

ANNUAL SEA TURTLE MONITORING REPORT
SAVANNAH DISTRICT
MAINTENANCE DREDGING - FISCAL YEAR 2012

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) 2012 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 projects that used a hopper dredge) were completed in FY 2012 under contract W912HN-12-C-0001.

Brunswick Harbor Bar Channel 27 Jan 12 to 07 Feb 12
22 Mar 12 (one day)

Savannah Harbor Bar Channel 18 Mar 12 to 30 Mar 12

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 hopper dredging vessels Newport, Bayport and Glenn Edwards during FY 2012. The vessels were 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. For these projects, no modifications to the screening occurred.

PROJECTS

Brunswick Harbor Channel, Glynn County, GA

Contract #W912HN-12-C-0001 included maintenance dredging for both Brunswick and Savannah Bar Channels. The contract was awarded to Manson Construction Company on 16 December 2011 and Notice To Proceed (NTP) was issued on 23 January 2012. The work was performed in Brunswick by the Newport from 27 January 2012 to 07 February 2012 between and including stations -26+000B to -36+000B and for one day on 22 March 2012 by the dredge Bayport. The Newport was subject to a 5 knot speed restriction (slow bell), or the minimum safe speed, due to North Atlantic right whale (NARW) sightings on January 27th, 28th, & 31st, and February 1st, 2nd, 4th, 5th & 6th. Inclement weather conditions resulted in 1 slow bell.

In accordance with the pre-dredge risk assessment, The District instructed the contractor to begin trawling prior to commencing work. The Coastwise Consulting, Inc vessel, Catina Renea, performed non-capture (sweep) trawling 25 January through 07 February with a total of 72 tows and 370 sweeps between buoy channel markers 4 and 8. However, due to the inherent potential for entrainment when using a hopper dredge during clean-up operations, a total of 6 turtles were taken by the Newport during the Brunswick Harbor portion of the project.

The trawler Lady Susie II began sweep trawling at Brunswick on 21 March 2012 through 23 March 2012 in the outer channel from buoy channel marker 10 seaward to buoy 2 with a total of 43 tows and 43 sweeps. The dredge Bayport took three turtles in the first load the day after trawling began and the project was terminated. Two were found during inspections of the hopper and screening. The third was found inside the hopper and reported on 26 March after the dredge had docked in Jacksonville, Florida. The captain of the vessel believed the turtle was pinched in either the aft vertical seal or the lower hopper seal.

A sea turtle compliance inspection was performed in accordance with the “COE Sea Turtle Inspection Checklist for Hopper Dredges” for both dredges. The dredges’ 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 all observer reports for both harbors have been provided to the U.S. Army Engineer Research and Development Center (ERDC) for uploading to the “Sea Turtle Data Warehouse”.

Below is a summary of sea turtle takes in Brunswick Harbor for FY12.

Turtle Take	Species	Age	Date	Load #	Time Recovered	Surface Temp (°C)	Dredge
1	Kemp's Ridley	Juvenile	1/29/2012	20	0550	15	Newport
2	Loggerhead	Adult	1/31/2012	34	0045	15	Newport
3	Kemp's Ridley	Juvenile	2/3/2012	59	0830	15.2	Newport
4	Green	Juvenile	2/6/2012	96	1345	15.2	Newport
5	Kemp's Ridley	Juvenile	2/7/2012	101	0300	15.2	Newport
6	Kemp's Ridley	Sub-adult	2/7/2012	102	0515	15.1	Newport
7	Loggerhead	Unknown	3/22/2012	103	2145	22.0	Bayport
8	Kemp's Ridley	Unknown	3/22/2012	103	2145	22.0	Bayport
9	Loggerhead	Adult	3/22/2012	103	*Not reported	22.0	Bayport

*Turtle discovered 3/26 but take occurred on 3/22. The vessel's captain completed the Incidental Take Data Form. Time of discovery was not reported.

