay-St. Marks)

State(s):
Florida

County/Parish(es):
FL - Escambia
FL - Pasco
FL - Pinellas
FL - Charlotte
FL - Citrus
FL - Collier
FL - Dixie
FL - Franklin
FL - Sarasota
FL - Taylor
FL - Wakulla
FL - Bay
FL - Gulf
FL - Santa Rosa
FL - Walton
FL - Hernando
FL - Hillsborough
FL - Jefferson
FL - Lee
FL - Levy
FL - Manatee
FL - Monroe
FL - Okaloosa

Congressional District(s):

FL - 3
FL - 14
FL - 15
FL - 26
FL - 11
FL - 13
FL - 16
FL - 18
FL - 12
FL - 1
FL - 19
FL - 2
FL - 17
FL - 28

Narratives

Introduction and Overview:

The Florida Gulf Coast Resilience Program includes adaptation planning and mitigation activities for sustainable solutions to promote coastal resilience in the face of hurricanes, flooding, and other stressors. Florida has marshalled resources to prepare coastal communities for impacts associated with hurricanes and flooding, and has developed natural resource protection tools and funding to make Florida's coastline more resilient (FDEP 2018). FGCRP consists of a suite of intrinsically linked activities that in combination result in significant improvements in resilience. Eligible activities include: planning or implementing adaptation and mitigation strategies; living shorelines; and land acquisition and management. Program activities will occur within the 23 counties along Florida's Gulf of America coastline (see Figures 1 through 3) and will address the protection, restoration and improvement of critical assets, including natural resources, vulnerable to hurricanes and flooding.

Florida evaluates proposals submitted by the public and local governments and selects those that fulfill the program purpose (e.g., enhance resilience in vulnerable communities, protect natural resources, sustain healthy ecosystems). FGCRP enables FDEP to fund critical projects that will make significant, measurable improvements to the long-term resilience of natural resources, fisheries, marine and wildlife (essential) habitats, beaches, coastal habitats, and Florida's coastal communities.

Florida plans to apply Best Available Science (BAS) reviews of FGCRP that were completed upon original application of the program in Funded Priorities List 3b. This is justified due to the methods remaining largely the same and the scientific integrity of the program potentially increasing. For example, the previous iteration of the program focused on completion of vulnerability assessments, which apply the background and data that drives activities in the next iteration. The next step is to complete planning, engineering, design, permitting and implementation of site-specific adaptation and mitigation strategies. Likewise, more work has been done to site, design and construct living shorelines in Florida, only lending more credibility and experience to using natural solutions as a practice. Finally, land acquisitions will continue to

be accomplished through Florida Forever, as described in the original program application.

Goals/Objectives: FGCRP addresses the Comprehensive Plan goal to Enhance Community Resilience and the objective to Promote Community Resilience. The program increases the capacity of the vulnerable communities to adapt to short-term changes, such as hurricanes and flooding; and long-term changes, such as rising sea levels. This is achieved through: implementing adaptation and mitigation strategies to address resilience, which is critical to Florida's ability to adapt to a changing coastline; creating living shorelines to reduce erosion, wave energy, and protect shorelines and inland communities against hurricanes; and acquiring and managing lands in critical areas to allow habitats and species to adapt or migrate in response to changing climate and coastlines.

Commitments: FGCRP builds on Florida's commitment to science-based decision making. FDEP's Office of Resilience and Coastal Protection (ORCP) has: (1) conducted a comprehensive statewide flooding and sea level rise vulnerability assessment, which incorporates state-of-the art flood modeling on a statewide basis, and (2) funded or provided input on local vulnerability assessments for each of Florida's 67 counties and nearly 410 municipalities. These studies presented valuable data related to the exposure and sensitivity of local critical assets to be assessed alongside sea level rise, storm surge, and rainfall scenarios now and in the projected future to assist in resilience planning. These efforts allowed FDEP and communities in Florida to identify science-based strategies to address the negative effects of changing future conditions. Florida leverages the Florida Forever Program (FF) Priority List (FF 2025); Florida Forever utilizes a science-based evaluation process, which includes a ranking of parcels based on environmental conditions, including protection of fragile coastal habitat, to mitigate the effects of sea level rise.

Florida is committed to public engagement and transparency. FDEP coordinated with numerous stakeholders to develop the FGCRP. The public can propose projects for funding. FDEP funded the preparation of vulnerability assessments, which frequently included public engagement aspects, including outreach to vulnerable populations (FDEP 2018). Grantees who are awarded FGCRP funds are required to post products of program-funded activities on a publicly-available website. FGCRP leverages resources and partnerships to identify and implement resilience-focused activities. When evaluating activities, Florida considers whether the project leverages other funding sources. For land acquisitions, Florida relies on Florida Forever to identify eligible projects. FDEP also coordinates with local entities to identify projects and program activities as well as FDEP's ORCP, which funded vulnerability assessments for communities. Finally, Florida's commitment to coordinating resources and partnerships, delivering results, and relying on the best available science, is illustrated through the Governor's appointment of the first Chief Resilience Officer (CRO) in August 2019. The CRO is tasked with preparing for the environmental, physical, and economic impacts of sea level rise.

Environmental Benefits: In 2018, much of the Florida coast was developed and approximately 80 percent of Florida's population lived within 10 miles of the coast (FDEP 2018). Florida has been designated as one of the fastest growing states between 2023-2024 with Panama City-Panama City Beach metro area along the Gulf coast as the second fastest growing metropolitan area in the state in the same time period (behind Ocala, Florida). (Census.gov

2024, Census.gov 2025). Due to low elevations, coastal communities and habitats are at significant risk from the effects of hurricanes and flooding. FGCRP provides environmental benefits to coastal communities by increasing coastal resilience, specifically through planning and implementation of adaptation and mitigation strategies, creating living shorelines, and conservation or increased protection of natural areas, including offshore submerged lands and riparian buffers.

Coastal habitats such as barrier islands, marsh, mangroves, seagrass, oyster reefs, and coral reefs have the capacity to reduce wave energy and erosion, protecting coastal communities from sea level rise and in some cases, storm surge (Beck et al. 2018, Boutwell and Westra 2016, Ferrario et al. 2014, Guannel et al. 2016, Liu et al. 2013, USGCRP 2018, Zhang et al. 2012). Natural vegetation and networks of connected wetlands stabilize shorelines by trapping sediments and filtering excess nutrients from urban runoff, while providing essential habitat for commercially valuable species. Living shorelines enhance shoreline stabilization and coastal protection (Bilkovic and Mitchell 2017).

Acquisition, conservation, and regulatory protection of natural areas, including unique, imperiled, and ecologically valuable habitats (e.g., riparian buffers, wildlife corridors, submerged lands), promotes coastal resilience and strengthens natural resources. Protecting large areas of natural lands preserves the ecosystems that reduce wave energy and erosion. Land conservation protects native biodiversity and ecosystem function, promotes connectivity, increasing genetic diversity and species fitness, and allows for migration or adaptation as environmental change induces shifts in species' range of distribution (Damschen et al. 2019, DeFreese 1995, Tewksbury et al. 2002). Land conservation enhances water resource protection by allowing water to filter naturally, reducing impervious surfaces, and flooding, and improving water quantity and quality (Shepard et al. 2016).

Florida has demonstrated success implementing these project types across the Gulf Coast of Florida. FDEP, in coordination with other State and Federal partners, developed the Florida Adaptation Planning Guidebook (FDEP 2018, updated 2025) and funded projects that produced vulnerability assessments for more than 95% of Florida communities including 100% of all counties. FDEP and partners successfully constructed a number of living shoreline projects, notably: "Project Greenshores" in Pensacola Bay (FDEP 2019a); a living shoreline in St. Andrews Bay recognized by EPA through its Gulf Guardian Award in 2013 (Florida Living Shorelines 2020); and Cat Point Living Shoreline in Apalachicola Bay, which won Best Restored Shores Award by American Shore and Beach Preservation Association in 2023 (NOAA 2023). Nearly 10 million acres of land is publicly managed for conservation in Florida, more than 2.6 million acres of which were purchased under Florida Forever and an earlier State land acquisition program (FNAI 2022).

