

ANNUAL SEA TURTLE MONITORING REPORT
SAVANNAH DISTRICT
MAINTENANCE DREDGING - FISCAL YEAR 2011

INTRODUCTION

This report is submitted in fulfillment of requirements of the Endangered Species Act and the Section 7 Consultation - Biological Opinion for the “Continued use of hopper dredging of channels and borrow areas in the southeastern United States” (No Consultation Number provided) dated September 25, 1997 (that incorporates the August 25, 1995 Biological Opinion for these activities). Specifically, this report summarizes hopper dredging operations in Fiscal Year (FY) 2011 within the Savannah District and is submitted in compliance with reasonable and prudent measure No. 6 – Reporting found in the August 25, 1995 Opinion.

The following hopper maintenance dredging projects (or the portion of the project that used a hopper dredge) were completed in FY 2011 under contract W912HN-11-D-0006.

Brunswick Harbor Bar Channel 15 Jan 11 to 24 Feb 11

Savannah Harbor Bar Channel 25 Feb11 to 07 Mar 11

In accordance with the South Atlantic Division Corps of Engineers Hopper Dredging Protocol for the Atlantic Coast, the Savannah District normally schedules hopper dredging operations for Savannah Harbor during the winter months (15 December through 31 March) when water temperatures are cool and the risk of taking sea turtles is low. Brunswick Harbor is normally scheduled for hopper dredging 1 January through 28 February.

TURTLE MONITORING PROGRAM

As a result of the consultation process, the requirement to document turtle takes by the dredges was devised. In order to accomplish this task, before hopper dredging operations commenced, they are equipped such that all inflows and overflows are 100% screened with a 4” X 4” mesh size. The configuration and location of the screens depends upon the construction of the dredge. Additionally, 24-hour monitoring by NMFS-approved turtle observers is conducted to identify any turtles or turtle parts that may be caught on these screens. Draghead deflectors are also deployed to deflect any turtles that may happen to be in or near the path of the draghead during excavation. The design of the deflectors is such that, when plowing at approximately a 6” depth, a sediment wave is created ahead of the draghead, cushioning any contact with benthic-oriented turtles and thereby preventing injuries. As a component of the project specifications, the contractor is required to submit drawings of the turtle deflector attachment to the draghead as well as the approach angles that are necessary to attain the required 6” plowing depth for the given project depths. These submittals are reviewed and inspected prior to commencement of hopper dredging projects.

The observers inspect and clean all inflow and overflow screening at the end of each load. Dragheads and deflectors are also inspected immediately after each load, and dredge personnel are informed of any necessary repairs. Data sheets are completed daily detailing all biological samples and debris found in the screening and dragheads. The observers also record the start, end, and discharge times for each load, the specific location of the dredging area, the type of material being dredged, weather, tide and water temperature data, the condition of the screening, and any other pertinent information. Any sea turtle encounters or takes are described on a separate incident report form. Additionally, all positively identified turtle parts or carcasses are photographed and diagrams are made of the specimen. Tissue samples from all loggerhead sea turtles taken by the dredge shall be collected, preserved in accordance with National Marine Fisheries Service (NMFS) protocols and shipped to the Southeast Fisheries Science Center in Miami, FL.

A bridge watch for sea turtles and marine mammals is maintained during all daylight hours except when the observer is off the bridge cleaning and inspecting the screens and dragheads. All sightings of cetaceans and sea turtles are recorded in a bridge watch logbook. Specific sightings of North Atlantic right whales (NARW) are reported separately on the Large Whale Observation Data form and are attached to the Endangered Species Observation Program Daily Report. Likewise, any takes of sturgeons are reported on a separate incident report form. Copies of all endangered species forms are supplied to the Contracting Officer or Contracting Officer's Representative (CO or COR) and NFMS by the Contractor.

SCREEN CONFIGURATIONS

Turtle monitoring activities were conducted aboard the Padre Island during FY 2011. This vessel was required to have rigid draghead deflectors, and 100% inflow screening or overflow screening with openings starting at 4" x 4". If the observers and the draghead operator determine that the draghead is clogging and reducing production substantially, the screens may be modified.

PROJECTS

Brunswick Harbor Channel, Glynn County, GA

Contract #W912HN-11-D-0006 included maintenance dredging for both Brunswick and Savannah Bar Channels. The contract was awarded to Great Lakes Dredge and Dock Company on 17 Dec 2010 and NTP was issued on 15 Jan 2011. The work was performed by the Padre Island from 15 January 2011 to 24 February 2011 between and including stations -30+000B to -45+000B and Cedar Hammock stations 21+835 to -8+000B. The dredge was subject to speed restrictions (slow bells) due to NARW sightings on January 16th, 20th, 25th & 29th and February 6th, 18th, 19th, 21st, & 22nd. Inclement weather conditions resulted in 8.5 slow bells. No trawling or turtle takes occurred.

Dredge working days:
Padre Island: 1/15 to 2/24.

Dredged material was placed in feeder berms E, F, and G.

Brunswick Harbor Dredging Summary

Start	Stop	Dredge	Loads	Dredging Days	Dredging Hrs	Whale Slow Days
15 Jan 11	24 Feb 11	Padre Island	223	41	394.92	9

Brunswick Harbor Dredged Material Placement Summary

Dredge	Loads in ODMDS	Loads in E	Loads in F	Loads in G
Padre Island	0	1	66	156

Dredging Volumes Reported by Contractor (Cubic Yards)

Dredge	ODMDS	Area E	Area F	Area G	Total
Padre Island	0	1,115	133,804	285,386	420,305

COR estimated total placed volumes agree with those reported by the Contractor.

