

# THIN-LAYER PLACEMENT PROJECT SHEET



## Galveston GIWW, West Bay

August 2016

**Location:** Galveston GIWW, West Bay

**Type:** Marsh restoration/ Historical dredged material placement

**Area:**

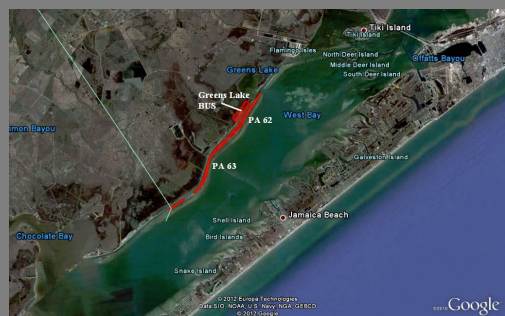
**City:** Galveston

**County:** Galveston and Brazoria

**Agencies:** US Army Corps of Engineers, Galveston District, Galveston Bay Foundation

**State/Province:** Texas

**Country:** United States



Taken from Salles 2012.

### Background

West Bay is a long inlet of Galveston Bay that nearly runs the entire length west of Galveston Island. Seagrass is an important and rare habitat in the bay, which provides nursery areas for species such as juvenile shrimp, crabs, and fish. Since 1950s, the bay has lost over 90% of its seagrasses, but recently these have begun to return to the bay (Galveston Bay Foundation 2012). Maintenance dredging is regularly required in a Galveston Gulf Intracoastal Waterway (GIWW) area adjacent to West Bay. Two different permitted placement areas (PA 62 and PA 63) have been identified for thin layer placement of dredged material. The main purpose of thin layer placement is to nourish emergent land to protect the GIWW and marshes from the strong fetch across the bay. This will improve the conditions of the site and prevent existing seagrass beds from eroding.

### Project Description

As of January 2012, thin layer placement efforts had already been completed in PA 63 and placement of a substantial amount of dredged material was scheduled for PA 62. Continuous outfall repositioning was used for dredged material placement on both areas. The material was placed during the winter to minimize impacts to seagrass, which was a contractual requirement. It has been demonstrated that seagrass could potentially recover if 6 to 8 in. of consolidated material is placed during dormancy. Approximately 260,000 CY of DM were scheduled to be placed at 4 locations of PA 62, 91,000 CY at 3 locations of PA 62 - west end, and 70,000 CY at more than 12 locations of PA 62 - east end. One of the issues with the placement areas is that placed material is re-worked by tides and storms, and current sediment thickness is expected to significantly during the summer growing season. For PA 62, a seagrass survey was performed prior to placement and the amount of dredged material to be placed was reduced by half. A long-term monitoring plan for seagrass

beds will be developed by the ICT for both PAs. A post-placement survey was planned for PA 63 to determine layer thickness and elevations as part of long-term monitoring efforts.

### Findings

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The USACE, Galveston District will establish an Upper Coasts GIWW Interagency Tea, (ICT) to keep agencies better informed of maintenance dredging and placement efforts, and solicit their input (Sallase 2012).

### References

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Galveston Bay Foundation (2012) USACE Makes Changes to West Bay Dredging Project. Webster, TX.

Sallese, C.C. (2012) GIWW Dredging at West Bay Response to Public Concerns. Presentation. USACE-Galveston District.

### Points of Contact

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Information on thin layer placement (TLP) case studies has been compiled as part of a DOTS/EWN project to provide a source of information, knowledge, and experience on TLP of sediment or dredged material in aquatic environments. The Thin Layer Placement Website and Map-Portal are funded by the US Army Engineer Research and Development Center (ERDC). POCs for the Thin Layer Placement Website and Map-Portal are:

- Damarys Acevedo-Mackey, PE  
[Damarys.Acevedo-Mackey@usace.army.mil](mailto:Damarys.Acevedo-Mackey@usace.army.mil), 601-634-4845
- Trudy J. Estes, Ph.D., PE  
[Trudy.J.Estes@usace.army.mil](mailto:Trudy.J.Estes@usace.army.mil), 601-634-2125



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