

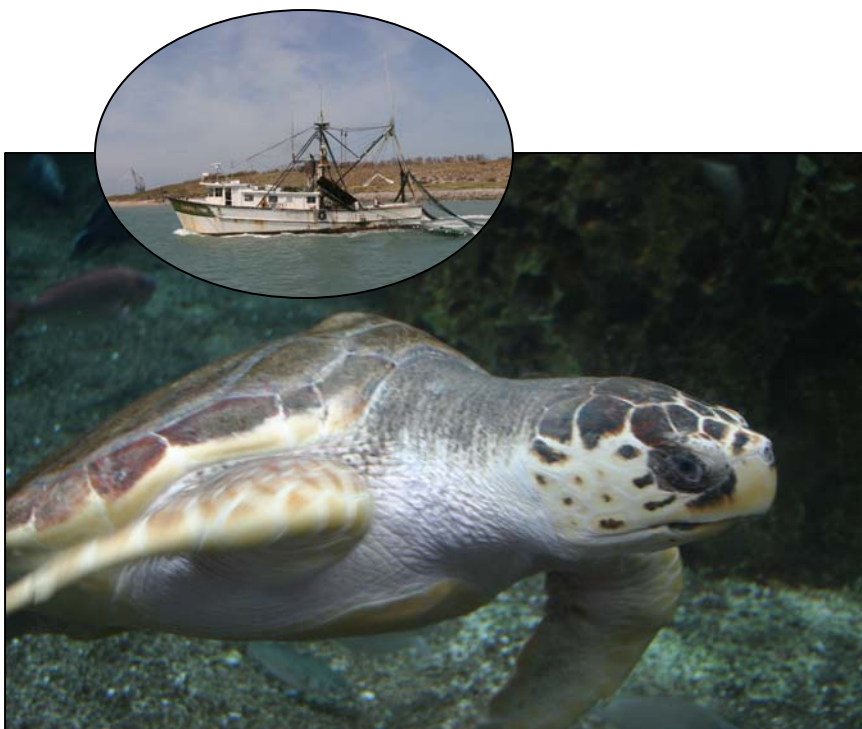
**USACE Hopper Dredging Interactions with Sea Turtles:  
Fiscal Year 2011 Annual Summary Report  
For the Northern Gulf of Mexico Region**

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**FINAL REPORT**



## **BACKGROUND**

This report summarizes data collected for dredging interactions with sea turtles during USACE hopper dredging operations throughout the northern Gulf of Mexico in Fiscal Year (FY) 2011 (1 October 2010 through 31 September 2011). Data were collected by contracted observer companies as part of the Endangered Species Observer Program administered by the USACE Districts Galveston, New Orleans, Mobile, and Jacksonville as specified and mandated by the Gulf of Mexico Regional Biological Opinion (GRBO) (issued by the Southeast Region National Marine Fisheries Service (NMFS) on 19 November 2003 and revised 24 June 2005 (Revision 1) and 9 January 2007 (Revision 2) and the USACE GRBO Management Protocol (UGMP) (issued by the USACE South Atlantic Division on 29 December 2006). These data are for hopper (trailing-suction style) dredging projects only and do not include non-hopper (i.e. clamshell bucket, cutterhead) dredging projects. Non-hopper dredges are not monitored for sea turtle entrainments since the mechanical operation of these dredges has been identified as having minimal or no risk to sea turtles (GRBO). Hopper dredges were used instead of non-hopper dredges for the projects presented in this report due to factors related to crew/vessel safety, sea and weather conditions, project configurations, and productivity costs. This report fulfills the reporting requirements, as specified in both the GRBO and the UGMP, for an annual regional summary of hopper dredging-related incidental takes and trawling-related captures/relocations of sea turtles.

## **METHODS AND DATA SOURCES**

Appendix A provides a map designating the 7 locations for the 10 USACE hopper dredging projects in the northern Gulf of Mexico during FY2011 by USACE District and geographic subregion. The USACE Districts Galveston, New Orleans, Mobile, and Jacksonville were responsible for implementing these hopper dredging projects and for complying with the environmental requirements designated by the GRBO and the UGMP (i.e., use of deflectors, 100% observer coverage, relocation trawling). Due to potential differences in habitat use by sea turtles and differences in dredging environments, the northern Gulf of Mexico region was divided into 4 subregions (West Gulf (WG), Northwest Gulf (NWG), Northeast Gulf (NEG), and East Gulf (EG)) for some data presented in this report. These subregions were defined using the 29° 00" latitude and Mississippi River outlet as boundaries. These subregions are consistent with those presented in Dickerson et al. 2007 to allow continuity in data comparisons.

Data summarized in this report were compiled from individual project summary reports and annual hopper dredging reports on sea turtle interactions for FY 2011 submitted by the USACE Districts Galveston, New Orleans, Mobile, and Jacksonville as well as the Endangered Species Observer Reports submitted by each of the contracted observer companies. Reports are electronically linked within the reference section of this document. These reports, along with individual data profiles for each documented sea turtle incidental take, protocols for mitigation efforts and data collection, and links to the GRBO and UGMP are archived for reference on the USACE Sea Turtle Data Warehouse website: (<http://el.erdcl.usace.army.mil/seaturtles/>).

