

FLORIDA RESTORE ACT CENTERS OF EXCELLENCE PROGRAM

2024 Annual RESTORE Council Report

Table of Contents

- Executive Summary..... 3
- Background..... 4
- Programmatic Elements..... 5
 - Award Recipient..... 5
- Award Subrecipients..... 6
 - Current Award Recipients..... 6
 - Prior Award Recipients..... 10
 - Strategic Plan..... 10
 - Publications..... 10
- Financial Elements..... 11
 - Award Recipient..... 11
 - Award Subrecipient(s)..... 12
- Gulf Coast Ecosystem Restoration Council Element..... 12
 - Leveraging Multipliers..... 12

Executive Summary

The primary accomplishments of the Florida Centers of Excellence research grant program in 2024 were the publication of a decadal program review, unveiling of a new program website, finalization of a new 10-year strategic plan, hosting a Co-Production Science Workshop, and announcement of a competitive research grant request for proposals.

Florida Institute of Oceanography (FIO) (grant administrators) and the Program Management Team (PMT) finalized a new strategic plan that charts the next decade of the research grant program. Part of the process included a review of the results and impact of past Florida Centers of Excellence projects. Each of the 21 projects, which includes completed, in-progress, and just awarded grants, summarized major results, impact, and additional knowledge gaps in 2-page articles that were published in a report “Results and Impacts of the First Decade of the Florida RESTORE Act Centers of Excellence Program,” in January 2024. In addition, external consultant, Richard Batiuk, from CoastWise Partners, solicited feedback from individual PMT members through a guided conversation, to learn more about their perspectives on FLRACEP and future directions. The summary includes twelve key findings were presented to the PMT and FIO and discussed at the annual meeting in January 2024. Subsequent meetings between FIO and the PMT resulted in a 1-page strategic plan that includes an objective, strategy with guiding principles, and implementing actions with rolling 5-year plans.

The Annual All Hands Meeting in January 2024 took place at the University of South Florida’s University Student Center in St. Petersburg, Florida, with a virtual option for the broader community. Over a day and a half, the current and newly awarded Centers of Excellence leads and several students reported on research progress. The meeting also included program updates, including the unveiling of a new program website, and shared meals for networking and discussions.

In May 2024, the NOAA RESTORE Science Program, Florida RESTORE Act Centers of Excellence Program, the NOAA National Estuarine Research Reserve System Science Collaborative, Florida Sea Grant, and the University of Florida’s Natural Resource Leadership Institute partnered to host a two-day workshop in St. Petersburg, Florida to help bridge the gap between researchers, resource managers, and other end users. The workshop gathered 51 individuals from across the state to learn about science co-production and discuss best practices to improve science for natural resource management in Florida. Participants worked in small groups and engaged in a range of activities, giving them the chance to not only learn about the process of co-production and how to effectively implement it, but to also build relationships with each other.

A new competitive research grant competition was announced in June 2024. FIO submitted a budget amendment to support request for proposals (RFP) V in July 2024. Letters of intent were received in late August and full proposals are due in early January 2025. It is anticipated that 3-5 projects will be awarded funding for 2-3 year projects. The total available funding is \$4,000,000.

FIO continued financial and administrative support and oversight for FLRACEP. Staff continued to monitor RFP II, III, and III.5, and IV. RFP III and III.5 projects performance periods end December 31, 2024, with final reporting due in early 2025.

The Office of Gulf Coast Restoration has obligated over \$10.83 M in research awards through five RFPs since the inception of the program.

Background

On August 20, 2015, the Department of the Treasury issued the Florida Institute of Oceanography its first award for the project titled “Florida RESTORE Act Centers of Excellence Program (FLRACEP)” to solicit and issue sub-awards for Florida Centers of Excellence research grants for the eligible disciplines:

1. Coastal fisheries and wildlife ecosystem research and monitoring in the Gulf Coast Region;
2. Comprehensive observation, monitoring, and mapping of the Gulf of Mexico.

Priority objectives within these eligible disciplines are defined by the FLRACEP Program Management Team (PMT) in each request for proposals (RFP).

