



Tab A, No. 8

FLORIDA RESTORE ACT CENTERS OF EXCELLENCE PROGRAM

Fisheries Monitoring and Research

Gulf of Mexico Fishery
Management Council
Meeting

June 23, 2016

Libby Fetherston-Resch, FLRACEP
Director

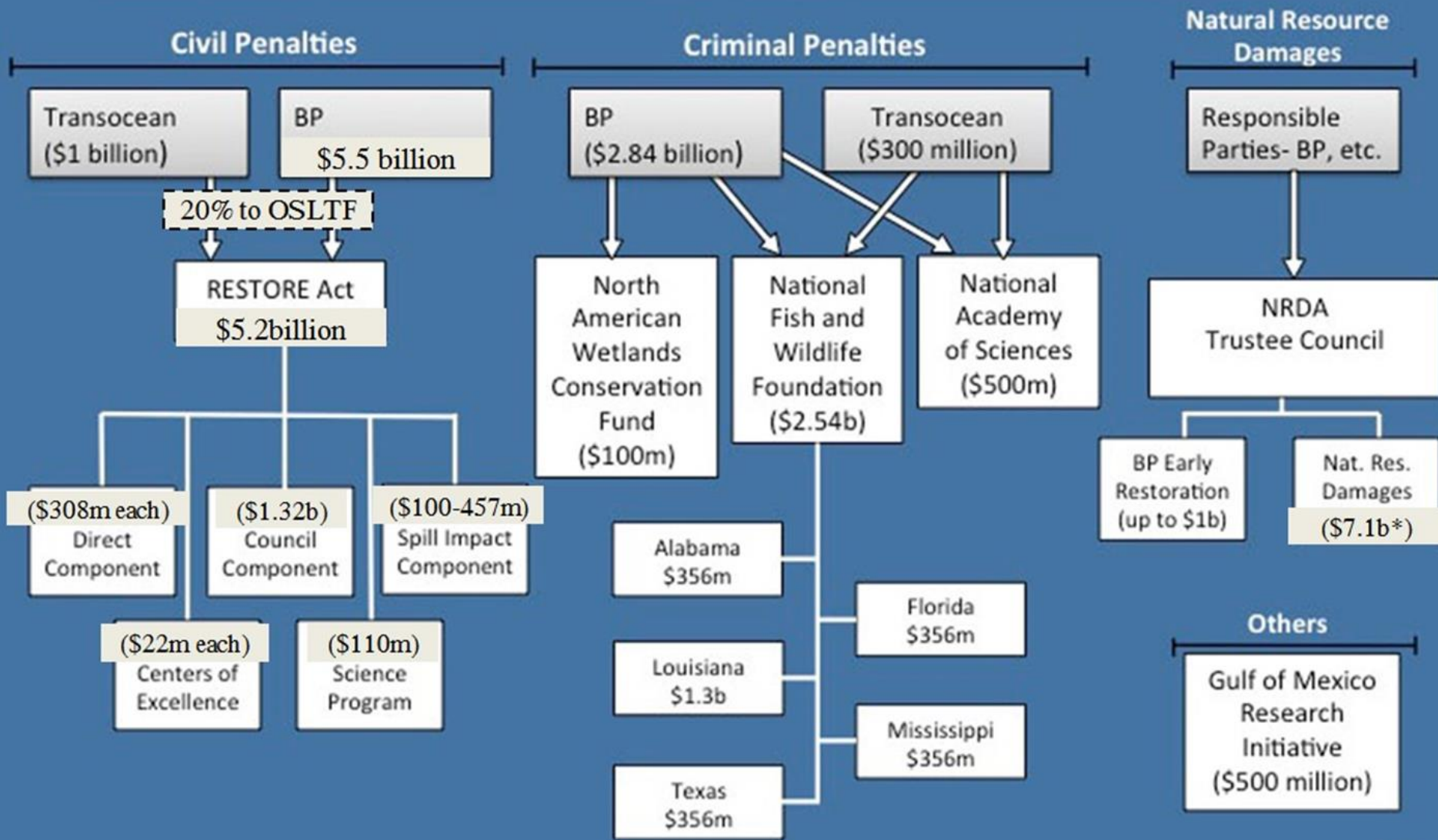


<http://fio.marine.usf.edu/research/flracep>



Post-Settlement Gulf Restoration Funding

Deepwater Horizon Gulf Science and Restoration Initiatives



* And up to \$700m for "unknown conditions and adaptive management"



