



DEPARTMENT OF THE NAVY

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

IN REPLY REFER TO:

5090

Ser N46/0917

July 20, 2022

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 printed copy of the unclassified Gulf of Alaska (GOA) Temporary Maritime Activities Area (TMAA) Training Report for the fifth year of the authorization (8 pages).

This report is submitted pursuant to the reporting requirements for the GOA 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 meet with you or your staff should you have comments on the enclosed report or recommendations for future reports. My point of contact for these matters is Mr. Ben Kostenbader, at 808-471-4683, arnold.kostenbader@navy.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "A. K. Hutchison", with a stylized flourish at the end.

A. K. HUTCHISON
Captain, U.S. Navy
By direction

Enclosure: 2022 Unclassified GOA TMAA Study Area Training Report, year 5

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 dated 26 April 2017 and ITS authorization under
the ESA dated 19 April 2017

UNCLASSIFIED

**2022 Gulf of Alaska
Temporary Maritime Activities Area
Training Report**

With 5-Year Close-out Report

26 JULY 2022

TABLE OF CONTENTS

GULF OF ALASKA TEMPORARY MARITIME ACTIVITIES AREA

INTRODUCTION	1
(1) GOA TMAA – MFAS/HFAS Major Training Exercises	
(i) Exercise information for each Major Training Exercise.....	2
(ii) Individual marine mammal sighting information for each Major Training Exercise	3
(iii) Evaluation (based on data gathered during all of the MTEs) of effectiveness.....	4
(2) GOA TMAA – Summary of Sources Used	
(i) Total annual usage of each type of sound source.....	5
(3) GOA TMAA – Geographic Information Presentation	6
(4) GOA TMAA – 5-Year Close-out Report	6

GULF OF ALASKA TEMPORARY MARITIME ACTIVITIES AREA EXERCISE REPORT

INTRODUCTION

The U.S. Navy prepared this Annual Exercise Report covering the period of Northern Edge 2021 in compliance with the National Marine Fisheries Service (NMFS) Final Rule and Letter of Authorization under the Marine Mammal Protection Act (MMPA) for the Navy's training activities conducted in the Gulf of Alaska (GOA) Temporary Maritime Activities Area (TMAA).

The Letter of Authorization¹ "Monitoring and Reporting" subsection indicates the following must be present within this report:

- (1) Mid-Frequency Active Sonar (MFAS)/High-Frequency Active Sonar (HFAS) Major Training Exercises (MTE)
 - (i) Exercise Information (for each MTE)
 - (ii) Individual Marine Mammal Sighting Information (for each sighting in each MTE when mitigation occurred)
 - (iii) Evaluation (based on data gathered during all of the MTEs) of the effectiveness of mitigation measures designed to minimize the received level to which marine mammals may be exposed. This evaluation shall identify the specific observations that support any conclusions the Navy reaches about the effectiveness of the mitigation.
- (2) Summary of Sources Used (some classified)
- (3) Geographic information presentation (classified)
- (4) 5-Year Close-out Report (some classified)

The information in this Annual Report represents the best available and practical data collection for this period. The 5-Year Close-out Report contains final totals of authorized usage for the entire five-year period of the authorization.

¹ GOA TMAA: 7(g) and 7(i) of the Letter of Authorization, and 50 CFR §218.155(g) (1) through (g) (3) and (i)

(1) GOA TMAA – MFAS/HFAS Major Training Exercises

(i) Exercise information (for each MTE)

One exercise, Northern Edge 2021, occurred within the GOA TMAA during this reporting period (Table 1-1).

Table 1-1. Exercise information for the GOA TMAA.

