

Commander, U.S. Pacific Fleet Northwest Training Range Complex Annual Exercise Report

Prepared for and submitted to:
National Marine Fisheries Service
Office of Protected Resources

Prepared by:
Department of the Navy
In accordance with the Letter of Authorization
Under the MMPA and ITS authorization under
the ESA of 16 October 2012

Annual Range Complex Unclassified Exercise Report

YEAR 4

02 May 2013 to 01 May 2014

**For The U.S. Navy's
Northwest Training Range Complex (NWTRC)**

01 July 2014



Table of Contents

Introduction	1
ASW Summary	2
IEER/AEER Summary	5
Explosive Summary	5

NORTHWEST TRAINING RANGE COMPLEX YEAR 4 ANNUAL EXERCISE REPORT

INTRODUCTION

The U.S. Navy prepared this Year 4 Annual Range Complex Exercise Report covering the period from 02 May 2013 to 01 May 2014 in compliance with the National Marine Fisheries Service (NMFS) Final Rule under the Marine Mammal Protection Act for the Northwest Training Range Complex (NWTRC).

The following report subsections were specified by the National Marine Fisheries Service (NMFS):

- (1) Anti-submarine warfare (ASW) summary
 - (i) Total annual hours of each type of sonar source
 - (ii) Post calculation/estimation based on actual training level
 - (iii) Cumulative impact report

- (2) Improved Extended Echo Ranging (IEER)/Advanced Extended Echo Ranging (AEER) summary
 - (i) Total number of IEER events
 - (ii) Total expended/detonated rounds (buoys)
 - (iii) Total number of self-scuttled IEER rounds

- (3) Explosives summary
 - (i) Total annual number of each type of explosive exercises
 - (ii) Total annual expended/detonated rounds for each explosive type

(1) ASW summary

(i) Total annual hours of each type of sonar source is reported in detail to NMFS in the classified version of this report. All use of sonar and explosives during this reporting period were less than authorized in the NWTRC Final Rule (FR), Letter of Authorization (LOA), and Biological Opinion (BO).

Table 1. Authorized sonar sources per §218.112 of NMFS' NWTRC Final Rule and Navy use in the NWTRC.

System	Type ¹	Metric	NMFS Authorized	
			<u>5-Year</u>	<u>Annual Average</u>
(i) AN/SQS-53	HM	hours	215	43
(ii) AN/SQS-56	HM	hours	325	65
(iii) AN/BQQ-15	HM	hours	210	42
(iv) AN/SSQ-62 DICASS	AS	# of buoys	4,430	886
(v) AN/SSQ-125 (AEER)	AS	# of buoys	745 ³	149 ³
(vi) Range Pingers	TR	hours	900	180
(vii) PUTR Uplink	TR	hours	750	150

(ii) Post-Calculation Summary of Potential 2013-2014 NWTRC Exposures Based on Reported System Use

Training Use May 2013-May 2014

The Navy's 2014 classified annual Northwest Training Range Complex (NWTRC) Exercise Report contains the list of authorized systems and their reported use from 2 May 2013 to 1 May 2014. Of the sonar systems and explosives authorized under NMFS' NWTRC Final Rule, Letters of Authorization (LOA), and Biological Opinions (BO) for the NWTRC during this period, no sonar system exceeded any authorized amount and there was no offshore explosive use reported.

Current Year Exposure Assessment

Table 2 contains NWTRC estimated post-calculation annual potential exposures from May 2013 to May 2014; cumulative species-specific estimates for the period from November 2010 through May 2014; and an estimate of total percentage of exposures compared to the amount authorized over 5-years if in the final year there was 100% system use ¹.

The post-calculation estimates for this period indicate:

- Annual species-specific estimates of exposure for the period May 2013 to May 2014 range from 0% of annual authorization to 4 % of annual authorization (**Table 2**).
- In terms of cumulative potential exposures under the NWTRC Final Rule from November 2010 through May 2014, species-specific exposures range from 25-43% of total 5-year authorization at the end of the fourth of five years (**Table 2**).

In terms of quantity of potential exposures to Endangered Species Act (ESA) cetacean species, of the six ESA species (blue whale, fin whale, humpback whale, sei whale, sperm whale, Southern Resident killer whale), there was potentially only one (1) exposure to sperm whales (**Table 2**).

