

ANNUAL SEA TURTLE MONITORING REPORT  
SAVANNAH DISTRICT  
MAINTENANCE DREDGING - FISCAL YEAR 2007

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, summarizing hopper dredging operations in Fiscal Year (FY) 2006 within the Savannah District, 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 2007.

|                                     |  |
|-------------------------------------|--|
| <b>Brunswick Harbor Bar Channel</b> | 20 Dec 06 to 11 Jan 07 and 20 Mar to 24 Mar 07 |
| <b>Savannah Harbor Bar Channel</b>  | 13 Jan to 5 Feb 07                             |

The Savannah District schedules hopper-dredging operations during the winter months (1 December through 31 March), as recommended by SAD, when water temperatures are cool and the risk of taking sea turtles is low.

TURTLE MONITORING PROGRAM

As 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 incidents are photographed and diagrams are made of the specimen sampled. Once documentation has been collected, observers coordinate with the Savannah District office in order share the specimens with the North Carolina Wildlife Commission and the National Marine Fisheries Service lab in Beaufort, NC to be used for scientific purposes.

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 were recorded in a bridge watch logbook. Specific sightings of right whales are reported separately and forms are sent to the District office for reporting purposes.

### SCREEN CONFIGURATIONS

Turtle monitoring activities were conducted aboard the Newport, Bayport, and Glenn Edwards during FY 2007. These vessels were required to have rigid draghead deflectors, and 100% inflow screening or overflow screening with openings starting at 4" x 4."

### PROJECTS

#### *Brunswick Harbor Channel, Glynn County, GA*

Contract #W912HN-07-C-0008 included maintenance dredging for both Brunswick and Savannah Bar Channels. The contract was awarded to Manson Dredging on 7 Dec 06 and NTP was issued on 20 Dec 06. The Brunswick work included only bar channel work from Stations -19+000 to -38+000. This work was performed by the Newport from 20 Dec 06 to 11 Jan 07. In addition, the Bayport worked Stations -19+000 to -29+000 from 20 Mar to 25 Mar 07.

#### Brunswick Harbor Dredging Summary

| Start     | Stop      | Dredge  | Loads | Dredging Days | Dredging Hrs | Whale Slow Days |
|-----------|-----------|---------|-------|---------------|--------------|-----------------|
| 20 Dec 06 | 11 Jan 07 | Newport | 276   | 23            | 448.3        | 17              |
| 20 Mar 07 | 24 Mar -7 | Bayport | 52    | 5             | 102.2        | 3               |
| Totals    |           |         | 328   | 28            | 550.5        | 20              |

#### Brunswick Harbor Dredged Material Placement Summary

| Dredge  | Loads in D | Loads in E | Loads in F |
|---------|------------|------------|------------|
| Newport | 179        | 97         |            |
| Bayport |            | 27         | 25         |
| Totals  | 179        | 124        | 25         |

Pay Volume = 996,172 cu yds  
 Total Removed = 1,198,571 cu yds  
 Placement = Nearshore areas D, E, and F.

A sea turtle compliance inspection was performed in accordance with the “COE Sea Turtle Inspection Checklist for Hopper Dredges (Attachment 3).” 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, Coastwise Consulting, provided 24-hour/day monitoring of dragheads and screens for each load cycle.

Dredging began on 20 December and continued without turtle take until load 60 on December 26, when a loggerhead was taken, along with an Atlantic Sturgeon. After two Kemp’s Ridley sea turtles were taken on 29 December (loads 98 and 103), work was stopped until relocation trawling could be begun. Relocation trawling by the Winds of Fortune began on 30 December and continued until dredging ceased on 11 January 07 when another Kemp’s Ridley was taken in load 276.

Relocation trawling began again on 15 March with dredging recommencing on 20 March. After 2 loggerhead sea turtles were taken in load 52 on 24 March, the dredging work was ended. A total of 3 loggerheads and 3 Kemp’s Ridley sea turtles were taken by the project.

Copies of the observer reports are being provided to Craig Theriot, a CSC contractor at the U.S. Army Engineer Research and Development Center (ERDC).