Environmental Stressors: Comprehensive resource management and planning efforts, such as Florida Forever, Florida Gulf Environmental Benefit Fund Restoration Strategy, Basin Management Action Plans, Aquatic Preserve and State Park Management Plans, the Statewide Vulnerability Assessment, local Vulnerability Assessments, and many others have identified stressors and threats to Florida's natural resources including habitat loss and fragmentation, storm surge, flooding, and sea level rise. FGCRP enhances resilience and sustainability by

addressing habitat loss and fragmentation through acquisitions and land management protections as well as implementing adaptive strategies and constructing living shorelines to protect critical assets from hurricanes and flooding.

Costs: $20,000,000. FGCRP leverages funding and resources from Florida Forever and the Resilient Florida grant programs. $8,000,000 in Category 1 funds will be used for program management; monitoring and data management; adaptive management; living shoreline planning, design, and environmental compliance; and planning, design and environmental compliance for adaptation and mitigation strategies for future implementation. $12,000,000 in Category 2 funds will be used for implementation of adaptation and mitigation strategies, construction of living shorelines, land acquisition, and project monitoring.

Timeline: The duration of FGCRP planning and implementation is expected to be 7 years. Land acquisitions identified from the Florida Forever Priority List could begin upon receipt of funding and acquired lands will be maintained in perpetuity.

Partners: Florida relies on Florida Forever to leverage Florida's science-based approach to land conservation and to streamline the land acquisition process. FDEP will rely on ORCP to develop adaptation and mitigation strategies as well as continue resource management and stewardship activities on State submerged lands. In 2021, Governor DeSantis signed House Bill 1954, the Always Ready Bill, implementing Section 380.093, Florida Statute (F.S.), and creating the Resilient Florida Program within the FDEP's ORCP. The legislation forges a path for coordinated flood resilience planning and mitigation efforts in the state to protect critical assets defined by statute (including specifically identified types of public infrastructure). Since July 1, 2021, the state has appropriated nearly $1.8 billion dollars toward local and statewide flood planning and mitigation efforts. In addition to funding grants to communities, ORCP completed a comprehensive statewide flooding and sea level rise vulnerability assessment (Statewide Assessment), which is now undergoing post project QA/QC and analysis. This assessment will further allow communities to identify mitigation needs.

Funded Priorities List (FPL) Planning Framework: FGCRP is consistent with the Protect and Conserve Coastal, Estuarine, and Riparian Habitats priority approach identified in the FPL planning framework. The primary goal and objective of the program is to improve coastal resilience, through utilization of techniques such as adaptation and mitigation strategies, living shorelines and coastal habitat protection. Identifying strategies to improve coastal resilience will help ensure Florida's coastal communities are able to adapt to the effects of hurricanes and flooding by conserving Florida's natural resources, reducing wave energy, protecting against storm surge, and providing opportunities for species and habitat migration.

Proposed Methods :

FGCRP consists of a suite of intrinsically linked conservation activities designed to implement sustainable solutions to improve coastal community resilience. FGCRP includes activities such as: planning and evaluation tools, design, and construction of living shorelines (where needed and viable); acquiring and managing lands for conservation; and other activities that improve coastal resilience, such as habitat restoration (e.g., oyster reef, marsh, beach and dune, floodplain, mangrove, coastal hammock and forest, coral reef and seagrasses), or restoring

flowways to sustain marsh vegetation. As such, the program will rely on a range of methods for the various activities. The methods Florida utilizes to select projects or activities under this program (i.e., decision criteria) and descriptions of methods for some of the activities are summarized below.

Project or activity selection criteria. The goal of FGCRP is to enhance and promote community resilience by increasing the capacity of Florida's coastal communities to adapt to short- and long-term changes such as increased flood risks, storm surge, and rising sea levels. The objectives of the program are to: fund adaptation and mitigation strategies for Florida Gulf coastal communities' assets which are most at risk from the effects of hurricanes and flooding; identify strategies to address coastal resilience; and implement sustainable solutions to improve coastal resilience, such as constructing living shorelines to reduce wave energy which protects against storms, or acquiring and managing coastal lands, urban riparian buffers, flowways or other habitats.

Florida leveraged funds from RESTORE Council's federal award for Commitment and Planning Support (CPS) to develop selection criteria for the FGCRP and its other FPL programs. Florida selects projects from proposals submitted by the public and stakeholders. FDEP utilizes project portals and issues a public notice to solicit proposals. The notices clearly describe the goal and objectives of the program and the types of activities that will be considered.

In selecting program activities from submitted project proposals, FDEP screens and evaluates each proposal to ensure it meets the goal and objective of the program. If a proposal meets the screening criteria, FDEP evaluates the proposal further in accordance with its evaluation criteria. FDEP then selects program activities based on the extent to which the proposals meet the evaluation criteria and are most cost-effective at addressing community resilience. Proposals that meet the initial screening and evaluation criteria are further evaluated as outlined below for each of the project types: adaptation and mitigation planning and/or implementation, living shorelines, and land acquisition. The number and type of projects selected for implementation depends on project proposals and will be scaled to the program budget.

Screening criteria:
Does the proposal have sufficient information to allow for screening and evaluation?
Is the project proposal consistent with the program goal and objective?
Is the proposed project feasible (i.e., has not already been completed, does not conflict with any State or Federal regulations, etc.).

Evaluation criteria:
Extent to which the project proposal is cost-effective (i.e., reasonable and comparable to other equivalent activities; low cost compared to likely benefits).
Extent to which the project proposal is supported by the local community.
Extent to which the project proposal leverages other funding sources (including in-kind services).
Extent to which the project proposal provides benefits to multiple communities and/or multiple natural resources.
Extent to which the project proposal addresses the goals and objectives of the program.

Proposed project location (i.e., whether it is located in an area that is vulnerable to current and future risks including flooding, storm surge, erosion, or rising sea levels). If within an ORCP-managed area (National Estuarine Research Reserve, Aquatic Preserve or National Marine Sanctuary), does it meet the goals and objectives of the approved management plan?
Project readiness and sustainability and/or likelihood of long-term success of the proposed project.

When planning adaptation and mitigation strategies, Florida utilized a science-based process in coordination with ORCP staff and followed state guidance. Specifically, vulnerability assessments were developed in accordance with guidance outlined in the Florida Adaptation Planning Guidebook (FDEP 2018), the Sea-Level Rise Vulnerability Assessment Tools and Resources (FDEO 2015), and requirements found in s. 380.093, Florida Statutes, among others. FDEP may refer to previously conducted local and regional vulnerability assessments (e.g., Beever III et al. 2009, Taylor Engineering, Inc. 2019) which have included sea level rise and storm surge risk models such as the Sea Level Affecting Marshes Model (SLAMM) and an ADvanced CIRCulation Model (ADCIRC).

FDEP may consider living shoreline proposals independent of any specific vulnerability assessment or may prioritize them based on one or more vulnerability assessments. Selection of individual living shoreline proposals are based on best available science (Miller 2015, NOAA 2015). FDEP factors ecological resources present and adjacent land use in its evaluation of proposals as part of a science-based process to prioritize projects (Taylor Engineering, Inc. 2019). FDEP requires professional services contractors to conduct site investigations, complete necessary engineering and design, and regulatory compliance for any living shoreline proposals selected. Professional services agreements are drafted and executed in accordance with Florida laws and regulations. The selected professional services contractor will be required to conduct site visits as necessary, develop designs, construction drawings as applicable, and determine the necessary permits required to complete the project. Upon receipt of all needed approvals, an Invitation to Bid for construction will be issued in accordance with Florida State procurement laws.

FDEP will consider each land acquisition or management proposal independently. However, some land acquisition proposals may be prioritized based on the results of one or more vulnerability assessments. Land acquisitions may be suggested by the public through project proposals or identified through the Florida Forever Priority List which is updated annually (FF 2025). Florida utilizes a science-based process in identifying lands for acquisition and management. Parcels within the Climate Change Lands category of the Florida Forever Priority List, or other parcels that drain to the Gulf of America which may help strengthen coastal resilience or mitigate the effects of climate change including: coastal salt marshes, mangroves, oyster reefs, riparian buffers, or flowways, may be considered by Florida for acquisition. The Florida Forever program conducts a thorough field review and a comprehensive natural resource analysis to score and rank parcels on the Florida Forever Priority List. The goal of the process is to conserve environmentally unique and irreplaceable lands or rare ecosystems, native flora and fauna, important breeding locations, natural areas for recreation, and archaeological or historic sites (Section 259.105, F.S.). A series of geographic data layers including information on various measures used by Florida Forever (e.g., rare species habitat

conservation priorities, ecological greenways, landscape-sized protection areas, significant surface waters, natural floodplains, functional wetlands) are utilized, (see FNAI 2022 for additional details on the methods and process). FDEP, in accordance with Florida Statutes, Chapter 259, Land Acquisitions for Conservation or Recreation (Section 259.105, F.S.). FDEP's Division of State Lands or its local acquisition partners, contracts with parties as necessary to obtain services for appraisal(s) and required due diligence, such as environmental site assessments, to complete the acquisition(s). Lands acquired would be titled to the State and protected in perpetuity. Land management plans are required on acquired lands and could include: seagrass, coral reef, marsh, and mangrove restoration activities along with other types of stewardship activities.

