

FINAL REPORT

Marine Endangered Species Monitoring Program

Beach Nourishment Dredging Project
Weeks Marine

Dewey & Bethany Beaches, DE

Project Number: W912BU-08-B-0017

Dates: 01 June 2009 – 16 June 2009

Submitted by:

Coastal & Marine Services Division

Marine Endangered Species Observer Program



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TABLE OF CONTENTS

ABSTRACT	1
INTRODUCTION	1
METHODS	2
RESULTS	2
SUMMARY	2

Appendix I – Daily Data Sheets

Appendix II - Weekly Data Sheets

ABSTRACT

A twelve hour per day marine endangered species monitoring program was conducted onboard the hopper dredges R.N. Weeks & the B.E. Lindholm for the Dewey & Bethany beaches, DE beach nourishment dredging project. Endangered species observers were on board the B.E. Lindholm 01 June – 12 June 2009 and on board the R.N. Weeks 01 June – 16 June 2009. Endangered and threatened sea turtles Caretta caretta (loggerhead), Chelonia mydas (green), Lepidochelys kempii (Kemp's ridley), Dermochelys coriacea (leatherback), Eretmochelys imbricata (hawksbill), sturgeon and marine mammal Eubalaena glacialis (Northern Right Whale) were the species of interest. There were a total of zero incidents involving the species of interest.

INTRODUCTION

The REMSA Inc., Endangered Species Observer Division was subcontracted by *Weeks Marine Inc.* under their contract with the U.S. Army Corps of Engineers Philadelphia District to monitor for the presence of sea turtles, Northern Right Whale and sturgeon in the area of the dredge operation. Pursuant to agreements with the National Marine Fisheries Service (NMFS), one certified observer (12-hour coverage) was required onboard during the months of prime sea turtle and Right Whale activity for that area to document any 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 dredges *R.N. Weeks* & the *B.E. Lindholm*. Monitoring was performed 12 hours a day on each dredge for the duration of the project. Observers physically inspected all inflow screens, and inspected both dragheads each time they were brought on deck for cleaning and maintenance during their 12-hour daylight shift. Any death or injury of any 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 identified to species, logged, measured, and photographed. A load sheet was completed for each load whether or not turtle/sturgeon parts were found. In the case of an incident or take involving a sea turtle, incident report forms were completed and the observers contacted NMFS and the USACE within 24 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 on 01 June 2009 when the observers arrived onboard the dredges *R.N. Weeks* & the *B.E. Lindholm*. On the *B.E. Lindholm* the observer worked 01 June – 12 June 2009 and on the *R.N. Weeks* the observer worked 01 June – 16 June 2009. One certified observer, working 12 hour daylight shifts, was present on each dredge during prime sea turtle and Right Whale activity.

Both dredges functioned with 100% inflow screening 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 present in the inflow boxes.

The screening on the dredge intake was 1.25" x 6" as per the Army Corps specifications to prevent the passage of any material greater than 1.25" in diameter. The screening on the discharge end of the pipeline was 1.25" x 1.25" as per regulations so as not to allow any material greater than 1.25" onto the beach.

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 marine mammals in the dredging area and pump-out site.

RESULTS

There were zero incidents involving marine mammals or sea turtles.

SUMMARY

On 01 June 2009, the hopper dredges *B.E. Lindholm* and *R.N. Weeks* began dredging the Dewey & Bethany Beaches, DE beach nourishment project and continued until 12 June and 16 June 2009 respectively. Each dredge had one NMFS approved endangered species observers working 12-hour daylight shifts.

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

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APPENDIX I
DAILY DATA SHEETS

**ENDANGERED SPECIES OBSERVER PROGRAM
DAILY REPORT**

USACE DISTRICT: Philadelphia, Pa
 OBJECT NAME: Delaware Beach Nourishment (DEWEY Bch) DREDGE NAME: RN Weeks

Date: 05 June 09 Load #: 28-32 Areas dredge worked: Borrow Site

Weather conditions: overcast with scattered rain REDUCED VISIBILITY <1mi. until late afternoon.

