

Project Report
ENDANGERED SPECIES MONITORING
Calcasieu River and Pass, LA
Bar Channel
Maintenance Dredging
00-2-CAL

Operations Technical Support Branch
US Army Corps of Engineers
New Orleans District
504-862-2521

Introduction

This report is submitted to fulfill requirements of the Endangered Species Act and the Incidental Take Statement (ITS) "for sea turtle takes resulting from Hopper Dredging activities" dated September 22, 1995. The New Orleans District (NOD) submits this preliminary report summarizing the results of Fiscal Year (FY) 2000 maintenance dredging of the Calcasieu River and Pass, Louisiana, bar channel by the Contract Dredges ATCHAFALAYA and COLUMBIA.

The NOD scheduled dredging in the Calcasieu River and Pass, Louisiana bar channel, such that the majority of the maintenance work would be conducted between December 1 and March 30, the time period when sea turtles are predicted to be the least abundant in nearshore gulf waters. However, the dredge that was awarded the contract for the FY 00 work, the ATCHAFALAYA, is a small size hopper dredge. Historically medium size hopper dredges have conducted Calcasieu River and Pass, La., bar channel maintenance. A medium hopper dredge has higher production than a small size hopper dredge. The ATCHAFALAYA required more time to complete channel maintenance and some work was conducted after March 30. Additionally, a second hopper dredge, the COLUMBIA, was brought onto the job in May 2000 to speed the process of bar channel maintenance dredging.

Maintenance dredging operations in the Calcasieu River bar channel were interrupted when a dry dock barge sank on June 13, 2000, in the Calcasieu River navigational channel at approximate Mile 22.65, where the channel intersects the Gulf Intracoastal Waterway. The sunken barge blocked the entire eastern-half of the authorized navigational channel and large vessels carrying raw materials and other products vital to the operations of Port of Lake Charles industries were unable to traverse the channel. Crude oil refineries in Lake Charles were supplied with crude oil from the Strategic Petroleum Reserve to maintain their operations until such time as their regular supply vessels could access their dock facilities. This economic impact resulted in the NOD implementing emergency hopper dredging activities to excavate as quickly as possible a bypass channel around the sunken barge to allow these large vessels to navigate the ship channel and reach the Port of Lake Charles.

Between June 16, 2000, and July 9, 2000, the NOD used multiple hopper dredges to excavate a bypass channel around the western side of the sunken dry dock barge in the Calcasieu River navigational channel between approximate Mile 22.25 and Mile 23.25. The hopper dredges ATCHAFALAYA and COLUMBIA were temporarily reassigned to this emergency dredging operation on June 16, 2000. On July 4, 2000, both dredges returned to their work in the Calcasieu River bar channel.

Completely avoiding dredging during the period when sea turtles are abundant in the nearshore gulf waters was not possible during this maintenance event because the time period required to complete this work was longer than anticipated. Sea turtle observers were placed on board both dredges and conducted sea turtle monitoring as necessary from April 1, 2000, to the end of the contract on July 27, 2000.

Scope of Work

Maintenance dredging of the Calcasieu River and Pass, LA., bar channel conducted by the contract dredges ATCHAFALAYA and COLUMBIA under contract DACW29-00-0016, commenced December 26, 1999, and was completed July 27, 2000. The ATCHAFALAYA began work on December 26, 1999, and continued working in the Calcasieu River bar channel until May 16, 2000, when the dredge was reassigned to the U. S. Army Corps of Engineers, Mobile District, and later to the emergency bypass channel dredging performed in the inland Calcasieu River reach. The ATCHAFALAYA returned to the Calcasieu River bar channel on July 3, 2000, and continued working in the bar channel until July 21, 2000. The ATCHAFALAYA conducted dredging between approximate channel Miles -1.1 and -19.8 (Figure 1). The majority of the dredged material was removed from between Miles -1.1 and -6.0.

The COLUMBIA began work on May 13, 2000, and continued working in the Calcasieu River bar channel until June 17, 2000, when the dredge was reassigned to the emergency bypass channel dredging performed in the inland Calcasieu River reach. The COLUMBIA returned to the Calcasieu River bar channel on July 3, 2000, and continued working in the bar channel until July 27, 2000. The COLUMBIA conducted dredging between approximate channel Miles -1.1 and -19.8 (Figure 1). The majority of the dredged material was removed from between Miles -12.2 and -19.8.

A portion of the maintenance dredging activities was conducted during the time period when sea turtle monitoring was required as described in the ITS dated September 22, 1995, and during that time period sea turtle observers were on board the hopper dredges conducting monitoring.

In 1995, and previous years, the National Marine Fisheries Service determined that listed whales are unlikely to be adversely affected by hopper dredging in the Gulf of Mexico. As a result, endangered species monitors for whales, bridge observers, were not required for this contract. Throughout the maintenance event, dredging operations were conducted following the items listed in reasonable and prudent measures 4. and 6. This included advising the Contractor of the potential presence of sea turtles in the navigation channel and reporting and operating requirements.

Methodology

The dredges worked in dredge and haul and agitation modes. Material was deposited in the Ocean Dredged Material Disposal Site located south of and parallel to the navigation channel. The ATCHAFALAYA and the COLUMBIA were equipped with 4"x 4" inflow screens and sea turtle observers were on board monitoring for sea turtle takes. The screens were inspected for sea turtles and sea turtle parts and cleared by hand of debris. Draghead deflectors are not currently required for this project and were not in use during dredging operations. The results of monitoring are summarized in Tables 1 and 2.

Table 1
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Turtle
Obs. Rpts.
Table 2
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Summary

Results

The ATCHAFALAYA worked in the Calcasieu River bar channel from December 26, 1999, to May 16, 2000, and from July 3, 2000, to July 21, 2000. The ATCHAFALAYA was temporarily reassigned to work in the Mobile District from May 17, 2000, through June 14, 2000, and in the emergency bypass channel dredging operation in the inland reach of the Calcasieu River from June 16, 2000, through July 3, 2000. Approximately 252,960 cubic yards of shoal material were removed from the bar channel by dredge and haul operations. Approximately 1,992,343 cubic yards of shoal material were removed in the agitation mode.

The COLUMBIA worked in the Calcasieu River bar channel from May 13, 2000, to June 16, 2000. The COLUMBIA was temporarily reassigned to the emergency bypass channel dredging operation in the inland Calcasieu River reach from June 17, 2000, through July 3, 2000. The COLUMBIA resumed work in the bar channel from July 4, 2000, through July 27, 2000. Approximately 209,820 cubic yards of shoal material were removed from the bar channel by dredge and haul operations. Approximately 4,178,961 cubic yards of shoal material were removed in the agitation mode.

During this maintenance event there was one documented take of a Kemp's ridley sea turtle on April 17, 2000, by the ATCHAFALAYA, and one sighting of a dead leatherback sea turtle on May 10, 2000. A section of sea turtle gut was recovered from the ATCHAFALAYA's screens on April 5, 2000. Old sea turtle bones were recovered from the ATCHAFALAYA's screens on May 17, 2000, and May 19, 2000, and from the COLUMBIA's screens on May 15, 2000, and May 16, 2000.

