

ENDANGERED SPECIES MONITORING

**Calcasieu River and Pass, Louisiana
Bar Channel
Maintenance Dredging
Fiscal Year 1998
98-7-CAL**

**Operations Technical Support Branch
U.S Army Corps of Engineers
New Orleans District
504-862-2504**

Introduction

This report is submitted to fulfil 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 submits this preliminary report summarizing the results of Fiscal Year 1998 maintenance dredging of the Calcasieu River and Pass, Louisiana, bar channel.

The contract was originally advertised in October 1997 in an effort to conduct maintenance during late winter and early spring and to avoid dredging during a period when sea turtles are most abundant in coastal waters. The bid for this contract was significantly higher than the Government estimate for the cost of the job requiring the job be re-advertised. If a contract bid exceeds the government estimate by more than 25 percent, the government is unable to award the contract. The re-advertised contract was awarded in December 1997, and the MANHATTAN ISLAND began dredging the Calcasieu River and Pass, bar channel on January 15, 1998.

Due to rapid shoaling in the Mississippi River, Southwest Pass and a shortage of contract dredges available to work in the New Orleans District the MANHATTAN ISLAND was reassigned to the Mississippi River, Southwest Pass, on January 25, 1998. The bar channel leased hopper dredge contracts are written such that if the need arises a dredge can easily be reassigned from channel to channel. In this instance the MANHATTAN ISLAND was reassigned from the Calcasieu River and Pass, Louisiana, bar channel to the Mississippi River, Southwest Pass. The contractor did not return to Calcasieu River and Pass, Louisiana, bar channel until February 26, 1998. The contractor substituted the dredge MANHATTAN ISLAND with the NORTHERLY ISLAND. The NORTHERLY ISLAND began dredging in the bar channel on that date. The NORTHERLY ISLAND continued to conduct maintenance until the end of the project.

The NOD had originally scheduled FY 98 dredging in the Calcasieu River and Pass, Bar Channel, such that maintenance would have been conducted during the period when sea turtles are predicted to be the least abundant in nearshore gulf waters. However due to contractual problems and the transfer of the MANHATTAN ISLAND to the Mississippi River, Southwest Pass, dredging in the Calcasieu River and Pass, Louisiana, bar channel was not completed prior to April 1, 1998. Sea turtle observers were placed on board the dredge and conducted sea turtle monitoring as necessary from April 2, 1998, to the end of the contract (July 8, 1998).

Scope of Work

Maintenance dredging conducted by the contract dredges MANHATTAN ISLAND and NORTHERLY ISLAND under Army Corps of Engineers Contract DACW29-98-C-0011, commenced January 15, 1998, and was completed July 8, 1998. The MANHATTAN ISLAND began dredging on January 15, 1998, and continued working in the Calcasieu River and Pass, bar channel, until January 25, 1998, when the dredge was re-assigned to the Mississippi River, Southwest Pass. While working in Southwest Pass under the Calcasieu River and Pass, contract, the dredging contractor was awarded a second contract for Mississippi River dredging (Mississippi River, Southwest Pass, Leased Hopper Dredge Contract DACW-29-98-C0023). At that time the contractor mobilized the dredge NORTHERLY ISLAND to complete the Calcasieu River and Pass, bar channel, dredging. The NORTHERLY ISLAND began working on February 26, 1998. The NORTHERLY ISLAND completed the Calcasieu River and Pass, Louisiana bar channel maintenance on July 8, 1998.

A portion of the maintenance dredging activities were 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 dredge conducting monitoring. Maintenance dredging was conducted by the contract hopper dredges the MANHATTAN ISLAND and the NORTHERLY ISLAND between Miles -1.7 and Mile -19.24 of the channel (Figure).

To fulfil requirements of the ITS, sea turtle monitoring was conducted during the dredging contract listed above. Monitoring began on April 2, 1998, instead of April 1, 1998, due to a coordination error. In 1995, and previous years the NMFS 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.