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

AIR TEMP: 60 °C/F (°F = 9/5 (°C) + 32; °C = 5/9 (°F - 32))
 WATER TEMP: Surface 64 °C/F Column (mid-depth) _____ °C/F Bottom _____ °C/F

Condition of deflector: Good Condition of screening: Good

Were there incidents involving endangered or protected species? YES _____ NO ✓

Which species? (complete incident form(s)) N/A

Comments (type of material, biological specimens, unusual circumstances, etc): _____

MATERIAL: SAND
BYCATCH: None
DEBRIS: WHOLE EGG CASING, BIVALVE AND GASTROPOD SHELLS

DREDGING CONTINUED WITHOUT INCIDENT

NO INCIDENTS WITH PROTECTED OR ENDANGERED SPECIES

BRIDGE WATCH SUMMARY

<u>Time</u>	<u>Species</u>	<u># Sightings/# Animals</u>	<u>Location/Comments</u>
<u>1514</u>	<u>T. truncatus / Br. dolphin</u>	<u>2 / 8</u>	<u>~1000yds off port bow traveling SE returning from dump</u>
<u>1633</u>	<u>T. truncatus / Br. dolphin</u>	<u>3 / 5</u>	<u>~300' N of mooring</u>

Observer name Allison Griffin Allison Griffin

**ENDANGERED SPECIES OBSERVER PROGRAM
DAILY REPORT**

USACE DISTRICT: Philadelphia, Pa

OBJECT NAME: Delaware Beach Nourishment (DEWEY Bch) **DREDGE NAME:** RN Weeks

Date: 06 June 09 **Load #s:** 33-34 **Areas dredge worked:** Borrow Site

Weather conditions: overcast becoming PARTLY CLOUDY LATE MORNING WITH DECREASING WINDS AND SEAS.

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

AIR TEMP: 60-72 °C/F (°F = 9/5 (°C) + 32; °C = 5/9 (°F - 32))
WATER TEMP: Surface 63 °C/F Column (mid-depth) _____ °C/F Bottom _____ °C/F

Condition of deflector: Good **Condition of screening:** Good

Were there incidents involving endangered or protected species? YES _____ NO X

Which species? (complete incident form(s)) N/A

Comments (type of material, biological specimens, unusual circumstances, etc): _____

DELAY AFTER LOAD 34 For WELDING ON DISCHARGE PIPE

1430hrs: Heading to anchor after pumping off load 34.
Notes: At anchorage awaiting movement of monohway.

Material: Sand
Bycatch: none
debris: gastropod and whelk shells

BRIDGE WATCH SUMMARY

<u>Time</u>	<u>Species</u>	<u># Sightings/# Animals</u>	<u>Location/Comments</u>
<u>0825</u>	<u>T. truncatus / b. nose dolphin</u>	<u>2 / 6</u>	<u>~500' off stern near indian river inlet</u>
<u>0938</u>	<u>" "</u>	<u>5 / 9</u>	<u>~250' off port stern ~1/2 mi. E of monohway</u>
<u>1100</u>	<u>" "</u>	<u>6 / 3</u>	<u>off tip of lighthouse at Cape Henlopen</u>
<u>1140</u>	<u>loggerhead turtle / C. caretta</u>	<u>2 / 1</u>	<u>~25' port beam while @ anchor hdg NE away from dredge</u>

Observer name Allison Griffin / Allison Griffin

**ENDANGERED SPECIES OBSERVER PROGRAM
DAILY REPORT**

MSACE DISTRICT: Philadelphia, Pa
PROJECT NAME: Delaware Beach Nourishment (BETHANY Bch) **DREDGE NAME:** RN Weeks

Date: 08 June 09 **Load #s:** 4-10 **Areas dredge worked:** Borrow Site

Weather conditions: Patchy dense fog till late morning becoming partly cloudy with haze

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

AIR TEMP: 68-73 °C/F (°F = 9/5 (°C) + 32; °C = 5/9 (°F - 32))
WATER TEMP: Surface 65 °C/F Column (mid-depth) _____ °C/F Bottom _____ °C/F

Condition of deflector: Good **Condition of screening:** Good

Were there incidents involving endangered or protected species? YES _____ NO X

Which species? (complete incident form(s)) N/A

Comments (type of material, biological specimens, unusual circumstances, etc): _____

Material: Sand Bycatch: NONE
 DEBRIS: PEA GRAVEL

DREDGING CONTINUED WITHOUT INCIDENT.