Environmental Benefits:

Much of Florida's coast is developed and approximately 80 percent of the population live within 10 miles of the coast (FDEP 2018). Due to the State's low elevations, coastal communities are at significant risk from the direct and indirect effects hurricanes and flooding as well as sea level rise. Shoreline protection and conservation of coastal ecosystems can enhance community and ecosystem resilience to mitigate those effects (USGCRP 2018). FGCRP will result in significant environmental benefits to coastal communities by increasing community resilience through adaptation and mitigation strategies, living shorelines, and land conservation and management.

Efforts to assess communities' vulnerabilities have been essential for building capacity to plan and implement appropriate mitigation and adaptation strategies. Vulnerability assessments have helped to identify those areas most at risk and evaluate the potential range and magnitude of impacts from flooding. Understanding communities' vulnerabilities to flooding allows resource managers to plan and implement corrective measures to mitigate future threats. Local and statewide vulnerability assessments have integrated projected sea level rise with critical assets to identify assets that might be most vulnerable, helping communities effectively plan for the future. Implementation of adaptation and mitigation strategies will be informed by the data that was collected to develop community-specific vulnerability assessments.

Natural communities such as barrier islands, marsh, mangroves, seagrass beds, oyster reefs, and coral reefs can reduce wave energy and erosion, protecting coastal communities from sea level rise and in some cases, storm surge (Beck et al. 2018, Boutwell and Westra 2016, Ferrario et al. 2014, Guannel et al. 2016, Liu et al. 2013, USGCRP 2018, Zhang et al. 2012). Wetland presence has been shown to be negatively correlated with economic damages following hurricanes and storm surge (Boutwell and Westra 2016), providing further evidence that wetlands increase community resilience. Natural vegetation and networks of connected wetlands further stabilize shorelines by trapping sediments and filtering excess nutrients from urban runoff. Living shorelines are constructed to enhance shoreline stabilization and coastal protection by reducing wave and tidal influences, as well as periodic storm surge impacts. A review of restoration projects following Hurricane Sandy found that living shorelines were five to eight times more cost-effective than stone revetments for erosion control (Abt Associates 2019).

Florida ranks in the top three states nationally where existing coastal habitat is expected to defend the greatest number of people and property from sea level rise (Arkema et al. 2013). It is estimated that preserving and restoring coastal habitats in the U.S. could reduce the impacts of

sea level rise on people and their property by half (Arkema et al. 2013). Conservation of natural lands in Florida, including unique, imperiled, and ecologically valuable habitat (e.g., riparian buffers, wildlife corridors), promotes coastal resilience. Protecting large areas of natural lands directly protects the communities by reducing wave energy and shoreline erosion. Land acquisition conserves native biodiversity, ecosystem function, promotes connectivity, increases genetic diversity and species fitness, and allows for migration as environmental changes induce shifts in species' distribution ranges (Damschen et al. 2019, DeFreese 1995, Tewksbury et al. 2002). Conservation of riparian buffers and natural flowways can help mitigate floods and protect coastal communities susceptible to flood risk (World Bank 2018). Finally, land conservation enhances water resource protection and management, reducing impervious surfaces, allowing water to filter naturally, and reducing flooding (Shepard et al. 2016).

Metrics:

Metric Title: HC003 : Land acquisition - Acres acquired in fee

Target: 0.99

Narrative: Florida will use this as a project or activity metric. The project or activity metrics may be adjusted as needed once projects or activities are funded. Metrics may be added, removed, or replaced as appropriate at the project work plan application stage. Once a project or activity is selected a target value will be established. Project or activity success will be determined as the total number of acres acquired in fee. The purpose of this metric will be to verify that acquisition has been completed, and the performance measure will be an executed and recorded deed. Upon transfer of the parcel to public ownership, this metric will be complete. The outcome will be an increase in protected acres.

Metric Title: HR012 : Shoreline protection - Miles of living shoreline installed

Target: 0.99

Narrative: Florida will use this as a project or activity metric. The project or activity metrics may be adjusted as needed once projects or activities are funded. Metrics may be added, removed, or replaced as appropriate at the project work plan application stage. Once a project or activity is selected a target value will be established. Project or activity success will be determined as the number of miles of living shoreline installed. The purpose of this metric will be to verify that the living shoreline had been completed according to plans and designs. The outcome will be an increase in miles of living shoreline.

Metric Title: HC001 : Conservation easements - Acres protected under easement

Target: 0.99

Narrative: Florida will use this as a project or activity metric. The project or activity metrics may be adjusted as needed once projects or activities are funded. Metrics may be added, removed, or replaced as appropriate at the project work plan application stage. Once a project or activity is selected a target value will be established. Project or activity success will be determined as the total number of acres protected under a conservation easement. The purpose of this metric will be to verify that the conservation easement has been acquired and recorded in property records. The performance measure will be an executed and recorded conservation easement agreement. Upon receipt of the executed and recorded agreement, this metric will be complete. The outcome will be an increase in acres protected under easement, and lands will be conserved in perpetuity.

Metric Title: PRM010 : Research - # studies used to inform mgmt.

Target: 0.99

Narrative: Florida will use this as a project or activity metric. The project or activity metrics may be adjusted as needed once projects or activities are funded. Metrics may be added, removed, or replaced as appropriate at the project work plan application stage. Once a project or activity is selected a target value will be established. Project or activity success will be evaluated and determined as the number of vulnerability assessments or other studies completed and used to inform management over the duration of the program. The purpose of this metric will be to verify and track that the planning or evaluation of adaptation strategies have been completed, and the performance measure will be a completed planning or evaluation report.

Metric Title: RES003 : Community Resilience - # of community critical assets benefiting

Target: 0.99

Narrative: Florida will use this as a program-wide metric to evaluate the success of the program. Program success will be determined as the number of community critical assets by the program, as applicable. Because specific projects or activities are not yet identified, a target value or range of values is to be determined. As projects or activities are selected for funding a range of values for this program metric can be proposed at that time. Each project or activity funded under this program may not be captured by this metric. Additional metrics will be determined to capture the benefits of each technique utilized under this program; specifically, each project or activity selected under the program will have specific metrics aimed at evaluating the success of the individual project or activity.

Risk and Uncertainties:

Florida's coastal communities are at significant risk from the effects of hurricanes and flooding,

among other stressors. Florida has demonstrated a commitment to coastal resilience and adaptation planning. In 2009, the first Climate Leadership Summit was convened by Broward, Miami-Dade, Monroe, and Palm Beach Counties. Since that time, FDEP, in coordination with other State and Federal partners, has developed guidance on adaptation planning and vulnerability assessments (FDEO 2015, FDEP 2018). FDEP has funded over 100 projects that produced vulnerability assessments for more than 150 communities. In 2019, the Governor appointed the first Climate Resilience Officer to help prepare for the impacts of sea level rise in partnership with FDEP. Based on Florida's experience, and the technical assistance available, there is a strong likelihood of success for executing the resilience activities in this program. Nevertheless, both short-and long-term risks and uncertainties are inherent in planning and implementing this program. There are also risks associated with uncertainties with sea level rise and rainfall projections, which require careful consideration in planning for the long-term success of the program. FGCRP will promote long-term coastal resilience in each activity through an adaptive management approach and site-specific consideration of local and regional risks and uncertainties.

Near-term risks and uncertainties associated with FGCRP are related to planning and implementing program activities (e.g., adaptation and mitigation strategies, living shorelines, or acquisitions). Risks include uncertainty in project budget estimates, changes in local partners' capacity to manage funded projects after selection, delays in timelines, and cost overruns due to industry-wide increasing costs. These risks can be mitigated through careful cost estimation, including reasonable contingencies, effective planning and design, third-party oversight, and adaptive management. Entities receiving funding are required to document strong operation and management capabilities and financial resources to assure long-term project success.