(A) Exercise	(B) Date	(C) Location	(D) # and types of active sources used	(E) # and types of passive sources used	(F) # and types of vessels and aircraft participating	(G) Total hours of observation by watchstanders (hrs)	(H) Total hours of all active sonar	(I) Total hours each active source bin	(J) Wave height (high, low, and average) (ft)
NE 21	3-14 May 2021	A	SQS-53 BQQ-10 AQS-22 SSQ-62 Sonobuoys SSQ-125 Sonobuoys SLQ-25 Nixie	SQS-53 BQQ-10 AQS-22 Towed Array SSQ-53 Sonobuoys	CG DDG FCG MH-60R dipping bello MH-60S non-dipping bello Submarines MPRA Non-ASW surface ships	3,168	*	MFI * MF3 * MF4 * MFS * ASW2 * ASW3 *	5, 0, 3

NE 21 – Northern Edge 2021

A – Gulf of Alaska TMAA

*This information is classified and has been forwarded to NMFS in accordance with the GOA TMAA Letter of Authorization in the classified version of this Training Report.

(ii) Individual marine mammal sighting information for each MTE when mitigation occurred

Table 1-2. GOA TMAA MTE – Individual Marine Mammal Sighting Information: Northern Edge 2021 3 May - 14 May 2021.

(A) Date/time/location of sighting	(B) Species	(C) Number of individuals	(D) Initial detection sensor	(E) Indication of specific type of platform the observation was made from	(F) Length of time observers maintained visual contact with marine mammal(s) (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 is <200 yd, 200-500 yd, 500-1000 yd, 1000-2000 yd, or >2000 yd from sound source	(K) Mitigation implementation – whether operation of sonar sensor was delayed, or sonar was powered down or shutdown, and how long the delay was	(L) If source in use is hull-mounted, true bearing of animal from ship, true direction of ship's travel, and estimation of animal's motion relative to ship	(M) Observed behavior – Lookouts shall report, in plain language and without trying to categorize in any way, the observed behavior of the animals and if any calves present
No marine mammal mitigations reported during exercise												

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

Northern Edge 2021 was conducted from 3-14 May 2021. There were no reported active sonar mitigations due to marine mammals during the exercise, and there were 15 reported instances of ships maneuvering to avoid marine mammals. In-water explosives were not used during this exercise. In support of Northern Edge 2021, the Navy conducted over 602 hours of mammal mitigation-related training for 474 personnel prior to the exercise.

Table 1-3. GOA TMAA MTE – Northern Edge 2021.

MTE Type	Dates	# of Exercise Days	# of US Ships Involved (MFAS and non-MFAS)	# of Marine Mammal Mitigations	# of Marine Mammals
Northern Edge	3-14 May 2021	12	8	0	0
	Total	12	8	0	0

Mitigation Effectiveness Discussion

Although no mitigations took place during Northern Edge 2021, the proper implementation of mitigation measures for sighted marine mammals are estimated to be highly effective at preventing exposures that may result in injury (e.g. Permanent Threshold Shift).

The mitigation measures (including Lookouts, Mitigation Zones, Cautionary Areas, and Stranding Response Plan) outlined in the GOA TMAA Final Supplemental Environmental Impact Statement (EIS)/Overseas Environmental Impact Statement (OEIS) of July 2016 and approved by NMFS in the GOA TMAA LOA were trained to, and were effectively implemented by the watch standers and lookouts during Northern Edge 2021. Fleet commanders, aircrews, and ship watchteams 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 watchstanding qualifications), awareness tools such as Protective Measures Assessment Protocol, and application of lessons learned in marine mammal sighting and reporting.

(2) GOA TMAA – Summary of Sources Used**(i) Total annual usage of each type of sound source**

All sound sources were used less than authorized by NMFS. The actual amount of sonar used is classified and has been forwarded to NMFS in accordance with the GOA TMAA Letter of Authorization in the classified version of this report. A cumulative summary of source usage for the 5-year period of the authorization is also included in the classified report.

Table 2-1. Source usage within the GOA TMAA by source bin.