In 2015, FLRACEP selected ten research grant projects at eight Florida institution under RFP I via the peer-reviewed, competitive process detailed in the program Rules and Policies. These projects were completed in 2018 and have resulted in 45 publications to date.

RFP II awarded a two-year pilot award to the University of South Florida, for long-term fisheries monitoring Center of Excellence in 2016. The Center is investigating ‘Spawning Habitat and Early-life Linkages to Fisheries’ (SHELF) and could potentially span 15 years pending successful program reviews. The first of these reviews was conducted in 2018, which extended the SHELF project through February 2023. The SHELF team, led by Dr. Ernst Peebles, submitted a report on SHELF II in the summer of 2022. A Scientific Review Panel of fisheries experts from across the U.S. assembled in St. Petersburg to review the report and the proposal for SHELF III, under the new leadership of Dr. Chris Stallings (who was a co-investigator on SHELF previously). Based on the Science Review Panel findings and the Program Management Team’s assessment, the proposal was awarded an additional 3.5 years of funding to advance technologies used to collect and barcode fish eggs collected throughout the year to improve the understanding of seasonal spawning dynamics and conduct targeted studies, including linking adult abundances to egg production. SHELF III started in February 2023 and will continue through August 2026.

RFP III was announced in January 2019 for \$2 million in Centers of Excellence grants across three RA disciplines. As in prior RFPs, disciplines 2 and 5 were eligible, with the addition of RA 1 (Coastal sustainability, restoration and protection, including solutions and technology that allow citizens to live in a safe and sustainable manner in a coastal delta in the Gulf Coast Region). Six funded Centers of Excellence were awarded, with projects completed in 2023 or with a no-cost extension through late 2024, due to impacts of the COVID-19 pandemic. An additional RFP III.5 to develop benthic habitat mapping data integration framework for the west Florida Shelf was funded in 2020 and will be completed in December 2024.

In 2023, FLRACEP awarded over \$2.8M in funding to researchers through RFP IV. Each project will focus on understanding the impacts of restoration projects along the Florida Gulf coast. End-user collaborators, required as part of the project team, will work with the researchers from the project’s inception to ensure the applicability of the research to future restoration efforts. The recipients started research in the summer or fall of 2023. The program office and new awardees submitted an abstract to the 2024 Gulf of Mexico Conference to discuss the collaborative grants process that included scoping with the other Gulf state Centers of Excellence for potential future synergistic synthesis.

In 2024, FLRACEP released a new request for proposals (RFP V) to fund research, observation, or monitoring technology demonstrations that improve our understanding of De Soto Canyon and connected northeastern West Florida Shelf and escarpment ecosystems. Three to five projects will be selected through a competitive peer-review process of full proposals, with the PMT making final decisions. Up to \$4 million is available for these projects, which will be selected in February 2025 and are anticipated to start in April 2025. The projects will be two to three years in length.

Programmatic Elements

Award Recipient

The Florida Institute of Oceanography (FIO) is an Academic Infrastructure Support Organization (AISO) of the State of Florida established by the Florida Board of Governors (BOG). Under a Memorandum of Understanding ratified by the member organizations and approved by the BOG, the University of South Florida (USF) assumes the role of host university, and fiscal accounting functions are administered by USF and overseen by the USF Board of Trustees. FIO was named the Gulf Coast State Entity to administer Florida's RESTORE Act Centers of Excellence Program. The FLRACEP includes the following organizational elements:

PROGRAM OFFICE: FIO serves as the FLRACEP Program Office. The FIO Director is the Principal Investigator (PI) for the FLRACEP Program. As the PI, the FIO director is responsible for program funds and performance. The FLRACEP's organization includes a Chief Scientist, who reports to the FIO Director and is responsible for programmatic tasks that the Gulf coast state entities must perform. These programmatic responsibilities include coordination of competitive selection process for Florida Center of Excellence grants; developing award terms and conditions, and monitoring performance based on required deliverables and metrics; coordination with other Gulf restoration programs as mandated by the guidelines and RESTORE Act; and monitoring the success of the Centers of Excellence. The Chief Scientist also represents the Florida Centers of Excellence on regional coordination efforts (e.g., NOAA RESTORE Science Program advisory working group, etc.). The FLRACEP Program Office works directly with the FIO Manager of Fiscal and Business to ensure funds appropriately allocated for use.

