Open Ocean Restoration Area
Spring Meeting
April 12, 2022
Webinar Participation

• If you’re using a phone, turn off your computer’s microphone and speakers
• Please use the “Questions” box to type questions for the Q&A session
• Presentation will be posted on www.gulfspillrestoration.noaa.gov
• Please see the chat box for a link to the Open Ocean Restoration Area webpage
Webinar Overview

• Open Ocean Restoration Area Updates
• Draft Restoration Plan 3
• Fish and Water Column Invertebrates Strategic Plan
• Question and Answer Session
• More Information and Upcoming Meetings
# Open Ocean Trustee Representatives

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<thead>
<tr>
<th></th>
<th>NOAA</th>
<th>USDA</th>
<th>EPA</th>
<th>DOI</th>
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<tbody>
<tr>
<td>Chris Doley</td>
<td>Ron Howard</td>
<td>Gale Bonanno</td>
<td>Mary Josie Blanchard</td>
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<tr>
<td>Laurie Rounds</td>
<td>Ben Battle</td>
<td>Treda Grayson</td>
<td>Ashley Mills</td>
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Open Ocean Restoration

29

RESTORATION PROJECTS IN THE OPEN OCEAN RESTORATION AREA

5  Fish and Water Column Invertebrates
1  Sturgeon
6  Sea turtles
4  Marine Mammals
2  Birds
4  Mesophotic and Deep Benthic Communities
4  Provide and Enhance Recreational Opportunities
3  Monitoring and Adaptive Management

The Open Ocean Trustee Implementation Group restores wide-ranging and migratory species that were injured by the spill throughout their geographic range, including some areas outside the Gulf of Mexico.
Open Ocean Restoration Highlights

In its Final Year, Early Project Data Show Fishermen Are Contributing to Healthier Gulf Fisheries

Upcoming Expeditions will Support Deep-sea Habitat Restoration
Open Ocean Restoration Highlights

Updates on the Open Ocean Sea Turtle Project Working with Menhaden Purse Seine Fishery

Adaptively Managing Gulf Sturgeon Restoration Activities in the Pearl and Pascagoula Rivers
Monitoring & Adaptive Management

- Restoration objectives and indicators
- Monitoring and adaptive management activities
  - Gulf sturgeon population status and trends
  - Juvenile Gulf sturgeon habitat use
  - Effects of stressors on whales and dolphins
- Data management plan
Deepwater Horizon NRDA
Open Ocean Restoration Area

Restoration Plan 3
Restoration Plan 3 Next Steps

• Develop the Draft Restoration Plan
• Release the Draft Restoration Plan for public review and comments
• Hold a public meeting
• Consider public comments to finalize the restoration plan
• Implement selected projects
Bird Connections to Gulf Habitats
Bird Connections to Gulf Habitats

Northern Gannet

Audubon’s Shearwater

Gulf of Mexico
Restoration Plan 3
Fish and Water Column
Invertebrates Strategic Plan
Fish and Water Column Invertebrates Strategic Plan

Open Ocean Fish and Water Column Invertebrates Strategic Plan
Deepwater Horizon Open Ocean Trustee Implementation Group
MARCH 2022
Overview of the Strategic Plan

• Background
  • Injury, Goals, Projects
• Purpose of the Plan
• Approach to the Strategy
  • Engagement
  • Prioritization
  • Threats
  • Objectives
Fish and Water Column Injury

• Hundreds of species where exposed to oil
• Trillions of larval fish and invertebrates
• Fish suffered many negative effects from the oil
• Reef fish communities were also impacted
Restoration Goals

• The goals for Fish and Water Column Invertebrates are to restore for injuries from the spill by:

  • Reducing direct sources of mortality, and
  • Increase the health of fisheries by providing fishing communities with methodologies and incentives to reduce impacts to fishery resources.
Open Ocean Restoration Projects

- Oceanic Fish Restoration Project
- Restoring for Bluefin Tuna via Fishing Depth Optimization
- Better Bycatch Reduction Devices
- Return 'Em Right - Reduction of Post-release Mortality from Barotrauma
- Communication Networks and Mapping Tools to Reduce Bycatch—Phase 1

April 2022
Other Restoration Types to Address Water Column Injury

• Wetlands, Coastal, and Nearshore Habitats
• Mesophotic and Deep Benthic Communities
• Water Quality – Nutrient Reduction and Water Quality
• Monitoring and others (SAVs, Oysters, Fed Lands)
Overview and Purpose

• Guide restoration planning for FWCl
  • Establishing a species prioritization process
  • Identifying threats to injured species and associated restoration opportunities
  • Setting objectives for those species and/or species groups
  • Data gaps
Engagement

• Four sessions with external stakeholder groups in winter/spring 2021
  • Two invited roundtables
  • Two public meetings coordinated with the Gulf Commission and Gulf Council
  • Numerous internal meetings

• Received input on
  • Threats
  • Prioritization criteria – important species
  • Communications
  • Opportunities for collaboration
Steps in Species Prioritization Process

1. Determine species groups representing ecosystem components
2. Determine criteria to evaluate restoration priorities
3. Collect data that serve as criteria proxies
4. Select priority species by group based on evaluation of criteria
## Priority Species Selections by Group

<table>
<thead>
<tr>
<th>FWCI Species Group</th>
<th>Priority Species</th>
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<tr>
<td><strong>Billfish</strong></td>
<td>Blue marlin (Makaira nigricans)</td>
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<tr>
<td><strong>Drums and seatrout</strong></td>
<td>Spotted seatrout (Cynoscion nebulosus)</td>
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<td><strong>Flatfishes</strong></td>
<td>Southern flounder (Paralichthys lethostigma)</td>
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<td><strong>Jacks</strong></td>
<td>Greater amberjack (Seriola dumerili)</td>
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<td><strong>Forage fish</strong></td>
<td>Mullets (Mugil cephalus and curema)</td>
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<td></td>
<td>Gulf menhaden (Brevoortia patronus)</td>
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<td><strong>Sea basses/Groupers</strong></td>
<td>Red grouper (Epinephelus morio)</td>
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<tr>
<td><strong>Snappers</strong></td>
<td>Red snapper (Lutjanus campechanus)</td>
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<td>Vermilion snapper (Romboplites aurorubens)</td>
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<td><strong>Tunas/mackerels</strong></td>
<td>Yellowfin tuna (Thunnus albacares)</td>
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<td>King mackerel (Scomberomorus cavalla)</td>
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<td><strong>Other demersal</strong></td>
<td>American eel (Anguilla rostrata)</td>
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<td><strong>Other reef-associated</strong></td>
<td>Golden tilefish (Lopholatilus chamaeleoniceps)</td>
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<tr>
<td><strong>Crabs and Lobsters</strong></td>
<td>Blue crab (Callinectes sapidus)</td>
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<tr>
<td><strong>Shrimp</strong></td>
<td>Royal red shrimp (Pleoticus robustus)</td>
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* Indicates high priority groups

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# Threats

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<tr>
<th></th>
<th>Blue marlin</th>
<th>Greater amberjack</th>
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<tr>
<td><strong>Fishing</strong></td>
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<tr>
<td>Overfishing</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Illegal fishing</td>
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<tr>
<td>Bycatch</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Data limitations</td>
<td>X</td>
<td>X</td>
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<tr>
<td><strong>Marine debris</strong></td>
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<tr>
<td>Plastic/Microplastic</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Derelict gear</td>
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<tr>
<td><strong>Ecological</strong></td>
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<tr>
<td>Invasive species</td>
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<td><strong>Climate change</strong></td>
<td>X</td>
<td>X</td>
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<tr>
<td><strong>Water quality</strong></td>
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<td>HABs (red tide)</td>
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Photo by Jay Fleming

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Restoration Objectives

• Reduce negative effects or risks of:
  • bycatch
  • illegal, unregulated, and unreported fishing
  • marine debris to FWCI resources
  • post-release mortality
  • invasive species
  • marine pollution
  • energy production
  • harmful algal blooms (HABs)

• Develop tools and techniques to reduce uncertainty in restoration and provide best practices to stakeholders and fishing communities

• Improve pelagic and sargassum habitat
Questions
Questions

• Please type your questions in the “Questions” box.

• We’ll do our best to get to as many as possible.

• Remember to take a look at the Open Ocean webpage linked in the chat.
Upcoming Open Ocean Public Meetings

- **Trustee Council Annual Meeting**
  - Early Summer

- **Restoration Plan 3 Public Meeting**
  - Fall-following the release of Draft Plan

- **Open Ocean Annual Meeting**
  - October-December

April 2022
How to Access Open Ocean Project Information

www.gulfspillrestoration.noaa.gov
Thank You

openocean.TIG@noaa.gov