

FINAL REPORT

Marine Endangered Species Monitoring Program

Maintenance Dredging Project
USACE

Thimble Shoal Channel
Norfolk, VA

Project Number: W912BU-06-P-0166

Dates: 12 June – 30 June 2006
10 July – 27 July 2006

Submitted by:



Marine Endangered Species Observer Program

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ABSTRACT

*A twenty-four hour per day marine endangered species monitoring program was conducted onboard the hopper dredge McFarland from 12 June thru 30 June 2006 and 10 July thru 27 July 2006 during the Norfolk, VA Thimble Shoal channel maintenance dredging project. Endangered and threatened sea turtles *Caretta caretta* (loggerhead), *Chelonia mydas* (green), *Lepidochelys kempii* (Kemp's ridley), *Dermochelys coriacea* (leatherback), *Eretmochelys imbricata* (hawksbill) and marine mammal *Eubalaena glacialis* (Northern Right Whale) were the species of interest. There were a total of two incidents involving the species of interest. The first incident involved a *Caretta caretta* and the second incident involved an unknown species of sea turtle. Only the first *Caretta caretta* incident was considered a lethal takes by the dredge. The second incident was not considered a lethal take by the dredge; rather it was determined to be an old carcass and not a fresh kill.*

INTRODUCTION

The REMSA Inc. Marine Endangered Species Observer Division was contracted by *US Army Corps of Engineers Norfolk District* to monitor the impact of dredging on endangered sea turtle species in the area of the dredge operation. Pursuant to agreements with the National Marine Fisheries Service (NMFS), observers were required onboard during the months of prime sea turtle activity for that area to document any detected incidents involving species of interest.

SCOPE OF WORK

REMSA provided the necessary trained personnel and equipment to clean and maintain inflow screens onboard the hopper dredge *McFarland*. Monitoring was performed 24 hours each day for the duration of the project. Observers inspected and cleaned all inflow screens, and inspected both dragheads each time they were brought on deck for cleaning and maintenance. Any death or injury involving species of interest, the loggerhead turtle (*Caretta caretta*), green turtle (*Chelonia mydas*), Kemp's ridley turtle (*Lepidochelys kempii*), leatherback turtle (*Dermochelys coriacea*), and hawksbill turtle (*Eretmochelys imbricata*) were to be identified, logged, measured, and photographed. A load sheet was completed for each load whether or not turtle parts were found. In the case of an incident or take involving a sea turtle, incident report forms were to be completed and the observers were to contact NMFS and the USACE within twenty-four hours of the incident. A daylight bridge watch was conducted during periods when the observer was not occupied with screen cleaning duties. Observers ensured that dredge crew personnel were aware of the need to avoid incidents involving any endangered animal, and that civil and criminal penalties are possible for harming or harassing endangered species.

METHODS

Dredge coverage began when the observers arrived onboard the *McFarland* on 12 June 2006. Two certified observers were present during prime sea turtle activity, each working 12 hour shifts.

The dredge *McFarland* functioned with 100% inflow screening for all 138 loads and operated with sea turtle draghead deflectors for all loads. The screening baskets were fitted with 4" x 4" screening material to insure that parts of the species of interest would not be allowed to flow through into the hopper. All dragheads and screening baskets were checked after each hopper load was completed during the observers 12-hour shift. The appropriate forms were filled out; noting any incidents regarding species of interest as well as noting other marine life and abiotic material present in the inflow boxes.

A bridge lookout was maintained during those daylight hours that the observer was not on deck checking screens. Watch was kept for sea turtles and Right whales in the dredging area and dump site.

RESULTS

1. On 21 June 2006 at 0825hrs body parts from a loggerhead (*Caretta caretta*) turtle were discovered in the starboard inflow box after load #36. The specimen was fresh and consisted only of the head and possibly part of the intestine. The approximate location of the take was: Latitude 076° 12.5N, Longitude 037° 00.0W. The weather was as follows: Air Temp. 23.3°C, Water Temp. 22.8°C, Winds west @ 15 knots, Waves – 0.5 ft (see Figure 1 and Appendix A).
2. On 13 July 2006 at 0130 hrs body parts from an unknown turtle species were discovered in the port side inflow box. The specimen was not considered a fresh take due to its state of decomposition, smell and condition of parts recovered. Parts recovered consisted of one rib bone, some smaller flipper bones and anterior portions of the carapace and a pelvic bone. The location of the take was: Latitude 36° 59.6 N, Longitude 76° 11.5 W Thimble Shoal Channel near buoys 13 and 14. The weather was as follows: Air Temp. 28.9°C, Water Temp. 25.6°C, Winds south @ 6 knots, Waves – 0-1 ft (see Figure 2 and Appendix A).

