



**DEPARTMENT OF THE NAVY**

COMMANDER  
UNITED STATES PACIFIC FLEET  
250 MAKALAPA DRIVE  
PEARL HARBOR HI 96860-3131

IN REPLY REFER TO:

5090  
Ser N46/0736  
October 24, 2024

Office Director, Office of Protected Resources  
National Marine Fisheries Service  
National Oceanic and Atmospheric Administration  
B-SSMC3, Room 13821  
1315 East-West Highway  
Silver Spring, MD 20910-3282

Dear Director,

On behalf of Commander, U.S. Pacific Fleet, enclosed is a copy of the Mariana Islands Training and Testing (MITT) Study Area Annual Training Report for the fourth year of the authorization. The classified annex of this report will be delivered separately.

This report is submitted pursuant to the reporting requirements for the MITT Study Area Marine Mammal Protection Act authorization.

Please extend my thanks to your staff for their continued support of the U.S. Navy's compliance process. We are available to discuss with you or your staff should you have comments regarding this report or recommendations for future reports. My point of contact for these matters is Mr. Ben Kostenbader at 808-471-4683 or [arnold.r.kostenbader.civ@us.navy.mil](mailto:arnold.r.kostenbader.civ@us.navy.mil).

Sincerely,

A handwritten signature in black ink that reads "J. H. Beattie".

J. H. BEATTIE  
Captain, U.S. Navy  
Deputy Fleet Civil Engineer  
By direction

Enclosure: 2024 MITT Study Area Annual Training Report, Year 4

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 30 July 2020

# **2024 Mariana Islands Training & Testing (MITT) Study Area Annual Training and Testing Report**

**31 July 2023 to 30 July 2024  
Year 4**

**30 OCTOBER 2024**

## TABLE OF CONTENTS

### MITT STUDY AREA ANNUAL TRAINING AND TESTING REPORT

INTRODUCTION.....	3
(1) MITT – Major Training Exercises (MTEs)	
(i) Exercise information for each MTE.....	4
(ii) Individual marine mammal sighting information for each sighting when mitigation occurred during each MTE .....	5
(iii) Evaluation (based on data gathered during all MTEs) of effectiveness .....	6
(2) MITT – Sinking Exercises (SINKEXs) .....	6
(3) MITT – Summary of Sources Used	
(i) Total annual hours or quantity of each bin of sonar or other transducers .....	7
(ii) Total annual expended/detonated ordnance for each explosive bin .....	7
(4) MITT – Marpi Reef and Chalan Kanoa Reef Geographic Mitigation Areas .....	8
(5) MITT – Geographic Information Presentation.....	8
(6) MITT – Sonar Exercise Notification.....	8
(7) MITT – Farallon de Medinilla (FDM) Ordnance Expenditures.....	9

# MARIANA ISLANDS TRAINING AND TESTING STUDY AREA ANNUAL TRAINING AND TESTING REPORT

## INTRODUCTION

The U.S. Navy prepared this Annual Training and Testing Report covering the period from 31 July 2023 to 30 July 2024 in compliance with the National Marine Fisheries Service (NMFS) Final Rule, Letter 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 Mariana Islands Training and Testing (MITT) Study Area.

In the MITT Final Rule and Letter of Authorization,<sup>1</sup> the following report subsections were specified and are present within this report:

- (1) Major Training Exercises (MTEs)
  - (i) Exercise information for each MTE
  - (ii) Individual marine mammal sighting information for each sighting in each exercise where mitigation was implemented
  - (iii) Evaluation (based on data gathered during all MTEs) of the effectiveness of mitigation measures designed to minimize the received level to which marine mammals may be exposed
- (2) Sinking Exercises (SINKEXs)
  - (i) Exercise information gathered for each SINKEX
  - (ii) Individual marine mammal observation (by Navy Lookouts) information for each sighting where mitigation was implemented
- (3) Summary of Sources Used
  - (i) Total annual hours or quantity of each bin of sonar or other transducers
  - (ii) Total annual expended/detonated ordnance (missiles, bombs, sonobuoys, etc.) for each explosive bin
- (4) Marpi Reef and Chalan Kanoa Reef Geographic Mitigation Areas
- (5) Geographic Information Presentation
- (6) Sonar Exercise Notification

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

The Biological Opinion<sup>2</sup> "Terms and Conditions" subsection states the Navy will monitor and report annual numbers of ordnance by type expended at Farallon de Medinilla (FDM). This information is present in this report in section (7).