NO INCIDENTS WITH PROTECTED OR ENDANGERED SPECIES.

BRIDGE WATCH SUMMARY

<u>Time</u>	<u>Species</u>	<u># Sightings/# Animals</u>	<u>Location/Comments</u>
0840	T. truncatus / Bottle dolphin	3 / 3	~1/4 mi port beam / hdg to pump off.

Observer name Allison Griffin / Allison Griffin

**ENDANGERED SPECIES OBSERVER PROGRAM
DAILY REPORT**

USACE DISTRICT: Philadelphia, Pa

OBJECT NAME: Delaware Beach Nourishment (BETHANY Bch) DREDGE NAME: RN Weeks

Date: 14 June 09 Load #: 48-55 Areas dredge worked: Borrow Site

Weather conditions: Overcast with haze becoming partly cloudy and clear

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

AIR TEMP: 66-73 °C/F (°F = 9/5 (°C) + 32; °C = 5/9 (°F - 32))
 WATER TEMP: Surface 68 °C/F Column (mid-depth) / °C/F Bottom / °C/F

Condition of deflector: Good Condition of screening: Good

Were there incidents involving endangered or protected species? YES ___ NO X

Which species? (complete incident form(s)) N/A

Comments (type of material, biological specimens, unusual circumstances, etc):

MATERIAL: SAND
 BYCATCH:
 DEBRIS: PEA GRAVEL, METAL (SOCAL bucket)

NO INCIDENTS WITH PROTECTED OR ENDANGERED SPECIES.

DUG ON 1 ARM FOR LOADS 51 AND 54. RAW WATER NOT GETTING TO PORT DRAG ARM DURING LOAD 54, ISSUE WAS RESOLVED.

BRIDGE WATCH SUMMARY

Time	Species	# Sightings/# Animals	Location/Comments
1015	T. truncatus/B-nose dolphin	5 / 11	~150' off stern @ monobway
1015	" "	3 / 8	~500' stbd beam whike @ m. buoy

Observer name Allison Griffin *Allison Griffin*

ENDANGERED SPECIES OBSERVER PROGRAM

DAILY REPORT

USACE DISTRICT: Philadelphia
 PROJECT NAME: Bewey Beach, DE DREDGE NAME: B. E. Lindholm

Date: 6-June-09 Load #: 128 Areas dredge worked: Fenwick Borrow

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

AIR TEMP: 64 °C/F
 WATER TEMP: Surface 64 °C/F Column (mid-depth) 56 °C/F Bottom n/a °C/F

Condition of deflector: n/a Condition of screening: GOOD

Were there incidents involving endangered or protected species? YES ___ NO X

Which species? (complete incident form(s)) n/a

Comments (type of material, biological specimens, unusual circumstances, etc):

Material: shell & sand, some small pebbles
Debris: none
Bycatch: none

After dumping load #128 Lindholm went to anchor at 1217 off Bethany Beach in order to wait for Monohay to be moved.

BRIDGE WATCH SUMMARY

Time	Species	# Sightings/# Animals	Location/Comments
1140	<i>Tursiops truncatus</i>	1 / 6	Port side swimming near Indian River inlet.
1730	<i>Pinnipedia bonisus</i>	1 / 3	Swimming under Bow
1900-1930	<i>Stenella coeruleoalba</i>	50 / ~30	off Bethany beach swimming/playing

Observer name J. Rufus SHAFER

ENDANGERED SPECIES OBSERVER PROGRAM

DAILY REPORT

USACE DISTRICT: Philadelphia
 PROJECT NAME: Bethany Beach DREDGE NAME: B.E. Lindholm

