

**ADDRESSES:** The workshop will be held at the Veach-Baley Federal Complex, located at 151 Patton Avenue, Asheville, North Carolina 28801.

For changes in the schedule, agenda, and updated information, please check the workshop website at <https://sites.google.com/a/noaa.gov/severe-storms-workshop/>.

**FOR FURTHER INFORMATION CONTACT:** Brooke Stewart, National Climatic Data Center, 151 Patton Avenue, Rm. 563, Asheville, North Carolina 28801. (Phone: 828-257-3020, E-mail: [brooke.stewart@noaa.gov](mailto:brooke.stewart@noaa.gov).)

**SUPPLEMENTARY INFORMATION:** This workshop will provide an update to the climate science surrounding extreme events. The intent is to make key input available to the National Climate Assessment (NCA) for consideration. Further information regarding the NCA is available at <http://www.globalchange.gov/what-we-do/assessment/>. NOAA is sponsoring this workshop in support of the National Climate Assessment process.

As workshop materials become available, they may be found at <https://sites.google.com/a/noaa.gov/severe-storms-workshop/>.

**Topics To Be Addressed:** This conference will address all aspects of trend monitoring for severe storms. Specific topics include: Severe Thunderstorms (and associated hail and winds), tornadoes, extreme precipitation, hurricanes (winds and rainfall) and typhoons, severe snowstorms and ice storms. The workshop will consider monitoring both physical measurements of these events as well as proxy information such as socio-economic impact.

Participants will consider:

- what determinations can be made regarding the detection of trends;
- what determinations can be made regarding possible causes of any observed trends; and
- what degree of confidence is implied by the best available science regarding the detection and possible causes of trends

The workshop will feature invited speakers and discussions. The workshop is designed to produce a draft detailed outline of an article for submission to a peer-reviewed journal.

The report from this workshop will also include the following:

- (1) Maintenance/updates of the data sets related to the events considered.
- (2) What are the key impediments in detecting changes in the events?

(3) How can the impediments be overcome?

**Mary E. Kicza,**

*NOAA Assistant Administrator for Satellite and Information Services.*

[FR Doc. 2011-16428 Filed 6-29-11; 8:45 am]

**BILLING CODE P**

## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

**RIN 0648-XA524**

#### Marine Mammals; File No. 15488

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

**ACTION:** Notice; issuance of permit.

**SUMMARY:** Notice is hereby given that a permit has been issued to the Georgia Department of Natural Resources, Wildlife Resources Division [Responsible Party: Dan Forster], to conduct research on North Atlantic right whales (*Eubalaena glacialis*).

**ADDRESSES:** The permit and related documents are available for review upon written request or by appointment in the following offices:

Permits, Conservation and Education Division, Office of Protected Resources, NMFS, 1315 East-West Highway, Room 13705, Silver Spring, MD 20910; phone (301) 427-8401; fax (301) 713-0376; and Southeast Region, NMFS, 263 13th Avenue South, Saint Petersburg, Florida 33701; phone (727) 824-5312; fax (727) 824-5309.

**FOR FURTHER INFORMATION CONTACT:** Kristy Beard or Carrie Hubard, (301) 427-8401.

**SUPPLEMENTARY INFORMATION:** On December 3, 2010, notice was published in the **Federal Register** (75 FR 75458) that a request for a permit to conduct research on North Atlantic right whales had been submitted by the applicant. The requested permit has been issued under the authority of the Marine Mammal Protection Act of 1972, as amended (16 U.S.C. 1361 *et seq.*), the regulations governing the taking and importing of marine mammals (50 CFR part 216), the Endangered Species Act of 1973, as amended (ESA; 16 U.S.C. 1531 *et seq.*), and the regulations governing the taking, importing, and exporting of endangered and threatened species (50 CFR parts 222-226).

The permit authorizes harassment of North Atlantic right whales off the coast of Georgia, Florida, and South Carolina.

Annual activities include aerial surveys and close approach by vessel to collect right whale photo-identification and behavioral data from up to 350 whales. An additional 50 adult or juvenile whales and 20 whales older than one month would be approached by vessel to collect photo-identification and behavioral data and skin/blubber biopsy samples. The purpose of the research is to monitor North Atlantic right whale population status, demographics, habitat and anthropogenic impacts. Up to 350 bottlenose (*Tursiops truncatus*) and 200 Atlantic spotted dolphins (*Stenella frontalis*) would be harassed incidental to research. The permit is valid for five years.

An environmental assessment (EA) was prepared analyzing the effects of the permitted activities on the human environment in compliance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*). Based on the analyses in the EA, NMFS determined that issuance of the permit would not significantly impact the quality of the human environment and that preparation of an environmental impact statement was not required. That determination is documented in a Finding of No Significant Impact (FONSI), signed on June 23, 2011.

As required by the ESA, issuance of this permit was based on a finding that such permit: (1) Was applied for in good faith; (2) will not operate to the disadvantage of such endangered species; and (3) is consistent with the purposes and policies set forth in section 2 of the ESA.

Dated: June 24, 2011.

**P. Michael Payne,**

*Chief, Permits, Conservation and Education Division, Office of Protected Resources, National Marine Fisheries Service.*

[FR Doc. 2011-16519 Filed 6-29-11; 8:45 am]

**BILLING CODE 3510-22-P**

## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

**RIN 0648-XA280**

#### Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to a Test Pile Program

**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 NMFS has issued an Incidental Harassment Authorization (IHA) to the U.S. Navy (Navy) to incidentally harass, by Level B harassment only, five species of marine mammals during pile driving activities conducted as part of a test pile program in the Hood Canal, Washington.

**DATES:** This authorization is effective from July 16, 2011, through October 31, 2011.

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

A copy of the application containing a list of the references used in this document may be obtained by writing to the above address, telephoning the contact listed here (see **FOR FURTHER INFORMATION CONTACT**) or visiting the internet at: <http://www.nmfs.noaa.gov/pr/permits/incidental.htm#applications>. Supplemental documents, including the Navy's Environmental Assessment and NMFS' associated Finding of No Significant Impact, prepared pursuant to the National Environmental Policy Act (NEPA), are available at the same site. Documents cited in this notice may be viewed, by appointment, during regular business hours, at the aforementioned address.

**FOR FURTHER INFORMATION CONTACT:** Ben Laws, NMFS, Office of Protected Resources, NMFS, (301) 713-2289.

**SUPPLEMENTARY INFORMATION:**

**Background**

Section 101(a)(5)(D) of the MMPA (16 U.S.C. 1371(a)(5)(D)) directs the Secretary of Commerce to authorize, upon request, the incidental, but not intentional, taking by harassment of small numbers of marine mammals of a species or population stock, by United States citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and a notice of a proposed authorization is provided to the public for review.

Authorization for incidental taking of small numbers of marine mammals shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s), and will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant). The

authorization must set forth the permissible methods of taking, other means of effecting the least practicable adverse impact on the species or stock and its habitat, and monitoring and reporting of such takings. 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."

