

PRELIMINARY REPORT ON OPERATION OF HOPPER DREDGES  
IN THE FREEPORT HARBOR CHANNEL PROJECT

On June 27, 1996, the Government-owned hopper dredge *Wheeler* began work on the Entrance Channel of the Freeport Harbor Channel Project. Contract specifications required dredging an estimated 1,769,000 cubic yards (CY) of shoal material. The required depth of dredging was 49 feet below Mean Low Tide (MLT, Corps of Engineers Datum), with 2 feet of allowable overdepth dredging along the Outer Bar Channel and 47 feet MLT with 2 feet of overdepth along the Jetty Channel.

Dredging began on June 27, 1996, and was completed on August 5, 1996. A total of 418 loads of dredged material was collected and placed into Placement Area No. 1-A. Dredging was performed between Stations -50+00 and 0+00 in the Outer Bar Channel. A total of 393,394 CY of material was excavated from within the channel.

The dredge was equipped with rigid draghead turtle deflectors, and 100% inflow screening with a 4-inch square mesh. NMFS-approved turtle observers provided 24-hour/day monitoring of dragheads and screens for each load cycle. The observers were employed by Coastwise Consulting under a subcontract with Espey, Huston, and Associates, Inc.

During the performance of this dredging, a total of four sea turtle takes were observed, all of which were loggerheads. The first take occurred on June 28, in load No. 9. The second turtle was taken on July 11, in load No. 146. The third take occurred on July 13, in load No. 171, and the fourth occurred on July 22 in load No. 283. A copy of the daily and weekly observer reports is enclosed.

We discussed this situation with *Wheeler* personnel, and have asked them to study the dredging records in an attempt to discern a reason for the number of takes experienced, and whether there is a possibility that operational parameters can be modified to reduce turtle incidents. Their analysis did not reveal any changes, that if implemented, would prevent nor reduce the number of turtle takes during dredging operations. Additionally, we have requested the New Orleans District to furnish to the draghead design team at the Waterways Experiment Station (WES), a copy of the As-Built shop drawings of the draghead deflectors, to ensure that they were constructed to design specifications. The WES presently has a copy of those specifications, but has not indicated when their analyses would be concluded.

The next dredging project to be performed by the *Wheeler* is currently projected to be in the Corpus Christi Ship Channel during the December 1996 time frame. During this dredging, the Galveston District intends to have one of the researchers from WES, on board to observe the operations and handling of the dragheads, to determine if the turtle deflectors are used to optimal potential.

One of the recurring difficulties experienced by the observers involved the excessive amounts of clay that were often dredged. The clay was taken as cohesive masses which often clogged the screening and made cleanup physically difficult and time-consuming.