

**Request for 12 November 2011 to 11 November 2012
Year 2 Renewal
Of The
Letter of Authorization Under
The Marine Mammal Protection Act
For Incidental Harassment Of Marine Mammals Resulting From
U.S. Navy Training Activities In The
Northwest Training Range Complex**

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**FINAL
01 July 2011**

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1. INTRODUCTION AND ACTIVITY

Under Section 101(a)(5)(A) of the Marine Mammal Protection Act of 1972, this document is the annual renewal application to the National Marine Fisheries Service (NMFS) for a Letter of Authorization from U.S. Navy training and research activities in the Northwest Training Range Complex. This Letter of Authorization renewal application is being sought to cover the annual period from 12 November 2011 to 11 November 2012 to cover the taking of marine mammals, as described by the Marine Mammal Protection Act, incidental to training within the Northwest Training Range Complex.

The renewal will not address activities designated for armed conflict or direct combat support operations, nor during periods of heightened national threat conditions, as determined by the President and Secretary of Defense or their duly designated alternatives or successors, as assisted by the Chairman of the Joint Chiefs of Staff.

Table 1-1 below shows the Marine Mammal Protection Act permit documentation applicable to the Northwest Training Range Complex and NMFS's authorization.

Information contained in these references provide a complete description of the background for the Navy's request, overview of the Northwest Training Range Complex, and description of the specified activities, description of marine mammals in the area, discussion of potential effects or lack of effects of specified activities on marine mammal, mitigation, marine mammal monitoring, and associated reporting. The descriptions contained in these references have not changed, except as where noted in this application renewal.

Table 1-1. Key Northwest Training Range Complex Marine Mammal Protection Act documents.

Timeline Date	From	Event	As cited in this renewal
Sep 2008	Navy	Letter Of Authorization Application (request for Incidental Harassment For the Northwest Training Range Complex) submitted to NMFS Office of Protected Resources	Navy 2008
24 Feb 2009	Navy	Letter Of Authorization Application Addendum	Navy 2009
10 Nov 2010	NMFS	Taking and Importing Marine Mammals; U.S. Navy Training In Northwest Training Range Complex; Final Rule published in Federal Register (75 FR 69296)	NMFS 2010a
12 Nov 2010	NMFS	Letter of Authorization for the Northwest Training Range Complex	NMFS 2010b

There are no further changes to Chapter 1 from the U.S. Navy's 2008 Letter of Authorization application of Sep 2008, Letter of Authorization Application Addendum of 24 Feb 2009, and subsequent NMFS Letter of Authorization of 12 Nov 2010 (NMFS 2010b and Table 1-1).

Subsequent chapters without change are indicated in light gray text.

Unless otherwise noted herein, there will not be a substantial modification to the described work, mitigation or monitoring undertaken during the upcoming 12 months. Monitoring reports required by 50 C.F.R. §218.115(a) through (j) will be submitted no later than 1 July 2011.

2. DURATION AND LOCATION OF ACTIVITIES

There are no further changes to Chapter 2 from the U.S. Navy's 2008 Letter of Authorization Application of Sep 2008, Letter of Authorization Application Addendum of 24 Feb 2009, and subsequent NMFS Letter of Authorization of 12 Nov 2010 (NMFS 2010b and Table 1-1) (Figure 2-1).