Marine Fisheries Restoration Funding to Date

NRDA	Initial PDARP Restoration Approaches	Gear conversion and/or removal of derelict fishing gear to reduce impacts of ghost fishing
		Reduce mortality among highly migratory species and other oceanic fishes
		Voluntary reduction in Gulf menhaden harvest
		Incentivize Gulf of Mexico commercial shrimp fishers to increase gear selectivity and environmental stewardship
		Enhance development of bycatch reducing technologies
		Reduce post-release mortality of red snapper and other reef fishes in the Gulf of Mexico recreational fishery using fish descender devices
		Restore sturgeon spawning habitat
	Reduce Gulf of Mexico commercial red snapper or other reef fish discards through IFQ allocation subsidy program	
NRDA Phase IV	Bluefin tuna voluntary longline conversion to green stick gear	

Marine Fisheries Restoration Funding to Date

NFWF	Enhancing Fishery Independent Information	Florida program
		Alabama program
		Mississippi program
		Florida habitat mapping, characterization and assessment
RESTORE Council Pot II	Monitoring and Assessment Program Development	Support science-based decision-making
		Measure restoration outcomes across the various scales described above
		Evaluate progress toward comprehensive restoration objectives
		Catalog monitoring activities/data
		Coordination among monitoring entities
		Data management standards and methods
		Address information gaps
	GOMA Monitoring and Assessment Program outreach and support	State outreach
		Community of Practice connection to states
		State input on monitoring priorities

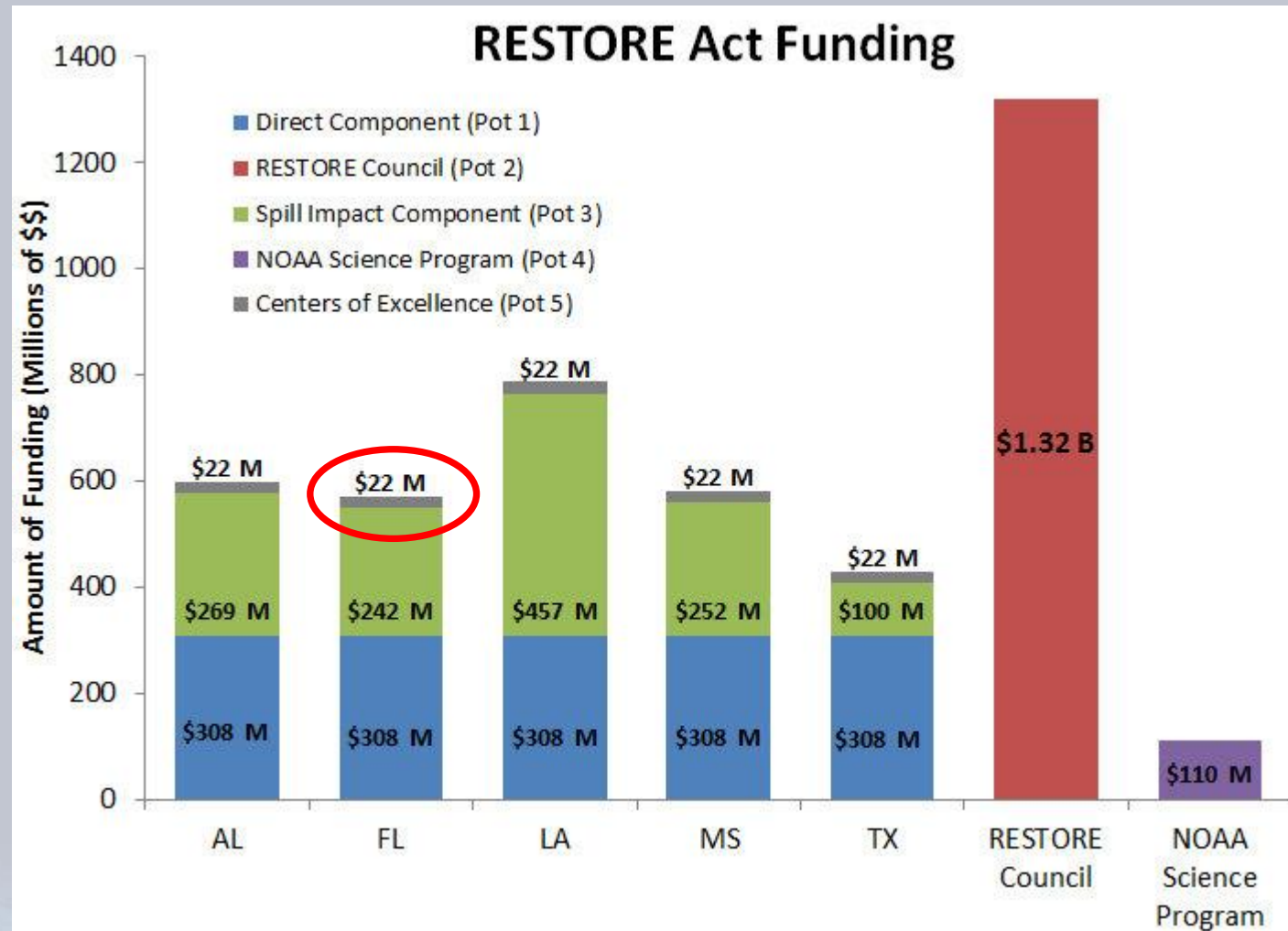
Marine Fisheries Restoration Funding to Date