PROGRAM MANAGEMENT TEAM (PMT): This is an independent body that provides the FLRACEP guidance and engages in the development of program strategic plan, funding strategies, solicitation reviews, and funding approval. The PMT includes the FIO Director and other senior-level advisors elected by the PMT members. The PMT were selected based on their knowledge of Florida and Gulf of Mexico regional science, technology, and the FLRACEP program needs. Program Management Team members are not eligible to submit or participate on FLRACEP grants or contracts. The duties of the PMT include developing and approving science concepts to solicit FLRACEP Requests for Proposals, reviewing and ranking Letters of Intent, selecting proposals to receive funding, participating in annual all-hands meetings, and other ad hoc tasks as determined by the PMT Chair and FLRACEP Program Office.

SCIENCE REVIEW PANEL (SRP): The SRP is an ad hoc team responsible for technical review of grant proposals. The SRP is nominated by the FIO Director and approved by the PMT members; the Panel will consist of science and technology experts not involved in any proposals, from in and outside Florida. In the event of a conflict regarding the FIO Director, then the PMT shall select the SRP members.

CENTERS OF EXCELLENCE: FLRACEP establishes Centers of Excellence through a competitive award process to produce outputs and outcomes that address the eligible disciplines. The Requests for Proposals (RFP) and subsequent award terms and conditions define the Principal Investigator and Grantee institution roles and

responsibilities. Each Center of Excellence project must produce at least one peer-reviewed journal article at the conclusion of the project.

PARTNERS: Program partners to be engaged both informally and under formal agreements include, but are not limited to: other Gulf coast state entities and their CERGPs; other RESTORE Act components (sections 1603 and 1604); National Fish and Wildlife Foundation Gulf Environmental Benefit Fund; National Academies of Science Gulf Research Program; Natural Resources Damage Assessment and Restoration Program; Gulf of Mexico Research Initiative; North American Wetlands Conservation Act, Gulf Program Fund; Florida Department of Environmental Protection; Florida Fish and Wildlife Conservation Commission; Florida Gulf Coast Counties; and other programs that may be funded by future litigation or settlements.

Award Subrecipients

Current Award Recipients

Grant number RCEGR020005 was awarded in July of 2016. This award funds the long-term RPF II Center of Excellence, as well as seven additional research projects under the RFP III and RFP III.5 solicitation. The award was extended to March 1, 2027 to allow the continuance of the SHELF project. A brief description of all the current sub-recipients is detailed below (status reports are available upon request):

RFP II - Center of Excellence (Continuance awarded 2023)

- **PI Name:** Dr. Christopher Stallings, University of South Florida
Award Amount: \$1,205,826 over three and a half (3.5) years (research project may be renewed upon scientific review and approval by the Program Management Team).
Title: Spawning Habitat and Early-Life Linkages to Fisheries (SHELF, phase III)
Abstract: This project is applying novel approaches to long-term monitoring of fisheries in the eastern Gulf of Mexico. The monitoring program consists of seasonal surveys of planktonic fish eggs that are collected as they drift in the waters of the West Florida Shelf (WFS), offshore of Florida's Gulf Coast. The eggs are identified using DNA barcoding, which is a novel approach. A specific objective of the monitoring effort, in addition to locating important fish spawning areas, is to produce a time series that will detect changes in the amount or location of spawning by individual fish species, and to detect changes in fish-egg community composition over time, such as that brought about by climate change, fishing, or changes in habitat quality. Targeted studies will test the ability to link adult abundances to egg production and further test and refine the methodology.

