

Prepared For and Submitted To  
**National Marine Fisheries Service**  
**Office of Protected Resources**

Prepared by  
**Department of the Navy**

In accordance with: 50 C.F.R. Part 218,  
Subparts A, B, C, and D; and the Annual  
Biological Opinions for Three Navy East  
Coast Range Complexes and the Gulf of  
Mexico Range Complex

# **Annual Range Complex Exercise Report**

## **2011**

**For the U.S. Navy's Explosive  
Training Activities in the  
Virginia Capes, Jacksonville, Cherry  
Point, Northeast, and Gulf of Mexico  
Range Complexes**

**February 2012**

[THIS PAGE INTENTIONALLY LEFT BLANK]

**TABLE OF CONTENTS**

INTRODUCTION ..... 1

SECTION I: Virginia Capes Range Complex ..... 6

SECTION II: Jacksonville Range Complex ..... 8

SECTION III: Cherry Point Range Complex ..... 10

SECTION IV: Gulf of Mexico Range Complex..... 12

REFERENCES ..... 14

## INTRODUCTION

(U) The U.S. Navy prepared this Annual Range Complex Exercise Report covering the period from 02 January 2011 to 01 January 2012 pursuant to the National Marine Fisheries Service (NMFS) Marine Mammal Protection Act (MMPA) regulations for the Virginia Capes (VACAPES) (50 C.F.R. Part 218, Subpart A), Jacksonville/Charleston (JAX) (50 C.F.R. Part 218, Subpart B), Navy Cherry Point (CHPT) (50 C.F.R. Part 218, Subpart C), and Gulf of Mexico (GOMEX) (50 C.F.R. Part 218, Subpart D) Range Complexes. The report also provides the information required by the terms and conditions found in the 17 March 2011 and 6 January 2012 biological opinions (BOs) and incidental take statements for training activities occurring in the GOMEX and East Coast (VACAPES, CHPT, JAX) Range Complexes (NMFS 2011, 2012). The scope of activities covered in the NMFS BOs include the same training activities using explosives covered by the above MMPA regulations, and also include non-explosive training conducted in the VACAPES, JAX, CHPT, and GOMEX Operating Areas (OPAREAs), Navy training in the Northeast OPAREAs, and activities associated with the Transit Protection System at Naval Submarine Base Kings Bay, Georgia. Figure 1 illustrates the geographic extent of the VACAPES, JAX, and CHPT OPAREAs, figure 2 illustrates the Northeast OPAREAs, and Figure 3 illustrates the GOMEX OPAREAs.

(U) In the MMPA regulations<sup>1</sup> and associated Letters of Authorization (LOA) for the VACAPES, JAX, CHPT, and GOMEX Range Complexes (NMFS 2012a-c, NMFS 2011a) the following reporting requirements were specified and are presented in Sections I-IV of this report:

- (1) Total annual number of each type of explosive exercise (of those identified as part of the “specified activity” in the regulations) conducted in the VACAPES, JAX, CHPT, and GOMEX Range Complexes.
- (2) Total annual expended/detonated rounds (missiles, bombs, etc.) for each explosive type.

(U) In NMFS’ 2012 East Coast (NMFS 2012) and 2011 GOMEX (NMFS 2011) BOs the above exercise reporting requirement is repeated as a term and condition that implements, in part, the Reasonable and Prudent Measure listed in the Incidental Take Statement. The measure is the same as the exercise reporting requirement from the above MMPA regulations and is also addressed in Sections I-IV of this report.

(U) In addition, each of the range complex MMPA LOAs and regulations require an update from Navy on the status of its explosive training tracking efforts. While Navy units, such as ships and aircraft, report a variety of information on a routine basis, a specific process for reporting and tracking the required information did not exist when the MMPA authorizations were finalized. The following update describes refinements to the Navy’s tracking process since the previous reporting period.