Load#	Dredge Start	Dredge Stop	Stations	Start X Northing	Start Y Easting	End X Northing	End Y Easting
20	0446	0527	-26+000 to -30+000	923878.46	396736.97	923164.36	396803.74
34	2221	2325	-30+000 to -36+000	922876.57	397074.86	927969.18	393674.22
59	0652	0735	-26+000 to -36+000	929077.24	393149.23	927456.13	394029.41
96	1114	1234	-26+000 to -36+000	923493.76	396837.68	920046.41	398895.28
101	0051	0144	-26+000 to -36+000	919528.54	399284.39	922007.38	397797.20
102	0351	0440	-26+000 to -36+000	927302.43	394217.74	925530.77	395404.90
103	2005	2220	-26+000 to -30+000	*920051.49	*398814.60	*923701.65	*396548.70

*Exact coordinates for this load were not reported by contractor. These northing and easting coordinates are based on latitude/longitude acquired from the DQM data viewer for that particular load.

Based on observer reports, other port and starboard screen contents varied among loads to include horseshoe crabs, blue crabs, whelk/whelk shells, sea stars, jelly fish, flounder, gastropods, sea whip, sea pork, bat rays and cownose rays.

Dredged material was placed in the Ocean Dredged Material Disposal Site (ODMDS).

Brunswick Harbor Dredging Summary

Start	Stop	Dredge	Loads	Dredging Days	Dredging Hrs	Whale Slow Days
27 Jan 12	07 Feb 12	Newport	102	12	79.2	8
22 Mar 12	22 Mar 12	Bayport	1	1	1.3	0

Brunswick Harbor Dredged Material Placement Summary

Dredge	Loads in ODMDS	*Volume (cubic yards)
Newport	102	261,890
Bayport	1	2,637
Total	103	264,527

*Volumes Reported by Contractor

Total Removed = 350,842 cu yds (as calculated from post-dredge bathymetric survey)

Pay Volume = 350,842 cu yds

Pre-dredging bathymetric survey was conducted on 19 January 2012. Post-dredging bathymetric survey was conducted on 14 & 15 February 2012.

Savannah Harbor Bar Channel, Chatham County, GA

The Savannah Harbor bar channel was dredged from 18 March 2012 through 30 March 2012. The work was performed by the Glenn Edwards between and including stations -30+000B to -40+000B. There were no NARW sightings.

The vessel Winds of Fortune performed sweep trawling 14 March 2012 through 30 March 2012 with a total of 100 tows and 244 sweeps between buoy channel markers 5 and 12.

Below is a summary of sea turtle takes in Savannah Harbor for FY12.

Turtle Take	Species	Age	Date	Load #	Time Recovered	Surface Temp (°C)	Dredge
1	Loggerhead	Unknown	3/20/2012	20	1849	18.5	Glenn Edwards
2	Green	Juvenile	3/22/2012	28	0145	18	Glenn Edwards

Load#	Dredge Start	Dredge Stop	Stations	Start X Northing	Start Y Easting	End X Northing	End Y Easting
20	0446	0527	-30+000 to -40+000	1078804.99	735708.85	1085305.18	728175.31
28	2237	0016	-30+000 to -40+000	1083978.87	729603.95	1085719.52	728081.62

Dredged material was placed in the Ocean Dredged Material Disposal Site (ODMDS).

Savannah Harbor Dredging Summary

Start	Stop	Dredge	Loads	Dredging Days	Dredging Hrs	Whale Slow Days
18 March 12	30 Mar 12	Glenn Edwards	75	13	96.1	0

Savannah Harbor Dredged Material Placement Summary

Dredge	Loads in ODMDS	*Volumes (cubic yards)
Glenn Edwards	75	537,941

*Volumes Reported by Contractor

Total Removed = 351,347 cu yds (as calculated from post-dredge bathymetric survey)

Pay Volume = 351,347 cu yds

Pre-dredging bathymetric survey was conducted on 13 & 14 March 2012. Post-dredging bathymetric survey was conducted on 10 & 11 May 2012.

COSTS

The costs incurred in performing the turtle-monitoring program during FY 2012 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. The table below depicts the costs of monitoring and dredge inspection for FY 2012. 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.