NOAA RESTORE Act Science Program	FFO 2015: Focus on assessing ecosystem modeling, evaluating indicators for ecosystem conditions, and assessing and developing recommendations for monitoring and observing in the Gulf of Mexico	Indicators and assessment framework for ecological health and ecosystem services
		Inventory of Gulf of Mexico ecosystem indicators using an ecological resilience framework
		Evaluation of Gulf of Mexico oceanographic observation networks impact assessment on ecosystem management and recommendation
		Ecosystem modeling efforts in the Gulf of Mexico: current status and future needs to address management and restoration activities
		Defining abnormal events of oceanographic, biological, and physical properties in the Gulf of Mexico to identify data gaps
		Cooperative monitoring program for spawning aggregations in the Gulf of Mexico: an assessment of existing information, data gaps and research priorities
		The central role of the Mississippi River and its delta in the oceanography and ecology of the Gulf of Mexico large marine ecosystem
	FFO 2016: Focus on living coastal marine resources and their habitats	TBD

Marine Fisheries Restoration Funding to Date

Florida RESTORE Act Centers of Excellence Program	RFP I: Coastal Fisheries and Wildlife Research and Monitoring in the Gulf Region	Examining fisheries impact of invasive lionfish with an ecopath with ecosim model
		Biological and economic indicators for assessing recreational fisheries
		Improving the use of products derived from monitoring data in ecosystem models of the Gulf of Mexico
		Fishery-independent surveys of reef fish community, size, and age structure off Northwest Florida
		Evaluating fish production and ecosystem impacts of artificial reefs
		Monitoring oil spill effects and recovery in large deep-sea fishes
		Demonstration of fisheries assessment applications for underwater gliders
		Ontogenic shifts in sea turtle habitat use and foraging ecology
		Egg and larval barcoding for Gulf DEPM stock assessments
	Hardbottom mapping and community characterization of the west-central Florida Gulf coast	
FRP II: Comprehensive Ecosystem Monitoring to Support Fisheries Management Needs	TBD	