RFP III - Centers of Excellence – Awarded 2019

- **PI Name:** Dr. Randy Wells, Mote Marine Laboratory
Status: Project will be completed December 31, 2024
Award Amount: \$364,432 over three (3) years*
Title: Health and movements of Florida's Gulf dolphins
Abstract: This project will address important research gaps regarding movement patterns, habitat use, and health for the two dolphin species that regularly inhabit the coastal and/or shelf waters off Florida's west coast, bottlenose (*Tursiops truncatus*) and Atlantic spotted (*Stenella frontalis*). The researchers are conducting capture-release health assessments to establish baselines and serve as the basis for comparison to inshore dolphins to assess health status. Capture will provide opportunities for collection of samples for genetic, environmental contaminant, and diet analyses, as well as for attaching satellite-linked time-depth-recording tags. These tags will provide information on ranging and habitat use patterns, along with dive patterns relative to health. Relationships between dive patterns and health will be investigated as potential behavioral proxies for assessing health of dolphins tagged without capture. Continuation of a long-term collaborative photo-identification matching system and repository, GoMDIS, will facilitate identification of sources of stranded dolphins, and range shifts in response to environmental changes. Findings will be provided to NMFS Southeast Fisheries Science Center, Southeast Regional Office, and Marine Mammal Health and Stranding Response Program, for

consideration for management action, and for incorporation into their congressionally mandated Marine Mammal Stock Assessment Report

- **PI Name:** Ms. Kelly Sloan, Sanibel Captiva Conservation Foundation
Status: Project was completed April 30, 2024
Award Amount: \$233,334.34 over three (3) years*
Title: After the Tide: Characterizing the Sublethal Effects of a Catastrophic Red Tide in Nesting Sea Turtles
Abstract: Blooms of toxic algae occur almost annually in the Gulf of Mexico and pose a significant and persistent threat to sea turtles and other marine life. These blooms start naturally in the Gulf but are fed and perpetuated by harmfully high nutrients in the water washing into the Gulf from anthropogenic sources on land. Eutrophication of our waterways is a serious concern and stabilizing the oceanic habitat is critically important in the conservation of many vulnerable species. The bloom that started in October 2017 and ended in early 2019 was so severe that it resulted in the largest number of sea turtle deaths ever attributed to a single red tide event. The mass mortality of sea turtles associated with this event clearly demonstrates the acute impacts of brevetoxicosis. The project is empirically investigating the effects of this bloom on the health and reproductive success of nesting sea turtles. In addition to learning more about the insidious effects of red tide blooms on sea turtles, the data will be used to raise awareness and inform policies that promote heightened water quality standards and healthier oceans.
- **PI Name:** Dr. Hannah Vander Zanden, University of Florida
Award Amount: \$395,365 over three (3) years*
Status: Project will be completed December 31, 2024
Title: Tissue Clocks: new methods for ageing and decoding sea turtle life histories
Abstract: Loggerhead sea turtles were negatively impacted by the Deepwater Horizon Oil Spill in addition to suffering effects from numerous other anthropogenic stressors, such as fisheries bycatch, climate change, and red tide events in U.S. waters of the Gulf of Mexico (GoM). Population models designed to quantify the effects of these stressors, as well as to evaluate the resultant impacts to coastal ecosystems of declining sea turtle recruitment or population size, require accurate estimates of age, growth, longevity, and mortality. Furthermore, there are vast gaps in our knowledge of marine habitats and environments utilized by different loggerhead life stages and the timing of transition between habitats. The project uses novel radio and stable isotope techniques to validate loggerhead sea turtle age and longevity estimates, as well expand the types of long-term trophic records that can be obtained from various loggerhead tissues (e.g., eye lenses, bone, and scutes). Objectives of the study include: 1) evaluating eye lenses as a new method to age sea turtles and track lifetime isotopic histories, 2) characterizing scute growth rates, and 3) developing region-specific population models for the GoM using updated parameters estimated with results of this study. Approaches developed and data generated during this study will have direct conservation benefits to loggerhead sea turtles in the GoM. These approaches will be applicable to the conservation of loggerheads in other global regions, as well as for the study of other sea turtle species around the globe.
- **PI Name:** Dr. Matthew Deitch, University Florida
Award Amount: \$499,997 over three (3) years*
Status: Project was completed March 3, 2024
Title: Predicting benefits in Panhandle Estuary Systems: A partnership to quantify impacts, stressors, and outcomes using Adaptive Management Frameworks.
Abstract: The project supports county staff, local conservation groups, and other stakeholder collaborators in the St. Andrew, St. Joseph, Choctawhatchee, Pensacola, and Perdido Bays to work together to develop Estuary Programs following the USEPA National Estuary Program model. The goal of each Program is to develop a strategy to protect and restore estuaries through management or restoration actions that reduce anthropogenic impacts on these systems. This project will enhance and build on existing partnerships between local academic researchers with expertise in watershed science and estuary science and local Estuary Program developers. These partnerships will provide meaningful scientific input and rigor in identifying and implementing methods to assess impacts and stressors in each

system. Project outputs include conceptual models and adaptive management frameworks intended for use in Comprehensive Conservation and Management Plans (CCMPs); and collaborative efforts (e.g., outreach materials, grant proposals) to support long-term Estuary Program goals.

