FLORIDA RESTORE ACT CENTERS OF EXCELLENCE PROGRAM

Gulf States Marine Fisheries Commission
March 15, 2018

Libby Fetherston-Resch
FLRACEP Director

http://fio.marine.usf.edu/research/flracep
Other Gulf Restoration Funding

Deepwater Horizon Gulf Science and Restoration Initiatives

Civil Penalties
- Transocean ($1 billion)
- BP ($5.5 billion)
  - 20% to OSLTF
  - RESTORE Act $5.2 billion

Criminal Penalties
- BP ($2.84 billion)
- Transocean ($300 million)

Natural Resource Damages
- Responsible Parties - BP, etc.
  - NRDA Trustee Council
    - BP Early Restoration (up to $1b)
    - Nat. Res. Damages ($7.1b*)
  - others
    - Gulf of Mexico Research Initiative ($500 million)

Restoration Funding Components:
- Direct Component ($308m each)
- Council Component ($1.32b)
- Spill Impact Component ($100-457m)
- Centers of Excellence ($22m each)
- Science Program ($110m)

* And up to $700m for "unknown conditions and adaptive management"
Centers of Excellence Funds

RESTORE Act Funding

Amount of Funding (Millions of $)

- Direct Component (Pot 1)
- RESTORE Council (Pot 2)
- Spill Impact Component (Pot 3)
- NOAA Science Program (Pot 4)
- Centers of Excellence (Pot 5)

- AL: $308 M, $269 M
- FL: $308 M, $242 M
- LA: $308 M, $457 M
- MS: $308 M, $252 M
- TX: $308 M, $100 M
- RESTORE Council: $1.32 B
- NOAA Science Program: $110 M
Focal Areas (from the RESTORE Act):

- Discipline 2: Coastal fisheries and wildlife ecosystem research and monitoring
- Discipline 5: Comprehensive observation, monitoring, and mapping
Program spending to date: $4.6M
- RFP I: $2.8M for 10 coastal fisheries and wildlife projects
- RFP II: $900k over 2 years for one fisheries and ecosystem monitoring project

Future spending: ~$22m over 15 years
- Note: Annual deposits from interest cannot be estimated - 2017 deposit = $600,000
- Planning to issue RFP III in Spring 2019
- Potential topics include
  - Marine wildlife
  - Seafloor mapping
  - Recreational fishing data collection
  - Ecosystem monitoring mini grants
- May try to leverage with other Florida and/or RESTORE science programs
FL Centers of Excellence: Who is Eligible?

- Academic institutions
- Non-governmental organizations
- Non-profits
- Must be located in Florida
- Can partner with non-Florida entities
FLRACEP – Research Grants

- Nine fish research projects
- One sea turtle project
- One long-term fisheries monitoring grant
- RFP III anticipated in early 2019
- RFPs on ~2-year cycle going forward

Note: Centers of Excellence funding is independent of the federal budget
Fish and Wildlife Grants At a Glance

✓ Improving the pipeline of fisheries monitoring data to data product in order to better inform ecosystem models
✓ Mapping and validating benthic habitat using satellite data
✓ Using sonar to characterize fish community structure/biomass
✓ Examining the impact of artificial reefs on productivity
✓ Creating new biological indicators and economic valuation estimates for recreational fisheries
✓ DNA barcoding identification of larval fish
Fish and Wildlife Grants At a Glance (con’t)

- Tracking juvenile sea turtle settlement to coastal waters
- Autonomous gliders as fishery-independent data collectors
- Tracking oil contamination in deep sea fishes
- Modeling fisheries impacts of the lionfish invasion

- Testing the Daily Egg Production Method as a viable alternative to traditional assessments of Gulf fisheries
SLOCUM ELECTRIC
Investigate alternative assessment method for Gulf fish

 Applies the Daily Egg Production Method (DEPM) for fish population assessments

 Method used for Pacific anchovy and sardine

 DNA barcoding for rapid and accurate planktonic egg identification

 Massive field collection effort in July 2017 involving 11 vessels and participants from academia, NMFS lab, fishermen & students

 Preliminary report on progress: June 1, 2018

 Up to 15 additional years of funding available
In Summary...

- Fisheries and wildlife research for improved/sustainable management
- Innovations in measuring the health of marine populations
- Trying to use modest funds in an impactful way
Elizabeth Fetherston-Resch

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SUPPLEMENTAL SLIDES
<table>
<thead>
<tr>
<th>Sub #</th>
<th>PI Last Name</th>
<th>PI First Name</th>
<th>Title</th>
<th>Center of Excellence</th>
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<td>FLRACEP 4710-1126-00-A</td>
<td>Allen</td>
<td>Mike</td>
<td>Assess management options to mitigate lionfish impacts to reef ecosystems</td>
<td>University of Florida</td>
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<td>FLRACEP 4710-1126-00-B</td>
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<td>Babcock</td>
<td>Elizabeth</td>
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<td>Kevin M</td>
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<td>Jane M.</td>
<td>Evaluating the role of artificial reefs as hotspots of biological productivity</td>
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<td>FLRACEP 4710-1126-00-F</td>
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<td>Tracking sea turtle “lost years” in the Gulf of Mexico.</td>
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<td>FLRACEP 4710-1126-00-J</td>
<td>Walker</td>
<td>Brian</td>
<td>Habitat mapping to inform future survey efficiencies, management strategies, and climate change research.</td>
<td>NOVA Southeastern University</td>
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Table 5.10-1. Settlement of NRD claims; NRD final allocation ($ dollars).

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<th>Major Restoration Category</th>
<th>Unknown Conditions</th>
<th>Regionwide</th>
<th>Open Ocean</th>
<th>Alabama</th>
<th>Florida</th>
<th>Louisiana</th>
<th>Mississippi</th>
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<td>3. Replenish and Protect Living Coastal and Marine Resources</td>
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<td>5. Monitoring, Adaptive Management, Administrative Oversight</td>
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<td>Adaptive Management NRD Payment for Unknown Conditions</td>
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<td>$285,567,000</td>
<td>$238,151,458</td>
<td>$2,2 billion (dollars plus up to an additional 700 million dollars for adaptive management and unknown conditions)</td>
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</table>
Fish Projects of Interest

✓ Ecosystem modeling the impact of invasive lionfish on native reef species and the effectiveness of different mitigation strategies.

✓ Develop biological indicators of stock status and sustainability (using existing recreational data from state-federal databases) to design and implement an economic survey to improve estimates of the value of ecosystem goods and services of Florida Gulf coast recreational fisheries.

✓ Examine the effect of artificial reef habitat on ecosystem productivity to address the question whether artificial reefs create biogeochemical hotspots, increase rates of primary productivity, and enhance secondary productivity and fish production.
Fish Projects of Interest Continued

✓ New technologies for reducing cost/improving quality in fishery independent data collection including sonar, gliders, and remotely operated vehicles and habitat mapping (satellite imagery).

✓ Investigate applicability of the daily egg production stock assessment method (DEPM), a robust, rapid, fishery-independent stock assessment tool. The project is using genetic barcoding for identification of planktonic fish eggs, which can be particularly difficult to identify with other methods.

✓ Assessing long-term oil impacts in deep water species. Toxicological responses may be dissipating in some species but remain persistent in others, often correlated with distance from the well site. In some species these effects weren’t apparent until three years after the spill, reflecting a time lag for effects to transfer up the food chain.