

**ANNUAL SEA TURTLE MONITORING REPORT  
MAINTENANCE DREDGING**

**GALVESTON DISTRICT  
FISCAL YEAR 2006**

**ANNUAL SEA TURTLE MONITORING REPORT  
MAINTENANCE DREDGING  
GALVESTON DISTRICT - FISCAL YEAR 2006**

INTRODUCTION

This report is submitted in fulfillment of requirements of the Endangered Species Act and the Section 7 Consultation - Biological Opinion concerning Dredging of Gulf of Mexico Navigation Channels and Sand Mining (“Borrow”) Areas Using Hopper Dredges by COE Galveston, New Orleans, Mobile, and Jacksonville Districts (Consultation Number F/SER/2000/01287) dated November 19, 2003. Specifically this report, summarizing hopper dredging operations in Fiscal Year (FY) 2006 within the Galveston District, is submitted in compliance with reasonable and prudent measure No. 9 - Reporting.

The following six hopper maintenance dredging projects were completed in FY 2006.

Freeport Harbor (FH)	December 27, 2005 - May 20, 2006
Brazos Island Harbor (BIH)	February 23, 2006 - March 11, 2006
Galveston Harbor and Channel (GALV)	July 22, 2006 - September 24, 2006
Sabine - Neches Waterway (SNWW)	July 28, 2006 - August 26, 2006
Matagorda Ship Channel (MSC)	July 31, 2006 - August 10, 2006
Corpus Christi Ship Channel (CCSC)	July 21, 2006 - August 10, 2006

The use of hopper dredges to maintain these navigation projects is necessary because of three factors: safety, weather conditions and productivity. These factors are closely interrelated; however, the emphasis is placed on safety. The nearshore Gulf of Mexico is characterized by a wide shallow shelf. The Sabine-Neches Waterway, for example, extends about 22 miles into the Gulf. A cutterhead dredge operating offshore would require a pipeline length that could extend for several miles.

The dredges operating in these channels must be highly mobile to rapidly maneuver out of the way of other vessels. Pipeline cutterhead dredges are not self-propelled, and are held into position with spuds. Furthermore, the swing of the cutterhead is controlled by cables attached to the cutterhead arm. These cables are anchored along the outer limits of the channel to be dredged. Prior to moving the dredge, tenders must raise the anchors, and a towboat must be fastened to the dredge. These characteristics prevent the pipeline dredge from quickly moving out of the channel when other vessels approach. From a practical standpoint, dredges are generally not relocated for normal ship traffic; rather, dredging may be interrupted, but the dredge remains a stationary obstruction in half of

ANNUAL SEA TURTLE MONITORING REPORT  
GALVESTON DISTRICT - FY 2006 (Cont'd.)

the channel. This situation is encountered in inland bays. The use of hopper dredges in the Gulf avoids such a stationary obstruction.

Weather conditions also affect the safety of the dredge and crew. Pipeline dredges were not designed to operate in open-sea conditions. Due to the reasons stated above, these dredges cannot rapidly demobilize in harsh weather. The pipelines used to transport the dredged material to the placement sites would also be highly susceptible to breaking during rough weather. Even in relatively sheltered bays, cutterhead dredges often stop dredging in rough weather, and during frontal passages. During these periods, only water is pumped to keep tension on the pipelines to prevent breaking. In the open Gulf of Mexico, this precaution would not be effective, even if it were possible to leave the dredge offshore. During relatively calm weather conditions, only the largest cutterhead dredges would be able to operate efficiently. Sea swells make it difficult to control the depth of the cutterhead; consequently, this affects the dredging operation. To illustrate this point, in 1977, a 27-inch diameter pipeline cutterhead dredge sank near the jetties while dredging the Entrance Channel of the Port Mansfield project. A frontal passage caused large waves, which battered the dredge, breaking the spud used to secure the vessel. Water entered the dredge through cable ports faster than it could be pumped out. A 27-inch dredge is one of the largest dredges commonly used within the Galveston District.

Productivity of the dredging operation is important because the purpose of dredging is to remove shoals and provide a safe depth for waterborne traffic. The use of pipeline dredges in the open Gulf would result in frequent relocations, or other interruptions, due to weather and traffic conditions. Consequently, it would take longer to remove shoals, which present a hazard to safe navigation. The longer the time to remove the shoals, the longer a dredge must be on site to maintain the channel. The presence of the dredge and pipeline, themselves, present an obstruction to safe navigation. For these reasons, hopper dredges are used to maintain deep-draft entrance channels in the Galveston District.