Throughout the dredging work both biological and non-biological debris was recovered from the screens. The majority of the non-biological debris consisted of unspecified trash, plastics, cloth, and assorted fishing-associated gear. The biological material collected included sargassum, sea grass, stingrays, worms, eels, blue crabs, spider crabs, shrimp, jellyfish, flounder, whelks, and whelk egg casings. The results of the ATCHAFALAYA's screen monitoring are summarized in Table 1. The results of the COLUMBIA's screen monitoring are summarized in Table 2.

Water temperatures ranged from a maximum surface water temperature of 88 degrees F (31.1 degrees C) to a minimum surface water temperature of 71 degrees F (21.6 degrees C). Mid-depth water temperatures ranged from a maximum of 88 degrees F (31.1 degrees C) to a minimum of 69 degrees F (20.5 degrees C).

Bridge monitoring was conducted opportunistically. Numerous sightings of *Tursiops truncatus* were recorded in the bar channel vicinity by observers working on both hopper dredges.

Discussion

For the duration of maintenance dredging work (December 26, 1999 through July 27, 2000) conducted in the Calcasieu River and Pass, LA., bar channel under contract DACW29-00-0016, only one sea turtle take was recorded. On April 17, 2000, a Kemp's ridley sea turtle was taken by the hopper dredge ATCHAFALAYA. A section of sea turtle gut was recovered from the ATCHAFALAYA's screens on April 5, 2000, but this incident was not counted as a sea turtle take. On May 10, 2000, a dead leatherback sea turtle was sighted outside of the Calcasieu River navigational channel between buoys 33-35. This sea turtle mortality was not related to the hopper dredging activities in the bar channel. Between May 15 and 19, 2000, a few old sea turtle bones were recovered from the inflow screens of both hopper dredges. Temperature conditions during the maintenance event were well within range of sea turtle tolerances.

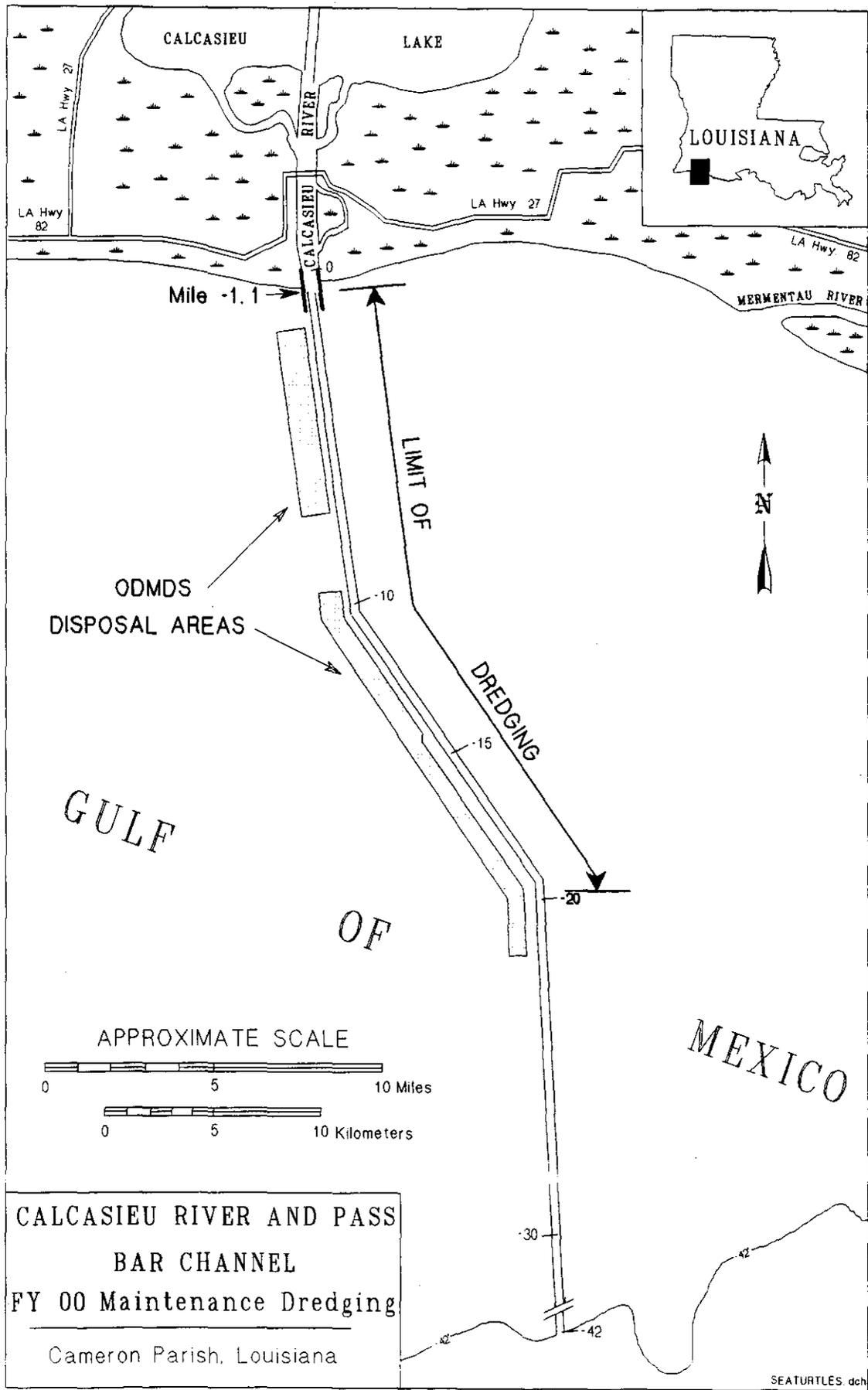


Figure 1

Table 1. Summary Sea Turtle Observer Reports (Hopper Dredge ATCHAFALAYA)

DATE	DREDGE	NOTES
1 April 2000	ATCHAFALAYA	Screens: rope, net, wire, trash, spider crab Below Mid-Depth Temp: 70 F Surface Temp: 71 F Weather: cloudy, winds 18-22 knots, BSS 3-4 Other:
2 April 2000	ATCHAFALAYA	Screens: rope, net, line, plastic, trash, blue crab, mantis shrimp, fish Below Mid-Depth Temp: 70 F Surface Temp: 72 F Weather: cloudy, winds 5-20 knots, BSS 2-5 Other:
3 April 2000	ATCHAFALAYA	Screens: wood, plastic, rope, line, net, spider crab, blue crab, mantis shrimp, stingray, sargassum Below Mid-Depth Temp: 71 F Surface Temp: 72 F Weather: cloudy w/rain, winds 5-40 knots, BSS 3-5 Other:
4 April 2000	ATCHAFALAYA	Screens: net, rope, plastic, wire, cloth, blue crab, mantis shrimp, brown shrimp, sargassum, tube worms, other worms Below Mid-Depth Temp: 71 F Surface Temp: 72 F Weather: p/cloudy-clear, winds 10-30 knots, BSS 2-4 Other:
5 April 2000	ATCHAFALAYA	Screens: plastic, net, rope, line, cloth, tube worms, whelk egg case, portion of gut Below Mid-Depth Temp: 69-71 F Surface Temp: 71-72 F Weather: p/cloudy-clear, wind 5-20 knots, BSS 3 Other: thickness, texture, smell, & toughness of gut leads to believe that it was from a turtle. positive I.D. could not be made. May have been a possible take.
6 April 2000	ATCHAFALAYA	Screens: plastic, cloth, net, line, rope, wire, stingray, tube worms, whelk egg case, crab sp. Below Mid-Depth Temp: 69 F Surface Temp: 71 F Weather: p/cloudy-clear, winds 18-20 knots, BSS 3-4 Other:

DATE	DREDGE	NOTES
7 April 2000	ATCHAFALAYA	Screens: plastic, cloth, net, line, rope, tube worms Below Mid-Depth Temp: 71-69 F Surface Temp: 71-72 F Weather: p/cloudy, winds 10-22 knots, BSS 3-4 Other:
8 April 2000	ATCHAFALAYA	Screens: plastic, net, line, rope, wire, blue crab, whelk egg case Below Mid-Depth Temp: 69 F Surface Temp: 71 F Weather: sunny/cloudy, winds 5-40 knots, seas 3-4' Other:
9 April 2000	ATCHAFALAYA	Screens: net, rope, line, wood, plastic, sargassum, moon snail, fish sp. Below Mid-Depth Temp: 69 F Surface Temp: 71 F Weather: clear-p/cloudy, winds 18-30 knots, BSS 3-5 Other:
10 April 2000	ATCHAFALAYA	Screens: plastic, net, rope, line, crabpot, sargassum, stingray, crabs Below Mid-Depth Temp: 69 F Surface Temp: 71 F Weather: cloudy, winds 10-32 knots, BSS 3-4 Other:
11 April 2000	ATCHAFALAYA	Screens: net, plastic, line, rope, cloth, wood, whelk egg case, sargassum, fish sp. Below Mid-Depth Temp: 69 F Surface Temp: 71 F Weather: cloudy w/ lt. haze, winds 5-22 kts, seas 3-4' Other:
12 April 2000	ATCHAFALAYA	Screens: plastic, line, net, cloth, rope, tube worm, whelk egg case, sargassum Below Mid-Depth Temp: 69 F Surface Temp: 71 F Weather: p/cloudy-clear, winds 2-20 knots, seas 1-2' Other:
13 April 2000	ATCHAFALAYA	Screens: plastic, net, line, cloth, rope, wood, sargassum, eel, stingray, whelk egg case Below Mid-Depth Temp: 69 F Surface Temp: 71 F Weather: cloudy, winds 5-20 knots, seas 1-2'

DATE	DREDGE	NOTES
14 April 2000	ATCHAFALAYA	Screens: plastic, cloth, wire, net, line, cable, sargassum, stingray, cannonball jellyfish, mantis shrimp, flatfish sp. Below Mid-Depth Temp: 69 F Surface Temp: 71 F Weather: clear-p/cloudy, winds 2-15 kts, BSS 1' Other:
15 April 2000	ATCHAFALAYA	Screens: plastic, net, line, rope, cloth, spider crab, brotula sp. stingray, sargassum, whelk egg Below Mid-Depth Temp: 69 F Surface Temp: 71 F Weather: p/cloudy, winds 5-22 kts, BSS 3' Other:
16 April 2000	ATCHAFALAYA	Screens: plastic, net, line, rope, wood, tube, sargassum, whelk egg, cutlass fish, stingray Below Mid-Depth Temp: 69 F Surface Temp: 71 F Weather: clear, winds 2-20 kts, BSS 3' Other:
17 April 2000	ATCHAFALAYA	Screens: plastic, net, rope, line, crab, stingray, whelk egg, sargassum, posterior portion of a Kemp's Ridley sea turtle. Below Mid-Depth Temp: 69 F Surface Temp: 71 F Weather: clear-p/cloudy, winds 5-12 kts, seas 0-1' Other: Kemp's ridley sea turtle Take.
18 April 2000	ATCHAFALAYA	Screens: plastic, line, net, rope, cloth, sting ray, spider crab, whelk egg, sargassum Below Mid-Depth Temp: 69 F Surface Temp: 71 F Weather: clear-p/cloudy, winds 5-12 knots, BSS 0-1 Other:
19 April 2000	ATCHAFALAYA	Screens: cloth, plastic, line, net, rope, wood, shark, skate, whelk egg, sargassum, spider crab, other crab sp. Below Mid-Depth Temp: 69 F Surface Temp: 71 F Weather: cloudy-clear. winds 10-20 kts, BSS 1-3 Other:

DATE	DREDGE	NOTES
20 April 2000	ATCHAFALAYA	Screens: plastic, net, line, rope, moon snail, sargassum, spider crab, blue crab, other crab sp. Below Mid-Depth Temp: 69 F Surface Temp: 71 F Weather: p/cloudy-clear, winds 10-22 kts, seas 1-3 Other:
21 April 2000	ATCHAFALAYA	Screens: plastic, net, rope, line, cloth, wire, wood, shrimp sp., blue crab, other crab sp. brotula sp. stingray, other fish Below Mid-Depth Temp: 69 F Surface Temp: 71 F Weather: clear, winds 10-22, BSS 1-2' Other:
22 April 2000	ATCHAFALAYA	Screens: plastic, net, line, rope, wood, cownose ray, sargassum, flatfish sp., blue crab, spider crab Below Mid-Depth Temp: 69 F Surface Temp: 71 F Weather: clear, winds 10-25 kts, seas 1-3 Other:
23 April 2000	ATCHAFALAYA	Screens: plastic, net, rope, cloth, sargassum, whelk egg, crab sp., cannonball jellyfish Below Mid-Depth Temp: 69 F Surface Temp: 71 F Weather: p/cloudy-cloudy w/rain, winds 10-24 kts, seas 1-6 Other:
24 April 2000	ATCHAFALAYA	Screens: plastic, net, line, rope, wood, sargassum, cannonball jellyfish, whelk egg, moon snail Below Mid-Depth Temp: 69 F Surface Temp: 71 F Weather: clear, winds 8-25 knots, BSS 2-4 Other:
25 April 2000	ATCHAFALAYA	Screens: plastic, line, net, cloth, wood, stingray, sargassum Below Mid-Depth Temp: 69 F Surface Temp: 71 F Weather: clear, winds 10 kts, BSS 0-1' Other:

DATE	DREDGE	NOTES
26 April 2000	ATCHAFALAYA	Screens: plastic, line, net, cloth, rope, crab sp, brotulla sp , sargassum Below Mid-Depth Temp: 69 F Surface Temp: 71 F Weather: clear, winds 5-22 kts, BSS 0-1' Other:
27 April 2000	ATCHAFALAYA	Screens: flounder, sargassum, whelk egg cases, stingray, clay trash Below Mid-Depth Temp: 69 F Surface Temp: 71 F Weather: Winds SW 15-20 kts, BSS 5, clear skies Other:
28 April 2000	ATCHAFALAYA	Screens: blue crabs, trash, clay Below Mid-Depth Temp: 74 F Surface Temp: 74 F Weather: N winds 10-20 kts, BSS 5 Other:
29 April 2000	ATCHAFALAYA	Screens: whelk egg casing, shrimp, blue crabs, sargassum, trash, clay Below Mid-Depth Temp: 74 F Surface Temp: 74 F Weather: SE winds 15-20 kts, BSS 5 Other:
30 April 2000	ATCHAFALAYA	Screens: trash, clay, whelk egg casings, blue crabs, Below Mid-Depth Temp: 74 F Surface Temp: 74 F Weather: SE winds 20-30 kts, BSS 6 Other:
1 May 2000	ATCHAFALAYA	Screens: blue crabs, sargassum, shell, whelk egg cases, wood, trash Below Mid-Depth Temp: 74 F Surface Temp: 74 F Weather: SE winds 10-30 kts, BSS 4-6 Other:
2 May 2000	ATCHAFALAYA	Screens: blue crabs, croaker, shell, whelk egg case, trash, wood Below Mid-Depth Temp: 74 F Surface Temp: 74 F Weather: variable winds, 20-40 kts, BSS 6 Other:

DATE	DREDGE	NOTES
3 May 2000	ATCHAFALAYA	Screens: shell, trash, wood Below Mid-Depth Temp: 74 F Surface Temp: 74 F Weather: SE winds 10-25 kts, BSS 3-5 Other:
4 May 2000	ATCHAFALAYA	Screens: blue crabs, sargassum, white shrimp, croaker, clay, trash Below Mid-Depth Temp: 74 F Surface Temp: 74 F Weather: variable winds 20-25 kts, BSS 5 Other:
5 May 2000	ATCHAFALAYA	Screens: blue crabs, cannonball jellyfish, whelk egg casing, spider crabs, sargassum, trash Below Mid-Depth Temp: 74 F Surface Temp: 74 F Weather: SE winds 10-15 kts, BSS 4 Other:
6 May 2000	ATCHAFALAYA	Screens: shell, blue crabs, spider crabs, shrimp, sargassum, wood, trash Below Mid-Depth Temp: 75 F Surface Temp: 75 F Weather: SE winds 15-20 kts, BSS 5 Other:
7 May 2000	ATCHAFALAYA	Screens: blue crabs, spider crabs, sargassum, clay, shell, wood, trash Below Mid-Depth Temp: 76 F Surface Temp: 76 F Weather: SSE winds 15-20 kts, BSS 5 Other:
8 May 2000	ATCHAFALAYA	Screens: shell, whelk egg casing, sargassum, blue crabs, trash Below Mid-Depth Temp: 77 F Surface Temp: 77 F Weather: S winds 20 kts, BSS 5 Other:
9 May 2000	ATCHAFALAYA	Screens: blue crab, spider crab, whelks, whelk egg cases, wood, shrimp, netting, crab pot, plastics, trash Below Mid-Depth Temp: 77 F Surface Temp: 77 F Weather: S winds 5-20, BSS 4-5, p/cloudy Other:

DATE	DREDGE	NOTES
10 May 2000	ATCHAFALAYA	Screens: shell, catfish, whelk egg casing, sargassum, worms, clay, trash Below Mid-Depth Temp: 78 F Surface Temp: 78 F Weather: S winds 10-20 kts, BSS 4 Other: dead leatherback sea turtle sighted. Sub-adult sighted between buoys 33-35. Badly decomposed. NOT related to dredging project.
11 May 2000	ATCHAFALAYA	Screens: blue crab, mantis shrimp, whelk egg casings, lightening whelk, catfish skull, sargassum wood, plastics, crab pot Below Mid-Depth Temp: 78 F Surface Temp: 78 F Weather: S winds 10-25 kts, BSS 3-5, mostly cloudy Other:
12 May 2000	ATCHAFALAYA	Screens: shell, whelk egg casing, sargassum, blue crabs, clay, trash Below Mid-Depth Temp: 79 F Surface Temp: 79 F Weather: S winds 10-20 kts, BSS 4 Other:
13 May 2000	ATCHAFALAYA	Screens: blue crab, whelk egg casings, flounder, sargassum, moon snails, wood Below Mid-Depth Temp: 79 F Surface Temp: 79 F Weather: NE winds 15-25 kts, BSS 2-5, mostly cloudy Other:
14 May 2000	ATCHAFALAYA	Screens: blue crab, flounder, whelks, whelk egg casings, sargassum, wood Below Mid-Depth Temp: 78 F Surface Temp: 78 F Weather: clear sky, NE winds 5-10 knots, BSS 2-3 Other:
15 May 2000	ATCHAFALAYA	Screens: plastic, rope, aluminum can, old clothing, bags, small drift wood, sargassum, blue crab, whelk eggs Below Mid-Depth Temp: 78 F Surface Temp: 78 F Weather: clear sky, NE winds 10-15 kts Other:

DATE	DREDGE	NOTES
16 May 2000	ATCHAFALAYA	Screens: blue crab, spider crab, whelks, whelk egg cases, sargassum, flounder, wood Below Mid-Depth Temp: 78 F Surface Temp: 78 F Weather: p/cloudy, BSS 2, SE wind 5 kts Other:
17 May 2000	ATCHAFALAYA	Screens: trash, worms, sargassum, blue crabs, trash Below Mid-Depth Temp: 78 F Surface Temp: 78 F Weather: SW winds 10 kts, BSS 3 Other: 2 old weathered sea turtle bones sampled today
18 May 2000	ATCHAFALAYA	Screens: Below Mid-Depth Temp: Surface Temp: Weather: Other:
19 May 2000	ATCHAFALAYA	Screens: sea weed, clams, blue crab, worms, barnacles, angel wings, flounder, moon snail, wood Below Mid-Depth Temp: Surface Temp: Weather: overcast, W winds 5-20 kts, BSS 2-4 Other: small plastron bone (black & old) in no way related to dredge operations
1 July 2000	ATCHAFALAYA	Screens: Below Mid-Depth Temp: Surface Temp: Weather: Other:
2 July 2000	ATCHAFALAYA	Screens: Below Mid-Depth Temp: Surface Temp: Weather: Other:
3 July 2000	ATCHAFALAYA	Screens: Below Mid-Depth Temp: Surface Temp: Weather: clear sky, BSS 4-5, SW wind 15 kts Other:

DATE	DREDGE	NOTES
4 July 2000	ATCHAFALAYA	Screens: sea grass, sargassum, moon snail, whelk egg cases, wood Below Mid-Depth Temp: Surface Temp: Weather: clear sky, BSS 2-4', wind SE 5-15 Other:
5 July 2000	ATCHAFALAYA	Screens: sea weed, worms, whelks, catfish skull Below Mid-Depth Temp: Surface Temp: Weather: mostly clear, BSS 2-3, 10 SSE kts Other:
6 July 2000	ATCHAFALAYA	Screens: sargassum, whelk eggs, penshells, horse coach, blue crab, worms, wood, debris Below Mid-Depth Temp: Surface Temp: Weather: clear, 5 kts SSE, BSS 2 Other:
7 July 2000	ATCHAFALAYA	Screens: bivalves, clams, whelks Below Mid-Depth Temp: Surface Temp: Weather: clear, SW 3 kts, BSS 2 Other:
8 July 2000	ATCHAFALAYA	Screens: blue crab, polychaetes, large worms, penshells, clams, whelks, whelk egg cases Below Mid-Depth Temp: Surface Temp: Weather: clear, NW/SE wind 5-15 kts (squalls in evening gusting 30) Other:
9 July 2000	ATCHAFALAYA	Screens: blue crab, whelk, clam, flounder, barnacles, sea grass, moon snails, penshells Below Mid-Depth Temp: Surface Temp: Weather: hot/clear, BSS 2, WSW 10k, pm SE 5-10 kts Other:

DATE	DREDGE	NOTES
10 July 2000	ATCHAFALAYA	Screens: sea grass, clams, lightening whelks, spider crab, calico crab, worms, wood, skate Below Mid-Depth Temp: Surface Temp: Weather: clear, WNW 10 kts, BSS 2-4 Other:
11 July 2000	ATCHAFALAYA	Screens: sea grass, blue crab, calico crabs, spider crabs, clam shells, whelk Below Mid-Depth Temp: Surface Temp: 87 F Weather: clear sky, WSW 10 kts, BSS 2-4 Other:
12 July 2000	ATCHAFALAYA	Screens: sea grass, clams, blue crab, whelks barnacles, plastic, rope, netting Below Mid-Depth Temp: Surface Temp: Weather: clear, WNW 10 kts, BSS 2/3 Other:
13 July 2000	ATCHAFALAYA	Screens: seaweed, blue crab, clams, whelks, barnacles, worms, plastic, rope, netting Below Mid-Depth Temp: Surface Temp: Weather: clear, NNW 5-10 kts (up to 20 kts), BSS 4-5 Other:
14 July 2000	ATCHAFALAYA	Screens: blue crab, sea weed, mantis shrimp, hermit crab, lightening whelks, whelk egg cases, 3" flounder, wood Below Mid-Depth Temp: Surface Temp: Weather: clear, WNW wind 10-20 kts, BSS 2-4 Other:
15 July 2000	ATCHAFALAYA	Screens: sea grass, worms, clam, whelk shells Below Mid-Depth Temp: Surface Temp: Weather: clear, SW winds 10 kts, BSS 2 Other:

DATE	DREDGE	NOTES
16 July 2000	ATCHAFALAYA	Screens: sea weed, jumbo shrimp, mantis shrimp, lightening whelks, blue crab (w/eggs), clams, wood Below Mid-Depth Temp: Surface Temp: 88 F Weather: clear, W wind (light), BSS 1-3 Other:
17 July 2000	ATCHAFALAYA	Screens: sea weed, clams, blue crab (w/eggs), worms, whelk, horse conch, spider crab Below Mid-Depth Temp: Surface Temp: Weather: clear, W winds 10 kts, BSS 2 Other:
18 July 2000	ATCHAFALAYA	Screens: sea weed, blue crab, spider crab, worms, clams, whelks, wood Below Mid-Depth Temp: Surface Temp: Weather: clear, p/cloudy, BSS 4, wind W 5-10 kts Other:
19 July 2000	ATCHAFALAYA	Screens: Below Mid-Depth Temp: Surface Temp: Weather: Other:
20 July 2000	ATCHAFALAYA	Screens: sea grass, clams, whelks, whelk egg cases, catfish, blue crab, large shrimp, worms, horse conch, angel shells, laughing gull Below Mid-Depth Temp: Surface Temp: Weather: clear, SW wind 10-20 kts, BSS 4-5 Other:
21 July 2000	ATCHAFALAYA	Screens: sea grass, clams, whelks, blue crab, shrimp, worms Below Mid-Depth Temp: Surface Temp: Weather: clear, SW wind 10-12 kts, BSS 4-5 Other: FINAL

Table 2. Summary Sea Turtle Observer Reports (Hopper Dredge COLUMBIA)

DATE	DREDGE	NOTES
13 May 2000	COLUMBIA	Screens: trash & clay Below Mid-Depth Temp: 79 F Surface Temp: 79 F Weather: SE winds 10-15 knots, BSS 4 Other:
14 May 2000	COLUMBIA	Screens: trash in large amounts Below Mid-Depth Temp: 79 F Surface Temp: 79 F Weather: SE winds 15-20 knots, BSS 5 Other:
15 May 2000	COLUMBIA	Screens: sargassum, clay and trash Below Mid-Depth Temp: 79 F Surface Temp: 79 F Weather: NE winds 2-25 knots, BSS 6 Other: old weathered sea turtle bone sampled
16 May 2000	COLUMBIA	Screens: trash, worms, sargassum and blue crabs Below Mid-Depth Temp: 78 F Surface Temperature: 78 F Weather: SW winds 10 knots, BSS 3 Other: 2 old weathered sea turtle bones sampled
17 May 2000	COLUMBIA	Screens: sargassum, clay, shell, worms, trash and spider crabs Below Mid-Depth Temp: 78 F Surface Temp: 78 F Weather: S winds 20 knots, BSS 5 Other:
18 May 2000	COLUMBIA	Screens: clay, worms, sargassum and trash Below Mid-Depth Temp: 79 F Surface Temp: 79 F Weather: SW winds 20-25 knots, BSS 6 Other:
19 May 00	COLUMBIA	Screens: clay, sargassum, blue crabs, trash, dolly varden crabs, mantis shrimp, whelk egg casing and shell Below Mid-Depth Temp: 79 F Surface Temp: 79 F Weather: S winds 10-15 knots. BSS 4 Other:

DATE	DREDGE	NOTES
20 May 2000	COLUMBIA	Screens: clay, trash, sargassum, blue crabs, spider crabs, shell, and a red drum Below Mid-Depth Temp: 79-80 F Surface Temp: 79-80 F Weather: WNW winds 5-10 knots, BSS 3 Other:
21 May 2000	COLUMBIA	Screens: clay, sargassum, flounder, blue crabs, spider crabs, and trash Below Mid-Depth Temp: 80 F Surface Temp: 80 F Weather: S winds 5-10 knots, BSS 3 Other:
22 May 2000	COLUMBIA	Screens: clay, trash, blue crabs, net, rope, shell, worms, whelk egg casings Below Mid-Depth Temp: 80 F Surface Temp: 80 F Weather: S winds 7-10 knots, BSS 3 Other:
23 May 2000	COLUMBIA	Screens: clay, sargassum, shell, worms, blue crabs, whelk egg casings Below Mid-Depth Temp: 81 F Surface Temperature: 81 F Weather: S winds 10-20 knots, BSS 4 Other:
24 May 2000	COLUMBIA	Screens: clay, sargassum, worms, flounder, blue crabs, shrimp, and trash Below Mid-Depth Temp: 81 F Surface Temp: 81 F Weather: WSW winds 20 knots BSS 5 Other:
25 May 2000	COLUMBIA	Screens: clay, trash, sargassum, and blue crabs Below Mid-Depth Temp: 81F Surface Temp: 81 F Weather: SW winds 15-20 knots BSS 5 Other:
26 May 2000	COLUMBIA	Screens: Below Mid-Depth Temp: Surface Temp: Weather: Other:

DATE	DREDGE	NOTES
27 May 2000	COLUMBIA	Screens: clay, trash, sargassum, and blue crabs Below Mid-Depth Temp: 81 F Surface Temp: 86 F Weather: SSW winds 10-20 knots, BSS 5 Other:
28 May 2000	COLUMBIA	Screens: blue crabs, sargassum grass, whelk casing, whelk, bi-colored eel Below Mid-Depth Temp: 80-81 F Surface Temp: 80-81 F Weather: SSW 10-20 knot, BSS 3-5, Pt Cloudy 89 F Other:
29 May 2000	COLUMBIA	Screens: clay, trash, flounder, worms, whelk egg casings, sargassum Below Mid-Depth Temp: 81F Surface Temp: 81-82 F Weather: NSW winds 10-12 knots, BSS 3 Pt. Cloudy Other:
30 May 2000	COLUMBIA	Screens: Below Mid-Depth Temp: Surface Temperature: Weather: Other:
31 May 2000	COLUMBIA	Screens: whelk egg casings, flounder (2), worms, sargassum, blue crabs (4), and trash Below Mid-Depth Temp: 81 F Surface Temp: 81F Weather: SE winds 4-10 knots, BSS 2-3 sunny/clear Other:
1 June 2000	COLUMBIA	Screens: crustaceans, gastropods, worms, flatfish, and eel Below Mid-Depth Temp: 81 F Surface Temp: 81 F Weather: Clear, SSE 3-10 knots, BSS 3-4, 79-89 F Other:
2 June 2000	COLUMBIA	Screens: rope/cable, netting, fishing line, scrap metal, clothing/shoes, and assorted trash, crustaceans, gastropods, eel worms, flatfish, and assorted vegetation Below Mid-Depth Temp: 81 F Surface Temp: 81 F Weather: clear 87 F, BSS 3-4, SSE winds 10 knots Other:

DATE	DREDGE	NOTES
3 June 2000	COLUMBIA	Screens: rope/cable, fishing line/net, clothing/shoes, trash, crustaceans, gastropods (whelk egg casings), numerous species of eel, worms, & juvenile roundfish Below Mid-Depth Temp: 81 F Surface Temp: 81-82 F Weather: clear, BSS 2-3, SSE winds 5-10 knots Other:
4 June 2000	COLUMBIA	Screens: crustaceans, gastropods, flounder, eel, rope/cable, fishing line/net, clothing/shoes, wood, trash Below Mid-Depth Temp: 82 F Surface Temp: 82 F Weather: pt. cloudy, BSS 3-5, WSW 15 knots, 87 F Other:
5 June 2000	COLUMBIA	Screens: gastropods, eel, roundfish, sargassum, wood, rope/cable, fishing line/net, clothing, scrap metal, trash Below Mid-Depth Temp: 82 F Surface Temp: 82 F Weather: cloudy/rain, WNW 5-20 knots, BSS 5-6 Other:
6 June 2000	COLUMBIA	Screens: Below Mid-Depth Temp: 82 F Surface Temperature: 83 F Weather: clear, BSS 3-4, NNE 5-10 knots Other: unable to dredge due to loss of draghead & dragarm
7 June 2000	COLUMBIA	Screens: Below Mid-Depth Temp: 83 F Surface Temp: 83 F Weather: clear/overcast, BSS 5, SSE winds Other: unable to dredge due to loss of draghead & dragarm
8 June 2000	COLUMBIA	Screens: Below Mid-Depth Temp: 83 F Surface Temp: 83 F Weather: overcast; calm at dock Other: unable to dredge due to repairs

DATE	DREDGE	NOTES
9 June 00	COLUMBIA	Screens: crustaceans, gastropods, eel, worms, rope, fishing net/line, tires, trash Below Mid-Depth Temp: 83 F Surface Temp: 83 F Weather: rough, SE 15-20 knots, BSS 3-5, overcast Other: dredging resumed late in the p.m.
10 June 2000	COLUMBIA	Screens: crustaceans, gastropods, eel, roundfish, marine vegetation, tires, rope/cable, fishing line/net, clothing, wood trash, scrap metal Below Mid-Depth Temp: 83 F Surface Temp: 83 F Weather: partly cloudy, BSS 3-4, SE 10-15 knots Other:
11 June 2000	COLUMBIA	Screens: sea grass, bivalves, gastropods, shrimp, blue crab, flounder, assorted abiotic debris Below Mid-Depth Temp: 82 F Surface Temp: 82 F Weather: partly cloudy, BSS 3-5 ft, S wind 10-15 knots Other:
12 June 2000	COLUMBIA	Screens: polychaete worms, blue crabs, mollusks, sea grass, assorted abiotic debris Below Mid-Depth Temp: 83 F Surface Temp: 83 F Weather: partly cloudy, BSS 1-3 ft, S 10-15 knots Other:
13 June 2000	COLUMBIA	Screens: bivalve and gastropod mollusks, sea grass, blue crabs, flatfish, shrimp & mantis shrimp, abiotic debris Below Mid-Depth Temp: 82-83 F Surface Temperature: 82-83 F Weather: SSW wind 18 knots, partly cloudy, 2-4 BSS Other:
14 June 2000	COLUMBIA	Screens: shrimp, blue crabs, sea grass, gastropod & bivalve mollusks, eels, worms, abiotic debris Below Mid-Depth Temp: 82-83 F Surface Temp: 82-83 F Weather: SW wind 10-20 knots, BSS 3-6, partly cloudy Other:

DATE	DREDGE	NOTES
15 June 2000	COLUMBIA	Screens: shrimp, goby, mollusks (lamellibranchs and gastropods, blue crabs, eels, annelid worms, seagrass, abiotic material Below Mid-Depth Temp: 83 F Surface Temp: 83 F Weather: Other: SSW wind 10-20 knots, BSS 1-4, partly cloudy
16 June 2000	COLUMBIA	Screens: flatfish, clupeid fish, eels, crabs, gastropod & bivalve mollusks, worms, & seagrass Below Mid-Depth Temp: 83 F Surface Temp: 83 F Weather: SSW wind 10-20 knots, BSS 2-4, overcast Other: After load 60, vessel left dredge area and went upriver for emergency clearing river of sunken dry dock
4 July 2000	COLUMBIA	Screens: blue crab, shrimp, mollusk shells, abiotic debris Below Mid-Depth Temp: 28 C Surface Temperature: 28 C Weather: SE wind 10-15 knots, BSS 2-4, clear skies Other: Dredging resumes 1235 hrs. No loads completed by 000 hrs
5 July 2000	COLUMBIA	Screens: catfish, eels, redbfish, blue crabs, bivalves, gastropods, annelid worms, seagrass, goby, heavy abiotic debris Below Mid-Depth Temp: 28 C Surface Temp: 28 C Weather: SE winds 10-15 knots, partly cloudy, BSS 2-3 Other:
6 July 2000	COLUMBIA	Screens: crabs, bivalves, gastropods, goby, seagrass, annelid worms, eels, shrimp Below Mid-Depth Temp: 28-29 C Surface Temp: 28-29 C Weather: light wind to SE 15 knots, BSS 1-3, clear skies Other: screens occasionally plugged w/ bryozoans

DATE	DREDGE	NOTES
7 July 2000	COLUMBIA	Screens: juvenile shark, gastropods, barellibranchs, annelid worms, bryozoans, abiotic debris Below Mid-Depth Temp: 28 C Surface Temp: 28 C Weather: SE winds 2-15 knots, BSS 1-2, clear skies Other:
8 July 2000	COLUMBIA	Screens: bryozoan colonies, bivalves, gastropods, worms, juvenile drum, eels, crabs, and shrimp Below Mid-Depth Temp: 29-30 C Surface Temp: 29-30 C Weather: calm winds, calm seas, hazy Other:
9 July 2000	COLUMBIA	Screens: crustaceans, bivalves, gastropods, roundfish, bryozoans, sea grass, abiotic debris Below Mid-Depth Temp: 29-30 C Surface Temp: 29-30 C Weather: 2-3 BSS, slightly overcast, WSW 5-10 knots Other:
10 July 2000	COLUMBIA	Screens: crustaceans, gastropods, catfish, goby, bryozoans, sea grass, trash, tires, rope, net, clothing, wood, scrap metal Below Mid-Depth Temp: 30 C Surface Temp: 30 C Weather: BSS 3, WSW 10 knots, partly cloudy Other:
11 July 2000	COLUMBIA	Screens: crustaceans, gastropods, bivalves, roundfish, eels, worms, bryozoans, sea grass, wood, scrap metal, trash, netting, clothing Below Mid-Depth Temp: 30-31 C Surface Temperature: 30-31 C Weather: 1-2 BSS, SW 10 knots, cloudy Other:
12 July 2000	COLUMBIA	Screens: gastropods, bivalves, bryozoans, sea grass, wood, scrap metal, fishing line/net, clothing, rope/cable, trash Below Mid-Depth Temp: 30-31 C Surface Temp: 30-31 C Weather: WSW 5-20 knots, 2-4 BSS, clear Other:

DATE	DREDGE	NOTES
13 July 2000	COLUMBIA	Screens: trash, wood, rope, plastic, cloth, crustaceans, clam, worms, seagrass Below Mid-Depth Temp: 30 C Surface Temp: 30 C Weather: WSW 10 knots, 2-3 BSS, partly cloudy Other:
14 July 00	COLUMBIA	Screens: same as above Below Mid-Depth Temp: 30 C Surface Temp: 30 C Weather: WSW 10-15 knots, 2-4 BSS, 96-97 F Other:
15 July 2000	COLUMBIA	Screens: some biotic trash and wood Below Mid-Depth Temp: 88 F Surface Temp: 88 F Weather: WSW 10-12 knots, -3 BSS, clear Other:
16 July 2000	COLUMBIA	Screens: wood, plastic, rope, cable, cloth, biota (same) Below Mid-Depth Temp: 30 C Surface Temp: 30 C Weather: clear, WSW 5-8 knots, 2-3 BSS Other:
17 July 2000	COLUMBIA	Screens: biota (same), trash (same) Below Mid-Depth Temp: 30 C Surface Temp: 30 C Weather: partly cloudy, SW 10-12 knots, 1-2 BSS, 97 F Other:
18 July 2000	COLUMBIA	Screens: biota (same), trash (same) Below Mid-Depth Temp: 30 C Surface Temperature: 30 C Weather: SW 5-10 knots, clear, 1-2 BSS Other:
19 July 2000	COLUMBIA	Screens: biota (same), trash (same) Below Mid-Depth Temp: 30 C Surface Temperature: 30 C Weather: SW 5-12 knots, clear, sunny, 1-2 BSS Other:

DATE	DREDGE	NOTES
20 July 2000	COLUMBIA	Screens: biota (same), trash (same) Below Mid-Depth Temp: 30 C Surface Temperature: 30 C Weather: W 5-15 knots, clear, 2-3BSS Other:
21 July 2000	COLUMBIA	Screens: biota (same), trash (same) Below Mid-Depth Temp: 30 C Surface Temperature: 30 C Weather: SW 8-12 knots, clear, 2-3 BSS, 92 F Other:
22 July 2000	COLUMBIA	Screens: biota (same), trash (same) Below Mid-Depth Temp: 30 C Surface Temperature: 30 C Weather: WSW 10-15 knots, BSS 2-3, clear Other:
23 July 2000	COLUMBIA	Screens: biota (same), trash (same) Below Mid-Depth Temp: 30 C Surface Temperature: 30 C Weather: partly cloudy Other:
24 July 2000	COLUMBIA	Screens: biota (same), trash (same) Below Mid-Depth Temp: 30 C Surface Temperature: 30 C Weather: clear, calm, W 3-6 mph Other:
25 July 2000	COLUMBIA	Screens: biota (same), trash (same) Below Mid-Depth Temp: 30 C Surface Temperature: 30 C Weather: clear, E 7-10 mph, 1-2 BSS Other:
26 July 2000	COLUMBIA	Screens: biota (same), trash (same) Below Mid-Depth Temp: 30 C Surface Temperature: 30 C Weather: partly cloudy, seas 1-2', N 10 knots Other:
27 July 2000	COLUMBIA	Screens: biota (same), trash (same) Below Mid-Depth Temp: 30 C Surface Temperature: 30 C Weather: clear, sunny, 1-2', ESE 4-8 mph Other: Final, Contract completed

ENDANGERED SPECIES OBSERVER PROGRAM

Project: ~~ATCHA FALAYA~~ Calcasieu River

INCIDENT REPORT OF SEA TURTLE TAKE BY DREDGING ACTIVITY # 1

Date 04 / 17 / 00 Time(24hr) 1950

Species of Turtle Taken Kemp's Ridley (Lepidochelys kemp)

Dredging Site (channel, port, etc.) ATCHA FALAYA

Location of Take: Latitude 29° 41' .27N Longitude 93° 20' .20W

Vessel Name and Company ATCHA FALAYA / B+B Dredging Inc.

Type of Dredging Activity Maintenance

Load # 177 Times: Start 0327 End 1944 Dump 1955

Sampling Method (overflow, inflow, etc.) Inflow

Samples Recovered From Port Aft

Condition of Screening Good

Draghead Deflector? Yes No X

Condition of Deflector N/A

Weather Conditions Sunny w/ Haze - Sunset Tide 1.58

Water Temperature: Surface 71° Column 69° C or (F) (circle one)

Condition of Specimen(s) Sampled Dead (fresh) - posterior portion of carapace including flippers (both hind) and tail. Portion of posterior plastron intact with section of meat.