## **RESULTS**

During FY 2011, 10 hopper dredging projects (9 civil works (CW) channel/harbor maintenance of and 1 regulatory (R) (beach renourishment) were conducted along the northern Gulf of Mexico, with a total of 4 (4 CW; 0 R) dredging-related incidental takes of sea turtles. Capture trawling was performed during 3 of these hopper projects with 113 (2 CW; 1 R) trawler capture/relocated sea turtles during dredging as well as bed-leveling operations for part of the Gulfport project. A Gulf sturgeon was relocated during the Gulfport project and a bottlenose dolphin was caught and drowned onboard the Captain Wick on 7/25/11 while supporting drag bar operations. Three capture/relocations were sent to a rehabilitation center after being captured by the trawler during the Gulfport Expansion Project (both Kemps sent to rehab were released back into the wild) and Longboat Key (Green turtle sent to Mote Lab, no update given at time of reporting). Also onboard the Lady Paige, a loggerhead was fitted with a satellite tag and released on 7/4/11. Four more loggerheads had satellite tags attached during the Longboat Key project during May and June. Transmitters were supplied by NOAA Fisheries and applied to the turtles by an employee of ERDC.

## REFERENCES AND RESOURCES

USACE Sea Turtle Database Warehouse, (<http://el.erd.c.usace.army.mil/seaturtles/>).

Dickerson, D., C. Theriot, M. Wolters, C. Slay, T. Bargo, W. Parks. (2007). “[Effectiveness of relocation trawling during hopper dredging for reducing incidental take of sea turtles](#),” *In: Proceedings of the World Dredging Congress XVIII, USACE ERDC Research Initiatives*. Central Dredging Association, 27 May-1 June 2007, Lake Buena Vista, Florida.

Dickerson, D. D., M. S. Wolters, C. T. Theriot, C. Slay. (2005). “[Dredging impacts on sea turtles in the Southeastern USA: A historical review of protection](#),” *In: Proceedings of the World Dredging Conference XVII, Dredging in a Sensitive Environment*. Central Dredging Association, 27 September-1 October 2004, Hamburg, Germany.

[Gulf Regional Biological Opinion \(GRBO\). 2003.](#)

[Gulf Regional Biological Opinion \(GRBO\). 2005 revision.](#)

[Gulf Regional Biological Opinion \(GRBO\). 2007 revision.](#)

[USACE Gulf GRBO Management Protocol.](#)

**FY 2010 USACE District Annual Reports for Sea Turtle Monitoring during Maintenance Dredging/Beach Nourishment Projects along the Gulf of Mexico Coast:**  
(Archived at: <http://el.erd.c.usace.army.mil/seaturtles/>)

USACE Galveston District. FY 2011. [Annual Sea Turtle Monitoring Report](#)

USACE New Orleans District. FY 2011. [Annual Sea Turtle Monitoring Report](#)

USACE Mobile District. FY 2011. [Annual Sea Turtle Monitoring Report](#)

**FY 2011 Project Sea Turtle/Dredging Data Submitted by Endangered Species Observer Companies and USACE Districts (Archived at: <http://el.erd.c.usace.army.mil/seaturtles/>)**

[USACE Galveston District \(FY 2011\)](#)

[Freeport Harbor Entrance Channel](#) (Coastwise Consulting, Inc.)

[Galveston Jetty, Entrance, and Harbor & Channel](#) (Coastwise Consulting, Inc.)

[Sabine Neches Waterway](#) (East Coast Observer Company, Inc.)

[USACE New Orleans District \(FY 2011\)](#)

[Calcasieu River Bar Channel](#) (East Coast Observer Company, Inc.)

[Calcasieu River Bar Channel](#) (Coastwise Consulting, Inc.)

USACE Mobile District (FY 2011)

Mobile Harbor Bay Channel (REMSA, Inc.)

Mobile Harbor /Bay Channel (Coastwise Consulting, Inc.)

Mobile Harbor Bar Channels (Coastwise Consulting, Inc.)

\*Gulfport Expansion Project (Coastwise Consulting, Inc.)

USACE Jacksonville District (FY 2011)

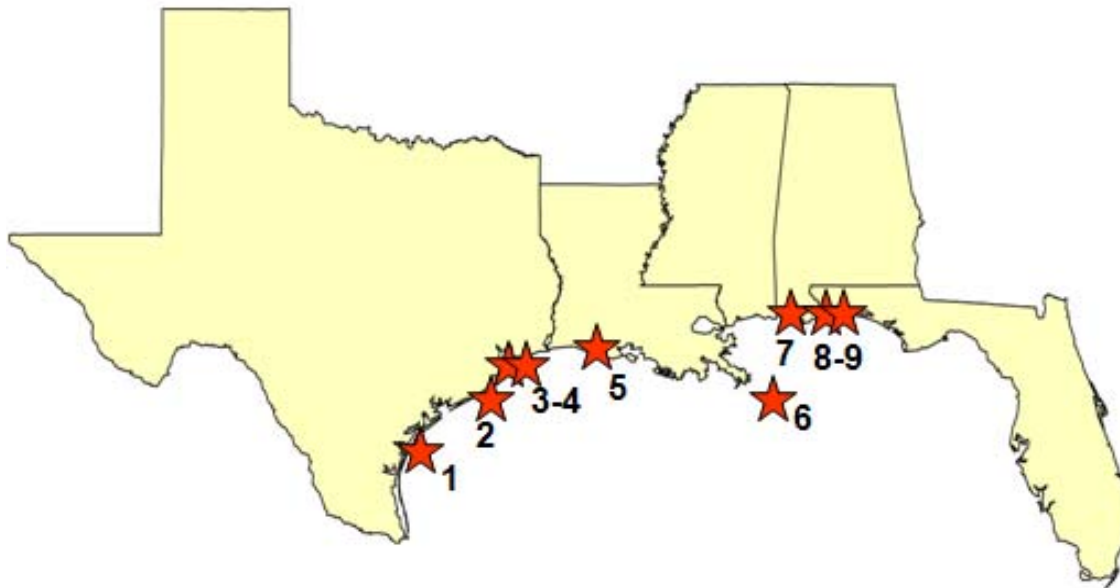
Longboat Key (East Coast Observer, Inc.)

