



Agenda Item: Presentation on the Planning Assistance to States Project for an Offshore Breakwater off Dellanera RV Park

Background:

The beach in front of Dellanera RV Park has faced the highest erosion rates of the entire Galveston Island, up to eight feet per year. Due to the close proximity to Highway 3005, the main evacuation route for Galveston in the event of severely inclement weather, the beach is a crucial line of defense. Without proper dune height and berm width, a significant storm surge could breach the highway and prevent evacuation, trapping residents on the island.

Following the destruction of Hurricane Ike in 2008, the Park Board embarked on a mission to combat the excessive erosion rates at the beach in front of Dellanera RV Park. In 2015, in a collaborative effort with the Texas General Land Office (GLO), the Federal Emergency Management Agency (FEMA), the City of Galveston, and Seascape Condominiums, the Park Board trucked in 118,000 cubic yards of beach-quality sand. The nourishment effort established a dune height of 11 feet and extended the width of the berm to 50-80 feet over a length of 2000 feet.

Under the authority provided by Section 22 of the Water Resources Development Act of 1974, the Army Corp of Engineers (USACE) can provide local governments assistance in the preparation of comprehensive plans for the development, utilization, and conservation of water and related land resources through the Planning Assistance to States (PAS) program.

In response to damages from Hurricane Harvey in 2017, the Park Board began discussions with USACE through the PAS program to develop designs for a hard structure off the western terminus of the Galveston Seawall. These discussions also engaged FEMA in the effort to seek Hazard Mitigation Funding under the declared disaster to assist with engineering and construction of a possible offshore breakwater. In 2020 the Park Board hired W.F. Baird & Associates Ltd. (Baird) as their engineer of record to assist with the project.

The purpose of this study is to utilize modeling to analyze various breakwater designs. The design will be optimized with the intent of creating an offshore structure for erosion mitigation. The final PAS documents will be an addendum to the existing Sand Management Plan.

The presentation today, provided by the USACE team (with the assistance of Baird), will provide an update on the project. The presentation will include highlights on 1) Background on the problem; 2) FEMA involvement; 3) Solutions developed / alternative analysis; 4) Focus on the preferred solution; 5) Appearance, performance & effects; and 6) Materials.

Staff Recommendation:

There are no recommendations at this time.

Funding Source (if applicable):

Nourished Beach Budget -- Work with USACE for the PAS was funded through the FY 19-20 budget.