The Galveston District endeavors to schedule hopper-dredging operations during the recommended December 1 through March 31 window, wherever feasible. However, it is impossible to schedule all hopper-dredging projects during this time frame, due to the availability of the hopper dredge fleet. Hopper dredging priorities are developed in concert with other Corps of Engineers Districts that conduct these operations along the Atlantic and Gulf Coasts. The priorities are determined after considering the dredging needs and resident sea turtle populations within the various Districts.

ANNUAL SEA TURTLE MONITORING REPORT  
GALVESTON DISTRICT - FY 2006 (Cont'd.)

TURTLE MONITORING PROGRAM

A result of the consultation process was the requirement to document turtle takes by the dredges. In order to accomplish this task, before hopper dredging operations commenced, they were equipped such that all inflows and overflows would be screened. The configuration and location of the screens depends upon the construction of the dredge. The starting mesh size of this screening is 4-inches by 4-inches. Additionally, around-the-clock monitoring by NMFS-approved turtle inspectors was conducted to identify any turtles or turtle parts that were caught on these screens. Draghead deflectors were also deployed to deflect any turtles that may happen to be in, or near, the path of the draghead during excavation. The design of the deflectors is such that a sediment riffle is created ahead of the draghead, cushioning any contact with turtles thereby preventing injuries.

The observers inspected and cleaned all inflow and overflow screening at the end of each load. Dragheads and deflectors were also inspected immediately after each load, and dredge personnel were informed if repairs were necessary. Data sheets were completed daily, detailing all biological samples and debris found in the screening and dragheads. The observers also recorded the start, end, and discharge times for each load, the specific location of the dredging area, the type of material being dredged, weather, tide and water temperature data, the condition of the screening, and any other pertinent information. Any sea turtle encounters or takes were described on a separate incident report form. Additionally, all incidents were photographed and diagrams were made of the specimen sampled. Dead specimens were frozen until all concerned parties were notified. Specimens were then weighted with scrap iron and disposed of at the dredged material placement site, thereby ensuring that these same samples would not wash ashore or be taken again by the dredge.

A bridge watch for sea turtles and marine mammals was maintained during all daylight hours, except when the observer was off the bridge, cleaning and inspecting the screens and dragheads. All sightings of cetaceans and sea turtles were recorded in a bridge watch logbook.

SCREEN CONFIGURATIONS

Turtle monitoring activities were conducted aboard seven different hopper dredges during FY 2006 these include the *Stuyvesant*, *Wheeler*, *Eagle I*, *Glen Edwards*, *Padre Island*, *Bayport* and *Atchafalaya*. These vessels were required to have rigid draghead deflectors, and 100% inflow screening or overflow screening with openings starting at 4" x 4."

ANNUAL SEA TURTLE MONITORING REPORT  
GALVESTON DISTRICT - FY 2006 (Cont'd.)

PROJECTS

**Freeport Harbor - Entrance and Jetty Channels**

On December 27, 2005 the contract hopper dredge *Stuyvesant* began work on the Entrance and Jetty Channels of the Freeport Harbor Project. Contract specifications required dredging an estimated 1,800,000 cubic yards (CY) of shoal material. The required depth of dredging was 49 feet below Mean Low Tide (MLT, Corps of Engineers Datum), with 2 feet of allowable overdepth dredging along the Entrance Channel and 47 feet MLT with 2 feet of overdepth along the Jetty Channel.

Dredging began on December 27, 2005, and was completed on May 20, 2006. Dredging operations were discontinuous during this time period. Two dredges were employed under this contract, they were the *Stuyvesant* and the *Eagle I*. The *Stuyvesant* worked from December 17, 2005 until February 7, 2006, dredging 1,911,091 CY of material in 567 loads. The *Eagle I* worked from May 15, 2006 until May 20, 2006, dredging 200,511 CY in 58 loads. A total of 625 loads of dredged material were collected and placed into Placement Area No. 1-A. A total of 2,111,602 CY of material was excavated from this project between Stations 78+63 along the Jetty Channel and (-)200+00 along the Outer Bar Channel.

The dredges were initially equipped with rigid draghead turtle deflectors, and 100% inflow screening with a 4-inch square mesh. NMFS-approved turtle observers provided 24-hour/day monitoring of dragheads and screens for each load cycle. The observers were employed by East Coast Observers, Inc. and Coastwise Consulting under subcontract to the dredging contractor, Bean Stuyvesant, L.L.C.