- **PI Name:** Dr. Katherine Mansfield, University of Central Florida
Award Amount: \$339,867 over three (3) years*
Status: Project was completed May 27, 2024
Title: Understanding genomic, behavioral, and microbial drivers of ontogenetic shifts in early sea turtle foraging ecology and habitat use.
Abstract: The research uses novel technology and approaches to understand early sea turtle habitat use, ecology, and underlying drivers by which young turtles recruit from offshore into West Florida coastal waters in the Gulf of Mexico. This group's prior work shows oceanic turtles from the Shelf exhibit plasticity in habitat selection and global gene expression profiles, which likely accompany plasticity in foraging and gut microbiota. Researchers are determining what the underlying drivers of these shifts through finer-scale genetic characterizations and by establishing a framework for understanding gene-by-environment interactions to better quantify management needs for these protected species.

* Requested no-cost extensions to initial grant period.

RFP III.5 - Center of Excellence – Awarded 2020

- **PI Name:** Dr. Anna Braswell, University of Florida
Status: Project will be completed December 31, 2024
Award Amount: \$349,722.89 over three (3) years*
Title: Developing a Standardized Framework for Data Integration and Distribution on the West Florida Shelf.
Abstract: Despite past and ongoing efforts from regional, state, and federal governments to study Florida's marine ecosystems and resources and repeated calls for a standardized approach to map them, there is currently no general framework for guiding research, management, and conservation of benthic resources in Florida. There is a critical need to have a descriptive, spatially-explicit cyberinfrastructure representing Florida's seafloor environments at multiple scales that can serve management, conservation, and research efforts, and that aligns with existing national and international efforts. To build such cyberinfrastructure, we need to reach community agreement on a framework to support effective and dynamic aggregation of current and future seafloor mapping data. This Center of Excellence is managing efforts to: (1) review existing and successful frameworks for marine data integration and distribution around the world, (2) review existing standards, protocols, and guidelines for data collection, integration, and distribution, (3) get community agreement on the structure of a framework for data integration and distribution on the West Florida Shelf, and (4) build tools to support the chosen framework. Three workshops will be organized to get community input. The tools will be open-source, compatible with existing national and international frameworks, and adhere to FAIR (Findable, Accessible, Interoperable, Reusable) principles.

*Requested a no-cost extension on initial grant period.

RFP IV - Center of Excellence – Awarded in 2023

- **PI Name:** Dr. Cameron Ainsworth, University of South Florida
Status: Project will be completed in April 2025
Award Amount: \$272,233 over two (2) years
Title: Estimating combined effects of FL TIG restoration projects in Florida using an end-to-end ecosystem model
Abstract: The Deepwater Horizon Trustees have so far approved 279 restoration activities Gulf-wide, of which 157 have occurred in Florida. These projects are intended in the aggregate to shepherd the marine ecosystem towards a more desirable state. Yet, this state has not been explicitly defined despite a mature body of study on ecosystem metrics of structure and function. This two-year study will model the

cumulative effects of FL TIG-administered restoration projects using an end-to-end ecosystem model GOM Atlantis. This project will be aided by analysis of a spatially expansive monitoring dataset of community composition throughout the entirety of Big Bend seagrass ecosystems. Statistical models will be used to account for fish and invertebrate community effects as a result of restoration of seagrass, oyster, mangrove, macroalgae and salt marsh habitats. A multivariate approach will evaluate the concept of the habitat mosaic in which cooccurrence of different types of habitats has beneficial effects on populations. Results from statistical models will help parameterize fish habitat affinities in Atlantis to help us understand species composition changes in restored habitats.