Florida has successfully funded planning and implementation for adaptation and mitigation strategies and living shoreline projects, and conserved natural areas, and acknowledges unexpected issues can arise. In planning living shorelines, unknown aspects of current site conditions, changing conditions, and unanticipated changes to a project's scale can alter plans. For land acquisition projects, near-term risks and uncertainties include the continued availability of properties, the successful negotiation of sales with landowners, and the cost of the acquisition. These can be mitigated through thoughtful discussion with property owners, quality appraisals, and due diligence.

Florida does not anticipate near-term socioeconomic risks from land acquisition projects. Some near-term socioeconomic risks may be associated with construction of living shorelines. Construction activities pose potential to impact aesthetics, increase noise and local traffic, or temporarily restrict access to recreational or commercial fishing sites or navigation channels. The potential negative effects associated with construction will be addressed through careful project planning, sequencing, and public engagement as necessary to minimize impacts. Further, impacts are likely to be offset by the socioeconomic benefits of the activities, such as reduced erosion, protection from storm surge, etc.

Long-term risks and uncertainties for FGCRP are primarily associated with the adequacy of flooding and rainfall projection models to inform project design and implementation. The success and sustainability of projects could be undermined if conditions do not match projection

scenarios.

The Florida Flood Hub has developed sea level rise projection curves for Florida, while ORCP has published a statewide vulnerability assessment to evaluate projected impacts of sea level rise and flooding. Despite the uncertainties associated with any model predictions, the state has a science-based approach to model updates. In Florida, every coastal county was found to be at risk for storm surge and 12 counties had residents at extreme risk in the lowest prediction of sea level rise investigated. As cited in Stys et al. (2017), 25 percent of 1,200 species tracked by the Florida Natural Areas Inventory are expected to lose more than half of their current habitat area due to sea level rise. Studies have demonstrated the direct impact of sea level rise, reducing abundance and distribution of plant and animal species restricted to low elevation habitats in Florida (LaFever et al. 2007, Ross et al. 1994).

Completed vulnerability assessments rely on the selection and application of appropriate sea level rise and flooding vulnerability projections. Modeling and decision support tools will be used to develop scenarios of future conditions during planning of adaptation strategies and implementation, living shorelines and identification of lands for acquisition. FGCRP will limit risk associated with uncertainty in models by utilizing Florida-specific models and a science-based approach.

Assessing the long-term successes of living shorelines and land acquisition projects in sustaining resilience may depend on future sea level rise and rainfall projections. During project planning, accounting for future sea level rise in determining the appropriate siting for a living shoreline will help to effectively reduce wave energy for current and future shoreline protection. The success of conservation for coastal resilience depends on the appropriate consideration of impacts on lands being considered for acquisition. The sections below summarize some of the risks and uncertainties associated with model projections as well as the risks and uncertainties associated with the program activities and the long-term success of the program. A source for U.S. sea level rise and storm surge scenarios is the 2022 NOAA Sea Level Rise Technical Report. This multi-agency effort, representing the first update since 2017, offers projections out to the year 2150 and information to help communities assess potential changes in average tide heights and height-specific threshold frequencies as they strive to adapt to sea level rise.

Conservation and management of coastal habitats that have the capacity to provide a natural buffer to waves and storm surge (e.g., marshes, mangroves, submerged aquatic vegetation, oyster reef, coral reef, and barrier islands) will increase Florida's resilience(Beck et al. 2018, Boutwell and Westra 2016, Ferrario et al. 2014, Guannel et al. 2016, Liu et al. 2013, USGCRP 2018, Zhang et al. 2012). Feagin et al. (2010) suggest that while coastal vegetation is effective in attenuating short-period wave energy, it may be less effective in reducing the impacts of storm surge. Thus, some uncertainty is associated with the ability of coastal habitats to reduce storm surge impacts.

Projects that conserve habitat corridors, riparian buffers, and natural flowways can sequester carbon, promote population and habitat connectivity, and provide protection against floods. However, the degree to which individual conservation lands achieve connectivity is uncertain. The effectiveness of a corridor depends on a variety of factors (e.g., size and shape of the

patches connected by the corridor, distance between patches) and may be difficult to quantify (Tewksbury et al. 2002).

Despite the risks and uncertainties associated with model projections, FGCRP activities will focus on areas most at risk for hurricanes and flooding and implement projects that improve coastal communities' resilience through careful planning, effective strategies, and conservation of habitats that protect against the effects of climate change. While some risks and uncertainties exist for the long-term success of program activities, these may be mitigated through monitoring and adaptive management. Ultimately, any remaining risks and uncertainties are expected to be offset by the long-term environmental benefits of the program.

Florida anticipates limited long-term socioeconomic risks from the installation of living shorelines, adaptation and mitigation strategies, and land acquisition projects, the latter of which could limit economic development and reduce potential property tax revenues. Florida suggests long-term socioeconomic risks would be offset by potential long-term benefit of reduction of costs associated with hurricane and flood damage.

Other sources of long-term risk include a range of factors beyond the control of FDEP and project proponents, including: the trajectory and timing of population change and infrastructure development in project areas (which can in turn affect measures of resilience of physical assets and indicators of socioeconomic factors); the impact of natural disasters beyond the range of historical or projected science; or other site-specific factors. While some aspects of these long-term risks can be addressed through scenario analysis and project robustness, Florida expects that project proponents will address these factors qualitatively.

Monitoring and Adaptive Management:
Program-wide monitoring for RES003, Community Resilience - # of residential, commercial, and public facilities benefiting will occur for the duration of the program, as applicable to projects or funded activities. Program success will be tracked as the number of community critical assets benefited under this program; the total number benefitting will be verified using associated program implementation documents.

FDEP will utilize a monitoring and adaptive management framework consistent with the Deepwater Horizon NRDA MAM Manual guidelines (DWH Trustees 2019) and the RESTORE Interim Observational Data Plan (ODP) Guidance (2021). The program will be adaptively managed to ensure the greatest benefits are achieved. For example, as new information on sea level rise and flooding becomes available, the information will be incorporated into planning and implementation of adaptation and mitigation strategies and living shorelines. Project reports will be utilized to document applicable lessons learned to allow for improvements to be incorporated into future activities.

Project or activity monitoring including the metrics, duration, performance criteria, and adaptive management activities, will vary depending on the technique implemented in each project or activity. Florida will require the development of adaptive management plans for all funded projects or activities to ensure long-term success.

Monitoring for HR012 - Miles of living shoreline installed will be conducted using surveys or aerial imagery, consistent with methods outlined in the NRDA MAM Manual (DWH Trustees 2019) and ODP Guidance (RESTORE 2021).

Monitoring for HC001: Conservation easements - Acres protected under easement and HC003: Land acquisition - Acres acquired in fee will take place following acquisition and acres will be verified by survey or aerial imagery, consistent with methods in the NRDA MAM Manual (DWH Trustees 2019) and ODP Guidance (RESTORE 2021).

Monitoring for PRM010: Research - # studies used to inform management will be used to verify and track the number of studies (i.e., adaptation and mitigation strategy planning and evaluation activities) will be tracked and documented for the duration of the program.

Data Management:
Florida developed a Program Observational Data Plan (ODP) and Data Management Plan detailing how program and project data will be collected and managed. FDEP will provide a publicly accessible central location to access relevant data.

Depending on the technique(s) used for individual projects, the following types of data will be collected: number, type, and location of adaptation and mitigation strategy activities; planning and engineering data and miles of living shoreline installed; acreage acquired, location, and property information. For any partnerships with Florida Forever, property information will be made available on the FDEP Oculus site. Information on any Florida Forever activities are available at https://floridadep.gov/lands/environmental-services/content/florida-forever.

.

Collaboration:
During initial development of the FGCRP under FPL 3b, Florida collaborated with numerous State, regional, and local entities and stakeholders to develop and refine this program. FDEP held meetings with local governments, Water Management Districts, National Estuary Programs (NEP), non-governmental organizations (NGO), Florida's RESTORE Act Center of Excellence (COE), and other RESTORE Council members. At these meetings, NGOs, local entities, State agencies, and NEPs reiterated their support for funding coastal resilience projects, especially living shorelines and land acquisition.

Florida will rely on ORCP which identified and funded vulnerability assessments for over 95% of Florida communities as well as the statewide vulnerability assessment to measure the impacts of sea level rise and identify critical assets at risk. ORCP awarded more than $100 million in planning grants to help coastal and noncoastal communities plan for the effects of flooding and sea level rise.