Placement was as follows:

Padre Island loads to Feeder Berm E: 220.

Padre Island loads to Feeder Berm F: 3, 5, 6, 8, 9, 12, 15, 16, 19, 22-25, 27, 28, 31, 34, 35, 38, 43, 44, 46, 49, 54, 60, 65, 67, 70, 71, 73, 74, 77, 78, 80, 81, 83, 84, 87, 90, 93, 94, 97, 99, 102, 108, 119, 122, 125, 126, 134, 137, 142, 145, 148, 153, 156, 159, 162, 164, 165, 167, 170, 175, 200, 212, 223.

Padre Island loads to Feeder Berm G: 1, 2, 4, 7, 10, 11, 13, 14, 17, 18, 20, 21, 26, 29, 30, 32, 33, 36, 37, 39, 40-42, 45, 47, 48, 50-53, 55-59, 61-64, 66, 68, 69, 72, 75, 76, 79, 82, 85, 86, 88, 89, 91, 92, 95, 96, 98, 100, 101, 103-107, 109-118, 120, 121, 123, 124, 127-133, 135, 136, 138-141, 143, 144, 146, 147, 149-152, 154, 155, 157, 158, 160, 161, 163, 166, 168, 169, 171-174, 176-199, 201-211, 213-219, 221, 222.

Pay Volume = 1,474,424 cu yds

Total Removed = 1,474,424 cu yds (as calculated from after-dredge hydrographic survey)

Placement = Feeder Berms E, F, and G.

A sea turtle compliance inspection was performed in accordance with the “COE Sea Turtle Inspection Checklist for Hopper Dredges.” The dredge’s dragarms were equipped with a rigid draghead turtle deflector. Inflow screening was in place and, during normal flow conditions, was 100%. NMFS-approved turtle observers under contract with Coastwise Consulting, Inc provided 24-hour/day monitoring of dragheads and screens for each load cycle.

Copies of the observer reports have been provided to the U.S. Army Engineer Research and Development Center (ERDC) for uploading to the “Sea Turtle Data Warehouse”.

Savannah Harbor Bar Channel, Chatham County, GA

The Savannah Harbor bar channel was dredged from 25 February 2011 through 07 March 2011 by the Padre Island. Dredged ranges included Stations -9+000B to -23+000B. There were no NARW sightings and 5 slow bells due to inclement weather. No trawling or turtle takes occurred.

Dredge working days:
Padre Island: 2/25 to 3/7

Dredge material was placed in feeder berm #6.

Savannah Harbor Dredging Summary

Start	Stop	Dredge	Loads	Dredging Days	Dredging Hrs	Whale Slow Days
25 Feb 11	07 Mar 11	Padre Island	56	11	108.95	0

Savannah Harbor Dredged Material Placement Summary

Dredge	Loads in ODMDS	Loads in #6
Padre Island	0	56

Dredging Volumes Reported by Contractor (Cubic Yards)

Dredge	ODMDS	#6	Total
Padre Island	0	143,194	143,194

COR estimated total placed volumes agree with those reported by the Contractor.

Placement was as follows:

Padre Island loads to Feeder Berm #6: 224-279 (load numbers contiguous with Brunswick project).

Pay Volume = 217,647 cu yds
Total Removed = 237,007 cu yds (as calculated from after-dredge hydrographic survey)
Placement = Feeder Berm #6

Copies of the observer reports have been provided to the U.S. Army Engineer Research and Development Center (ERDC) for uploading to the “Sea Turtle Data Warehouse.”

COSTS

The costs incurred in performing the turtle-monitoring program during FY 2011 include the costs for equipping and maintaining screens and draghead deflectors on contractor-owned dredges, as well as providing NMFS-approved observers. In addition to the direct costs are District costs for administration and oversight. Table #1 depicts the costs of monitoring and dredge inspection for FY 2011. However, this table does not include the costs for equipping and maintaining screens and draghead deflectors, the unquantifiable costs associated with decreased dredging efficiency which may result from the use of the draghead deflectors, and downtime experienced during cleaning of excessively fouled screens. Estimates of these increased costs are anticipated by the potential contractors during the preparation of bids, and there is no way to determine the actual value of these costs.

TABLE #1
COSTS ASSOCIATED WITH PROTECTION OF SEA TURTLES
DURING HOPPER DREDGING IN FY11

Project	Monitoring*1	Dredge Stand-by	Inspections*2	PD-E*3	DQM
Brunswick Bar	(41 days) \$20,500	0	(41 days) \$76,859.83	\$2,000	\$17,425
Savannah Bar	(11 days) \$5,500	0	(11 days) \$20,620.93	\$2,000	\$4,675
Total	\$26,000	\$0	\$97,480.76	\$4,000	\$22,100

*1 Monitoring by Turtle Observers, estimated at \$500/day.

*2 Inspections/oversight, \$1, 874.63/day. Includes administration time. This cost equals COE daily inspection costs determined for liquidated damages.

*3 Estimate

SUMMARY

During Fiscal Year 2011, two maintenance-dredging projects in Savannah District were performed using a hopper dredge, Savannah Harbor bar and Brunswick Harbor bar. No turtle takes or other incidents with endangered species were reported.