Below are pictures of the two sea turtle incidents that occurred on this project. See attached incident reports for more information (Appendix A). These specimens were documented and diagrams were drawn of what was recovered.

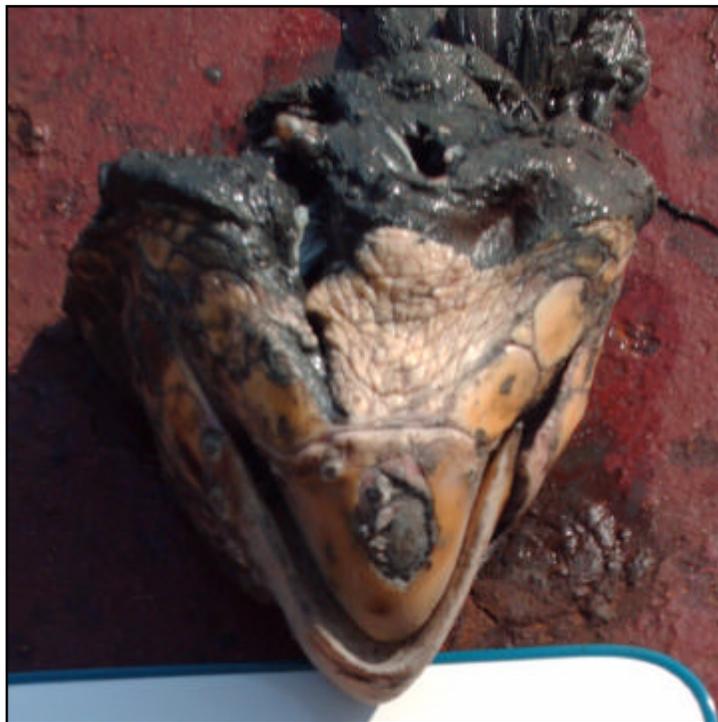


Figure 1 (A & B). Photographs of the first incident occurring 21 June 2006 aboard hopper dredge *McFarland*.



Figure 2 (A & B). Photographs of the second incident occurring 13 July 2006 aboard hopper dredge *McFarland* not considered a lethal take.

There were zero Northern Right Whale sightings during the dredging project.

SUMMARY

The hopper dredge *McFarland* began dredging in Norfolk, VA on 12 June and completed the first tour 30 June 2006. The second tour began 12 July and ended 27 July 2006. Dredging was conducted for a total of 37 days with a total of 138 loads. There were two sea turtle incidents; only one of which was considered lethal. There were no Northern Right Whale sightings.

All pertinent information was recorded and copies were made for the USACE and the NMFS.

If there are any questions regarding this report please feel free to contact us at the number below.

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APPENDIX A
INCIDENT REPORTS

**ENDANGERED SPECIES OBSERVER PROGRAM
SEA TURTLE INCIDENTAL TAKE DATA FORM**

USACE DISTRICT: NORFOLK, VA DISTRICT
PROJECT NAME: NORFOLK THIMBLE SHOAL CHANNEL DREDGE NAME: McFARLAND

DATE: 06/21/06 Time turtle take recovered (24hr): ~0825 Turtle take # for project: 1
LOAD #: 36 Times (24hrs): Start 0501 End 0610 Load start date 06/21/06

SPECIES OF TURTLE TAKE: Unknown Loggerhead Green Kemp's ridley Hawksbill Leatherback

Channel location of take: Latitude 36.12.5/076.09.0 Longitude 074.00.0 / 036.59.0
Other location / Channel description (e.g. buoy markers, landmarks):

BETWEEN R⁰16" → R⁰12"
G⁰15" → G⁰11"
Location take recovered on dredge: SIBD. TURTLE CAGE BOTTOM FORWARD LEFT CORNER

Number of dragheads in use at time of incident: 2 Draghead deflector? YES NO
Condition of deflector: GOOD Condition of screening: GOOD