During the performance of this dredging, two green turtle takes were experienced by the *Stuyvesant*, but neither was lethal. Both were transported to the NMFS Galveston Laboratory for rehabilitation. The first take occurred on January 17 in load 339, and the second was February 2 in load 511. The surface water temperature during these takes was about 16.0°C.

Relocation trawling was conducted on a 24-hour daily basis during dredging operations. A total of 833 tows were conducted. No turtles were captured or relocated. A bottlenose dolphin was netted on May 17, 2006 in *Mister B* tow number 55. During net retrieval, the dolphin became free, and afterward was observed swimming away normally.

ANNUAL SEA TURTLE MONITORING REPORT  
GALVESTON DISTRICT - FY 2006 (Cont'd.)

Coordination was conducted with the Sea Turtle Stranding and Salvage Network (STSSN). There were no reports of stranded turtles that bore injuries consistent with a potential encounter with a hopper dredge.

An abundance of debris and clay caused excessive clogging of the screening aboard the dredge. Some of these screens were modified or opened to alleviate this problem. The resulting screening efficiency ranged from 0% to 50%. During these periods, 100% overflow screening was utilized.

### **Brazos Island Harbor - Entrance and Jetty Channels**

On February 23, 2006, the Government hopper dredge *Wheeler* began work on the Entrance and Jetty Channels of the Brazos Island Harbor (BIH) Project. Because this was not a typical contract, no specific volume of sediment was specified for removal; rather, the intent was to remove as much shoal material as possible during the timeframe that the *Wheeler* was available. The project depth is 44 feet below Mean Low Tide (MLT, Corps of Engineers Datum).

Dredging began on February 23, 2006, and was completed on March 11, 2006. Other than for delays caused by fog or waiting on hydrographic surveys, dredging operations were continuous during this time period. A total of 129 loads of dredged material were collected and deposited into the nearshore berm at Placement Area 1A. Dredging was performed between Stations -5+000 and 5+000. A total of 332,721 CY of material was excavated from this project.

The dredge was equipped with rigid draghead turtle deflectors, and 100% inflow screening with a 4-inch square mesh. NMFS-approved turtle observers provided 24-hour/day monitoring of dragheads and screens for each load cycle. The observers were employed by East Coast Observers, Inc.

During the performance of this dredging, two lethal green turtle takes were experienced. The first take occurred on March 3<sup>rd</sup> in load 73, and the second was March 6<sup>th</sup> in load 104. The surface water temperature during these takes was about 22.2° - 22.8°C. The second of these takes was alive and was transported to the Gladys Porter Zoo in Brownsville for rehabilitation. This turtle subsequently succumbed to her injuries and died the following day. In load No. 75, some old turtle bones were retrieved. These bones were not from a fresh kill and were not considered a taking. Copies of the observer reports are enclosed.

ANNUAL SEA TURTLE MONITORING REPORT  
GALVESTON DISTRICT - FY 2006 (Cont'd.)

Relocation trawling was conducted on a 24-hour daily basis during dredging operations. Two trawlers worked concurrently to provide better channel coverage. A total of 425 tows were conducted. During this effort, a total of 35 turtles were tagged and relocated, including one recapture; all of them were green turtles.

Coordination was conducted with the Sea Turtle Stranding and Salvage Network (STSSN). There were two reports of strandings that bore injuries consistent with an encounter with a hopper dredge. One of these was captured by a relocation trawler, the other was found about 0.5 miles north of the BIH jetties nine days after dredging was completed.

Debris and clay occasionally caused excessive clogging of the screening aboard the dredge. But, the mesh size was not adjusted.

### **Galveston Harbor and Channel - Jetty and Entrance Channel**

On July 22, 2006, the contract hopper dredge *Glen Edwards* began work on the Jetty and Entrance Channel segments of the Galveston Channel Project. Contract specifications required dredging an estimated 3,183,400 cubic yards (CY) of shoal material. The required depth of dredging was 47 feet below Mean Low Tide (MLT, Corps of Engineers Datum) along the Bolivar Roads Channel from Station 0+000 to 23+800 of the Outer Bar Channel. The remainder of the Outer Bar Channel and Entrance Channel was dredged to 49 feet MLT. All dredging provided for 1 to 2 feet of allowable overdepth.