- **PI Name:** Dr. Jessica Graham, Florida State University-Panama City

Status: Project will be completed in April 2026

Award Amount: \$1,640,996 over three (3) years

Title: Assessing restoration success and ecosystem services across the Panhandle Region to assist in restoration target setting

Abstract: Large-scale investments into coastal restoration have resulted from penalty funds associated with the 2010 Deepwater Horizon oil spill restoration settlement and disaster area declarations. Florida is also investing sizeable funds to improve community resilience. Many of these investments have supported implementation of Nature-Based Solutions (NBS) including living shorelines. A collaborative team will evaluate the success of living shoreline restoration projects in three estuarine systems across the Florida Panhandle to better inform restoration targets and assess local and regionalized ecosystem services. Partners will monitor and assess existing restoration project performance by combining historical shoreline mapping, existing monitoring data, and newly collected data from existing restoration sites to determine living shoreline restoration success and additional benefits such as nitrogen storage and removal, fish community composition, and economic impact to the local economy. This information will be used by each Estuary Program to highlight benefits of NBS, message both ecological and economic benefits to multiple audiences, and inform best management practices for future coastal restoration in the Florida Panhandle and inform restoration targets.

- **PI Name:** Dr. Brad Rosenheim, University of South Florida

Status: Project will be completed in April 2026

Award Amount: \$915,424 over three (3) years

Title: Evaluation of past Florida Gulf Coast mangrove restorations as a basis for future restoration success and resiliency

Abstract: Mangroves are important ecosystems along the Florida Gulf Coast, providing diverse services related to habitat, surge protection, and carbon sequestration. However, pressure from increasing coastal infrastructure demands restoration of mangroves in areas where they have been removed or degraded. This Center of Excellence will compare restored and natural mangrove systems on the Florida Gulf Coast to determine success and resilience of restored systems on the decadal time scale. The research aims to extend the time frame for evaluating success of a mangrove restoration project from 5 years to decadal time scales to allow assessment of mangrove soil health and vegetative biomass. The establishment of mangrove soil provides stability to the mangrove ecosystem and resilience to pressures related to sea-level rise and coastal development. This study will focus on the identification of optimal elevation, inundation, and nutrient thresholds that maximize the aboveground biomass and carbon sequestration in restored mangrove ecosystems. The team includes restoration practitioners at the Florida Fish and Wildlife Conservation Commission and TerraCarbon LLC to ensure that the research has applied use toward maximizing the success and ecosystem stability of future mangrove restoration projects. The work carries significance not only to immediate and ongoing restoration projects, but also to the study of blue carbon (coastal wetlands) ecosystems worldwide. This project will develop a better understanding of how to restore and manage Florida's.

Prior Award Recipients

The PMT previously selected ten research projects to address the coastal fisheries and wildlife ecosystem research and monitoring eligible activity under RFP I for 2-year research grant awards, and one project from an existing Center of Excellence (USF) to address long-term fisheries monitoring as a part of the comprehensive observation, monitoring, and mapping of the Gulf of Mexico eligible activity under RFP II. In addition, one RFP III project was completed in 2023. Final research reports are available upon request. A summary of all of the Centers of Excellence projects, past and ongoing, is available in the “Results and Impacts of the First Decade of the Florida RESTORE Act Centers of Excellence Program” ([DOI: https://zenodo.org/doi/10.5281/zenodo.10735728](https://zenodo.org/doi/10.5281/zenodo.10735728)).

Strategic Plan

The Florida Centers of Excellence finalized a new [10-year Strategic Plan](#) to support a resilient Gulf environment and economy. The next decade of Centers of Excellence projects will focus on research that generates a long-term understanding of the West Florida Shelf and connected systems to support improved and dynamic management.

