



Regional Sediment Management Program

Galveston District: Galveston Entrance Channel RSM



Description

The Galveston District (SWG) will identify sediment management options to reduce the amount of material which settles in the Galveston Entrance Channel. Successful options would benefit SWG by increasing time between dredging cycles, reducing overall dredging costs, and minimizing the occurrences of vessel draft restrictions.



Issue/Challenge To Address

Approximately 1.5 to 2 Million cubic yards of dredged material is removed from the Galveston Entrance Channel every 18 to 24 months as part of the normal maintenance dredging cycle. In recent years, funding limitations have precluded sufficient removal of maintenance material from the Galveston Entrance Channel resulting in the requirement for more frequent dredging contracts to alleviate and prevent the draft restrictions imposed on vessels utilizing the channel. Due to these funding limitations and the shared pot of money which funds the maintenance of the channels and upland placement areas within the Galveston project, SWG often has to choose whether to dredge the channel, or maintain the placement areas, but cannot afford to do both. As a result, the overall management of the system suffers. Dredging projects are knocked off cycle due to insufficient funds available to remove all of the material required to maintain the 18 to 24 month cycle, or placement area levee projects are delayed resulting in insufficient capacity for placement of dredge material and increased dredging costs (Galveston Harbor material is forced to be taken offshore instead of depositing in the San Jacinto and Pelican Island placement areas). Finding alternatives that could potentially keep material in suspension, on adjacent beaches, or otherwise out of the Galveston Entrance Channel would benefit SWG by decreasing dredging needs and enabling the district to stretch its funding in order to maintain the other requirements of the Galveston project.

Successes Lessons Learned

Lessons learned will be compiled during the duration of this study.

Expected Products

- Description of Alternatives to be Analyzed
- Quantified impacts of each Alternative Solution
- Final Report and Presentation

Stakeholders/Users

Stakeholders include the Galveston Park Board of Trustees, the Texas General Land Office, the Ports of Galveston, Texas City, and Houston, as well as waterway users.

Projected Benefits

Benefits would include the reduction of the Galveston Entrance Channel's overall dredging costs by identifying the various sources of material which enters the channel and finding ways to keep sediment in the system instead of settling in the channel. By attempting to minimize the amount of material which settles in the channel, SWG could potentially reduce the frequency of dredging in at least portions of the channel, reduce dredging costs due to decreased cubic yardage and decreased dredging frequency (i.e. reduced mobilization costs), and minimize the development of draft restrictions due to shoals in the channel.

Leveraging Opportunities

SWG has identified opportunities to perform this RSM study in conjunction with the Galveston Park Board of Trustees Sand Management Plan. The Sand Management Plan will create a long term plan for maintaining sand on Galveston beaches, including the popular East Beach and Stewart Beach, and will identify sand sources to help sustain the beaches along the island. The Galveston Entrance Channel RSM study will work to identify sources of sand that contribute to shoaling in the Galveston Entrance Channel and find ways to prevent the material from entering the channel. Collaboration between these two studies is anticipated to help better manage the Galveston Entrance Channel and the adjacent beaches as a system and benefit both SWG and the Galveston Park Board of Trustees.

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Participating Partners

Galveston Park Board of Trustees