Open Ocean Draft Restoration Plan 2 and Environmental Assessment:

Atlantic Highly Migratory Species Advisory Panel

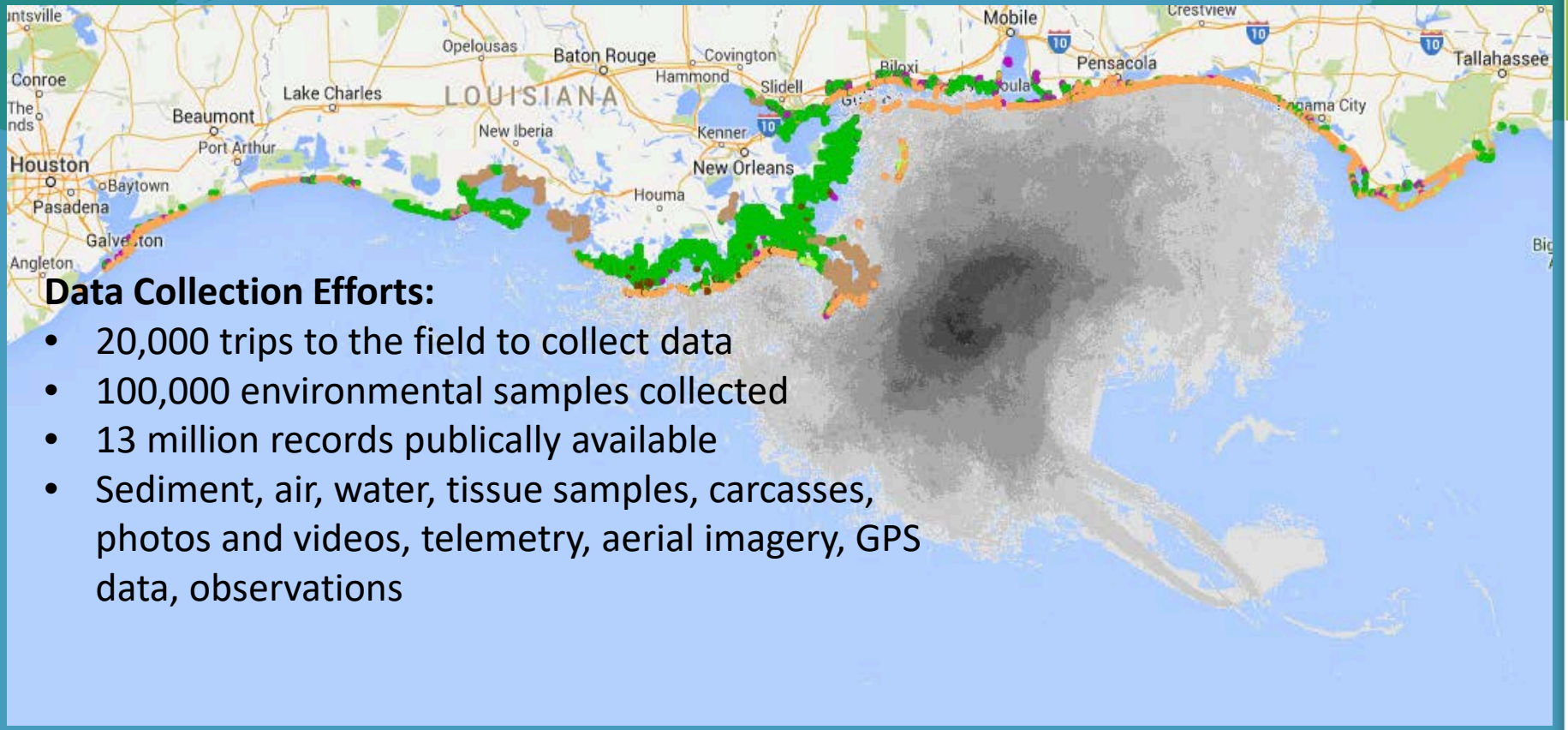
May 21, 2019

Deepwater Horizon Incident

Source: U.S. Coast Guard.