Conclusion and Forecast

If the Navy were to use 100% of all sonar system and explosive use authorized under the NWTRC Final Rule, LOA, and BO during the final year then cumulative species-specific exposure estimates would only be between 36-59% of total authorized over the entire 5-year period. All ESA species would be below 50% (**Table 2**). Given these percentages, the annual variations provided under Section 5(a) of the LOA would not be applied.

Therefore, the Navy asserts it will not exceed its 5-year take authorization requirements at the conclusion of the NWTRC Final Rule and Biological Opinion.

¹ It should be noted these post-calculations are based on mathematical modeled results originally derived for the NWTRC Final Environmental Impact Statement(Overseas Environmental Impact Statement (FEIS/OEIS) and subsequent LOA applications. Over conservative modeling and density caveats and limitations expressed in the Navy's LOA applications and the NWTRC FEIS/OEIS also still apply. For instance, the Navy acknowledges that for NWTRC modeling purposes density spatial distribution for harbor porpoises extended further to sea than their known geographic range leading to additional modeled exposures. Post-calculation comparisons discussed in this section may not be indicative of actual exposures based on real-world short and long-term spatial movements of various species and their relative occurrence within the NWTRC.

Table 2. Navy post-calculation of potential model exposures for the NWTRC from November 2010 to May 2014.

Species authorized in NMFS Northwest Training Range Complex Letters of Authorization (ESA species in <i>bold italics underlined</i>)	NMFS Annual Authorizations				Navy Annual Estimates of Exposure								% Of Authorized Takes Over Five Years If 100% System Use Occurs in Year 5					
	NMFS Nov 2010-May 2011 Authorized Level B Takes	NMFS MMPA May 2011-May 2012 Authorized Level B Takes	NMFS MMPA May 2012-May 2015 Authorized Level B Takes	Nov 2010-May 2011 Predicted Level B Takes Based on Reported Training	Level B	% potential takes compared to authorized	May 2011-May 2012 Predicted Level B Takes Based on Reported Training		Level B	% potential takes compared to authorized	May 2012-May 2013 Predicted Level B Takes Based on Reported Training			Level B	% potential takes compared to authorized	May 2013-May 2014 Predicted Level B Takes Based on Reported Training	Level B	% potential takes compared to authorized
							Level B	% potential takes compared to authorized			Level B	% potential takes compared to authorized						
(1) Mysticetes:																		
(i) <u>Humpback whale</u>	15	15	15	0	0	0%	2	13%	19	127%	0	0%	0	0%	0	0%	45%	
(ii) <u>Fin whale</u>	40	69	57	0	0	0%	8	12%	61	107%	0	0%	0	0%	0	0%	38%	
(iii) <u>Blue whale</u>	11	17	16	0	0	0%	2	18%	16	100%	0	0%	0	0%	0	0%	36%	
(iv) <u>Mink whale</u>	9	9	9	0	0	0%	1	11%	11	122%	0	0%	0	0%	0	0%	47%	
(v) <u>Gray whale</u>	4	4	4	0	0	0%	0	0%	6	150%	0	0%	0	0%	0	0%	50%	
(vi) <u>Sei whale</u>	1	1	1	0	0	0%	0	0%	1	100%	0	0%	0	0%	0	0%	40%	
(2) Odontocetes:																		
(i) <u>Sperm whale</u>	84	127	111	1	1	1%	18	14%	130	117%	1	1%	1	1%	1	1%	42%	
(ii) <u>Killer whale</u> **	14	14	14	0	0	0%	2	14%	18	129%	0	0%	0	0%	0	0%	49%	
(iii) <u>Pygmy or dwarf sperm whales</u>	4	4	3	0	0	0%	0	0%	4	133%	0	0%	0	0%	0	0%	53%	
(iv) <u>Mesoplodon beaked whales</u>	15	15	14	0	0	0%	2	13%	19	136%	0	0%	0	0%	0	0%	51%	
(v) <u>Cuvier's beaked whale</u>	14	14	12	0	0	0%	2	14%	18	150%	0	0%	0	0%	0	0%	53%	
(vi) <u>Baird's beaked whale</u>	13	13	12	0	0	0%	2	15%	16	133%	0	0%	0	0%	0	0%	52%	
(vii) <u>Striped dolphin</u>	40	40	40	1	1	3%	8	20%	57	143%	0	0%	0	0%	0	0%	53%	
(viii) <u>Risso's dolphin</u>	100	100	94	3	3	3%	18	18%	130	138%	2	2%	2	2%	2	2%	54%	
(ix) <u>Northern right whale dolphin</u>	741	741	735	14	14	2%	154	21%	1,068	145%	25	3%	25	3%	25	3%	54%	
(x) <u>Pacific white-sided dolphin</u>	571	571	566	13	13	2%	113	20%	784	139%	20	4%	20	4%	20	4%	53%	
(xi) <u>Short beaked common dolphin</u>	1,256	1,256	1,234	34	34	3%	258	21%	1,764	143%	51	4%	51	4%	51	4%	55%	
(xii) <u>Short finned pilot whale</u>	2	2	2	0	0	0%	0	0%	3	150%	0	0%	0	0%	0	0%	50%	
(xiv) <u>Dall's porpoise</u>	4,752	4,752	4,716	97	97	2%	992	21%	6,782	144%	175	4%	175	4%	175	4%	54%	
(xv) <u>Harbor porpoise</u>	119,274	119,274	119,274	1,413	1,413	1%	25,624	21%	173,992	146%	3,936	3%	3,936	3%	3,936	3%	54%	
(3) Pinnipeds:																		
(i) <u>Pacific harbor seal</u>	586	586	586	6	6	1%	109	19%	763	130%	14	2%	14	2%	14	2%	48%	
(ii) <u>California sea lion</u>	286	286	286	6	6	2%	57	20%	396	138%	9	3%	9	3%	9	3%	53%	
(iii) <u>Northern fur seal</u>	1,365	1,365	1,339	33	33	2%	272	20%	1,826	135%	54	4%	54	4%	54	4%	52%	
(iv) <u>Steller sea lion</u>	91	120	118	2	2	2%	17	14%	118	100%	2	2%	2	2%	2	2%	39%	
(v) <u>Northern elephant seal</u>	378	378	330	10	10	3%	72	19%	502	152%	14	4%	14	4%	14	4%	59%	

