

US Department of the Interior

Recovery and Restoration of Deep-water Coral Habitats in the Gulf of Mexico

The principal goal of the proposed research is to support restoration and conservation of deep-sea coral habitats. Understanding long-term recovery and preparing for potential future impacts are fundamental to the basic concept of habitat restoration and protection of ecosystem services.

There is a fundamental need to identify the best methods for monitoring and restoration of deep-sea coral habitats. This study represents the primary restoration phase involving data collection to understand changes and possible recovery to the impacted deep-sea coral communities, locating sources of populations of impacted coral, developing advanced techniques to understand the coral and associated community response, and to develop transplantation techniques for deep-sea corals. This research will initiate the development of a deep-sea component to a GoM-wide observing system that extends from shallow to deep waters (>1500 m). This work will track the success of direct restoration techniques while continuously monitoring the environmental conditions and natural resources over broad temporal and spatial scales. After successful restoration and continued protection from future damage, these coral habitats will provide ecosystem services for decades to come. The proposed work also has broad applications to understanding the GoM-wide ecosystem, making trophic connections from the Gulf-state watersheds to deep-sea environments. Requested funding amount: \$ 11,234,739.