Beaufort Sea State: 0 1 2 3 4 5 6 7 8 9 10 11 12

AIR TEMP: 74 °C/F
WATER TEMP: Surface — °C/F Column (mid-depth) 73 °C/F Bottom — °C/F
(°F = 9/5 (°C) + 32; °C = 5/9 (°F - 32))

Condition of specimen: HEAD & POSSIBLY INTESTINE? ONLY

0 = Alive; 1 = Fresh dead; 2 = Moderately decomposed; 3 = Severely decomposed; 4 = skeleton/old bone; 5 = undetermined

Sex: M F UN How determined? _____ Age class: Juv ___ Sub-Adult ___ Adult UN ___

Measurements: <u>Circle units</u>	Head Width:	<u>UNK</u>	cm/in		
Plastron Length:	<u>N/A</u>	cm/in	Plastron Width:	<u>N/A</u>	cm/in
Carapace Straight Length:	<u>N/A</u>	cm/in	Carapace Straight Width:	<u>N/A</u>	cm/in
Carapace Curved Length:	<u>N/A</u>	cm/in	Carapace Curved Width:	<u>N/A</u>	cm/in

Measurement/description of part: _____

Genetic samples taken: YES NO ___ Photos taken: YES NO ___
Turtle tagged?: YES ___ NO Tag type: _____ Tag #: _____ Tag date: _____
Final disposition of specimen: DOUBLE BAGGED, PLACED IN FREEZER TO BE EXAMINED LATER

Comments: _____

Load data form attached: YES NO ___ Dredge load log attached: YES NO ___

Observer's name ERIC HOLLER

Use diagrams below to illustrate specimen/part recovered:

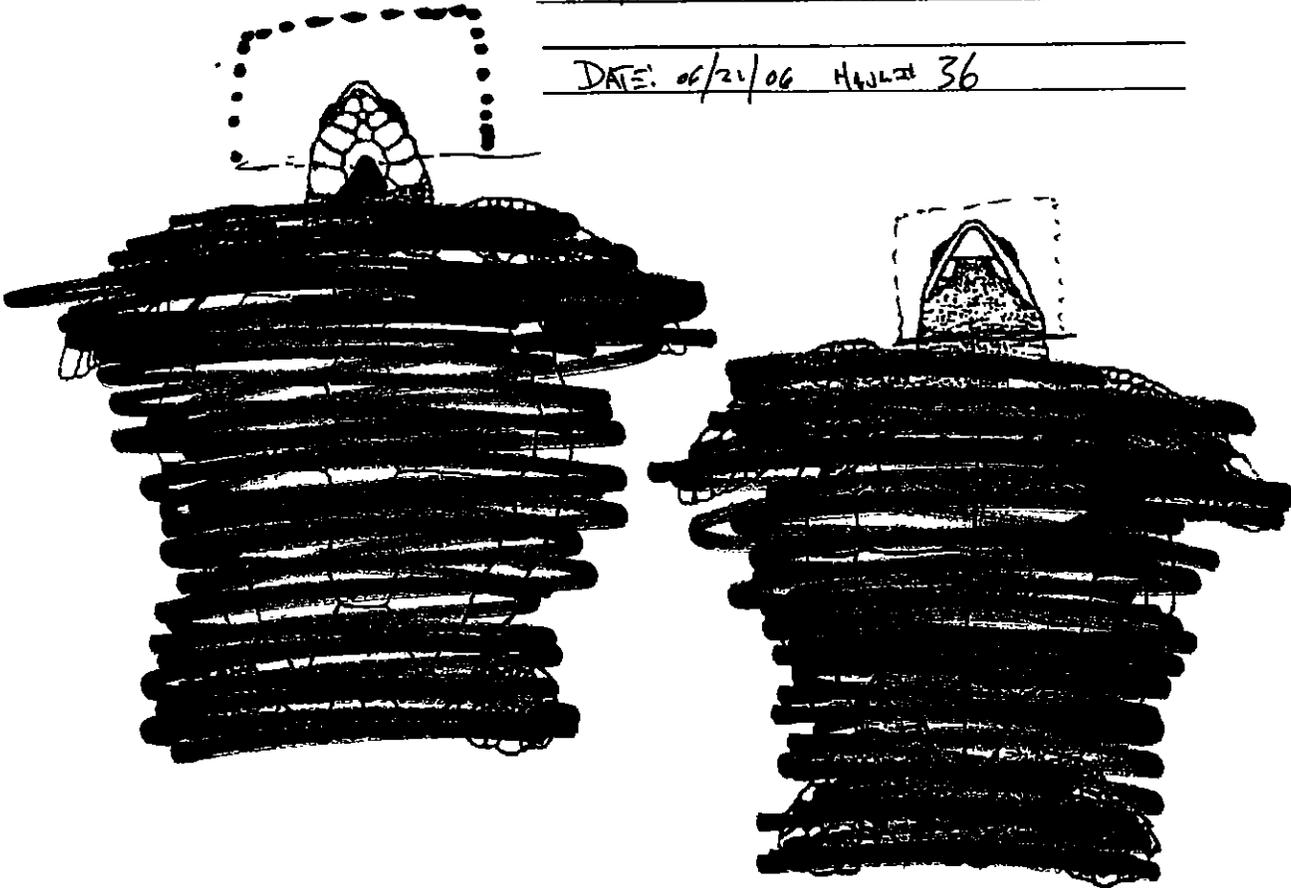


Loggerhead (*Caretta caretta*)

Shade areas of turtle that are missing; sketch cracks and lacerations

Comments: HEAD PORTION FOUND IN
STBD. TURTLE CAGE
UPPER PORTION OF HEAD
CRUSHED, MISSING SCALE(S)
POSTERIOR TO HORIZONTAL LINE
MADE BELOW, FLESH ON SIDES, AND
VENTRAL TORN.
PORTIONS OF ESOPHAGUS ATTACHED
& HANGING.

DATE: 06/21/06 HAUL# 36



Diagrams by Tom McFarland

ENDANGERED SPECIES OBSERVER PROGRAM
SEA TURTLE INCIDENTAL TAKE DATA FORM

USACE DISTRICT: Norfolk, VA District
PROJECT NAME: Norfolk Thimble Shoal Channel DREDGE NAME: McFarland

DATE: 7/13/06 Time turtle take recovered (24hr): 0130 Turtle take # for project: see comments

LOAD #: 82 Times (24hrs): Start 2125 End 2251 Load start date 7/12/06

SPECIES OF TURTLE TAKE: Unknown Loggerhead Green Kemp's ridley Hawksbill Leatherback

Channel location of take: Latitude 36°59.6 N Longitude 76°11.5 W
Other location / Channel description (e.g. buoy markers, landmarks): Thimble Shoal Channel - near buoys 13+14

Location take recovered on dredge: Port Side Turtle Cage

Number of dragheads in use at time of incident: 2 Draghead deflector? YES NO
Condition of deflector: good Condition of screening: good

Beaufort Sea State: 0 1 2 3 4 5 6 7 8 9 10 11 12

AIR TEMP: 84 °C °F (°F = 9/5 (°C) + 32; °C = 5/9 (°F - 32))
WATER TEMP: Surface °C °F Column (mid-depth) 78 °C °F Bottom °C °F

Condition of specimen: bones found with some amount of attached flesh - flesh severely decomposed

0 = Alive; 1 = Fresh dead; 2 = Moderately decomposed; 3 = Severely decomposed; 4 = skeleton/old bone; 5 = undetermined

Sex: M F UN How determined? Age class: Juv Sub-Adult Adult UN

Measurements: Circle units
Plastron Length: cm/in Head Width: cm/in
Plastron Width: cm/in
Carapace Straight Length: cm/in Carapace Straight Width: cm/in
Carapace Curved Length: cm/in Carapace Curved Width: cm/in
Measurement/description of part: Triple garbage bagged, labeled, and put in freezer

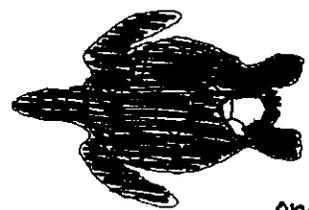
Genetic samples taken: YES NO Photos taken: YES NO
Turtle tagged?: YES NO NA Tag type: Tag #: Tag date:
Final disposition of specimen: triple bagged labeled + placed in freezer

Comments: Turtle take #2 for this project but turtle was not a fresh kill therefore we don't feel it's an incidental take for the ~~drag~~ dredge

Load data form attached: YES NO Dredge load log attached: YES NO

Observer's name Roxanne Torres / Kate Sparks

Use diagrams below to illustrate specimen/part recovered:



also found one rib and flipper bones