Date: 7-June-09 Load #s: 1-3 Areas dredge worked: Borrow Area E

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

AIR TEMP: 71-74 °C/F (°F = 9/5 (°C) + 32; °C = 5/9 (°F - 32))
 WATER TEMP: Surface 64 °C/F ① Column (mid-depth) 54 °C/F ① Bottom n/A °C/F

Condition of deflector: n/A Condition of screening: Good

Were there incidents involving endangered or protected species? YES ___ NO X

Which species? (complete incident form(s)) n/A

Comments (type of material, biological specimens, unusual circumstances, etc):

Material: Sand and shell & some small pebbles
Debris: Fishing line
Bycatch: - Horseshoe crab = 2
- Whelk egg case = 1
- At some pts during the day fog caused reduced visibility.
- No incidents of Endangered or protected species.
- Anchor weighed at 1347. Headed to new Borrow area E to dredge Bethany Beach. Monitors moved & ready.
Began lead 1 at 1420. Everything in normal working order.

BRIDGE WATCH SUMMARY

Time	Species	# Sightings/# Animals	Location/Comments
<u>1109</u>	<u>T. Tomatis</u>	<u>3 / 6</u>	<u>off str beam feeding</u>
 	 	 	
 	 	 	
 	 	 	
 	 	 	
 	 	 	
 	 	 	
 	 	 	
 	 	 	
 	 	 	
 	 	 	
 	 	 	
 	 	 	
 	 	 	
 	 	 	
 	 	 	
 	 	 	
 	 	 	
 	 	 	
 	 	 	

Observer name Jimmy Lifer

ENDANGERED SPECIES OBSERVER PROGRAM

DAILY REPORT

USACE DISTRICT: Philadelphia

PROJECT NAME: Bethany Beach DE

DREDGE NAME: BE Kindholm

Date: 8-June-09 Load #: 7-10

Areas dredge worked: Borrow Area E

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

AIR TEMP: 68-74 °C/F (°F = 9/5 (°C) + 32; °C = 5/9 (°F - 32))

WATER TEMP: Surface 64 °C/F Column (mid-depth) 56 °C/F Bottom _____ °C/F

Condition of deflector: n/a Condition of screening: Good

Were there incidents involving endangered or protected species? YES ___ NO X

Which species? (complete incident form(s)) NONE

Comments (type of material, biological specimens, unusual circumstances, etc):

- Material: sandy shell and some small pebbles
- Debris: 1 bullet shell casing
Fishing line and net wrapped around screening
- Bycatch: Spider crab = 1
Horseshoe crab = 6
Stone crab = 1
Centropomus striata = 1 (Black seabass)
- Still slightly hazy off and on today causing reduced visibility at some points.
- No incidents of endangered or protected species all in normal working order.

BRIDGE WATCH SUMMARY

Time	Species	# Sightings/# Animals	Location/Comments
<u>09:18</u>	<u>T. truncatus</u>	<u>4 / 3</u>	<u>Off port bow swimming North</u>
<u>2034</u>	<u>T. truncatus</u>	<u>2 / 6</u>	<u>Swimming by starboard beach.</u>

Observer name: Jerry Lopez

ENDANGERED SPECIES OBSERVER PROGRAM

DAILY REPORT

USACE DISTRICT: Philadelphia
 PROJECT NAME: Bethany Beach DE DREDGE NAME: BE Lindholm

Date: 9-June-09 Load #: 15-18 Areas dredge worked: Borrow Area E

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

AIR TEMP: 68-76 °C/F (°F = 9/5 (°C) + 32; °C = 5/9 (°F - 32))
 WATER TEMP: Surface 67-68 °C/F Column (mid-depth) 56 °C/F Bottom N/A °C/F

Condition of deflector: N/A Condition of screening: Good

Were there incidents involving endangered or protected species? YES ___ NO X

Which species? (complete incident form(s)) N/A

Comments (type of material, biological specimens, unusual circumstances, etc):

Materials shell, sand and small pebbles

Debris: NONE

Bycatch: Blue Crab: 1
Horseshoe crab: 2

There were no incidents of endangered or protected species.

Everything in normal working order.