Section 101(a)(5)(D) of the MMPA establishes a 45-day time limit for NMFS' review of an application followed by a 30-day public notice and comment period on any proposed authorizations for the incidental harassment of small numbers of marine mammals. Within 45 days of the close of the public comment period, NMFS 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**

NMFS received an application on November 2, 2010, from the Navy for the taking of marine mammals incidental to pile driving in association with a test pile program in the Hood Canal at Naval Base Kitsap in Bangor, Washington (NBKB). Vibratory and impulsive pile driving operations associated with the test pile program have the potential to affect marine mammals within the waterways adjacent to NBKB, and could result in harassment as defined in the MMPA. This test pile program will occur between July 16, 2011, and October 31, 2011. Six species of marine mammals may be present within the waters surrounding NBKB: Steller sea lions (*Eumetopias jubatus*), California sea lions (*Zalophus californianus*), harbor seals (*Phoca vitulina*), killer whales (*Orcinus orca*), Dall's porpoises (*Phocoenoides dalli*), and harbor porpoises (*Phocoena phocoena*). These species may occur year-round in the Hood Canal, with the exception of the Steller sea lion. Steller sea lions are present only from fall to late spring (November–June), outside of the project's timeline (July 16–October 31). 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 is not found in the Hood Canal and was therefore excluded from further analysis. Only the five species which may be present during the project's timeline may be

exposed to sound pressure levels associated with vibratory and impulsive pile driving, and were analyzed in detail in NMFS' analysis of this action.

**Description of the Specified Activity**

In accordance with regulations implementing the MMPA, NMFS published notice of the proposed IHA in the **Federal Register** on January 25, 2011 (76 FR 4300). A complete description of the action was included in that notice and will not be reproduced here.

NBKB is located on the Hood Canal approximately 20 miles (32 km) west of Seattle, Washington, and provides berthing and support services to Navy submarines and other fleet assets. The Navy will install and remove up to 29 test and reaction piles, conduct loading tests on select piles, and measure in-water sound propagation parameters (e.g., transmission loss) during pile installation and removal. Geotechnical and sound propagation data collected during pile installation and removal will be integrated into the design, construction, and environmental planning for the Navy's proposed Explosive Handling Wharf (EHW-2)—a separate project in planning stages and currently undergoing environmental review. While this project is designed to produce information necessary for the proposed EHW-2, the collected data will allow a better understanding of the characteristics of sound produced by pile driving in Hood Canal. This information will be instrumental to better understanding the potential impacts of other future projects at the NBKB waterfront. In addition, the Navy, in collaboration with NMFS, will study the performance of new methods of sound attenuation and will investigate the efficacy of soft start techniques as well as of the use of sound attenuation devices for vibratory driving. This information will be broadly applicable to NMFS' future efforts to mitigate impacts to marine mammals, and thus carries value in addition to the project's intended purpose.

The test pile program will require a maximum of forty work days for completion. The forty work day duration of the program includes the time for the initial pile installations, for performing loading tests, and to remove all of the test piles. The test pile program will involve driving 18 steel pipe piles, at pre-determined locations within the proposed footprint of EHW-2. Some of the initial 18 piles will be removed and re-driven as part of lateral load and tension tests. A total of 11 piles will be installed to perform lateral load and tension load tests. All piles will be driven with a vibratory hammer for their initial embedment depths, and select piles will be impact driven for their final 10–15 ft (3–4.6 m) for proofing, which involves driving a pile the last few feet into the substrate to determine the load capacity of the pile. Noise attenuation measures (i.e., bubble curtain) will be used during most impact hammer operations and on two of the vibratory-driven piles. Certain piles will undergo unmitigated impact driving in order to determine performance of the bubble curtain. This represents a change from the action as proposed and is discussed later in this document. Hydroacoustic

monitoring will be performed to assess effectiveness of noise attenuation measures.

The Navy anticipates that an average of two piles will be installed and removed per day. For each pile installed, the driving time is expected to include no more than 1 hour for vibratory driving and 15 minutes for the impact driving portion, with a maximum 100 blows executed per day. All piles will be extracted using a vibratory hammer. Extraction is anticipated to take approximately 30 minutes per pile. Overall, this results in an estimated maximum of 2 hours for driving and removal per pile, or approximately 4 hours per day. Therefore, while 40 days of total in-water work time is proposed, only a fraction of the total work time will actually be spent on pile driving and removal. Based on these estimates, the total pile driving time from vibratory or impact pile driving would be less than 15 days (29 piles at an average of two per day), although delays may spread pile driving over additional days.

For pile driving activities, the Navy used NMFS-promulgated thresholds for assessing pile driving impacts (NMFS 2005b, 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 other 30–72 in. (0.8–1.8 m) diameter steel pile driving events 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 driving activities, and that 1,187 Level B harassments may occur during the test pile program from underwater sound. No incidents of harassment were predicted from airborne sounds associated with pile driving.

**Changes to the Proposed Action**

As a result of negotiation with the U.S. Fish and Wildlife Service, which has jurisdiction over the ESA-listed marbled murrelet, the Navy now has the opportunity to conduct some unmitigated impact pile driving (i.e., without use of a sound attenuation device) in order to empirically determine the performance of sound attenuation devices under local conditions. NMFS supports this effort, which will enable more precise understanding of device efficacy and ensure that the best-performing device will be used in this and other pile

driving projects. In order for the Navy to confirm that the sound attenuation system is functioning properly and achieving the levels of reduction that were anticipated, comparative measurements must be taken during the course of pile driving with the sound attenuation device both in operation and shut off.

Unmitigated driving will be limited to no more than seven piles in total, with maximums of one pile per day and 60 seconds per pile. The Navy’s application provided modeled distances to buffer (Level B harassment) and exclusion (Level A harassment or injury) zones, for both mitigated and unmitigated driving. The exclusion zone for pinnipeds (190-dB) would increase from 5 to 22 m when the sound attenuation device is off. The injury zone for cetaceans (180-dB) would increase from 22 to 100 m with the device off. The behavioral disturbance zone for all marine mammals (160-dB) would increase from 464 to 2,154 m when the sound attenuation system is off. Using the methodology described in NMFS’ notice of proposed IHA (76 FR 4300; January 25, 2011), the calculated acoustic zones of influence would change slightly, as shown in Table 1.

**TABLE 1—AREA ENCOMPASSED BY UNDERWATER SOUND THRESHOLDS FOR IMPACT PILE DRIVING, MITIGATED AND UNMITIGATED.**

Description	Area (km <sup>2</sup> ) encompassed by threshold		
	Pinniped injury— 190 dB	Cetacean injury— 180 dB	Level B—160 dB
Impact driving, no mitigation .....	0.002	0.031	5.80 <sup>1</sup>
Impact driving with bubble curtain, assuming 10 dB attenuation .....	0.000	0.002	0.509 <sup>1</sup>

<sup>1</sup> These areas are smaller than calculated values because the morphology of the shoreline and intervening land masses constrain the propagation of sound, resulting in a reduced area of acoustic influence.

The initial analysis predicted that no injuries would occur, and the increased areas of influence do not change that prediction, using methodology described in the notice of proposed IHA. However, the increase in the size of the behavioral disturbance zone could result in additional exposures of animals to underwater sound, and thus additional takes under the MMPA. Because only sixty seconds of unmitigated driving may occur, for a maximum of seven days, the additional impact will be slight. The Navy’s initial calculation of take estimate conservatively considered a pile driving day to be eight hours long. Dividing the potential number of takes that may occur per day by the number of minutes in a pile driving day (i.e., 480 minutes) allows estimation of a per minute take ratio. NMFS conservatively rounded any value above 0.01 (i.e., greater than a 1-percent chance of take occurring in a minute) up to one. The total number of takes is equivalent to the number of takes previously estimated for fifteen days of attenuated pile driving, plus any takes predicted to result per minute of unattenuated pile driving. This method predicts an additional seven takes by Level B harassment for harbor seals—the species present in the highest density—but does not predict additional take of any kind for the other species present. This change in

estimated take is reflected in the section “Estimated Takes by Incidental Harassment.”