Authorized sound sources 50 CFR §218.150 (c) and NMFS GOA TMAA LOA		Authorized Amount (26Apr21- 26Apr22)	Northern Edge 2021 Actual Usage	% Used of Authorized Amount
(A) Sonar and Other Active Sources Used During Training				
MF1	Hull-mounted sonars (e.g. AN/SQS-53)	271 hours	*	*
MF3	Hull-mounted sonar (e.g. AN/BQQ-10)	24 hours	*	*
MF4	Helicopter dipping sonar (e.g. AN/AQS-22)	26 hours	*	*
MF5	Acoustic sonobuoys (e.g. AN/SSQ-62)	126 items	*	*
MF6	Underwater sound signaling devices (e.g. MK-84 SUS)	11 items	*	*
MF11	High duty cycle hull-mounted sonars (e.g. AN/SQS-53 HDC)	39 hours	*	*
HF1	Hull-mounted submarine sonar (e.g. BQQ- 10)	12 hours	*	*
HF6	Other active sources from 180 dB up to 200 dB (e.g. UUV sensors)	40 items	*	*
ASW2	Mid-frequency Multi-static Active Coherent sonobuoy (e.g. AN/SSQ-125)	40 items	*	*
ASW3	Mid-frequency towed acoustic countermeasure (e.g. AN/SLQ-25)	273 hours	*	*
ASW4	Mid-frequency expendable acoustic device countermeasure (e.g. ADC/NAE)	6 items	*	*
TORP2	Heavyweight torpedo (e.g. MK-48)	0 items	*	*
(B) Impulsive Source Detonations During Training				
E5	>5 lb to 10 lb NEW	56 detonations	0	0%
E9	>100 lb to 250 lb NEW	64 detonations	0	0%
E10	>250 lb to 500 lb NEW	6 detonations	0	0%
E12	>650 lb to 1,000 lb NEW	2 detonations	0	0%

*This information is classified and has been forwarded to NMFS in accordance with the GOA TMAA Letter of Authorization in the classified version of this Annual Exercise Report. Use of sonars during Northern Edge 2021 was substantially below that authorized.

Table 2-2. 5-year cumulative sound source usage within the GOA TMAA by source bin.

Sound Source Bin	Year 1 Actual Usage (26Apr17-25Apr18)	Year 2 Actual Usage (26Apr18-25Apr19)	Year 3 Actual Usage (26Apr19-25Apr20)	Year 4 Actual Usage (26Apr20-25Apr21)	Year 5 Actual Usage (26Apr21-26Apr22)	5-yr Authorized Amount (26Apr17-26Apr22)	5-yr Cumulative Actual Usage (26Apr17-26Apr22)	% Used Of 5-yr Authorized Amount
(A) Sonar and Other Active Sources Used During Training								
MF1	*	*	*	*	*	1,355 hours	*	*
MF3	*	*	*	*	*	120 hours	*	*
MF4	*	*	*	*	*	130 hours	*	*
MF5	*	*	*	*	*	630 items	*	*
MF6	*	*	*	*	*	55 items	*	*
MF11	*	*	*	*	*	195 hours	*	*
HF1	*	*	*	*	*	60 hours	*	*
HF6	*	*	*	*	*	200 items	*	*
ASW2	*	*	*	*	*	200 items	*	*
ASW3	*	*	*	*	*	1,365 hours	*	*
ASW4	*	*	*	*	*	30 items	*	*
TORP2	*	*	*	*	*	0 items	*	*
(B) Impulsive Source Detonations During Training								
E5	0	0	0	0	0	280 detonations	0	0%
E9	0	0	0	0	0	320 detonations	0	0%
E10	0	0	0	0	0	30 detonations	0	0%
E12	0	0	0	0	0	10 detonations	0	0%

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

(3) GOA TMAA – Geographic Information Presentation

The geographic extent of U.S. Navy use of sound sources within the GOA TMAA during the reporting period is classified and has been forwarded to NMFS in accordance with the GOA TMAA Letter of Authorization in the classified version of this report.

(4) GOA TMAA – 5-Year Close-out Report

In accordance with section 7(i) of the Letter of Authorization, this report serves as the 5-year close-out report. The annual totals for each sound source bin with a comparison to the annual allowance and the 5-year total for each sound source bin with a comparison to the 5-year allowance are presented in section 2 and in the classified version of this report.