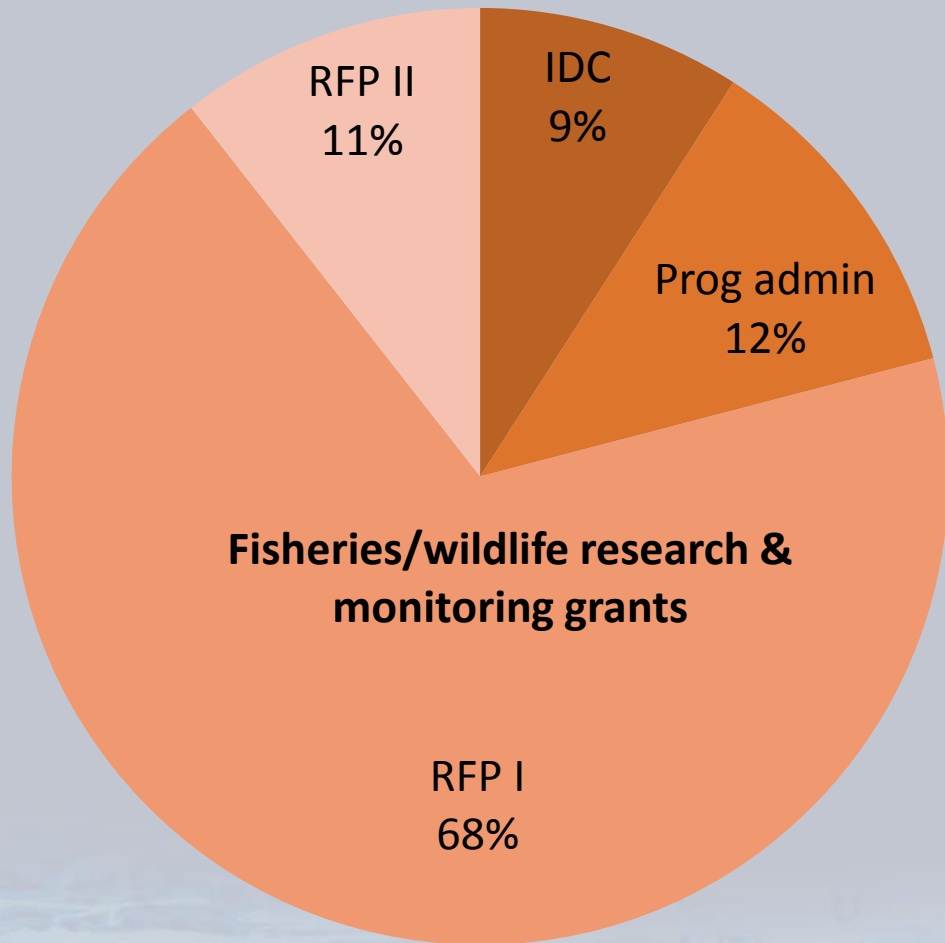
Centers of Excellence Funds



FLRACEP Program Focal Areas

- ✓ *Coastal fisheries and wildlife ecosystem research and monitoring in the Gulf Coast Region;*
- ✓ *Comprehensive observation, monitoring, and mapping of the Gulf of Mexico;*
- ✓ *Coastal sustainability, restoration and protection, including solutions and technology that allow citizens to live in a safe and sustainable manner.*

2015-2017 Strategy



Transocean settlement spending breakdown

- ❖ Transocean settlement: \$4M over three years
 - RFP I: \$2.8M for 10 coastal fisheries and wildlife projects
 - RFP II: \$900k over 2 years for one fisheries and ecosystem monitoring project

- ❖ BP settlement strategy options (\$22m, 15 years):
 - One or two additional long-term monitoring grants of \$400k over 10-15 years
 - 8-12 shorter-term innovation grants every 2 years
 - Combination of the two
 - Set aside funds to leverage with other Florida and/or RESTORE science programs

RFP I Fisheries and Wildlife: At a Glance

- ✓ Ecosystem models
- ✓ Ecosystem monitoring data
- ✓ Essential Fish Habitat mapping
- ✓ Fishery-independent data
- ✓ Invasive species
- ✓ Improvements to rec socioeconomic and fishery-dependent data
- ✓ New biological data (fish egg DNA) to inform stock assessment
- ✓ Protected species survey data
- ✓ Socioeconomic data on fisheries

RFP II Long-Term Fisheries Monitoring

- Two-year grant
- Fisheries focused
- Early life-history emphasis
- Integrated observations
- Predictive models
- Option to continue funding for 15 additional years



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.

