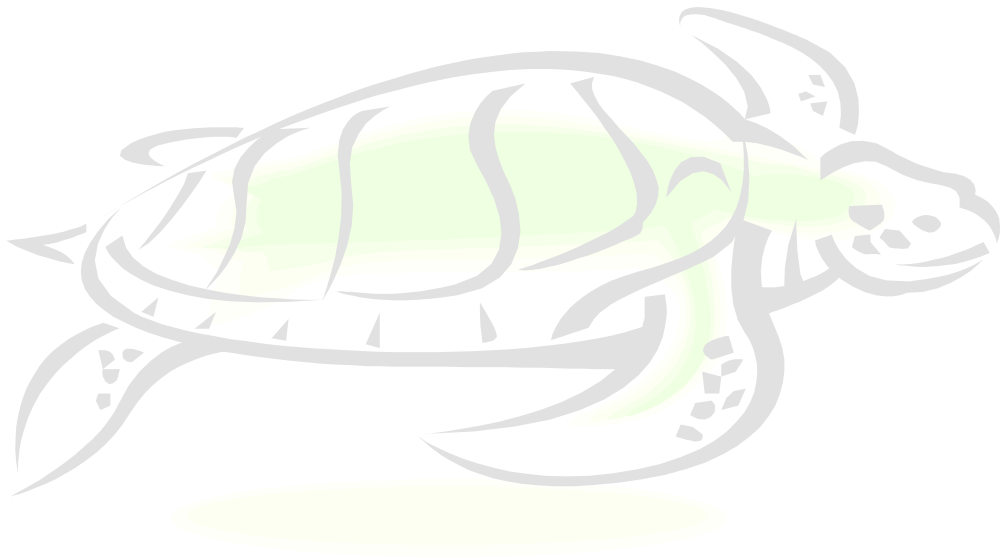


**ANNUAL SEA TURTLE MONITORING REPORT
NEW WORK & MAINTENANCE DREDGING
GULF OF MEXICO COAST
MOBILE DISTRICT
FISCAL YEAR 2012**



**ANNUAL SEA TURTLE MONITORING REPORT
MOBILE DISTRICT
FOR GULF OF MEXICO PROJECTS
NEW WORK, MAINTENANCE DREDGING, & HURRICANE AND
STORM RISK DAMAGE PROJECTS
FISCAL YEAR 2012 (Oct 1, 2011- Sept 30, 2012)**

INTRODUCTION

This report is submitted in fulfillment of requirements of the Endangered Species Act (ESA) and the Section 7 Consultation - Biological Opinion concerning Dredging of Gulf of Mexico Navigation Channels and Sand Mining (“Borrow”) Areas Using Hopper Dredges by U.S. Army Corps of Engineers (USACE) Galveston, New Orleans, Mobile, and Jacksonville Districts (Consultation Number F/SER/2000/01287) dated November 19, 2003 and amended on June 24, 2005 and January 9, 2007. Specifically, this report summarizes hopper dredging operations in Fiscal Year (FY) 2012 within the Mobile District, and is submitted in compliance with Reasonable and Prudent Measure, Nos. 3 and 9.

The following Mobile District Civil Works hopper new work, maintenance dredging and hurricane and storm risk damage (i.e. nourishment) projects were conducted in FY 2012. One (1) Civil Works shore protection project was conducted using a hopper dredge in FY 2012.

Gulfport Harbor: Operations continued into FY 2012 from
August 18, 2011 – October 7, 2011

Mobile Harbor: October 1, 2011 – January 19, 2012
January 16, 2012 – January 19, 2012
January 1, 2012 – January 25, 2012
March 5, 2012 – April 21, 2012
September 13, 2012 – September 30, 2012

Panama City Beach Shore
Restoration Project: October 10, 2011 – December 31, 2011

No Regulatory hopper dredging work was conducted by the Mobile District in FY 2012. However one (1) Regulatory project using a hopper dredge commenced on October 21, 2012 and will be included in next year’s report.

The use of hopper dredges improve and maintain these navigation projects and to construct hurricane and storm reduction 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 dredges operating in navigation channels and pump-out/borrow area sites 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 the channel. This situation is encountered in inland bays and waterways. The use of hopper dredges 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 (such as the bar/borrow areas). Due to the reasons stated above, these dredges cannot rapidly demobilize in harsh weather, for example, as a hurricane approaches. 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.

