MIAMI HARBOR | Phase III Dredging Project

ENVIRONMENTAL FACT SHEET

DECEMBER 2011

BACKGROUND

The Port of Miami is situated in the Biscayne Bay, which is home to many protected, threatened and endangered species including the Florida manatee, sea turtle species and bottlenose dolphins, in addition to numerous important recreational and commercial fish species. Terrestrial and marine habitats surrounding the Port include beaches, mangroves, seagrass beds and hardbottom and reef communities. As such, the Miami Harbor Deepening Project has been closely coordinated with resource agencies, stakeholders and members of our surrounding community during the planning process. The U.S. Army Corps of Engineers and the Port of Miami are committed to working with all parties to ensure environmental resources are protected, and to monitoring prior, during and after the dredging takes place.

ENVIRONMENTAL IMPACTS

The project includes seagrass beds restoration, coral relocations, and the creation of artificial reefs. These environmental efforts will occur concurrently during harbor dredging construction to minimize resource time lags.

- Only 0.2 acres of seagrass will be directly impacted by dredging activities; there is a potential indirect impact of up to 7.7 acres. To offset these impacts, up to will create 24 acres of new seagrass beds will be created north of the Julia Tuttle Causeway in the Biscayne Bay.
- This project will widen the harbor entrance channel by 300 feet to maintain navigational safety requirement, which will impact adjacent reef habitat.
  - Estimated direct hard-bottom habitat impacts of channel deepening and widening are approximately 7.07 acres. Approximately 10 acres of artificial reef will be created south of the navigation channel.
  - Prior to construction of this widening, 1300 corals that can be successfully relocated (greater than 10 cm and Acropora corals) will be placed along adjacent reef tracts or newly created artificial reef sites.

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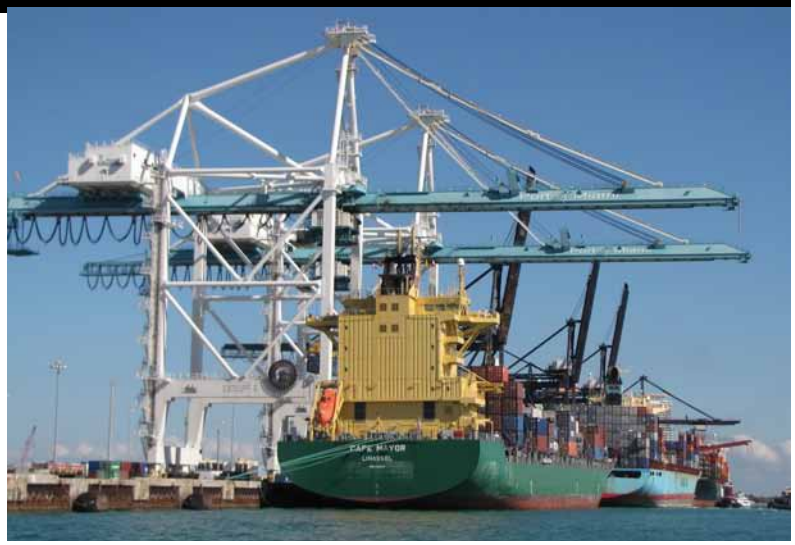
Extensive research and collaborative planning with the Florida Department of Environmental Protection, and other resource agencies is ongoing to ensure that each of these mitigation efforts have a high probability of being successful.

As part of the construction contract, the contractor will be required to hire an on-site, full-time manager to provide construction monitoring and environmental oversight during both mitigation and dredging activities.

Prior to construction activities, the selected contractor will be required to host workshops open to the community and media to present the schedule of upcoming activities.

The Corps has determined that due to the hardness of the limestone rock found throughout the project, confined underwater blasting would be required to pre-treat the rock before dredging.

- The proposed blasting utilized to pre-treat bedrock prior to removal by a dredge will use a method called "confined blasting", meaning the majority of the blast energy would be "confined" in the rock.
- Studies have shown that confined blasts have up to a 90% decrease in the strength of the pressure wave released, which helps protect the ecosystem.
- The project contractor will be required to have in place an extensive marine watch program during all confined blasting activities.
- This includes the establishment of safety zones and watch zones from both the water and air. All blasting will be conducted only during daylight hours.
- In confined blasting, holes are drilled into the rock in order to place the explosive material at the necessary depth. This hole is then capped with an inert material, such as crushed rock. This is referred to as "stemming the hole." This method helps limit impacts to fish, mammals and resources in the vicinity.



- The confined blasting method was successfully utilized at the Port of Miami in 2005, with no reported deaths of mammals, fish, sea turtles or other sustained habitat impacts.

Additional environmental monitoring includes monitoring for direct and indirect impacts to hardbottom, coral and seagrass resources in and adjacent to the project area using underwater divers, sedimentation devices and other visual observation techniques.

Monitoring activities will include turbidity, sedimentation and resource health occurring before, during and after dredging the channel.

The U.S. Army Corps of Engineers and the Port of Miami are committed to protecting the surrounding environment in the Biscayne Bay, while serving the community, to provide a more efficient, sustainable Port.

FOR MORE INFORMATION

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