Next Steps

- 10 fisheries and wildlife grantees collecting data through fall 2017
- Select a fisheries monitoring proposal for funding
- Determine a long-term strategy for BP funds



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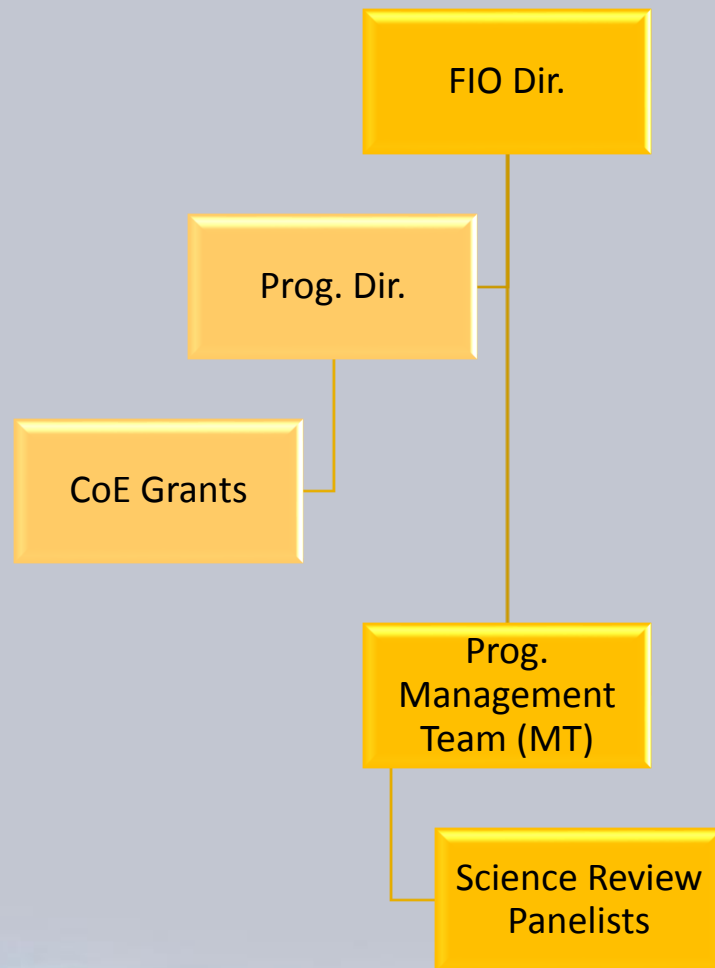