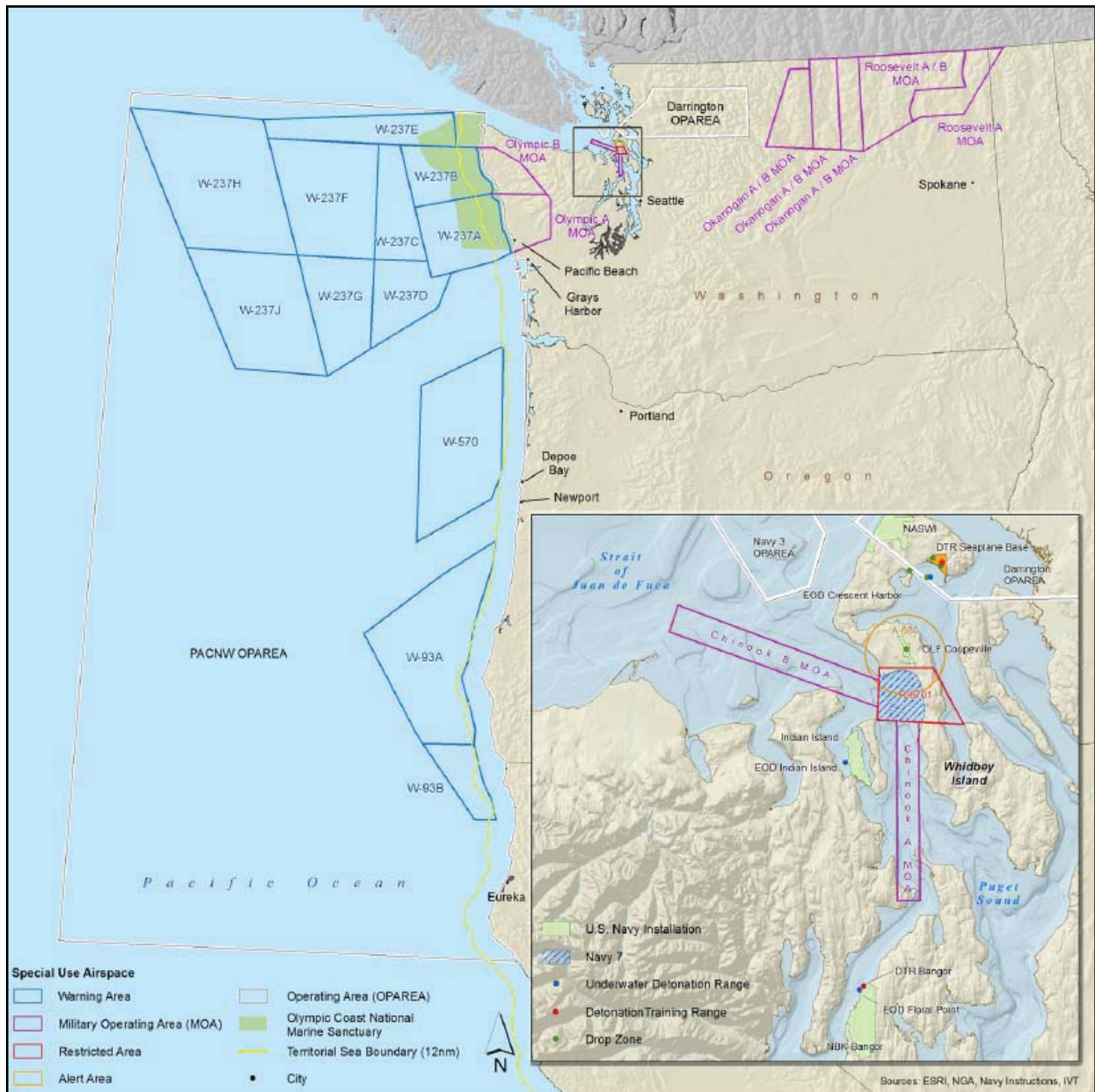


Figure 2-1. Spatial extent of the Navy's Northwest Training Range Complex.

3. MARINE MAMMAL SPECIES AND NUMBERS

There are no further changes to Chapter 3 from the U.S. Navy's 2008 Letter of Authorization Application of Sep 2008, Letter of Authorization Application Addendum of 24 Feb 2009, and subsequent NMFS Letter of Authorization of 12 Nov 2010 (NMFS 2010b and Table 1-1). Newest information from NMFS is contained in the latest Stock Assessment Report.

NMFS Stock Assessment Report update

NMFS' Southwest Fisheries Science Center published the final 2010 Pacific Stock Assessment Report in May 2011 (Carretta et al. 2011).

<http://www.nmfs.noaa.gov/pr/sars/region.htm>

Typically Pacific Stock Assessment Reports estimate marine mammal abundance for the entire U.S. West Coast and Hawaii, and may not reflect regional abundance at smaller geographic areas within the Northwest Training Range Complex.

4. AFFECTED SPECIES STATUS AND DISTRIBUTION

There are no further changes to Chapter 4 from the U.S. Navy's 2008 Letter of Authorization Application of Sep 2008, Letter of Authorization Application Addendum of 24 Feb 2009, and subsequent NMFS Letter of Authorization of 12 Nov 2010 (NMFS 2010b and Table 1-1).