\*Project started in FY11 but finished in FY12.

## APPENDICES

Appendix A.....	Map of FY11 Gulf of Mexico Hopper Dredging Projects
Appendix B-1.....	Incidental Take Limits Designated by the Gulf of Mexico Region Biological Opinion
Appendix B-2.....	Incidental Takes Designated by Civil Works Versus Regulatory Projects
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**APPENDIX A**  
**FY11 Gulf of Mexico Hopper Dredging Projects**



**West Gulf (WG)**

- 1. Corpus Christi(SWG)
- 2. Freeport Harbor (SWG)

**Northwest Gulf (NWG)**

- 3. Houston Ship Channel (SWG)
- 4. Galveston Channels (SWG)
- 5. Calcasieu Pass (MVN)
- 6. Louisisana Coast-Hewes Point (MVN)

**Northeast Gulf (NEG)**

- 7. Mobile Harbor/Bay/Bar (SAM)
- 8. Holiday Isle Beach SPP (SAJ)
- 9. Santa Rosa Island (SAJ)

**East Gulf (EG)**

**Key**

SWG = USACE Galveston District  
MVN = USACE New Orleans District  
SAM = USACE Mobile District  
SAJ = USACE Jacksonville District

**APPENDIX B-1**  
**Incidental Take Limits Designated by the**  
**Gulf of Mexico Region Biological Opinion**

<i><b>FY11 Incidental Take Limits for Civil Works (CW) and Regulatory (R) Projects as defined by Revision 2 of the Gulf of Mexico Regional Biological Opinion (2007) for Hopper Dredges</b></i>									
<b>Loggerhead</b> <i>(Caretta caretta)</i>		<b>Green</b> <i>(Chelonia mydas)</i>		<b>Kemp's ridley</b> <i>(Lepidochelys kempii)</i>		<b>Hawksbill</b> <i>(Eretmochelys imbricata)</i>		<b>Gulf Sturgeon</b> <i>(Acipenser oxyrinchus desotoi)</i>	
<b>CW</b>	<b>R</b>	<b>CW</b>	<b>R</b>	<b>CW</b>	<b>R</b>	<b>CW</b>	<b>R</b>	<b>CW</b>	<b>R</b>
<b>32</b>	<b>8</b>	<b>11</b>	<b>3</b>	<b>16</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>1</b>

<i><b>FY11 Take Limits for Capture Relocation Trawling Operations as defined by Revision 2 of the Gulf of Mexico Regional Biological Opinion (2007)</b></i>			
<b>Sea Turtle Relocations</b>	<b>Sea Turtle (any species) Relocation Takes (injured or killed)</b>	<b>Gulf Sturgeon Relocations</b>	<b>Gulf Sturgeon Relocation Takes (injured or killed)</b>
<b>300</b>	<b>2</b>	<b>8</b>	<b>1</b>

**APPENDIX B-2**  
**FY 2011 Documented Incidental Takes**  
**Designated by Civil Works (CW) vs. Regulatory (R) Projects**

<i><b>FY11 Documented Incidental Takes for Gulf of Mexico Civil Works (CW) and Regulatory (R) Hopper Dredging Projects</b></i>									
<b>Loggerhead</b> <i>(Caretta caretta)</i>		<b>Green</b> <i>(Chelonia mydas)</i>		<b>Kemp's ridley</b> <i>(Lepidochelys kempii)</i>		<b>Hawksbill</b> <i>(Eretmochelys imbricata)</i>		<b>Gulf Sturgeon</b> <i>(Acipenser oxyrinchus desotoi)</i>	
<b>CW</b>	<b>R</b>	<b>CW</b>	<b>R</b>	<b>CW</b>	<b>R</b>	<b>CW</b>	<b>R</b>	<b>CW</b>	<b>R</b>
<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

<i><b>FY11 Total Captured &amp; Relocated Turtles and Sturgeon by Gulf of Mexico Civil Works and Regulatory Hopper Dredging Projects</b></i>							
<b>Sea Turtle Relocations</b>		<b>Sea Turtle (any species) Relocation Takes (injured or killed)</b>		<b>Gulf Sturgeon Relocations</b>		<b>Gulf Sturgeon Relocation Takes (injured or killed)</b>	
<b>CW</b>	<b>R</b>	<b>CW</b>	<b>R</b>	<b>CW</b>	<b>R</b>	<b>CW</b>	<b>R</b>
<b>88</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>

# APPENDIX C

## Dredging Project Summary Data

(FY11 Gulf of Mexico Hopper Dredging)