METHODOLOGY

The dredges worked in both agitation, and dredge and haul modes. The agitation mode allows the effluent to overflow the hopper, as opposed to being bottom dumped, when fine grained shoal material is being excavated. Screening was modified to accommodate the agitation mode of the dredge. The NORTHERLY ISLAND was equipped with inflow screening. Since the NORTHERLY ISLAND was working for long periods of time in the agitation mode, and some days only one load was bottom dumped. The skimmers were utilized during agitation mode to prevent a large build up of trash and to obtain samples before they were eroded. Dragheads and screens were inspected and cleaned, periodically.

Throughout the dredging operations, light amounts of biotic and abiotic material were recovered from the screens. Data sheets were completed at the end of each day detailing biological samples and debris found on the screening, weather, temperature, location of the dredging and a narrative of work or modifications to equipment completed during that day. A summary of the daily sheets is provided in Table 1. Daily reports for the final week of work could not be located as indicated in Table 1.

RESULTS

The dredge MANHATTAN ISLAND worked from 15, 1998, until January 25, 1998. The dredge NORTHERLY ISLAND worked from February 26, 1998, to July 8, 1998. A total of 5,163,426 cubic yards of shoal material was removed by both agitation and dredge and haul operations. Shoal material consisted of mud, clays, and sands.

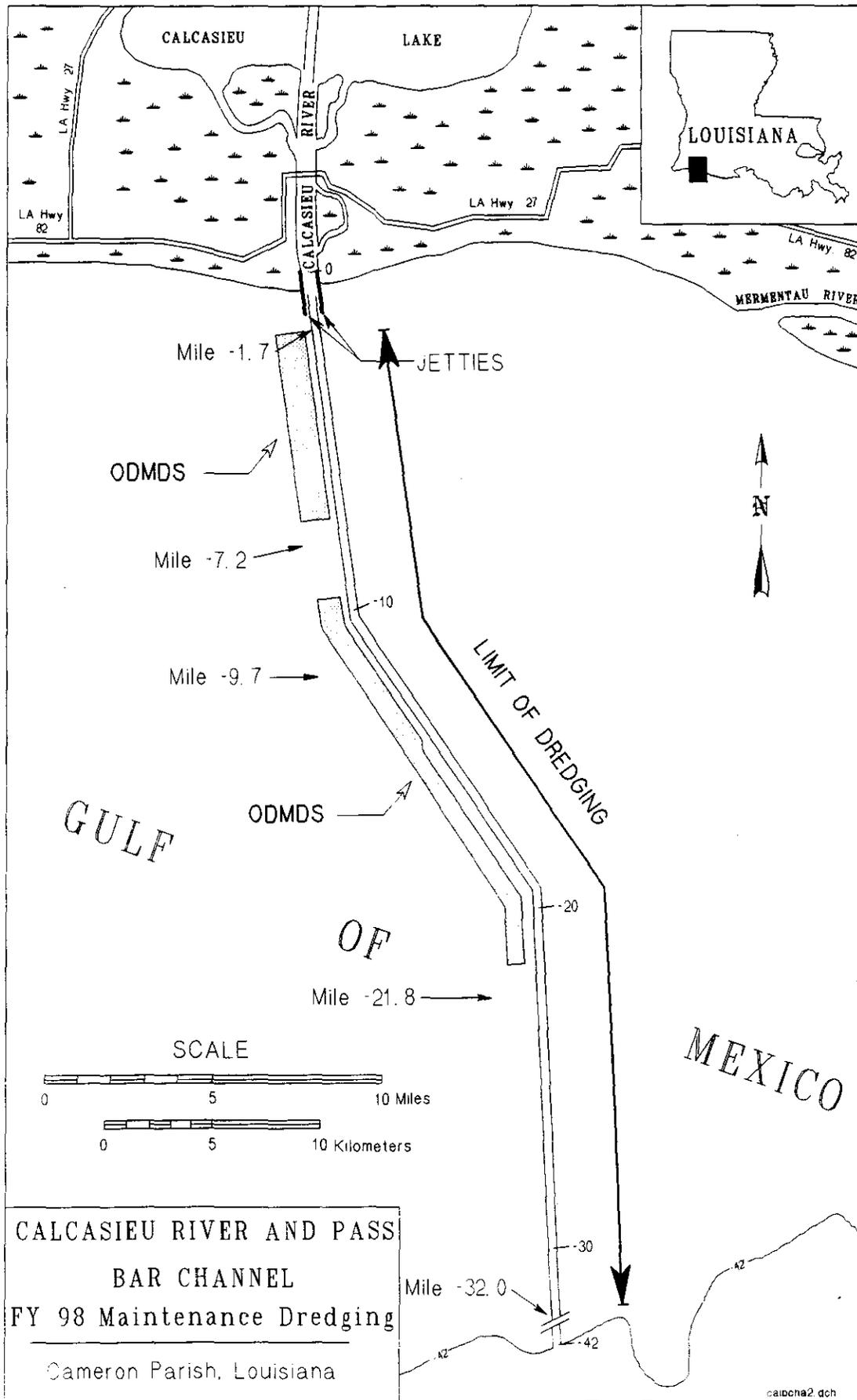
During this maintenance event there was one documented sighting of a loggerhead sea turtle (June 26, 1998) and no documented takes involving sea turtles. Throughout the monitoring observers noted the majority of material collected in the screens was non-biological debris. Debris included burlap sacks, cable, monofilament line, net, plastic, rope, and wood. A small, but fairly diverse amount of biological material also was collected. The biological material collected included; blackdrum, blue crabs, bryozoans, catfish skulls, clupeiid fish, conch, cownose ray, cutlassfish, decomposing fish, flounder, gastropod shells, jack crevalle, lamellibranch shells, moonsnails, oyster drills, penshells, ploycheate worms, red drum, sargassum, skate, spider crabs, stingray, whelks, and whelk egg cases. The results of the screen monitoring are summarized in table 1.

