## **GALVESTON BAY BOTTOM ECOSYSTEM SYSTEM FEATURES**

Eddie Irigoyen 3 November 2016

"The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation."







US Army Corps of Engineers

### Galveston Bay Submerged Aquatic Habitat ER

Data needed related to previously mined holes from oyster shell mining operations in Galveston Bay.

Evaluation of sediment and biological characteristics of previously mined pits in Galveston Bay.

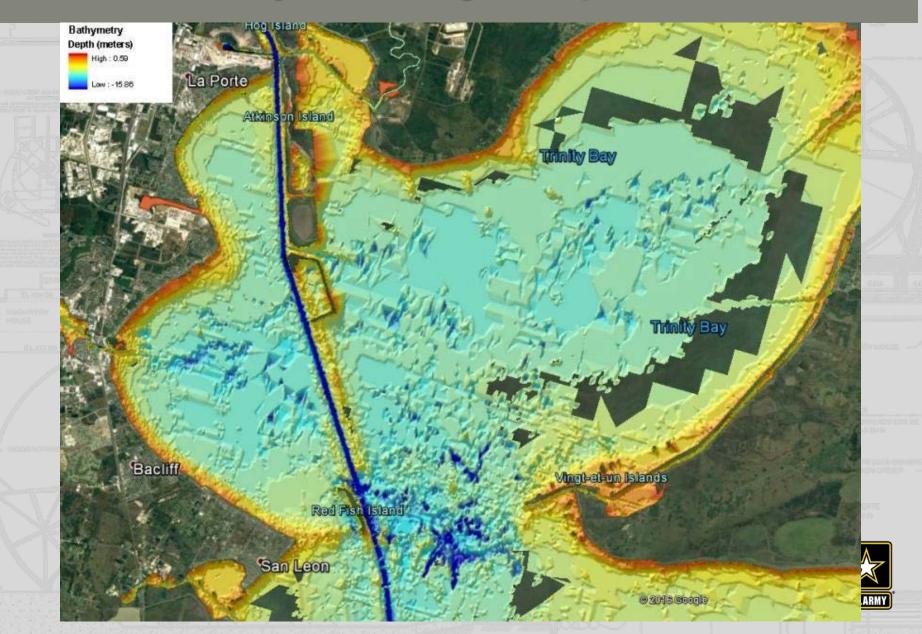
¿Questions have come up regarding if maintenance material dredged from the channel could be placed in these holes?

ER opportunity to identify, develop, and recommend a bay bottom habitat restoration plan through application of innovative concepts and EWN-RSM principles





### Galveston Bay Submerged Aquatic Habitat ER



## **TYPE OF SEDIMENTS AND IMPACTS**

What Kind of sediments exists in these holes?

Galveston Bay is a shallow brackish estuary with a large supply of mobile, fine-grained sediment.

What kind of impacts would result by open bay disposal of maintenance material in these holes?

These former holes are probably filled with material that is very similar to the proposed maintenance dredge material form the Huston Ship Channel.

TANTER GATE





### Next Step

Does any information already exist regarding these areas?No Current data exist.

 Working with ERDC through a DOTS Request to gather data to quantify site conditions so that a project to fill or cap these mines can be developed.

#### What would be the procedure for filling holes?

- Dredged materials would be harvested and placed at select bay bottom sites for restoration of bay bottom elevations and compositions conducive to habitat ER
- Restored submerged aquatic habitat would be suitable for colonization of oysters and seagrasses with return to functionality for fish and wildlife





## GALVESTON BAY BOTTOM ER INVESTIGATION APPROACH

- An approved Sec 1135 project for construction would be coordinated with ongoing operations and maintenance to ensure consistency and compatibility
- The plan will also be developed for consistency and compatibility with commercial navigation and existing recreation usage in the bay
  - Estimated total project budget is \$10 M





# **CONTINUE AUTHORITY PROGRAM**

| Program Authority | Description  |
|-------------------|--|
| Section 204       | Regional Sediment Management and beneficial uses of dredged material from new or existing Federal projects for ecosystem restoration, FRM or HSDR purpose.   |
| Section 206       | Aquatic ecosystem restoration.   |
| Section 1135      | Modification of USACE constructed water resources<br>projects to improve the quality of the environment. Also,<br>restoration projects at locations where an existing Corps<br>project contributed to the degradation. 7 |



US Army Corps of Engineers.



## **Eddie Irigoyen**

Project Manager US Army Corps of Engineers Galveston District

### eduardo.irigoyen@usace.army.mil 409-766-3130



11512 OLEAN 50 THE SAME BUCKNERDS SAN 26 USEDFORL SONS A DAM

PRESTRESSED GONGRETT

NOTE TARTER GATE NOT SHOWN



