BILLING CODE 3510-22-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648-XB146

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to a Pile Replacement Project

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; issuance of an incidental harassment authorization.

SUMMARY: In accordance with the regulations implementing the Marine Mammal Protection Act (MMPA) as amended, notification is hereby given that we have issued an incidental harassment authorization (IHA) to the U.S. Navy (Navy) to incidentally harass, by Level B harassment only, six species of marine mammals during construction activities associated with a pile replacement project in Hood Canal, Washington.

DATES: This authorization is effective from July 16, 2012, through February 15, 2013.

ADDRESSES: A copy of the IHA and related documents are available by writing to Michael Payne, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910.

A copy of the application, including references used in this document, may be obtained by visiting the internet at: http://www.nmfs.noaa.gov/pr/permits/incidental.htm. For those members of the public unable to view these documents on the internet, a copy may be obtained by writing to the address specified above or telephoning the contact listed below (see FOR FURTHER INFORMATION CONTACT). The Navy's Environmental Assessment (2011) and

Supplemental EA (2012) and our associated Finding of No Significant Impact, prepared pursuant to the National Environmental Policy Act, are also available at the same site. Documents cited in this notice may also be viewed, by appointment, during regular business hours, at the aforementioned address.

FOR FURTHER INFORMATION CONTACT: Ben Laws, Office of Protected Resources, NMFS, (301) 427-8401.

SUPPLEMENTARY INFORMATION:

Background

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 et seq.) direct the Secretary of Commerce to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed authorization is provided to the public for review.

Authorization for incidental takings shall be granted if we find that the taking will have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant), and if the permissible methods of taking and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth. We have defined "negligible impact" in 50 CFR 216.103 as "...an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival."

Section 101(a)(5)(D) of the MMPA established an expedited process by which citizens of the U.S. can apply for an authorization to incidentally take small numbers of marine mammals by harassment. Section 101(a)(5)(D) establishes a 45-day time limit for our review of an application followed by a 30-day public notice and comment period on any proposed authorizations for the incidental harassment of marine mammals. Within 45 days of the close of the comment period, we must either issue or deny the authorization. Except with respect to certain activities not pertinent here, the MMPA defines "harassment" as: “any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment].”

Summary of Request

We received an application on March 8, 2012, from the Navy for the taking of marine mammals incidental to pile removal in association with a pile replacement project in the Hood Canal at Naval Base Kitsap at Bangor, WA (NBKB). This pile replacement project will occur during the designated in-water work window for Hood Canal, between July 16, 2012 and February 15, 2013. The issued IHA covers the second and final year of this project; we previously issued an IHA for the first year of work associated with this project (76 FR 30130; May 24, 2011). Seven species of marine mammals are known from the waters surrounding NBKB, including the Steller sea lion (Eumetopias jubatus), California sea lion (Zalophus californianus), harbor seal (Phoca vitulina), killer whale (Orcinus orca; transient type only), Dall’s porpoise (Phocoenoides dalli), harbor porpoise (Phocoena phocoena), and humpback whale (Megaptera novaeangliae). These species may occur year-round in the Hood Canal, with

the exception of the Steller sea lion, which is present only from fall to late spring (October to mid-April), and the California sea lion, which is not present during part of summer (late June through July). Additionally, while the Southern resident killer whale (listed as endangered under the Endangered Species Act [ESA]) is resident to the inland waters of Washington and British Columbia, it has not been observed in the Hood Canal in over 15 years and was therefore excluded from further analysis.

NBKB provides berthing and support services for OHIO Class ballistic missile submarines (SSBN), also known as TRIDENT submarines. The Navy's pile replacement project is necessary to complete repairs at the Explosive Handling Wharf #1 (EHW-1) facility at NBKB in order to to restore and maintain the structural integrity of the wharf and ensure its continued functionality to support necessary operational requirements. The EHW-1 facility, constructed in 1977, has become compromised due to the deterioration of the wharf's existing piling sub-structure. The planned activities include removal of ninety-six 24-in (0.6-m) diameter concrete piles, twenty-one 12-in (0.3-m) diameter steel fender piles, and eight 16-in (0.4-m) diameter steel falsework piles, and represent the remainder of work planned for the initial 2-year rehabilitation plan. The Navy is likely to continue rehabilitation work at EHW-1 in the long-term, but has no immediate plans to do so. All concrete piles would be removed via pneumatic chipping or similar method. All steel piles would be removed via vibratory hammer, direct pull, or, if necessary, cut off at the mud line; however, the analysis in this document assumes that all piles would be removed via vibratory hammer. No pile installation – and therefore no impact pile removal – will occur.

For pile removal activities, the Navy used our current thresholds for assessing impacts (NMFS, 2005, 2009), outlined later in this document. The Navy used recommended spreading

loss formulas (the practical spreading loss equation for underwater sounds and the spherical spreading loss equation for airborne sounds) and empirically-measured source levels from 18- to 30-in (0.5- to 0.8-m) diameter steel pile removal events, or concrete pile removal events using similar methodology, to estimate potential marine mammal exposures. Predicted exposures are outlined later in this document. The calculations predict that no Level A harassments would occur associated with pile removal activities, and that as many as 1,416 Level B harassments may occur during the pile replacement project from generation of underwater sound. No incidents of harassment were predicted from airborne sounds associated with pile removal.

Description of the Specified Activity

NBKB is located on the Hood Canal approximately 20 miles (32 km) west of Seattle, Washington (see Figures 2-1 through 2-3 in the Navy's application). NBKB provides berthing and support services for OHIO Class ballistic missile submarines (SSBN), also known as TRIDENT submarines. The Navy's pile replacement project is designed to maintain the structural integrity of EHW-1 and ensure its continued functionality to support operational requirements of the TRIDENT submarine program. Construction activities with the potential to cause harassment of marine mammals within the waterways adjacent to NBKB, under the MMPA, are vibratory and pneumatic chipping pile removal operations associated with the pile replacement project. These activities will occur between July 16, 2012 and February 15, 2013; all in-water construction activities within the Hood Canal are only permitted during July 16-February 15 in order to protect spawning fish populations.

As part of the Navy's sea-based strategic deterrence mission, the Navy Strategic Systems Programs directs research, development, manufacturing, test, evaluation, and operational support for the TRIDENT Fleet Ballistic Missile program. Maintenance and development of necessary

facilities for handling of explosive materials is part of these duties. The Navy's repair project includes the removal of 126 steel and concrete piles at EHW-1. Please see Figures 1-1 through 1-3 of the Navy's application for conceptual and schematic representations of the work proposed for EHW-1. Of the piles requiring removal, 96 are 24-in (0.6-m) diameter hollow pre-cast concrete piles which will be excised down to the mud line. Twenty-one 12-in (0.3-m) steel fender piles and eight 16-in (0.4-m) steel falsework piles will be extracted using a vibratory hammer or direct pull, and one additional 24-in steel fender pile will be extracted via direct pull only. Also included in the repair work is removal of the fragmentation barrier and walkway, construction of new cast-in-place pile caps (concrete formwork may be located below Mean Higher High Water [MHHW]), installation of the pre-stressed superstructure, installation of four sled-mounted cathodic protection (CP) systems, and installation or re-installation of related appurtenances.

Work completed at EHW-1 during the first year of work, conducted under an IHA issued by us (76 FR 30130; May 24, 2011), was described in the notice of receipt of Navy's application and request for comments on the proposed IHA that was published in the Federal Register (hereafter, 'the FR notice'; 77 FR 25408; April 30, 2012). In addition, the work proposed by the Navy and scheduled for completion under the current IHA was described in detail. Please see that document for more information on the Navy's planned and completed construction activities.

The Navy estimates that steel pile removal will occur at an average rate of two piles per day and that concrete pile removal will occur at a rate of three piles per day. These two activities would likely not occur on the same day, however. On the basis of these estimates, the Navy states that steel pile removal would require 15 days and concrete pile removal would require an

additional 32 days. Our analysis is thus based upon these numbers, and assumes that (1) all marine mammals available to be incidentally taken within the relevant area would be; and (2) individual marine mammals may only be incidentally taken once in a 24-hour period – for purposes of authorizing specified numbers of take – regardless of actual number of exposures in that period.

Description of Sound Sources and Distances to Thresholds

An in-depth description of sound sources in general was provided in the FR notice (77 FR 25408; April 30, 2012). Significant sound-producing in-water construction activities associated with the project include vibratory pile removal and pneumatic chipping of concrete piles.

Since 1997, we have used generic sound exposure thresholds as guidelines to estimate when harassment may occur. Current practice regarding exposure of marine mammals to sound defines thresholds as follows: cetaceans and pinnipeds exposed to sound levels of 180 and 190 dB root mean square (rms; note that all underwater sound levels in this document are referenced to a pressure of 1 μPa) or above, respectively, are considered to have been taken by Level A (i.e., injurious) harassment, while behavioral harassment (Level B) is considered to have occurred when marine mammals are exposed to sounds at or above 120 dB rms for continuous sound (such as will be produced by the EHW-1 activities) and 160 dB rms for pulsed sound, but below injurious thresholds. For airborne sound, pinniped disturbance from haul-outs has been documented at 100 dB (unweighted) for pinnipeds in general, and at 90 dB (unweighted) for harbor seals (note that all airborne sound levels in this document are referenced to a pressure of 20 μPa).