Dredging began on July 22, 2006, and was completed on September 24, 2006. Dredging operations were continuous during this time period. A total of 360 loads of dredged material were collected and deposited into Placement Area No. 1. Dredging was performed from Stations 0+000 to 76+000; a total of 3,744,550 CY of material was excavated from this project.

The dredge was equipped with rigid draghead turtle deflectors, and 100% inflow screening with 4-inch diameter circular holes cut into metal plates. NMFS-approved turtle observers provided 24-hour/day monitoring of dragheads and screens for each load cycle. The observers were employed by Coastwise Consulting, Inc. under a subcontract to the dredging contractor, Manson Construction Co.

Relocation trawling was conducted on a 24-hour daily basis during dredging operations. Two trawlers worked concurrently to provide better channel coverage. A total of 3,187 tows were performed. Seven turtles were safely captured, tagged and relocated, these were all loggerheads.

ANNUAL SEA TURTLE MONITORING REPORT  
GALVESTON DISTRICT - FY 2006 (Cont'd.)

One bottlenose dolphin was also captured during these trawling activities. This dolphin was tangled in the lazy line and was presumed drowned. This incident was reported to the Marine Mammal Stranding Network, who took possession of the carcass.

During the performance of this dredging, no turtle takes were experienced. The water temperature during this project ranged from about 27.7° to 31.1°C.

Coordination was conducted with the Sea Turtle Stranding and Salvage Network (STSSN). There have been no reports which suggest the possibility that stranding deaths may have been caused by an encounter with a hopper dredge.

The inflow screens frequently became clogged with clay, however, there were no replacement screens available with larger mesh size. Consequently, some dredging was conducted with the screens open. The dredge was not yet outfitted with overflow screens, so this secondary monitoring was not available. These conditions were coordinated with NMFS.

### **Sabine - Neches Waterway – Sabine Bank Channel**

On July 28, 2006 the contract hopper dredge *Padre Island* began work on the Sabine Bank Channel of the Sabine-Neches Waterway Project. Contract specifications required dredging an estimated 1,461,000 cubic yards (CY) of shoal material. The required depth of dredging was 44 feet below Mean Low Tide (MLT, Corps of Engineers Datum), with 2 feet of allowable overdepth dredging.

Dredging began on July 28, 2006, and was completed on August 26, 2006. Dredging operations were continuous during this time period. A total of 242 loads of dredged material were collected and deposited into Placement Area Nos. 1 and 2. Dredging was performed from Stations 64+000 to 93+000; a total of 1,524,203 CY of material was excavated from this project.

The dredge was equipped with rigid draghead turtle deflectors, and 100% inflow screening with a 4-inch square mesh. NMFS-approved turtle observers provided 24-hour/day monitoring of dragheads and screens for each load cycle. The observers were employed by Coastwise Consulting, Inc. under a subcontract to the dredging contractor, Great Lakes Dredge and Dock Co.

Relocation trawling was conducted on a 24-hour daily basis during dredging operations. Two trawlers worked concurrently to provide better channel coverage. A total of 1,580 tows were performed. A total of 5 turtles were captured for relocation, these included two Kemp's ridleys and

ANNUAL SEA TURTLE MONITORING REPORT  
GALVESTON DISTRICT - FY 2006 (Cont'd.)

three loggerheads. One of the ridleys was transferred to Texas A&M at Galveston where it was outfitted with a satellite tag for tracking. This turtle was designated as Bebas-TTN799.

During the performance of this dredging, one lethal Kemp's ridley turtle take was experienced. This take occurred on August 14, in load No. 152. The water temperature during this take was about 31.1°C.

Coordination was conducted with the Sea Turtle Stranding and Salvage Network (STSSN). There were no reports of stranded turtles that bore injuries that might be consistent with a potential encounter with a hopper dredge.

On frequent occasions, an excess abundance of debris and clay caused the inflow screening aboard the dredge to clog. When this occurred, the screens were inspected and cleared prior to resumption of dredging.

### **Matagorda Ship Channel - Entrance Channel**

On July 31, 2006 the contract hopper dredge *Bayport* began work on the Entrance Channel of the Matagorda Ship Channel Project. Contract specifications required dredging an estimated 360,000 cubic yards (CY) of shoal material. The required depth of dredging was 41 to 43 feet below Mean Low Tide (MLT, Corps of Engineers Datum), with 2 feet of allowable overdepth dredging.