District	Sub-region	Project*	Project Type	Dredge	# Drag-heads	Dredge Dates**	Total Dredge Days**	Total Y <sup>3</sup> Dredged***	Total M <sup>3</sup> Dredged***	Observer Co.
SWG	WG	Freeport Harbor	M/C/OD	<i>Bayport</i>	2	12/22/10 – 2/5/11	46	1,977,488	1,511,898	CWC
SWG	NWG	!Galveston Harbor	M/C/OD	<i>Bayport</i>	2	9/23/11 – 9/30/11	8	218,000	166,673	CWC
SWG	NWG	Sabine-Neches Waterway	M/C/OD	<i>RN Weeks BE Lindholm</i>	2/2	9/29/10 – 11/12/10; 11/2/10 – 11/14/10	45/13	2,939,338 786,101	2,247,285 601,017	CWC
MVN	NWG	Calcasieu River Bar Channel	M/C/OD	<i>Bayport</i>	2	2/06/11 – 5/13/11	84	7,079,652	5,412,782	CWC
MVN	NWG	Calcasieu River Bar Channel	M/C/OD	<i>Wheeler</i>	2	9/15/11 – 10/1/11	17	1,973,623	1,508,943	CWC
SAM	NEG	Mobile Harbor & Bay Channel	M/C/OD	<i>Columbia</i>	2	9/27/10 – 3/13/11	168	1,609,925	1,230,876	REM
SAM	NEG	Mobile Harbor/ Bay Channel	M/C/OD	<i>Glenn Edwards Bayport</i>	2/2	5/27/11 - 6/26/11 5/24/11 - 6/26/11	32/34	779,086	595,654	CWC
SAM	NEG	Mobile Harbor Bar Channel	M/C/OD	<i>Bayport</i>	2	9/7/11 – 9/21/11	15	472,988	361,625	CWC
SAM	NEG	!Gulfport Expansion	M/C/OD	<i>Bayport Glenn Edwards Newport</i>	2/2/2	9/30/11 – 7/19/11 11/5/10 – 10/7/11 12/23/10 – 1/13/11	146 235 22	1,458,865 5,574,616 287,519	1,115,382 4,262,100 219,824	CWC
SAJ	EG	Longboat Key N End Beach Nourishment	O/BD	<i>Atchafalaya</i>	1	3/23/11 – 6/20/11	90	139,867	106,936	ECO

M = Maintenance; ED = Emergency dredging; C = Channel sediment source; O = Offshore/non-channel sediment source; OD = Ocean disposal; BD = Beach disposal

Gray shaded = Regulatory project. Cubic yards shown for Longboat Key are amounts reported to have been placed on beach.

ECO = East Coast Observers, Inc.; CWC = Coastwise Consultants, Inc.; REM = REMSA, Inc.

\*Data includes projects that occurred in FY11.

\*\* Project and dredge dates include non-dredging down time unless reported differently by district POC – span of projected listed above.

\*\*\* Dredge quantities (provided by USACE Districts) may be estimates instead of actual amounts

Y<sup>3</sup> = Total Cubic Yards dredged material; M<sup>3</sup> = Total Cubic Meters dredged material

! Projects carried over two FY's. Galveston Harbor and Gulfport started in FY11 and worked over into FY12. Rest of Galveston Harbor will be summarized in next FY summary while Gulfport Expansion will all go into this FY11 report.

Note: Projects that worked less than 5 days in a month and started/ended in one FY was reported in the FY that had the most days worked unless cubic yards moved could not be separated into separate FYs (i.e. finished in FY12 but including those 7 days in this FY since it was not separated out.

**APPENDIX D**  
**Distribution of Sea Turtle Incidental Takes by Species**  
**(FY11 Gulf of Mexico Hopper Dredging)**

District	Sub-Region	Project	Dredge	Cc	Cm	Lk	Total Takes
SWG	WG	Freeport Harbor	<i>Bayport</i>	1	0	0	1
SWG	NWG	!Galveston Harbor	<i>Bayport</i>	0	0	0	0
SWG	NWG	Sabine-Neches Waterway	<i>RN Weeks</i>	0	0	0	0
SWG	NWG	Sabine-Neches Waterway	<i>BE Lindholm</i>	0	0	0	0
MVN	NWG	Calcasieu River Bar Channel	<i>Bayport</i>	0	0	1	1
MVN	NWG	Calcasieu River Bar Channel	<i>Wheeler</i>	0	0	1	1
SAM	NEG	Mobile Harbor & Bay Channel	<i>Columbia</i>	0	0	0	0
SAM	NEG	Mobile Harbor/ Bay Channel	<i>Glenn Edwards</i>	0	0	0	0
SAM	NEG	Mobile Harbor/ Bay Channel	<i>Bayport</i>	0	0	0	0
SAM	NEG	Mobile Harbor Bar Channel	<i>Bayport</i>	0	0	0	0
SAM	NEG	!Gulfport Expansion	<i>Bayport</i>	1	0	0	1
SAM	NEG	!Gulfport Expansion	<i>Glenn Edwards</i>	0	0	0	0
SAM	NEG	!Gulfport Expansion	<i>Newport</i>	0	0	0	0
SAJ	EG	Longboat Key N End Beach Nourishment	<i>Atchafalaya</i>	0	0	0	0
<b>TOTAL</b>				<b>2</b>	<b>0</b>	<b>2</b>	<b>4</b>

Cc = Loggerhead (*Caretta caretta*); Cm = Green turtle (*Chelonia mydas*); Lk = Kemp's Ridley (*Lepidochelys kempii*)  
! Projects carried over two FY's.  
Gray shaded = Regulatory project