Florida RESTORE Act Centers of Excellence – Strategic Plan – 2024-2034		
<p>Mission: Engage a broad base of non-governmental participants, including institutions of higher education, with interest and expertise in science, technology and monitoring to support a healthy Gulf of Mexico environment and economy</p> <p>Vision: Sustainable Gulf Coast Region ecosystem goods and services, including living resources, fisheries and wildlife habitats, beaches, wetlands and coastal communities</p>		
 <p>2024-2034 OBJECTIVE Research that generates long-term understanding of the West Florida Shelf & connected systems to support improved & dynamic management</p> <p>STATUTORY GOALS</p> <ul style="list-style-type: none"> Coastal sustainability, restoration & protection, including solutions & technology that allow citizens to live in a safe and sustainable manner in a coastal delta in the Gulf Coast Region Coastal fisheries & wildlife ecosystem research & monitoring in the Gulf Coast Region Comprehensive observation, monitoring & mapping of the Gulf of Mexico <p>About the RESTORE Act The Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act of 2012 (RESTORE Act, P.L. 112-141), establishes a Gulf Coast Restoration Trust Fund in the Treasury of the United States that supports five components, including the Centers of Excellence Research Grant Program (CERGP). Florida Institute of Oceanography (FIO) hosts Florida’s CERGP. Based on public input and per the approved Rules and Policies, FLRACEP focuses on three of the five eligible disciplines (“statutory goals”) as defined in the RESTORE Act.</p> <p>Links to additional information FLRACEP Website (link) FLRACEP Decadal Results & Impact Report (link) Treasury RESTORE Act (link)</p>	<p>STRATEGY Fund short- & long- term research that focuses on processes Ecosystem health and productivity depend on integrated processes and ecological interactions, which we must understand to ensure sustainability</p> <p>Guiding Principles</p> <ul style="list-style-type: none"> Synthesis projects to bring information together and develop an understanding of processes Science to support coastal sustainability & restoration as it relates to connectivity to the West Florida Shelf Science-driven technology development to support improved long-term monitoring & management Acknowledgement of potential climate impacts in research results 	
	<p>Implementing Actions</p> <p>Cultivate synergies among Florida Centers of Excellence Centers of Excellence (CoE) that work with each other to solve problems and have a greater impact through leveraging and partnerships</p>	<p>Rolling 5-year Plans (2024-29) updated annually:</p> <ul style="list-style-type: none"> Convene annual All Hands Meeting and quarterly discussions between Centers of Excellence Conduct meetings, town halls, or workshops as needed to facilitate collaborative, impactful research Encourage cross-collaboration and utilization of information between CoEs and across the Gulf
	<p>Build & facilitate community Ensure relevance of research through sustaining and facilitating connections between a diversity of end-users</p>	<ul style="list-style-type: none"> Co-Production Science-to-Management Workshop co-hosted by NOAA RESTORE, Sea Grant, NERRS (May 2024) Include co-production of research projects with scientists, managers, & agencies in RFPs Facilitate discussions with state and Federal agency scientists and managers to identify knowledge gaps and barriers to dynamic management regarding our objective
	<p>Disseminate research outcomes Transfer of knowledge from Center of Excellence projects to the broader management & research communities and the public</p>	<ul style="list-style-type: none"> Emphasize publication requirement for all CoEs Attend and present at Gulf-wide and RESTORE meetings, workshops and conferences Create a broader community through open invitation to the Annual All Hands Meeting Press releases to highlight new awards & results and update website with latest information, publications & outcomes
<p>Develop the next generation of Gulf scientists Encourage undergraduate, graduate and post-doctoral involvement in projects</p>	<ul style="list-style-type: none"> Leverage educational opportunities and where possible, incorporate internships Highlight student research through Annual All Hands Meeting & other forums Share opportunities for student advancement 	

Revised: 04/05/2024

Publications

The Florida Centers of Excellence have produced 54 publications to date. The following one (1) new publication was reported from the Centers of Excellence in 2024:

Fang, S., M.J. Deitch, T.G. Gebremicael, C. Angelini, C.J. Ortals, 2024. Identifying critical source areas of non-point source pollution to enhance water quality: Integrated SWAT modeling and multi-variable statistical analysis to reveal key variables and thresholds. *Water Research*, <https://doi.org/10.1016/j.watres.2024.121286>.