**Errata**

In NMFS’ notice of proposed IHA (76 FR 4300; January 25, 2011), Table 10 (“Number of Potential Warm Season (May-Oct) Exposures of Marine Mammals within Various Acoustic Threshold Zones”) contained a transcription error. Total numbers in the bottom row of that table were each shifted one cell to the left. For example, total takes should have been depicted as 1,180.

**Comments and Responses**

On January 25, 2011, NMFS published notice of proposed IHA (76 FR 4300) in response to the Navy’s request to take marine mammals incidental to a test pile program and requested comments and information concerning that request. During the 30-day public comment period, NMFS received comments from eighteen private individuals, the Ground Zero Center for Nonviolent Action (GZCNA), the Washington State Department of Natural Resources (DNR), and the Marine Mammal Commission (MMC). Seventeen individuals and the GZCNA expressed opposition to the proposed action, while one individual expressed concern and

provided information and recommendations. Those expressing opposition did so on the grounds of general concerns related to the environment, defense spending, military policy, and international treaty issues. In addition, the majority of individuals expressed concern over the appropriateness of the Navy’s NEPA process, stating that the test pile program and the proposed EHW–2 construction are connected and should be considered together in the same NEPA analysis. It is important to note that NMFS’ request for comments and information was limited to the proposed authorization of marine mammal take incidental to the proposed action. NMFS’ sole jurisdiction with regard to the MMPA and the proposed action is the potential incidental take of marine mammals; NMFS has no jurisdiction to approve or deny the proposed action itself or over the manner in which the Navy fulfills its responsibilities under NEPA. The Navy has chosen to request authorization for the test pile program as a standalone action and NMFS is required to accept the request to analyze the action. NMFS conducted appropriate analysis of the potential for cumulative impacts related to the test pile program under NEPA.

As such, the majority of public comment received concerns matters that are outside of

NMFS' jurisdiction under the MMPA and will not be addressed further. The DNR requested that information about results from monitoring of the test pile program be shared and raised a concern over use of state-owned aquatic lands. These concerns are outside of NMFS' jurisdiction and DNR was referred to the Navy. The remaining comments and NMFS' responses are detailed below.

*Comment 1:* The MMC recommends that NMFS require the Navy to make careful observations in conjunction with in-air sound propagation information in order to add to the limited data available so that in the future thresholds for harassment due to airborne sound can be set based on more robust data.

*Response:* NMFS agrees with the MMC about the importance of founding thresholds for behavioral harassment from airborne sound upon the best scientific information available, and about the importance of collecting additional data to improve that information. As described in the notice of proposed IHA, the Navy will be required to collect information regarding observed marine mammal behavioral responses to project activities, and if possible, the correlation to sound pressure levels. This information will be included in the Navy's monitoring report after completion of the test pile program.

*Comment 2:* The MMC recommends that NMFS require the Navy to provide a full description of the survey methods used during shoreline surveys at NBKB, including how the Navy searched for animals, if and how it corrected its estimate for sighting probability, and if and how it corrected its estimate for decreasing sighting probability with distance from the observer.

*Response:* The Navy has conducted two types of shoreline surveys at NBKB. The first set, which generated data used by the Navy in calculating density for California sea lions, are opportunistic visual area scans for marine mammals conducted by NBKB personnel from land at the NBKB waterfront. Sightings of marine mammals at manmade haul-out locations (e.g., piers) along the NBKB waterfront and in waters adjoining these locations are recorded. NBKB personnel attempt to conduct these surveys daily during a typical work week (i.e., Monday-Friday), although inclement weather or security constraints sometimes preclude surveying. Due to these constraints, the number of surveys conducted each month varies. During July-October (the period of the test pile program), surveys have been conducted an average of 13 times per month. Data recorded during these scans include species, behavior, associated habitat, and weather, among other descriptive information. The majority of all sightings are of hauled-out individuals.

No correction factor for sighting probability of California sea lions was used because there is no existing data to support it. The availability of a published study in which the movement of tagged animals was used in conjunction with aerial surveys allowed the Navy to use such a correction factor for harbor seals. The Navy did not correct for decreasing detection probability with distance because it would be atypical to do

so for shoreline pinniped surveys. Correcting for decreasing sighting probability with distance is appropriate for at-sea surveys, typically targeted towards cetaceans. In addition, no information that could potentially support such a correction was collected during the surveys. Each shoreline and wharf location is at a different height above the surface; therefore, the distance surveyed offshore is different at each position, which would result in deviations in detection probability rather than a constant value. However, the area surveyed of nearshore waters adjoining manmade haul-out locations is generally contained within the Waterfront Restricted Area (WRA), which extends approximately 500–1000 m offshore, and is generally able to be clearly observed.

The second set of shoreline surveys conducted by the Navy, which generated data used by the Navy in calculating density for Dall's porpoise and harbor porpoise, were defined line transect surveys. Marine mammal surveys were conducted from a small vessel operating at a speed of approximately five knots. Surveys involved following pre-determined transects parallel to the shoreline along the 3.5-mi waterfront. Transects were run from shallow water to deeper water with the first transect in each area located approximately 300 ft (91 m) offshore. Additional parallel transects were located at 300-ft intervals out to 1,800 ft (549 m) from shore. During these surveys, the distance surveyed offshore generally encompassed the area out to the WRA, resulting in a total area of 3.9 km<sup>2</sup> for each survey. Two observers and a vessel operator performed the surveys. Observers were trained in identification of marine mammal species and behavior, distance estimation, and area scanning techniques in order to reduce observer variation and avoid missed detections.

While on transect, the two observers scanned from zero degrees off the bow to 90 degrees abeam on each side of the vessel. Observers scanned ahead of the vessel for diving mammals and communicated any wildlife detections to the other observer to minimize missed detections and avoid duplicate observations. Observers scanned continuously, not staring in one direction, with a complete scan taking about 4–8 seconds. An observer focusing beyond 100 m is likely to miss some animals that are closer; thus, observers varied their focus from near to far fields in scanning within the 90-degree arc on each side of the vessel, and used binoculars only for species identification but not for sighting animals. To maintain effective transect width, animals detected through binoculars that would not otherwise have been detected with the naked eye were recorded in the comments field of the data form as being off transect. For all detections, time stamps were generated and locations recorded with a GPS. In addition, the observers recorded a compass bearing and distance to each animal or group of animals at the point of first detection. Distances were measured with a laser rangefinder when possible. Number and species of animals and behavior at first sighting were recorded.

*Comment 3:* The MMC recommends that NMFS require the Navy to (1) explain why

it used the anticipated area of ensouffication rather than surveyed area to estimate sea lion density and (2) correct the density estimate unless the Navy has a reasoned basis for not making such corrections.

*Response:* The data employed in deriving a density estimate for California sea lions comes from the first set of surveys (shoreline surveys) described previously. NMFS has determined that these surveys provide the best available data for determining sea lion density. The other available dataset (defined line transect surveys) included only sixteen survey days in 2007–2008 during the time period in which the test pile program will occur (July-October); only six sightings of California sea lions were recorded during these sixteen survey days. Two sightings were of individuals swimming, and the other four sightings were of groups of hauled-out animals. All observations of California sea lions during these surveys were over a mile away from the test pile location.