BRIDGE WATCH SUMMARY

Time	Species	# Sightings/# Animals	Location/Comments
<u>0910-0930</u>	<u>T. Truncatus</u>	<u>15 / 230</u>	<u>Near Bethany Beach traveling South on port side.</u>
<u>1130-1245</u>	<u>T. Truncatus</u>	<u>240 / 30+</u>	<u>Beachside near pump out first seen feeding in large group then they began playing, distilling & breaching.</u>

Observer name [Signature]

ENDANGERED SPECIES OBSERVER PROGRAM

DAILY REPORT

USACE DISTRICT: Philadelphia
 PROJECT NAME: Bethany Beach, DE DREDGE NAME: B/E Lindholm

Date: 11-June-09 Load #s: #28-#31 Areas dredge worked: Borrow Area E

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

AIR TEMP: 68-76 °C/F (°F = 9/5 (°C) + 32; °C = 5/9 (°F - 32))
 WATER TEMP: Surface 66-68 °C/F Column (mid-depth) 85 °C/F Bottom n/A °C/F

Condition of deflector: n/A Condition of screening: Good

Were there incidents involving endangered or protected species? YES ___ NO X

Which species? (complete incident form(s)) none

Comments (type of material, biological specimens, unusual circumstances, etc):

Material: sand, shell and some small pebbles
Debris: Metal
Bycatch: Horseshoe crab: 2

- All in normal working order today.
- There was a fog in the am which reduced visibility but that cleared up in the afternoon.
- There were no incidents involving endangered or protected species.

BRIDGE WATCH SUMMARY

Time	Species	# Sightings/# Animals	Location/Comments
<u>0945</u>	<u>T. truncatus</u>	<u>3 / 10</u>	<u>abaft of port side beam swimming near pump out.</u>
<u>1042</u>	<u>T. truncatus</u>	<u>>10 / 20</u>	<u>forward of port bow, lobtailing & breaching</u>

Observer name [Signature]

ENDANGERED SPECIES OBSERVER PROGRAM

DAILY REPORT

USACE DISTRICT: Philadelphia
 PROJECT NAME: Bethany Beach, DE DREDGE NAME: B.E. Lindholm

Date: 12-June-09 Load #s: 34-37 Areas dredge worked: Borrow Area E

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

AIR TEMP: 70-77 °C (°F) (°F = 9/5 (°C) + 32; °C = 5/9 (°F - 32))
 WATER TEMP: Surface 69 °C (°F) Column (mid-depth) 56 °C (°F) Bottom N/A °C (°F)

Condition of deflector: N/A Condition of screening: Good

Were there incidents involving endangered or protected species? YES NO

Which species? (complete incident form(s)) N/A

Comments (type of material, biological specimens, unusual circumstances, etc):

- Material: sand, shell and broken up pebbles.
- Debris: fishingline and metal
- Bycatch: 1-Black Sea Bass
 3-Horseshoe crabs
 1-Stone crab
- Everything in normal working order.
- There were no incidents of endangered or protected species.
- Lindholm leaving for shipyard tonight last day of dredging.

BRIDGE WATCH SUMMARY

Time	Species	# Sightings/# Animals	Location/Comments
0728	T. truncatus	8 / 3	-at pumpout off port side traveling Northwest toward beach.
0739	T. truncatus	6 / 4 total	-at pumpout str. off port side playing/travelling south
1032	T. truncatus	3 / 8	-breaching, bobtailing off port beam
1430-1450	T. truncatus	20 / 15	-@ borrow ~ 1 mile off bow

Observer name Jenny Phaler

APPENDIX II
WEEKLY DATA SHEETS

ENDANGERED SPECIES OBSERVER PROGRAM

WEEKLY SUMMARY

JSACE DISTRICT: Philadelphia, Pa

PROJECT NAME: Delaware Beach Nourishment (DEWEY Bch)

DREDGE NAME: RN Weeks

Dates: 01 June 09 - 07 June 09 **Load #s:** 10-34 (DEWEY Bch) 1-3 (BETHANY Bch)

Areas dredge worked: Borrow Site

Were there incidents involving endangered or protected species? YES ___ NO X

Which species? N/A

Comments:

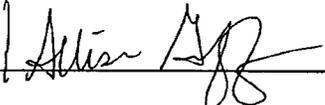
01 June 09: OBSERVER, ALLISON GRIFFIN, ON BOARD 50% COVERAGE WORKING 0800-2000hrs.

