DEPARTMENT OF THE NAVY
NAVAL UNDERSEA WARFARE CENTER DIVISION
610 DOWELL STREET
KEYPORT, WASHINGTON 98345-7610

5090
Ser 20/946-11
DEC 22 2011

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

Dear Mr. Lecky:

The enclosed Letter of Authorization (LOA) renewal request is provided pursuant to the Naval Sea Systems Command, Naval Undersea Warfare Center Keyport Range Complex Marine Mammal Protection Act (MMPA) authorization (50 Code of Federal Regulations §218.173 and §218.174). The request is for the taking of marine mammals incidental to research, development, test and training from May 2012 to May 2016. The Navy also requests the National Marine Fisheries Service (NMFS) issue a biological opinion under Section 7 of the Endangered Species Act (ESA) as reflected in the enclosed LOA renewal request.

If you have any questions regarding the LOA renewal application, the Keyport point of contact is Ms. Shaari Unger at (360) 315-2258.

Sincerely,

S. E. IWANOWICZ

Enclosure: Keyport 2012-2016 LOA renewal application

Copy to:
Ms. Jolie Harrison, NMFS Office of Protected Resources, Permits, Conservation and Education Division F/PR1
Mr. John Quinn, Chief of Naval Operations, OPNAV N45

Request for
Renewal of the Letter of Authorization Under
The Marine Mammal Protection Act
For Incidental Harassment of Marine Mammals Resulting From
Navy Research, Development, Test, and Evaluation Activities Conducted
Within The NAVSEA NUWC Keyport Range Complex
17 May 2012 to 16 May 2016

Submitted By
Department of the Navy
Commander, NAVSEA NUWC Division, Keyport
610 Dowell St
Keyport, WA 98345-7610

Submitted To
National Marine Fisheries Service
Office of Protected Resources
1315 East-West Highway
Silver Spring, Maryland 20910-3226

FINAL
December 2011

Enclosure

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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 renewal application to the National Marine Fisheries Service (NMFS) for a Letter of Authorization from U.S. Navy research, development, test, and evaluation (RDT&E) activities conducted within the NAVSEA NUWC Keyport Range Complex. This Letter of Authorization renewal application is being sought to cover the period from 17 May 2012 to 16 May 2016 to cover the taking of marine mammals, as described by the Marine Mammal Protection Act, incidental to research, development, test, and evaluation activities conducted within the NAVSEA NUWC Keyport 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 Keyport 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 Keyport 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. It is recommended that the requirement for monitoring marine mammal presence the day before and the day after be modified to be able to monitor on the same day, prior to and after the range event if there is enough daylight.

Table 1-1 Key NAVSEA NUWC Keyport Range Complex Marine Mammal Protection Act documents

Timeline Date	From	Event	As cited in this renewal
April 2008	Navy	Letter Of Authorization Application Under Section 101(A)(5)(A) Of The Marine Mammal Protection Act Incidental To Naval Sea Systems Command Naval Undersea Warfare Center Division, Keyport Mission Activities Submitted To NMFS Office Of Protected Resources April 2008	Navy 2008
April 2009	Navy	Addendum To Request For Letter Of Authorization Under Section 101(A)(5)(A) Of The Marine Mammal Protection Act Incidental To Naval Sea Systems Command Naval Undersea Warfare Center Division, Keyport Mission Activities Submitted April 2008 Submitted To NMFS Office Of Protected Resources *27* April 2009	Navy 2009
7 July 2009	NMFS	Taking And Importing Marine Mammals; U.S. Navy's Research, Development, Test And Evaluation Activities Within The Naval Sea Systems Command Naval Undersea Warfare Center Keyport Range Complex ; Proposed Rule Published In Federal Register (74 FR 32264)	NMFS 2009
12 April 2011	NMFS	Taking And Importing Marine Mammals; U.S. Navy's Research, Development, Test And Evaluation Activities Within The Naval Sea Systems Command Naval Undersea Warfare Center Keyport Range Complex; Final Rule Published In Federal Register (76 FR 20257)	NMFS 2011a
13 May 2011	NMFS	NMFS ESA Consultation Biological Opinion For Naval Sea Systems Command Naval Undersea Warfare Center (NUWC) Keyport Range Complex April 2011 To April 2012	NMFS 2011b
17 May 2011	NMFS	Letter Of Authorization Issued Under The MMPA Incidental To Navy's Research, Development, Test And Evaluation (RDT&E) Activities At The NAVSEA NUWC Keyport Range Complex For The Period May 17, 2011 Through May 16, 2012	NMFS 2011c

There are no changes to Chapter 1 from the U.S. Navy's Letter of Authorization Application of April 2008 (*Navy 2008*), Addendum to Letter of Authorization Application of April 2009 (*Navy 2009*), and

subsequent NMFS Biological Opinion of 13 May 2011 (*NMFS 2011b*) and NMFS Letter of Authorization (*NMFS 2011c*).

There will not be a substantial modification to the described work, mitigation or monitoring undertaken through May 16, 2016.

2. DURATION AND LOCATION OF ACTIVITIES

There are no further changes to Chapter 2 from the U.S. Navy's Letter of Authorization Application of April 2008 (*Navy 2008*), Addendum to Letter of Authorization Application of April 2009 (*Navy 2009*), and subsequent NMFS Biological Opinion of 13 May 2011 (*NMFS 2011b*) and NMFS Letter of Authorization (*NMFS 2011c*) and Table 1-1. The spatial extent of the Navy's Keyport Range Complex is shown in Figure 2-1. The Keyport range, Dabob Bay Range Complex (DBRC), and the Quinault range sites are shown in Figures 2-2, 2-3, and 2-4 respectively. These figures show the sites with the extended range as allocated in the Record of decision and evaluated in the NMFS Final Rule and Letter of Authorization.

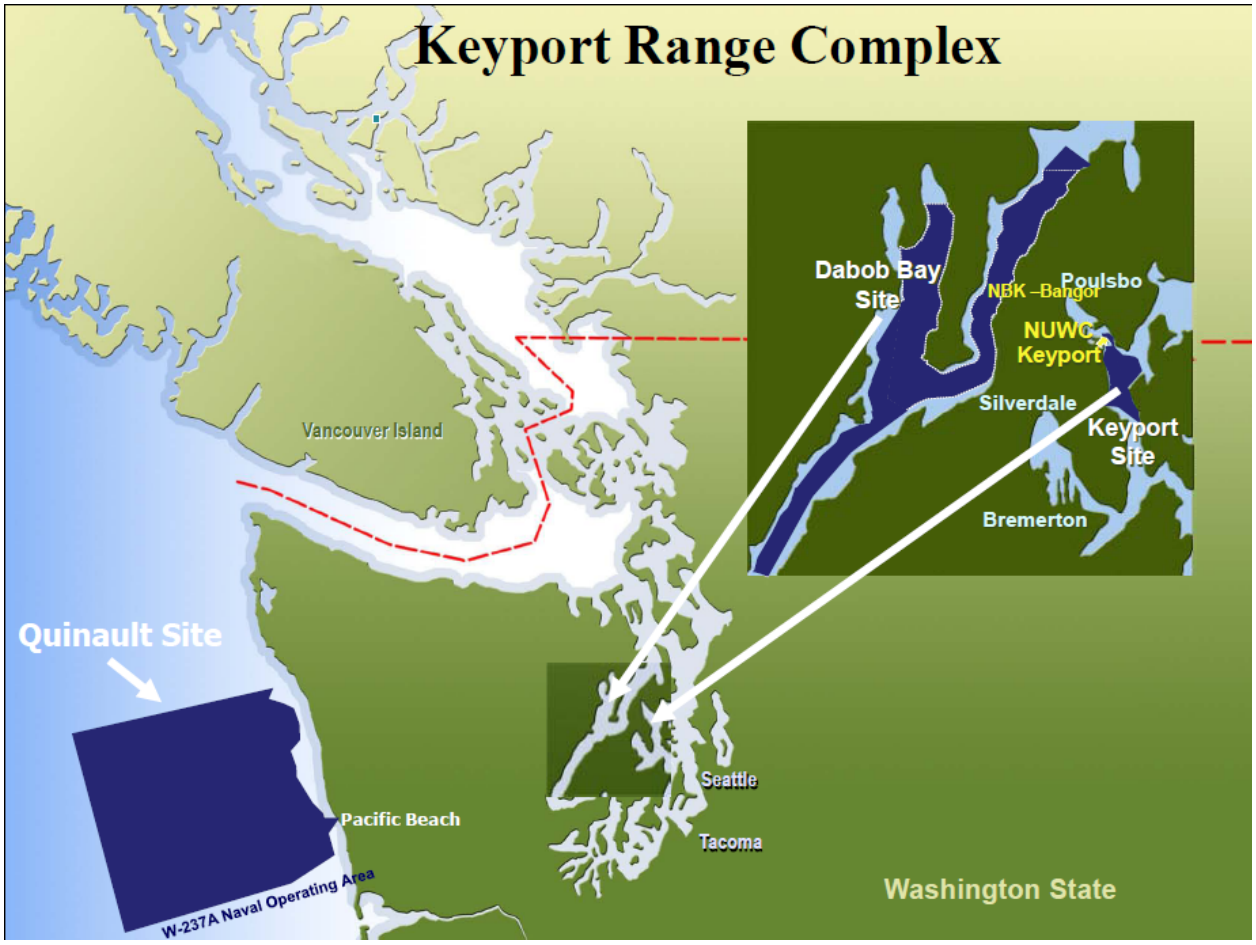

Figure 2-1 spatial extent of the Navy's Keyport Range Complex

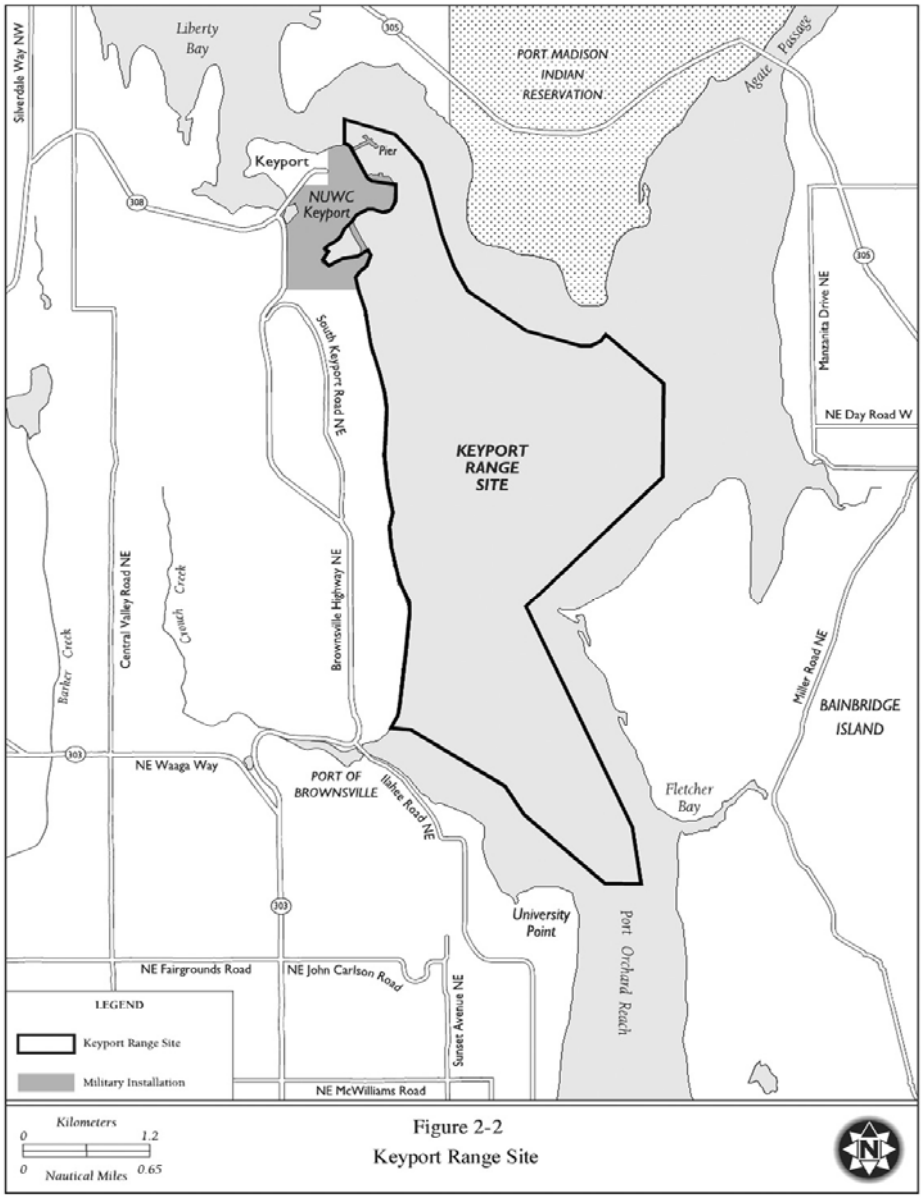

Figure 2-2 Keyport Range Complex Keyport Site

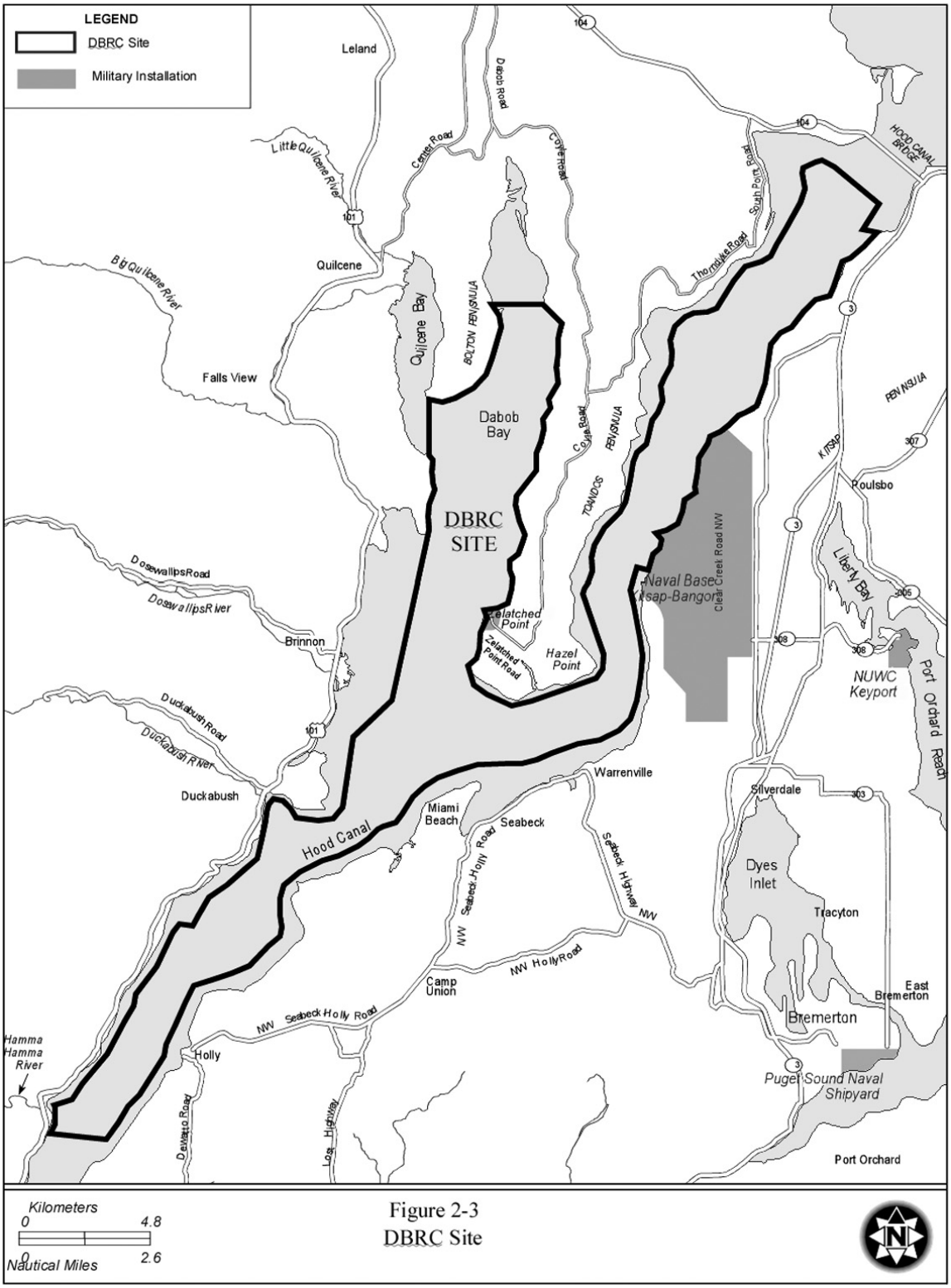

Figure 2-3 Keyport Range Complex DBRC Site

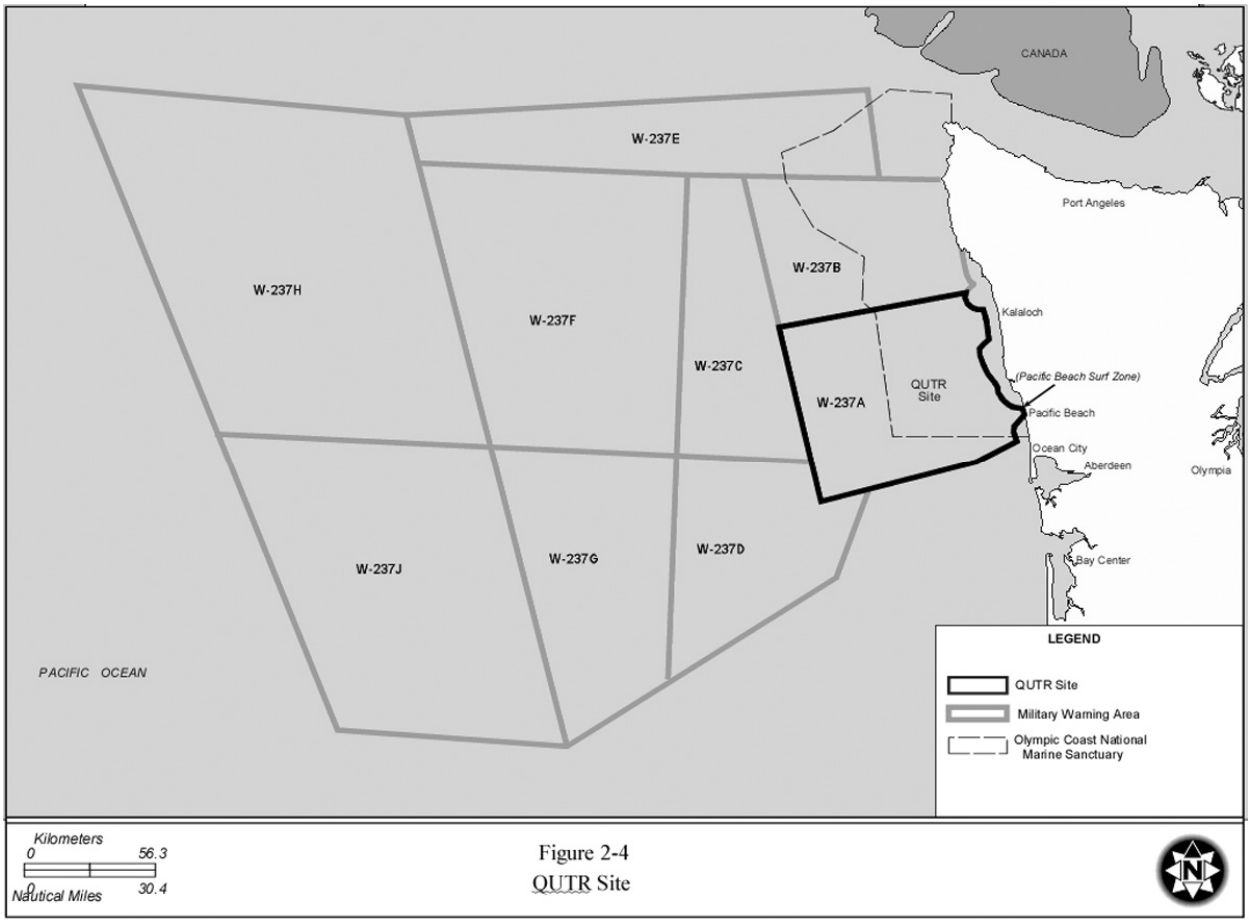

Figure 2-4 Keyport Range Complex Quinault Site Surf Zone at Pacific Beach

3. MARINE MAMMAL SPECIES AND NUMBERS

There are no changes to Chapter 3 from the U.S. Navy's Letter of Authorization Application of April 2008 (*Navy 2008*), Addendum to Letter of Authorization Application of April 2009 (*Navy 2009*), and subsequent NMFS Biological Opinion of 13 May 2011 (*NMFS 2011b*) and NMFS Letter of Authorization (*NMFS 2011c*) and Table 1-1. The 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 likely do not reflect regional abundance at smaller geographic areas within the Keyport Range Complex.

4. AFFECTED SPECIES STATUS AND DISTRIBUTION

Since the NMFS Final Rule for the Keyport Range Complex of 12 April 2011, there was no designation of any new marine mammal critical habitat within the Keyport Range Complex, no listing of new Candidate [1] marine mammal species, and no listing of new Proposed[2] marine mammal species.

However, harbor porpoise were observed in the Hood Canal in the vicinity of the Naval Base Kitsap-Bangor (submarine base) during the Navy Region Northwest Pile Driving Test conducted during the summer and fall of 2011. The Navy Marine Mammal Observation (NMMO) team has notified NMFS through the chain of command, and is establishing a plan to document the presence of harbor porpoise in the Hood Canal in coordination with NMFS. It is anticipated that the NOAA stock assessment of harbor porpoise will change over the next several years. The Keyport LOA, as written, allows for harbor porpoise behavioral takes from Keyport activities in Hood Canal. The harbor porpoise are afforded the same standoff distance as any cetacean (1,000 yards from the intended track of the test vehicle). All marine mammal sightings, whether expected or unusual are reported to the Range Officer in accordance with range operating procedures.

On 14 Apr 2011, NMFS issued 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.

The range operating procedures and direction from annual LOA Biological Opinion of 13 May 2011 (*NMFS 2011a*) the LOA of 17 May 2011 (*NMFS 2011c*) establishes an "exclusion zone" in which surveillance will be conducted to ensure that there are no marine mammals within this exclusion zone prior to the commencement of each in-water exercise.
(i) For cetaceans, the exclusion zone shall extend out 1,000 yards (914.4 m) from the intended track of the test unit.

[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.

(ii) For pinnipeds, the exclusion zone shall extend out 100 yards (91 m) from the intended track of the test unit.

There are no further changes to Chapter 4 from the U.S. Navy's Letter of Authorization Application of April 2008 (*Navy 2008*), Addendum to Letter of Authorization Application of April 2009 (*Navy 2009*), and subsequent NMFS Biological Opinion of 13 May 2011 (*NMFS 2011b*) and NMFS Letter of Authorization (*NMFS 2011c*) and Table 1-1.

5. HARASSMENT AUTHORIZATION REQUESTED

There are no changes to Chapter 5 from the U.S. Navy's Letter of Authorization Application of April 2008 (*Navy 2008*), Addendum to Letter of Authorization Application of April 2009 (*Navy 2009*), and subsequent NMFS Biological Opinion of 13 May 2011 (*NMFS 2011b*) and NMFS Letter of Authorization (*NMFS 2011c*) and Table 1-1. As discussed in the next section, use of authorized sonar systems from 12 April 2011 to 1 September 2011 resulted in fewer takes than originally listed in the NMFS's Final Rule of 12 April 2011 and authorized in NMFS's Letter of Authorization of 17 May 2011 for a single year. The reporting period did not cover a full year but only four and a half months from 12 April 2011 to 1 September 2011. The number and tempo of activities were also less than the anticipated maximum described in the Navy Letter of Authorization Request of April 2008.

The amount of harassment authorization requested by the Navy for the Keyport Range Complex in this Letter of Authorization renewal application for the period 17 May 2012 to 16 May 2016 remains the same as authorized by the Final Rule of 12 April 2011 (NMFS 2011a) and the Letter of Authorization of 13 May 2011. These values are provided within Tables 5-1 and 5-2.

The subsequent annual post-calculation/estimation of species-specific potential exposures is provided in Section 6.

Table 5-1 Estimated Annual MMPA Level B Exposures for the Keyport Range Complex From Tables 9, 10, and 11 of NMFS Proposed Rule 7 July 2009 (*NMFS 2009*)

	TTS (Level B) Exposures	**Risk Function Sub-TTS Behavioral Exposures**
Estimated Annual MMPA Level B Exposures for Inland Water – Keyport Range Site		
Harbor Seal	41	109
Estimated Annual MMPA Level B Exposures for Inland Water – DBRC Site		
California sea lion	0	109
Harbor seal	1,998	3,320
Estimated Annual MMPA Level B Exposures for Open Water – QUTR Site		
Harbor porpoise	0	11,282
Northern fur seal	0	44
California sea lion	0	5
Northern elephant seal	0	14
Harbor seal	23	78

Table 5-2. Navy's 2012-2016 requested take authorization in the Keyport Range Complex. (Values the same yearly amount as Table 12 of Final Rule of 12 April 2011 (*NMFS 2011a*))				
	TTS (Level B) Yearly Exposures	**Risk Function Sub-TTS Behavioral Yearly Exposures**	**TTS (Level B) Exposures over Four Years**	**Risk Function Sub-TTS Behavioral Exposures over Four Years**
Endangered & Threatened Species				
Any marine mammal species	0	0	0	0
Non-ESA Listed Species				
Harbor porpoise[3]	1	11,282	4	45,128
Northern fur seal	0	44	0	176
California sea lion	0	114	0	456
Northern elephant seal	0	14	0	56
Harbor seal	2,062	3,507	8,248	14,028

As shown in Table 5-2 for one year NMFS allowed for the following number of takes: 11,283 harbor porpoises, 44 northern fur seals, 114 California sea lions, 14 northern elephant seals, and 5,569 harbor seals (5,468 Washington Inland Waters stock and 101 Oregon/Washington Coastal stock) by Level B harassment (TTS and sub-TTS) as a result of the Keyport Range Complex RDT&E sonar testing activities. For this four year Letter of Authorization request, Navy is applying for the following number of takes: (The following numbers include both TTS (Level B) and sub-TTS takes); 45,132 harbor porpoises, 176 northern fur seals, 456 California sea lions, 56 northern elephant seals, and 22,276 harbor seals (21,872 Washington Inland Waters stock and 404 Oregon/Washington Coastal stock) by Level B harassment The estimates are based on scientific modeling for acoustic sources using both sound energy level and animal density as well as sound pressure level and the risk function methodology. This is coupled with the analysis of the abundance, distribution, and density of marine mammal species in the action area.

There may be harbor porpoise in Dabob Bay although none have been sighted to date during range operations. Density data do not exist for harbor porpoise in Hood Canal, however, the Navy has estimated ten percent of the authorized harbor porpoise takes would occur in the Dabob Bay Range Complex. This assumption is based on limited empirical sightings by Navy biologists at other locations in Hood Canal and is conservative.

6. NUMBERS AND SPECIES EXPOSED

[3] For harbor porpoise, the model results represent the step function criteria where 100% of the population exposed to 120 dB SPL are listed. This is not a risk function calculation.

There are no changes to Chapter 6 from the U.S. Navy's Letter of Authorization Application of April 2008 (*Navy 2008*), Addendum to Letter of Authorization Application of April 2009 (*Navy 2009*), and subsequent NMFS Biological Opinion of 13 May 2011 (*NMFS 2011b*) and NMFS Letter of Authorization (*NMFS 2011c*) and Table 1-1. The use of authorized sonar systems from 12 April 2011 to 1 September 2011 resulted in fewer takes than originally listed in the NMFS's Final Rule of 12 April 2011 and authorized in NMFS's Letter of Authorization of 17 May 2011 for a single year. The reporting period did not cover a full year but only four and a half months from 12 April 2011 to 1 September 2011. The number and tempo of activities were also less than the anticipated maximum described in the Navy Letter of Authorization Request of April 2008.

As detailed in the Navy's Keyport Range Complex Annual Exercise report of December 2011 submitted to NMFS, no individual category of authorized system or research, development, test and evaluation activity exceeded authorized quantities of sonar within the Keyport Range Complex.

The total hours allotted for each range site is from NMFS Final Rule of 12 April 2011 (*NMFS 2011a*) in terms of general usage and modeled as groupings of high and midfrequency sources. The following is the description of the general sources and hours allowed as well as the specific source types and hours.

The general acoustic sources listed in the NMFS Final Rule of 12 April 2011 apply only to the taking of marine mammals by the Navy that occurs within the Keyport Range Complex Action Area, which includes the extended Keyport Range Site, the extended DBRC Site, and the extended Quinault Underwater Tracking Range (QUTR) Site, as presented in the Navy's LOA application. The NAVSEA NUWC Keyport Range Complex is divided into open ocean/offshore areas and in-shore areas:

(1) Open Ocean Area—air, surface, and subsurface areas of the NAVSEA NUWC Keyport Range Complex Extension that lie outside of 12 nautical miles (nm) from land.
(2) Offshore Area—air, surface, and subsurface ocean areas within 12 nm of the Pacific Coast.
(3) In-shore—air, surface, and subsurface areas within the Puget Sound, Port Orchard Reach, Hood Canal, and Dabob Bay.

These regulations apply only to the taking of marine mammals by the Navy if it occurs incidental to the following activities, or similar activities and sources (estimated amounts of use below):

(1) Range Activities Using Active Acoustic Devices:
    (i) General range tracking: Narrow frequency output between 10 to 100 kHz with source levels (SL) between 195– 203 dB re 1 microPa @ 1 m—up to 504.5 hours per year.
    (ii) UUV Payloads: Operating frequency of 10 to 100 kHz with SLs less than 195 dB re 1 microPa @ 1 m at all range sites—up to 166 hours per year.
    (iii) Torpedo Sonars: Operating frequency from 10 to 100 kHz with SL under 233 dB re 1 microPa @ 1 m—up to 21 hours per year.
    (iv) Range Targets and Special Test Systems: 5 to 100 kHz frequency range with a SL less than 195 dB re 1 microPa @ 1 m at the Keyport Range Site and SL less than 238 dB re microPa @ 1 m at the DBRC and QUTR sites—up to 9 hours per year.
    (v) Special Sonars (non-Navy, shore/pier static testing, and diver activities) and Fleet Aircraft (active sonobuoys and dipping sonars): Frequencies vary from 100 to 2,500 kHz with SL less than 235dB re 1 microPa @ 1 m—up to 321 hours per year.
    (vi) Side Scan Sonar: Multiple frequencies typically at 100 to 700 kHz with SLs less than 235 dB re 1 microPa @ 1 m—up to 166 hours per year.
    (vii) Other Acoustic Sources:
        (A) Acoustic Modems: Emit pulses at frequencies from 10 to 300 kHz with SLs less than 210 dB re 1 microPa @ 1 m—up to 166 hours per year.

(B) Sub-bottom Profilers: Operate at 2 to 7 kHz at SLs less than 210 dB re 1 microPa @ 1 m, and 35 to 45 kHz at SLs less than 220 dB re 1 microPa @ 1 m—up to 192 hours per year.

(C) Target simulator (surface vessels, submarines, torpedoes, and UUV engine noise): Acoustic energy from engines usually from 50 Hz to 10 kHz at SLs less than 170 dB re 1 microPa @ 1 m—up to 24.5 hours per year.

Every use of underwater acoustic energy includes the potential to harass marine animals in the vicinity of the source. The number of animals exposed to potential harassment in any such action is dictated by the propagation field and the manner in which the acoustic source is operated (*i.e.,* source level, depth, frequency, pulse length, directivity, platform speed, repetition rate). A wide variety of systems/ equipment that utilize acoustic sources are employed at the NAVSEA NUWC Keyport Range Complex. Eight have been selected as representative of the types operating in this range and are described in Table 6-1. Other systems with similar parameters will be used when their use will not result in more than authorized takes. The total annual hours of each type of sonar source is provided in Table 6-2.

Table 6-1 Acoustic Source Employed in the Keyport Range Complex

Source Designation	Center frequency (kHz)	Source Level (dB re 1 □Pa @ 1m)	Acoustic Source Description
S1	4.5	207	Sub-Bottom Profiler
S2	15	205	UUV Payloads (Special Sonars)
S3	10	186	Acoustic Modem
S4	150	220	Side-Scan sonar and UUV Payloads
S5	5	233	Range Targets
S6	20	233	Torpedoes (both Electric and Thermal Propulsion)
S7	25	230	Torpedoes (both Electric and Thermal Propulsion)
S8	30	233	Torpedoes (both Electric and Thermal Propulsion)