Dredging began on July 31, 2006, and was completed on August 10, 2006. A total of 108 loads of dredged material were collected and deposited into Placement Area No. 1. Dredging was performed between Stations -4+600 and -19+000. A total of 336,720 CY of material was excavated from this project.

The dredge was equipped with rigid draghead turtle deflectors, and 100% inflow screening with a 4-inch square mesh. NMFS-approved turtle observers provided 24-hour/day monitoring of dragheads and screens for each load cycle. The observers were employed by Coastwise Consulting, Inc. under a subcontract to the dredging contractor, Manson Construction Co.

Relocation trawling was conducted on a 24-hour daily basis during dredging operations. Two trawlers worked concurrently to provide better channel coverage. A total of 593 tows were performed. A total of 27 turtles were captured for relocation, these included six Kemp's ridleys and 21 loggerheads. Two of the loggerheads were recaptures.

ANNUAL SEA TURTLE MONITORING REPORT  
GALVESTON DISTRICT - FY 2006 (Cont'd.)

During the performance of this dredging, four lethal turtle takes were experienced, two loggerheads and two Kemp's ridleys. The loggerheads were taken on August 3 and August 8 in loads 46 and 92, respectively. The ridleys were taken on August 4 and August 8 in loads 55 and 88, respectively. The water temperature during these incidents ranged from about 28.3° to 29°C.

Coordination was conducted with the Sea Turtle Stranding and Salvage Network (STSSN). There were no reports of stranded turtles that bore injuries that might be consistent with an encounter with a hopper dredge.

### **Corpus Christi Ship Channel**

On July 21, 2006 the contract hopper dredge *Atchafalaya* began work on the Entrance Channel of the Corpus Christi Ship Channel Project. Contract specifications required dredging an estimated 134,000 cubic yards (CY) of shoal material. The required depth of dredging was 49 feet below Mean Low Tide (MLT, Corps of Engineers Datum), with 2 feet of allowable overdepth dredging.

Dredging began on July 21, 2006, and was completed on August 10, 2006. A total of 161 loads of dredged material were collected and deposited into Placement Area No. 1. Dredging was performed between Stations 50+00 to 120+00 along the Outer Bar Channel. A total of 149,706 CY of material were excavated from this project.

The dredge was equipped with rigid draghead turtle deflectors, and 100% inflow screening with a 4-inch square mesh. NMFS-approved turtle observers provided 24-hour/day monitoring of dragheads and screens for each load cycle. The observers were employed by Oceanlife Consulting, Inc. under a subcontract to the dredging contractor, B+B Dredging Co.

Relocation trawling was conducted on a 24-hour daily basis during dredging operations. Two trawlers worked concurrently to provide better channel coverage. A total of 1,011 tows were conducted. During this effort, 12 turtles were tagged and relocated; this total included two Kemp's ridleys; and 10 loggerheads.

During the performance of this dredging, one lethal loggerhead turtle take was experienced. This take occurred on August 6, in load No. 128. The water temperature during this take was about 30.6°C.

ANNUAL SEA TURTLE MONITORING REPORT  
 GALVESTON DISTRICT - FY 2006 (Cont'd.)

Coordination was conducted with the Sea Turtle Stranding and Salvage Network (STSSN). There were no reports of stranded turtles that bore injuries that might be consistent with an encounter with a hopper dredge.

**COSTS**

The costs incurred in performing the turtle-monitoring program during FY 2006 include the costs for equipping and maintaining screens and draghead deflectors on contractor and Government-owned dredges, as well as providing NMFS-approved observers and relocation trawling. In addition to the direct costs are District costs for administration and oversight. Below is a table depicting the costs for FY 2006. However, costs not included in this discussion are unquantifiable costs associated with decreased dredging efficiency which may result from the use of the draghead deflectors, and downtime experienced during cleaning of excessively fouled screens. Estimates of these increased costs are anticipated by the potential contractors during the preparation of bids, and there is no way to determine the actual value of these costs.