**APPENDIX E**  
**Hopper Dredge/Capture Trawler-related Incidental Take Summary**  
**(FY11 Gulf of Mexico Dredging)**

District	Sub-region	Project	Species	Take Date	Dredge Load #	Time Recovered	Lat	Long	Water Temp*	SI used?	Trawling used?
SWG	WG	Freeport Harbor	Cc	1/27/11	287	1153	28' 55.42	95' 15.86	15.0	Yes	No
MVN	NWG	Calcasieu River Bar	LK	3/26/11	206	1920	29' 37.44	93' 19.14	18.0	Yes	No
			LK	9/19/11	23	1745	29' 43.00	93' 23.90	29.4	No	No
SAM	NEG	Gulfport Expansion	Cc	10/05/10	41	0130	30' 07.77	88' 56.45	20.0	Yes	Yes
Cc = Loggerhead ( <i>Caretta caretta</i> ); Cm = Green turtle ( <i>Chelonia mydas</i> ); Lk = Kemp's ridley ( <i>Lepidochelys kempi</i> ) N/A = Data not available; SI used? = Silent Inspector in use during dredging project?											
*Surface Temperature Observer's record lat/long of turtle takes either at the beginning, middle, or end of the load. Usually the beginning of the load (Chris Slay, Coastwise Consulting). ! Projects carried over two FY's.											

## APPENDIX F

### Capture/Relocation Trawling Summary Data (FY11 Gulf of Mexico Hopper Dredging)

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**APPENDIX G**  
**Dredging Project Summary Data by Subregion and USACE District**  
(FY11 Gulf of Mexico Hopper Dredging)

Dredging Data Summary	Subregion				
	West Gulf	Northwest Gulf	Northeast Gulf	East Gulf	TOTAL
Total Dredge Projects	1	4	4	1	10
Total Turtle Takes	1	2	1	0	4
Total Dredge Days	46	167	652	90	955
Total Turtle Takes/Days Dredged	0.0217	0.01198	0.0015	0	0.0042
Total Cubic Yards	1,977,488	1,299,6714	10,182,999	139,867	25,297,068
Total Cubic Meters	1,511,898	9,936,701	7,785,461	106,936	19,340,996
Total Turtle Takes/1000-y <sup>3</sup>	0.00051	0.00015	0.00010	0	0.00016
Total Turtle Takes/1000-m <sup>3</sup>	0.00066	0.00020	0.00013	0	0.00021

Dredging Summary Data	USACE District				
	Galveston	New Orleans	Mobile	Jacksonville	Total
Total Dredge Projects	3	2	4	1	10
Total Turtle Takes	1	2	1	0	4
Total Dredge Days	112	101	652	90	955
Total Turtle Takes/Days Dredged	0.0089	0.01980	0.00153	0.0000	0.0042
Total Cubic Yards	5,920,927	9,053,275	10,182,999	139,867	25,297,068
Total Cubic Meters	4,526,874	6,921,725	7,785,461	106,936	19,340,996
Total Turtle Takes/1000-y <sup>3</sup>	0.00017	0.00022	0.00010	0.0000	0.00016
Total Turtle Takes/1000-m <sup>3</sup>	0.00022	0.00029	0.00013	0.0000	0.00021

**APPENDIX H**  
**Capture / Relocation Trawling Summary Data by Subregion and USACE District**  
(FY11 Gulf of Mexico Hopper Dredging)