06 June 09: LAST LOAD FOR DEWEY BEACH (LD# 34, COMPLETED PUMP OFF 1430hrs) HEADING TO ANCHOR TO AWAIT MOVEMENT OF MONOBUOY TO BETHANY BEACH.

07 June 09: 1115 hrs ARRIVED BACK ONSITE TO BEGIN LOAD # 01 FOR BETHANY BEACH.

BRIDGE WATCH SUMMARY

Date/Time	Species	# Sightings/# Animals	Location/Comments
05 June 1514	T. truncatus / B. nose dolphin	2 / 8	~1000' yds port bow traveling SE returning from dump
1633	" "	3 / 5	~200' N of monobuoy
06 June 0835	T. truncatus / B. nose dolphin	2 / 6	~500' off stern near indian river inlet
0928	" "	5 / 9	~250' off port stern ~1nmi E of monobuoy
1600	" "	6 / 3	off tip of light house @ Cape Henlopen
1640	loggerhead turtle / C. Caretta	2 / 1	~25' port beam while @ anchor hdg NE
			AWAY from dredge
07 June 1435	T. truncatus / B. nose dolphin	3 / 5	~300' port stern @ Cape Henlopen

Observer name Allison Griffin 

**ENDANGERED SPECIES OBSERVER PROGRAM
WEEKLY SUMMARY**

ISACE DISTRICT: Philadelphia, Pa

PROJECT NAME: Delaware Beach Nourishment (Bethany Beach) DREDGE NAME: RN Weeks

Dates: 08 June 09 - 15 June 09 Load #: 4-104

Areas dredge worked: Borrow site

Were there incidents involving endangered or protected species? YES ___ NO

Which species? N/A

Comments: MATERIAL: SAND DERIS: PEA GRAVEL, METAL (BRASS detector caps, 50 gal. bucket)
BYCATCH: (2) Horseshoe crab, (1) Blue crab, whelk EGG SACS

09 June: DELAY FOR WEATHER (LIGHTENING SURROUNDINGSHIP) WHILE PUMPING OFF LOAD 15.

11 June: dense fog < 1/4mi visibility IN AM HOURS.

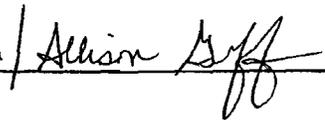
13 June: MID-AFTERNOON DENSE FOG < 500' VISIBILITY DECREASING ABILITY TO OBSERVE SPECIES IN WATER

14 JUNE: LOADS STAND ST. DUG WITH STARBOARD DRAG ARM ONLY DUE TO PROBLEMS WITH RAW WATER TO PORT ARM. ISSUE RESOLVED DURING LOAD ST.

BRIDGE WATCH SUMMARY

Date/Time	Species	# Sightings/# Animals	Location/Comments
08 June 09 / 0840	T. truncatus / B. nose dolphin	3 / 3	~1/4mi port beam / hdg to pump off
09 June 09 / 1150	" "	10 / 6	~200' stbd bow @ pump off - probable feeding
10 June 09 / 1107	" "	4 / 12	~300' stbd bow feeding SE of monobuoy
1310	knid. turtle	1 / 1	probable Kemp's ridley - Crew observed while hooking up to m. buoy feeding on pick up line
11 June 09 / 0940-0950	T. truncatus / B. nose dolphin	10* / 30-40	stbd bow -> stern leg pod feeding leaving monobuoy
1113	" "	7 / 5	~1000' port beam traveling west
1121-1127	" "	20+ / 25-30	~250-750' stbd beam - traveling w/ social behavior
12 June 09 / 0831	" "	6 / 15-20	~100' port bow E. of m. buoy feeding pod - 2 m/c pairs
13 June 09 / 0810	" "	1 / 2	@ m. buoy ~250' N of ship
0900	" "	5 / 8	~50' off stern while @ m. buoy
14 June 09 / 1015	" "	5 / 11	~150' off stern @ m. buoy
1115	" "	3 / 8	~500' stbd beam @ m. buoy
15 June 09 / 1540	" "	12 / 17	~200' stbd beam hdg to Borrow Area - leg. feeding pod