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<sup>1</sup>MITT: 7(e) of the Letter of Authorization, and 50 CFR §218.95(e)(1) through (e)(6)

<sup>2</sup>MITT: 12.4(2)(b) of the Biological Opinion for the MITT Study Area (10 July 2020)

**(1) MITT – Major Training Exercises (MTEs)**

This section summarizes authorized sonar use and marine mammal observations from MTEs conducted within the MITT Study Area during the reporting period. The MITT MTEs include Large Integrated Anti-Submarine Warfare, which consists of *Joint Multi-Strike Group Exercise (Valiant Shield)*, and Medium Integrated Anti-Submarine Warfare, which consists of *Joint Expeditionary Exercise*.

**(i) Exercise information for each MTE**

**Table 1-1. MTEs conducted in the MITT Study Area**

(A) Exercise designer	(B) Date began and ended	(C) Location	(D) Number and types of active sonar sources used						(E) Number and types of passive acoustic sources used				(F) Number and types of vessels, aircraft, and other platforms participating					
			Surface hull-mounted sonar	Submarine hull-mounted sonar	Helicopter dipping sonar	Aircraft sonobuoy	Towed countermeasure	Surface hull-mounted sonar	Submarine hull-mounted sonar	Aircraft sonobuoy	Towed array	CG	DDG	MH-60R dipping bello	MPPRA	Submarines	Non-ASW surface ship	
Valiant Shield 24	07-18 Jun 2024	MITT	8	1	0	0	10	8	1	40	9	1	7	11	2	1	2	

**Table 1-1 (continued). MTEs conducted in the MITT Study Area**

(A) Exercise designer	(B) Date began and ended	(C) Location	(G) Total hours of all active sonar source operation	(H) Total hours of each active sonar source bin																						(I) Wave height (high, low, average)									
				LF4 (hours)	LF5 (hours)	MFI (hours)	MFIK (hours)	MF3 (hours)	MF4 (hours)	MF5 (count)	MF6 (count)	MF9 (count)	MF11 (hours)	MF12 (hours)	MF1 (hours)	MF3 (hours)	MF4 (hours)	MF6 (hours)	ASW1 (hours)	ASW2 (count)	ASW3 (hours)	ASW4 (count)	ASW5 (hours)	TORP1 (count)	TORP2 (count)		TORP3 (count)	FLS2 (hours)	M3 (hours)	SAS2 (hours)	SAS4 (hours)				
Valiant Shield 24	07-18 Jun 2024	MITT	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.1.2

(ii) Individual marine mammal sighting information for each exercise where mitigation was implemented

Table 1-2. MITT MTE – Individual Marine Mammal and Sea Turtle Mitigation Sighting Information: Valiant Shield 24 07 Jun – 18 Jun 2024

(A) Date/time/location of sighting	(B) Species	(C) Number of individuals	(D) Initial detection sensor	(E) Indication of specific type of platform observation was made from	(F) Length of time observers maintained visual contact with marine mammal (min)	(G) Sea state (Beaufort scale)	(H) Visibility (nm)	(I) Sound source in use at time of sighting (Y/N)	(J) Indication of whether animal was <200 yd, 200-500 yd, 500-1000 yd, 1000-2000 yd, or >2000 yd from sonar source	(K) Whether operation of sonar sensor was delayed, or sonar was powered or shut down, and how long the delay	(L) If source in use was hull-mounted, true bearing of animal from the vessel, true direction of vessel's travel, and estimation of animal's motion relative to vessel	(M) Lookouts must report, in plain language and without trying to categorize in any way, the observed behavior of the animal(s) and if any calves were present
No marine mammal mitigations reported during this exercise.												