Through the CPS process, Florida extensively collaborated with partners and determined that coastal resilience is a priority for local governments, Water Management Districts, National Estuary Programs, non-governmental Organizations (NGO), and RESTORE Council Members.

Public Engagement, Outreach, and Education:

Florida collaborated with the public and local entities to develop the original proposal for this program through numerous meetings with local governments, Water Management Districts, NEPs, NGOs, and Florida's COE. FDEP will continue to collaborate with local entities and the public for their assistance in identifying potential program projects and activities. The public will be able to submit proposals for funding projects or activities under FGCRP. FDEP will hold a webinar to present project selection criteria and will make draft project lists available for public review and comment.

Florida will rely on Florida Forever to streamline the process of identifying potential lands for acquisition, which incorporates additional opportunities for public engagement, outreach, and education. Florida Forever promotes land acquisition on behalf of the public, to conserve valuable resources, improve public land management, and increase public access to natural areas. Public engagement is a critical component of the Florida Forever selection process. Acquisition projects may be nominated by Federal, State and local government agencies, conservation organizations, or private citizens. Acquisition and Restoration Council (ARC) meetings are publicly noticed, and the public is encouraged to provide comment on the projects. Nonprofit organizations may play a role in helping acquire conservation lands. They advocate for parcels to be placed onto the Florida Forever Priority List and can act as intermediaries with owners, including assisting them with tax and estate planning issues. Florida Forever has previously collaborated with The Nature Conservancy, the Trust for Public Land, and The Conservation Fund. In addition to providing opportunities for the public to participate in the site selection and land acquisition process, Florida Forever provides education and outreach to ensure the public has knowledge of the accessibility of public lands. A publicly available database and mobile application are available to provide the public with information on the location, types of recreational opportunities, access points, facilities, amenities, and restrictions for public lands in Florida (Section 259.105, F.S.).

Leveraging:

Funds: $1,856,124,990

Type: Leveraging

Status: Received

Source Type: State

Description: FGCRP will leverage funds, knowledge and resources from the ORCP and its Resilient Florida program when identifying and/or selecting program activities. The Resilient Florida program enhances efforts to protect inland waterways, coastlines and shores, which serve as invaluable natural defenses against sea level rise. Resilient Florida provides funding assistance to analyze and plan for vulnerabilities, as well as implement projects for adaptation and mitigation (FDEP 2019b). The amount represents funds legislative appropriated funds over the last five years and includes up to $650 million in American Rescue Plan Act of 2021 funding dedicated by the state to this

program.

Funds: $$467,000,000

Type: Leveraging

Status: Received

Source Type: State

Description: The FGCRP will leverage funds and resources from Florida Forever, including the Florida Forever Priority List to help identify land acquisition projects that are eligible for funding under the program. The Florida Forever Priority List includes parcels ranked by the ARC that when protected will help to improve coastal resilience. Florida Forever received $467,000,000 in legislative appropriations over the last 3 5 years.

Funds: $450,000.00

Type: Leveraging

Status: Received

Source Type: Other Federal

Description: FGCRP will leverage resources for land conservation via the ORCP's Florida Coastal Management Program (FCMP), funded through NOAA Bipartisan Infrastructure Law Coastal Management Program Capacity Building. FCMP will increase Florida's capacity to set conservation priorities for the State's Aquatic Preserve watersheds through the lens of sea level rise and Landscape Development Intensity with a focus on estuarine habitat migration corridors within those watersheds. FCMP will produce a detailed GIS-based habitat change-analyses of these watersheds using Coastal Connectivity Modeling through a contract with the University of Florida's Center for Landscape Conservation Planning.

Funds: $11,250.00

Type: Leveraging

Status: Received

Source Type: Other

Description: The FGCRP leveraged some CPS federal award funds to develop the project selection criteria for multiple FPL 3b programs and present draft selection criteria in a public webinar. It is anticipated that the selection criteria and process will be adapted to future FPL programs. CPS funds are utilized for an array of activities that support planning and collaboration efforts to prepare grant applications prior to implementing specific projects through federal awards. The selection criteria put greater emphasis on projects that leverage other funding sources. Therefore, it is expected that individual projects will also leverage other federal funds and state funds. See Methods section for a description of selection criteria.

Environmental Compliance:

Under the RESTORE FPL Proposal Submission Guidelines, FGCRP includes Category 1 planning funds for planning, engineering, design and permitting for adaptation and mitigation strategies, planning, engineering design and permitting of living shorelines, which do not involve any construction or ground-breaking activities, and associated program management, monitoring and adaptive management, and data management activities. Thus, Florida will comply with the National Environmental Policy Act (NEPA) using the Council's NEPA Categorical Exclusion (CE) for planning, research, or design activities (Section 4(d)(3) of the Council's NEPA procedures). Implementation (construction) of projects that address adaptation and mitigation strategies, construction of living shorelines, and land acquisitions are currently in Category 2. Florida requires selected implementation projects to comply with all applicable federal, state and local laws. Because Council NEPA regulations allow the use of member NEPA CEs where appropriate (Section 4(d)(4) of the Council's NEPA procedures), selected project NEPA compliance will occur using the appropriate documentation (Environmental Assessments, Environmental Impact Studies, or CEs). Florida may work with other Council members to secure CEs (e.g., NOAA 6.03b.3(b)(2)) for NEPA requirements for land acquisition projects and activities implemented under this program.

Bibliography (All references listed below that were published prior to 2025 may reference the Gulf of Mexico. This nomenclature has been retained to maintain the integrity of the referenced material. The Council recognizes the name change Gulf of America):

Abt Associates. 2019. Evaluation of Hurricane Sandy Coastal Resilience Program. Prepared for National Fish and Wildlife Foundation (NFWF) and U.S. Department of the Interior (DOI). Abt Associates, Rockville, MD.

Arkema, K.K., Guannel, G., Verutes. G., Wood, S.A., Guerry, A., Ruckelshaus, M., Kareiva, P., Lacayo, M. and J.M. Silver. 2013. Coastal habitats shield people and property from sea-level rise and storms. Nature Climate Change, 3: 913–918.

Beever III, J.W, Gray, W., Trescott, D., Cobb, D., Utley, J. and L.B. Beever. 2009. Comprehensive Southwest Florida/Charlotte Harbor Climate Change Vulnerability Assessment. Prepared for: Southwest Florida Regional Planning Council and Charlotte Harbor National Estuary Program. Technical Report 09-3.

Beck, M.W., Losado, I.J., Menedez, P., Reguero, B.G., Diaz-Simal, P. and F. Fernandez. 2018. The global flood protection savings provided by coral reefs. Nature Communications, 9: 2186.

Barry, S.C., Hernandez, E.M. and Clark, M.W., 2025. Performance Assessment of Three Living Shorelines in Cedar Key, Florida, USA. *Estuaries and Coasts*, *48*(1), p.7.

Bilkovic, D.M. and M.M. Mitchell. 2017. Designing Living Shorelines Salt Marsh Ecosystems to Promote Coastal Resilience, Chapter 15 in Bilkovic, D.M., Mitchell, M., LaPeyre, M., & J. Toft (Eds.), Living Shorelines: The Science and Management of Nature-Based Coastal Protection, CRC Press.

Borchert, S.M., Osland, M.J., Enwright, N.M. and K.T. Griffith. 2018. Coastal wetland adaptation to sea level rise: Quantifying potential for landward migration and coastal squeeze. Journal of Applied Ecology, 55: 2876-2887.

Boutwell, J.L. and J.V. Westra. 2016. The role of wetlands for mitigating economic damage from hurricanes. Journal of the American Water Resources Association, 52(6): 1472-1481.

Butler, W.H., Deyle, R.E. and C. Mutnansky. 2016. Low-regrets incrementalism: Land use planning adaptation to accelerating sea level rise in Florida's coastal communities. Journal of Planning Education & Research, 1: 9–10.

United States Census Bureau, 2024. Net International Migration Drives Highest U.S. Population Growth in Decades. Retrieved from https://www.census.gov/newsroom/press-releases/2024/population-estimates-international-migration.html.

United States Census Bureau, 2025. Some Metro Areas' Population Gains Reversed COVID-19 Era Trends. Retrieved from https://www.census.gov/library/stories/2025/04/metro-area-trends.html.