**TURTLE PROTECTION COSTS**

<b>Project Name</b>	<b>Relocation Trawling Costs (\$)</b>	<b>Dredge Monitoring Costs (\$)</b>	<b>Total (\$)</b>
FH	108,800.00	21,600.00	130,400.00
BIH	89,785.00	6,765.00	96,550.00
GALV	255,000.00	60,000.00	315,000.00
SNWW	240,250.00	16,000.00	256,250.00
MSC	70,000.00	10,000.00	80,000.00
CCSC	168,200.00	10,625.00	178,825.00
District labor	NA	NA	73,991.75
<b>TOTALS</b>	<b>932,035.00</b>	<b>124,990.00</b>	<b>1,131,016.75</b>

**SUMMARY**

During Fiscal Year 2006, six maintenance-dredging projects were conducted by hopper dredge during which 8,199,502 cubic yards of sediments were excavated. Ten turtles were taken by the dredges, eight of which were lethal. Lethal takes consisted of three Kemp's ridleys, three

ANNUAL SEA TURTLE MONITORING REPORT  
 GALVESTON DISTRICT - FY 2006 (Cont'd.)

loggerheads and two greens. Two greens were captured alive, rehabilitated and subsequently returned to the wild.

Relocation trawling was conducted on a 24-hour daily basis during dredging operations. Two trawlers worked concurrently to provide better channel coverage on all projects except Freeport Harbor. In FY 2006, 86 turtles were relocated as a result of 7,629 trawls. This total includes three recaptures. One of the captured ridleys was outfitted with a satellite tag for tracking and was designated as Bebas-TTN799. Additionally, two bottlenose dolphins were captured during relocation trawling efforts, one was successfully released, but the other was deceased and presumed drowned. Below is a table detailing trawling results.

**RELOCATION TRAWLING**

<b>Project Name</b>	<b>Number of Tows</b>	<b>Number of Turtles Captured</b>	<b>Catch per Unit Effort</b>
FH	833	0	0.0000
BIH	425	35	0.0824
GALV	3,187	7	0.0022
SNWW	1,580	5	0.0032
MSC	593	27	0.0455
CCSC	1,011	12	0.0119
<b>TOTALS</b>	<b>7,629</b>	<b>86</b>	<b>0.0113</b>

Coordination was conducted with the Sea Turtle Stranding and Salvage Network (STSSN). There were two reports of strandings that bore injuries that might be consistent with an encounter with a hopper dredge. One of these was captured by a relocation trawler, the other was found about 0.5 miles north of the BIH jetties nine days after dredging was completed.

During FY 2006, part of Galveston District's incidental take allotment was adjusted through take transfers among other Gulf Coast Districts. The green turtle limit was increased by transfer of two allotments from New Orleans District and one from Mobile District. Similarly, Galveston's loggerhead limit was reduced through a transfer of three take allotments to Jacksonville District. These transfers were applicable to FY 2006, only.

GALVESTON DISTRICT  
INCIDENTAL TAKES OF SEA TURTLES  
MAINTENANCE DREDGING - FY 2006

Date Taken	Project	Dredge	Channel Reach	Water Temp. (°C)	Species and Authorized Incidental Take per Fiscal Year			
					Kemp's ridley 7	Loggerhead 15 (12 <sup>@</sup> )	Green 5 (8 <sup>**</sup> )	Hawksbill 1
17 Jan 06	FH	<i>Stuyvesant</i>	-50+00 to 59+62	16.0			1*	
2 Feb 06	FH	<i>Stuyvesant</i>	59+62 to 78+63	16.0			1*	
3 Mar 06	BIH	<i>Wheeler</i>	26° 03.9'N; 97° 10.0'W	22.8			1	
6 Mar 06	BIH	<i>Wheeler</i>	Between Buoys 9 and 10	22.2			1	
3 Aug 06	MSC	<i>Bayport</i>	28° 24.39'N; 96° 18.36'W	29.0		1		
4 Aug 06	MSC	<i>Bayport</i>	28° 23.60'N; 96° 17.56'W	29.0	1			
6 Aug 06	CCSC	<i>Atchafalaya</i>	27° 49.462'N; 97° 01.201'W	30.6		1		
8 Aug 06	MSC	<i>Bayport</i>	28° 23.223'N; 96° 17.331'W	29.0	1			
8 Aug 06	MSC	<i>Bayport</i>	28° 23.63'N; 96° 17.54'W	28.3		1		
14 Aug 06	SNWW	<i>Padre Island</i>	29° 30.26'N; 93° 41.62'W	31.1	1			
TOTAL TAKE					3	3	4	0
ALLOWABLE TAKE REMAINING					4	9	4	1

\* Non-lethal take

\*\* 2 Takes borrowed from MVN, 1 borrowed from SAM

@ 3 Takes transferred to SAJ