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

There was one major training exercise conducted in the MITT Study Area during this reporting period (see **Table 1-3**).

**Table 1-3. MITT Study Area Major Training Exercises.**

MTE Type	Dates	# of Exercise Days	# of US Ships Involved (MFAS and non-MFAS)	# of Marine Mammal Mitigation Sightings	# of Marine Mammals
Valiant Shield 24	07 Jun – 18 Jun 2024	12	11	0	0
	<b>Total</b>	<b>12</b>	<b>11</b>	<b>0</b>	<b>0</b>

**MITT Study Area Major Training Exercise Marine Mammal Observations**

There were no reported marine mammal observations during the single MTE in the MITT Study Area during the reporting period.

**MITT Study Area Major Training Exercise Mitigations**

There were no active sonar mitigation actions taken during the single MTE in the MITT Study Area during the reporting period.

**SUMMARY: Mitigation Effectiveness and Navy Mitigation Zone Adherence**

The Lookout and mitigation zone measures approved by NMFS and outlined in the MITT Study Area LOA were effective in appropriately mitigating exposure of marine mammals to sonar. Although no active sonar mitigations took place in the MITT Study Area during the reporting period, the Protective Measures Assessment Protocol (PMAP) is directed to be used prior to each activity requiring potential mitigation to ensure proper requirements and mitigation zones are utilized. Fleet commanders, aircrews, and ship watch teams continue to improve individual awareness and enhance reporting practices. This improvement can be attributed to rigorous pre-event planning, mandatory Marine Species Awareness Training (including online training required for watch standing qualifications), adherence to required active sonar mitigation zones, and application of lessons learned in marine mammal sighting and reporting.

**(2) MITT – Sinking Exercises (SINKEXs)**

One SINKEX event was conducted in the MITT Study Area during the reporting period from 16-17 June 2024.

**Table 2-1. SINKEX information for event from 16-17 June 2024.**

(A) Location	Mariana Islands Range Complex
(B) Date and time exercise began and ended	0645 local, 16 July 2024 through 1346 local, 17 July 2024
(C) Total hours of observation by Lookouts before, during, and after exercise	58 hours
(D) Total number and types of explosive bins detonated	E8: 5 detonations E10: 4 detonations E12: 7 detonations
(E) Number and types of passive acoustic sources used in exercise	1x SQS-53 surface hull-mounted sonar 1x BQQ-10 submarine hull-mounted sonar 40x SSQ-53 passive sonobuoys

(F) Total hours of passive acoustic search time
48 hours
(G) Number and types of vessels, aircraft, and other platforms participating in exercise
USS RONALD REAGAN (Non-ASW ship) USS TUCSON (SSN) USS ROBERT SMALLS (CG) PACAF (US Air Force F-16 aircraft) 1 <sup>st</sup> Marine Air Wing (USMC F/A-18 aircraft) 1MDTF (US Army rocket battery) CVW-5 (US Navy F/A-18 aircraft) JASDF (Japanese F-2 aircraft)
(H) Wave height in feet (high, low, average) during exercise
3,1,2
(I) Narrative description of sensors and platforms utilized for marine mammal detection and timeline illustrating how marine mammal detection was conducted
In addition to surface ship Lookouts, several aircraft conducted visual, radar, and acoustic search of the area in support of mammal surveillance. Flight parameters varied throughout the event to maximize search effectiveness and maintain coverage due to visibility, cloud layers, and safety standoff ranges. Aircraft included P-8 maritime patrol aircraft, MH-60 helicopters, MQ-9, E-2 and E-3 aircraft. Passive sonobuoys were deployed to monitor during E12 detonations.
Timeline (all times local): 0645 Sunrise 0700 P-8 mammal survey on station 1919 Sunset 0645 Sunrise 1109 MH-60 mammal survey on station 1346 Hulk sunk

### (3) MITT – Summary of Sources Used

This section summarizes total annual usage of each type of sound source used for training and testing within MITT from 31 July 2023 to 30 July 2024, which constitutes Year 4 of the 7-year authorization.