Distance to Sound Thresholds

Pile removal generates underwater noise that could potentially result in disturbance to marine mammals in the project area. Please see the FR notice for a detailed description of the calculations and information used to estimate distances to relevant threshold levels. Transmission loss, or the decrease in acoustic intensity as an acoustic pressure wave propagates out from a source, was estimated as so-called 'practical spreading loss'. This model follows a geometric propagation loss based on the distance from the pile, resulting in a 4.5 dB reduction in level for each doubling of distance from the source. In the model used here, the sound pressure level (SPL) at some distance away from the source (e.g., driven pile) is governed by a measured source level, minus the transmission loss of the energy as it dissipates with distance.

The intensity of pile removal sounds is greatly influenced by factors such as the type of piles, hammers, and the physical environment in which the activity takes place. Despite a large quantity of literature regarding SPLs recorded from in-water construction projects, there is a general lack of empirical data regarding vibratory pile removal and the acoustic output of chipping hammers. In order to determine reasonable SPLs and their associated affects on marine mammals that are likely to result from pile removal at NBKB, studies with similar properties to the Navy's project were evaluated. Overall, studies which met the following parameters were considered: (1) Pile size and materials: Steel pipe pile removal (12- to 24-in diameter) and concrete pile removal with chipping hammer or similar method (because these tools are used to chip portions of concrete from the pile, sound output is not tied to pile size); (2) Hammer machinery: Vibratory hammer for steel piles and pneumatic chipping hammer or similar tool for concrete piles; and (3) Physical environment: shallow depth (less than 30 m).

Based on studies satisfying these parameters, the Navy determined that representative source levels (standardized to 1 m distance from the source) would be 180 dB rms for vibratory

removal and 161 dB rms for pneumatic chipping. The estimated source level for vibratory removal is below the injury threshold for pinnipeds, while SPLs resulting from pneumatic chipping are well below levels that may cause injury to any marine mammal. These values represent reasonable SPLs which could be anticipated, and which were used in the acoustic modeling and analysis. All calculated distances to and the total area encompassed by the marine mammal underwater sound thresholds are provided in Table 1.

Table 1. Calculated distance(s) to and area encompassed by underwater marine mammal sound thresholds

Threshold	**Distance (m)**	**Area (km^2)**
Vibratory removal, cetacean injury (180 dB)	1	< 0.001
Vibratory removal, disturbance (120 dB)	10,000	314
Pneumatic chipping, disturbance (120 dB)	542	0.9

The values presented in Table 1 assume a field free of obstruction, which is unrealistic, because Hood Canal does not represent open water conditions. Instead, sounds attenuate as they encounter land masses or bends in the canal. As a result, some of the distances and areas of impact calculated cannot actually be attained at the project area. The actual distances and areas for behavioral disturbance thresholds for vibratory pile removal and pneumatic chipping may be shorter and/or smaller than those calculated due to the irregular contour of the waterfront, the narrowness of the canal, and the maximum fetch (furthest distance sound waves travel without obstruction [i.e., line of sight]) at the project area. The actual areas encompassed by sound exceeding or reaching the 120 dB threshold are 35.9 km^2 and 0.6 km^2 for vibratory removal and pneumatic chipping, respectively. See Figures 6-1 and 6-2 of the Navy's application for a depiction of the size of areas in which each underwater sound threshold is predicted to occur at the project area due to pile removal.

Pile removal can generate airborne sound that could potentially result in disturbance to marine mammals (specifically, pinnipeds) which are hauled out or at the water's surface. As a result, the Navy analyzed the potential for pinnipeds hauled out or swimming at the surface near NBKB to be exposed to airborne SPLs that could result in Level B behavioral harassment. A spherical spreading loss model (i.e., 6 dB reduction in sound level for each doubling of distance from the source), in which there is a perfectly unobstructed (free-field) environment not limited by depth or water surface, is appropriate for use with airborne sound and was used to estimate the distance to the airborne thresholds.

As was discussed for underwater sound from pile removal, the intensity of pile removal sounds is greatly influenced by factors such as the type of piles, hammers, and the physical environment in which the activity takes place. In order to determine reasonable airborne SPLs and their associated effects on marine mammals that are likely to result from pile removal at NBKB, studies with similar properties to the Navy's project, as described previously, were evaluated. Evaluation of representative pile removal activities that have occurred in recent years, and which represent reasonable SPLs which could be anticipated, provide representative source levels of approximately 116.5 dB rms (unweighted) for vibratory removal and 112 dB rms (unweighted) for chipping. All calculated distances to and the total area encompassed by the marine mammal airborne sound thresholds are provided in Table 2.

Table 2. Calculated distance(s) to and area encompassed by airborne marine mammal sound thresholds

Threshold	**Distance (m)**	**Area (km^2)**
Vibratory removal, pinniped disturbance (100 dB)	7	< 0.001
Vibratory removal, harbor seal disturbance (90 dB)	20	0.001
Pneumatic chipping, pinniped disturbance (100 dB)	4	< 0.001

Pneumatic chipping, harbor seal disturbance (90 dB)	13	< 0.001

Construction sound associated with the project would not extend beyond the disturbance zone for underwater sound that would be established to protect pinnipeds. No haul-outs or rookeries are located within the airborne harassment radii. It is important to note that animals within the harassment radii for airborne sound, even if they are in the water rather than hauled-out, may be exposed to SPLs that result in behavioral harassment when their heads are above water. However, these exposures are not considered separate 'takes' for purposes of estimating total incidental take that may be caused by the project activities, as the animals would be previously exposed to underwater sound at or above levels that may result in behavioral harassment. See Figures 6-3 through 6-6 of the Navy's application for a depiction of the size of areas in which each airborne sound threshold is predicted to occur at the project area due to pile removal.

Acoustic Monitoring

In 2011, the Navy conducted acoustic monitoring as required by IHAs for the first year of repair work at EHW-1 and for a test pile project (76 FR 25408; June 30, 2011) conducted in order to obtain geotechnical data in advance of the construction of a second EHW. The two projects together involved impact driving of 24 to 48-in piles, vibratory installation of 16 to 48-in piles, and vibratory removal of 12 to 48-in piles. All piles were steel pipe piles. Primary objectives for the acoustic monitoring were to characterize underwater and airborne source levels for each pile size and hammer type and to verify distances to relevant threshold levels by characterizing site-specific transmission loss. Secondary objectives included testing the effective attenuation performance for use of a bubble curtain and investigation of SPLs produced during

soft starts. Select results are reproduced here; the interested reader may find the entire reports posted at http://www.nmfs.noaa.gov/pr/permits/incidental.htm.

Table 3. Acoustic monitoring results from 2011 activities at NBKB

Pile size (in)	Hammer type[1]	n[2]	Underwater			Airborne		Distances to threshold (m)[7]					
			RL[3]	SD[4]	TL[5]	RL[6]	SD	190	180	160	120	100	90
24	Impact	1 (2)	174	0.7	13.2	89	n/a	< 10	< 10	108	n/a	47	150
36	Impact	10 (17)/9	182	5.7	16.4	92	2.3	< 10	28	398	n/a	48	150
48	Impact	4 (8)	187	4.4	13.4	91	2.1	< 10/15	40	1,180	n/a	34	108
24	Vibratory	4 (7)/2	164	5.0	17.4	91	1.4	-	-	n/a	2,635	14	45
36	Vibratory (I)	23 (42)/30	162	4.3	15.1	93	2.9	-	-	n/a	6,082	20	64
36	Vibratory (R)	21 (36)	157	4.5									
48	Vibratory (I)	7 (14)/11	163	5.1	16.3	94	3.2	-	-	n/a	5,046	24	75
48	Vibratory (R)	8 (15)	155	4.5									
12	Vibratory (R)	6 (4)[8]	160	2.4	16.5	-	-	-	-	n/a	5,375	22	69
16	Vibratory (I)	8 (16)	159	4.7		-	-	-	-	n/a			
30	Vibratory (I)	44 (87)	165	4.5		-	-	-	-	n/a		44	138

[1]For vibratory hammer, I = installation and R = removal. Because of limited sample size for 24-in piles, all events were combined. All data for impact driving includes use of bubble curtain.

[2]n = sample size, or number of measured pile driving events. For categories where two numbers are listed, sample size was different for underwater and airborne measurements. For underwater, each event may have up to two measurements because two hydrophones were deployed at different depths although both hydrophones did not produce usable data for all events. For airborne events, each event represents a single measurement. Information is presented as follows: # underwater events measured (total # measurements – maximum would be twice the total # events)/# airborne events measured (if different).

[3]Received level at 10 m, presented in dB re: 1 µPa rms.

[4]Standard deviation

[5]Transmission loss (log_{10}). Mean TL calculations for vibratory driving were not separated by I/R. A single mean TL value was calculated for 12/16/30-in piles.

[6]Received level at 15 m, presented in dB re: 20 µPa rms. Airborne measurements were combined for I/R events, as no difference in airborne SPLs would be expected. No near-source measurements were conducted for 12/16/30-in piles.

[7]Indicated thresholds are in dB rms and correspond with those described previously under Description of Sound Sources and Distances to Thresholds. Combined values for mean distance to threshold were calculated for I/R events and for airborne sound. Values were calculated using interpolated TL values and SPL measurements at multiple distances from the source. A dash indicates that mean source level was below the relevant threshold. For impact driving of 48-in piles, mean distance to the 190 dB threshold was calculated as being < 10 m for measurements taken at the mid-depth hydrophone and 15 m for measurements taken at the deep hydrophone. For all others, mean of the mean values taken at mid-depth and deep hydrophone is presented.

[8]These six events were measured in two episodes; i.e., three separate events were measured to provide a mean in each of two episodes.

Comparison of Predictions and Measurements

The project activities involve vibratory removal of 12 to 16-in steel piles and removal by pneumatic chipping or similar method of concrete piles. Sound levels produced by the latter

activity are not dependent upon pile size. As shown by the empirical data collected during 2011 activities, vibratory removal of 12- and 16-in piles would be expected to produce sound levels not exceeding the thresholds for Level A harassment (i.e., 180/190 dB rms). The actual distance to the 120 dB rms behavioral harassment threshold is likely to be significantly smaller than predicted. There is no relevant comparison for pneumatic chipping.

Mean distances to airborne thresholds were larger than those predicted for vibratory removal activities. The observed distances for 2011 activities remain smaller than the least distance to an available haul-out area. However, regardless of actual distance to threshold, it is likely that any animal exposed to airborne sound that may result in behavioral harassment would also be exposed to underwater sound above behavioral harassment thresholds, even if hauled-out during pile removal activity. We recognize that swimming pinnipeds may be exposed to airborne sound that may cause behavioral harassment if they raise their heads above water within the relevant zone; however, for purposes of take estimation these are accounted for through estimation of incidental take resulting from underwater sound. An animal is considered to be 'available' for incidental take by behavioral harassment only once per 24-hour period, regardless of source.

Comments and Responses

We published a notice of receipt of the Navy's application and proposed IHA in the Federal Register on April 30, 2012 (77 FR 25408). During the 30-day comment period, NMFS received a letter from the Marine Mammal Commission (MMC). The MMC's comments, and our responses, are provided here. All measures proposed in the initial Federal Register notice are included within the authorization and NMFS has determined that they will effect the least practicable impact on the species or stocks and their habitats.

Comment 1: The Commission recommends that we require the Navy to measure in-air sound levels as a function of distance from the pneumatic chipper and make concurrent observations of marine mammal behavioral responses to in-air sound produced by those activities.

Response: We concur with the Commission's recommendation. As originally proposed, the Navy will measure airborne sound levels associated with removal of concrete piles. The specifics of the monitoring protocol are described in detail in the Navy's Acoustic Monitoring Plan. The Navy will make concurrent observations of behavioral reactions and, if possible, relate these to approximate received levels of sound in order to better understand what levels of sound might result in behavioral harassment given the context present at the time of the observation. The Commission also notes that they would welcome the opportunity to consult with us to (1) identify the types of activities that have the potential to take marine mammals by exposure to in-air sounds, (2) determine the best scientific basis for identifying exposure thresholds of concern, and (3) develop research strategies for gathering the information needed to set more reliable thresholds. We look forward to working with the Commission to better understand these issues.

The Commission also encourages us to simply specify that the authorized number of takes of pinnipeds by Level B harassment, although based upon the predicted footprint of underwater sound, could occur by exposure to underwater and/or airborne sound when the animals are within an area that is ensonified to both 120 dB underwater (for non-pulsed sounds, as will be produced by this project) and 90/100 dB in-air (harbor seals and other pinnipeds, respectively), rather than attempting to predict these takes separately. We agree with that recommendation. Pinnipeds, whether hauled-out or looking with head above water in the project

vicinity, may be exposed to both airborne and underwater sound levels that could cause behavioral reactions indicating harassment. We consider exposure of the same individual to different stimuli that may potentially result in harassment – whether airborne or underwater sound or pulsed or non-pulsed sound – within the same 24-hour period to be a single incidence of take.

Comment 2: The Commission recommends that we require the Navy to re-estimate the number of in-water and in-air takes using the overall density of harbor seals in Hood Canal (i.e., 3.74 animals/km^2) or to use a different density estimate if monitoring data indicate one that is appropriate.

Response: We disagree with the Commission's recommendation and feel that the density estimate used for estimating potential incidental take is sufficiently conservative. As described in greater detail in the FR notice of proposed authorization (77 FR 25408; April 30, 2012), the Navy's density estimate relies on work showing that, of an estimated 1,088 seals resident to the Hood Canal, approximately 35 percent will be in the water at any given time (Huber et al., 2001; Jeffries et al., 2003), producing a density estimate of 1.31 seals/km^2. The Commission contends that this will result in an underestimate of take, because essentially all of the seals may enter the water over the matter of hours during which pile removal may occur in a day. It is possible that greater than 35 percent of seals could enter the water during the course of pile removal activity. However, remembering that the population estimate of 1,088 seals represents the entirety of Hood Canal (291 km^2 vs. the 35.9 km^2 predicted area of effect), it is unlikely that all of these animals would be exposed to elevated levels of sound from the project, even over the course of multiple days. No data exist regarding fine-scale harbor seal movements within the project area on time durations of less than a day, thus precluding an assessment of

ingress or egress of different animals through the action area. As such, it is impossible, given available data, to determine exactly what number of individuals above 35 percent may potentially be exposed to underwater sound. There are no existing data that would indicate that the proportion of individuals entering the water within the predicted area of effect during pile removal would be dramatically larger than 35 percent; thus, the Commission's suggestion that 100 percent of the population be used to estimate density would likely result in a gross exaggeration of potential take.

In addition, there are a number of factors indicating that the density we used should not result in an underestimate of take. Hauled-out harbor seals are necessarily at haul-outs, and no significant harbor seal haul-outs are located within or near the action area. Harbor seals observed in the vicinity of the NBKB shoreline are rarely hauled-out (for example, in formal surveys during 2007-08, approximately 86 percent of observed seals were swimming), and when hauled-out, they do so opportunistically (i.e., on floating booms rather than established haul-outs). Harbor seals are typically unsuited for using manmade haul-outs at NBKB, which are used by sea lions. Primary harbor seal haul-outs in Hood Canal are located at significant distance (20 km or more) from the action area in Dabob Bay or further south (see Figure 4-1 in the Navy's application), meaning that animals casually entering the water from haul-outs or flushing due to some disturbance at those locations would not likely be exposed to underwater sound from the project; rather, only those animals embarking on foraging trips and entering the action area may be exposed. Moreover, because the Navy is unable to determine from field observations whether the same or different individuals are being exposed, each observation will be recorded as a new take, although an individual theoretically would only be considered as taken once in a given day.

There are two final factors that support the conservatism of the 1.31 density estimate: (1) limited surveys conducted during construction in Hood Canal during off days in 2011 produced an uncorrected density estimate of approximately 0.55 seals/km^2; and (2) although authorized to incidentally take 1,668 seals (corrected for actual number of pile driving days) during two projects conducted in Hood Canal in 2011, the total estimate of actual take (observed takes and observations extrapolated to unobserved area) was only 187 seals.

Comment 3: The Commission recommends that we require the Navy to implement soft-start procedures after 15 minutes if pile removal was delayed or shut down because of the presence of a marine mammal within or approaching the shutdown zone.

Response: We disagree with this recommendation. The Commission cites several reasons why pinnipeds may remain in a shutdown zone after shutdown and yet be undetected by observers during the 15 minute clearance period (e.g., perception and availability bias). While this is possible in theory, we find it extremely unlikely that an animal could remain undetected in such a small zone and under typical conditions in Hood Canal. The shutdown zone for pinnipeds has a 10 m radial distance, while typical observation conditions in the Hood Canal are excellent. We believe the possibility of a pinniped remaining undetected in the shutdown zone, in relatively shallow water, for greater than 15 minutes is discountable. A requirement to implement soft start after every shutdown or delay less than 30 minutes in duration would be impracticable, resulting in significant construction delays and therefore extending the overall time required for the project, and thus the number of days on which disturbance of marine mammals could occur.

Comment 4: The Commission recommends that we require the Navy to develop a monitoring strategy that ensures it will be able to detect and characterize marine mammal

responses to the pile removal activities as a function of sound levels and distance from the pile removal sites.

Response: We believe that the Navy, in consultation with us, has developed such a strategy. The Commission states that the goal is not simply to employ a strategy that ensures monitoring out to a certain distance, but rather to employ a strategy that provides the information necessary to determine if the construction activities have adverse effects on marine mammals and to describe the nature and extent of those effects. We agree with that statement, and note that the Navy does not simply monitor within defined zones, ignoring occurrences outside those zones. The mitigation strategy is designed to implement shutdown of activity only for marine mammal occurrence within designated zones, but all observations of marine mammals, and any observed behavior, whether construed as a reaction to project activity or not, are recorded, regardless of distance to project activity. This information is coupled with acoustic monitoring data (i.e., sound levels recorded at multiple defined distances from the activity) to draw conclusions about the impact of the activity on marine mammals. The Commission notes that the Navy does not plan to use vessel-based observers in the far-field. This is technically correct for the EHW-1 project, but there will be at least one vessel-based observer located on the far-field acoustic monitoring vessel associated with the concurrent EHW-2 project, for a minimum of 30 days. Information from this far-field observer effort will be applicable to both EHW-1 and EHW-2 projects, in terms of ensuring that actual marine mammal occurrence in the far-field is not substantially different from what has been assumed on the basis of 2011 monitoring, other past monitoring efforts specific to NBKB, and information found in the literature. Additionally, the larger monitoring effort conducted by the Navy in deeper waters of Hood Canal during their 2011 project monitoring was an important piece of the Navy's overall monitoring strategy for the

ongoing suite of actions at NBKB and may reasonably be used as a reference for the current activities. Using that information, as well as the results of the more limited deep-water component of the EHW-2 monitoring plan, we can gain an acceptable understanding of marine mammal occurrence and behavior within the Level B harassment zone in deeper waters beyond the waterfront restricted area, which is intensively monitored. It is unclear what aspects of the monitoring goals or strategy the Commission considers inadequate.