Water temperatures ranged from a maximum surface water temperature of 85 degrees F to a minimum surface water temperature of 67 degrees F. Mid-depth water temperatures ranged from 85 degrees F to 67 degrees F.

During this same period there were more than 139 sightings of more than 1,051 Tursiops truncatus, the bottlenose dolphin. This may be an underestimate of the number of sighting because many days sightings were not quantified but simply described as continuous. The dolphins typically were sighted both in the channel and at the dredging site. The bottlenose dolphins were observed displaying numerous behaviors including; milling, bow riding, breaching, tail slapping and spyhopping. The sightings of Tursiops truncatus, the bottlenose dolphin also may be underestimated, since bridge monitoring was not required under the contract and only was conducted opportunistically.

DISCUSSION

Turtle movements in the Gulf of Mexico have been shown to be correlated to water temperature. Temperature conditions during the maintenance dredging event were within the range of sea turtle tolerance. The amount of biological debris collected on the screens was light throughout the job. However, prey items such as blue crabs and spider crabs also were collected during monitoring operations. Both of these conditions suggest that suitable habitat conditions for sea turtle existed during dredging operations, however, only one turtle was sighted during maintenance.



FIGURE

Table 1 Summary Sea Turtle Observer Reports NORTHERLY ISLAND

DATE	DREDGE	NOTES
1 April 1998	NORTHERLY ISLAND	Screens: Below Mid-Depth Temp: Surface Temp: Weather: Other: Due to coordination error sea turtle observers were not placed onboard until April 2, 1998
2 April 1998	NORTHERLY ISLAND	Screens: No biological specimens, assorted trash Below Mid-Depth Temp: Not sampled Surface Temp: Not sampled Weather: fog work delayed due to fog
3 April 1998	NORTHERLY ISLAND	Screens: No biological material sampled, a variety of trash sampled Below Mid-Depth Temp: No data Surface Temp: 72 F Weather: Clear skies, Winds 15 knots, seas 3 ft Other:
4 April 1998	NORTHERLY ISLAND	Screens: Biological material accumulated in screens was light, included whelk egg cases and catfish skulls, a variety of trash sampled Below Mid-Depth Temp: No data Surface Temperature: 71 F Weather: Clear, Winds 15 knots, seas 3-4 ft Other:
5 April 1998	NORTHERLY ISLAND	Screens: Biological material accumulated in screens was light, included whelk egg cases, gastropod mullusks, a variety of trash was sampled Below Mid-Depth Temp: No data Surface Temp: 70 F Weather: Clear, Winds 15-20 knots, seas 3-4 ft Other:
6 April 1998	NORTHERLY ISLAND	Screens: parchment worms cases, catfish skulls, Atlantic cutlass fish Below Mid-Depth Temp: 67-69 F Surface Temp: 67-69 F Weather: Overcast, Winds 20 knots, seas 5-7 ft Other:
7 April 1998	NORTHERLY ISLAND	Screens: 1 blue crab, gastropod mollusk, bivalve shells, assorted trash Below Mid-Depth Temp: 69-70 F Surface Temp: 69-71 F Weather: Hazy, foggy, Winds 8-10 knots, seas 3 ft Other: Anchored at end of day due to fog