NMFS Designation of Marine Mammal Critical Habitat or New Endangered Species Act Species Listings Within Northwest Training Range Complex

Since November of 2010, there was no designation of any new marine mammal critical habitat within the Northwest Training Range Complex, no listing of new Candidate¹ marine mammal species, and no listing of new Proposed² marine mammal species.

On 14 Apr 2011, NMFS issues a final rule for new "Protective Regulations for Killer Whales in the Northwest Region (76FR20870). These new regulations are applicable to inland Washington State waters, and as stated in the rule, government vessels which would include Navy vessels are exempt from these prohibitions. However, the intent of this regulation was to seek a 200 yard approach restriction on whale watching activities and associated vessel noise as it may impact killer whale. Navy vessels normally try to maintain the safest distance possible from marine mammals including killer whales, safety of navigation permitting.

Additional Endangered Species Act Discussions not in original Navy Biological Evaluation

Since NMFS' Biological Opinion for Navy training and testing activities on the Northwest Training Range Complex of 15 Jun 2010, Endangered Species Act critical habitats proposed by NMFS within the boundaries of the Northwest Training Range Complex include those listed in Table 4-1.

¹ Candidate species (69 FR 19975 and 71 FR 61022) are petitioned species that are actively being considered for listing as endangered or threatened under the Endangered Species Act, as well as those species for which NMFS has initiated an Endangered Species Act status review that it has announced in the Federal Register.

² Proposed species are those candidate species that were found to warrant listing as either threatened or endangered and were officially proposed as such in a Federal Register notice after the completion of a status review and consideration of other protective conservation measures.

Table 4-1. ESA species and regulatory status since June 2010.

Species	Action	Rule Making	Application to the Northwest Training Range Complex
Loggerhead sea turtle	Proposed Listing of Nine Distinct Population Segments of Loggerhead Sea Turtles as Endangered or Threatened	76FR15932 March 22, 2011	6-month extension of the deadline for a final listing decision
Loggerhead sea turtle (North Pacific distinct population segment)	Endangered status (proposed change from threatened to endangered)	75FR12598 March 16, 2010	North Pacific ocean from equator to 60 degrees North
Pacific eulachon	Designation of Critical Habitat for Southern Distinct Population Segment of Eulachon (proposed)	76FR515 January 5, 2011	Combination of freshwater creeks and rivers and their associated estuaries
Leatherback sea turtle	Notice of 90-Day Finding on a Petition to Revise Critical Habitat for Endangered Leatherback Sea Turtle	76FR225660 May 5, 2011	petition presents substantial scientific information indicating that the petitioned action may be warranted for leatherback sea turtles and their habitat
	Critical habitat designation (proposed)	75FR315 January 5, 2010	Marine area stretching from Cape Flattery, Washington to the Umpqua River (Winchester Bay), Oregon east of a line approximating 2,000 meter depth contour

5. HARASSMENT AUTHORIZATION REQUESTED

There are no further changes to Chapter 5 from the U.S. Navy's 2008 Letter of Authorization Application of Sep 2008, Letter of Authorization Application Addendum of 24 Feb 2009, and subsequent NMFS Letter of Authorization of 12 Nov 2010 (NMFS 2010b and Table 1-1). As discussed in the next section, use of authorized sonar systems from 12 Nov 2010 to 1 May 2011 potentially resulted in a lower amount of take as originally authorized in the NMFS' Letter of Authorization of 12 Nov 2010.

The subsequent annual post-calculation/estimation of species-specific potential exposures as required by NMFS is provided in Table 6-1.

The amount of harassment authorization requested by the Navy for the Northwest Training Range Complex in this Letter of Authorization renewal application for the annual period 12 Nov 2011 to 11 Nov 2012 remains the same as authorized by NMFS' 12 Nov 2010 annual Letter of Authorization (see Table 5-1).