Summary of sea turtle takes at Brunswick Harbor FY07

| Turtle Take | Species | date       | load # | Temp C | dredge  |
|-------------|---------|------------|--------|--------|---------|
| 1           | Log     | 12/26/2006 | 60     | 16     | Newport |
| 2           | Kemp's  | 12/29/2006 | 98     | 14.5   | Newport |
| 3           | Kemp's  | 12/29/2006 | 103    | 14     | Newport |
| 4           | Kemp's  | 1/11/2007  | 276    | 15     | Newport |
| 5           | Log     | 3/24/2007  | 52     | 18.3   | Bayport |
| 6           | Log     | 3/24/2007  | 52     | 18.3   | Bayport |

Relocation Trawling by the Winds of Fortune 30 Dec 06 to 11 Jan 07

Trawling Days = 25 12-hr periods  
 Number of Tows = 325  
 Number of Relocated Turtles = 1 loggerhead, 3 Kemp’s Ridley

Relocation Trawling by the Winds of Fortune 15 Mar to 24 Mar 07

Trawling Days = 20 12-hr periods  
 Number of Tows = 207  
 Number of Relocated Turtles = 17 loggerhead, 14 Kemp’s Ridley, 1 Atlantic sturgeon

***Savannah Harbor Bar Channel, Chatham County, GA***

The Savannah Harbor bar channel was dredged from 13 January through 5 February 2007. Dredged ranges included Stations 0+000 to -4+500B and Stations -8+000B to -45+000B..

| Start     | Stop     | Dredge        | Loads | Dredging Days | Dredging Hrs |
|-----------|----------|---------------|-------|---------------|--------------|
| 13 Jan 07 | 5 Feb 07 | Glenn Edwards | 150   | 24            | 503.6        |

Whale Slow Days = 0  
Pay Volume = 973,463 cu yds  
Total Removed = 997,137  
Placement = Savannah ODMDS

Because of the take of a Kemp’s Ridley in Brunswick in January, relocation trawling was conducted prior to and during dredging operations in Savannah.

Relocation Trawling by the Catina Renea 11 Jan to 5 Feb 07

Trawling Days = 53 12 hr days  
Number of Tows = 530  
Number of Relocated Turtles = none. However, 8 Atlantic sturgeon were captured and relocated.

Copies of the observer reports are being 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 2007 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 2007. 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 FY07

| Project          | Monitoring*1          | Trawling*2                         | Dredge Stand-<br>by*3    | Inspections<br>*4     | PD-E*5  | Silent<br>Inspector |
|------------------|-----------------------|------------------------------------|--------------------------|-----------------------|---------|---------------------|
| Brunswick<br>Bar | (28 days)<br>\$14,000 | 47 12-hr<br>periods<br>\$164,500   | (1.408 days)<br>\$85,957 | (28 days)<br>\$27,299 | \$4,000 | \$22,429.50         |
| Savannah<br>Bar  | (24 days)<br>\$12,000 | (53 12-hr<br>periods)<br>\$185,500 | 0                        | (24 days)<br>\$23,399 | \$1,000 | \$19,018.98         |
| Total            | \$26,000              | \$350,000                          | \$85,957                 | \$50,698              | \$5,000 | \$41,448.48         |

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

\*2 Cost of trawling efforts, \$3,500 per 12-hr period

\*3 \$40k for first day, \$80k for all additional

\*4 Inspections/oversight, \$974.96. Includes administration time. This cost equals COE daily inspection costs determined for liquidated damages.

\*5 Estimate

#### SUMMARY

During Fiscal Year 2007, two maintenance-dredging projects in Savannah District were performed using hopper dredges, Savannah Harbor bar and Brunswick Harbor bar. Six turtles were taken lethally by the Brunswick Harbor project. No sea turtle takes occurred during dredging of the Savannah Harbor.

TABLE #2  
INCIDENTAL TAKES OF SEA TURTLES  
BRUNSWICK HARBOR MAINTENANCE DREDGING FY07

| Date Taken | Project              | Dredge  | Channel Reach        | Water Temp. (°C) | Species and Authorized Incidental Take per Fiscal Year |                  |            |                |
|------------|----------------------|---------|----------------------|------------------|--|------------------|------------|----------------|
|            |                      |         |                      |                  | Kemp's ridley<br>7                                     | Loggerhead<br>35 | Green<br>7 | Hawksbill<br>2 |
| 12/26/06   | Brunswick Harbor Bar | Newport | -19+000B to -29+000B | 16.0             |  | 1                |            |                |
| 12/29/06   | Brunswick Harbor Bar | Newport | -29+000B to -38+000B | 14.5             | 1  |                  |            |                |
| 12/29/06   | Brunswick Harbor Bar | Newport | -19+000B to -29+000B | 14               | 1  |                  |            |                |
| 1/11/07    | Brunswick Harbor Bar | Newport | -29+000B to -38+000B | 15               | 1  |                  |            |                |
| 3/24/07    | Brunswick Harbor Bar | Bayport | -19+000B to -29+000B | 18.3             |  | 1                |            |                |
| 3/24/07    | Brunswick Harbor Bar | Bayport | -19+000B to -29+000B | 18.3             |  | 1                |            |                |
| TOTAL TAKE |                      |         |                      |                  | 3  | 3                | 0          | 0              |

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