DATE	DREDGE	NOTES
8 April 1998	NORTHERLY ISLAND	Screens: Black drum, gastropod shells, oyster drill Below Mid-Depth Temp: 70-71 F Surface Temp: 70-71 F Weather: Fog, Winds 5-10 knots, seas 3 ft Other: Mechanical and fog delays limited dredging to afternoon
9 April 1998	NORTHERLY ISLAND	Screens: polychaete worms, bivalves, 1 blue crab, clupeid fish,, moon snails, sea stars, sea bass, skate Below Mid-Depth Temp: 68-70 F Surface Temp: 69-71 F Weather: Clear, skies hazy, winds 15 knots Other:
10 April 1998	NORTHERLY ISLAND	Screens: bryozoans, oyster drills, whelks, blue crabs, shell, red drum and assorted trash Below Mid-Depth Temp: 69-71 F Surface Temp: 68-71 F Weather: Clear, Winds 8-10 knots, seas 3-4 ft Other:
11 April 1998	NORTHERLY ISLAND	Screens: oyster drills, oyster shells, bryozoans, cutlass fish, blue crabs, grass Below Mid-Depth Temp: 68-71 F Surface Temp: 69-71 F Weather: Clear, SE winds 3 knots, seas 2-4 ft Other:
12 April 1998	NORTHERLY ISLAND	Screens: bryozoans, clupied fish, cutlass fish, gastropod Below Mid-Depth Temp: 71 F Surface Temp: 71-72 F Weather: Clear, Wind 20-23 knots Other:
13 April 1998	NORTHERLY ISLAND	Screens: blue crab, oyster drills, pen shells, lightening whelk, stingray, cutlass fish, bryozoans Below Mid-Depth Temp: 68-71 F Surface Temp: 70-72 F Weather: Overcast hazy, winds 10-20 knots, seas 3-5 ft Other:
14 April 1998	NORTHERLY ISLAND	Screens: moon snail, cutlassfish, oyster drills, catfish skulls, trumpet snails, bryozoans Below Mid-Depth Temp: 70-71 F Surface Temp: 70-72 F Weather: Overcast, Winds 10-20 knots Other:
15 April 1998	NORTHERLY ISLAND	Screens: catfish skulls, bivalves, gastropods, lightening whelks, drum Below Mid-Depth Temp: 70-71 F Surface Temp: 71-72 F Weather: Hazy, winds 15-20 knots Other: Dredging stopped due to broken skimmer ram

DATE	DREDGE	NOTES
16 April 1998	NORTHERLY ISLAND	Screens: cutlass fish, oyster drills, whelk egg case, bivalves, gastropods Below Mid-Depth Temp: 71 F Surface Temperature: 71 F Weather: Cloudy, hazy, Winds 7-10 knots Other: Stopped dredging to refuel
17 April 1998	NORTHERLY ISLAND	Screens: cutlass fish, whelk Below Mid-Depth Temp: 70-71 F Surface Temp: 70-71 F Weather: Cloudy, hazy, winds 7-25 knots Other:
18 April 1998	NORTHERLY ISLAND	Screens: cutlass fish, whelk egg casing, gastropods Below Mid-Depth Temp: 70-71 F Surface Temp: 69-71 F Weather: Overcast, winds 20 knots Other:
19 April 1998	NORTHERLY ISLAND	Screens: cutlassfish, red drum, whelk, whelk egg casings Below Mid-Depth Temp: 69-70 F Surface Temp: 69-70 F Weather: Overcast, winds 20 knots, Other:
20 April 1998	NORTHERLY ISLAND	Screens: red drum, cutlass fish, oyster drills Below Mid-Depth Temp: 70 F Surface Temp: 70 F Weather: clear skies, light winds Other: ship anchored for of US Coast Guard inspection
21 April 1998	NORTHERLY ISLAND	Screens: No data Below Mid-Depth Temp: No data Surface Temp: No data Weather: Other: Ship undergoing US Coastguard inspection
22 April 1998	NORTHERLY ISLAND	Screens: gastropods, bivalves, wood, rope, net Below Mid-Depth Temp: 69 F Surface Temp: 69 F Weather: Clear, winds 8-12 knots Other:
23 April 1998	NORTHERLY ISLAND	Screens: gastropods, bivalves, blue crabs, cutlass fish, wood, line, rope, crabpots Below Mid-Depth Temp: 69-70 F Surface Temp: 69-70 F Weather: Clear, winds 8-12 knots Other:

DATE	DREDGE	NOTES
24 April 1998	NORTHERLY ISLAND	Screens: bivalves, gastropods, decomposing fish, wood, net, rope Below Mid-Depth Temp: 69-70 F Surface Temp: 69-70 F Weather: Clear, winds 5-20 knots Other:
25 April 1998	NORTHERLY ISLAND	Screens: gastropods, bivalves, wood, rope, line crabpots Below Mid-Depth Temp: 70 F Surface Temp: 70 F Weather: Clear, winds 10-15 knots Other:
26 April 1998	NORTHERLY ISLAND	Screens: bivalves, gastropod, decomposing fish, wood, cable, rope, net line Below Mid-Depth Temp: 70 F Surface Temp: 70 F Weather: Clear to overcast, winds 10-20 knots Other:
27 April 1998	NORTHERLY ISLAND	Screens: cutlass fish, gastropods, bivalves Below Mid-Depth Temp: 70 F Surface Temp: 70F Weather: Overcast, storms, winds 10-20 knots Other:
28 April 1998	NORTHERLY ISLAND	Screens: red drum, flounder, cutlass fish, bivalves, gastropods, rope, net, line, cable, wood and assorted trash Below Mid-Depth Temp: 70-71 F Surface Temp: 70-71 F Weather: Clear to overcast, winds 5-10 knots Other:
29 April 1998	NORTHERLY ISLAND	Screens: decomposing fish parts, bivalves, gastropods, rope, line, cable, netting, clothing, trash Below Mid-Depth Temp: 70 F Surface Temp: 70-71 F Weather: Overcast, winds light to 20 knots Other:
30 April 1998	NORTHERLY ISLAND	Screens: decomposing fish parts, gastropods, bivalves, rope, line, cable, trash Below Mid-Depth Temp: 70 F Surface Temp: 69.5 to 70.5 Weather: Overcast to clear skies, winds 5 to 20 knots Other:
1 May 1998	NORTHERLY ISLAND	Screens: bivalves, gastropods, whelk egg casings, fish parts, plastic, rope, net line, cable, wood and assorted trash Below Mid-Depth Temp: 70 F Surface Temp: 70.5 F Weather: Clear, winds 5-15 knots Other:

DATE	DREDGE	NOTES
9 May 1998	NORTHERLY ISLAND	Screens: whelk egg casings, gastropod shells, bivalve shells, rope, net, line, plastic, cloth, wood, trash Below Mid-Depth Temp: 74-75 F Surface Temp: 75-77 F Weather: Partly cloudy, winds 15-20 knots, seas 2-3 feet Other:
10 May 1998	NORTHERLY ISLAND	Screens: southern stingray, whelk egg casings, gastropod shells, bivalve shells, plastic, rope, net line, wood, trash Below Mid-Depth Temp: 76 F Surface Temp: 77-80 F Weather: Clear, winds strong 12-18 knots, Other:
11 May 1998	NORTHERLY ISLAND	Screens: stingray, whelk egg casings, trash, plastic, ropes, netting Below Mid-Depth Temp: No data F Surface Temp: 76-80 F Weather: Clear, winds 5-10 knots Other:
12 May 1998	NORTHERLY ISLAND	Screens: whelk egg casings, rope, plastic, net, line, cable, wood, cloth, trash Below Mid-Depth Temp: 77-78 F Surface Temp: 78-79 F Weather: Clear to partly cloudy, winds 10-15 knots Other:
13 May 1998	NORTHERLY ISLAND	Screens: whelk egg casings, rope, cable, plastic, fabric, trash, net, line Below Mid-Depth Temp: 77-78 F Surface Temp: 77-78 F Weather: Overcast, winds 15-20 knots Other:
14 May 1998	NORTHERLY ISLAND	Screens: no biological specimens in the screens, rope, line, plastic, fabric, wood, metal, cable Below Mid-Depth Temp: 77-79 F Surface Temp: 77-79 F Weather: Hazy, overcast, winds 5-20 knots Other:
15 May 1998	NORTHERLY ISLAND	Screens: whelk egg casings, skate, rope, trash, line, net, plastic, fabric, cable Below Mid-Depth Temp: No Data Surface Temp: 79-80 F Weather: Hazy, overcast Other:
16 May 1998	NORTHERLY ISLAND	Screens: gastropods, whelk egg casings, trash, rope, line, fabric, plastic Below Mid-Depth Temp: No Data Surface Temp: 79-80 F Weather: Hazy, winds 7-10 knots Other: Repairs made to port draghead

DATE	DREDGE	NOTES
17 May 1998	NORTHERLY ISLAND	Screens: gastropods, clupeid fish, whelk egg casings, rope, line, trash Below Mid-Depth Temp: 79-80 F Surface Temp: 79-80 F Weather: Hazy, winds 3-7 knots Other:
18 May 1998	NORTHERLY ISLAND	Screens: cow nose ray, whelk egg casings, gastropod, bivalves Below Mid-Depth Temp: 80-82 F Surface Temp: 80-82 F Weather: Hazy, light winds Other:
19 May 1998	NORTHERLY ISLAND	Screens: cow nose ray, mollusks, blue crab, bivalves, snails, trash, rope, line, net, wood Below Mid-Depth Temp: 80-82 F Surface Temp: 80-82 F Weather: Hazy, winds 10 knots Other:
20 May 1998	NORTHERLY ISLAND	Screens: No biological specimens, trash, rope, line, net Below Mid-Depth Temp: No data Surface Temp: No data Weather: Hazy, winds 8 knots Other: dredge went to dock for repairs
21 May 1998	NORTHERLY ISLAND	Screens: jack crevalle, snail, trash, rope, line, net Below Mid-Depth Temp: 80 F Surface Temp: 80 F Weather: Clear to hazy, winds 15-20 knots Other:
22 May 1998	NORTHERLY ISLAND	Screens: snails, clupeid fish, rope, trash Below Mid-Depth Temp: 79-80 F Surface Temp: 79-80 F Weather: Hazy, overcast, winds 10-20 knots Other:
23 May 1998	NORTHERLY ISLAND	Screens: whelk egg casings, trash, rope, line, wood Below Mid-Depth Temp: 79 F Surface Temp: 79 F Weather: Partly cloudy, wind 15-25 knots Other:
24 May 1998	NORTHERLY ISLAND	Screens: no biological specimens, trash, rope, line, net Below Mid-Depth Temp: 79-81 F Surface Temp: 79-81 F Weather: sunny to hazy, winds 10-15 knots Other:
25 May 1998	NORTHERLY ISLAND	Screens: biological samples light, whelk egg casings, trash, rope, line, net, wood Below Mid-Depth Temp: 79-81 F Surface Temp: 79-81 F Weather: clear skies, winds 10-20 knots Other:

DATE	DREDGE	NOTES
26 May 1998	NORTHERLY ISLAND	Screens: biological specimens very light, whelk egg casings, trash, rope, line, net, wood Below Mid-Depth Temp: 79-81 F Surface Temp: 79-81F Weather: Clear, winds 10-15 Other: dredge went to dock for fuel 1650 hrs
27 May 1998	NORTHERLY ISLAND	Screens: Few biological specimens, whelk egg casings, trash, rope, line, net Below Mid-Depth Temp: 80 F Surface Temp: 80 F Weather: Clear, winds 10-15 knots Other:
28 May 1998	NORTHERLY ISLAND	Screens: moonsnail, lightning whelk, bivalve shells, whelk egg casing, trash, monofilament line, rope Below Mid-Depth Temp: 80-81 F Surface Temp: 80-81 F Weather: Clear, light variable winds Other: dredge when to dock for repairs
29 May 1998	NORTHERLY ISLAND	Screens: Below Mid-Depth Temp: F Surface Temp: F Weather: Other: No dredging , dredge at dock for repairs
30 May 1998	NORTHERLY ISLAND	Screens: Below Mid-Depth Temp: F Surface Temp: F Weather: Other: No dredging, completed repairs, then refueled and underway to dredging site
31 May 1998	NORTHERLY ISLAND	Screens: blue crabs, moonsnails, whelk egg cases, trash, net rope, line, cable Below Mid-Depth Temp: 83-85 F Surface Temp: 83-85 F Weather: Partly cloudy, winds 13-15 knots Other:
1 June 1998	NORTHERLY ISLAND	Screens: blue crab, conch, bone fragments, moonsnail, lightning whelk, line, rope, net , wood, trash. Below Mid-Depth Temp: 85-86 F Surface Temp: 85-86 F Weather: Partly cloudy, winds 10-15 knots Other:
2 June 1998	NORTHERLY ISLAND	Screens: conch, whelks, bivalve shells Below Mid-Depth Temp: 85 F Surface Temp: 85 F Weather: Partly cloudy, winds 10-15 knots Other: dredge when to shipyard for repairs
3 June 1998	NORTHERLY ISLAND	Screens: Below Mid-Depth Temp: F Surface Temp: F Weather: Other: dredge under repair

DATE	DREDGE	NOTES
4 June 1998	NORTHERLY ISLAND	Screens: Below Mid-Depth Temp: F Surface Temp: F Weather: Other: dredge under repair
5 June 1998	NORTHERLY ISLAND	Screens: bivalve shells, gastropod shells, red drum, clupeid fish, trash Below Mid-Depth Temp: 83-85 F Surface Temp: 83-85 F Weather: Overcast, winds 15-20 knots Other: dredge resumed working after 21/2 days under repair
6 June 1998	NORTHERLY ISLAND	Screens: moonsnails, lightning whelks, oyster drill, red drum, whelk egg cases, lamellibranch shells, trash, rope, monofilament line Below Mid-Depth Temp: 84 F Surface Temp: 83-84 F Weather: Thunderstorms, Other:
7 June 1998	NORTHERLY ISLAND	Screens: moonsnails, lightning whelks, whelk egg cases, red drum, flounder, gastropod shells, lamellibranch shells, trash, rope Below Mid-Depth Temp: 85 F Surface Temp: 85 F Weather: Overcast, winds 15-20 knots Other:
8 June 1998	NORTHERLY ISLAND	Screens: moonsnails, whelk egg cases, clupeid fish Below Mid-Depth Temp: 82-84 F Surface Temp: 83-84 F Weather: Partly cloudy, winds 20 knots Other:
9 June 1998	NORTHERLY ISLAND	Screens: thoracic vertebrate, moonsnails, whelks, whelk egg cases, gastropod shells, lamellibranch shells. Below Mid-Depth Temp: 82-84 F Surface Temp: 83-84 F Weather: Cloudy, winds 20 knots Other: dredging ceased in afternoon did not resume to next day
10 June 1998	NORTHERLY ISLAND	Screens: whelks, moonsnails, flounder, lamellibranch shells, whelk egg cases, teleost, net, rope, trash Below Mid-Depth Temp: 83 F Surface Temp: 83-84 F Weather: Partly cloudy, winds 15-20 knots Other:
11 June 1998	NORTHERLY ISLAND	Screens: blue crabs, moonsnails, whelk egg cases, lamellibranch shells, clupeid fish, trash, rope, line, debris Below Mid-Depth Temp: 83 F Surface Temp: 84 F Weather: Partly cloudy, wins 20-25 knots Other:
12 June 1998	NORTHERLY ISLAND	Screens: flounder, gastropods, moonsnails, blue crabs, whelk, whelk egg cases, lamellibranch shells Below Mid-Depth Temp: 84 F Surface Temp: 83-84 F Weather: Overcast, winds 10-15 knots Other: