

PRELIMINARY REPORT ON OPERATION OF HOPPER DREDGES  
IN THE BRAZOS ISLAND HARBOR PROJECT

DECEMBER 2003

On December 1, 2003 the contract hopper dredge *Dodge Island* began work on a segment of the Brownsville Channel along the Brazos Island Harbor (BIH) Project. Contract specifications required dredging an estimated 491,000 cubic yards (CY) of shoal material. The required depth of dredging was 44 feet below Mean Low Tide (MLT, Corps of Engineers Datum), with 2 feet of allowable overdepth dredging.

Dredging began on December 1, 2003, and was suspended on December 18, 2003. A total of 82 loads of dredged material were collected and deposited into the nearshore berm at Placement Area 1A. Dredging was performed between Stations 1+423 and 13+000. A total of 355,957 CY of material were excavated from this project.

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 to the dredging contractor, Great Lakes Dredged and Dock Co., Inc.

Prior to dredging, risk-assessment trawling was conducted on a 24-hour daily basis over a period of five days from September 30, 2003 to October 5, 2003. A total of 127 tows were conducted. No turtles were captured during this effort.

Relocation trawling was conducted on a 24-hour daily basis during dredging operations. A total of 13 green turtles were tagged and relocated.

During the performance of this dredging, three green sea turtle takes were documented. These takes occurred on December 8 in load No. 37, December 12, in load No. 53, and December 18 in load No. 82. The water temperatures during these takes were 20.5°, 19.5°, and 18.8°C, respectively. A copy of the observer reports is enclosed.

Dredging was suspended prior to completion of work as a result of these takes. The sequence of work was prioritized to remove the most heavily shoaled areas first; so, when work was halted, only lighter shoals remained. The harbor pilots were consulted about the situation and they indicated that the condition of the channel was satisfactory.

Coordination was conducted with the Sea Turtle Stranding and Salvage Network (STSSN). There was a report of one stranding that bore injuries consistent with an encounter with a hopper dredge. This stranding was located about 2.1 miles north of the BIH jetties. A copy of the stranding report is enclosed.

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. As a result, the inflow screening was left open to prevent the clay accumulations. Inflow screen was reduced to about 50% effectiveness; however, overflow remained 100% effective.