Observer name Allison Griffin



ENDANGERED SPECIES OBSERVER PROGRAM
WEEKLY SUMMARY

USACE DISTRICT: Philadelphia
PROJECT NAME: Dewey Beach & Bethany Beach DREDGE NAME: B. E. Lindholm

Dates: 1-June 09 - 8-June 09 Load #: 105-128 & 1-10

Areas dredge worked: Fenwick Borrow (1-6-09-6-6-09) & Borrow Area E (7-June-09-8)

Were there incidents involving endangered or protected species? YES NO

Which species? NONE

Comments: _____

- Material dredged for the week was sand, shell and some small pebbles
- The only debris were fishing line and netting as well as 1 bullet shell casing.
- The Biological Specimens/Biota for the week totaled:
 - Horseshoe crabs = 14
 - Stone crab = 2
 - Whelk egg casing = 2
 - Spider crab = 1
 - Cleamose skate = 1
 - Centropomus striata = 1 (black sea bass)
- No incidents/unusual occurrences or anything out of ordinary involving endangered or protected species.
- Project began in Dewey Beach with Fenwick Borrow and was ended 6-June-09. Moved to Bethany Beach with borrow Area E on 7-June-09.

BRIDGE WATCH SUMMARY

Date/Time	Species	# Sightings/# Animals	Location/Comments
June 2	<i>T. Truncatus</i>	1 / 3	Swimming SOUTH
June 6 1140-	<i>T. Truncatus</i>	1 / 6	port side swimming near Indian River Inlet
June 6 1730	<i>Rhinoptera bonasus</i>	1 / 3	swimming under bow
June 6 1900-1930	<i>Stellera coeruleoalba</i>	20 / ~30	off Bethany beach swimming/playing
June 7 1109	<i>T. Truncatus</i>	3 / 6	off stb beam feeding.
June 8 0918	<i>T. Truncatus</i>	4 / 3	off port bow swimming North.
June 8 2034	<i>T. Truncatus</i>	2 / 6	swimming by stb near beach

Observer name Jimmy Pifer

ENDANGERED SPECIES OBSERVER PROGRAM
WEEKLY SUMMARY

USACE DISTRICT: Philadelphia
PROJECT NAME: Bethany Beach, DE DREDGE NAME: B.E Lindholm

Dates: 09-June-09 - 12-June-09 Load #: 15 - 37

Areas dredge worked: Borrow Area E

Were there incidents involving endangered or protected species? YES NO

Which species? none

Comments:
- The material dredged this week was mostly sand and shell. There were small amounts of pebbles too.

- The debris consisted of: metal & fishing line.

Bycatch for the loads were: Blue crab = 1
Stone crab = 1
Horseshoe crab = 9
(Black sea urchin) Centropristis striata = 1

- B.E. Lindholm leaving for shipyard 12-June last day of dredging.
- Everything in normal working order.
- There were no incidents this week of endangered or protected species.
- Only protected species observed was *Tuesiapostumus* this week.

BRIDGE WATCH SUMMARY

Date/Time	Species	# Sightings/# Animals	Location/Comments
9-June-09 10-1245	<i>T. truncatus</i>	55 / >100	Near bethany beach & pumbout feeding in large pod; traveling and playing.
10-June 09 00-0920	<i>T. truncatus</i>	>36 / 35+	Feeding, playing, lobtailing
11-June 09 45-1042	<i>T. truncatus</i>	13 / 30	mostly on port side @ manobay swimming, breaching, lobtailing.
12-June 0728-1430	<i>T. truncatus</i>	37 / 30+ calf	@ manobay & borrow, traveling & playing.
12-			

Observer name Linger Hufner