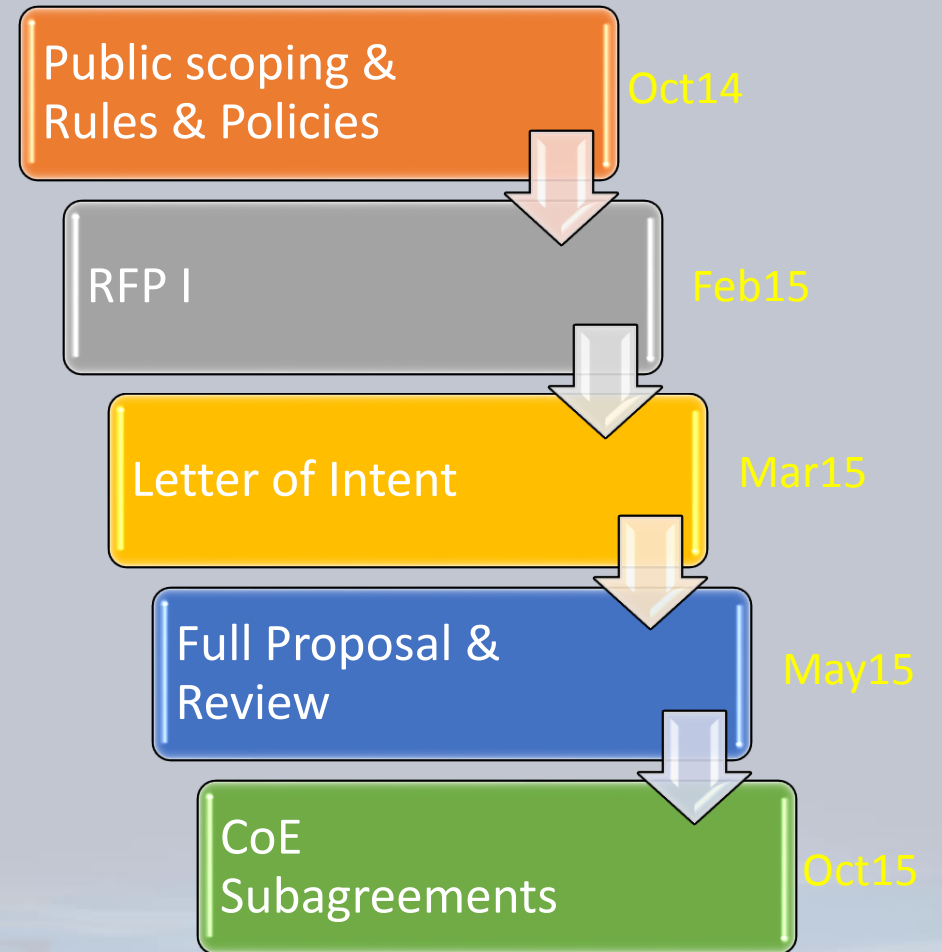
SUPPLEMENTAL SLIDES

Sub #	PI Last Name	PI First Name	Title	Center of Excellence
FLRACEP 4710-1126-00-A	Allen	Mike	<i>Assess management options to mitigate lionfish impacts to reef ecosystems</i>	University of Florida
FLRACEP 4710-1126-00-B	Ault	Jerald	<i>Optimizing economic value and sustainability of Florida's recreational fisheries.</i>	University of Miami
FLRACEP 4710-1126-00-C	Babcock	Elizabeth	<i>Better use of directly-observed data in ecosystem simulation models</i>	University of Miami
FLRACEP 4710-1126-00-D	Boswell	Kevin M	<i>Informing fishery-independent reef fish surveys through advanced survey techniques</i>	Florida International University
FLRACEP 4710-1126-00-E	Caffrey	Jane M.	<i>Evaluating the role of artificial reefs as hotspots of biological productivity</i>	University of West Florida
FLRACEP 4710-1126-00-F	Grubbs	Dean	<i>Study to examine long-term effects of DWH spill on large deep-sea fishes</i>	Florida State University
FLRACEP 4710-1126-00-G	Lembke	Chad	<i>Robotic monitoring of Red Grouper in the Eastern GoM.</i>	University of South Florida
FLRACEP 4710-1126-00-I	Peebles	Ernst	<i>Egg and larval DNA barcoding support Gulf reef fish stock assessments</i>	University of South Florida
FLRACEP 4710-1126-00-H	Mansfield	Katherine	<i>Tracking sea turtle "lost years" in the Gulf of Mexico.</i>	University of Central Florida
FLRACEP 4710-1126-00-J	Walker	Brian	<i>Habitat mapping to inform future survey efficiencies, management strategies, and climate change research.</i>	NOVA Southeastern University

Organization



RFP I Process



RFP II Scoping Recommendations:

FOCUS: Monitoring to support ecosystem approach to fisheries management.

- **Unified data and information management** (endorsed GRIIDC, DWH Project Tracker)
- **Collaborate** to determine priorities, e.g. :
 - GOMRI ad hoc team and 2016 theme-based meetings
 - RESTORE Council-funded project led by NOAA/USGS to develop regional restoration monitoring and assessment operational framework
 - NRDA Comprehensive Restoration Plan to identify needs and gaps.
 - NAS/GRP (e.g., NAS 2015 workshop report and current working group study)
 - GCOOS/SECOORA GOM Build-out Plan
 - NOAA (NMFS SE Region) FY2016 line item (HR 3525, Gulf Red Snapper Data Improvement Act)
- **RFP II pilot project** that addresses critical need identified from above planning activities and public scoping.