Comment 5: The Commission recommends that we complete an analysis of the impact of the proposed activities together with the cumulative impacts of all the other pertinent risk factors (including the Navy's concurrent EHW-2 construction project) impacting marine mammals in the Hood Canal area prior to issuing the incidental harassment authorization.

Response: Section 101(a)(5)(D) of the MMPA requires NMFS to make a determination that the harassment incidental to a specified activity will have a negligible impact on the affected species or stocks of marine mammals, and will not result in an unmitigable adverse impact on the availability of marine mammals for taking for subsistence uses. Neither the MMPA nor NMFS' implementing regulations specify how to consider other activities and their impacts on the same populations. However, consistent with the 1989 preamble for NMFS' implementing regulations (54 FR 40338; September 29, 1989), the impacts from other past and ongoing anthropogenic activities are incorporated into the negligible impact analysis via their impacts on the environmental baseline (e.g., as reflected in the density/distribution and status of the species, population size and growth rate, and ambient noise).

In addition, cumulative effects were addressed in the Navy's Environmental Assessment and in the biological opinion prepared for this action. These documents, as well as the relevant Stock Assessment Reports, are part of NMFS' Administrative Record for this action, and

provided the decision-maker with information regarding other activities in the action area that affect marine mammals, an analysis of cumulative impacts, and other information relevant to the determination made under the MMPA.

Comment 6: The Commission recommends that we encourage the Navy to combine future requests for incidental harassment authorizations for all activities that would occur in the same general area and within the same year rather than segmenting those activities and their associated impacts by requesting separate authorizations.

Response: We agree with the Commission's recommendation and have encouraged the Navy to do so.

Comment 7: The Commission recommends that we adopt a policy to provide an additional opportunity for public review and comment before amending authorizations if any substantive changes are made to them after they have been issued or if the information on which a negligible impact determination is based is significantly changed in a way that indicates the likelihood of an increased level of taking or impacts not originally considered.

Response: We disagree with the Commission's contention that the referenced IHA modifications constituted a substantive change. The modifications involved small increases to the amount of incidental take of harbor porpoise authorized for two projects conducted in 2011 at NBKB in response to new information about harbor porpoise occurrence and habitat use at NBKB. In our findings for the referenced modification, we determined that authorization of the incidental taking, by Level B harassment only, of increased numbers of harbor porpoise did not alter the original scope of activity analyzed, the monitoring and mitigation measures implemented, or the impact analysis in a manner that materially affected the basis for our original findings. The increased level of authorized take for harbor porpoise remained a small

number, by any definition of that term. The Inland Washington stock of harbor porpoise is not listed under the ESA, nor is it considered depleted or designated as a strategic stock under the MMPA. The increase in takings was considered negligible in comparison with the overall population of the stock. The modifications reflected a more complete understanding of harbor porpoise presence and use of habitat in the Hood Canal, but constituted a negligible increase in impacts to the stock. We believe that those modifications were within the scope of analysis supporting the determinations for the original IHAs, and that those original findings remained valid. Nevertheless, we thank the Commission for the recommendation and will consider it in the future for situations where substantive changes are required.

Description of Marine Mammals in the Area of the Specified Activity

There are seven marine mammal species, four cetaceans and three pinnipeds, which may inhabit or transit through the waters nearby NBKB in the Hood Canal. These include the transient killer whale, harbor porpoise, Dall's porpoise, Steller sea lion, California sea lion, harbor seal, and humpback whale. While the Southern Resident killer whale is resident to the inland waters of Washington and British Columbia, it has not been observed in the Hood Canal in over 15 years, and therefore was excluded from further analysis. The Steller sea lion and humpback whale are the only marine mammals that may occur within the Hood Canal that are listed under the ESA; the humpback whale is listed as endangered and the eastern distinct population segment (DPS) of Steller sea lion is listed as threatened. All marine mammal species are protected under the MMPA. The FR notice (77 FR 25408; April 30, 2012) summarizes the population status and abundance of these species and provides detailed life history information.

Potential Effects of the Specified Activity on Marine Mammals

NMFS has determined that pile removal, as outlined in the project description, has the potential to result in behavioral harassment of marine mammals that may be swimming, foraging, or resting in the project vicinity while pile removal is being conducted. Pile removal could potentially harass those pinnipeds that are in the water close to the project site, whether their heads are above or below the surface. The FR notice (77 FR 25408; April 30, 2012) provides a detailed description of marine mammal hearing and of the potential effects of these construction activities on marine mammals.

Anticipated Effects on Habitat

The proposed activities at NBKB would not result in permanent impacts to habitats used directly by marine mammals, such as haul-out sites, but may have potential short-term impacts to food sources such as forage fish and salmonids. There are no rookeries or major haul-out sites within 10 km (6.2 mi), foraging hotspots, or other ocean bottom structures of significant biological importance to marine mammals that may be present in the marine waters in the vicinity of the project area. Therefore, the main impact issue associated with the proposed activity would be temporarily elevated sound levels and the associated direct effects on marine mammals, as discussed previously in this document. The most likely impact to marine mammal habitat occurs from pile removal effects on likely marine mammal prey (i.e., fish) near NBKB and minor impacts to the immediate substrate during removal of piles during the wharf rehabilitation project. The FR notice (77 FR 25408; April 30, 2012) describes these potential impacts in greater detail.

Previous Activity

The proposed action for this IHA request represents the second year of a 2-year project. We issued an IHA for the first year of work on May 24, 2011 (76 FR 30130). In accordance with

the 2011 IHA, the Navy submitted a monitoring report, and the information contained therein was considered in this analysis. During the course of activities conducted under the previous authorization, the Navy did not exceed the take levels authorized under that IHA. Additional information regarding harbor porpoise, Steller sea lion, and humpback whale occurrence in the Hood Canal has been considered in this analysis.

Mitigation

In order to issue an incidental take authorization (ITA) under section 101(a)(5)(D) of the MMPA, NMFS must, where applicable, set forth the permissible methods of taking pursuant to such activity, and other means of effecting the least practicable impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for taking for certain subsistence uses (where relevant).

The predicted results for zones of influence (ZOIs; see "Estimated Take by Incidental Harassment") were used to develop mitigation measures for pile removal activities at NBKB. ZOIs are often used to effectively represent the mitigation zone that would be established around each pile to prevent Level A harassment of marine mammals, and also establish zones within which Level B harassment of marine mammals may occur. In addition to the measures described later in this section, the Navy will employ the following standard mitigation measures:

(a) Conduct briefings between construction supervisors and crews, marine mammal monitoring team, acoustical monitoring team, and Navy staff prior to the start of all pile removal activity, and when new personnel join the work, in order to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.

(b) Comply with applicable equipment sound standards and ensure that all construction equipment has sound control devices no less effective than those provided on the original equipment.

(c) For in-water heavy machinery work other than pile removal, if a marine mammal comes within 10 m (33 ft), operations shall cease and vessels shall reduce speed to the minimum level required to maintain steerage and safe working conditions. This type of work could include, for example, movement of the barge to the pile location or removal of the pile from the water column/substrate via a crane (i.e., direct pull). For these activities, monitoring will take place from 15 minutes prior to initiation until the action is complete.

Monitoring and Shutdown

The following measures apply to the Navy's mitigation through shutdown and disturbance zones:

Shutdown Zone – For all pile removal activities, the Navy will establish a shutdown zone (defined as, at minimum, the area in which SPLs equal or exceed the 180/190 dB rms acoustic injury criteria). The purpose of a shutdown zone is to define an area within which shutdown of activity would occur upon sighting of a marine mammal (or in anticipation of an animal entering the defined area), thus preventing injury, serious injury, or death of marine mammals. Although predictions indicate (and empirical measurements confirm) that radial distances to the 180/190-dB threshold will be less than 10 m – or would not exist because source levels are lower than the threshold – shutdown zones will conservatively be set at a minimum 10 m. This precautionary measure is intended to further reduce any possibility of injury to marine mammals by incorporating a buffer to the 180/190-dB threshold within the shutdown area.

Disturbance Zone – Disturbance zones are typically defined as the area in which SPLs equal or exceed 120 dB rms (for non-pulsed sound, as will be produced by the project activities). However, when the size of a disturbance zone is sufficiently large as to make monitoring of the entire area impracticable (as in the case of the vibratory removal zone here, predicted to encompass an area of 35.9 km^2), the disturbance zone may be defined as some area that may reasonably be monitored or, alternatively, is a de facto zone defined by the distance that monitors are capable of observing from defined deployment locations. For removal of concrete piles, the Navy is able to monitor the entire area of predicted ensonification to levels exceeding the behavioral harassment criterion (542 m radial distance). However, for all activities, protected species observers (PSOs) will record all observations of marine mammals, whether estimated to be within a defined zone or not.

Disturbance zones provide utility for monitoring conducted for mitigation purposes (i.e., shutdown zone monitoring) by establishing monitoring protocols for areas adjacent to the shutdown zones. Monitoring of disturbance zones enables PSOs to be aware of and communicate the presence of marine mammals in the project area but outside the shutdown zone and thus prepare for potential shutdowns of activity. However, the primary purpose of disturbance zone monitoring is for documenting incidents of Level B harassment; disturbance zone monitoring is discussed in greater detail later (see Monitoring and Reporting). As with any such large action area, it is impossible to guarantee that all animals would be observed or to make comprehensive observations of fine-scale behavioral reactions to sound.

All disturbance and shutdown zones would initially be based on the distances from the source that are predicted for each threshold level. However, should data from in-situ acoustic monitoring indicate that actual distances to these threshold zones are different, the size of the

shutdown and disturbance zones would be adjusted accordingly. However, these adjustments should not be considered 'real-time', as the collection and processing of a sufficient quantity of data upon which to base such a decision cannot generally occur on a real-time basis. Nevertheless, if data clearly indicate that zones are inaccurate and EHW-1 project activity is ongoing, appropriate adjustments of shutdown zones shall be made.

Monitoring Protocols – Monitoring would be conducted for a minimum 10 m shutdown zone surrounding each pile for the presence of marine mammals before, during, and after pile removal activities. In addition, PSOs shall record all observable incidences of marine mammal occurrence, regardless of distance from activity, and shall document any behavioral reactions. However, observations made outside the shutdown zone will not result in shutdown; that pile segment would be completed without cessation, unless the animal approaches or enters the shutdown zone, at which point all pile removal activities would be halted.

Detailed observations outside the Waterfront Restricted Area (WRA) as defined by the Port Security Barrier, are likely not possible, and it would be impossible for the Navy to account for all individuals occurring within the full disturbance zone with any degree of certainty. Monitoring would take place from 15 minutes prior to initiation through 30 minutes post-completion of pile removal activities. Pile removal activities include the time to remove a single pile or series of piles, as long as the time elapsed between uses of the pile removal equipment is no more than 30 minutes.

The following additional measures would apply to visual monitoring:

(a) Monitoring would be conducted by qualified observers. Qualified observers are trained biologists, with the following minimum qualifications:

- Visual acuity in both eyes (correction is permissible) sufficient for discernment of moving targets at the water's surface with ability to estimate target size and distance; use of binoculars may be necessary to correctly identify the target;
- Advanced education in biological science, wildlife management, mammalogy, or related fields (bachelor's degree or higher is required);
- Experience and ability to conduct field observations and collect data according to assigned protocols (this may include academic experience);
- Experience or training in the field identification of marine mammals, including the identification of behaviors;
- Sufficient training, orientation, or experience with the construction operation to provide for personal safety during observations;
- Writing skills sufficient to prepare a report of observations including but not limited to the number and species of marine mammals observed; dates and times when in-water construction activities were conducted; dates and times when in-water construction activities were suspended to avoid potential incidental injury from construction sound of marine mammals observed within a defined shutdown zone; and marine mammal behavior; and
- Ability to communicate orally, by radio or in person, with project personnel to provide real-time information on marine mammals observed in the area as necessary.

A trained observer would be placed from the best vantage point(s) practicable, as defined in the Navy's Marine Mammal Monitoring Plan, to monitor for marine mammals and implement

shutdown or delay procedures when applicable by calling for the shutdown to the equipment operator.

(b) Prior to the start of pile removal activity, the shutdown zone will be monitored for 15 minutes to ensure that it is clear of marine mammals. Pile removal will only commence once observers have declared the shutdown zone clear of marine mammals; animals will be allowed to remain in the disturbance zone (i.e., must leave of their own volition) and their behavior will be monitored and documented.

(c) If a marine mammal approaches or enters the shutdown zone during the course of pile removal operations, pile removal will be halted and delayed until either the animal has voluntarily left and been visually confirmed beyond the shutdown zone or 15 minutes have passed without re-detection of the animal.

Acoustic Measurements

Acoustic measurements would be used to empirically characterize source levels for pneumatic chipping. For further detail regarding the Navy's acoustic monitoring plan see "Monitoring and Reporting".

Timing Restrictions

The Navy has set timing restrictions for pile removal activities to avoid in-water work when ESA-listed fish populations are most likely to be present. The in-water work window for avoiding negative impacts to fish species is July 16-February 15.

Soft-start

The use of a soft-start procedure is believed to provide additional protection to marine mammals by warning, or providing marine mammals a chance to leave the area prior to the hammer operating at full capacity. The wharf rehabilitation project will utilize soft-start

techniques for vibratory pile removal. The soft-start requires contractors to initiate sound from vibratory hammers for fifteen seconds at reduced energy followed by a 30-second waiting period. This procedure is repeated two additional times.

Daylight Construction

Pile removal and other in-water work will occur only during daylight hours (i.e., civil dawn to civil dusk).

Mitigation Effectiveness

It should be recognized that although marine mammals will be protected through the use of measures described here, the efficacy of visual detection depends on several factors including the observer's ability to detect the animal, the environmental conditions (visibility and sea state), and monitoring platforms. All observers utilized for mitigation activities will be experienced biologists with training in marine mammal detection and behavior. Trained observers have specific knowledge of marine mammal physiology, behavior, and life history, which may improve their ability to detect individuals or help determine if observed animals are exhibiting behavioral reactions to construction activities.

The Puget Sound region, including the Hood Canal, only infrequently experiences winds with velocities in excess of 25 kn (Morris et al., 2008). The typically light winds afforded by the surrounding highlands coupled with the fetch-limited environment of the Hood Canal result in relatively calm wind and sea conditions throughout most of the year. The wharf rehabilitation project site has a maximum fetch of 8.4 mi (13.5 km) to the north, and 4.2 mi (6.8 km) to the south, resulting in maximum wave heights of from 2.85-5.1 ft (0.9-1.6 m) (Beaufort Sea State (BSS) between two and four), even in extreme conditions (30 kn winds) (CERC, 1984). Visual

detection conditions are considered optimal in BSS conditions of three or less, which align with the conditions that should be expected for the wharf rehabilitation project at NBKB.

We have carefully evaluated the applicant's mitigation measures and considered a range of other measures in the context of ensuring that we prescribe the means of effecting the least practicable impact on the affected marine mammal species and stocks and their habitat. Our evaluation of potential measures included consideration of the following factors in relation to one another: (1) the manner in which, and the degree to which, the successful implementation of the measure is expected to minimize adverse impacts to marine mammals; (2) the proven or likely efficacy of the specific measure to minimize adverse impacts as planned; and (3) the practicability of the measure for applicant implementation, including consideration of personnel safety, and practicality of implementation.

Based on our evaluation of the applicant's proposed measures, as well as other measures considered, we have determined that the proposed mitigation measures provide the means of effecting the least practicable impact on marine mammal species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

Monitoring and Reporting

In order to issue an ITA for an activity, section 101(a)(5)(D) of the MMPA states that we must, where applicable, set forth "requirements pertaining to the monitoring and reporting of such taking". The MMPA implementing regulations at 50 CFR 216.104 (a)(13) indicate that requests for ITAs must include the suggested means of accomplishing the necessary monitoring and reporting that would result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present in the proposed action area.

Acoustic Monitoring

The Navy will conduct acoustic monitoring for pneumatic chipping of concrete piles to characterize the actual source levels for this previously unstudied activity. Previous monitoring conducted by the Navy in 2011 provides data on site-specific propagation loss that may be applied to empirically measured source levels in order to determine actual distances to relevant thresholds. In addition, airborne acoustic monitoring will be conducted during pile removal through chipping.

The Navy will conduct acoustic monitoring in accordance with the NMFS-approved acoustic monitoring plan. Please see that plan, available at http://www.nmfs.noaa.gov/pr/permits/incidental.htm, for more detail. At a minimum, acoustic monitoring, both underwater and in-air, will be conducted for five concrete piles. However, monitoring may be continued if necessary to collect a representative and usable dataset.

Visual Monitoring

The Navy would collect sighting data and behavioral responses to construction for marine mammal species observed in the region of activity during the period of activity. All observers would be trained in marine mammal identification and behaviors. NMFS requires that the observers have no other construction-related tasks while conducting monitoring. The Navy will conduct biological monitoring in accordance with the NMFS-approved marine mammal monitoring plan. Please see that document, available at http://www.nmfs.noaa.gov/pr/permits/incidental.htm, for more information.

Methods of Monitoring – The Navy would monitor the shutdown zone and surrounding waters before, during, and after pile removal. There would, at all times, be at least one observer stationed at an appropriate vantage point to observe the shutdown zones associated with each

operating hammer. There would also at all times be at least one additional observer stationed to observe the surrounding waters within the WRA. Based on NMFS requirements, the Marine Mammal Monitoring Plan includes the following procedures for pile removal:

(1) MMOs would be located at the best vantage point(s) in order to properly see the entire shutdown zone and as much of the disturbance zone as possible.