Productivity of the dredging operation is important because the purpose of dredging is to remove shoals or sand from borrow areas, and provide a safe depth for waterborne traffic or sand on beaches for storm protection. The use of pipeline dredges in the open Gulf of Mexico 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 and construct many shore protection projects in the Mobile District.

The Mobile District periodically has to schedule hopper-dredging operations outside of the required December 1 through April 15 window due to the lack of equipment (dredges are on the Atlantic coast during this described period). The Mobile District tries to schedule as much of its hopper dredging during the December 1 through April 15 timeframe as possible. 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 for the Mobile District are developed in concert with other USACE 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.

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 National Marine Fisheries Service (NMFS)-approved protected species observer(s) 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. Once documentation had been collected, dead specimens were properly discarded by the NMFS-approved protected species observer(s).

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 six (6) different hopper or trawl vessels during FY 2012. These were the *Columbia*, *Stuyvesant*, *Glenn Edwards*, *Newport*, *Capt Wick* and *Liberty Island*. The hopper vessels were required to have rigid draghead deflectors, and 100% inflow screening or overflow screening with openings starting at 4" x 4."

PROJECTS

Civil Works Projects in FY 2012

Gulfport Harbor

Glenn Edwards

The *Glenn Edwards* continued work on Gulfport Harbor Improvements under contract W91278-10-D-0035 (T.O. # 001) from August 18, 2011 through October 7, 2011. This information was captured in the previous year's report; however the contract continued into FY 2012. No relocation trawling was conducted during this latter part of the hopper dredging project.

Mobile Harbor

Columbia, Stuyvesant, Glenn Edwards and Newport

On October 1, 2011, the *Columbia* began work on dredging Mobile Harbor under contract W91278-11-D-0003 (T.O.# 001). The *Columbia* concluded dredging on January 19, 2012; for a total of 99 dredging days, 378 loads dredged and 988,125 cubic yards removed from the channel. The *Stuyvesant* began dredging on January 16, 2012 and concluded January 19, 2012; for a total of 3 dredging days, 16 loads removed and 68,400 cubic yards removed from the channel.

The contractor dredged approximately 1,056,525 cubic yards for the entire contract W91278-11-D-0003 (T.O.# 001). The contract was completed on January 19, 2012. A total of 394 loads of dredged material was collected during 102 total dredging days and deposited in authorized Mobile Ocean Dredged Material Disposal Site (ODMDS). The required depth of dredging is 45 feet below Mean Lower Low Water (MLLW) with 2 feet of advanced maintenance dredging and 2 feet of allowable overdepth dredging.

On January 1, 2012, the *Glenn Edwards* continued work on Mobile Harbor under contract W91278-12-D-0012 (T.O. # 001). The *Glenn Edwards* continued dredging through to January 25, 2012; for a total of 25 dredging days, 54 loads removed and 381,530 cubic yards removed from the channel. On March 5, 2012, the *Columbia* continued work on Mobile Harbor under the same contract. The *Columbia* continued dredging through to April 21, 2012, for a total of 48 dredging days, 144 loads removed and 310,204 cubic yards removed from the channel. On September 13, 2012, the *Newport* continued dredging under the same contract. The *Newport* continued dredging through to September 30, 2012 for a total of 18 dredging days, 172 loads removed and 484,509 cubic yards removed from the channel.

The contractor dredged approximately 1,176,243 cubic yards for the entire contract W91278-12-D-0012 (T.O. # 001). The contract was completed on September 30, 2012. A total of 370 loads of dredged material was collected during 91 total dredging days and deposited in authorized Mobile ODMDS. The required depth of dredging is 45 feet below Mean Lower Low Water (MLLW) with 2 feet of advanced maintenance dredging and 2 feet of allowable overdepth

dredging.

The dredge was equipped with rigid draghead turtle deflectors, and 100% inflow screening with a 4" square mesh. NMFS-approved protected species observers provided 24-hour/day monitoring of dragheads and screens for each load cycle. The observers were employed by REMSA, Inc. (first contract) and Coastwise Consulting, Inc (second contract) under a subcontract to the government.

the performance of this dredging, no turtle "takes" were experienced by the *Columbia*, *Stuyvesant*, *Glenn Edwards* or *Newport* under these contracts.

