Fish Restoration Type

Open Ocean Restoration Area

From estuaries to the deep sea, fish play an important ecological role in the Gulf of Mexico by cycling and transporting nutrients between nearshore and offshore areas and between the water surface and the deep sea. The northern Gulf of Mexico commercial and recreational finfish fisheries support billion-dollar industries. Fish and water column resources injured by the *Deepwater Horizon* oil spill include species from all levels of the marine food web.

Draft Open Ocean Restoration Plan 2 focuses on the following Fish and Water Column Invertebrates restoration approaches from the *Deepwater Horizon* Oil Spill Final Programmatic Damage Assessment and Restoration Plan and Final Programmatic Environmental Impact Statement:

- Reduce mortality among highly migratory species and other oceanic fishes.
- Reduction of post-release mortality of red snapper and other reef fishes in the Gulf of Mexico using fish descender devices.
- Incentivize Gulf of Mexico commercial shrimp fishers to increase gear selectivity and environmental stewardship.
- Voluntary fisheries-related actions to increase fish biomass.

Fish Restoration Goals

- Restore injured fish 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 methodologies and incentives for reducing impacts to fishery resources.

The Open Ocean Trustee Implementation Group is seeking public comments on the Draft Open Ocean Restoration Plan 2 and Environmental Assessment. For more information, please visit https://www.gulfspillrestoration.noaa.gov/restoration-areas/open-ocean. You can submit your comments online via the comment portal at https://parkplanning.nps.gov/OOTIGRP2 or by U.S. mail to U.S. Fish and Wildlife Service, P.O. Box 29649, Atlanta, GA 30345.

Fish Restoration Type Proposed Projects

PROJECT NAME	PROJECT DESCRIPTION	EST. COST AND TIMEFRAME
REPLENISH AND PROTECT LIVING COASTAL AND MARINE RESOURCES		
Reduction of Post-release Mortality from Barotrauma in Gulf of Mexico Reef Fish Recreational Fisheries	Barotrauma occurs when fish are rapidly brought to the surface from deep water and gases in the fish's tissues and organs expand and in some cases rupture. When fish suffering from barotrauma are released they can struggle to descend back into the water column to deeper depths, becoming easy prey to predators. Barotrauma can cause other physiological effects such as bulging eyes. Injuries due to barotrauma can result in mortality. This project would reduce mortality from barotrauma and restore reef fish populations by promoting the use of fish descender devices (FDDs) and other tools, targeting reef species such as red snapper, red grouper, vermillion snapper, and gag grouper. This project would focus on the development of best practices for FDDs through the distribution of FDDs to recreational anglers and providing information on their use. Surveys on attitude changes, use, and effectiveness of FDDs would be conducted to track project success. Supplying fishermen with the tools and knowledge to minimize barotrauma-related mortality would result in increased survival of fish released during recreational fishing activities.	$30,011,000 8 years
Better Bycatch Reduction Devices for the Gulf of Mexico Commercial Shrimp Trawl Fishery	The Gulf of Mexico shrimp fishery is a trawl-based fishery for brown, white, and pink shrimp. However, as trawl fishing involves the use of nets, shrimp trawls can result in unintentional catch of other species (or bycatch). This project would reduce finfish bycatch through voluntary partnerships with fishermen to use better bycatch reduction devices (BRDs). Project activities would include identifying innovative BRDs, validation of BRD effectiveness, and conducting outreach workshops/dockside training. Reducing bycatch of finfish would increase overall fishery health for commercially and recreationally important species.	$17,171,000 7 Years
Communication Networks and Mapping Tools to Reduce Bycatch – Phase I	The unintentional catch of non-target species (bycatch) can have substantial biological and economic impacts and prevent or delay the recovery of species injured during the DWH oil spill. This project would reduce bycatch in the south Atlantic and Gulf of Mexico by developing a bycatch hotspot identification system and communication network to avoid bycatch. This phased project would develop a system to create near-real time spatial maps of bycatch hotspots coupled with a communication tool to inform fishermen of the high bycatch potential in those areas. This initial phase would include activities such as conducting scoping workshops to identify fisheries, regions, and ports that would benefit from a bycatch identification system; the development of maps to identify areas of potentially high bycatch; and a workshop to discuss the issues surrounding voluntary communication network to avoid bycatch.	$4,416,000 5 Years
Restoring Bluefin Tuna via Fishing Depth Optimization	Atlantic bluefin tuna can be caught as bycatch in the pelagic longline (PLL) fishery that targets yellowfin tuna and swordfish. Data collected from recent studies suggest that increasing the PLL fishing depth may reduce bycatch of bluefin tuna. This project would restore Western Atlantic bluefin tuna by identifying and sharing fishing practices that reduce bycatch in the PLL fishery. This project would involve conducting a pilot study to better define an optimal PLL fishing depth to reduce bluefin tuna bycatch. Anticipated benefits of identifying optimal depths in the PLL fishery include positive economic benefits to fishermen from increased target catch per unit effort and positive benefits to bluefin tuna stocks and possibly other bycatch species by reducing fishing mortality.	$6,175,000 10 Years

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