

PRELIMINARY REPORT ON OPERATION OF HOPPER DREDGES
IN THE SABINE-NECHES WATERWAY PROJECT

MARCH 12, 1997 - SEPTEMBER 25, 1997

On March 12, 1997, contract hopper dredges began work on the Sabine Pass Outer Bar, and Sabine Bank Channels of the Sabine-Neches Waterway Project. Dredging specifications required dredging an estimated 3,800,000 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 March 12, 1997, and was completed on September 25, 1997. Three dredges were employed under this contract, they were the *Mermentau*, *Atchafalaya*, and the *Ouachita*. The *Mermentau* worked from March 12, 1997 until August 1, 1997, dredging 3,237 loads. The *Atchafalaya* worked from June 6, 1997 until August 27, 1997, and excavated 342 loads of dredged material and conducted bed-leveling operations. The *Ouachita* worked from August 4, 1997 until September 25, 1997, and dredged 997 loads of dredged material. A total of 4,576 loads of dredged material were collected and placed into the four Placement Areas. Dredging was performed Stations 0+000 and 20+000 along the Outer Bar Channel. The two segments of the Sabine Bank Channel that were dredged extended from Stations 40+000 to 46+000, and 70+000 to 90+000. A total of 4,727,775 CY of material were excavated from within the channel.

The dredges were 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, Gulf Coast Trailing Co., Inc.

Bed-leveling operations consisted water injection dredging (WID). This process involves the injection of a high volume of low pressure water into the sediment. This raises the sediment, creating a gravity flow of the material toward the low areas in the channel. This was accomplished by installing a water injection head onto one of the dragheads. The other draghead was suspended in the water column about 12 feet from the surface, and was the source of the injected water. During the course of the WID operations, the inflow screens continued to be monitoring, at approximately 6-hour intervals. Anecdotal evidence suggests that sweeping operations result in the majority of turtle takes during hopper dredge operations. This WID process was conducted in lieu of traditional sweeping operations.

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During the performance of this dredging, one sea turtle take was documented. This was a Kemp's ridley taken by the *Mermentau* on March 26 in load No. 376. This turtle was taken from the Outer Bar Channel within 5,000 feet of the end of the jetties. The water temperature was about 19°C. Following this take, dredging continued for another six months, during which the water temperature increased to 32°C. This later dredging was conducted further from the jetty, than the channel segment where the turtle take occurred. There were also instances where turtles were swimming in the vicinity of the dredge, in the more Gulfward sections. This suggests that an increase in the distance from the jetties, the likelihood for a resulting decrease in lethal turtle encounters. A copy of the daily and weekly observer reports is enclosed.