Table 6-2 Total Annual Hours of Each Type of Sonar Source

Acoustic Source	Range Usage	Total Hours Allotted	% Hours Used	Description of LOA Active Sources
Keyport Range Site				
S1	0	80	0	Sub-Bottom Profiler
S2	0	42	0	UUV Payloads (Special Sonars)
S3	0	42	0	Acoustic Modem
S4	0	42	0	Side-Scan sonar and UUV Payloads
S5	0	1.33	0	Range Targets
S6	0	0.33	0	Torpedoes (both Electric and Thermal Propulsion)
S7	0	0.33	0	Torpedoes (both Electric and Thermal Propulsion)
S8	0	0.33	0	Torpedoes (both Electric and Thermal Propulsion)
DBRC Site				
S1	0	80	0	Sub-Bottom Profiler
S2	0	100	0	UUV Payloads (Special Sonars)
S3	2.514	100	2.5	Acoustic Modem
S4	0	100	0	Side-Scan sonar and UUV Payloads

S5	0	6.67	0	Range Targets
S6	0.07	5.83	1.2	Torpedoes (both Electric and Thermal Propulsion)
S7	0.112	5.83	1.9	Torpedoes (both Electric and Thermal Propulsion)
S8	0.014	5.83	0.2	Torpedoes (both Electric and Thermal Propulsion)
Quinault Site				
S1	0	32	0	Sub-Bottom Profiler
S2	0	24	0	UUV Payloads (Special Sonars)
S3	0	24	0	Acoustic Modem
S4	0	24	0	Side-Scan sonar and UUV Payloads
S5	0	1	0	Range Targets
S6	0	0.83	0	Torpedoes (both Electric and Thermal Propulsion)
S7	0	0.83	0	Torpedoes (both Electric and Thermal Propulsion)
S8	0	0.83	0	Torpedoes (both Electric and Thermal Propulsion)

Post-Calculation/Estimation

A species-specific post-calculation/estimation was conducted for this Letter of Authorization renewal application to assess potential takes in terms of takes originally authorized by NMFS in the 12 April 2011 Final Rule and subsequent annual Letter of Authorization of 17 May 2011 .

Based on systems used as shown in Table 6-1 the maximum percentage of animals exposed to active acoustic energy during Keyport activities would coincide with the percentage of sonar hours utilized during the 12 April – 1 September 2011 timeframe.

The post-calculation results presented in Table 6-3 shows that active sonar for 12 April through 1 September 2011 in the Keyport Range Complex potentially resulted in less than 1% of the original NMFS 2011 authorized takes for all species. There were no takes of Endangered Species Act species.

Post-calculation takes to all non-ESA listed species were all ≤ 1.0% of the NMFS authorized annual total. All animal takes were from the DBRC Site.

Navy post-calculation/estimation for the Keyport Range Complex of potential species-specific takes based on Keyport activities during the first reporting period to NMFS from 12 April to 1 September 2011 is provided in Table 6-3.

Table 6-3 Estimation of Takes for the Keyport Range Complex, Number of animals from NMFS Proposed Final Rule of 7 July 2009 (*NMFS 2009*)

Species authorized in NMFS Final Rule of 12 April 2011	NMFS Authorized Level B Takes	2010-2011 Predicted Level B Takes Based on Reported Keyport Activities	
		Level B	% of potential takes as compared to authorized takes
No Endangered & Threatened Species			
Non-ESA Listed Species			
(1) Cetaceans:			
i) Harbor Porpoise[4]	1128	8	0.67
(3) Pinnipeds:			
i) California Sea Lion	109	1	0.67
ii) Harbor seal	5318	36	0.67
TOTALS:	6555	45	0.67

This post-calculation is a model-based look at takes based solely on the assumption that use of a given system as reported in the 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 Keyport 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 activities in one part of the range vice another.

However, as a conservative, over predictive assessment of exposure and potential takes in the upcoming authorization years, the U.S. Navy requests the same level of takes as detailed in NMFS' Letter of Authorization of 13 May 2011 (NMFS 2010b) (*see previous Chapter 5*).

Although harbor porpoise have been spotted within the Hood Canal where they had not been expected, there is no stock assessment population density estimate for this species in the Hood Canal. Therefore, takes and authorizations are anticipated to remain the same for this renewal application covering the period from 17 May 2012 to 16 May 2016 (Table 5-1).

[4] Assumes 10% of the population from the coast is in the DBRC area and therefore 10% of the takes are conservatively possible.

7. IMPACTS TO MARINE MAMMAL STOCKS

There are no changes to Chapter 7 from the U.S. Navy's Letter of Authorization Application of April 2008 (*Navy 2008*), Addendum to Letter of Authorization Application of April 2009 (*Navy 2009*), and subsequent NMFS Biological Opinion of 13 May 2011 (*NMFS 2011b*) and NMFS Letter of Authorization (*NMFS 2011c*) and Table 1-1.

8. IMPACTS ON SUBSISTENCE USE

There are no changes to Chapter 8 from the U.S. Navy's Letter of Authorization Application of April 2008 (*Navy 2008*), Addendum to Letter of Authorization Application of April 2009 (*Navy 2009*), and subsequent NMFS Biological Opinion of 13 May 2011 (*NMFS 2011b*) and NMFS Letter of Authorization (*NMFS 2011c*) and Table 1-1.

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

There are no changes to Chapter 9 from the U.S. Navy's Letter of Authorization Application of April 2008 (*Navy 2008*), Addendum to Letter of Authorization Application of April 2009 (*Navy 2009*), and subsequent NMFS Biological Opinion of 13 May 2011 (*NMFS 2011b*) and NMFS Letter of Authorization (*NMFS 2011c*) and Table 1-1.

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

There are no changes to Chapter 10 from the U.S. Navy's Letter of Authorization Application of April 2008 (*Navy 2008*), Addendum to Letter of Authorization Application of April 2009 (*Navy 2009*), and subsequent NMFS Biological Opinion of 13 May 2011 (*NMFS 2011b*) and NMFS Letter of Authorization (*NMFS 2011c*) and Table 1-1.

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

There are no changes to Chapter 11 from the U.S. Navy's Letter of Authorization Application of April 2008 (*Navy 2008*), Addendum to Letter of Authorization Application of April 2009 (*Navy 2009*), and subsequent NMFS Biological Opinion of 13 May 2011 (*NMFS 2011b*) and NMFS Letter of Authorization (*NMFS 2011c*) and Table 1-1.

12. SUBSISTENCE EFFECTS AND PLAN OF COOPERATION

There are no changes to Chapter 12 from the U.S. Navy's Letter of Authorization Application of April 2008 (*Navy 2008*), Addendum to Letter of Authorization Application of April 2009 (*Navy 2009*), and subsequent NMFS Biological Opinion of 13 May 2011 (*NMFS 2011b*) and NMFS Letter of Authorization (*NMFS 2011c*) and Table 1-1.

13. MONITORING AND REPORTING MEASURES

Unless otherwise noted herein, there will not be a substantial modification to the described work, mitigation or monitoring undertaken through 16 May 2016. Monitor reports required by 50 C.F.R. §218.173 and §218.174 will be submitted annually by 1 December.

Keyport Range Complex Year 1 Marine Mammal Monitoring Accomplishments From 12 April 2011 to 1 September 2011

As described in the NMFS Final Rule (2011a), special surveys are to be completed each year to monitor HFAS and MFAS events. These are to occur at the DBRC Range site. This will include visual surveys composed of vessel, shore monitoring and passive acoustic monitoring. Marine mammal observers may be on range craft and/or on shore side.

The Navy met its current Keyport Range Complex monitoring obligations as described in the Letter of Authorization in November 2011. This was particularly relevant given the limited amount of time from authorization of the Keyport Range Complex Letter of Authorization on 17 May 2011 and the end of the first monitoring period through 01 October 2011, and the effort to put in place the NMMOs during appropriate DBRC Site High and Mid frequency activities.

As described in the Monitoring Report being submitted to NMFS via separate correspondence, NMMOs were used to assess the impacts of RDT&E and training activities on marine species and effectiveness of the Navy's current mitigation practices.

Both HFAS and MFAS events were conducted on the DBRC Site on 7 November 2011. Navy observers and Navy escorts were in place on two 186 foot range craft and at the computer site ashore at Zelatched Point. A bottom mounted passive acoustic monitoring (PAM) system was operated and observed both aurally and in a spectral display during the events as well as prior to and after the events were completed.

NMMO support was provided by NAVFAC NW allowing for Navy observers to provide a perspective outside a range operator. The NAVFAC NW NMMO report is provided as an appendix to the Navy's Keyport Range Complex Monitoring Report. Pictures (Figures 13-1to 13-3) from the required day after monitoring are provided below.

Figure 13- 1 DBRC from computer site looking west northwest

Figure 13- 2 NS-50 Post event visual surveillance from computer site

Figure 13- 3 Post event visual surveillance at DBRC from shore below computer site looking west

Adaptive Management For Monitoring In the Keyport Range Complex

NMFS has acknowledged that the Keyport Range Complex monitoring will enhance the understanding of distribution and/or abundance comparisons in times or areas with concentrated HFAS/MFAS versus times or areas without HFAS/MFAS and provide an increased knowledge of the affected species as well as increase our understanding of the effectiveness of certain mitigation and monitoring measures. Additionally, NMFS also pointed out that information gained from the observations 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 Keyport 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, 2011 monitoring within the Keyport Range Complex represents the first year of a planned five year effort. At this point, Keyport would propose several modifications to the prescribed pre and post event monitoring of the monitoring plan as well as the location.

In the monitored events in November 2011, the entire instrumented range site shore line was observed from the water and from the shore the day prior and the day following the event as prescribed. Additionally, the area was observed the morning of the event prior to the craft entering the range area.

Recommend changing the timing of the shore-based and vessel surveys currently required. Rather than requiring surveys be conducted only the day prior and the day following the activity, recommend including the option of surveys the day of the activity before and after the range is utilized. The suggestion comes from the situation that in the inland waters, the marine animals are habituated to and

intermittently in the area. The presence or absence of animals in the area the day before may not have any bearing on whether there are animals in the area the day of the event. Presence of marine mammals is frequent and intermittent, therefore linking active sonar activities to species that are already intermittently in the immediate area of the Keyport activities is not possible. This conclusion is based on both empirical observations and on NMMO monitoring conclusions. The NMMO report is provided in the Marine Mammal Monitoring Report being sent under separate cover.

Proposed 17 May 2012 to 16 May 2016 Monitoring

The Navy proposes to keep the same level of monitoring effort, with the inclusions of the recommendations above, in the Keyport Range Complex as was committed and accomplished in Year 1 from 17 May 2012 to 16 May 2016.

There are no further changes to Chapter 13 from the U.S. Navy's Letter of Authorization Application of April 2008 (*Navy 2008*), Addendum to Letter of Authorization Application of April 2009 (*Navy 2009*), and subsequent NMFS Biological Opinion of 13 May 2011 (*NMFS 2011b*) and NMFS Letter of Authorization (*NMFS 2011c*) and Table 1-1.

14. RESEARCH

There are no changes to Chapter 14 from the U.S. Navy's Letter of Authorization Application of April 2008 (*Navy 2008*), Addendum to Letter of Authorization Application of April 2009 (*Navy 2009*), and subsequent NMFS Biological Opinion of 13 May 2011 (*NMFS 2011b*) and NMFS Letter of Authorization (*NMFS 2011c*) 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 Keyport Range Complex other than the Letter of Authorization specified Keyport-funded monitoring (*e.g., Section 13*).

15. REFERENCES

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