In addition, the program published an open-access decadal review:

Raineault, N.A., ed., 2024. Results and Impacts of the First Decade of the Florida RESTORE Act Centers of Excellence Program. 26pp. [DOI: https://zenodo.org/doi/10.5281/zenodo.10735728](https://zenodo.org/doi/10.5281/zenodo.10735728)

Financial Elements

Award Recipient

Budget Narrative – Award RCEGR02005: Treasury’s award in February of 2019 totaling \$1,951,733 for the 2019-2023 performance period included \$750,000 to fund the second phase of the University of South Florida (USF) SHELF Center of Excellence. In 2019, FLRACEP requested two additional amendments with funds to support the six research projects under RFP III and one project under RFP III.5 and extended the performance period to January 31, 2024. The total amount of funds FLRACEP requested from Treasury was \$4,458,072.88. In April 2023, FLRACEP requested an additional amendment to fund SHELF III and extend the performance period to March 1, 2027, for a new total award amount of \$5,663,898.88.

In calendar year 2024, a total of \$621,440.48 was expended, leading to a year-to-date total expenditure of \$4,365,046.11 for award RCEGR020005.

	Amended Award Budget RCEGR020005-01-04	Amount Expended in CY 2024 (a/o 11/27/24)	Amount Expended Life of Project
Categories			
Salaries and Fringe	\$ 707,183.00	\$ 109,470.65	\$ 734,311.58
Food and Beverage	\$ 5,050.00	\$ 0.00	\$ 2,579.17
Expense – Other	\$ 337,210.00	\$ 5,000.00	\$ 189,534.86
Travel (Domestic)	\$ 67,740.00	\$ 1,379.77	\$ 26,925.05
Telephone/Telecom	\$ 3,100.00	\$ 0.00	\$ -
Computers	\$ 2,300.00	\$ 0.00	\$ 2,480.98
Other	\$ 43,037.96	\$ 0.00	\$ -
Contractual (subawards)	\$ 4,347,872.23	\$ 449,595.20	\$ 3,184,684.44
Total Direct Costs	\$ 5,513,493.19	\$ 565,445.62	\$ 4,140,516.08
Indirect Costs	\$ 150,405.69	\$ 55,994.85	\$ 224,530.03
Total Budget/Expense	\$ 5,663,898.88	\$ 621,440.48	\$ 4,365,046.11

Budget Narrative – Award RCEGR020428: Treasury’s award in April of 2023 totaling \$6,310,096.00 for the 2023-2028 performance period included \$2,828,653 to fund three new projects under RFP IV and allocated \$2,000,000 for Centers of Excellence use of FIO research vessels and/or Keys Marine Lab facilities in Layton, Florida. FLRACEP plans to submit future amendments under this project to support planned RFP V, as well as future RFPs through 2028.

In calendar year 2024, a total of \$711,338.23 was expended, leading to a year-to-date total expenditure of \$905,677.27 for award RCEGR020428.

	Amended Award Budget RCEGR020428-01-00	Amount Expended in CY 2023 (a/o 11/27/24)	Amount Expended Life of Project
Categories			
Salaries and Fringe	\$ 829,690.00	\$ 98,596.59	\$ 98,596.59

Food and Beverage	\$ 7,500.00	\$ 2,578.33	\$ 2,578.33
Expense – Other	\$ 269,895.00	\$ 24,201.50	\$ 24,201.50
Travel (Domestic)	\$ 90,500.00	\$ 1,822.17	\$ 1,822.17
Telephone/Telecom	\$ -	\$ -	\$ -
Computers	\$ -	\$ -	\$ -
Other	\$ 2,000,000.00	\$ 167,305.00	\$ 167,305.00
Contractual (subawards)	\$ 2,828,653.00	\$ 368,889.68	\$ 546,219.65
Total Direct Costs	\$ 6,026,238.00	\$ 663,393.27	\$ 840,723.24
Indirect Costs	\$ 283,858.00	\$ 47,944.96	\$ 64,954.03
Total Budget/Expense	\$ 6,310,096.00	\$ 711,338.23	\$ 905,677.27

Gulf Coast Ecosystem Restoration Council Element

Leveraging Multipliers

No FLRACEP projects or elements have leveraged RESTORE Act funding streams to the best of our knowledge, due in part to the differences in priority areas, timing of projects, and areas of focus. FLRACEP staff continue to work with other restoration science funding entities to explore opportunities for collaboration and leveraging.

This report will be made available on:

<https://florida-restore-act-centers-of-excellence-program-fio-maps.hub.arcgis.com/pages/publications-and-reports>