Damschen, E. I., Brudvig, L. A., Burt, M. A., Fletcher, R. J., Haddad, N. M., Levey, D. J., Orrock, J.L., Resasco, J. and J.J. Tewksbury. 2019. Ongoing accumulation of plant diversity through habitat connectivity in an 18-year experiment. Science, 365(6460): 1478–1480.

DeFreese, D.E. 1995. Land acquisition: a tool for biological diversity protection in the Indian River Lagoon, Florida. Bulletin of Marine Science 57(1): 14-27.

DWH Trustees (Deepwater Horizon Natural Resource Damage Assessment Trustees). 2019. Monitoring and Adaptive Management Procedures and Guidelines Manual Version 1.0. Originally released in December 2017, Updated August 2019. Retrieved from https://www.gulfspillrestoration.noaa.gov/sites/default/files/2019-08%20MAM_Manual_FULL_Updated%202019.pdf.

FDEO (Florida Department of Economic Opportunity). 2015. Sea level Rise Vulnerability Assessment Tools and Resources: A Guide for Florida's Local Governments. Tallahassee. Retrieved from https://floridadep.gov/sites/default/files/SLR-VA-tools-extended_1.pdf

FDEP (Florida Department of Environmental Protection). 2018. Florida Adaptation Planning Guidebook. Retrieved from

https://floridadep.gov/sites/default/files/AdaptationPlanningGuidebook.pdf

FF (Florida Forever). 2025a. 2025 BOT Approved Florida Forever Priority List. March. Retrieved from https://floridadep.gov/sites/default/files/2025%20BOT%20Approved%20Florida%20Forever%20Priority%20List%20FI.pdf

FDEP (Florida Department of Environmental Protection). 2019a. Project GreenShores. Retrieved from https://floridadep.gov/rcp/aquatic-preserve/content/project-greenshores

FDEP (Florida Department of Environmental Protection). 2019b. Office of Resilience and Coastal Protection Resilient Florida Program. Retrieved from https://floridadep.gov/RCP and https://floridadep.gov/rcp/florida-resilient-coastlines-program

Feagin, R.A., Mukherjee, N., Shanker, K., Baird, A.H., Cinner, J., Kerr, A.M., Koedam, N., Sridhar, A., Arthur, R., Jayatissa, L.P., Lo Seen, D., Menon, M., Rodriguez, S., Shamsuddoha, M., and F. Dahdouh-Guebas. 2010. Shelter from the storm? Use and misuse of coastal vegetation bioshields for managing natural disasters. Conservation Letters, 3: 1-11.

Ferrario, F., Beck, M.W., Storlazzi, C.D., Micheli, F., Shepard, C.C. and L. Airoldi. 2014. The effectiveness of coral reefs for coastal hazard risk reduction and adaptation. Nature Communications, 5(1): 1-9.

FF (Florida Forever). 2025. 2025 Florida Forever Plan. Division of State Lands Florida Department of Environmental Protection. May 9, 2025. Retrieved from https://floridadep.gov/sites/default/files/FLDEP_DSL_OES_FF_2025_FloridaForeverAnnualPlan.pdf

Florida Living Shorelines. 2020. Naval Support Activity. Retrieved from http://floridalivingshorelines.com/project/820/

Florida Statutes. 2018. Chapter 259 Land Acquisitions for Conservation or Recreation. Title XVIII Public Lands and Property. The Florida Senate. Retrieved from https://www.flsenate.gov/Laws/Statutes/2018/Chapter259

FNAI (Florida Natural Areas Inventory). 2022. Florida Forever Project Ranking Support Analyses Documentation. Florida Natural Areas Inventory. Tallahassee, FL. Retrieved from https://www.fnai.org/PDFs/RSA_Report_Dec2022.pdf

FNAI (Florida Natural Areas Inventory). 2020. Summary of Florida Conservation Lands. Retrieved from https://www.fnai.org/PDF/Maacres_202002_FCL_plus_LTF.pdf

Guannel, G., Arkema, K., Ruggiero, P. and G. Verutes. 2016. The power of three: coral reefs, seagrasses and mangroves protect coastal regions and increase their resilience. PloS one, 11(7).

LaFever, D.H., Lopez, R.R., Feagin, R.A. and N.J. Silvy. 2007. Predicting the impacts of future sea-level rise on an endangered lagomorph. Environmental Management, 40: 430-437.

Liu, H., Zhang, K., Li, Y. and L. Xie. 2013. Numerical study of the sensitivity of mangroves in reducing storm surge and flooding to hurricane characteristics in southern Florida. Continental Shelf Research, 64: 51-65.

Miller, J.K., Rella, A., Williams, A. and E. Sproule. 2015. Living Shorelines Engineering Guidelines. Prepared for: New Jersey Department of Environmental Protection. Retrieved from http://floridalivingshorelines.com/wp-content/uploads/2015/04/New-Jersey-LivingShorelinesEngineeringGuidelines.pdf

NOAA (National Oceanic and Atmospheric Administration). 2023. Florida Living Shoreline Project Wins Prestigious Award. Retrieved from (noaa.gov)https://www.gulfspillrestoration.noaa.gov/2023/11/florida-living-shoreline-project-wins-prestigious-award

_____2015. Guidance for Considering the Use of Living Shorelines. Retrieved from https://www.habitatblueprint.noaa.gov/wp-content/uploads/2018/01/NOAA-Guidance-for-Considering-the-Use-of-Living-Shorelines_2015.pdf

_____2022. 2022 Sea Level Rise Technical Report. Retrieved from https://oceanservice.noaa.gov/hazards/sealevelrise/sealevelrise-tech-report.html

RESTORE Council. 2021. Observational Data Plan (ODP) Draft Interim Guidance. https://restorethegulf.gov/files/observationaldataplanguidance

Ross, M.S., O'Brien, J.J. and L. da Silveira Lobo Sternberg. 1994. Sea-level rise and the reduction in pine forests in the Florida Keys. Ecological Applications, 4(1): 144-156.

Shepard C., Majka, D., Brody, S., Highfield, W. and J. Fargione. 2016. Protecting Open Space & Ourselves: Reducing Flood Risk in the Gulf of Mexico Through Strategic Land Conservation. Washington D.C.: The Nature Conservancy. Retrieved from https://www.conservationgateway.org/ConservationPractices/Marine/crr/library/Documents/TNC_open_spaces_2016.pdf

Stys, B., Foster, T., Fuentes, M.M.P.B., Glazer, B., Karish, K., Montero, N. and J.S. Reece. 2017. Climate Change Impacts on Florida's Biodiversity and Ecology. Chapter 12 in Chassignet, E. P., Jones, J. W., Misra, V., & J. Obeysekera (Eds.), Florida's climate: Changes, variations, & impacts. Gainesville, FL: Florida Climate Institute.

Sweet, W.V., Kopp, R.E., Weaver, C.P., Obeysekera, J., Horton, R.M., Thieler, E.R. and C. Zervas. 2017. Global and Regional Sea Level Rise Scenarios for the United States. NOAA Technical Report, NOS CO-OPS 083.

Taylor Engineering, Inc. 2019. City of Punta Gorda Adaptation Plan Update. Prepared for: City of Punta Gorda. Retrieved from http://www.ci.punta-gorda.fl.us/government/city-manager/climate-adaptation-plan

Tewksbury, J.J., Levey, D.J., Haddad, N.M., Sargent, S., Orrock, J.L., Weldon, A., Danielson, B.J., Brinkerhoff, J., Damschen, E.I. and P. Townsend. 2002. Corridors affect plants, animals, and their interactions in fragmented landscapes. Proceedings of the National Academy of Sciences, 99(20): 12923-12926.

Perry, M., Rogers, L., and Wilder, K. 2022. New Florida Estimates Show Nation's Third Largest State Reaching Historic Milestone. Retrieved fromhttps://www.census.gov/library/stories/2022/12/florida-fastest-growing-state.html

USGCRP (U.S. Global Change Research Program). 2018. Impacts, Risks, and Adaptation in

the United States: Fourth National Climate Assessment, Volume II. Reidmiller, D.R., Avery, C.W., Easterling, D.R., Kunkel, K.E., Lewis, K.L.M., Maycock, T.K. and B.C. Stewart (Eds.). Washington, D.C.: United States Global Change Research Program. Accessed 3/19/2020. Retrieved from http://dx.doi.org/10.7930/NCA4.2018

World Bank. 2018. Nature-based Solutions for Disaster Risk Management. Washington, D.C.: World Bank Group (in association with PROFOR and the World Resources Institute).