Table 5-1. Navy's 2011-2012 requested take authorization in the Northwest Training Range Complex.
(Values the same as 2010-2011 NMFS Letter of Authorization 12 Nov 2010)

Species authorized in NMFS Northwest Training Range Complex Letter of Authorization 12 Nov 2010 §5(b)	NMFS Final Annual Take Authorization		
	Level B Harassment	Level A Harassment	Mortality
(1) Mysticetes:			
(i) Humpback whale	15	0	0
(ii) Fin whale	40	1	0
(iii) Blue whale	11	0	0
(iv) Minke whale	9	0	0
(v) Gray whale	4	0	0
(vi) Sei whale	1	0	0
(2) Odontocetes:			
(i) Sperm whale	84	1	0
(ii) Killer whale	14	0	0
(iii) Pygmy or dwarf sperm whales	4	0	0
(iv) Mesoplodon spp. beaked whales	15	0	0
(v) Cuvier's beaked whale	14	0	0
(vi) Baird's beaked whale	13	0	0
(vii) Striped dolphin	40	0	0
(viii) Risso's dolphin	100	0	0
(ix) Northern right whale dolphin	741	1	0
(x) Pacific white-sided dolphin	571	0	0
(xi) Short beaked common dolphin	1256	2	0
(xii) Short finned pilot whale	2	0	0
(xiv) Dall's porpoise	4752	3	0
(xv) Harbor porpoise	119274	1	0
(3) Pinnipeds:			
(i) Pacific harbor seal	586	1	0
(ii) California sea lion	286	0	0
(iii) Northern fur seal	1365	1	0
(iv) Steller sea lion	91	0	0
(vi) Northern elephant seal	378	2	0
TOTALS:	129,666	13	

6. NUMBERS AND SPECIES TAKEN

There are no further changes to Chapter 6 from the U.S. Navy's 2008 Letter of Authorization Application of Sep 2008, Letter of Authorization Application Addendum of 24 Feb 2009, and subsequent NMFS Letter of Authorization of 12 Nov 2010 (NMFS 2010b and Table 1-1).

As detailed in the classified version of the Navy's Northwest Training Range Complex Annual Exercise Report submitted to NMFS, no individual category of authorized system or training event exceeded authorized quantities of sonar and explosives within the Northwest Training Range Complex.

A species-specific 2010-2011 post-calculation/estimation was conducted for this Letter of Authorization renewal application as required in §5 (a)(1) to assess potential takes in terms of takes originally authorized by NMFS in the 10 November 2010 Final Rule and subsequent annual Letter of Authorization (Table 6-1).

*Post-Calculation\Estimation **

The post-calculation presented in Table 6-1 shows that Navy training through 01 May 2011 in the Northwest Training Range Complex potentially resulted in less than 1.3 % of the original NMFS 2010 authorized takes for all species.

- Based on systems used, there were potential takes to only two of seven Endangered Species Act species:
 - Sperm whale (1.2% of the NMFS authorized annual total) and;
 - Steller sea lion (2.2% of authorized annual total).
- Post-calculated takes to 11 of 18 other non-ESA listed species were all \leq 3.0% of the NMFS authorized annual total:
 - Striped dolphin (2.5% of authorized annual total)
 - Risso's dolphin (3.0% of authorized annual total)
 - Northern right whale dolphin (1.9% of authorized annual total)
 - Pacific white-sided dolphin (2.3% of authorized annual total)
 - Short-beaked common dolphin (2.7% of authorized annual total)
 - Dall's porpoise (2.0% of authorized annual total)
 - Harbor porpoise (1.2% of authorized annual total)
 - Pacific harbor seal (1.0% of authorized annual total)
 - California sea lion (2.1% of authorized annual total)
 - Northern fur seal (2.4% of authorized annual total)
 - Northern elephant seal (2.6% of authorized annual total)

*this post-calculation is only a model based look at takes based solely on the assumption that use of a given system as reported in the classified Exercise Report could potentially generate certain species-specific modeled exposures that NMFS equates to "takes" under the MMPA. Model limitations as discussed in the Navy's Northwest Training Range Complex Environmental Impact Statement and previous Letter of Authorization application do not factor in small scale animal movement, regional distribution other than potential presence, or exposure limiting effects from Navy mitigation measures or location of actual training in one part of the range vice another.