Although the first dataset is limited in not having a defined survey area, as exists for the second dataset, the first dataset provides several years of data with many more data points for the months in which the test pile program is scheduled to occur and is thus the more robust source of data for estimating density of California sea lions. As described previously, the shoreline surveys averaged 13 survey days per month during July-October of 2008–2009, thus providing 104 data points compared with 16 for the line transect surveys. In addition, use of this more robust dataset results in a more conservative estimate for California sea lion density. The Navy also investigated published studies external to survey efforts at NBKB. Ideally, aerial surveys encompassing the local population's entire geographic range, used in conjunction with a correction factor for sighting probability, would be available, as was the case for harbor seals. However, this data is not available for California sea lions in Hood Canal.

Because these surveys are of known manmade haul-out areas and adjoining waters, and are conducted from land, there is no appropriate way to define an area surveyed. It would not be appropriate to define survey area strictly as the area observed (i.e., the WRA) because the vast majority of sighted animals are hauled-out. At haul-outs, animals that forage over some greater area—unknown in this case—congregate in greater numbers than would be found in the absence of the availability of such habitat. Thus, a density calculated for animals found at known haul-outs and adjoining waters would not be applicable to the broader marine waters of the action area and would result in a gross exaggeration of sea lion numbers if extrapolated to that larger area.

Because all of the California sea lion observations were of hauled-out individuals, which gives a reasonable proxy understanding of the numbers of animals that are utilizing waters in the vicinity of the project area for foraging, a reasonable method of generating a realistic in-water density would be to determine the approximate area that might be used by the animals when swimming and/or foraging. However,

minimal data is available regarding the foraging home ranges of California sea lions. Research by Costa *et al.* (2007) regarding the foraging behavior of 32 adult females in California indicated that they travel an average distance of 66.3 +/- 11 km from rookeries. Data from Wright *et al.* (2010) for 14 wintering males from the Columbia River indicate that travel is a maximum of 70 km from shore. Additional data for 12 adult males from mixed stocks in Washington showed a maximum travel distance of 99 km per day (Wright *et al.*, 2010). Given these data regarding California sea lion travel during foraging trips, NMFS feels that using the maximum action area—the largest area affected by underwater sound produced by the action (i.e., 41.5 km<sup>2</sup>)—as proposed by the Navy is an acceptable representation of the area in which these animals may be expected to forage in Hood Canal.

In a previous environmental analysis for Dabob Bay, located in Hood Canal to the south of the action area, the Navy used published data (Jeffries *et al.*, 2000) to produce a density estimate of 0.052 animals/km<sup>2</sup>. While that was likely an underestimate, the density estimate produced by the methodology described here (0.410 animals/km<sup>2</sup>) is significantly higher, and thus more conservative. The density estimate is conservative in part because the Navy used the highest recorded daily values for each month in the dataset to estimate density. For example, in September 2009, the Navy used the highest recorded value of 32 animals; the daily average for twelve surveys conducted that month was 6.75 animals. In addition, California sea lions are generally not present in the action area during July–August (one observed sea lion in 51 survey days during July–August 2008–2009). While take was estimated for the test pile project as though pile driving was equally likely to occur from July–October, it is possible that only 15 days may be required. Although this is an optimistic scenario (two piles per day for 29 total piles), and delays may occur that would spread driving out over more total days, it is probable that the bulk of pile driving will be concluded while there are few California sea lions present.

NMFS concedes that the data used, and the methodology used in estimating density, are not ideal. However, as described here, the data used is the best available, and the method of estimating density is the most appropriate based on available information. The density estimate is also likely conservative, as described previously. Finally, no better information or alternative method of estimating density was provided or proposed to NMFS during the public comment period.

*Comment 4:* The MMC recommends that NMFS require the Navy to re-estimate the expected number of in-water and in-air takes for harbor seals using the overall density of harbor seals in Hood Canal (i.e., 3.74 animals/km<sup>2</sup>).

*Response:* As described in NMFS' notice of proposed IHA, the entire population of harbor seals in Hood Canal is estimated at 1,088 (Jeffries *et al.*, 2003). Using this estimate, with the entire area of Hood Canal (291 km<sup>2</sup>), produces a density estimate of

3.74 animals/km<sup>2</sup>. These data represent comprehensive, dedicated aerial surveys that were conducted for harbor seals hauled out in the Hood Canal by the Washington State Department of Fish and Wildlife from 1978–1999. However, the work by Jeffries *et al.* (2003) used a correction factor of 1.53, based on VHF-tagging data (Huber *et al.*, 2001), to account for seals in the water and not counted. The tagged animals were from the same populations that were surveyed aerially. The data from Huber *et al.* (2001) indicated that approximately 65 percent of harbor seals are hauled-out at a given moment (i.e., only 35 percent of seals are in the water at a given moment). The data loggers in these studies ran 24 hours per day. These studies computed the average proportion ashore for all seals in the population assuming an annual basis; therefore, the data indicates that the percentage of harbor seals that can be in the water at any one time (35 percent) is assumed to be reasonably consistent on a daily basis for the entire year. As a result, exposures to underwater sound were calculated using a density derived from the number of harbor seals that are anticipated to be present in the water at any one time (35 percent of 1,088, or approximately 381 animals; 1.31 animals/km<sup>2</sup>).

There are a number of caveats associated with use of this data. The cited studies involved aerial surveys that were conducted primarily at low-tide, when maximum numbers of seals were hauled-out. However, the correction factor applied to determine the total population and take into account in-water harbor seals was not based on the aerial surveys but on VHF tag data which is unaffected by tidal influences. While some of the aerial surveys were conducted in Hood Canal, Huber *et al.*'s (2001) tagging data came from outside Hood Canal. The VHF data came from radio tags deployed in three sites within the coastal stock and three sites within the inland waters stock to determine any regional haul-out variability. While Hood Canal was not specifically sampled in Huber *et al.*'s (2001) study, Jeffries *et al.* (2003)—Huber was an author on this study as well—found the VHF data broadly applicable to all inland water stocks and applied it to estimate the total population for the inland waters. While it is possible that proportions of harbor seals in the water versus on land in Hood Canal could deviate slightly from other inland water stock populations, it is unlikely that such deviation would be large. No similar site specific data exists for Hood Canal. Therefore, the data described here is considered the best available.

It is possible that the density estimate used for estimating take may be an underestimate. Pile driving is estimated as occurring a maximum of 4 hours per day, and it is reasonable to expect that greater than 35 percent of the individuals in the action area would enter the water during the estimated 4-hour duration of pile driving. That is, assuming 65 percent of animals are hauled-out at a given time, it is possible that some animals may enter and exit the water during those 4 hours. Thus, while it is possible that no more than 35 percent of animals will be in the water at any given moment during pile

driving, it is also possible that more than 35 percent could potentially be exposed to underwater sound from pile driving during those four hours. However, no data exists 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 is no existing data that would indicate that the proportion of individuals entering the water during pile driving would be dramatically larger than 35 percent; thus, the MMC'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 a density derived from 35 percent of the population may not result in an underestimate of take. Hauled-out harbor seals are necessarily at haul-outs, and no 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 2007–2008, 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 would not automatically be exposed to underwater sound; 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. If the estimated take is an underestimate (i.e., if authorized take is exceeded), there is the possibility that the Navy's action may need to be halted. Lastly, no alternative information or methodology was presented or proposed during the public comment period that would lead NMFS to believe that the MMC's recommendation would not lead to a gross exaggeration of potential take, or that would present a better estimate than that contained herein.

*Comment 5:* Because the Navy did not request authorization for take of harbor seals resulting from exposure to airborne sound, the MMC recommends that NMFS require the Navy to shut down activities whenever a harbor seal is within the in-air Level B harassment zone (i.e., within a radius of 358 m).

*Response:* The Navy's waterfront surveys have found that it is extremely rare for harbor seals to haul out in the vicinity of the test

pile project area. While in-water sightings are fairly common, even temporary, opportunistic haul-out locations are limited within the acoustic zone of influence for airborne sound (maximum of 358 m) estimated for the test pile program. Harbor seal haul-out area can include intertidal or sub-tidal rock outcrops, sandbars, sandy beaches, peat banks in salt marshes, and manmade structures such as log booms, docks, and recreational floats. The lack of any of these suitable haul-out habitats in the immediate vicinity of the test pile project area makes it extremely unlikely that a harbor seal would be hauled out in range of sounds that could cause acoustic disturbance. The only structures within the largest airborne zone of influence (358 m) are the current Explosive Handling Wharf (EHW-1) and Marginal Wharf. Both of these structures are elevated more than sixteen feet above the Mean Higher High Water (MHHW) mark, so there is no opportunity for harbor seals to haul out on these structures, even during the highest tides. Secondly, while a small intertidal/shoreline zone is present between these structures, it does not represent favorable haul-out habitat for the harbor seal. The shoreline located between the current EHW-1 and Marginal Wharf is extremely narrow, and is backed by a steep cliff face that is heavily vegetated with trees. Additionally, any portion of the intertidal zone that may be exposed at low tide is also vegetated with eelgrass beds and macroalgae, neither of which is known haul-out attractant for harbor seals. All harbor seals that are found swimming or diving within 358 m of the pile location would be considered to be taken by underwater sounds from pile driving activities; thus, there is no additional need to shutdown any time a harbor seal is within the airborne Level B harassment zone.

*Comment 6:* The MMC recommends that NMFS encourage the Navy to consult with experts at the National Marine Mammal Laboratory to review and revise the Navy's survey methods as needed to make them scientifically sound.

*Response:* The Navy has consulted with marine science experts in the past in the development of surveys and will continue to do so, including outreach with the National Marine Mammal Laboratory. NMFS is supportive of the Navy's effort to improve the strength of their survey design.

*Comment 7:* The MMC recommends that NMFS require the Navy to record distances to and behavioral observations of animals sighted within the entirety of the in-water Level B harassment zone that would be established for vibratory pile driving and removal activities.

*Response:* All shutdown and buffer zones will initially be based on predicted distances from the source, as described in the Navy's application. The size of the shutdown and buffer zones will be adjusted accordingly based on in-situ empirically measured received sound pressure levels. The 120-dB disturbance criterion for vibratory pile driving predicts an affected area of 41.5 km<sup>2</sup>. Due to financial and personnel constraints, it is impracticable to effectively monitor such a large area. However, the 120-dB zone will be adjusted as necessary based on the results

of in-situ hydroacoustic monitoring, and it is possible that the true 120-dB zone may be of a size that is practicable to monitor. Nevertheless, the Navy has committed to monitoring a minimum zone of 2,400 m, which corresponds to the width of the Hood Canal at the project site. This distance subsumes the next largest buffer zone (the 464 m, 160-dB Level B disturbance zone for underwater sound from impact pile driving). Observers will also be placed in additional locations within the 41.5 km<sup>2</sup> vibratory disturbance zone, as indicated in the Navy's Marine Mammal Monitoring Plan. Sightings occurring in the area outside of the 2,400 m zone—the maximum zone in which it is practicable to effectively monitor—will still be recorded and noted as a take. However, it would not be possible to state with certainty that all takes were recorded, and fine-scale behavioral observations may not be possible. In addition, the proposed monitoring methodology is consistent with other actions analyzed by NMFS that involve prohibitively large harassment zones. These include seismic air gun and sonar activities, in which visual monitoring is only practicable for an exclusion zone corresponding to the injury thresholds and precise quantification of impacts to marine mammals within the behavioral harassment zones could not be empirically verified through visual observation, but was estimated by modeling.

*Comment 8:* The MMC recommends that NMFS complete an analysis of the impact of the proposed activities together with the cumulative impacts of all the other pertinent risk factors affecting marine mammals in the Hood Canal area, including the Navy's concurrent wharf repair project, before issuing the authorization.

*Response:* The test pile program and the EHW-1 pile replacement project overlap somewhat spatially and temporally. Spatially, the two areas are located adjacent to one another. There could be an overlap in their buffer zones (Level B harassment zones) but not for their exclusion zones (Level A harassment or injury zones) when the test piles closest to EHW-1 are installed and removed. Temporal overlap will occur as both projects will operate with a work window from July 16 through October 31. However, for the test pile program impact pile driving will cease no later than October 14, and for EHW-1 impact pile driving will cease no later than September 30.

The injury zones are not large enough to overlap spatially, and the Navy has agreed that no simultaneous impact driving will occur, in order to ensure that the combined energy of two impact rigs operating at once would not increase the potential injury zones. With regard to impact pile driving, EHW-1 is limited to impact pile driving only five piles per in-water work window, with a maximum of one pile driven per day and a maximum of 15 minutes of impact driving per pile. The test pile program is anticipated to require proofing for 18 test piles, although additional impact driving may be required should any of the piles fail to reach the necessary embedment depth with vibratory driving. Any impact pile driving during the test pile program would be limited to 100 strikes or 15 minutes per day.

No limitation has been placed upon vibratory pile installation and removal, as such limitation would significantly extend the length of each project's timeline and would result in a longer period of potential exposure for marine mammals in the Hood Canal. Vibratory pile drivers produce significantly lower initial sound pressure levels than impact hammers and are not known to cause injury to marine mammals. The simultaneous use of two vibratory drivers with similar sound outputs would likely increase initial sound pressure levels by approximately three decibels, thus increasing the potential area encompassed by the 120-dB buffer zone (Level B harassment zone) from a modeled 100,000 m to 158,489 m, using the practical spreading loss model. As described in NMFS' notice of proposed IHA, these distances assume a field free of obstruction. However, Hood Canal does not represent open water conditions, and sound attenuates upon encountering land masses or bends in the canal. As a result, neither hypothetical area of potential behavioral effects is possible in the project area. The actual distances to the 120-dB behavioral disturbance threshold for vibratory pile driving will be significantly reduced due to the irregular contours of the waterfront, narrowness of the canal, and maximum fetch (furthest distance sound waves travel without obstruction) at the project area. Based on these factors, the concurrent use of vibratory hammers at both project locations will not result in any actual increase in the area encompassed by the 120-dB criteria.

The Navy and NMFS have considered the potential overlap of these projects and the resulting effects that may occur, and have addressed these issues in the cumulative impacts analyses contained within their respective NEPA documents for these projects.

*Comment 9:* One commenter described a release of toxic material that occurred in the test pile area in 2000, and suggested that the test pile program could cause further contamination of Hood Canal, presumably by suspension of toxic sediment into the water column. If this occurred, it could result in decreased quality of pinniped habitat.

*Response:* Existing sediment information from the project area, from sampling conducted in 2007, indicates that sediment quality at the project site is generally good. Concentrations of a range of metals and organic contaminants were at or below the analytical detection limits in some cases and were consistently below the Sediment Quality Standards established by Washington State.

*Comment 10:* One commenter questioned the need for the full complement of test piles proposed by the Navy, stating that the relevant information could be collected through installation of a lesser number of piles or through alternative methods.