Detailed information for this project can be accessed from the USACE Sea Turtle Data Warehouse website – specifically at <http://el.erdc.usace.army.mil/seaturtles>.

Panama City Beach Restoration Project

Liberty Island and Capt Wick

On October 10, 2011, the *Liberty Island* began work on the Panama City Beach Restoration Project under contract W912EP-11-D-0004 (T.O. #CK01). The *Liberty Island* continued dredging through December 31, 2011 for a total of 73 dredging days, 335 loads removed and 1,557,019 total cubic yards removed of beach quality sand quality (as defined by Florida Department of Environmental Protection (FDEP)). Material was dredged from two borrow areas (02 and 03) which were located offshore of the beach in water depths from 60 to 70 feet NAVD 88. The hopper 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, Inc.

In addition, relocation trawling was conducted around the clock by the *Capt. Wick* during hopper dredging. All trawling was properly conducted and supervised (i.e. observing trawl speed and tow-time limits, and taking adequate precautions in the release of captured animals). Trawling efforts included both open and closed nets. Initially, trawling began with closed nets for 2 weeks, then open nets were deployed with underwater cameras for about 2 weeks, and finally closed net trawling was resumed to the completion of the project. During the open net trawling, camera footage did not reveal any presence of turtles moving through the nets. In all, eight (8) turtles were captured via closed nets and successfully relocated (no evidence of serious injury or mortality).

Two (2) turtle "takes" occurred during the performance of this dredging. The first one, a Kemp's Ridley (*Lepidochelys kempii*) occurred on November 22, 2011 from load #166 at 1015 hours. The water surface temperature was 18.8 degrees Celsius. The turtle was captured alive (retrieved from the inflow screening) but injured, and was transported the same day to the Gulf World Marine Institute in Panama City Beach, Florida.

The second one, also a Kemp's Ridley (*Lepidochelys kempii*) occurred on December 6, 2011 from load #213 at 1140 hours. The water surface temperature was 16.5 degrees Celsius. The second turtle was also captured alive (retrieved from the aft skimmer of the overflow screening), but had no external signs of trauma and was transported the same day to the Gulf World Marine Institute in Panama City Beach, Florida.

Detailed information for this project can be accessed from the USACE Sea Turtle Data Warehouse website – specifically at <http://el.erdc.usace.army.mil/seaturtles>.

Regulatory Projects in FY 2011

No hopper dredging work was performed under the Mobile District Regulatory program during FY 2012.

SUMMARY

During FY 2012, one (1) maintenance-dredging project and one (1) beach restoration project were conducted using hopper dredges. In FY 2012, two (2) turtles were “taken” (but not lethally) by the dredging of these projects. Relocation trawling was conducted during one (1) of these civil works dredging projects. In all, eight (8) sea turtles were successfully relocated (no evidence of serious injury or mortality). Table #1 summarizes some of the costs associated with the implementation of the Terms and Conditions of the GRBO. Table #2 summarizes turtle encounter(s). Table #3 summarizes the catch per unit effort for relocation trawling efforts associated with projects utilizing a hopper dredge.

TABLE #2 FY 2012 INCIDENTAL TAKES OF SEA TURTLES & GULF STURGEON MOBILE DISTRICT MAINTENANCE DREDGING								
Date	Project	Dredge/Trawl	Water Temp. (°C)	Gulf sturgeon	Kemp's ridley	Logger head	Green	Leather back
11/22/11	Panama City	Liberty Island/Capt Wick	18.8		1*			
12/06/11	Panama City	Liberty Island/Capt Wick	16.5		1*			
			Totals	0	2	0	0	0

***non-lethal**

TABLE #3
FY 2012 CATCH PER UNIT EFFORT – TRAWLING VS SEA TURTLES & GULF STURGEON
MOBILE DISTRICT MAINTENANCE DREDGING

Project Name	Number of Tows	Number of Turtles Captured	Number of Gulf sturgeon Captured	Catch per Unit Effort
Panama City	1898	8	0	0.00421
TOTALS	1898	8	0	0.00421

Updated 31 Oct 2012

■ Pipeline ▨ Awarded Contract

Carl Dyess 251-690-2570

[illegible]