#### (i) Total annual hours or quantity of each bin of sonar or other transducers

**Table 3-1. Annual Acoustic Source Usage within the MITT Study Area by Source Bin**

Authorized sound sources from MITT Final Rule	Authorized Amount (31Jul23-30Jul24)	Actual Usage (31Jul23-30Jul24)	% Used of Authorized Amount
(i) Acoustic Sources Used During Annual Training and Testing			
<i>See classified annex for acoustic sources</i>			

#### (ii) Total annual expended/detonated ordnance for each explosive bin

**Table 3-2. Annual Explosive Source Usage within the MITT Study Area by Source Bin**

Authorized sound sources from MITT Final Rule	Authorized Amount (31Jul23-30Jul24)	Actual Usage (31Jul23-30Jul24)	% Used of Authorized Amount
(ii) Explosive Sources Used During Annual Training and Testing			
E1	Medium-caliber projectile	768 detonations	0%
E2	Medium-caliber projectile	400 detonations	0%
E3	Large-caliber projectile	683 detonations	12%
E4	Mine neutralization charge	44 detonations	14%



E5	5-inch projectile	1,221 detonations	252	21%
E6	Hellfire missile	29 detonations	21	72%
E8	Maverick missile	134 detonations	23	17%
E9	500 lb. bomb	110 detonations	28	26%
E10	Harpoon missile / 1000 lb. bomb	78 detonations	68	87%
E11	650 lb. mine	5 detonations	0	0%
E12	2,000 lb. bomb	48 detonations	10	21%

**Table 3-3. 7-year Cumulative Sound Source Usage within the MITT Study Area by Source Bin**

Sound Source Bin	Year 1 Actual Usage (31Jul20 - 30Jul21)	Year 2 Actual Usage (31Jul21 - 30Jul22)	Year 3 Actual Usage (31Jul22 - 30Jul23)	Year 4 Actual Usage (31Jul23 - 30Jul24)	7-yr Authorized Amount (31Jul20 - 30Jul27)	7-yr Cumulative Actual Usage (31Jul20 - 30Jul27)	% Used of 7-yr Authorized Amount
<b>(i) Acoustic Sources Used During Annual Training and Testing</b>							
<i>See classified annex for acoustic sources</i>							
<b>(ii) Explosive Sources Used During Annual Training and Testing</b>							
E1	768	383	0	0	5,376 detonations	1,151	21%
E2	184	0	0	0	2,800 detonations	184	7%
E3	35	51	134	85	4,591 detonations	305	7%
E4	0	0	0	6	308 detonations	6	2%
E5	135	45	95	252	8,547 detonations	527	6%
E6	5	12	0	21	203 detonations	38	19%
E8	98	31	7	23	932 detonations	159	17%
E9	94	72	50	28	770 detonations	244	32%
E10	12	52	11	68	546 detonations	143	26%
E11	0	0	0	0	17 detonations	0	0%
E12	12	0	3	10	336 detonations	25	7%

#### **(4) MITT – Marpi Reef and Chalan Kanoa Reef Geographic Mitigation Areas**

The amount of active sonar used in this area from December 1 to April 30 is presented in the classified annex to this report.

#### **(5) MITT – Geographic Information Representation**

The precise locations and frequency of ASW training 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 is in the classified annex of this report.

#### **(6) MITT – 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.

## (7) MITT – Farallon de Medinilla (FDM) Ordnance Expenditures

In accordance with section 12.4 of the Biological Opinion, this section includes numbers of ordnance by type expended at FDM from 31 July 2023 to 30 July 2024.

**Table 7-1. FDM Ordnance Expenditures by Sound Source Bin.**

Sound Source Bin	FDM Ordnance Expenditures
E1	0
E2	0
E3	0
E4	0
E5	5
E6	0
E7	11
E8	1
E9	45
E10	0
E11	0
E12	9

There were fifteen reported ricochets or misses that landed in waters surrounding FDM during the reporting period. The Navy did not observe any in-water effects (e.g., craters, etc.) to corals resulting from ordnance.