*Response:* As described in the Navy's application, the test pile program will serve to validate the geotechnical explorations used in the design to estimate capacities of piles. Estimated pile embedment requirements and pile capacities provided by the geotechnical engineer without the benefit of site-specific empirical data from the test

pile program are conservative. The program will serve to provide such data to verify required embedment lengths and pile capacities. Real data can reduce conservatism, providing the potential of reduced pile sizes and lengths. The cost of piles can be broken into material purchase price and pile installation costs. A reduction of overall pile size or length, thus steel quantity, provides benefit of reduced costs both with initial price of material purchase and installation costs. Additionally, pile size or length reductions can reduce the amount of time the pile driving rigs are on site, reducing pile installation costs and impacts to the environment. The program will also establish the ability to advance piles to design tip using a vibratory hammer. This will potentially limit the strikes with an impact hammer to that of proofing piles, resulting in both environmental and cost benefits. The Navy has no desire to incur unnecessary expenditures, either through installing extraneous piles or by using methods inappropriate to gather required data. This data is critical to the design and cost planning of an explosives handling wharf, and validation of geotechnical and design assumptions is critical to long term survivability and safety.

*Comment 11:* One commenter challenged several assumptions and conclusions made by the Navy related to acoustic impacts. The commenter included numerous questions, but three key points related to acoustics were: (1) That, while total energy may be important for threshold shifts, frequency content is important as well (e.g., for masking); (2) that the Navy's use of the practical spreading loss model may not be appropriate, instead suggesting a ray path model using a salinity/velocity profile; and (3) that an assumption of a 10-dB reduction in sound intensity through attenuation by bubble curtain is unduly optimistic.

*Response:* The purpose of the test pile program is, in part, to answer many of the questions posed. For example, data from the test pile program will show whether the practical spreading loss model is appropriate as used (i.e., the appropriate transmission loss coefficient will be derived through test pile measurements) and will empirically determine the actual performance of sound attenuation measures (e.g., bubble curtain). As the commenter points out, certain factors (e.g., depth, salinity) are important considerations for propagation modeling. Again, measurements from test piles will enable empirical determination of sound propagation in this location and for this activity. The commenter inquires about the spectrum of pulse transmission, which may refer to the distribution of frequency in narrow bands across the frequency range. This data will be collected during test pile driving.

With regard to bottom propagation and surface reflection, computation for these values by modeling is extremely complex, especially in shallow water. However, although use of a simple spreading model may not be entirely accurate, it is likely to produce a conservative estimate of sound propagation distances because it does not take bottom loss into consideration. In

addition, because pile driving will occur in shallow water, and the dominant energy is low frequency, ray theory is unlikely to be the most appropriate method of modeling propagation. It is important to note that the estimates of buffer and exclusion zones presented here, as determined by relatively simple modeling, will be corrected as dictated by in-situ empirical measurements. This makes more complicated modeling efforts using bottom loss and surface reflection values unnecessary. Finally, while NMFS concedes that it is extremely difficult to accurately predict site-specific attenuation performance (specifically by bubble curtains) due to the number of variables at play, the estimate of 10 dB is not necessarily overly optimistic—it falls below the midpoint of attenuation variability described by Thorson and Reyff (2004)—and will likely be effective at reducing peak pressure characteristics of impact strikes regardless of total attenuation. Calculated buffer and exclusion zones will be adjusted in the field as appropriate based not only on empirically measured sound propagation, but also on actual performance of sound attenuation measures.

#### **Description of Marine Mammals in the Area of the Specified Activity**

The marine mammal species that may be harassed incidental to estuary management activities are the harbor seal, California sea lion, killer whale, Dall's porpoise, and harbor porpoise. None of these species are listed as threatened or endangered under the ESA, nor are they categorized as depleted under the MMPA. NMFS presented a more detailed discussion of the status of these stocks and their occurrence in the action area in the notice of the proposed IHA (76 FR 4300; January 25, 2011).

#### **Potential Effects of the Activity on Marine Mammals**

NMFS has determined that pile driving, as outlined in the project description, has the potential to result in behavioral harassment of California sea lions, harbor seals, harbor porpoises, Dall's porpoises, and killer whales that may be swimming, foraging, or resting in the project vicinity while pile driving is being conducted. Pile driving could potentially harass those pinnipeds that are in the waters adjoining the project site.

Based on the analysis contained in NMFS' notice of proposed IHA, it is unlikely that this project will result in temporary or permanent hearing impairment or non-auditory physical or physiological effects for any marine mammal. Because this project involves driving a small number of piles, with limited use of an impact driver, and will occur in a small area for limited duration, effects to marine mammals are likely to be limited to behavioral harassment. The planned mitigation measures for this project (see the "Mitigation" section later in this document) are designed to detect marine mammals occurring near the pile driving to avoid exposing them to sound pulses that might, in theory, cause hearing impairment. In addition, many cetaceans are likely to show some avoidance of the area where received levels of pile driving sound are high enough that hearing impairment could

potentially occur. In those cases, the avoidance responses of the animals themselves will reduce or (most likely) avoid any possibility of hearing impairment.

The effects of behavioral disturbance resulting from this project are difficult to predict, as behavioral responses to sound are highly variable and context specific. A number of factors may influence an animal's response to noise, including its previous experience, its auditory sensitivity, its biological and social status (including age and sex), and its behavioral state and activity at the time of exposure. These behavioral changes may include changes in duration of surfacing and dives or moving direction and/or speed; changes in vocalization; visible startle response or aggressive behavior; avoidance of areas where noise sources are located; and/or flight responses. Pinnipeds may increase their haul-out time, possibly to avoid in-water disturbance. Since pile driving will likely only occur for a few hours a day, over a short period of time, it is unlikely to result in permanent displacement from the area. Temporary impacts from pile driving activities could be experienced by individual marine mammals, but would not be likely to cause population level impacts, or affect any individual's long-term fitness.

The three cetacean species are rare in the project area, and, if present, numbers will likely be in single digits. While pinniped numbers will likely be greater, there are several factors indicating that these animals may only experience minor effects from behavioral disturbance. As described previously in this document, California sea lions are typically not present in the project area during July-August, and it is likely that the majority of pile driving will be complete before sea lions begin arriving in September. No haul-out areas are located in the immediate vicinity of the project site. California sea lions haul-out on manmade structures along the NBKB waterfront, typically over a mile from the project site. Harbor seals, though present in the Hood Canal year-round, have primary haul-outs even further away, in Dabob Bay to the west and at points further south.

#### **Anticipated Effects on Habitat**

NMFS provided a detailed discussion of the potential effects of this action on marine mammal habitat in the notice of the proposed IHA (76 FR 4300; January 25, 2011). The pile driving activities at NBKB will 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 structure 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 will be temporarily elevated noise 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 driving effects on marine mammal prey (i.e., fish) near NBKB

and minor impacts to the immediate substrate during installation and removal of piles during the test pile program.

Sound pressure levels of sufficient strength have been known to cause injury to fish and fish mortality (CALTRANS 2001; Longmuir and Lively 2001). However, due to mitigation measures in place to reduce impacts to ESA-listed fish—notably including adherence to the July 16–October 31 work window—the most likely impact to fish from pile driving activities at the project area will be temporary avoidance of the area. The duration of fish avoidance of this area after pile driving stops is unknown, but a rapid return to normal recruitment, distribution and behavior is anticipated. In general, impacts to marine mammal prey species are expected to be minor and temporary due to the short timeframe for the test pile program.

### Mitigation

In order to issue an IHA under section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to such activity, and other means of effecting the least practicable adverse 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.

The Navy has established exclusion and buffer zones (Level A and Level B harassment, respectively), based on modeling described in NMFS' notice of proposed IHA (76 FR 4300; January 25, 2011). The Navy will implement the following measures for these zones:

(1) The Navy will implement a minimum shutdown zone of 50 m (164 ft) radius around all pile driving activity. Shutdown zones typically include all areas where the underwater SPLs are anticipated to equal or exceed the Level A (injury) harassment criteria for marine mammals (180-dB isopleth for cetaceans; 190-dB isopleth for pinnipeds). In this case, pile driving sounds are expected to attenuate below 180 dB at distances of 22 m or less, but the 50-m shutdown is intended to further avoid the risk of direct interaction between marine mammals and the equipment.

(2) The buffer zone shall initially be set at a radius of 2,400 m, which is the width of the Hood Canal at the project site. This zone, which would subsume the 160-dB buffer zone, is the maximum area that is practicable for the Navy to monitor. The full 120-dB buffer zone for vibratory pile driving (modeled as radius of 13,800 m, but reduced to 41.5 km<sup>2</sup> when attenuation due to landmasses is accounted for) is so large as to make monitoring impracticable. Additional observers will be present in this zone, and any sighted animals would be recorded as takes, but it is impossible to guarantee that all animals will be observed or to make observations of fine-scale behavioral reactions to sound throughout this zone. The 2,400 m (1,644 ft) zone may be adjusted according to empirical, site-specific data after the project begins. Additional buffer zone distances, including the 160-dB zone for underwater sound from impact driving (464

m), may also be adjusted based upon the results of hydroacoustic monitoring.

(3) The shutdown and buffer zones will be monitored throughout the time required to drive a pile. If a marine mammal is observed entering the buffer zone, a take will be recorded and behaviors documented. However, that pile segment will be completed without cessation, unless the animal approaches or enters the shutdown zone, at which point all pile driving activities will be halted.

(4) All buffer and shutdown zones will initially be based on the distances from the source that are predicted for each threshold level. However, in-situ acoustic monitoring will be utilized to determine the actual distances to these threshold zones, and the size of the shutdown and buffer zones will be adjusted accordingly based on received sound pressure levels.

Monitoring will take place from thirty minutes prior to initiation through thirty minutes post-completion of pile driving activities. The following additional measures will apply to visual monitoring:

(1) Monitoring will be conducted by qualified observers. A trained observer will be placed from the best vantage point(s) practicable to monitor for marine mammals and implement shut-down or delay procedures when applicable by calling for the shut-down to the hammer operator.

(2) Prior to the start of pile driving activity, the shutdown and safety zones will be monitored for thirty minutes to ensure that they are clear of marine mammals. Pile driving will only commence once observers have declared the shutdown zone clear of marine mammals; animals will be allowed to remain in the buffer zone (i.e., must leave of their own volition) and their behavior will be monitored and documented.

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

The following additional measures will be implemented:

(1) Sound attenuation devices will be utilized during most impact pile driving operations (exceptions described previously in this document).

(2) The Navy will use soft-start techniques (ramp-up and dry fire) recommended by NMFS for impact and vibratory pile driving. The soft-start requires contractors to initiate noise from vibratory hammers for fifteen seconds at reduced energy followed by a one minute waiting period. This procedure will be repeated two additional times. For impact driving, contractors will be required to provide an initial set of three strikes from the impact hammer at 40 percent energy, followed by a 1-minute waiting period, then two subsequent three strike sets.

(3) Pile driving will only be conducted during daylight hours.

(4) For in-water heavy machinery work other than pile driving, if a marine mammal comes within 50 m (164 ft), operations shall cease and vessels shall reduce speed to the

minimum level required to maintain steerage and safe working conditions.

NMFS has carefully evaluated the applicant's mitigation measures as proposed and considered their effectiveness in past implementation to determine whether they are likely to effect the least practicable adverse impact on the affected marine mammal species and stocks and their habitat. Our evaluation of potential measures includes 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; (3) the practicability of the measure for applicant implementation, including consideration of personnel safety, and practicality of implementation.

It is unlikely that injury, serious injury, or mortality to marine mammals would result from any actions undertaken during the test pile program. The impacts of the project will likely be limited to temporary behavioral disturbance. However, to reduce the amount and degree of behavioral disturbance that occurs, NMFS and the Navy have developed the previously described mitigation measures. These are designed to limit the numbers of marine mammals that are exposed to underwater sound, by reducing the intensity of sound entering the environment, limiting the amount of impact pile driving and the duration of all driving, and to prevent any individual from being exposed to levels of sound that could result in injury. Based upon experience from previous pile driving projects and the analysis contained in NMFS' notice of proposed IHA and in this document, NMFS has determined that the proposed mitigation measures provide the means of effecting the least practicable adverse impacts on marine mammal species or stocks and their habitat.

### Monitoring and Reporting

In order to issue an IHA for an activity, section 101(a)(5)(D) of the MMPA states that NMFS must 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 IHAs must include the suggested means of accomplishing the necessary monitoring and reporting that will 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.

The Navy will conduct acoustic monitoring for impact driving of steel piles in order to determine the actual distances to the 190-, 180-, and 160-dB (re 1 µPa rms) isopleths and to determine the relative effectiveness of the bubble curtain system at attenuating noise underwater. The Navy will also conduct acoustic monitoring for vibratory pile driving in order to determine the actual distance to the 120-dB isopleth for behavioral harassment relative to background levels. The Navy's hydroacoustic monitoring plan (see ADDRESSES) addresses collection of data for both underwater and airborne sounds

from the test pile program, and is discussed in greater detail in NMFS' notice of proposed IHA (76 FR 4300; January 25, 2011).

The Navy will 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 will be trained in marine mammal identification and behaviors. NMFS requires that the observers have no other construction related tasks while conducting monitoring. Details regarding monitoring protocols are available in the Navy's marine mammal monitoring plan, and were discussed in greater detail in NMFS' notice of proposed IHA (76 FR 4300; January 25, 2011). The Navy will note in their behavioral observations whether an animal remains in the project area following a Level B taking (which would not require cessation of activity). This information will ideally make it possible to determine whether individuals are taken (within the same day) by one or more types of pile driving (i.e., impact and vibratory). NMFS requires that, at a minimum, the following information be collected on the sighting forms:

- (1) Date and time that pile driving begins or ends;
- (2) Construction activities occurring during each observation period;
- (3) Weather parameters identified in the acoustic monitoring (e.g., wind, humidity, temperature);
- (4) Tide state and water currents;
- (5) Visibility;
- (6) Species, numbers, and, if possible, sex and age class of marine mammals;
- (7) Marine mammal behavior patterns observed, including bearing and direction of travel, and if possible, the correlation to sound pressure levels;

(8) Distance from pile driving activities to marine mammals and distance from the marine mammals to the observation point;

(9) Locations of all marine mammal observations; and

(10) Other human activity in the area.

A draft report would be submitted to NMFS within 45 days of the completion of acoustic measurements and marine mammal monitoring. The results would be summarized in graphical form and include summary statistics and time histories of impact sound values for each pile. A final report would be prepared and submitted to NMFS within 30 days following receipt of comments on the draft report from NMFS. At a minimum, the report shall include:

- (1) Size and type of piles;
- (2) A detailed description of the sound attenuation device, including design specifications;
- (3) The impact or vibratory hammer force used to drive and extract the piles;
- (4) A description of the monitoring equipment;
- (5) The distance between hydrophone(s) and pile;
- (6) The depth of the hydrophone(s);
- (7) The depth of water in which the pile was driven;
- (8) The depth into the substrate that the pile was driven;
- (9) The physical characteristics of the bottom substrate into which the piles were driven;
- (10) The ranges and means for peak, rms, and SELs for each pile;
- (11) The results of the acoustic measurements, including the frequency spectrum, peak and rms SPLs, and single-strike and cumulative SEL with and without the attenuation system;

(12) The results of the airborne noise measurements including dBA and unweighted levels;

(13) 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;

(14) Results, including the detectability of marine mammals, species and numbers observed, sighting rates and distances, behavioral reactions within and outside of safety zones; and

(15) A refined take estimate based on the number of marine mammals observed in the safety and buffer zones. This may be reported as one or both of the following: a rate of take (number of marine mammals per hour), or take based on density (number of individuals within the area).