** Due to difficulty in determining particular stock densities of killer whales, all stocks of killer whales combined for modeling exposures. This included offshore, transient, and southern resident killer whale stocks. However, given the more offshore use of sonar, it is likely that most if not all exposures would have been to either transient or offshore killer whales. There were no killer whale explosive exposures in the Navy's original modeling for NWTRC.

(iii) Cumulative Impact Summary

This is the fourth annual exercise report for the NWTRC. As with similar reports for other Navy range complexes, positional plots of hull-mounted mid-frequency sonar use within a given region, including NWTRC, is classified national security information. There is no method to declassify the sensitivity of this data in order to publish this type of information in an unclassified annual report. For this reason the only method available for this information to be reported for the foreseeable future is in the classified annual exercise report that is submitted annually to the National Marine Fisheries Service.

(2) Improved Extended Echo Ranging (IEER)/Advanced Extended Echo Ranging (AEER) Summary.

IEER and AEER use in the NWTRC is reported to the NMFS in the classified version of this annual exercise report.

(3) Explosives Summary

Table 4. Authorized explosive sources per §218.112 of NMFS' NWTRC Final Rule and Navy use.

(i) Exercise Type	NMFS Authorized		Navy Used		% Total Used of 5-Year Authorized	% Total Used of Annual Authorized
	5-Year	Annual Average	5-Year	Annual 02 May 2013 to 01 May 2014		
(A) Surface to Surface Gunnery (S-S GUNEX)	1,700	340	33	0	1.9%	0%
(B) Bombing Exercise (BOMBEX)	150	30	3*	0	0%	0%
(C) IEER/AEER Sonobuoy Deployments	745	149	#	#	#	#
(D) Demolitions, Mine Warfare, and Mine Countermeasure Training Exercises	20	4	3	2**	15%	50%
(ii) Explosive Type						
(A) 5" naval gun round***			122	2*	.01%	0%
(B) 76 mm naval gun round***			184	5*	5.95%	0%
(C) MK-82 aerial bomb			0	0	0%	0%
(D) Demolition charge			8	7**	3%##	5%##
(E) AN/SSQ-110A sonobuoy			#	#	#	#

*All Non Explosive Practice Munitions (NEPM)

**All reduced charge weight EOD underwater demolitions (.847 ounce/24 grams NEW), all occurred at Hood Canal BOD Training Site

***Authorized % used based on annual totals listed in table 2 of the NWTRC Final Rule, and analysis contained in the NWTRC EIS

Classified information submitted to the NMFS in the classified version of the NWTRC Annual Exercise Report.

Percentage is based on the total net explosive weight authorized per year during underwater explosive ordnance demolition training.

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