LAKE WORTH INLET | Pilot Study

FACTS & INFORMATION

May 2013

Palm Beach Harbor is located on the Atlantic Coast of Florida, approximately 53 miles south of Fort Pierce Harbor, and 71 miles north of Miami Harbor. The harbor entrance (also known as Lake Worth Inlet) is an artificial cut through the barrier beach and limestone formation connecting Lake Worth, a coastal lagoon, with the Atlantic Ocean. Lake Worth Inlet contains a federally authorized channel and associated features which support a deepwater port on the Atlantic Ocean in Palm Beach County, Fla.

EXISTING SITE CONDITIONS

Lake Worth is an estuary that exhibits characteristics typical of estuarine systems in southeast Florida. Much of the beach and dune ecosystem in this vicinity has been altered by development. Structures such as seawalls and bulkheads have reduced a significant amount of the vegetation that would naturally occur here.

The existing channel sediments in the inlet are predominately sand and shell and are subject to considerable shifting by wave and tidal action. Limestone rock outcrops are found on either side of the Federal Channel at the interface between the channel and the Intracoastal Waterway (IWW). Littoral drift in the area is predominately north to south. The mean tidal range is 2.8 feet and the spring tidal range is 3.3 feet. Shoaling continues to be a recurring problem in the Palm Beach Harbor.

A sand transfer plant is located on the north jetty of the inlet. The sand transfer plant takes the sand that accumulates on the north jetty, slurries the material with sea water, and passes it under the inlet and to the beach south of the south jetty. Sand continues to accumulate at a rapid rate in this area. The areas to be dredged are located within the federal project limits.

The existing conditions at the Lake Worth Inlet cause vessels to be restricted by light loading, tidal delays, and maneuvering difficulties. These translate into transportation costs to the economy, navigation concerns and safety issues.

PROJECT BENEFITS

The U.S. Army Corps of Engineers Feasibility Study is currently underway and will determine plans to reduce transportation costs, reduce navigation concerns, and improve safety. The federal objective is to determine the project alternative with the maximum net benefits while protecting or minimizing impacts to the environment.

Lake Worth Inlet is historically a rapidly shoaling channel, requiring dredging twice per year to maintain existing project depths. There have been two ways of reducing maintenance: an existing/extended settling basin and 4-feet of advanced maintenance in the entrance channel.

One of the objectives of the feasibility study is to reevaluate the most effective way to maintain or reduce maintenance dredging intervals.

The study is examining widening the channel and deepening from the existing project depth of 33-feet in one-foot incremental depths from 34-43 feet. The study will also determine the impacts to sea grass and hardbottoms, and mitigation requirements for these species.

Conservation measures are a major focus of the study phase. Avoiding and minimizing potential impacts to managed and protected species are a major component of the plan, and will include measures to protect them.

FOR MORE INFORMATION

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