

Miami Harbor Improvement Study

November 2018

America's waterways have always played a key role in this nation's economic development, growth, and security. Navigation was the U.S. Army Corps of Engineers' earliest civil works mission, dating to the General Survey Act of 1824, which established the Corps' role as the federal water resource agency with the primary mission for constructing and maintaining a safe, reliable, and economically efficient navigation system.

The Nation's coastal channels and inland waterways are part of a larger transportation network that includes 25,000 miles of federal navigable channels and related infrastructure, as well as publicly and privately-owned marine terminals, intermodal connections, shipyards and repair facilities. Coastal channels and inland waterways are maintained by the Corps to support the Nation's economy, as well as contributing to both state and local government economic development, including job creation efforts.

At a national level, citizens need an efficient and reliable international ocean transportation system. Port congestion causes delays and increases transportation costs that hurt our economy. Addressing congestion and potential congestion-related maritime issues isn't vital only for our individual port gateways, but also a paramount national objective.

Congestion not only disrupts inbound cargo, but it also decreases the efficient transport of U.S. exports and reduces the competitive advantage of U.S. ports. Maintaining growth in U.S. exports is essential to strengthen the national economy. The vast majority of our nation's exports and 80 percent of international trade travel through our ports.

The Panama Canal expansion project started construction in 2007 and began commercial operation in June 2016. The project widened the canal for more traffic and a new class of supersize container vessels called "Post-Panamax" ships, with cargo capacity 2½ times greater than the standard Panamax ships.

The Corps started the Miami Harbor Deepening Feasibility

Study in 1999 and completed it in 2005, several years prior to the "then potential" Panama Canal expansion. Changes since the last Corps study also occurred in the size of cruise ships. Florida's seaports are growing more crowded as the cruise industry builds bigger ships, attracts more international tourists, and serves almost two-thirds of all U.S. cruise passengers as they pass through Florida's ports. In 2009, the "Oasis-class" was introduced as the world's largest cruise ships. These ships surpassed the earlier Freedom-class ships, and are nearly 45% larger. In 2017, four new Oasis cruise ships arrived in South Florida, including the world's (then) largest – Harmony of the Seas.



This new three-year study will help determine if a future project is justified from a federal economic perspective. It may also present opportunities for local economic development. Today's and future container ships, oil tankers and cruise ships require significantly more room to operate efficiently. As a result of increased traffic and overall growth in vessel size, improvements including potential deepening and widening may help alleviate vessel congestion and improve transit efficiency and maneuverability.

During the study process, the Corps will conduct extensive plan formulation, plan revision, and plan refinement to avoid impacts to the environment, whenever possible. The Corps also goes to great effort to ensure environmental impacts are accurately quantified, mitigated, and minimized to the greatest extent possible while still meeting the project need and purpose.

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Miami Harbor Improvement Study Area



- 5 miles of Federal Channel
- 52/50 foot depth by 500 feet wide
- Non-Federal Sponsor: Miami-Dade County and Port of Miami

The purpose of the scoping meeting is to present and discuss the production of a National Environmental Policy Act (NEPA) document for the feasibility study, and to assess the effects of potential navigation improvements to Miami Harbor. The scoping meetings will aid in determining the scope of the NEPA analysis and any potentially significant issues.

The NEPA process will also identify alternatives and information needed to evaluate alternatives. Alternatives under consideration for the study include:

1) No action;

2) Widening and/or deepening of specific areas within Miami Harbor’s federally authorized channels, including: the Outer Entrance Channel Flare, Outer Entrance Channel, Elbow, Fisherman’s Channel, and Lummus Island Turning basin. Additionally, the evaluation of assumption of maintenance for Dodge Island Cut and Dodge Island Turning Basin.

Project anticipated issues include proximity to hardbottom /reef communities, turbidity and sedimentation associated with dredging operations, seagrasses, threatened and endangered species, and cultural, commercial and recreational resources.

What’s occurred since the last dredging?

Since the Corps completed construction in 2015, the project’s mitigation features have attracted an abundance of marine life! The features include nearly 17 acres of seagrass, 12 acres of artificial reef and the relocation of thousands of corals.

Observed patterns of coral mortality in the harbor area over time appear related to a catastrophic, regional-scale coral disease outbreak that had, and continues to have, a destructive effect on local populations. Additionally, corals appeared affected by high temperature-induced bleaching in 2014, which ranked as Earth’s warmest year since 1880, according to separate analyses by NASA and NOAA scientists. NOAA’s Coral Reef Watch reported the global-scale bleaching lasted well into 2016.

In July 2016, at the one-year post construction mark, federal and state agencies started conducting a definitive survey of the project area and beyond to determine final project impacts, the success of mitigation efforts to date, and the need, if any, for additional mitigation. The one-year post construction reports were made publically available in 2017. State and Federal resource agency analysis of the survey remains ongoing today.

The thorough coral monitoring conducted throughout the Miami Harbor project is providing marine scientists with valuable time-series information regarding the spread of white band and other coral diseases in southeast Florida, and its impact on hundreds of coral colonies. This comprehensive dataset has very valuable information on coral disease for scientists to use.



Marine life are performing well on the artificial reef created by the previous project.



A diver attaches coral to the limerock placed as a substrate for the artificial reef during the previous project.