(2) During all observation periods, observers will use binoculars and the naked eye to search continuously for marine mammals.

(3) If the shutdown zone or surrounding waters within the WRA are obscured by fog or poor lighting conditions, pile removal at that location will not be initiated until that zone is visible.

(4) The shutdown zone and surrounding waters within the WRA will be monitored for the presence of marine mammals before, during, and after any pile removal activity.

Pre-activity Monitoring – The shutdown zone and surrounding waters within the WRA will be monitored for 15 minutes prior to initiating pile removal. If marine mammal(s) are present within the shutdown zone prior to pile removal, or during the soft start, the start of pile removal will be delayed until the animal(s) leave the shutdown zone. Pile removal will resume only after the PSO has determined, through observation or by waiting 15 minutes, that the animal(s) has moved outside the shutdown zone.

During Activity Monitoring – The shutdown zone and surrounding waters within the WRA will also be monitored throughout the time required to remove a pile. If a marine mammal is observed entering the disturbance zone, a take will be recorded and behaviors documented. However, that pile segment will be completed without cessation, unless the animal enters or approaches the shutdown zone, at which point all pile removal activities will be halted. Pile

removal can only resume once the animal has left the shutdown zone of its own volition or has not been re-sighted for a period of 15 minutes.

Post-Activity Monitoring – Monitoring of the shutdown zone and surrounding waters within the WRA will continue for 30 minutes following the completion of pile removal.

Individuals implementing the monitoring protocol will assess its effectiveness using an adaptive approach. Monitoring biologists will use their best professional judgment throughout implementation and will seek improvements to these methods when deemed appropriate. Any modifications to protocol will be coordinated between the Navy and NMFS.

Data Collection

We require that the PSOs use NMFS-approved sighting forms. In addition to certain specific information related to mitigation implementation, as specified in the marine mammal monitoring plan, we require that, at a minimum, the following information be collected on the sighting forms:

(1) Date and time that pile removal begins or ends;

(2) Construction activities occurring during each observation period;

(3) Weather parameters identified in the acoustic monitoring (e.g., percent cover, visibility);

(4) Water conditions (e.g., sea state, tide state);

(5) Species, numbers, and, if possible, sex and age class of marine mammals;

(6) Marine mammal behavior patterns observed, including bearing and direction of travel, and if possible, the correlation to SPLs;

(7) Distance from pile removal activities to marine mammals and distance from the marine mammals to the observation point;

(8) Locations of all marine mammal observations; and

(9) Other human activity in the area.

Reporting

A draft acoustic monitoring report will be submitted within 90 working days of the completion of the acoustic measurements. Separately, a draft marine mammal monitoring report would be submitted within 90 working days of the completion of construction activity. The report would include marine mammal observations pre-activity, during-activity, and post-activity during pile removal days. Final reports would be prepared and submitted within 30 days following receipt of comments on the draft report. The Navy will provide estimates of the total incidental taking of marine mammals in the report. Among available data, the Navy will have GPS-corrected positions for both the observers and the individual piles being driven; estimated distances from the PSOs to observed marine mammals; and actual pile-specific distances to relevant thresholds. Using this information, the Navy is able to determine which actual observations comprised incidental takes. The Navy will extrapolate these data to the remainder of unmonitored area ensonified to levels equaling or exceeding relevant thresholds for acoustic disturbance to reach a total estimate of the actual incidental taking.

Contents of the reports will be in accordance with the respective monitoring plans and, at minimum, will include:

- Date and time of activity;
- Water and weather conditions (e.g., sea state, tide state, percent cover, visibility);
- Description of the pile removal activity (e.g., size and type of piles, machinery used);
- The vibratory hammer force or chipping hammer setting used to extract the piles;

- A description of the monitoring equipment;
- The distance between hydrophone(s) and pile;
- The depth of the hydrophone(s);
- The physical characteristics of the bottom substrate from which the pile was extracted (if possible);
- The rms range and mean for each monitored pile;
- The results of the acoustic measurements, including the frequency spectrum, peak and rms SPLs for each monitored pile;
- The results of the airborne sound measurements (unweighted levels);
- Date and time observation is initiated and terminated;
- A description of any observable marine mammal behavior in the immediate area and, if possible, the correlation to underwater sound levels occurring at that time;
- Actions performed to minimize impacts to marine mammals;
- Times when pile removal is stopped due to presence of marine mammals within shutdown zones and time when pile removal resumes;
- Results, including the detectability of marine mammals, species and numbers observed, sighting rates and distances, behavioral reactions within and outside of shut down zones; and
- A refined take estimate based on the number of marine mammals observed in the shutdown and disturbance zones.

Estimated Take by Incidental Harassment

With respect to the activities described here, the MMPA defines "harassment" as: “any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment].”

All anticipated takes will be by Level B harassment, involving temporary changes in behavior. The planned mitigation and monitoring measures are expected to minimize the possibility of injurious or lethal takes such that take by Level A harassment, serious injury or mortality is considered remote. However, it is unlikely that injurious or lethal takes would occur even in the absence of the planned mitigation and monitoring measures.

If a marine mammal responds to an underwater sound by changing its behavior (e.g., through relatively minor changes in locomotion direction/speed or vocalization behavior), the response may or may not constitute taking at the individual level, and is unlikely to affect the stock or the species as a whole. However, if a sound source displaces marine mammals from an important feeding or breeding area for a prolonged period, impacts on animals or on the stock or species could potentially be significant (Lusseau and Bejder, 2007; Weilgart, 2007). Given the many uncertainties in predicting the quantity and types of impacts of sound on marine mammals, it is common practice to estimate how many animals are likely to be present within a particular distance of a given activity, or exposed to a particular level of sound. This practice potentially overestimates the numbers of marine mammals taken. For example, during the past 10 years, killer whales have been observed within the project area twice. On the basis of that information, an estimated amount of potential takes for killer whales is presented here. However, while a pod

of killer whales could potentially visit again during the project timeframe, and thus be taken, it is more likely that they would not.

The project area is not believed to be particularly important habitat for marine mammals, although harbor seals are year-round residents of Hood Canal and sea lions are known to haul-out on submarines and other man-made objects at the NBKB waterfront (although typically at a distance of a mile or greater from the project site). Therefore, behavioral disturbances that could result from anthropogenic sound associated with the proposed activities are expected to affect only a relatively small number of individual marine mammals, although those effects could be recurring if the same individuals remain in the project vicinity.

The Navy requested authorization for the potential taking of small numbers of Steller sea lions, California sea lions, harbor seals, transient killer whales, Dall's porpoises, and harbor porpoises in the Hood Canal that may result from pile removal during construction activities associated with the wharf rehabilitation project described previously in this document. The potential for incidental take of humpback whale is considered discountable; however, should a humpback whale occur within the project area the activity would have to cease in order to avoid an unauthorized take. The takes requested are expected to have no more than a minor effect on individual animals and no effect at the population level for these species. Any effects experienced by individual marine mammals are anticipated to be limited to short-term disturbance of normal behavior or temporary displacement of animals near the source of the sound.

Marine Mammal Densities

For all species, the best scientific information available was used to construct density estimates or estimate local abundance. Of available information deemed suitable for use, the data

that produced the most conservative (i.e., highest) density or abundance estimate for each species was used. For harbor seals, this involved published literature describing harbor seal research conducted in Washington and Oregon as well as more specific counts conducted in Hood Canal (Huber et al., 2001; Jeffries et al., 2003). Killer whales are known from two periods of occurrence (2003 and 2005) and are not known to preferentially use any specific portion of the Hood Canal. Therefore, density was calculated as the maximum number of individuals present at a given time during those occurrences (London, 2006), divided by the area of Hood Canal. The best information available for the remaining species in Hood Canal came from surveys conducted by the Navy at the NBKB waterfront or in the vicinity of the project area. These consist of three discrete sets of survey effort, which were described in detail in the FR notice. Please see that document for an in-depth discussion (77 FR 25408; April 30, 2012).

The cetaceans, as well as the harbor seal, appear to range throughout Hood Canal; therefore, the analysis in this proposed IHA assumes that harbor seal, transient killer whale, harbor porpoise, and Dall's porpoise are uniformly distributed in the project area. However, it should be noted that there have been no observations of cetaceans within the WRA security barrier; the barrier thus appears to effectively prevent cetaceans from approaching the shutdown zones (please see Figure 6-2 of the Navy's application; the WRA security barrier, which is not denoted in the figure legend, is represented by a thin gray line). Although source levels associated with the proposed actions are so low that no Level A harassments would likely occur even in the absence of any mitigation measures, it appears that cetaceans at least are not at risk of Level A harassment at NBKB even from louder activities (e.g., impact pile driving). The remaining species that occur in the project area, Steller sea lion and California sea lion, do not appear to utilize most of Hood Canal. The sea lions appear to be attracted to the man-made haul-

out opportunities along the NBKB waterfront while dispersing for foraging opportunities elsewhere in Hood Canal. California sea lions were not reported during aerial surveys of Hood Canal (Jeffries et al., 2000), and Steller sea lions have only been documented at the NBKB waterfront.