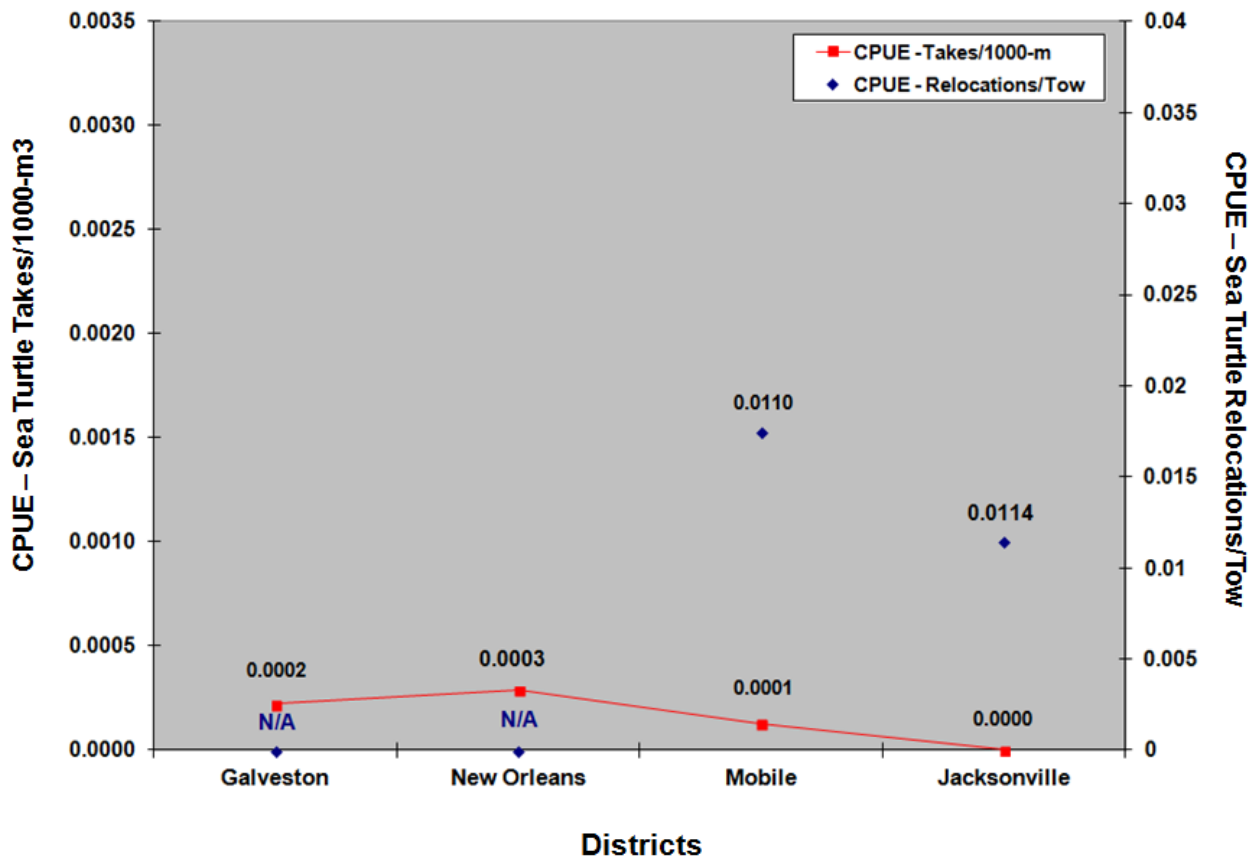
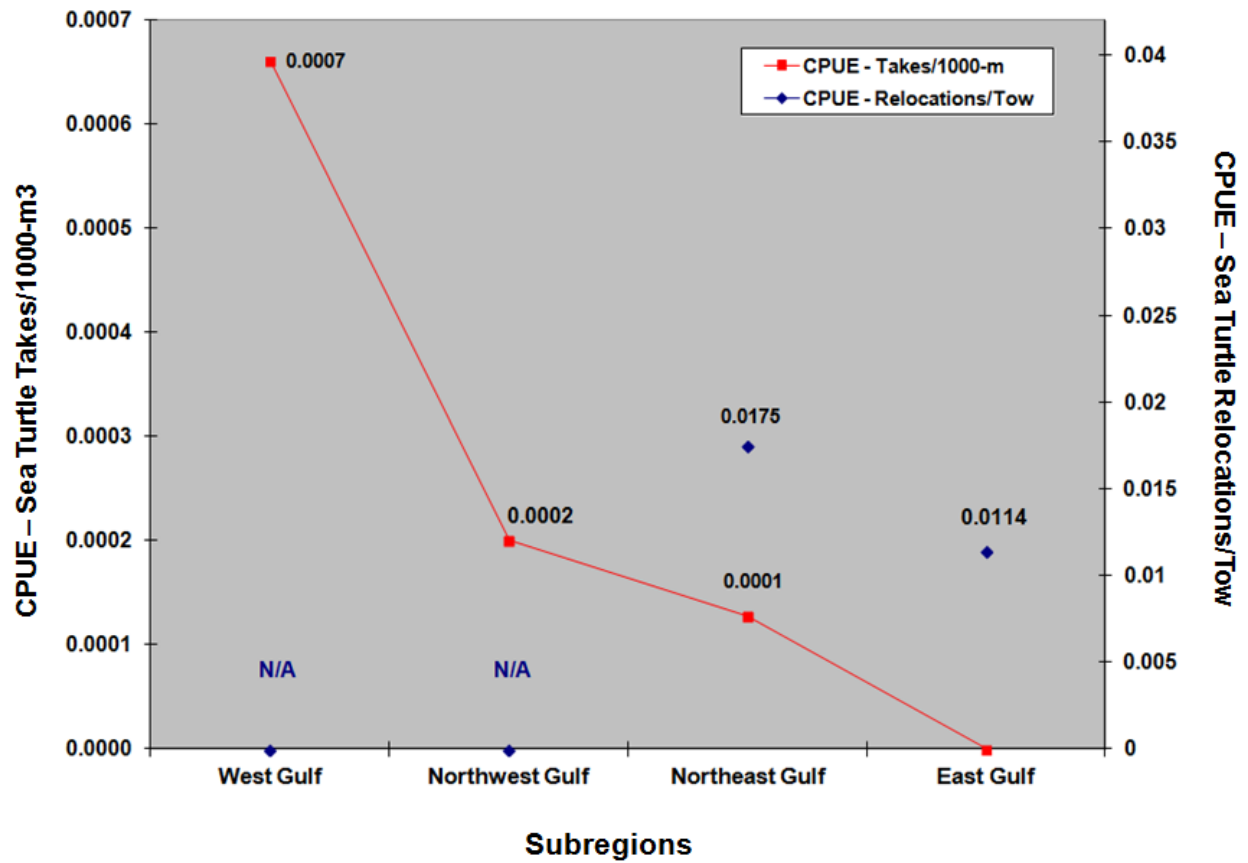
Relocation Trawling Summary Data	Subregion				
	West Gulf	Northwest Gulf	Northeast Gulf	East Gulf	TOTAL
Total Trawl Projects	N/A	N/A	2	1	3
Total Turtles Relocated	N/A	N/A	88	25	113
Total Trawl Days	N/A	N/A	176	90	266
Total Tows	N/A	N/A	5035	2184	7219
Total Turtles Trawled/Total Days	N/A	N/A	0.5000	0.2778	0.4248
Total Turtles Trawled/Total Tows	N/A	N/A	0.0175	0.0114	0.0157
Average Tows per day	N/A	N/A	28.61	24.27	27.14

Relocation Trawling Summary Data	USACE District				
	Galveston	New Orleans	Mobile	Jacksonville	Total
Total Trawl Projects	N/A	N/A	2	1	3
Total Turtles Relocated	N/A	N/A	88	25	113
Total Trawl Days	N/A	N/A	176	90	266
Total Tows	N/A	N/A	5035	2184	7219
Total Turtles Trawled/Total Days	N/A	N/A	0.5000	0.2778	0.4248
Total Turtles Trawled/Total Tows	N/A	N/A	0.0175	0.0114	0.0157
Average Tows per day	N/A	N/A	28.61	24.27	27.14

N/A = No relocation trawling performed; Each trawler worked 24 hours/day with 2 crews during the projects.