---

<sup>1</sup> See 50 C.F.R. §§ 218.5(g) (1) and (2), 218.14(g) (1) and (2), 218.24(g) (1) and (2), 218.34(f) (1) and (2)

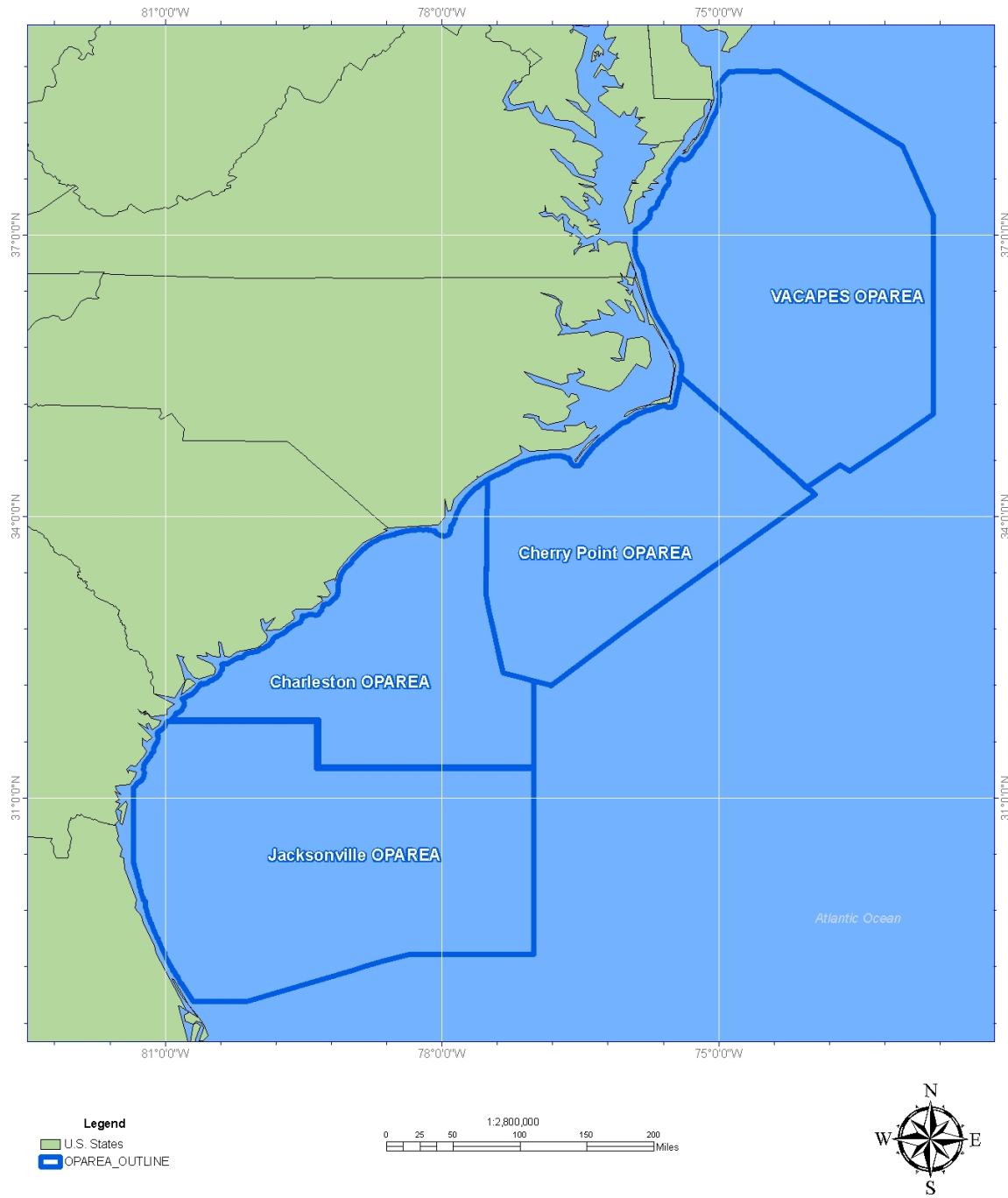
(U) As reported in Navy's 2009 report, a protocol has been established to monitor and track the number of events conducted and the type and amount of ordnance used for those activities identified in the MMPA authorizations. To summarize, data collection efforts are a result of a collective team effort between the Fleet Forces Range Complex Support Team (RCST) personnel and Fleet users. RCST personnel receive the weekly operating schedules promulgated by the Range Scheduling Offices. Through this scheduling process and daily coordination with the Scheduling Agencies and Fleet users, RCST personnel are aware of what activities are being requested in the operating areas and receive after-action reporting of high explosive (HE) munitions expenditures. The after-action reporting is accomplished by direct interface with the naval unit upon completion of the event and reviewing the naval unit's Ammunition Transaction Reporting message that reports the type and amount of ordnance expended. The collected data is then entered into a database for analysis and reporting.

