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

19 December 2018

2019 Annual Testing Report Year 1

21 December 2018 to 20 December 2019

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

20 March 2020

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ANNUAL HSTT TESTING REPORT

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HAWAII-SOUTHERN CALIFORNIA TRAINING AND TESTING STUDY AREA TESTING REPORT

INTRODUCTION

The U.S. Navy prepared this Annual Testing Report covering the period from 21 December 2018 to 20 December 2019 in compliance with the National Marine Fisheries Service (NMFS) Final Rule, Letters of Authorization (LOA), and Incidental Take Statements under the Marine Mammal Protection Act (MMPA) and Endangered Species Act (ESA) authorizations for the U.S. Navy's Hawaii-Southern California Training and Testing (HSTT) Study Area.

In the HSTT Final Rule and Letters of Authorization¹ the following report subsections were specified and are present within this report:

- (1) Summary of Testing Sources Used
- (2) Humpback Whale Special Reporting Area (December 15 – April 15)
- (3) HSTT Study Area Mitigation Areas
- (4) Geographic Information Presentation

The information in this report represents the best practical data collection for this period.

¹ HSTT Testing Letter of Authorization, and 50 CFR §218.75(e) (3), (4), (5) and (6)

(1) HSTT – Summary of Testing Sound Sources

This section summarizes total annual usage of each type of sound source used for testing within the HSTT study area from 21 December 2018 to 20 December 2019, which constitutes year 1 of the 5-year authorization.

Total annual hours or quantity of each bin of sonar or other acoustic sources

Table 1-1. Testing Sound Source Usage within the HSTT Study Area by Source Bin

Authorized sound sources HSTT Final Rule		Authorized Amount (21 Dec 18 - 20 Dec 19)	Actual Usage (21 Dec 18 - 20 Dec 19)	% Used of Authorized Amount
(1) Active Acoustic Sources Used				
LF3	Low frequency sources greater than 200 dB	195 hours	*	*
LF4	Low frequency sources equal to 180 dB up to 200 dB	777 hours	*	*
LF4	Low frequency sources equal to 180 dB up to 200 dB	20 items	*	*
LF5	Low frequency sources less than 180 dB	2694 hours	*	*
LF6	Low frequency sources greater than 200 dB with long pulse lengths	80 hours	*	*
MF1	Hull-mounted surface ship sonars (e.g. AN/SQS-53C and AN/SQS-61)	1540 hours	*	*
MF1K	Hull-mounted sonar Kingfisher mode	14 hours	*	*
MF2	Hull-mounted sonars (e.g. AN/SQS-56)	54 hours	*	*
MF3	Hull-mounted submarine sonar (e.g. AN/BQQ-10)	1311 hours	*	*
MF4	Helicopter dipping sonar (e.g. AN/AQS-13/22)	475 hours	*	*
MF5	Acoustic sonobuoys (e.g. DICASS)	5863 items	*	*
MF6	Underwater sound signaling devices (e.g. MK 84 SUS)	1226 items	*	*
MF8	Other active sources greater than 200dB	70 hours	*	*
MF9	Other active sources equal to 180 dB up to 200 dB not otherwise binned	5165 hours	*	*
MF10	Other active sources greater than 160 dB up to 180 dB not otherwise binned	1992 hours	*	*
MF11	Hull-mounted surface ship sonars with an active duty cycle greater than 80%	56 hours	*	*
MF12	Towed array surface ship sonars with an active duty cycle greater than 80%	660 hours	*	*
MF13	Mid-frequency sonar source	300 hours	*	*
HF1	Hull-mounted submarine sonar (e.g. AN/BQQ-10)	772 hours	*	*
HF2	HF Marine Mammal Monitoring System	120 hours	*	*
HF3	Other hull-mounted submarine sonars	110 hours	*	*
HF4	Mine detection/classification sonars	16323 hours	*	*
HF5	Other active sources greater than 200dB	960 hours	*	*
		40 items	*	*
HF6	Other active sources equal to 180 dB up to 200 dB	1009 hours	*	*
HF7	Active sources (greater than 160 dB, but less than 180 dB) not otherwise binned	1380 hours	*	*
HF8	Hull-mounted surface ship sonars (e.g. AN/SQS-61)	1032 hours	*	*
ASW1	Mid-frequency systems operating above 200 dB	470 hours	*	*
ASW2	Mid-frequency Multi-static Active Coherent sonobuoy (e.g. AN/SSQ-125)	5191 items	*	*