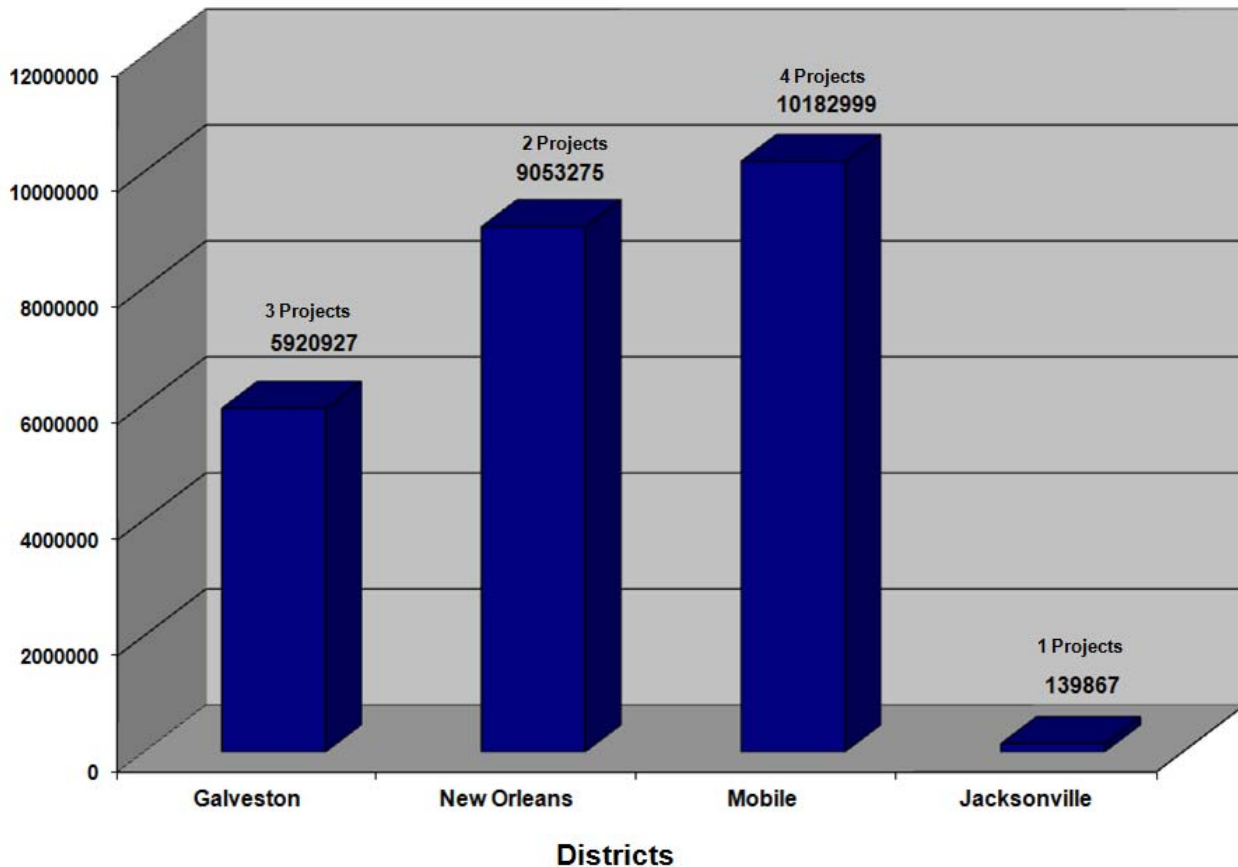
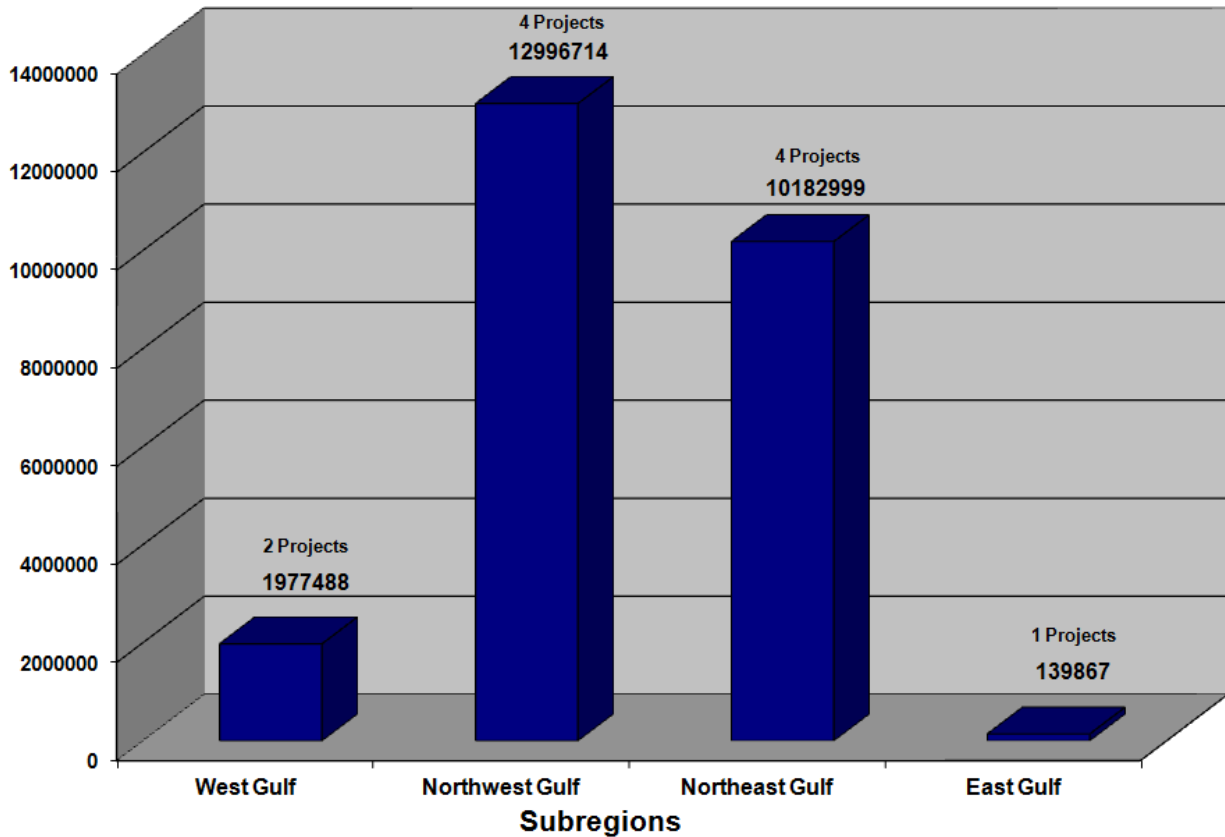
Notes: Three turtles were caught by trawlers and sent to rehab. 2 turtles were released back into the wild while we don't know the status of the 3<sup>rd</sup> turtle that was sent to Mote Lab. A gulf sturgeon was relocated safely during the Gulfport project (NE, Mobile) but there was a bottlenose dolphin fatality by the trawler during drag bar operations at the same project.