However, as a conservative, over predictive assessment of exposure and potential takes in the upcoming authorization year, the U.S. Navy requests the same level of takes as detailed in NMFS' Letter of Authorization of 12 Nov 2010 (NMFS 2010b) (*see previous Chapter 5*). Therefore, takes and authorizations are anticipated to remain the same for this renewal application covering the period from 12 Nov 2011 to 11 Nov 2012 (Table 5-1).

Table 6-1. Navy post-calculation\estimation for the Northwest Training Range Complex of potential species-specific takes based on Navy training during the first reporting period to NMFS from 12 Nov 2010 to 01 May 2011.

Species authorized in NMFS Northwest Training Range Complex Letter of Authorization 12 Nov 2010 §5(b)	NMFS Authorized Level B Takes	2010-2011 Predicted Level B Takes Based on Reported Navy Training	
		Level B	% of potential takes as compared to authorized takes
(1) Mysticetes:			
(i) Humpback whale	15	0	0 %
(ii) Fin whale	40	0	0 %
(iii) Blue whale	11	0	0 %
(iv) Minke whale	9	0	0 %
(v) Gray whale	4	0	0 %
(vi) Sei whale	1	0	0 %
(2) Odontocetes:			
(i) Sperm whale	84	1	1.2 %
(ii) Killer whale	14	0	0 %
(iii) Pygmy or dwarf sperm whales	4	0	0 %
(iv) Mesoplodon spp. beaked whales	15	0	0 %
(v) Cuvier's beaked whale	14	0	0 %
(vi) Baird's beaked whale	13	0	0 %
(vii) Striped dolphin	40	1	2.5 %
(viii) Risso's dolphin	100	3	3.0 %
(ix) Northern right whale dolphin	741	14	1.9 %
(x) Pacific white-sided dolphin	571	13	2.3 %
(xi) Short beaked common dolphin	1256	34	2.7 %
(xii) Short finned pilot whale	2	0	0 %
(xiv) Dall's porpoise	4752	97	2.0 %
(xv) Harbor porpoise	119274	1,413	1.2 %
(3) Pinnipeds:			
(i) Pacific harbor seal	586	6	1.0 %
(ii) California sea lion	286	6	2.1 %
(iii) Northern fur seal	1365	33	2.4 %
(iv) Steller sea lion	91	2	2.2 %
(v) Northern elephant seal	378	10	2.6 %
TOTALS:	129,666	1,633	1.3 %

7. IMPACTS TO MARINE MAMMAL SPECIES OR STOCKS

There are no further changes to Chapter 7 from the U.S. Navy's 2008 Letter of Authorization Application of Sep 2008, Letter of Authorization Application Addendum of 24 Feb 2009, and subsequent NMFS Letter of Authorization of 12 Nov 2010 (NMFS 2010b and Table 1-1).

8. IMPACT ON SUBSISTENCE USE

There are no further changes to Chapter 8 from the U.S. Navy's 2008 Letter of Authorization Application of Sep 2008, Letter of Authorization Application Addendum of 24 Feb 2009, and subsequent NMFS Letter of Authorization of 12 Nov 2010 (NMFS 2010b and Table 1-1).

9. IMPACTS TO THE MARINE MAMMAL HABITAT AND THE LIKELIHOOD OF RESTORATION

There are no further changes to Chapter 8 from the U.S. Navy's 2008 Letter of Authorization Application of Sep 2008, Letter of Authorization Application Addendum of 24 Feb 2009, and subsequent NMFS Letter of Authorization of 12 Nov 2010 (NMFS 2010b and Table 1-1).

10. IMPACTS TO MARINE MAMMALS FROM LOSS OR MODIFICATION OF HABITAT

There are no further changes to Chapter 10 from the U.S. Navy's 2008 Letter of Authorization Application of Sep 2008, Letter of Authorization Application Addendum of 24 Feb 2009, and subsequent NMFS Letter of Authorization of 12 Nov 2010 (NMFS 2010b and Table 1-1).

11. MEANS OF EFFECTING THE LEAST PRACTICABLE ADVERSE IMPACTS – MITIGATION MEASURES

There are no further changes to Chapter 11 from the U.S. Navy's 2008 Letter of Authorization Application of Sep 2008, Letter of Authorization Application Addendum of 24 Feb 2009, and subsequent NMFS Letter of Authorization of 12 Nov 2010 (NMFS 2010b and Table 1-1).

12. SUBSISTENCE EFFECTS AND PLAN OF COOPERATION

There are no further changes to Chapter 12 from the U.S. Navy's 2008 Letter of Authorization Application of Sep 2008, Letter of Authorization Application Addendum of 24 Feb 2009, and subsequent NMFS Letter of Authorization of 12 Nov 2010 (NMFS 2010b and Table 1-1).

13. MONITORING AND REPORTING MEASURES

There are no further changes to Chapter 12 from the U.S. Navy's 2008 Letter of Authorization Application of Sep 2008, Letter of Authorization Application Addendum of 24 Feb 2009, and subsequent NMFS Letter of Authorization of 12 Nov 2010 (NMFS 2010b and Table 1-1).

Unless otherwise noted herein, there will not be a substantial modification to the described work, mitigation or monitoring undertaken during the upcoming 12 months. Monitor reports required by 50 C.F.R. §218.115(a) through (j) will be submitted no later than 1 Jul 2011.

Navy-funded Northwest Training Range Complex Year 1 Marine Mammal Monitoring Accomplishments From 12 Nov 2010 to 1 May 2011

The Navy met its current Northwest Training Range Complex monitoring obligations as specified in the Letter of Authorization, although data has not yet been obtained from the devices. This was particularly relevant given the limited amount of time from authorization of the Northwest Training Range Complex Letter of Authorization in 12 Nov 2010 and the end of the first monitoring period through 01 May 2011, and the US government-wide stop-gap budget funding under a Continuing Resolution from Oct 2010 to Mar 2011.

Two high-frequency acoustic monitoring packages (HARP) were deployed by Scripps Institute of Oceanography (SIO) within the Northwest Training Range Complex.

http://cet.usd.edu/technologies_AutonomousRecorders.html

One HARP was deployed in January 2011 approximately 25 nm from the coast in the southern part of NOAA's Olympic Coast National Marine Sanctuary (Figure 13-1). SIO has had HARPs in the same approximate location periodically since 2004 (Oleson et al 2009). A second HARP was deployed in May 2011 near the edge of an underwater canyon west of the Olympic Coast National Marine Sanctuary boundary (Figure 13-1).

These devices placed on the ocean floor record marine mammal vocalizations on internal hard drives that must be retrieved during field service calls approximately every 6-9 months. Vocalization data from these HARPs is currently undergoing analysis by SIO, and results will eventually be presented in the Navy's July 2012 Northwest Training Range Complex Monitoring Report. One HARP previously in place east of Quinault Canyon under Navy funding from a different program, and for which initial data analysis would have hopefully been included within this report was found missing on a subsequent retrieval cruise in the fall/early winter of 2010. Cause of this loss is currently unknown, although SIO has reported problems in the past with bottom nets pulled from commercial fishing trawlers snagging bottom placed HARPs in this vicinity. While the HARP has been replaced, data from the previous year of recording is currently lost and not available for analysis.

SIO did conduct an analysis of data from June 2008 to June 2009 which is presented as an appendix to the Navy's Northwest Training Range Complex Monitoring Report.



Figure 13-1. Location of Navy funded HARPs deployed in January and May 2011 in relationship to Olympic Coast National Marine Sanctuary and associated bathymetry.
(Underlying graphic from NOAA Olympic Coast National Marine Sanctuary)

Also within this reporting period (12 Nov 2010 to 01 May 2011), the Navy purchased 10 satellite tracking tags suitable for deployment on a suite of marine species within the Northwest Training Range Complex. Two tag types are on order:

- 1) Smart Position or Temperature Transmitting Tag (SPOT5) and;
- 2) MK-10-A Data-Collecting Argos location-depth tag

Tags transmit animal movement data via the Argos satellite system. The commercial Argos system consists of data acquisition and relay equipment attached to National Oceanographic and Atmospheric Administration low-orbiting weather satellites and ground-based receivers and data processing systems. Field deployment for tagging marine mammals will occur in the spring and summer of 2011 in coordination with a joint NMFS, Cascadia Research Collective, Washington Department of Fish and Wildlife, and Oregon Department of Fish and Wildlife effort.