Zhang, K., Liu, H., Li, Y., Xu, H., Shen, J. Rhome, J. and T.J. Smith. 2012. The role of mangroves in attenuating storm surges. Estuarine, Coastal and Shelf Science, 102–103: 11-23.

Budget

Project Budget Narrative:
The budget for FGCRP is $20,000,000, of which the majority (approximately 90%) will be used for planning or implementation of projects or activities aimed at improving coastal resilience. The total amount of funding in Category 1 is $8,000,000 and the total amount of funding in Category 2 is $12,000,000. The Category 1 funds will be used for State of Florida program administration and project or activity specific planning, engineering, design, and permitting. Program monitoring and adaptive management activities, and data management activities will also fall under Category 1. Category 2 funds will be used to implement projects or activities such as implementation of adaptation strategies, construction of living shorelines or land acquisitions and will include project or activity specific monitoring and adaptive management activities, and data management activities. More detailed budgets will be developed at the project or activity level when projects or activities are selected for funding under this program, including an appropriate contingency. The percentages listed below apply to the entire $20,000,000 budget.

Total FPL Project/Program Budget Request:
$ 20,000,000

Estimated Percent Monitoring and Adaptive Management: 5 %

Estimated Percent Planning: 15 %

Estimated Percent Implementation: 80 %

Estimated Percent Project Management: N/A

Estimated Percent Data Management: N/A

Estimated Percent Contingency: 0 %

Is the Project Scalable?:
Yes

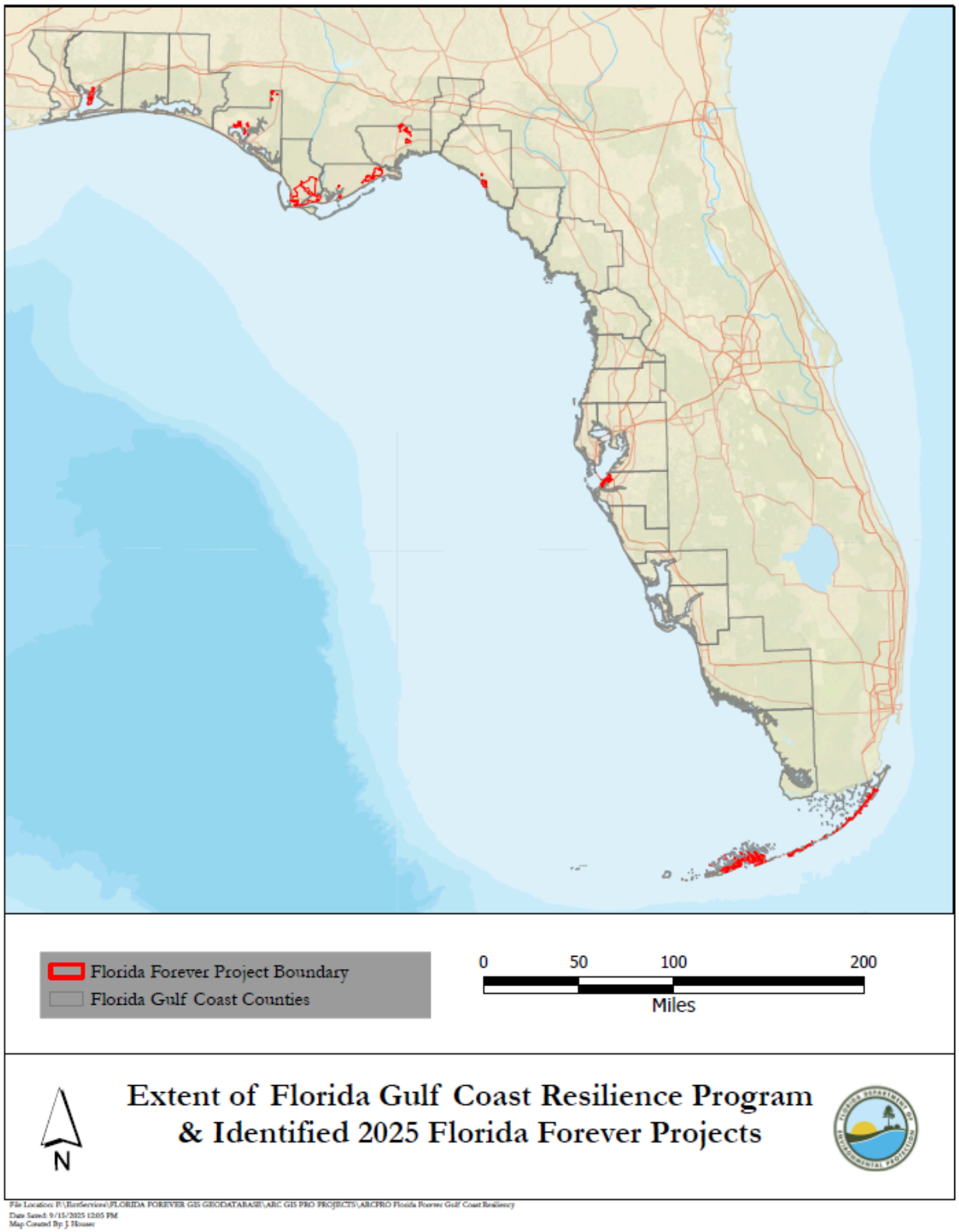
If yes, provide a short description regarding scalability.:
The program could be scaled to allow for more or fewer activities over a longer or shorter duration of time.

Environmental

Environmental Requirement	Has the Requirement Been Addressed?	Compliance Notes (e.g.,title and date of document, permit number, weblink etc.)
National Environmental Policy Act	N/A	Note not provided.
Endangered Species Act	N/A	Note not provided.
National Historic Preservation Act	N/A	Note not provided.
Magnuson-Stevens Act	N/A	Note not provided.
Fish and Wildlife Conservation Act	N/A	Note not provided.
Coastal Zone Management Act	N/A	Note not provided.
Coastal Barrier Resources Act	N/A	Note not provided.
Farmland Protection Policy Act	N/A	Note not provided.
Clean Water Act (Section 404)	N/A	Note not provided.
River and Harbors Act (Section 10)	N/A	Note not provided.
Marine Protection, Research and Sanctuaries Act	N/A	Note not provided.

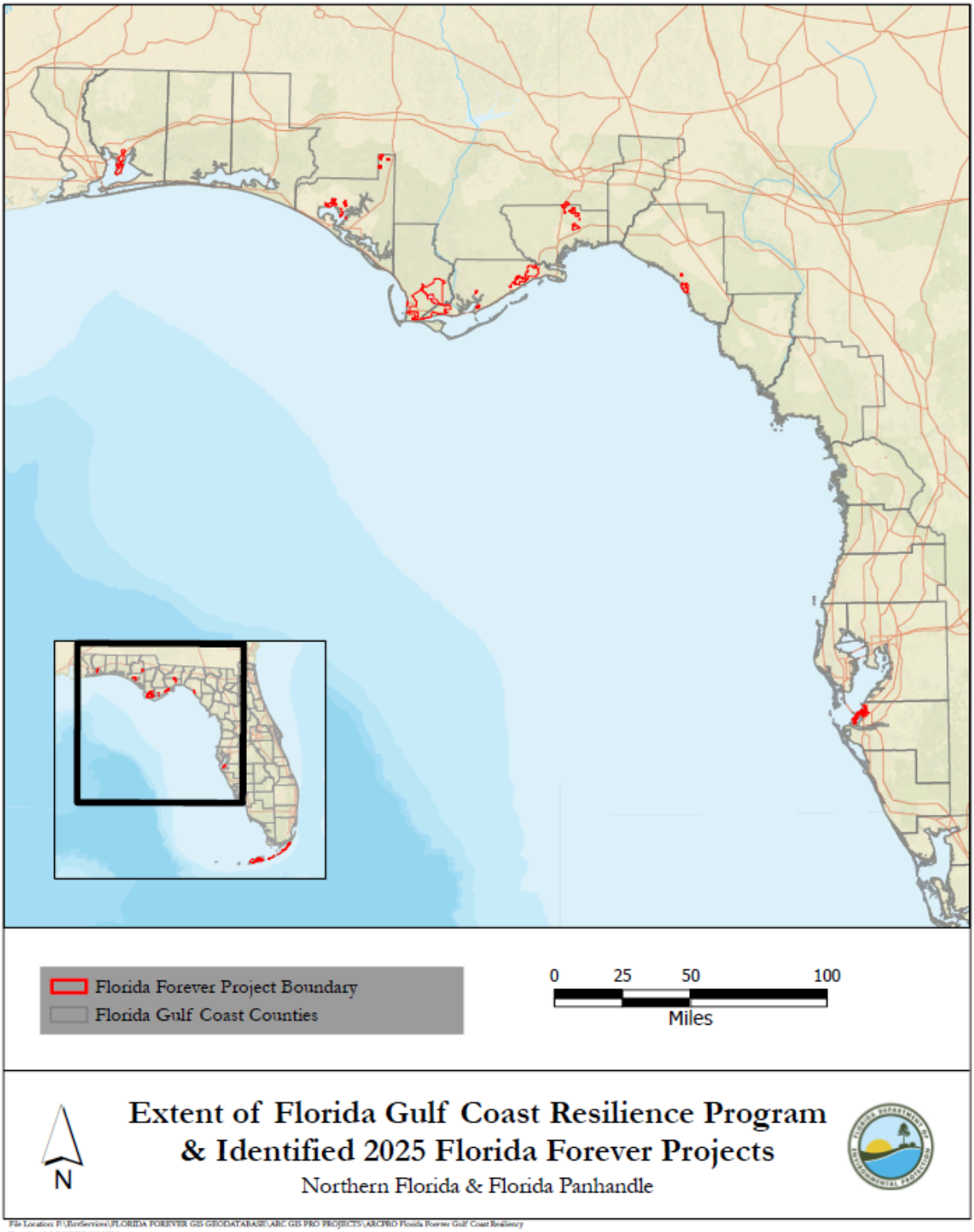
Marine Mammal Protection Act	N/A	Note not provided.
National Marine Sanctuaries Act	N/A	Note not provided.
Migratory Bird Treaty Act	N/A	Note not provided.
Bald and Golden Eagle Protection Act	N/A	Note not provided.
Clean Air Act	N/A	Note not provided.
Other Applicable Environmental Compliance Laws or Regulations	N/A	This activity is covered by the Council's NEPA Categorical Exclusion for planning, research or design activities (Section 4(d)(3) of the Council's NEPA Procedures).