# **APPENDIX I** **Catch per Unit Effort Comparisons for Sea Turtle Dredge Takes and** **Capture Trawl Relocations by Subregion and USACE District** **(FY11 Gulf of Mexico Hopper Dredging)**



## APPENDIX J

### Distribution of Dredged Material Quantities (Cubic Yards) by Geographic Subregion and USACE Districts



**APPENDIX K**  
**Distribution of Sea Turtle Takes by Month**  
**(FY11 Gulf of Mexico Hopper Dredging)**

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**APPENDIX L**  
**Distribution of Project Dredge Days by Month**  
**(FY11 Gulf of Mexico Hopper Dredging)**

PROJECT	DREDGE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Freeport Harbor	Bayport	31	5										10
!Galveston Harbor Entrance Channel	Bayport									8			
Sabine-Neches Waterway	RN Weeks BE Lindholm										31/0	12/13	
Calcasieu River Bar Channel	Bayport		11	31	30	13							
Calcasieu River Bar Channel	Wheeler									16			
Mobile Harbor & Bay Channel	Columbia	31	29	13							31	30	31
!Mobile Harbor/Bay Channel	Glenn Edwards Bayport					5/8	26/26						
Mobile Harbor & Bar Channel	Bayport									15			
!Gulfport Expansion	Bayport Glenn Edwards Newport	0/31/13	0/28/0	0/31/0	24/30/0	18/5/0	5/0/0	19/0/0	0/14/0	0/30/0	31/7/0	30/26/0	18/31/9
Longboat Key N End Beach Nourishment	Atchafalaya			9	30	31	20						
TOTAL DAYS DREDGED BY MONTH		106	73	84	114	80	77	19	14	69	100	111	99
TOTAL TURTLE TAKES BY MONTH		1	0	1	0	0	0	0	0	1	1	0	0
TURTLES TAKES PER DREDGE DAY BY MONTH		0.0094	0	0.0119	0	0	0	0	0	0.0145	0.0100	0	0

Shaded areas under the month = Project occurrence (projects under 5 days in one month not included)

Shaded areas under Project = Regulatory

Number of dredge days does not reflect any down time during project.

! Projects carried over two FY's. Gulfport Project – includes 7 days dredged in Oct FY12

**APPENDIX M**  
**Non-Sea Turtle Species Incidental Takes or Noted Occurrences**  
(FY11 Gulf of Mexico Hopper Dredging)

Species	Project	Observations/Remarks
<b>Sturgeon</b>	Gulfport Harbor Expansion	-Gulf sturgeon relocated safely by F/V Lady Paige during project -TL ~127cm
<b>Whales/Manatees</b>	N/A	N/A
<b>Dolphin</b>	Gulfport Harbor Expansion	-Lethal take of a bottlenose dolphin by trawler
<b>Shark</b>	N/A	N/A
<b>Bycatch</b>	N/A	N/A
N/A = No known significant occurrences		

No observer load sheets or daily reports submitted for Freeport, Longboat Key, all Mobile projects and very few for Gulfport projects.