The Navy tags purchased for the Northwest Training Range Complex Monitoring Plan are complementary and similar to tags being used in this joint field project. The species of interest in this 3-year joint project are endangered cetaceans such as blue whales, fin whales, humpback whales, and sperm whales, but may also include high priority cetaceans such as beaked whales, in the event they are encountered in favorable tagging conditions. Other species of interest for tagging could also include seasonal resident gray whales and transient or offshore killer whales.

Adaptive Management For Monitoring In The Northwest Training Range Complex

The NMFS has acknowledged that the Northwest Training Range Complex monitoring will enhance the understanding of marine mammal distributions within the offshore waters of northern California, Oregon, and Washington. Additionally, NMFS also pointed out that information gained from the investigations associated with the Navy’s monitoring may be used in the adaptive management of mitigation or monitoring measures in subsequent NMFS authorizations, if appropriate. Therefore, the Navy’s adaptive management of Northwest Training Range Complex monitoring under its Marine Mammal Protection Act responsibilities involves close coordination with NMFS to align marine mammal monitoring with the overall objectives stated within the Introduction to this report. To date, 2010 monitoring within the Northwest Training Range Complex only represents the beginning of Year 1 of a planned five year effort. As such, it would be premature to draw detailed conclusions or initiate comprehensive monitoring changes without further consultation and public review.

U.S. Ocean Policy

On 19 July 2010, the President signed a new Executive Order (EO 13547) on Stewardship of the Ocean, Our Coasts, and the Great Lakes which adopted the final recommendation of the Interagency Ocean Policy Task Force. Key recommendations include “Use the best available science and knowledge to inform decisions affecting the ocean...” and “Increase scientific understanding of ocean...” (EO 2010, CEQ 2010). Another integral part of these policy directions was to instill a collaborative spirit within the Federal Government in the planning, management, and program execution of ocean science projects. Both of these tenants (improving and using best available science along with increased collaboration) are similar to preceding recommendations of the Joint Subcommittee on Ocean Science and Technology (JSOST) on “Addressing the Effects of Human-Generated Sound on Marine Life: An Integrated Research Plan for U.S. federal agencies “(Southall et al. 2009).

Proposed 02 May 2011 to 01 May 2012 Monitoring

The Navy proposes to keep the same level of monitoring effort in the Northwest Training Range Complex as was committed and accomplished in Year 1 from 12 Nov 2010 to 1 May 2011. Table 13-1 highlights these goals. In support of the JSOST recommendations, and Ocean Policy direction, the Navy is committed to structuring the Northwest Training Range Complex monitoring to address both NMFS regulatory required monitoring under the Northwest Training Range Complex Letter of Authorization while at the same time making significant contributions to the greater body of marine mammal science.

Table 13-1. Navy’s proposed Year 2 monitoring plan goals for the Northwest Training Range Complex from 2 May 2011 to 1 May 2012.

Monitoring Technique	Implementation	
Marine Mammal Tagging	Conduct and report data from marine mammal tagging, leveraging existing field efforts where possible. Focus may be directed toward either detailed analysis or additional tags depending on need	Adaptive Management Review (AMR) for 2012
Passive Acoustic Monitoring	Maintain and present data analysis from US Navy funded passive acoustic monitoring device(s)	
<p><i>NO metric changes are envisioned in Year 2 (2011-2012) from the level of effort and funding performed in Year 1 (2010-2011)</i></p> <p>TOTAL Navy Year 2 Goal:</p> <ul style="list-style-type: none"> • <i>Conduct/present results from tagging studies</i> • <i>PAM device(s) and analysis</i> 		

14. RESEARCH

There are no further changes to Chapter 14 from the U.S. Navy's 2008 Letter of Authorization Application of Sep 2008, Letter of Authorization Application Addendum of 24 Feb 2009, and subsequent NMFS Letter of Authorization of 12 Nov 2010 (NMFS 2010b and Table 1-1). Based on the best information available at the time of submission of this Letter of Authorization renewal application, there was no additional Navy funded research within the Northwest Training Range Complex other than the Letter of Authorization specified Navy-funded monitoring (*e.g.*, *Section 13*).

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