Maps, Charts, Figures

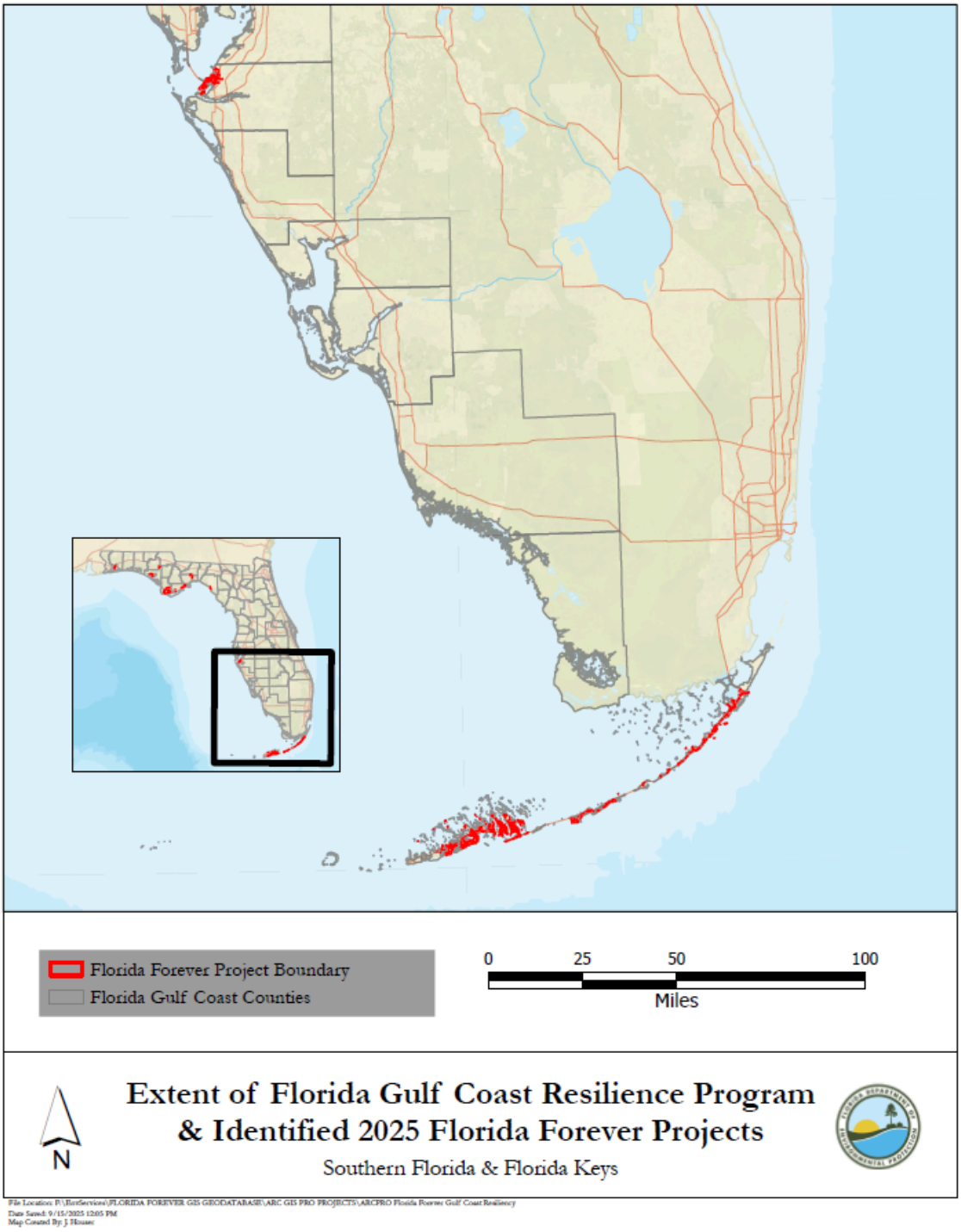


Caption : Map illustrating the extent of the Florida Gulf Coast Resilience Program, including 23

counties along the Florida Gulf of America coastline. Areas for potential acquisition under this program, identified through the Florida Forever Program, are highlighted.



Caption : Map illustrating a closer view of the northern extent of the Florida Gulf Coast Resilience Program and identified Florida Forever projects Lands for northern Florida and the Panhandle.



Caption : Map illustrating a closer view of the southern extent of the Florida Gulf Coast Resilience Program and identified Florida Forever Projects for southern Florida and the Florida Keys.

Other Uploads, GIS Data_3:
FDEP_CoastalResilience_GIS.gdb.zip

Council Staff Review: Florida Gulf Coast Resilience Program

FPL Internal Staff Review

Project/Program	Florida Gulf Coast Resilience Program		
Primary Reviewer	Heather Young	Sponsor	Florida
EC Reviewer	John Ettinger	Co-Sponsor	N/A

1. Is/Are the selected Priority Criteria supported by information in the proposal?	Yes
Notes	This is a continuation of an existing FPL funded program.

2. Does the proposal meet the RESTORE Act geographic eligibility requirement?	Yes
Notes	

3. Are the Comprehensive Plan primary goal and primary objective supported by information in the proposal?	Yes
Notes	

4. Planning Framework: If the proposal is designed to align with the Planning Framework, does the proposal support the selected priority approaches, priority techniques, and/or geographic area?	Yes
Notes	

5. Does the proposal align with the applicable RESTORE Council definition of project or program?	Yes
Notes	

6. Does the budget narrative adequately describe the costs associated with the proposed activity?	Yes
Notes	

7. Have three external BAS reviews been completed and has the proposal sponsor provided their response?	Yes
Notes	Florida applied Best Available Science (BAS) reviews that were completed upon original proposal of the program in Funded Priorities List 3b. This is justified due to the methods remaining largely the same and the scientific integrity of the program potentially increasing.

8. Have appropriate metrics been proposed to support all primary and secondary goals?	Yes
Notes	

9. Environmental compliance: If FPL Category 1 has been selected for the implementation component of the project or program, does the proposal include environmental compliance documentation that fully supports the selection of Category 1?	N/A
Notes	Implementation funds in FPL Category 2.

Best Available Science Review: Florida Gulf Coast Resilience Program

This program was reviewed for BAS under FPL 3b. Under the 2026 FPL, Florida is proposing a continuation of the program.

The original BAS review as well as the state's response to the BAS comments can be found at on the Council's 2026 FPL webpage.