Measurements--

Give estimate of entire carapace dimensions, as well as fragments sampled (in metric when possible, indicate if not):

Head Width

Plastron Length 9cm Width 15.5cm

Carapace S. L. Length S.L. Width

Carapace O.C. Length 22 1/2 cm O.C. Width 50.1 cm

Turtle Tagged? Yes No X Tag # Tag Date

Comments Estimated ^{Total} O.C. width / Length 55 - 60 cm. After positive identification via Andrew Jackson, the animal was weighted to be deposited at dump site.

Photos were taken by both observers.

Observer's Name Chad Leedey / Andrew Jackson

areas of turtle which are missing. Sk 1 cracks and lacerations.

Comments: Posterior portion of carapace

A plastron with both hind flippers.

Measurements of these sections

are:

Plastron Length 9cm Width 15.5cm

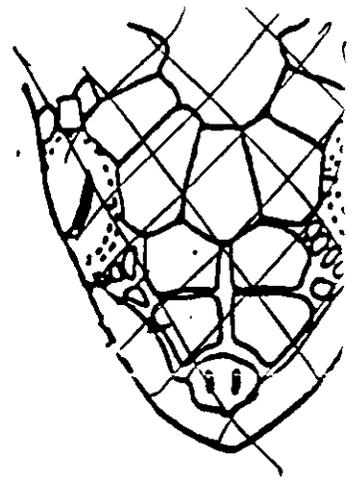
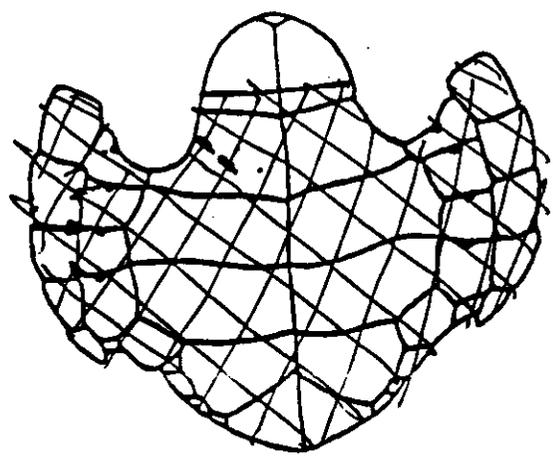
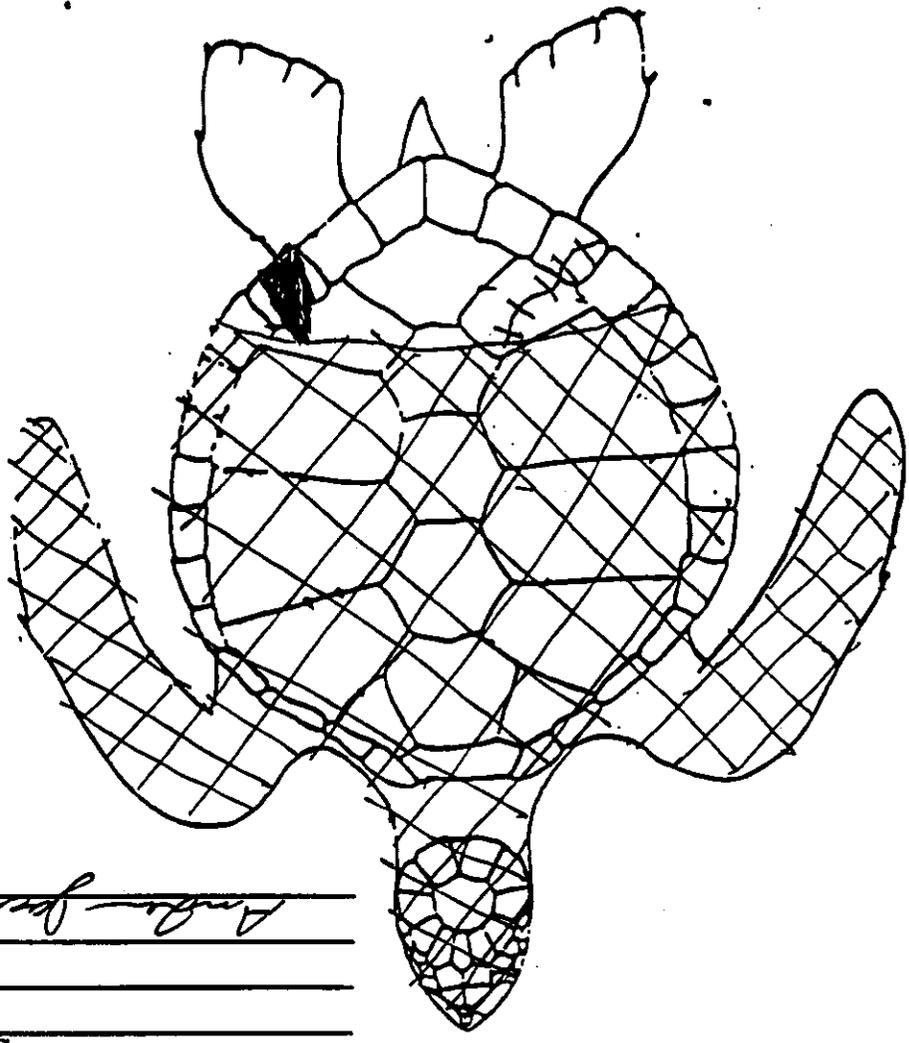
Carapace OL Length 22.5cm

OL Width 5.1cm

Total estimated width 55-60cm

Length 55-60cm

Andis grahami C.L.

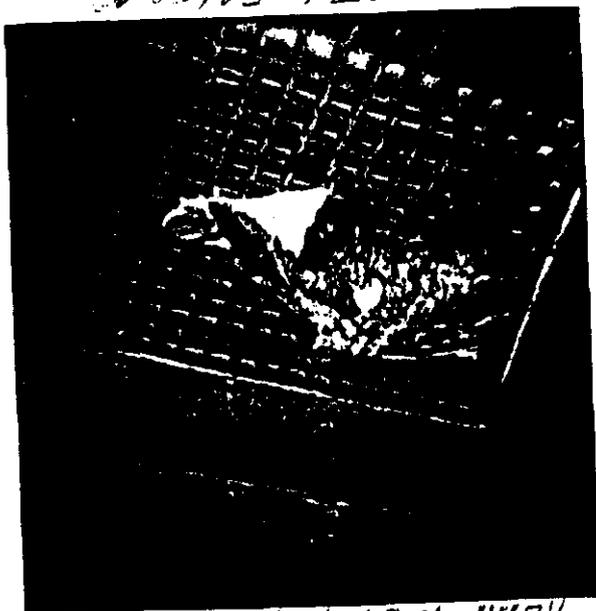


DEBOTE ATCHAFALYA
4/17/00 2015 CST
CALASIER SHIP CHMS. SH. 22200-392100



Kemp Ridley Turtle

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