Description of Take Calculation

The take calculations presented here rely on the best data currently available for marine mammal populations in the Hood Canal. The methodology for estimating take was described in detail in the FR notice (77 FR 25408; April 30, 2012). The ZOI impact area is the estimated range of impact to the sound criteria. The distances specified in Table 1 were used to calculate ZOI around each pile; although attenuation due to landforms was considered when defining the ZOI, as described in the text following Table 1. The ZOI impact area took into consideration the possible affected area of the Hood Canal from the pile removal site furthest from shore with attenuation due to land shadowing from bends in the canal. Because of the close proximity of some of the piles to the shore, the narrowness of the canal at the project area, and the maximum fetch, the ZOIs for each threshold are not necessarily spherical and may be truncated. Although mean distances to thresholds as determined during acoustic monitoring in 2011 may differ somewhat – primarily in that the distances to the 120 dB threshold are likely to be much smaller for vibratory removal – we have maintained the take estimated based on predicted distances, as analyzed in the notice of proposed authorization. Therefore, these take estimates are likely to be conservative.

For sea lions, the surveys offering the most conservative estimates of abundance do not have a defined survey area and so are not suitable for deriving a density construct. Instead, abundance is estimated on the basis of previously described opportunistic sighting information at

the NBKB waterfront, and it is assumed that the total amount of animals known from NBKB haul-outs would be 'available' to be taken in a given pile removal day. Thus, for these two species, take is estimated by multiplying abundance by days of activity. The total number of days spent removing piles is expected to be a maximum of 15 for vibratory removal and 32 for chipping.

The exposure assessment methodology is an estimate of the numbers of individuals exposed to the effects of pile removal activities exceeding NMFS-established thresholds. Of note in these exposure estimates, mitigation methods (i.e., visual monitoring and the use of shutdown zones) were not quantified within the assessment and successful implementation of this mitigation is not reflected in exposure estimates. Results from acoustic impact exposure assessments should be regarded as conservative estimates.

Airborne Sound – No incidents of incidental take resulting solely from airborne sound are likely, as even the larger distances to the harassment thresholds seen in acoustic monitoring from 2011 would not reach any areas where pinnipeds may haul out. While pinnipeds swimming within these zones may be exposed to airborne sound of sufficient intensity to result in behavioral harassment, these animals would previously have been 'taken' as a result of exposure to underwater sound above the behavioral harassment thresholds, which are in all cases larger than those associated with airborne sound. Thus, the behavioral harassment of these animals is already accounted for in these estimates of potential take. Multiple incidents of exposure to sound above NMFS' thresholds for behavioral harassment are not believed to result in increased behavioral disturbance, in either nature or intensity of disturbance reaction.

The derivation of density or abundance estimates for each species, as well as further description of the rationale for each take estimate, was described in detail in the FR notice (77

FR 25408; April 30, 2012). Total take estimates, and numbers of take per species to be authorized, are presented in Table 4. It is worth noting that the Navy will attempt to conclude project activities as early as possible after the beginning of the in-water work window. With an estimated 47 days of project activities, it is possible that project activities could conclude before the sea lion species begin to arrive in significant numbers; thus, the estimates for sea lions may be very conservative.

California Sea Lion

California sea lions are present in Hood Canal during much of the year with the exception of mid-June through August. California sea lions occur regularly in the vicinity of the project site from September through mid-June. With regard to the range of this species in Hood Canal and the project area, it is assumed on the basis of waterfront observations (Agness and Tannenbaum, 2009; Tannenbaum et al., 2009, 2011) that the opportunity to haul out on submarines docked at Delta Pier is a primary attractant for California sea lions in Hood Canal, as they have rarely been reported, either hauled out or swimming, elsewhere in Hood Canal (Jeffries, 2007). Female California sea lions are rarely observed north of the California/Oregon border; therefore, only adult and sub-adult males are expected to be exposed to project impacts.

The ZOI for vibratory removal encompasses areas where California sea lions are known to haul-out; assuming that 26 individuals could be taken per day of vibratory removal provides an estimate of 390 takes for that activity. The ZOI for pneumatic chipping does not encompass areas where California sea lions are known to occur; nevertheless, it is likely that some individuals would transit this area in route to haul out or forage. Therefore, although it is possible that no California sea lions would be exposed to sound from pneumatic chipping, we expect that

at least one individual California sea lion could be exposed to sound levels indicating Level B harassment per day of pneumatic chipping.

Steller Sea Lion

Steller sea lions were first documented at the NBKB waterfront in November 2008, while hauled out on submarines at Delta Pier (Bhuthimethee, 2008; Navy, 2010) and have been periodically observed since that time. Steller sea lions typically occur at NBKB from November through April; however, the first October sightings of Steller sea lions at NBKB occurred in 2011. Based on waterfront observations, Steller sea lions appear to use available haul-outs (typically in the vicinity of Delta Pier, approximately one mile south of the project area) and habitat similarly to California sea lions, although in lesser numbers. On occasions when Steller sea lions are observed, they typically occur in mixed groups with California sea lions also present, allowing observers to confirm their identifications based on discrepancies in size and other physical characteristics.

The time period from November through April coincides with the time when Steller sea lions are frequently observed in Puget Sound. Only adult and sub-adult males are likely to be present in the project area during this time; female Steller sea lions have not been observed in the project area. Since there are no known breeding rookeries in the vicinity of the project site, Steller sea lion pups are not expected to be present. By May, most Steller sea lions have left inland waters and returned to their rookeries to mate. Although sub-adult individuals (immature or pre-breeding animals) will occasionally remain in Puget Sound over the summer, observational data have indicated that Steller sea lions are present only from October through April and not during the summer months.

Steller sea lions are known only from haul-outs over one mile from the project area. The ZOI for vibratory removal encompasses areas where Steller sea lions are known to haul-out; assuming that one individual could be taken per day of vibratory removal provides an estimate of fifteen takes for that activity. However, the available abundance information does not reflect the nature of Steller sea lion occurrence at NBKB. According to the most recent observational information, if Steller sea lions are present at NBKB, it is possible that as many as four individuals could be present on submarines docked at Delta Pier or in waters adjacent to these haul-outs. Thus, we conservatively assume that up to four individuals could be exposed to sound levels indicating Level B harassment per day of vibratory pile removal. Similar to California sea lions, the ZOI for pneumatic chipping does not encompass areas where Steller sea lions are known to occur; nevertheless, it is possible that some individuals could transit this area in route to haul out or forage. Therefore, although it is possible that no Steller sea lions would be exposed to sound from pneumatic chipping, we expect that the equivalent of at least one individual Steller sea lion could be exposed to sound levels indicating Level B harassment per day of pneumatic chipping.

Harbor Seal

Harbor seals are the most abundant marine mammal in Hood Canal, and they can occur anywhere in Hood Canal waters year-round. During most of the year, all age and sex classes could occur in the project area throughout the period of construction activity. As there are no known regular pupping sites in the vicinity of the project area, harbor seal neonates are not expected to be present during pile removal. Otherwise, during most of the year, all age and sex classes could occur in the project area throughout the period of construction activity. Harbor seal numbers increase from January through April and then decrease from May through August as the

harbor seals move to adjacent bays on the outer coast of Washington for the pupping season. The main haul-out locations for harbor seals in Hood Canal are located on river delta and tidal exposed areas at various river mouths, with the closest haul-out area to the project area being 10 mi (16 km) southwest of NBKB (London, 2006). Please see Figure 4-1 of the Navy's application for a map of haul-out locations in relation to the project area.

Humpback Whales

One humpback whale has recently been documented in Hood Canal. This individual was originally sighted on January 27, 2012, and was last reported on February 23, 2012, indicating that the animal has almost certainly left the area. Although known to be historically abundant in the inland waters of Washington, no other confirmed documentation of humpback whales in Hood Canal is available. Their presence has likely not occurred in several decades, with the last known reports being anecdotal accounts of three humpback sightings from 1972-82. Although a calculated density (representing this single known individual in Hood Canal) is presented in Table 4, the important point is that we consider it extremely unlikely that any humpback whales would be present during the project timeframe. Therefore, the likelihood of incidental take of humpback whales is discountable.

Killer Whales

Transient killer whales are uncommon visitors to Hood Canal. Transients may be present in the Hood Canal anytime during the year and traverse as far as the project site. Resident killer whales have not been observed in Hood Canal, but transient pods (six to eleven individuals per event) were observed in Hood Canal for lengthy periods of time (59-172 days) in 2003 (January-March) and 2005 (February-June), feeding on harbor seals (London, 2006). These whales used the entire expanse of Hood Canal for feeding. Subsequent aerial surveys suggest that there has

not been a sharp decline in the local seal population from these sustained feeding events (London, 2006).

Dall's Porpoise

Dall's porpoises may be present in the Hood Canal year-round and could occur as far south as the project site. Their use of inland Washington waters, however, is mostly limited to the Strait of Juan de Fuca. One individual has been observed by Navy staff in deeper waters of Hood Canal.

Harbor Porpoise

Harbor porpoises may be present in the Hood Canal year-round; their presence had previously been considered rare. During waterfront surveys of NBKB nearshore waters from 2008-10 only one harbor porpoise had been observed. However, during monitoring of Navy actions in 2011, several sightings indicated that their presence may be more frequent in deeper waters of Hood Canal than had been believed on the basis of existing survey data and anecdotal evidence. Subsequently, the Navy conducted dedicated vessel-based line transect surveys on days when no construction activity occurred (due to security, weather, etc.) and made regular observations of harbor porpoise groups. It should be noted that, due to the availability of corrected trackline distances for harbor porpoise surveys conducted in 2011, that density estimate has been revised from 0.250 animals/km^2 to 0.231 animals/km^2 for survey data through September 28, 2011.

Potential takes could occur if individuals of these species move through the area on foraging trips when pile removal is occurring. Individuals that are taken could exhibit behavioral changes such as increased swimming speeds, increased surfacing time, or decreased foraging. Most likely, individuals may move away from the sound source and be temporarily displaced

from the areas of pile removal. Potential takes by disturbance would likely have a negligible short-term effect on individuals and not result in population-level impacts.

Table 8. Number of Potential Incidental Takes of Marine Mammals within Various Acoustic Threshold Zones

Species	Density/ Abundance	Underwater			Airborne	Total proposed authorized takes
		Injury threshold[1]	Disturbance threshold – vibratory removal (120 dB)	Disturbance threshold – pneumatic chipping (120 dB)	Disturbance threshold[2]	
California sea lion	26.2[3]	0	390*	32*	0	**422**
Steller sea lion	1.2[3]	0	60*	32*	0	**92**
Harbor seal	1.31	0	705	32	0	**737**
Humpback whale	0.003	0	0	0	N/A	**0**
Killer whale	0.038	0	15	0	N/A	**15**
Dall's porpoise	0.014	0	15	0	N/A	**15**
Harbor porpoise	0.231	0	120	0	N/A	**120**
Total		**0**	**1,305**	**96**	**0**	**1,401**

* See preceding species-specific discussions for description of take estimate.

[1] Acoustic injury threshold is 190 dB for pinnipeds and 180 dB for cetaceans. No activity would produce source levels equal to 190 dB, while only vibratory removal would produce a source level of 180 dB.

[2] Acoustic disturbance threshold is 100 dB for sea lions and 90 dB for harbor seals. We believe that any animal subject to levels of airborne sound that may result in harassment – whether hauled-out or in the water – would likely also be exposed to underwater sound above behavioral harassment thresholds within the same day. Therefore, no take authorization specific to airborne sound is warranted.

[3] Figures presented are abundance numbers, not density, and are calculated as the average of average daily maximum numbers per month. Abundance numbers are rounded to the nearest whole number for take estimation.

Negligible Impact and Small Numbers Analysis and Preliminary Determination

NMFS has defined "negligible impact" in 50 CFR 216.103 as "...an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival."

In making a negligible impact determination, we consider a variety of factors, including but not limited to: (1) the number of anticipated mortalities; (2) the number and nature of anticipated injuries; (3) the number, nature, intensity, and duration of Level B harassment; and (4) the context in which the take occurs.

Pile removal activities associated with the wharf rehabilitation project, as outlined previously, have the potential to disturb or displace marine mammals. Specifically, the project activities may result in take, in the form of Level B harassment (behavioral disturbance) only, from underwater sounds generated through pile removal. No mortality, serious injury, or Level A harassment is anticipated given the nature of the activity (i.e., non-pulsed sound with low source levels) and measures designed to minimize the possibility of injury to marine mammals, while Level B harassment would be reduced to the level of least practicable adverse impact for the same reasons. Specifically, these removal methods would produce lower source levels than would pile installation with a vibratory hammer, which does not have significant potential to cause injury to marine mammals due to its sound source characteristics and relatively low source levels. Pile removal will either not start or be halted if marine mammals approach the shutdown zone (described previously in this document). The pile removal activities analyzed here carry significantly less risk of impact to marine mammals than did other construction activities analyzed and monitored within the Hood Canal, including two recent projects conducted by the Navy at the same location (test pile project and the first year of EHW-1 pile replacement work) as well as work conducted in 2005 for the Hood Canal Bridge (SR-104) by the Washington Department of Transportation. These activities have taken place with no reported injuries or mortality to marine mammals.

The numbers of authorized take for marine mammals would be considered small relative to the relevant stocks or populations even if each estimated taking occurred to a new individual – an extremely unlikely scenario. The proposed numbers of authorized take represent 5 percent of the relevant stock for harbor seals, 4.2 percent for transient killer whales, and 1.1 percent for harbor porpoises; the proposed numbers are less than 1 percent for the remaining species. However, even these low numbers represent potential instances of take, not the number of individuals taken. That is, it is likely that a relatively small subset of Hood Canal harbor seals, which is itself a small subset of the regional stock, would be harassed by project activities.

For example, while the available information and formula estimate that as many as 737 exposures of harbor seals to stimuli constituting Level B harassment could occur, that number represents some portion of the approximately 1,088 harbor seals resident in Hood Canal (approximately 7 percent of the regional stock) that could potentially be exposed to sound produced by pile removal activities on multiple days during the project. No rookeries are present in the project area, there are no haul-outs other than those provided opportunistically by man-made objects, and the project area is not known to provide foraging habitat of any special importance. Repeated exposures of individuals to levels of sound that may cause Level B harassment are unlikely to result in hearing impairment or to significantly disrupt foraging behavior. Thus, even repeated Level B harassment of some small subset of the overall stock is unlikely to result in any significant realized decrease in viability for Hood Canal harbor seals, and thus would not result in any adverse impact to the stock as a whole.

NMFS has determined that the impact of the previously described wharf rehabilitation project may result, at worst, in a temporary modification in behavior (Level B harassment) of small numbers of marine mammals. No injury, serious injury, or mortality is anticipated as a

result of the specified activity, and none will be authorized. Additionally, animals in the area are not expected to incur hearing impairment (i.e., TTS or PTS) or non-auditory physiological effects. For pinnipeds, the absence of any major rookeries and only a few isolated and opportunistic haul-out areas near or adjacent to the project site means that potential takes by disturbance would have an insignificant short-term effect on individuals and would not result in population-level impacts. Similarly, for cetacean species the absence of any known regular occurrence adjacent to the project site means that potential takes by disturbance would have an insignificant short-term effect on individuals and would not result in population-level impacts. Due to the nature, degree, and context of behavioral harassment anticipated, the activity is not expected to impact rates of recruitment or survival.

While the number of marine mammals potentially incidentally harassed would depend on the distribution and abundance of marine mammals in the vicinity of the survey activity, the number of potential harassment takings is estimated to be small relative to regional stock or population number, and has been mitigated to the lowest level practicable through incorporation of the mitigation and monitoring measures mentioned previously in this document. This activity is expected to result in a negligible impact on the affected species or stocks.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the mitigation and monitoring measures, NMFS finds that the proposed wharf construction project would result in the incidental take of small numbers of marine mammals, by Level B harassment only, and that the total taking from the activity would have a negligible impact on the affected species or stocks.

Impact on Availability of Affected Species or Stock for Taking for Subsistence Uses

No tribal subsistence hunts are held in the vicinity of the project area; thus, temporary behavioral impacts to individual animals would not affect any subsistence activity. Further, no population or stock level impacts to marine mammals are anticipated or authorized. As a result, no impacts to the availability of the species or stock to the Pacific Northwest treaty tribes are expected as a result of the activities. Therefore, no relevant subsistence uses of marine mammals are implicated by this action.

Endangered Species Act (ESA)

There are two ESA-listed marine mammal species with known occurrence in the project area: the eastern DPS of the Steller sea lion, listed as threatened, and the humpback whale, listed as endangered. Because of the potential presence of these species, the Navy requested a formal consultation with the NMFS Northwest Regional Office under section 7 of the ESA. NMFS' Office of Protected Resources also initiated formal consultation on its authorization of incidental take of Steller sea lions. These consultations are complete, with the determination that these activities are not likely to jeopardize the continued existence of the threatened Steller sea lion and are not likely to adversely affect humpback whales. These species do not have critical habitat in the action area.

National Environmental Policy Act (NEPA)

In compliance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.), as implemented by the regulations published by the Council on Environmental Quality (40 CFR parts 1500-1508), and NOAA Administrative Order 216-6, the Navy prepared an Environmental Assessment (EA) to consider the direct, indirect and cumulative effects to the human environment resulting from the pile replacement project. We adopted that EA in order to assess the impacts to the human environment of issuance of an IHA to the Navy and signed a

Finding of No Significant Impact (FONSI) on May 17, 2011. On the basis of new information related to the occurrence of marine mammals in the Hood Canal, the Navy prepared a supplement to that EA. We have adopted that supplemental EA and signed a new FONSI on July 11, 2012.

Determinations

We have determined that the impact of conducting the specific activities described in this notice and in the IHA request in the specific geographic region in Hood Canal, Washington may result, at worst, in a temporary modification in behavior (Level B harassment) of small numbers of marine mammals. Further, this activity is expected to result in a negligible impact on the affected species or stocks of marine mammals. The provision requiring that the activity not have an unmitigable impact on the availability of the affected species or stock of marine mammals for subsistence uses is not implicated for this action.

Authorization

As a result of these determinations, we have issued an IHA to the Navy to conduct the described activities in the Hood Canal from the period of July 16, 2012, through February 15, 2013, provided the previously described mitigation, monitoring, and reporting requirements are incorporated.

Dated: July 13, 2012.

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Helen M. Golde,

Acting Director,

Office of Protected Resources,

National Marine Fisheries Service.

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