ASW3	Mid-frequency towed acoustic countermeasure (e.g. AN/SLQ-25)	2741 hours	*	*
ASW4	Mid-frequency expendable acoustic device countermeasure (e.g. MK 3)	2244 devices	*	*
ASW5	Mid-frequency sonobuoys with high duty cycles	592 hours	*	*
BB4	LF to MF oceanographic source	1170 hours	*	*
BB7	LF oceanographic source	28 counts	*	*
BB9	MF optoacoustic source	480 hours	*	*
TORP1	Lightweight torpedo (e.g. MK 46, MK 54, or Anti-Torpedo Torpedo)	971 torpedoes	*	*
TORP2	Heavyweight torpedo (e.g. MK48)	404 torpedoes	*	*
TORP3		45 items	*	*
FLS2	HF sources with short pulse lengths, narrow beam widths, and focused beam patterns	544 hours	*	*
FLS3	VHF sources with short pulse lengths, narrow beam widths, and focused beam patterns	2640 hours	*	*
M3	Mid-frequency acoustic modems (greater than 190 dB)	518 hours	*	*
SD1 – SD2	HF and VHF sources with short pulse lengths, used for the swimmer detection and other objects for port security	10 hours	*	*
AG	Underwater airguns	844 counts	*	*
SAS1	Mid-frequency SAS systems	1960 hours	*	*
SAS2	High-frequency SAS systems	8584 hours	*	*
SAS3	Very high-frequency SAS systems	4600 hours	*	*
(2) Explosive Sources Used				
E1	Medium-caliber projectiles (0.2 – 0.25 lb.)	15216 detonations	0	0%
E3	Large-caliber projectiles	3124 detonations	0	0%
E4	Mine neutralization charge	674 detonations	0	0%
E5	5-in projectiles	1400 detonations	0	0%
E6	Hellfire missile	38 detonations	0	0%
E8	Lightweight Torpedo	57 detonations	0	0%
E9	500 lb. Bomb	4 detonations	0	0%
E10	Harpoon Missile	30 detonations	0	0%
E11	650 lb. mine	12 detonations	0	0%

*Information is presented in the classified version of this report.

Total annual airgun use summary

Information is presented in the classified version of this report.

Table 1-2. 5-Year Cumulative Testing Sound Source Usage within the HSTT Study Area by Source Bin

Sound Source Bin	Year 1 Actual Usage (21 Dec 18 - 20 Dec 19)	5-Year Authorized Amount (21 Dec 18 - 20 Dec 19)	5-Year Cumulative Actual Usage (21 Dec 18 - 20 Dec 19)	% Used of Authorized Amount
LF3	*	975 hours	*	*
LF4	*	3131 hours	*	*
LF4	*	100 items	*	*
LF5	*	9950 hours	*	*
LF6	*	240 hours	*	*
MF1	*	5612 hours	*	*
MF1K	*	70 hours	*	*
MF2	*	270 hours	*	*
MF3	*	6,553 hours	*	*
MF4	*	1717 hours	*	*
MF5	*	27120 items	*	*
MF6	*	5835 items	*	*
MF8	*	350 hours	*	*
MF9	*	25753 hours	*	*
MF10	*	9288 hours	*	*
MF11	*	280 hours	*	*
MF12	*	3300 hours	*	*
MF13	*	1500 hours	*	*
HF1	*	3859 hours	*	*
HF2	*	600 hours	*	*
HF3	*	549 hours	*	*
HF4	*	81447 hours	*	*
HF5	*	4800 hours	*	*
	*	200 items	*	*
HF6	*	5007 hours	*	*
HF7	*	6900 hours	*	*
HF8	*	3072 hours	*	*
ASW1	*	2350 hours	*	*
ASW2	*	23375 items	*	*
ASW3	*	13705 hours	*	*
ASW4	*	10910 devices	*	*
ASW5	*	2740 hours	*	*
BB4	*	4434 hours	*	*
BB7	*	140 counts	*	*
BB9	*	2400 hours	*	*
TORP1	*	4560 torpedoes	*	*
TORP2	*	1948 torpedoes	*	*
TORP3	*	225 items	*	*
FLS2	*	2432 hours	*	*
FLS3	*	13200 hours	*	*
M3	*	2588 hours	*	*
SD1 – SD2	*	50 hours	*	*
AG	*	4220 counts	*	*
SAS1	*	9800 hours	*	*
SAS2	*	42920 hours	*	*
SAS3	*	23000 hours	*	*

(2) Explosive Sources Used				
E1	*	62880 detonations	0	0%
E3	*	14844 detonations	0	0%
E4	*	3065 detonations	0	0%
E5	*	7000 detonations	0	0%
E6	*	166 detonations	0	0%
E8	*	285 detonations	0	0%
E9	*	20 detonations	0	0%
E10	*	150 detonations	0	0%
E11	*	60 detonations	0	0%

*Information is presented in the classified version of this report.

(2) HSTT – Humpback Whale Special Reporting Area (December 15 – April 15)

The precise locations and frequency of testing is classified. There is currently no method to declassify the sensitivity of this data in order to publish this type of information in an unclassified report. For this reason the only available method for this information to be disseminated for the foreseeable future is in the classified version of this Annual Testing Report.

(3) HSTT – HSTT Study Area Mitigation Areas

The precise locations and frequency of testing is classified. There is currently no method to declassify the sensitivity of this data in order to publish this type of information in an unclassified report. For this reason the only available method for this information to be disseminated for the foreseeable future is in the classified version of this Annual Testing Report.

(4) HSTT – Geographic Testing Information Representation

The precise locations and frequency of testing is classified. There is currently no method to declassify the sensitivity of this data in order to publish this type of information in an unclassified report. For this reason the only available method for this information to be disseminated for the foreseeable future is in the classified version of this Annual Testing Report.