(U) In 2011 changes were made to the VACAPES and JAX MMPA regulations via an interim final rule (76 Fed. Reg. 30552) that allowed for changes in the explosive types or activities listed in the original authorization. This change resulted in the 2011 and 2012 LOAs increasing the frequency of some events (e.g., mine warfare training in VACAPES) and decreasing the frequency or type of ordnance in other events. While these changes were authorized in the interim final rule and associated LOAs, the rule does not allow the overall 5-year marine mammal take authorization to be exceeded.

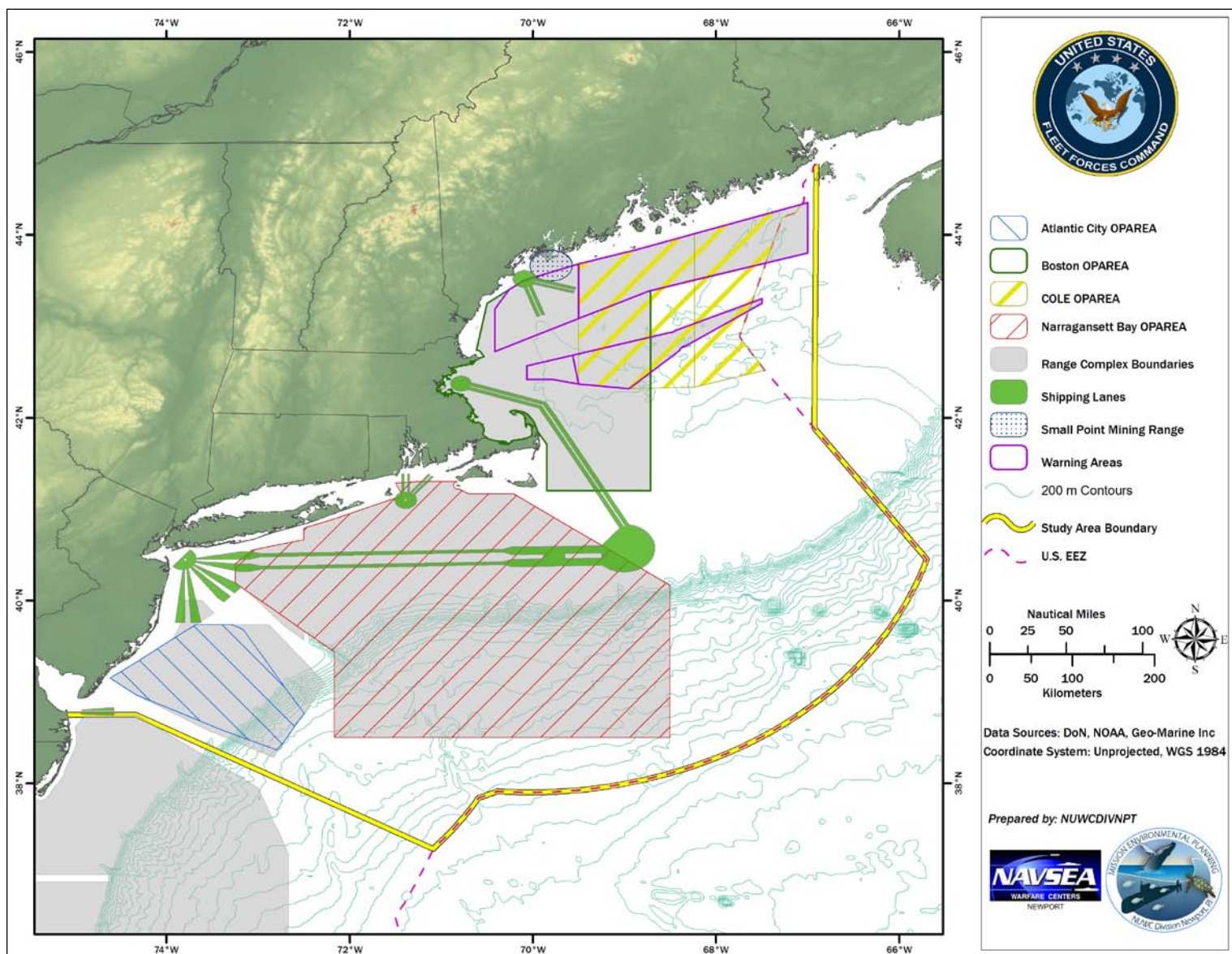
(U) To ensure the 5-year take authorization is not exceeded, the Navy now routinely tracks the estimated exposures that resulted from explosive events conducted. Exposures are quantitatively calculated based on outputs derived from the Navy's original modeling and the cumulative estimated exposures are provided in new tables within Sections I-IV for each range complex.

(U) The information contained in this report represents the best practical data collection as of 01 January 2012. The report provides an accounting of a full year of training from 2 January 2011 to 1 January 2012. The report also includes the cumulative amount of events and ordnance expended since the start of the authorizations for the East Coast (5 June 2009 – 1 January 2012) and GOMEX (18 March 2011 – 1 January 2012). The data provided in the following tables indicates that as of 1 January 2012 the Navy is not exceeding the 5-year estimate of training events or takes specified in the MMPA authorizations and ESA incidental take statements. However, it should be noted that Navy training events are variable within any given year based on the availability of strike groups undergoing training certification, logistics and fiscal considerations as they impact scheduling, and real-world commitments to other regional locations (North Atlantic and Mediterranean deployments, counter-piracy operations, disaster relief, etc.). Therefore, the data on the amount of annual training may vary on an annual basis, possibly resulting in higher or lower amounts of reported training events in future annual exercise reports.

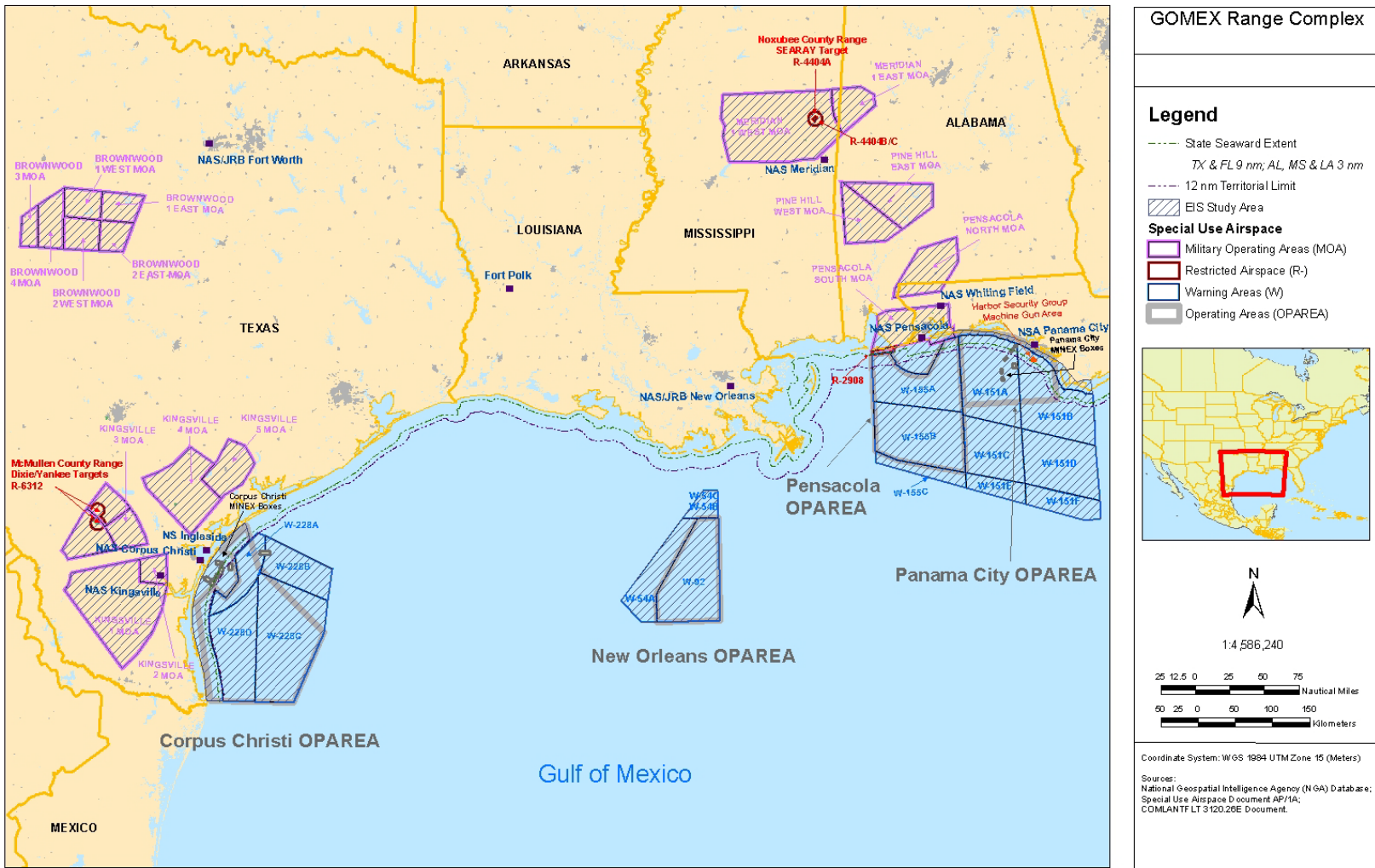
### VACAPES, Jacksonville, Cherry Point Study Area



(U) Figure 1. Geographic extent of the VACAPES, JAX, and CHPT OPAREAs. Activities within the Charleston OPAREA are combined with those activities conducted within the JAX OPAREA for purposes of the MMPA authorization and this report.



(U) Figure 2. Geographic extent of the Northeast OPAREAs.



(U) Figure 3. Geographic extent of the GOMEX Range Complex.



## SECTION I: Virginia Capes Range Complex

(U) The summary for explosive use within the VACAPES Range Complex is presented in Table 1. Table 2 provides the estimated takes of marine mammals and sea turtles from events conducted since the original authorization.

**(U) Table 1. Total annual number of each type of explosive exercise and associated ordnance listed at 50 C.F.R. §218.1 conducted in the VACAPES Range Complex. Current reporting period is 02 January 2011 through 01 January 2012. Cumulative total includes activity from 5 June 2009 through 01 January 2012.**

Training Event	Ordnance Used	Number of Events Conducted		Number of Expended/Detonated Rounds	
		Current Reporting Period	Cumulative Total	Current Reporting Period	Cumulative Total
Mine Exercise	Airborne Mine Neutralization System	0	0	0	0
	5-lb charge	14	15	14	15
	10-lb charge	28	70	28	70
	20-lb charge	3	24	3	24
Bombing Exercise (Air-to-Surface)	MK-83/GBU-32 (1,000 lb bomb)	0	0	0	0
	Mk-82 (500 lb bomb)	5	15	22	63
Missile Exercise (Air-to-Surface)	AGM-114 (Hellfire missile)	28	36	28	36
	AGM-65 (Maverick missile)	1	1	1	1
	AGM-88 (HARM missile)	0	0	0	0
Firing Exercise (FIREX with IMPASS)	5" explosive Naval gunfire	13	37	36 <sup>2</sup>	495

<sup>2</sup> Only 2 of the 13 FIREX events used explosive rounds for a total of 36 rounds. The remainder of the events used non-explosive practice rounds.

(U) Table 2. Estimated number of marine mammal and sea turtle takes from events conducted in VACAPES from 5 June 2009 through 01 January 2012.

VACAPES	Number of Takes Authorized at 50 C.F.R. §218.2 or in the ESA ITS <sup>3</sup>			Estimated Cumulative Takes (5 June 2009 - 01 January 2012)			Estimated Number of Authorized Takes Remaining		
	Level B/Harass	Level A/Harm	Mortality	Level B/Harass	Level A/Harm	Mortality	Level B/Harass	Level A/Harm	Mortality
<b>Marine Mammals</b>									
Atlantic spotted dolphin	215	5	0	43	1	0	172	4	0
Bottlenose dolphin	145	0	0	53	0	0	92	0	0
Clymene dolphin	165	0	0	49	0	0	116	0	0
Common dolphin	10965	100	0	3403	28	0	7562	72	0
Fin whale	10	0	0	3	0	0	7	0	0
Humpback whale	10	0	0	2	0	0	8	0	0
Kogia spp.	15	0	0	5	0	0	10	0	0
Pantropical spotted dolphin	350	5	0	106	0	0	244	5	0
Pilot whales	50	0	0	8	0	0	42	0	0
Risso's dolphin	80	0	0	21	0	0	59	0	0
Rough-toothed dolphin	5	0	0	2	0	0	3	0	0
Sperm whale	10	0	0	2	0	0	8	0	0
Striped dolphin	340	15	0	56	1	0	284	14	0
<b>Turtles</b>									
Hardshell turtle	1500	10	0	540	4	0	960	6	0
Kemp's ridley turtle	2775	25	0	994	7	0	1781	18	0
Leatherback turtle	45	0	0	14	0	0	31	0	0
Northwest Atlantic loggerhead turtle	2330	40	0	746	5	0	1584	35	0

<sup>3</sup> Sea turtle takes are authorized on an annual basis rather than over a 5-year period; therefore, the number of authorized sea turtle takes is estimated over 5 years and is based on the most recent annual incidental take authorization.

## SECTION II: Jacksonville Range Complex

(U) The summary for explosive use within the JAX Range Complex is presented in Table 3 below. Table 4 provides the estimated takes of marine mammals and sea turtles from events conducted since the original authorization.

**(U) Table 3. Total annual number of each type of explosive exercise and associated ordnance listed at 50 C.F.R. §218.10 conducted in the JAX Range Complex. Current reporting period is 02 January 2011 through 01 January 2012. Cumulative total includes activity from 5 June 2009 through 01 January 2012.**

Training Event	Ordnance Used	Number of Events Conducted		Number of Expended/Detonated Rounds	
		Current Reporting Period	Cumulative Total	Current Reporting Period	Cumulative Total
Mine Exercise	5-lb charge	0	0	0	0
	10-lb charge	0	0	0	0
	20-lb charge	0	0	0	0
Missile Exercise (Air-to-Surface)	AGM-114 (Hellfire missile)	9	18 <sup>4</sup>	9	18
	AGM-65 (Maverick missile)	3	8	3	8
Firing Exercise (FIREX with IMPASS)	5" explosive Naval gunfire	6	12	0 <sup>5</sup>	64
Small Arms Training	MK3A2 grenade	0	0	0	0

<sup>4</sup> The 2009 report listed one Hellfire event with 2 missiles expended. The Navy's reporting protocol now considers that training scenario as two events since two missiles were expended. Therefore, the cumulative total includes 2 events from 2009, 7 events from 2010, and 9 events from 2011 for a total of 18 events.

<sup>5</sup> All 6 FIREX events used non-explosive practice rounds.

(U) Table 4. Estimated number of marine mammal and sea turtle takes from events conducted in JAX from 5 June 2009 through 01 January 2012.

JAX	Number of Takes Authorized at 50 C.F.R. §218.11 or in the ESA ITS <sup>6</sup>			Estimated Cumulative Takes (5 June 2009 - 01 January 2012)			Estimated Number of Authorized Takes Remaining		
	Marine Mammals								
Species	Level B/Harass	Level A/Harm	Mortality	Level B/Harass	Level A/Harm	Mortality	Level B/Harass	Level A/Harm	Mortality
Atlantic spotted dolphin	310	10	0	28	0	0	282	10	0
Beaked whale	100	0	0	0	0	0	100	0	0
Bottlenose dolphin	150	0	0	8	0	0	142	0	0
Clymene dolphin	100	0	0	0	0	0	100	0	0
Common dolphin	150	0	0	0	0	0	150	0	0
Kogia spp.	15	0	0	0	0	0	15	0	0
Minke whale	15	0	0	0	0	0	15	0	0
Pantropical spotted dolphin	100	0	0	0	0	0	100	0	0
Pilot whales	100	0	0	0	0	0	100	0	0
Risso's dolphin	150	0	0	2	0	0	148	0	0
Striped dolphin	100	0	0	0	0	0	100	0	0
	Turtles								
Hardshell turtle	40	0	0	4	0	0	36	0	0
Kemp's Ridley turtle	10	0	0	0	0	0	10	0	0
Leatherback turtle	55	0	0	5	0	0	50	0	0
Northwest Atlantic loggerhead turtle	85	0	0	7	0	0	78	0	0

<sup>6</sup> Sea turtle takes are authorized on an annual basis rather than over a 5-year period; therefore, the number of authorized sea turtle takes is estimated over 5 years and is based on the most recent annual incidental take authorization.

### SECTION III: Cherry Point Range Complex

(U) The summary for explosive use within the CHPT Range Complex is presented in Table 5 below. Table 6 provides the estimated takes of marine mammals and sea turtles from events conducted since the original authorization.

**(U) Table 5. Total annual number of each type of explosive exercise and associated ordnance listed at 50 C.F.R. §218.20 conducted in the CHPT Range Complex. Current reporting period is 02 January 2011 through 01 January 2012. Cumulative total includes activity from 5 June 2009 through 01 January 2012.**

Training Event	Ordnance Used	Number of Events Conducted		Number of Expended/Detonated Rounds	
		Current Reporting Period	Cumulative Total	Current Reporting Period	Cumulative Total
Mine Exercise	5-lb charge	0	0	0	0
	10-lb charge	0	0	0	0
	20-lb charge	0	0	0	0
Missile Exercise (Air-to-Surface)	AGM-114 (Hellfire missile)	0	0	0	0
	AGM-65 (TOW missile)	0	0	0	0
Firing Exercise (FIREX with IMPASS)	5" explosive Naval gunfire	1	1	0 <sup>7</sup>	0

<sup>7</sup> Non-explosive practice rounds were used for the FIREX event.

(U) Table 6. Estimated number of marine mammal and sea turtle takes from events conducted in CHPT from 5 June 2009 through 01 January 2012.

Cherry Point	Number of Takes Authorized at 50 C.F.R. §218.21 or in the ESA ITS <sup>8</sup>			Estimated Cumulative Takes (5 June 2009 - 01 January 2012)			Estimated Number of Authorized Takes Remaining		
	Level B/Harass	Level A/Harm	Mortality	Level B/Harass	Level A/Harm	Mortality	Level B/Harass	Level A/Harm	Mortality
<b>Marine Mammals</b>									
Atlantic spotted dolphin	100	0	0	0	0	0	100	0	0
Atlantic white-sided dolphin	100	0	0	0	0	0	100	0	0
Beaked whale	100	0	0	0	0	0	100	0	0
Bottlenose dolphin	150	0	0	0	0	0	150	0	0
Clymene dolphin	150	0	0	0	0	0	150	0	0
Common dolphin	100	0	0	0	0	0	100	0	0
Fraser's dolphin	15	0	0	0	0	0	15	0	0
Killer whale	15	0	0	0	0	0	15	0	0
Kogia spp.	15	0	0	0	0	0	15	0	0
Melon-headed whale	15	0	0	0	0	0	15	0	0
Minke whale	15	0	0	0	0	0	15	0	0
Pantropical spotted dolphin	100	0	0	0	0	0	100	0	0
Pilot whales	100	0	0	0	0	0	100	0	0
Pygmy killer whale	15	0	0	0	0	0	15	0	0
Risso's dolphin	150	0	0	0	0	0	150	0	0
Spinner dolphin	15	0	0	0	0	0	15	0	0
Striped dolphin	100	0	0	0	0	0	100	0	0
<b>Turtles</b>									
Hardshell turtle	0	0	0	0	0	0	0	0	0
Kemp's Ridley turtle	0	0	0	0	0	0	0	0	0
Leatherback turtle	0	0	0	0	0	0	0	0	0
Northwest Atlantic loggerhead turtle	0	0	0	0	0	0	0	0	0

<sup>8</sup> Sea turtle takes are authorized on an annual basis rather than over a 5-year period; therefore, the number of authorized sea turtle takes is estimated over 5 years and is based on the most recent annual incidental take authorization.

### SECTION IV: Gulf of Mexico Range Complex

(U) The summary for explosive use within the GOMEX Range Complex is presented in Table 7 below. Table 8 provides the estimated takes of marine mammals and sea turtles from events conducted since the original authorization.

**(U) Table 7. Total annual number of each type of explosive exercise and associated ordnance listed at 50 C.F.R. §218.30 conducted in the GOMEX Range Complex. Current reporting period is 18 March 2011 through 01 January 2012. Cumulative total also includes activity from 18 March 2011 through 01 January 2012 since this is the first year of reporting.**

Training Event	Ordnance Used	Number of Events Conducted		Number of Expended/Detonated Rounds	
		Current Reporting Period	Cumulative Total	Current Reporting Period	Cumulative Total
Bombing Exercise (Air-to-Surface)	MK-83/GBU-32 (1,000 lb bomb)	0	0	0	0
Small Arms Training	MK3A2 grenade	0	0	0	0

(U) Table 8. Estimated number of marine mammal and sea turtle takes from events conducted in GOMEX from 18 March 2011 through 01 January 2012.

Gulf of Mexico	Number of Takes Authorized at 50 C.F.R. §218.31 or in the ESA ITS <sup>9</sup>			Estimated Cumulative Takes (18 March 2011 - 01 January 2012)			Estimated Number of Authorized Takes Remaining		
	Level B/Harass	Level A/Harm	Mortality	Level B/Harass	Level A/Harm	Mortality	Level B/Harass	Level A/Harm	Mortality
<b>Marine Mammals</b>									
Atlantic spotted dolphin	100	0	0	0	0	0	100	0	0
Beaked whale	100	0	0	0	0	0	100	0	0
Bottlenose dolphin	150	0	0	0	0	0	150	0	0
Clymene dolphin	100	0	0	0	0	0	100	0	0
False killer whale	50	0	0	0	0	0	50	0	0
Fraser's dolphin	100	0	0	0	0	0	100	0	0
Kogia spp.	100	0	0	0	0	0	100	0	0
Melon-headed whale	100	0	0	0	0	0	100	0	0
Pantropical spotted dolphin	130	5	0	0	0	0	130	5	0
Pygmy killer whale	50	0	0	0	0	0	50	0	0
Risso's dolphin	150	0	0	0	0	0	150	0	0
Rough-toothed dolphin	100	0	0	0	0	0	100	0	0
Short-finned pilot whale	100	0	0	0	0	0	100	0	0
Sperm whale	25	0	0	0	0	0	25	0	0
Spinner dolphin	135	5	0	0	0	0	135	5	0
Striped dolphin	100	0	0	0	0	0	100	0	0
<b>Turtles</b>									
Hardshell turtle	0	0	0	0	0	0	0	0	0
Kemp's Ridley turtle	0	0	0	0	0	0	0	0	0
Leatherback turtle	0	0	0	0	0	0	0	0	0
Northwest Atlantic loggerhead turtle	0	0	0	0	0	0	0	0	0

<sup>9</sup> Sea turtle takes are authorized on an annual basis rather than over a 5-year period; therefore, the number of authorized sea turtle takes is estimated over 5 years and is based on the most recent annual incidental take authorization.



## REFERENCES

(U) NMFS. 2011. Annual Biological and Conference Opinions for U.S. Navy Training Activities in the Gulf of Mexico Range Complex 18 March 2011 - 17 March 2012, issued March 17, 2011.

(U) NMFS. 2011a. Letter of Authorization, Taking of Marine Mammals Incidental to U.S. Navy Training in Gulf of Mexico Range Complex 18 March 2011 – 17 March 2012, issued March 17, 2011.

(U) NMFS. 2012. Annual Biological Opinion for U.S. Navy Training Activities on East Coast Range Complexes 6 January 2012 – 4 June 2012, issued January 6, 2012.

(U) NMFS. 2012a. Letter of Authorization, Taking Marine Mammals Incidental to U.S. Navy Training in the Virginia Capes Range Complex 6 January 2012 – 4 June 2012, issued January 6, 2012.

(U) NMFS. 2012b. Letter of Authorization, Taking Marine Mammals Incidental to U.S. Navy Training in the Jacksonville Range Complex 6 January 2012 – 4 June 2012, issued January 6, 2012.

(U) NMFS. 2012c. Letter of Authorization, Taking Marine Mammals Incidental to U.S. Navy Training in the Cherry Point Range Complex 6 January 2012 – 4 June 2012, issued January 6, 2012.