- Tragic loss of 11 workers and largest marine oil spill in U.S. history.
- 3.19 million barrels (134 million gallons) of oil released into the ocean over 87 days.
- 43,300 square miles: cumulative extent of surface slick during the spill—an area almost the size of Virginia.

Deepwater Horizon
A massive spill, a massive response



Data Collection Efforts:

- 20,000 trips to the field to collect data
- 100,000 environmental samples collected
- 13 million records publically available
- Sediment, air, water, tissue samples, carcasses, photos and videos, telemetry, aerial imagery, GPS data, observations

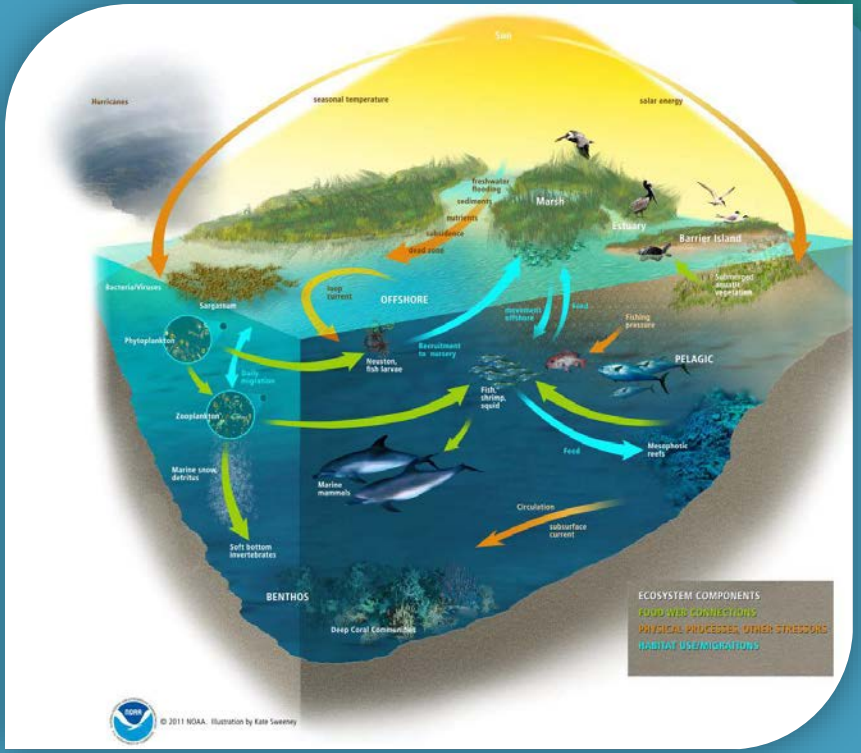
What is NRDA?

Natural Resource Damage Assessment is a legal process:

- to make the environment and public whole for injuries to natural resources and services.

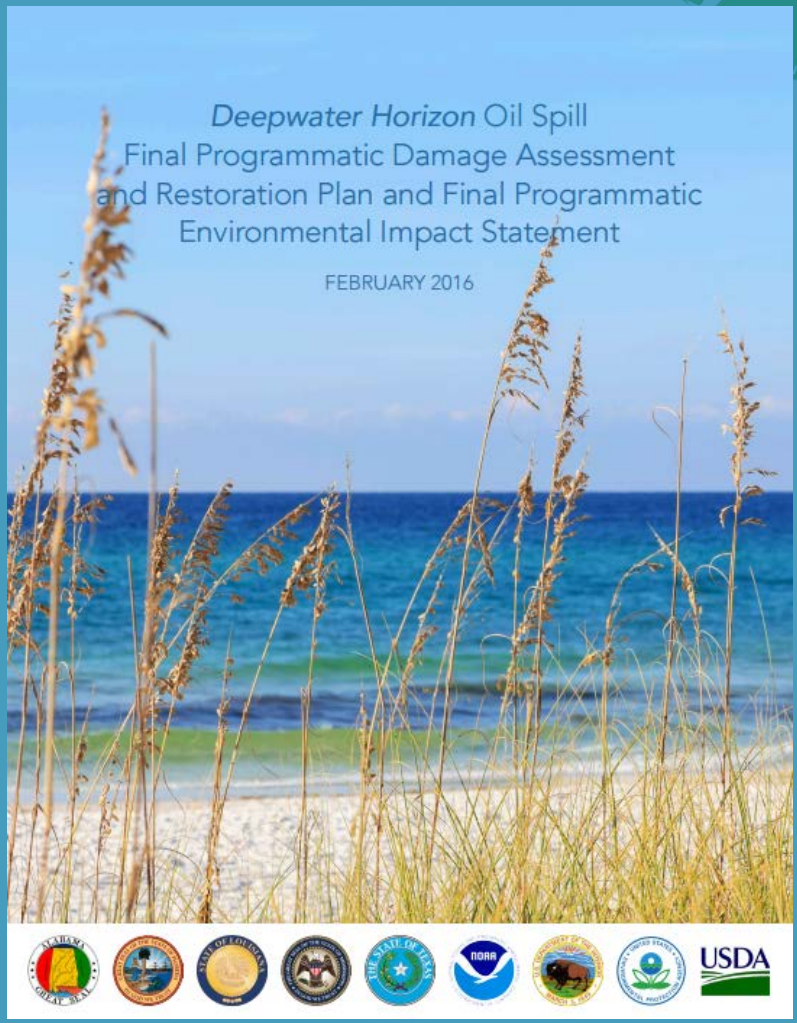
Ecosystem Impacts

Injuries from the Deepwater Horizon incident affected diverse and integrated resources over an enormous area for a long time. The effects constitute an ecosystem-level injury.



Trustees' Programmatic Restoration Plan

- **Damage assessment:** injuries to natural resources and services
- **Restoration:** ecosystem approach and science-based adaptive management
- **Governance:** framework for future decision-making, including project selection & implementation

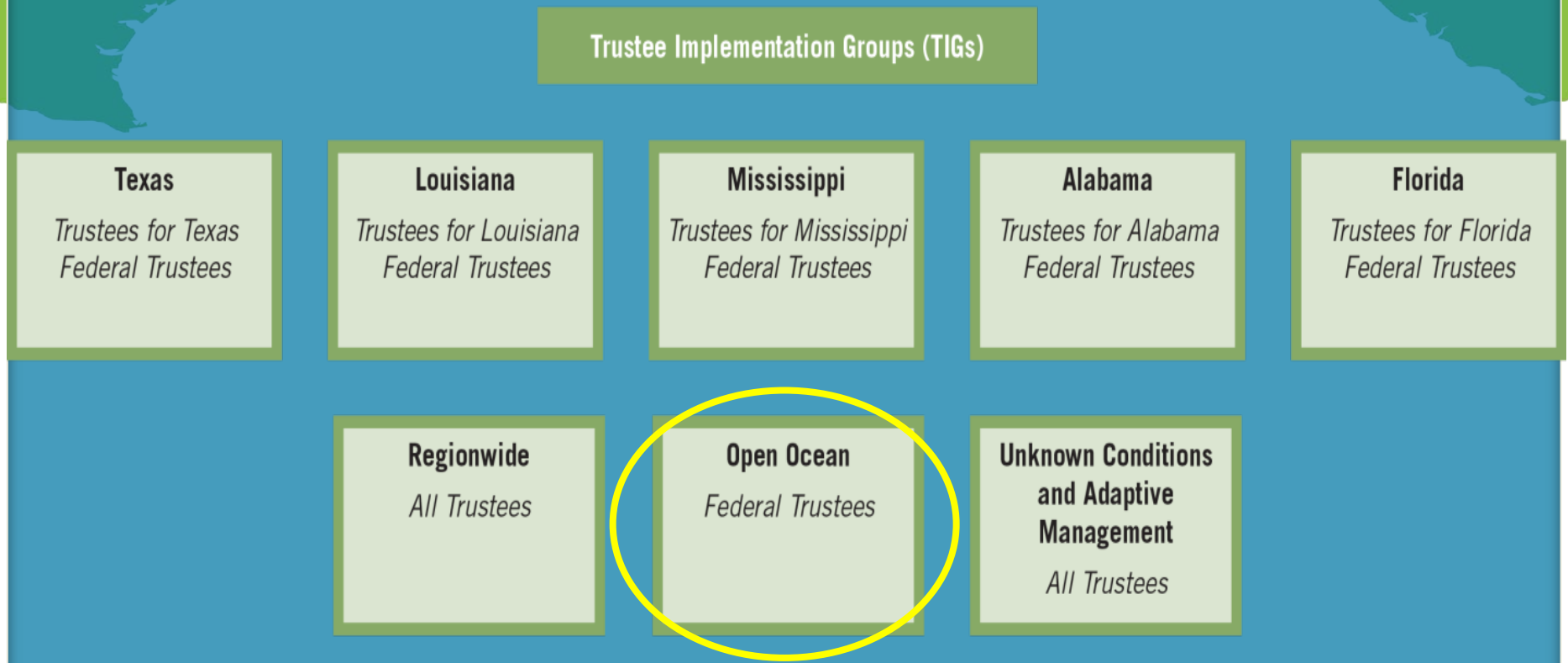


Natural Resource Damage Assessment Settlement

A total $8.8 billion allocated to:

- Restore and Conserve Habitat: $4.7 billion
- Replenish and Protect Living Coastal and Marine Resources: $1.8 billion
- Restore Water Quality: $0.4 billion
- Provide and Enhance Recreational Opportunities: $0.4 billion
- Provide Monitoring, Adaptive Management, Administrative Oversight: $1.5 billion
- Future Unknown Conditions, up to $0.7 billion

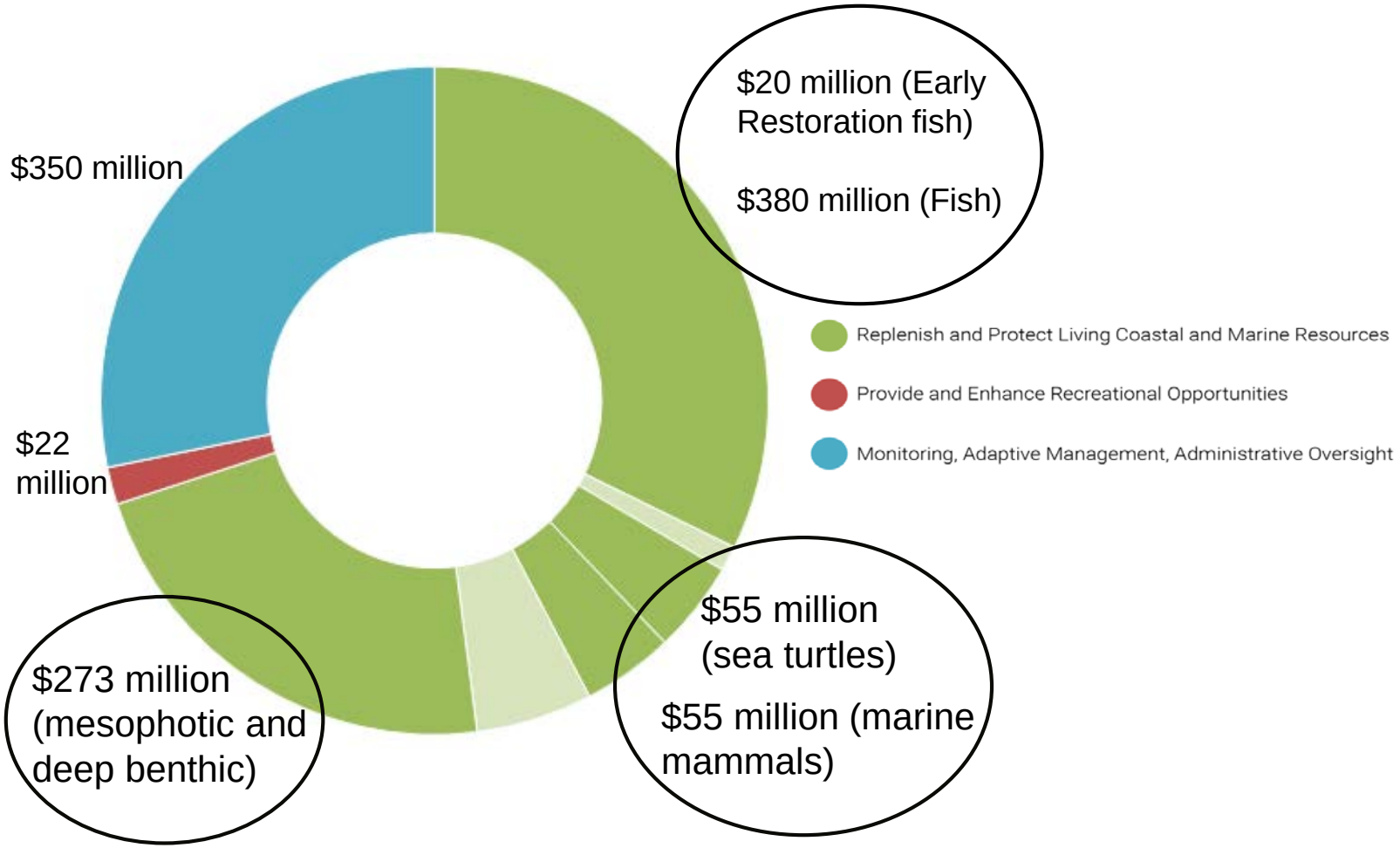
NRDA Trustees' Governance Structure



Open Ocean Trustee Implementation Group

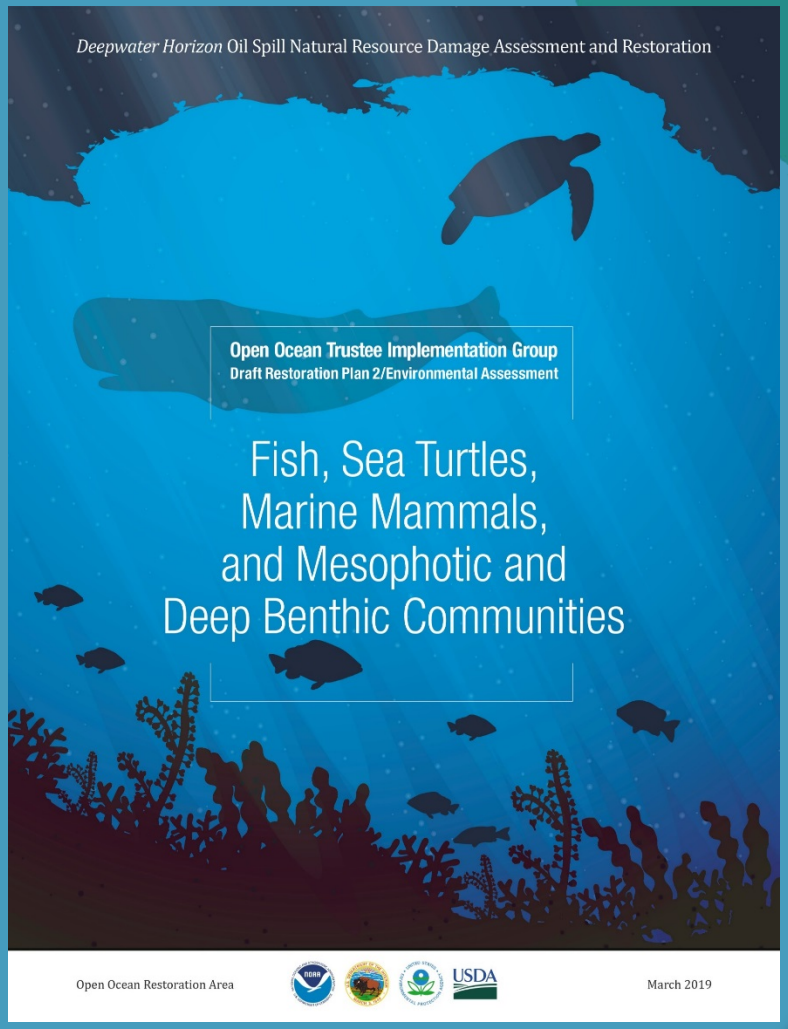
NOAA	USDA	EPA	DOI
Chris Doley	Homer Wilkes	Gale Bonanno	Debora McLain
Laurie Rounds	Ron Howard	Treda Grayson	Ashley Mills

Open Ocean Restoration Area Funding Allocation

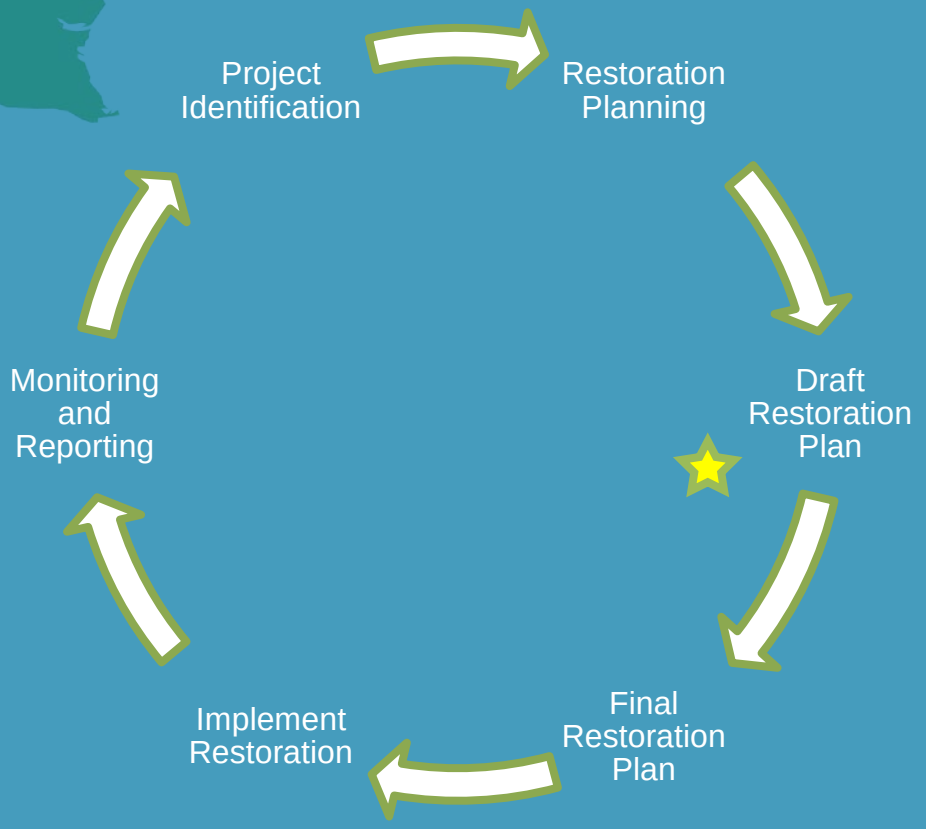


OO TIG Draft RP 2 Overview

- Proposes restoration for Fish, Sea Turtles, Marine Mammals, and Mesophotic & Deep Benthic Communities
- Evaluates 23 restoration projects identified through screening
- Proposes 18 projects for funding for an estimated cost of $225,680,700



TIG Restoration Planning Cycle



March-May 2017: Call for Open Ocean project ideas

***June – December 2017*:** Screened 1,600+ ideas in the DWH project portal

***February 2018*:** Notice of development for two restoration plans

***March 2019*:** Released Final Restoration Plan 1

Overview of Preferred Projects

Fish: 4 Preferred Projects

- Reduction of barotrauma in reef fish recreational fisheries
- Better BRD's for the GOM commercial shrimp trawl fishery
- Communication and mapping tools to reduce bycatch- Phase 1
- Restoring for bluefin tuna via fishing depth optimization

Sea Turtles: 6 Preferred Projects

- Methods to reduce bycatch in the reef fish bottom longline fishery
- Methods to observe sea turtle interactions in menhaden fishery
- Reducing juvenile turtle bycatch- testing reduced-bar spacing TEDs
- Long-term nesting beach habitat protection for sea turtles
- Comprehensive plan for in-water sea turtle data collection
- GOM Sea Turtle Atlas

Overview of Preferred Projects

Marine Mammals: 4 Preferred Projects

- Reducing impacts to cetaceans during disasters by improving response activities
- Reduce impacts of anthropogenic noise on cetaceans
- Reduce and mitigate vessel strike mortality of cetaceans
- Compilation of environmental, threats, and animal data for cetacean population health analyses

Mesophotic and Deep Benthic Communities: 4 Preferred Projects

- Mapping, ground-truthing, and predictive habitat modeling
- Habitat assessment and evaluation
- Coral propagation technique development
- Active management and protection

Preferred Alternatives:

Fish and Water Column Invertebrates

Injury to Fish Water Column Invertebrates

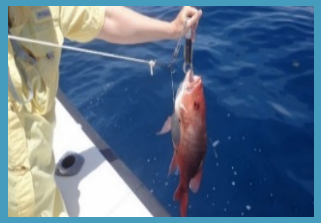
- Hundreds of species were injured
- All levels of the food chain impacted
- Including shrimp and crabs, drum, snappers, Mahi and tuna.

Restoration Goals for Fish and Water Column Invertebrates

- Restore injured species across the range of coastal and oceanic zones by reducing direct sources of mortality.
- Increase the health of fisheries by providing fishing communities with methods and incentives to reduce impacts to fishery resources.

Initial Restoration Priorities: Reef fish, highly migratory species (other than sharks), coastal migratory pelagic species

Fish & Water Column Invertebrates
Four Preferred Alternatives: $57.7M



Reduction of Post-Release Mortality from Barotrauma in Gulf of Mexico Reef Fish Recreational Fisheries
Estimated Duration: 7 years
Estimated Budget: $ 30,011,000

Better Bycatch Reduction Devices for the Gulf of Mexico Commercial Shrimp Trawl Fishery
Estimated Duration: 7 years
Estimated Budget: $ 17,171,000

Communication Networks and Mapping Tools to Reduce Bycatch—Phase 1
Estimated Duration: 5 years
Estimated Budget: $ 4,416,000

Restoring for Bluefin Tuna via Fishing Depth Optimization
Estimated Duration: 10 years
Estimated Budget: $ 6,175,000

Reduction of Barotrauma in GOM Reef Fish Recreational Fisheries

- Restore reef fish by reducing post-release mortality by recreational anglers
- Provide outreach, training, and materials to recreational anglers and businesses
- Monitor and evaluate project success

Photo Credit: Sara Worthy

Better Bycatch Reduction Devices for the Gulf of Mexico Commercial Shrimp Trawl Fishery

- Restore fish, such as red snapper and croaker, by reducing finfish bycatch in the commercial shrimp trawl fishery

- Distribute BRDS that are underutilized in Gulf of Mexico shrimp trawl fishery under an incentivized program

Communication Networks and Mapping Tools to Reduce Bycatch—Phase 1

- Feasibility study
- Identify promising opportunities to use voluntary communication networks to reduce bycatch
- Project will conduct workshops, data analysis, and propose potential implementation

Photo Credit: Jay Fleming

Restoring for Bluefin Tuna via Fishing Depth Optimization

Photo Credit: Jay Fleming

- Pilot project to benefit bluefin tuna by improving target to bycatch ratio
- Cooperative study conducted by NOAA with the pelagic longline fishery
- Based on previous work done by NOAA

How to Submit Comments

Comments on OO TIG Draft RP2/EA must be submitted:

- Online: http://parkplanning.nps.gov/OOTIGRP2
- By mail (hard copy), addressed to: U.S. Fish and Wildlife Service P.O. Box 29649 Atlanta, GA 30345
- In writing or verbally at the Open Ocean Trustee Implementation Group public meeting or online during public webinars

Comment deadline is July 1, 2019

Upcoming Public Events

- June 4th public meeting: 5:30 p.m. Central Pensacola, FL
- June 11th webinar: Noon Central
- June 13th webinar: 6:00 p.m. Central
- Registration: www.gulfspillrestoration.noaa.gov

Thank you

For More Information: www.gulfspillrestoration.noaa.gov