

Prepared for and submitted to:

National Marine Fisheries Service
Office of Protected Resources

Prepared by:

Department of the Navy

In accordance with the Letters of Authorization
Under the MMPA and ITS authorization under
the ESA

26 December 2013

UNCLASSIFIED
Annual Exercise Report
26 December 2013 to 25 December 2014

For The U.S. Navy's
Hawaii-Southern California Training and Testing (HSTT)
Study Area

25 MARCH 2015

TABLE OF CONTENTS

ANNUAL UNCLASSIFIED HSTT EXERCISE REPORT

INTRODUCTION.....	2
(1) HSTT – Major Training Exercises/SINKEX	
(i) Reporting requirements for Coordinated and Strike Group Exercises	3
(ii) Exercise information for each Major Training Exercise	3
(iii) Exercise information for each SINKEX.....	24
(2) HSTT – Summary of Sources Used	
(i) Total annual usage of each type of sound source	24
(3) HSTT – Sonar Exercise Notification.....	25
(4) HSTT – Geographic Information Representation.....	25
(5) HSTT – Special Reporting Requirements	26

ANNUAL HAWAII-SOUTHERN CALIFORNIA UNCLASSIFIED EXERCISE REPORT

INTRODUCTION

The U.S. Navy prepared this Annual Unclassified Exercise Report covering the period from 26 December 2013 to 25 December 2014 in compliance with the National Marine Fisheries Service (NMFS) Final Rule under the Marine Mammal Protection Act (MMPA) for the Hawaii-Southern California Training and Testing (HSTT) Study Area. This report includes only training information that is unclassified, all classified reporting requirements have been forwarded to NMFS in the classified version of this report.

In the HSTT Study Area Letter of Authorization¹ “Requirements for monitoring and reporting” the following report subsections were specified and are present within this report:

- (1) Major Training Exercises (MTE)/SINKEX
 - (i) Exercise Information (for each exercise)
 - (ii) Individual Marine Mammal Sighting Information (for each sighting in each MTE)
 - (iii) Exercise information for each SINKEX
- (2) Summary of Sources Used
 - (i) Total annual usage of each type of sound source
- (3) Sonar Exercise Notification
- (4) Geographic Information Representation
- (5) Special Reporting Requirements
 - (i) Total hours (from 15 December through 15 April) of hull-mounted active sonar operation occurring in the dense humpback areas generally shown on the Mobley map plus a 5-km buffer, but not including the Pacific Missile Range Facility
 - (ii) Total estimated annual hours of hull-mounted active sonar operation conducted in the Humpback Whale Cautionary Area between 15 December and 15 April

(U) The information in this Annual Report represents the best practical data collection for this period. To provide accounting for the entire five-year period of the authorization, Navy will also submit a five-year close-out exercise report with final totals of authorized usage.

¹HSTT: 7(d) of the Training Letter of Authorization, and 50 CFR §218.75(f) (1) through (f) (5)

(1) HSTT – Major Training Exercises/SINKEX

(i) Reporting requirements for Coordinated and Strike Group Major Training Exercises

This section summarizes authorized sonar use and marine mammal observations from MTEs conducted within the HSTT Study Area during the reporting period. The HSTT MTEs include *Sustainment Exercises* (SUSTEX), *Integrated ASW Course* (IAC), *Composite Training Unit Exercises* (C2X), *Joint Task Force Exercises* (JTFEX), *Undersea Warfare Exercises* (USWEX), and *Rim of the Pacific Exercises* (RIMPAC)*.

(ii) Exercise information for each Major Training Exercise

Table 1-ii-1. MTEs conducted in the HSTT Study Area.

(A) Exercise designator	(B) Date	(C) Locations	(D) Number of items or hours of each sound source bin used						(E) Number and types of US vessels and aircraft participating							
			MF1 (hours)	MF2 (hours)	MF3 (hours)	MF4 (hours)	MF5 (buoys)	ASW3 (hours)	CG	DDG	FFG	MH-60R/SH-60F dipping helo	SH-60B non-dipping helo	Submarines	MPRA	Non-ASW surface ship
USWEX	23 Jan - 31 Jan 2014	HRC	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C2X	6 May - 22 May 2014	SOCAL	**	**	**	**	**	**	**	**	**	**	**	**	**	**
C2X	9 May - 2 Jun 2014	SOCAL	**	**	**	**	**	**	**	**	**	**	**	**	**	**
IAC	17 May - 22 May 2014	SOCAL	**	**	**	**	**	**	**	**	**	**	**	**	**	**
JTFEX	3 Jun - 9 Jun 2014	SOCAL	**	**	**	**	**	**	**	**	**	**	**	**	**	**
RIMPAC*	7 Jul - 1 Aug 2014	HRC/SOCAL	**	**	**	**	**	**	**	**	**	**	**	**	**	**
USWEX	31 Aug - 3 Sep 2014	HRC	**	**	**	**	**	**	**	**	**	**	**	**	**	**
IAC	20 Oct - 31 Oct 2014	SOCAL	**	**	**	**	**	**	**	**	**	**	**	**	**	**

*RIMPAC is not listed as one of the Major Training Exercises requiring reporting in the HSTT Final Rule, or the HSTT MMPA Letter of Authorization for training, but is listed in the sonar exercise notification section.

**This information is classified and has been forwarded to NMFS in accordance with the HSTT Letter of Authorization in the classified version of this Annual Exercise Report.

(F) Individual marine mammal sighting information by exercise

Table 1-ii-2. HSTT MTE – Individual Marine Mammal Sighting Information: USWEX 23 Jan - 31 Jan 2014.

Date/time/location of sighting		Species	Number of individuals	Initial detection sensor	Indication of specific type of platform the observation was made from	Length of time observers maintained visual contact with marine mammal(s) (min)	Sea state (Beaufort scale)	Visibility (nm)	Sound source in use at time of sighting (Y/N)	Indication of whether animal is <200 yd, 200-500 yd, 500-1000 yd, 1000-2000 yd, or >2000 yd from sound source	Mitigation implementation – whether operation of sonar sensor was delayed, or sonar was powered down or shutdown, and how long the delay was; or whether navigation was changed or delayed	If source in use is a hull-mounted sonar, relative bearing of animal from ship and estimation of animal’s motion relative to ship	Observed behavior – Watchstanders shall report, in plain language and without trying to categorize in any way, the observed behavior of the animal(s), and if any calves are present	
24 Jan 14	0324Z	HRC	whale	1	ACO	CG	1	1	nr	N	nr	none	na	nr
24 Jan 14	0330Z	HRC	whale	1	ACO	CG	1	1	nr	N	nr	none	na	nr
24 Jan 14	0441Z	HRC	whale	1	ACO	CG	1	1	nr	N	nr	none	na	nr
24 Jan 14	0443Z	HRC	dolphin	2	VIS	CG	5	1	nr	N	nr	none	na	Paralleling ship
24 Jan 14	0719Z	HRC	whale	1	ACO	CG	1	1	nr	N	nr	none	na	nr
24 Jan 14	0829Z	HRC	dolphin	1	ACO	CG	1	1	nr	N	nr	none	na	nr
25 Jan 14	1203Z	HRC	whale	23	VIS	CG	20	4	10	N	>2000	Manuevered away	na	Breaching
25 Jan 14	0053Z	HRC	whale	1	VIS	MPRA	nr	4	10	N	>2000	none	na	nr
25 Jan 14	0200Z	HRC	whale	2	VIS	DDG	10	1	10	N	501-1000	none	na	Blowing
25 Jan 14	0325Z	HRC	whale	3	VIS	MPRA	nr	4	10	N	nr	none	na	nr
25 Jan 14	0757Z	HRC	whale	1	ACO	CG	20	nr	nr	N	nr	none	na	nr
25 Jan 14	0757Z	HRC	dolphin	1	ACO	CG	30	nr	nr	N	nr	none	na	nr
25 Jan 14	0757Z	HRC	dolphin	1	ACO	CG	30	nr	nr	N	nr	none	na	nr
25 Jan 14	0757Z	HRC	dolphin	1	ACO	CG	30	nr	nr	N	nr	none	na	nr
25 Jan 14	0900Z	HRC	whale	1	ACO	MPRA	5	7	6	N	>2000	none	na	nr
25 Jan 14	1019Z	HRC	whale	1	VIS	CG	5	1	10	N	>2000	none	na	nr

Commander, U.S. Pacific Fleet Annual HSTT Unclassified Exercise Report

25 Jan 14	1140Z	HRC	whale	1	VIS	CG	120	1	10	N	nr	none	na	Calves present
25 Jan 14	1140Z	HRC	generic	1	ACO	CG	120	1	10	N	nr	none	na	nr
25 Jan 14	1140Z	HRC	dolphin	1	ACO	CG	120	1	10	N	nr	none	na	nr
25 Jan 14	1140Z	HRC	whale	1	VIS	CG	120	1	10	N	nr	none	na	Calves present
25 Jan 14	1140Z	HRC	generic	1	ACO	CG	120	1	10	N	nr	none	na	nr
25 Jan 14	1140Z	HRC	dolphin	1	ACO	CG	120	1	10	N	nr	none	na	nr
25 Jan 14	1140Z	HRC	whale	1	VIS	CG	120	1	10	N	nr	none	na	Calves present
25 Jan 14	1140Z	HRC	generic	1	ACO	CG	120	1	10	N	nr	none	na	nr
25 Jan 14	1140Z	HRC	dolphin	1	ACO	CG	20	1	10	N	nr	none	na	nr
25 Jan 14	1223Z	HRC	whale	1	ACO	CG	15	1	nr	N	nr	none	na	nr
25 Jan 14	1504Z	HRC	dolphin	2	ACO	CG	10	1	nr	N	nr	none	na	nr
25 Jan 14	1640Z	HRC	dolphin	1	ACO	CG	10	1	nr	N	nr	none	na	nr
25 Jan 14	1733Z	HRC	whale	1	VIS	CG	10	1	10	N	nr	none	na	Calves present
25 Jan 14	1829Z	HRC	whale	1	VIS	CG	10	1	10	N	200-500	none	na	nr
25 Jan 14	2101Z	HRC	whale	1	ACO	CG	15	1	nr	N	nr	none	na	nr
26 Jan 14	1642Z	HRC	whale	5	VIS	CG	30	3	10	N	>2000	Manuevered away	na	Surfacing
26 Jan 14	0122Z	HRC	whale	8	VIS	DDG	4	2	10	N	>2000	none	na	Blowing
26 Jan 14	0331Z	HRC	whale	1	VIS	DDG	nr	nr	nr	N	nr	none	na	nr
26 Jan 14	0719Z	HRC	whale	3	VIS	DDG	4	2	10	N	200-500	none	na	Blowing
26 Jan 14	1900Z	HRC	whale	40	VIS	CG	60	1	10	N	>2000	none	na	Fin and tail slapping
27 Jan 14	1759Z	HRC	generic	2	VIS	CG	2	3	10	N	1001-2000	Manuevered away	na	Surfacing
27 Jan 14	1912Z	HRC	whale	2	VIS	CG	5	3	10	N	1001-2000	Manuevered away	na	Surfacing
27 Jan 14	1549Z	HRC	dolphin	1	ACO	CG	1	1	nr	N	nr	none	na	nr
28 Jan 14	0031Z	HRC	whale	1	ACO	CG	10	2	8	N	nr	none	na	nr
28 Jan 14	0042Z	HRC	whale	1	ACO	CG	60	2	8	N	nr	none	na	nr
28 Jan 14	0056Z	HRC	whale	1	ACO	CG	20	2	8	N	>2000	none	na	Blowing, calves present
28 Jan 14	0056Z	HRC	generic	9	ACO	CG	60	2	8	N	nr	none	na	nr

Commander, U.S. Pacific Fleet Annual HSTT Unclassified Exercise Report

28 Jan 14	0200Z	HRC	dolphin	10	VIS	DDG	nr	3	10	N	>2000	none	na	nr
28 Jan 14	0200Z	HRC	generic	4	ACO	CG	nr	2	8	N	nr	none	na	nr
28 Jan 14	0200Z	HRC	generic	4	ACO	CG	nr	2	8	N	nr	none	na	nr
28 Jan 14	0200Z	HRC	generic	4	ACO	CG	nr	2	8	N	nr	none	na	nr
28 Jan 14	0200Z	HRC	generic	4	ACO	CG	nr	2	8	N	nr	none	na	nr
28 Jan 14	0200Z	HRC	generic	4	ACO	CG	nr	2	8	N	nr	none	na	nr
28 Jan 14	0210Z	HRC	dolphin	2	VIS	DDG	5	3	10	N	>2000	none	na	Jumping
28 Jan 14	0210Z	HRC	whale	1	VIS	DDG	1	3	10	N	>2000	none	na	Blowing
29 Jan 14	1839Z	HRC	whale	1	VIS	CG	21	3	10	N	>2000	Manuevered away	na	Swimming
29 Jan 14	0707Z	HRC	generic	9	ACO	CG	nr	2	3	N	nr	none	na	nr
29 Jan 14	1322Z	HRC	dolphin	9	ACO	CG	15	2	nr	N	nr	none	na	nr
29 Jan 14	1650Z	HRC	whale	1	ACO	MPRA	nr	4	10	N	nr	none	na	nr
29 Jan 14	1715Z	HRC	whale	1	VIS	CG	30	2	10	N	nr	none	na	Blowing, calves present
29 Jan 14	1748Z	HRC	whale	3	VIS	DDG	7	2	10	N	>2000	none	na	Blowing
29 Jan 14	1805Z	HRC	generic	1	VIS	CG	nr	nr	nr	Y	>2000	none	Animal bearing nr, relative motion nr	nr
29 Jan 14	1807Z	HRC	whale	1	VIS	CG	10	2	10	N	>2000	none	na	Blowing, calves present
29 Jan 14	2002Z	HRC	generic	5	ACO	CG	30	2	10	N	nr	none	na	nr
29 Jan 14	2002Z	HRC	generic	5	ACO	CG	30	2	10	N	nr	none	na	nr
29 Jan 14	2002Z	HRC	generic	5	ACO	CG	30	2	10	N	nr	none	na	nr
30 Jan 14	1047Z	HRC	generic	5	ACO	CG	60	2	5	N	nr	none	na	nr
30 Jan 14	1047Z	HRC	generic	5	ACO	CG	60	2	5	N	nr	none	na	nr
30 Jan 14	1047Z	HRC	generic	5	ACO	CG	60	2	5	N	nr	none	na	nr
30 Jan 14	1047Z	HRC	generic	5	ACO	CG	60	2	5	N	nr	none	na	nr
30 Jan 14	1047Z	HRC	generic	5	ACO	CG	60	2	5	N	nr	none	na	nr
30 Jan 14	1247Z	HRC	generic	5	ACO	CG	60	2	5	N	nr	none	na	nr
30 Jan 14	2050Z	HRC	dolphin	1	VIS	CG	1	1	10	N	200-500	none	na	Blowing

Commander, U.S. Pacific Fleet Annual HSTT Unclassified Exercise Report

30 Jan 14	2048Z	HRC	whale	1	ACO	MPRA	nr	4	6	Y	nr	Shut down sonar	Whale bearing nr, closing aircraft	nr
31 Jan 14	0316Z	HRC	whale	4	VIS	DDG	5	4	10	N	200-500	none	na	Blowing
31 Jan 14	2200Z	HRC	whale	5	VIS	Helo	1	nr	10	N	501-1000	none	na	Helo observed 3 orcas with 2 calves in a close group circling and playing or feeding. The calves were close and submerged around the adults
2 Feb 14	1935Z	HRC	whale	1	VIS	CG	10	2	10	N	501-1000	none	na	Tail flapping
3 Feb 14	1744Z	HRC	dolphin	5	VIS	CG	26	2	10	N	200-500	none	na	Swimming
3 Feb 14	1840Z	HRC	whale	2	VIS	CG	10	2	10	N	501-1000	none	na	Swimming, calves present

nr=not reported; VIS=visual; ACO=acoustic; Y=yes; N=no; na=not applicable

Table 1-ii-3. HSTT MTE – Individual Marine Mammal Sighting Information: C2X 6 May - 22 May 2014.

Date/time/location of sighting		Species	Number of individuals	Initial detection sensor	Indication of specific type of platform the observation was made from	Length of time observers maintained visual contact with marine mammal(s) (min)	Sea state (Beaufort scale)	Visibility (nm)	Sound source in use at time of sighting (Y/N)	Indication of whether animal is <200 yd, 200-500 yd, 500-1000 yd, 1000-2000 yd, or >2000 yd from sound source	Mitigation implementation – whether operation of sonar sensor was delayed, or sonar was powered down or shutdown, and how long the delay was; or whether navigation was changed or delayed	If source in use is a hull-mounted sonar, relative bearing of animal from ship and estimation of animal's motion relative to ship	Observed behavior – Watchstanders shall report, in plain language and without trying to categorize in any way, the observed behavior of the animal(s), and if any calves are present	
6 May 14	01915	SOCAL	whale	1	VIS	Non-ASW ship	5	1	10	na	200-500	none	na	Swimming off the stbd bow
8 May 14	1434Z	SOCAL	dolphin	40	VIS	Non-ASW ship	5	2	10	na	<200	none	na	Jumping
8 May 14	1434Z	SOCAL	pinniped	5	VIS	Non-ASW ship	2	2	10	na	<200	none	na	Jumping
8 May 14	1625Z	SOCAL	dolphin	20	VIS	Non-ASW ship	5	2	10	na	<200	none	na	Swimming
8 May 14	1710Z	SOCAL	whale	1	VIS	Non-ASW ship	2	2	10	na	>2000	none	na	Swimming on surface
8 May 14	1815Z	SOCAL	dolphin	1	VIS	Non-ASW ship	1	2	10	na	200-500	none	na	Jumping
8 May 14	1920Z	SOCAL	dolphin	8	VIS	Non-ASW ship	5	3	10	na	<200	none	na	Surfaced
8 May 14	1921Z	SOCAL	whale	1	VIS	Non-ASW ship	2	3	10	na	<200	none	na	Diving
8 May 14	1925Z	SOCAL	pinniped	3	VIS	Non-ASW ship	5	3	10	na	<200	none	na	Floating
8 May 14	2003Z	SOCAL	whale	2	VIS	Non-ASW ship	2	3	10	na	200-500	none	na	Diving
8 May 14	0030Z	SOCAL	dolphin	2	VIS	Non-ASW ship	5	1	10	na	<200	none	na	Paralleling ship
8 May 14	1655Z	SOCAL	whale	1	VIS	Non-ASW ship	5	2	10	na	501-1000	none	na	Paralleling ship
11 May 14	0030Z	SOCAL	whale	2	VIS	Non-ASW ship	20	3	10	na	1001-2000	none	na	Swimming
12 May 14	1135Z	SOCAL	dolphin	20	VIS	Non-ASW ship	3	1	10	na	200-500	none	na	Swimming
12 May 14	2025Z	SOCAL	whale	2	VIS	Non-ASW ship	2	1	10	na	>2000	none	na	Swimming
13 May 14	2333Z	SOCAL	whale	1	VIS	Non-ASW ship	1	1	10	na	1001-2000	none	na	Swimming
13 May 14	0148Z	SOCAL	whale	4	VIS	Non-ASW ship	15	2	10	na	>2000	none	na	Blowing

Commander, U.S. Pacific Fleet Annual HSTT Unclassified Exercise Report

13 May 14	0107Z	SOCAL	whale	1	VIS	Non-ASW ship	1	1	10	na	501-1000	none	na	Swimming
13 May 14	1858Z	SOCAL	dolphin	10	VIS	Non-ASW ship	2	1	10	na	<200	none	na	Swimming
13 May 14	2105Z	SOCAL	dolphin	100	VIS	Non-ASW ship	3	1	10	na	200-500	none	na	Swimming
14 May 14	1343Z	SOCAL	whale	2	VIS	Non-ASW ship	3	2	10	na	>2000	none	na	Swimming
14 May 14	1406Z	SOCAL	whale	1	VIS	Non-ASW ship	2	1	10	na	<200	none	na	Swimming
14 May 14	1428Z	SOCAL	whale	1	VIS	Non-ASW ship	1	1	10	na	501-1000	none	na	Swimming
14 May 14	0129Z	SOCAL	dolphin	75	VIS	Non-ASW ship	15	1	10	na	<200	none	na	Paralleling ship
14 May 14	1426Z	SOCAL	whale	1	VIS	Non-ASW ship	2	1	10	na	<200	none	na	Crossed bow
14 May 14	2127Z	SOCAL	dolphin	10	VIS	Non-ASW ship	10	1	10	na	<200	none	na	Paralleling ship course and speed
14 May 14	2214Z	SOCAL	dolphin	5	VIS	Non-ASW ship	15	1	10	na	<200	none	na	Paralleling ship course and speed
14 May 14	1501Z	SOCAL	whale	3	VIS	CG	5	1	10	N	>2000	none	na	Paralleling ship
16 May 14	0217Z	SOCAL	dolphin	10	VIS	Non-ASW ship	2	1	10	na	>2000	none	na	Swimming
16 May 14	0232Z	SOCAL	dolphin	10	VIS	Non-ASW ship	2	1	10	na	>2000	none	na	Swimming
17 May 14	1010Z	SOCAL	dolphin	5	VIS	Non-ASW ship	1	1	10	na	1001-2000	none	na	Swimming
18 May 14	1907Z	SOCAL	dolphin	30	VIS	Non-ASW ship	10	1	10	na	<200	none	na	Jumping
19 May 14	1431Z	SOCAL	dolphin	30	VIS	Non-ASW ship	5	1	10	na	<200	none	na	Jumping
21 May 14	1752Z	SOCAL	dolphin	8	VIS	Non-ASW ship	10	1	10	na	<200	none	na	Swimming

nr=not reported; VIS=visual; ACO=acoustic; Y=yes; N=no; na=not applicable

Table 1-ii-4. HSTT MTE – Individual Marine Mammal Sighting Information: C2X 9 May - 2 Jun 2014.

Date/time/location of sighting		Species	Number of individuals	Initial detection sensor	Indication of specific type of platform the observation was made from	Length of time observers maintained visual contact with marine mammal(s) (min)	Sea state (Beaufort scale)	Visibility (nm)	Sound source in use at time of sighting (Y/N)	Indication of whether animal is <200 yd, 200-500 yd, 500-1000 yd, 1000-2000 yd, or >2000 yd from sound source	Mitigation implementation – whether operation of sonar sensor was delayed, or sonar was powered down or shutdown, and how long the delay was; or whether navigation was changed or delayed	If source in use is a hull-mounted sonar, relative bearing of animal from ship and estimation of animal's motion relative to ship	Observed behavior – Watchstanders shall report, in plain language and without trying to categorize in any way, the observed behavior of the animal(s), and if any calves are present	
9 May 14	1131Z	SOCAL	whale	1	VIS	DDG	15	1	10	N	1001-2000	none	na	nr
10 May 14	0042Z	SOCAL	whale	3	VIS	DDG	1	3	9	N	>2000	none	na	nr
11 May 14	1829Z	SOCAL	whale	1	VIS	DDG	3	6	10	N	>2000	Manuevered away	na	Crossed bow
11 May 14	1445Z	SOCAL	dolphin	3	VIS	DDG	10	2	10	N	200-500	none	na	Paralleling into ship's wake
11 May 14	700ZM	SOCAL	pinniped	1	VIS	DDG	1	5	10	N	<200	none	na	Swimming off starboard side and jumping
12 May 14	0051Z	SOCAL	dolphin	20	VIS	DDG	2	1	10	N	501-1000	none	na	Calves present
12 May 14	1245Z	SOCAL	dolphin	5	VIS	DDG	2	1	10	N	<200	none	na	Group of dolphins jumping out of the water
12 May 14	1445Z	SOCAL	pinniped	1	VIS	DDG	1	1	10	N	<200	none	na	Only saw seal for less than a minute then it swam away
13 May 14	2332Z	SOCAL	whale	2	VIS	DDG	1	2	10	N	501-1000	none	na	nr
14 May 14	0125Z	SOCAL	whale	1	VIS	DDG	4	2	10	N	1001-2000	none	na	nr
14 May 14	1800Z	SOCAL	dolphin	5	VIS	Non-ASW ship	1	1	10	na	200-500	none	na	nr
14 May 14	1929Z	SOCAL	pinniped	2	VIS	DDG	4	2	10	N	501-1000	none	na	nr
15 May 14	1751Z	SOCAL	pinniped	3	VIS	DDG	1	2	10	Y	200-500	Shut down sonar	Pinnipeds bearing 050R, closing ship	Closing
15 May 14	1613Z	SOCAL	dolphin	24	VIS	Helo	2	nr	10	N	501-1000	Delayed active sonar	na	Calves present
15 May 14	1615Z	SOCAL	dolphin	23	VIS	CG	8	2	10	N	>2000	none	na	Paralleling ship
15 May 14	1818Z	SOCAL	whale	1	VIS	DDG	2	2	10	Y	1001-2000	none	Whale bearing 330R, opening ship	nr

Commander, U.S. Pacific Fleet Annual HSTT Unclassified Exercise Report

15 May 14	2047Z	SOCAL	whale	1	VIS	DDG	1	1	10	N	<200	none	na	Surfaced and dived
15 May 14	2353Z	SOCAL	whale	1	VIS	DDG	5	1	10	N	>2000	none	na	Dove deep
15 May 14	1929Z	SOCAL	pinniped	3	VIS	DDG	1	2	10	Y	501-1000	Shut down sonar	Pinnipeds bearing nr, closing ship	nr
23 May 14	0006Z	SOCAL	whale	4	VIS	CG	nr	nr	10	N	200-500	Manuevered away	na	Off starboard bow
23 May 14	0040Z	SOCAL	pinniped	1	VIS	DDG	1	1	10	N	200-500	none	na	Dived and lost sight
23 May 14	1754Z	SOCAL	dolphin	10	VIS	Non-ASW ship	1	1	10	na	200-500	none	na	nr
24 May 14	1805Z	SOCAL	whale	1	VIS	DDG	3	1	10	N	501-1000	Manuevered away	na	Blowing
24 May 14	1412Z	SOCAL	whale	1	VIS	DDG	5	2	8	N	1001-2000	none	na	Stranding, carcass
25 May 14	1317Z	SOCAL	dolphin	10	VIS	Non-ASW ship	1	1	10	na	<200	none	na	Calves present
26 May 14	0858Z	SOCAL	dolphin	50	VIS	DDG	15	2	10	N	200-500	none	na	Riding bow then opened, calves present
27 May 14	1435Z	SOCAL	dolphin	10	VIS	Non-ASW ship	5	1	10	na	200-500	none	na	nr
27 May 14	1620Z	SOCAL	dolphin	10	VIS	DDG	8	1	10	Y	501-1000	Shut down sonar	Dolphins bearing 110R, opening ship	nr
28 May 14	0116Z	SOCAL	dolphin	20	VIS	DDG	2	1	10	N	200-500	none	na	nr
28 May 14	2202Z	SOCAL	dolphin	50	VIS	DDG	2	3	10	Y	200-500	none	Dolphins bearing 350R, closing ship	Closed to ride bow wake
29 May 14	2203Z	SOCAL	whale	1	VIS	DDG	2	4	10	N	>2000	none	na	nr
29 May 14	2209Z	SOCAL	whale	2	VIS	DDG	10	4	10	N	>2000	none	na	Both whales heading north
29 May 14	2352Z	SOCAL	dolphin	7	VIS	DDG	10	3	10	N	<200	none	na	Riding bow wake
30 May 14	1331Z	SOCAL	generic	1	VIS	DDG	nr	nr	nr	Y	1001-2000	Shut down sonar	Animal bearing nr, opening ship	Off port side
30 May 14	1527Z	SOCAL	dolphin	50	VIS	DDG	2	2	10	Y	>2000	none	Dolphins bearing 078R, closing ship	nr
30 May 14	1624Z	SOCAL	dolphin	5	VIS	DDG	1	2	10	Y	200-500	none	Dolphins bearing 046R, opening ship	nr
30 May 14	1545Z	SOCAL	whale	2	VIS	CG	2	2	10	Y	1001-2000	Powered down sonar	Whales bearing 000R, paralleling ship	Passing by
30 May 14	1340Z	SOCAL	whale	2	VIS	DDG	5	2	10	Y	1001-2000	Shut down sonar	Whales bearing 120R, closing ship	Crossing bow
31 May 14	1700Z	SOCAL	dolphin	7	VIS	Non-ASW ship	1	1	7	na	>2000	none	na	nr
1 Jun 14	0202Z	SOCAL	whale	2	VIS	DDG	nr	5	10	Y	1001-2000	none	Whales bearing nr, relative motion nr	Calves present

1 Jun 14	0221Z	SOCAL	dolphin	15	VIS	DDG	10	5	10	Y	501-1000	Powered down sonar	Dolphins bearing 355R, closing ship	Closed and riding bow
----------	-------	-------	---------	----	-----	-----	----	---	----	---	----------	--------------------	-------------------------------------	-----------------------

nr=not reported; VIS=visual; ACO=acoustic; Y=yes; N=no; na=not applicable

Table 1-ii-5. HSTT MTE – Individual Marine Mammal Sighting Information: IAC 17 May - 22 May 2014.

Date/time/location of sighting		Species	Number of individuals	Initial detection sensor	Indication of specific type of platform the observation was made from	Length of time observers maintained visual contact with marine mammal(s) (min)	Sea state (Beaufort scale)	Visibility (nm)	Sound source in use at time of sighting (Y/N)	Indication of whether animal is <200 yd, 200-500 yd, 500-1000 yd, 1000-2000 yd, or >2000 yd from sound source	Mitigation implementation – whether operation of sonar sensor was delayed, or sonar was powered down or shutdown, and how long the delay was; or whether navigation was changed or delayed	If source in use is a hull-mounted sonar, relative bearing of animal from ship and estimation of animal's motion relative to ship	Observed behavior – Watchstanders shall report, in plain language and without trying to categorize in any way, the observed behavior of the animal(s), and if any calves are present	
17 May 14	1617Z	SOCAL	whale	1	VIS	DDG	5	2	7	N	1001-2000	none	na	nr
17 May 14	1615Z	SOCAL	whale	1	VIS	DDG	2	3	10	N	>2000	none	na	nr
17 May 14	2100Z	SOCAL	whale	2	VIS	DDG	5	3	8	N	1001-2000	none	na	nr
17 May 14	1509Z	SOCAL	whale	1	VIS	DDG	nr	2	7	Y	nr	Powered down sonar	Whale bearing nr, relative motion nr	nr
17 May 14	1522Z	SOCAL	whale	1	VIS	DDG	nr	2	7	Y	nr	Powered down sonar	Whale bearing nr, relative motion nr	nr
17 May 14	1605Z	SOCAL	whale	2	VIS	DDG	3	2	7	Y	501-1000	Powered down sonar	Whales bearing 231R, closing ship	nr
17 May 14	1500Z	SOCAL	whale	4	VIS	CG	38	2	10	Y	1001-2000	Shut down sonar	Whales bearing 340R, closing ship	Closing
18 May 14	1742Z	SOCAL	dolphin	10	VIS	DDG	5	2	10	Y	200-500	Shut down sonar	Dolphins bearing 023R, opening ship	Crossing bow
18 May 14	0046Z	SOCAL	whale	2	VIS	DDG	4	2	10	N	501-1000	none	na	Calves present
18 May 14	1708Z	SOCAL	dolphin	15	VIS	DDG	6	1	10	N	>2000	none	na	nr
18 May 14	2141Z	SOCAL	whale	5	VIS	DDG	16	2	10	N	200-500	none	na	Crossed bow several times, closed ship, swam parallel off the bow at 50 yards
18 May 14	2229Z	SOCAL	dolphin	10	VIS	DDG	5	2	10	N	<200	none	na	Crossed bow
19 May 14	1929Z	SOCAL	whale	1	VIS	DDG	5	1	10	N	<200	none	na	nr
19 May 14	2008Z	SOCAL	dolphin	100	VIS	DDG	30	1	10	N	200-500	none	na	Calves present
19 May 14	2250Z	SOCAL	dolphin	50	VIS	DDG	2	2	10	N	200-500	none	na	Closed, riding bow wake

Commander, U.S. Pacific Fleet Annual HSTT Unclassified Exercise Report

19 May 14	2348Z	SOCAL	pinniped	1	VIS	DDG	5	3	9	N	501-1000	none	na	Playing in seaweed/kelp
19 May 14	1405Z	SOCAL	dolphin	10	VIS	DDG	10	3	10	Y	200-500	Shut down sonar	Dolphins bearing 010R, paralleling ship	Paralleling ship
20 May 14	1104Z	SOCAL	dolphin	50	VIS	DDG	3	4	10	N	200-500	none	na	nr
20 May 14	1739Z	SOCAL	dolphin	50	VIS	Non-ASW ship	2	2	10	na	<200	none	na	nr
22 May 14	224ZM	SOCAL	whale	1	VIS	DDG	1	1	10	N	501-1000	none	na	nr
22 May 14	2356Z	SOCAL	dolphin	100	VIS	DDG	4	1	10	N	501-1000	none	na	nr

nr=not reported; VIS=visual; ACO=acoustic; Y=yes; N=no; na=not applicable

Table 1-ii-6. HSTT MTE – Individual Marine Mammal Sighting Information: JTFEX 3 Jun - 9 Jun 2014.

Date/time/location of sighting		Species	Number of individuals	Initial detection sensor	Indication of specific type of platform the observation was made from	Length of time observers maintained visual contact with marine mammal(s) (min)	Sea state (Beaufort scale)	Visibility (nm)	Sound source in use at time of sighting (Y/N)	Indication of whether animal is <200 yd, 200-500 yd, 500-1000 yd, 1000-2000 yd, or >2000 yd from sound source	Mitigation implementation – whether operation of sonar sensor was delayed, or sonar was powered down or shutdown, and how long the delay was; or whether navigation was changed or delayed	If source in use is a hull-mounted sonar, relative bearing of animal from ship and estimation of animal's motion relative to ship	Observed behavior – Watchstanders shall report, in plain language and without trying to categorize in any way, the observed behavior of the animal(s), and if any calves are present	
3 Jun 14	0012Z	SOCAL	dolphin	5	VIS	DDG	10	2	10	N	<200	none	na	nr
3 Jun 14	0140Z	SOCAL	dolphin	20	VIS	DDG	5	3	10	N	<200	none	na	nr
3 Jun 14	1348Z	SOCAL	whale	2	VIS	DDG	3	4	10	N	>2000	none	na	Both whales heading north
4 Jun 14	0012Z	SOCAL	dolphin	75	VIS	DDG	7	2	10	N	200-500	none	na	Closed and riding bow then traveled northwest, calves present
4 Jun 14	1850Z	SOCAL	dolphin	7	VIS	DDG	1	1	10	N	200-500	none	na	nr
4 Jun 14	2015Z	SOCAL	whale	1	VIS	DDG	4	1	10	Y	1001-2000	Shut down sonar	Whale bearing 020R, paralleling ship	nr
9 Jun 14	2031Z	SOCAL	generic	1	VIS	DDG	nr	nr	nr	Y	200-500	Shut down sonar	Animal bearing nr, relative motion nr	nr
9 Jun 14	2150Z	SOCAL	whale	2	VIS	DDG	nr	nr	nr	Y	>2000	Shut down sonar	Whales bearing nr, relative motion nr	nr

nr=not reported; VIS=visual; ACO=acoustic; Y=yes; N=no; na=not applicable

Table 1-ii-7. HSTT MTE – Individual Marine Mammal Sighting Information: RIMPAC 7 Jul - 1 Aug 2014.

Date/time/location of sighting		Species	Number of individuals	Initial detection sensor	Indication of specific type of platform the observation was made from	Length of time observers maintained visual contact with marine mammal(s) (min)	Sea state (Beaufort scale)	Visibility (nm)	Sound source in use at time of sighting (Y/N)	Indication of whether animal is <200 yd, 200-500 yd, 500-1000 yd, 1000-2000 yd, or >2000 yd from sound source	Mitigation implementation – whether operation of sonar sensor was delayed, or sonar was powered down or shutdown, and how long the delay was; or whether navigation was changed or delayed	If source in use is a hull-mounted sonar, relative bearing of animal from ship and estimation of animal's motion relative to ship	Observed behavior – Watchstanders shall report, in plain language and without trying to categorize in any way, the observed behavior of the animal(s), and if any calves are present	
10 Jul 14	1928Z	HRC	dolphin	4	VIS	DDG	5	1	10	N	<200	none	na	nr
10 Jul 14	0010Z	HRC	generic	1	ACO	FFG	1	2	10	N	nr	none	na	nr
10 Jul 14	0321Z	HRC	generic	1	ACO	FFG	5	1	10	N	nr	none	na	nr
11 Jul 14	1847Z	HRC	whale	5	VIS	Non-ASW ship	12	2	10	N	<200	none	na	nr
11 Jul 14	1040Z	HRC	dolphin	1	ACO	Foreign ship	nr	1	10	N	nr	none	na	nr
12 Jul 14	2244Z	HRC	dolphin	15	VIS	Foreign ship	1	2	7	na	<200	none	na	Playing in bow wave
12 Jul 14	2122Z	HRC	whale	2	VIS	CG	1	3	10	N	<200	Manuevered away	na	Swimming below the surface
12 Jul 14	1255Z	SOCAL	whale	1	VIS	Non-ASW ship	1	1	10	N	501-1000	none	na	Breach and submerge
12 Jul 14	2020Z	SOCAL	whale	1	VIS	Non-ASW ship	1	1	10	N	501-1000	none	na	Animal's direction could not be determined
12 Jul 14	1340Z	SOCAL	whale	1	VIS	Non-ASW ship	1	1	10	N	1001-2000	none	na	Breach and submerge
13 Jul 14	2334Z	SOCAL	whale	2	VIS	Non-ASW ship	1	1	6	N	501-1000	none	na	Breach and submerge
13 Jul 14	1809Z	HRC	dolphin	3	VIS	CG	5	2	10	N	>2000	none	na	Swimming on surface
14 Jul 14	2105Z	HRC	dolphin	2	VIS	Foreign ship	1	2	7	na	<200	none	na	Dolphins breached then went deep
14 Jul 14	1553Z	SOCAL	dolphin	2	VIS	Non-ASW ship	5	1	6	N	>2000	none	na	Visually seen for approximately 5 minutes
14 Jul 14	0543Z	HRC	whale	1	ACO	Foreign ship	1	1	10	N	nr	none	na	nr
14 Jul 14	0706Z	HRC	whale	1	ACO	Foreign ship	1	1	10	N	nr	none	na	nr
14 Jul 14	0754Z	HRC	whale	1	ACO	Foreign ship	1	1	10	N	nr	none	na	nr

Commander, U.S. Pacific Fleet Annual HSTT Unclassified Exercise Report

14 Jul 14	1013Z	HRC	dolphin	1	ACO	CG	40	2	10	N	nr	none	na	nr
14 Jul 14	1245Z	HRC	generic	1	ACO	FFG	25	1	10	N	nr	none	na	No visual - Bridge notified
15 Jul 14	1230Z	HRC	dolphin	14	VIS	Foreign ship	10	3	10	na	200-500	none	na	Dolphins observed riding the bow wave. Opened on bow and then proceeded on reciprocal course to the ship
16 Jul 14	2155Z	HRC	dolphin	3	VIS	Non-ASW ship	1	1	10	na	<200	none	na	nr
17 Jul 14	0006Z	HRC	dolphin	10	VIS	DDG	5	1	10	N	<200	none	na	nr
19 Jul 14	0900Z	SOCAL	whale	1	VIS	Foreign ship	2	1	10	N	200-500	Manuevered away	na	Saw whale on starboard bow moving right to left, altered to starboard to avoid
19 Jul 14	0340Z	HRC	dolphin	2	VIS	Foreign ship	nr	nr	nr	N	nr	none	na	nr
19 Jul 14	0227Z	HRC	dolphin	20	VIS	Foreign ship	nr	nr	nr	N	nr	none	na	Jumping
20 Jul 14	0400Z	HRC	dolphin	10	VIS	Foreign ship	3	3	10	na	200-500	none	na	Dolphins appeared, closed the ship and rode the bow wave for approx 30 seconds. They then opened to starboard and went deep
20 Jul 14	2210Z	SOCAL	Pinniped	1	VIS	Non-ASW ship	nr	2	10	na	nr	none	na	Carcass of a dead sea lion was spotted from the bridge. Ship slowed and circled the carcass to collect imagery
21 Jul 14	0800Z	HRC	dolphin	10	VIS	Non-ASW ship	3	1	10	na	<200	none	na	nr
21 Jul 14	0744Z	HRC	whale	1	VIS	Non-ASW ship	1	1	10	na	<200	Manuevered away	na	nr
21 Jul 14	2210Z	HRC	dolphin	15	VIS	Foreign ship	5	2	1	N	1001-2000	none	na	Swimming parallel, calves present
22 Jul 14	1430Z	HRC	dolphin	4	VIS	Non-ASW ship	10	2	10	na	>2000	none	na	Paralleling
23 Jul 14	2025Z	HRC	dolphin	2	VIS	Non-ASW ship	1	2	nr	na	200-500	none	na	nr
26 Jul 14	1957Z	HRC	whale	1	VIS	Non-ASW ship	5	2	10	N	<200	none	na	Breached surface several times for air (wide and bushy)
26 Jul 14	1358Z	HRC	dolphin	1	ACO	CG	20	2	5	N	nr	none	na	nr
27 Jul 14	0130Z	HRC	whale	1	VIS	Foreign ship	nr	nr	nr	N	1001-2000	none	na	nr
27 Jul 14	0006Z	HRC	whale	2	VIS	Foreign ship	3	2	10	na	>2000	none	na	Whales observed tracking left to right at 3000 yards

nr=not reported; VIS=visual; ACO=acoustic; Y=yes; N=no; na=not applicable

Table 1-ii-8. HSTT MTE – Individual Marine Mammal Sighting Information: USWEX 31 Aug - 3 Sep 2014.

Date/time/location of sighting			Species	Number of individuals	Initial detection sensor	Indication of specific type of platform the observation was made from	Length of time observers maintained visual contact with marine mammal(s) (min)	Sea state (Beaufort scale)	Visibility (nm)	Sound source in use at time of sighting (Y/N)	Indication of whether animal is <200 yd, 200-500 yd, 500-1000 yd, 1000-2000 yd, or >2000 yd from sound source	Mitigation implementation – whether operation of sonar sensor was delayed, or sonar was powered down or shutdown, and how long the delay was; or whether navigation was changed or delayed	If source in use is a hull-mounted sonar, relative bearing of animal from ship and estimation of animal's motion relative to ship	Observed behavior – Watchstanders shall report, in plain language and without trying to categorize in any way, the observed behavior of the animal(s), and if any calves are present
31 Aug 14	1108Z	HRC	dolphin	50	VIS	DDG	1	1	10	Y	1001-2000	Manuevered away	Dolphins bearing 085R, opening ship	Parallel after ship maneuvered and dolphins passed down port side of ship
31 Aug 14	0045Z	HRC	dolphin	5	VIS	CG	5	2	10	N	>2000	none	na	Swimming
2 Sep 14	2235Z	HRC	dolphin	100	VIS	Non-ASW ship	2	1	10	N	200-500	none	na	nr

nr=not reported; VIS=visual; ACO=acoustic; Y=yes; N=no; na=not applicable

Table 1-ii-9. HSTT MTE – Individual Marine Mammal Sighting Information: IAC 20 Oct - 31 Oct 2014.

Date/time/location of sighting		Species	Number of individuals	Initial detection sensor	Indication of specific type of platform the observation was made from	Length of time observers maintained visual contact with marine mammal(s) (min)	Sea state (Beaufort scale)	Visibility (nm)	Sound source in use at time of sighting (Y/N)	Indication of whether animal is <200 yd, 200-500 yd, 500-1000 yd, 1000-2000 yd, or >2000 yd from sound source	Mitigation implementation – whether operation of sonar sensor was delayed, or sonar was powered down or shutdown, and how long the delay was; or whether navigation was changed or delayed	If source in use is a hull-mounted sonar, relative bearing of animal from ship and estimation of animal's motion relative to ship	Observed behavior – Watchstanders shall report, in plain language and without trying to categorize in any way, the observed behavior of the animal(s), and if any calves are present	
20 Oct 14	1552Z	SOCAL	pinniped	1	VIS	DDG	5	2	10	N	200-500	none	na	Passed down port side on course reciprocal to ship
20 Oct 14	1552Z	SOCAL	dolphin	3	VIS	DDG	2	2	10	N	>2000	none	na	Crossed starboard to port across bow and open ownship
20 Oct 14	2238Z	SOCAL	dolphin	2	VIS	Non-ASW ship	1	4	10	na	1001-2000	none	na	Blowing
20 Oct 14	2345Z	SOCAL	whale	1	VIS	DDG	1	2	10	N	>2000	none	na	Viewed fin at surface; observed opening
21 Oct 14	1805Z	SOCAL	whale	1	VIS	DDG	1	2	10	N	200-500	none	na	Viewed briefly at surface then dove
21 Oct 14	2120Z	SOCAL	dolphin	3	VIS	Non-ASW ship	1	5	10	na	>2000	none	na	Blowing
21 Oct 14	2147Z	SOCAL	pinniped	1	VIS	DDG	1	3	10	N	200-500	none	na	Dead seal sighted. Passed from port bow to stern. No movement; Seal was belly-up
22 Oct 14	1437Z	SOCAL	dolphin	3	VIS	DDG	1	2	10	N	200-500	none	na	Pod of 3 dolphins observed passing along the starboard side from bow to stern. Dorsal fins sighted
22 Oct 14	2304Z	SOCAL	whale	2	VIS	Non-ASW ship	3	4	10	na	1001-2000	none	na	Blowing
23 Oct 14	0037Z	SOCAL	dolphin	20	VIS	Non-ASW ship	5	4	10	na	1001-2000	none	na	Float on Surface
24 Oct 14	1400Z	SOCAL	dolphin	10	VIS	DDG	4	1	10	N	>2000	none	na	Pod of dolphins observed. Passed from bow to stern all swimming in one direction
24 Oct 14	1730Z	SOCAL	dolphin	5	VIS	Non-ASW ship	1	4	10	na	>2000	none	na	Blowing
24 Oct 14	1831Z	SOCAL	dolphin	21	VIS	DDG	10	1	10	N	>2000	none	na	Large pod of dolphins observed feeding on school of fish. Swimming in multiple directions and seen jumping out of water

Commander, U.S. Pacific Fleet Annual HSTT Unclassified Exercise Report

24 Oct 14	2107Z	SOCAL	dolphin	20	VIS	Non-ASW ship	6	4	10	na	>2000	none	na	Jumping
24 Oct 14	2109Z	SOCAL	dolphin	30	VIS	Non-ASW ship	4	4	10	na	1001-2000	none	na	Jumping
25 Oct 14	1827Z	SOCAL	whale	1	VIS	DDG	4	1	10	N	>2000	none	na	Observed fin at surface
26 Oct 14	2346Z	SOCAL	whale	1	VIS	DDG	1	3	10	N	<200	Manuevered away	na	Observed single blow at surface
27 Oct 14	2030Z	SOCAL	pinniped	1	VIS	DDG	1	1	10	N	<200	none	na	Observed floating by
28 Oct 14	1440Z	SOCAL	dolphin	10	VIS	DDG	10	1	10	N	<200	none	na	10 dolphins observed swimming in vicinity of ship, 500 yards away
28 Oct 14	1915Z	SOCAL	pinniped	1	VIS	DDG	10	2	10	N	200-500	none	na	Observed swimming parallel to ship
29 Oct 14	0028Z	SOCAL	dolphin	15	VIS	DDG	20	1	10	N	>2000	none	na	Large group seen swimming and jumping near surface
29 Oct 14	0905Z	SOCAL	dolphin	25	VIS	MPRA	5	1	10	Y	>2000	Shut down sonar	Dolphins bearing nr, closing aircraft	Leaping from the water
29 Oct 14	1658Z	SOCAL	Pinniped	1	VIS	Non-ASW ship	2	3	10	na	200-500	none	na	Float on Surface
29 Oct 14	2018Z	SOCAL	dolphin	2	VIS	Non-ASW ship	3	3	10	na	501-1000	none	na	Jumping
29 Oct 14	2025Z	SOCAL	whale	5	VIS	CG	30	1	10	Y	200-500	Shut down sonar	Whales bearing 109R, opening ship	nr
30 Oct 14	0028Z	SOCAL	dolphin	100	VIS	DDG	nr	1	10	N	>2000	none	na	Calves present
30 Oct 14	1748Z	SOCAL	dolphin	51	VIS	DDG	10	2	10	N	>2000	none	na	Very large group seen swimming and jumping near surface
30 Oct 14	1843Z	SOCAL	whale	1	VIS	DDG	5	2	10	N	1001-2000	none	na	Whale observed swimming near surface
30 Oct 14	2130Z	SOCAL	dolphin	1	VIS	DDG	20	3	10	N	<200	none	na	Dolphin swimming/splashing near surface
31 Oct 14	1518Z	SOCAL	dolphin	40	VIS	Non-ASW ship	4	3	10	na	1001-2000	none	na	Jumping
31 Oct 14	1630Z	SOCAL	dolphin	12	VIS	Non-ASW ship	2	3	10	na	501-1000	none	na	Swimming
31 Oct 14	1741Z	SOCAL	pinniped	1	VIS	DDG	1	1	10	N	200-500	none	na	Seal observed swimming by
31 Oct 14	2132Z	SOCAL	dolphin	3	VIS	DDG	5	2	10	N	200-500	none	na	Dolphins observed swimming near surface

nr=not reported; VIS=visual; ACO=acoustic; Y=yes; N=no; na=not applicable

(G) Evaluation (based on data gathered during all exercises) of effectiveness

There were eight major training exercises conducted in the HSTT Study Area this reporting period (see **Table 1-ii-10**). In support of these MTEs, the Navy conducted over 6,903 hours of Marine Species Awareness Training for 4,416 Navy personnel prior to the beginning of these training exercises.

Table 1-ii-10. HSTT Study Area major training exercises.

MTE Type	Dates	# of Exercise Days	# of US Ships Involved (MFAS and non-MFAS)	# of Marine Mammal Sightings	# of Marine Mammals
USWEX	23 - 31 Jan 2014	9	**	75	255
C2X	6 - 22 May 2014	17	**	34	416
C2X	9 May - 2 Jun 2014	25	**	41	362
IAC	17 - 22 May 2014	6	**	21	417
JTFEX	3 Jun - 9 Jun 2014	7	**	8	113
RIMPAC	7 Jul - 1 Aug 2014	26	**	36	144
USWEX	31 Aug - 3 Sep 2014	4	**	3	155
IAC	20 - 31 Oct 2014	12	**	33	394
	Total	106	**	251	2,256

**This information is classified and has been forwarded to NMFS in accordance with the HSTT Letter of Authorization in the classified version of this Annual Exercise Report.

HSTT Study Area Major Training Exercise Marine Mammal Observations

There were 251 sightings of an estimated 2,256 marine mammals over the course of eight MTEs in the HSTT Study Area (see **Table 1-ii-10**). Breakdown of sightings by species type are shown in **Table 1-ii-11**.

Table 1-ii-11. Total number of marine mammal sightings observed from Navy platforms during major training exercises.

Species Type	# of Sightings	% of Total Sightings	# of Marine Mammals	% of Total Number of Marine Mammals
Dolphins	105	42%	1,900	84%
Whales	104	42%	235	11%
Pinnipeds	16	6%	27	1%
Turtles	0	0%	0	0%
Not recorded	26	10%	94	4%
Totals:	251		2,256	

Dolphin species in Southern California typically occur in larger pods than whales, hence the higher number of dolphins and larger percentage of total numbers seen in these counts. During this reporting period, dolphin sightings accounted for 42% of all sightings and 84% of all individuals sighted (**Table 1-ii-11**).

HSTT Study Area Major Training Exercise Mitigations

Sonar mitigation – **Table 1-ii-12** shows the number of marine mammal sightings out of the total 251 sightings reported this period (**Table 1-ii-11**) that occurred at ranges less than 1,000 yards and indicates how many sonar mitigations were applied (third column in **Table 1-ii-12**). Other sightings within these ranges were instances when sonar was not in use, therefore sonar mitigation was not conducted (fourth column in **Table 1-ii-12**).

There were also 13 instances of Navy ships maneuvering to avoid marine mammals or avoid crossing the path of marine mammals. Of these 13 maneuvers, 11 were to avoid whales (n= 42 whales), 1 was to avoid dolphins (n= 50 dolphins), and 1 was to avoid an unspecified marine species (n=2 animals).

Table 1-ii-12. Number of marine mammal sightings at ranges less than 1,000 yards observed from Navy platforms during major training exercises concurrent with sonar shutdown mitigation

Ranges	Marine Mammal Type	Sightings within a given range with mitigation (i.e., sonar was on prior to sighting and sonar mitigation was applied)	Sightings within a given range with no mitigation required (i.e., sonar not on so sonar mitigation was not needed)
< 200 yards			
	Whales	0 sightings	10 sightings of 15 whales
	Dolphins	0 sightings	26 sightings of 400 dolphins
	Pinnipeds	0 sightings	5 sightings of 11 pinnipeds
	Turtles	0 sightings	0 sightings
200-500 yards			
	Whales	1 sighting of 5 whales	9 sightings of 22 whales
	Dolphins	4 sightings of 75 dolphins ¹	22 sightings of 639 dolphins
	Pinnipeds	1 sighting of 3 pinnipeds	6 sightings of 6 pinnipeds
	Turtles	0 sightings	0 sightings
	Generic	1 sighting of 1 animal	0 sightings
501-1000 yards			
	Whales	1 sighting of 2 whales	14 sightings of 23 whales
	Dolphins	2 sightings of 25 dolphins	5 sightings of 158 dolphins
	Pinnipeds	1 sighting of 3 pinnipeds	2 sightings of 3 pinnipeds
	Turtles	0 times	0 sightings

¹includes 1 case of bowriding dolphins and 1 case where ship was opening dolphins and mitigation was not applied

SUMMARY: Mitigation Effectiveness and Navy Safety Zone Adherence

During this year’s MTEs in the HSTT Study Area, prescribed NMFS mitigation zones were effectively applied in cases of observation of marine mammals within the applicable zone. Table 1-ii-13 depicts the maximum estimated receive levels at the marine mammal at the time the mitigation measure was applied. In each case (except the sighting that specified the species sighted as “generic”) the Permanent Threshold Shift (PTS) threshold is higher than the estimated maximum exposure level prior to mitigation which means that the marine mammal was unlikely to experience injury. During this reporting period the proper implementation of mitigation measures for sighted marine mammals are estimated highly effective at preventing exposures that may result in injury (e.g. PTS).

The three categories of mitigation measures (Personnel Training, Lookout and Watchstander Responsibility, and Operating Procedures) outlined in the HSTT Final Environmental Impact Statement (EIS)/Overseas Environmental Impact Statement (OEIS) of August 2013 and approved by NMFS in the HSTT Training LOA were effective in appropriately mitigating exposure of marine mammals to sonar. Fleet commanders, aircrews and ship watch teams continue to improve individual awareness and enhance reporting practices. This improvement can be attributed to the various pre-exercise conferences, mandatory Marine Species Awareness Training (including on-line training required for watch standing qualifications) with over 6,903 hours completed this year representing training to 4,416 Navy personnel, adherence to required active sonar mitigation zones, and application of lessons learned in marine mammal sighting and reporting.

Table 1-ii-13. Sightings where sonar was on during detection of marine mammals at ranges less than 1,000 yards, and the mitigation conducted.

1) Location	2) MTE	3) Month	4) Species sighted	5) # of marine mammals sighted	6) Platform	7) Length of time observed (min)	8) Range at which marine mammal sighted	9) Mitigation (Sonar powerdown, Sonar shutdown)	10) Estimate MAX exposure PRIOR to mitigation (dB re 1uPa) ¹	11) Number of minutes sonar mitigation applied	12) Estimate exposure AFTER mitigation (dB re 1uPa) ¹	13) DISTANCE ship would have moved given length of mitigation and nominal 10-knot ship speed (yds)	14) If source in use is hull-mounted sonar, relative bearing of animal from ship and estimation of animal's motion relative to ship	15) Observed behavior
SOCAL	C2X	May	pinniped	3	DDG	1	200-500	Sonar shutdown	<181-189	31	None	10,333	Pinnipeds bearing 050R, closing ship	Closing
SOCAL	C2X	May	pinniped	3	DDG	1	501-1000	Sonar shutdown	<175-181	1	None	333	Pinnipeds bearing nr, closing ship	nr
SOCAL	IAC	May	whale	2	DDG	3	501-1000	Powered down sonar	<175-181	5	<169-175	1,667	Whales bearing 231R, closing ship	nr
SOCAL	IAC	May	dolphin	10	DDG	5	200-500	Sonar shutdown	<181-189	10	None	3,333	Dolphins bearing 023R, opening ship	Crossing bow
SOCAL	IAC	May	dolphin	10	DDG	10	200-500	Sonar shutdown	<181-189	7	None	2,333	Dolphins bearing 010R, paralleling ship	Paralleling ship
SOCAL	C2X	May	dolphin	10	DDG	8	501-1000	Sonar shutdown	<175-181	12	None	4,000	Dolphins bearing 110R, opening ship	nr
SOCAL	C2X	May	dolphin	50	DDG	2	200-500	None	<181-189	na	<181-189	na	Dolphins bearing 350R, closing ship	Closed to ride bow wake
SOCAL	C2X	May	dolphin	5	DDG	1	200-500	None	<181-189	na	<181-189	na	Dolphins bearing 046R, opening ship	nr
SOCAL	C2X	Jun	dolphin	15	DDG	10	501-1000	Powered down sonar	<175-181	5	<169-175	1,667	Dolphins bearing 355R, closing ship	Closed and riding bow
SOCAL	JTFEX	Jun	generic	1	DDG	nr	200-500	Sonar shutdown	<181-189	4	None	1,333	Animal bearing nr, relative motion nr	nr
SOCAL	IAC	Oct	whale	5	CG	30	200-500	Sonar shutdown	<181-189	30	None	10,000	Whales bearing 109R, opening ship	nr

Notes:

¹ Estimated exposure based on 20Log[R] spherical spreading propagation loss for ranges less than 1,000 yards and where nominal active sonar Source Level (SL) assumed to be 235 dB for DDGs and 225 for FFGs. Actual operating parameters and oceanographic condition likely result is lower exposure. This calculation assumes exposure prior to mitigation. Once animal was spotted at the range indicated, applied mitigation would have resulted in much lower to no exposures.

Exposure Assessment

Estimated exposures within 2,000 yards can be determined based on standard formulas of how sound propagates in water. Spherical spreading is generally valid within 1,000 yards from the sound source, and can be expressed as spreading loss (in dB from a source) equals $20\log R$ (with “R” being range from the source in yards). Spherical spreading loss in the first 1,000 yards equates to 60 dB of loss. At ranges between 1,000 and 2,000 yards the sound waves become trapped by the sea surface and bottom and cannot expand vertically. The spreading wave then forms an expanding cylinder. Cylindrical spreading loss in dB between two points can be calculated by using the formula $(10\log R_2/R_1)$, with “R2” being the longer range, and “R1” being 1,000 yards. Cylindrical spreading loss between 1,000 and 2,000 yards equates to an additional 3 dB of loss. By the time the wave has propagated to 2,000 yards, the sonar signal strength has decreased by a total of 63 dB. Using the AN/SQS-53 sonar as an example, transmitting at 235 dB and subtracting the 63 dB of spreading loss equates to an estimated sonar Receive Level (RL) of 172 dB at 2000 yards. The spreading loss formulas are used to make very conservative assumptions about potential exposure. The formula is an estimation of spreading losses only and does not take into account other factors that could increase the total propagation losses such as oceanographic conditions, attenuation losses, scattering losses, and Navy-unique MFAS operating parameters which would result in slightly lower sonar transmit levels. Use of this approach to estimate potential RL at any given animal assumes the horizontal range from a visual sighting accounts for an animal across all depths at which an animal travels to predict the maximum, worst case potential exposure. In other words, this estimated worst case exposure is presented independent of the animal’s actual depth level, since a) time and depth of current and previous dives cannot be deduced from a limited surface sighting, and b) oceanographic and tactical conditions influence actual sound propagation at different depths. Given the relative motion of ships and animals at sea, the time spent with any given exposure from surface ships is likely to be limited.

(iii) Exercise Information for Each SINKEX

Two SINKEX events were conducted in the HSTT Study Area during the reporting period, one on 10 July 2014 and the other on 14 July 2014. Both events occurred in the Hawaii Range Complex during the Rim of the Pacific Exercise. The specific reporting requirements for sinking exercises are classified and this information has been forwarded to the National Marine Fisheries Service in the classified version of the HSTT Annual Exercise Report.

(2) HSTT – Summary of Sources Used

(i) Total annual usage of each type of sound source

The total annual usage by bin is classified for non-impulsive sources (e.g. sonar) is classified and have been forwarded to the National Marine Fisheries Service in the classified version of this report.

Table 2-i-1. Training sound source usage within the HSTT Study Area by source bin.

Authorized sound sources 50 CFR §218.70 (c) and NMFS HSTT LOA		Authorized Amount (26Dec13- 25Dec14)	Actual Usage (26Dec13- 25Dec14)	% Used of Authorized Amount
(A) Non-impulsive Sources Used During Training				
MF1	Hull-mounted sonars (e.g. AN/SQS-53)	11,588 hours	**	**
MF1K	Hull-mounted sonar Kingfisher mode	88 hours	**	**
MF2	Hull-mounted sonars (e.g. AN/SQS-56)	3,060 hours	**	**
MF2K	Hull-mounted sonar Kingfisher mode	34 hours	**	**
MF3	Hull-mounted submarine sonar (e.g. AN/BQQ-10)	2,336 hours	**	**
MF4	Helicopter dipping sonar (e.g. AN/AQS-22)	888 hours	**	**
MF5	Acoustic sonobuoys (e.g. AN/SSQ-62)	13,718 items	**	**
MF11	High duty cycle hull-mounted sonars (e.g. AN/SQS-53 HDC)	1,120 hours	**	**
MF12	High duty cycle towed array sonars (e.g. HDC-VDS)	1,094 hours	**	**
HF1	Hull-mounted submarine sonar (e.g. AN/BQQ-10)	1,754 hours	**	**

HF4	Mine detection / classification sonars	4,848 hours	**	**
ASW1	Mid-frequency Deep Water Active Distributed System (DWADS)	224 hours	**	**
ASW2	Mid-frequency Multi-static Active Coherent sonobuoy (e.g. AN/SSQ-125)	1,800 items	**	**
ASW3	Mid-frequency towed acoustic countermeasure (e.g. AN/SLQ-25)	16,561 hours	**	**
ASW4	Mid-frequency expendable acoustic device countermeasure (e.g. ADC/NAE)	1,540 items	**	**
TORP1	Lightweight torpedo (e.g. MK 54/MK 46)	170 items	**	**
TORP2	Heavyweight torpedo (e.g. MK 48)	400 items	**	**
(B) Annual Number of Impulsive Source Detonations During Training				
E1	0.1 lb to 0.25 lb NEW	19,840 detonations	**	**
E2	0.26 lb to 0.5 lb NEW	1,044 detonations	**	**
E3	>0.5 lb to 2.5 lb NEW	3,020 detonations	**	**
E4	>2.5 lb to 5 lb NEW	668 detonations	**	**
E5	>5 lb to 10 lb NEW	8,154 detonations	**	**
E6	>10 lb to 20 lb NEW	538 detonations	**	**
E7	>20 lb to 60 lb NEW	407 detonations	**	**
E8	>60 lb to 100 lb NEW	64 detonations	**	**
E9	>100 lb to 250 lb NEW	16 detonations	**	**
E10	>250 lb to 500 lb NEW	19 detonations	**	**
E11	>500 lb to 650 lb NEW	8 detonations	**	**
E12	>650 lb to 1,000 lb NEW	224 detonations	**	**
E13	>1,000 lb to 1,740 lb NEW	9 detonations	**	**

** This information is classified and has been forwarded to NMFS in accordance with the HSTT Marine Mammal Protection Act (MMPA) Letter of Authorization in the classified version of this Annual Exercise Report.

(C) Total annual airgun use

Airguns were not used within HSTT for training during this reporting period. Airgun use is not an authorized source for training in the HSTT Letter of Authorization or Final Rule, but reporting requirements for this source are specified in the reporting section for training in the HSTT Letter of Authorization.

(D) Improved Extended Echo-Ranging System (IEER) sonobuoy summary

IEER sonobuoys were not used within the HSTT. IEER buoys have been phased out of the inventory for training, and will no longer be used during training in the HSTT.

(3) HSTT – Sonar Exercise Notification

The Navy submitted all required information to NMFS for all MTEs during the reporting period, including location of the exercise, beginning and end dates of the exercise, and type of exercise.

(4) HSTT – Geographic Information Representation

The geographic depiction of U.S. Navy use of sound sources within the HSTT Study Area from 26 December 2013 to 25 December 2014 is classified and has been forwarded to the National Marine Fisheries service in accordance with the HSTT Training Letter of Authorization in the classified version of this report.

(5) HSTT – Special Reporting Requirements

(i) Total Sonar Hours (dense humpback areas)

(U) Hull-mounted active sonar use was not reported within the dense humpback areas between 15 December and 15 April of this reporting period.

(ii) Total Sonar Hours (Humpback Whale Cautionary Area)

(U) Hull-mounted active sonar use was not reported within the Humpback Whale Cautionary Area between 15 December and 15 April of this reporting period.