**Estimated Take by Incidental Harassment**

NMFS is authorizing the Navy to take harbor seals, California sea lions, killer whales, Dall's porpoises, and harbor porpoises, by Level B harassment only, incidental to pile driving activities. These activities, involving driving and extraction of 29 piles in order to collect geotechnical and hydroacoustic data, are expected to harass marine mammals present in the vicinity of the project site through behavioral disturbance only. Estimates of the number of marine mammals that may be harassed by the activities are based upon the estimated densities of each species in the area, the modeled areas of ensonification to various thresholds, and the estimated number of pile driving days. Table 2 details the total number of authorized takes. Methodology of take estimation was discussed in detail in NMFS' notice of proposed IHA (76 FR 4300; January 25, 2011).

TABLE 2—AUTHORIZED NUMBERS OF INCIDENTAL MARINE MAMMAL TAKES

Species	Density	Underwater			Airborne	Total (percent of stock or population)
		Impact injury threshold	Impact disturbance threshold (160 dB)	Vibratory disturbance threshold (120 dB)	Impact and vibratory disturbance threshold	
California sea lion .....	0.410	0	15	255	0	270 (0.01)
Harbor seal .....	1.31	0	122	810	40	832 (5.6)
Killer whale .....	0.038	0	9	30	N/A	39 (12.4)
Dall's porpoise .....	0.043	0	1	30	N/A	31 (0.06)
Harbor porpoise .....	0.011	0	0	* 15	N/A	15 (0.1)
Total .....	.....	0	47	1,140	0	1,187

<sup>1</sup> This value represents the sum of previously estimated takes from fifteen days of attenuated driving and seven days of unattenuated driving, at sixty seconds per day.

**Negligible Impact and Small Numbers Analysis and 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 determining whether or not authorized incidental take will have a negligible impact

on affected species stocks, NMFS considers a number of criteria regarding the impact of the proposed action, including the number, nature, intensity, and duration of Level B harassment take that may occur. Although the Navy's pile driving activities may harass marine mammals occurring in the project area, impacts are occurring to small, localized groups of animals for short durations or to individual cetaceans that may swim through the area. No permanent haul-outs or breeding or pupping areas are located

within the action area. No mortality or injury is anticipated, nor will the action result in long-term impacts such as permanent abandonment of haul-outs. No impacts are expected at the population or stock level. No pinniped stocks known from the action area that will be present during the work period are listed as threatened or endangered under the ESA or determined to be strategic or depleted under the MMPA. The number of animals authorized to be taken for each species of pinnipeds can be considered small

relative to the population size. Please see Table 2 for these numbers.

Based on the foregoing analysis, behavioral disturbance to marine mammals in the Hood Canal will be of low intensity and limited duration. To ensure minimal disturbance, the Navy will implement the mitigation measures described previously, which NMFS has determined will serve as the means for effecting the least practicable adverse effect on marine mammals stocks or populations and their habitat. NMFS finds that the Navy's pile driving activities will result in the incidental take of small numbers of marine mammals, and that the authorized number of takes will have no more than a negligible impact on the affected species and stocks.

#### Impact on Availability of Affected Species for Taking for Subsistence Uses

There are no relevant subsistence uses of marine mammals implicated by this action.

#### Endangered Species Act (ESA)

There are no ESA-listed marine mammals found in the action area during the project's in-water work timeframe; therefore, no consultation under the ESA is required by NMFS.

#### 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 test pile project. NMFS has adopted that EA in order to assess the impacts to the human environment of issuance of an IHA to the Navy. NMFS signed a Finding of No Significant Impact (FONSI) on June 24, 2011. The Navy's EA and NMFS' FONSI for this action are available for review at <http://www.nmfs.noaa.gov/pr/permits/incidental.htm>.

#### Determinations

NMFS has determined that the impact of conducting the specific activities described in this notice and in the IHA request in the specific geographic region in the 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, NMFS has issued an IHA to the Navy to conduct a test pile program in the Hood Canal from the period of July 16, 2011, through October 31, 2011, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated.

Dated: June 24, 2011.

**James H. Lecky,**

*Director, Office of Protected Resources,  
National Marine Fisheries Service.*

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## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

**RIN 0648–XA517**

#### Western Pacific Fisheries; Approval of a Marine Conservation Plan for Pacific Insular Areas; Western Pacific Sustainable Fisheries Fund

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

**ACTION:** Notice of agency decision.

**SUMMARY:** NMFS announces approval of a marine conservation plan for Pacific Insular Areas other than American Samoa, Guam, and the Northern Mariana Islands.

**DATES:** This agency decision is effective from June 24, 2011 through June 23, 2014.

**ADDRESSES:** Copies of the MCP are available from <http://www.regulations.gov>, or the Western Pacific Fishery Management Council (Council), 1164 Bishop St., Suite 1400, Honolulu, HI 96813, tel 808–522–8220.

**FOR FURTHER INFORMATION CONTACT:** Jarad Makaiau, Sustainable Fisheries, NMFS Pacific Islands Regional Office, 808–944–2108.

**SUPPLEMENTARY INFORMATION:** Section 204(e) of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) authorizes the Secretary of State, with the concurrence of the Secretary of Commerce (Secretary) and in consultation with the Council, to negotiate and enter into a Pacific Insular Area fishery agreement (PIAFA). A PIAFA would allow foreign fishing within the U.S. Exclusive Economic Zone (EEZ) adjacent to any Pacific Insular Area other than American Samoa, Guam or the Northern Mariana Islands, that is, in the EEZ around the Pacific remote island areas (PRIA). The PRIA are Baker Island, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Island, Wake Island, and Palmyra Atoll. Before entering into a PIAFA for the PRIA, the Council must develop a 3-year Marine Conservation Plan (MCP) providing details on uses for any funds collected by the Secretary under the PIAFA.

The Magnuson-Stevens Act requires any payments received under a PIAFA, and any funds or contributions received in support of conservation and management objectives for the PRIA to be deposited into the Western Pacific Sustainable Fisheries Fund (Fund) for use by the Council. Additionally, amounts received by the Secretary attributable to fines and penalties imposed under the Magnuson-Stevens Act for violations by foreign vessels occurring within the EEZ off any PRIA are also deposited into the Fund for use by the Council.

An MCP must be consistent with the Council's fishery ecosystem plans, must identify conservation and management objectives (including criteria for determining when such objectives have been met), and must prioritize planned marine conservation projects. Although no foreign fishing is being considered at this time, the Council, at its 151st meeting held June 15–18, 2011, approved its PRIA MCP. On June 18, 2011, the Council submitted the MCP to NMFS for review and approval.

The MCP contains five conservation and management objectives, and identifies major task areas under which nine planned activities are described, as follows:

*Objective 1.* Support quality research and obtain the most complete scientific information available to assess and manage fisheries within an ecosystem approach.

a. Support cooperative research on U.S. purse seine vessels fishing on fish aggregation devices in the PRIA.

b. Support tagging studies in the PRIA to provide better understanding of pelagic species.

c. Support collection and analysis of life history characteristics of federally managed species through bio-sampling.

*Objective 2.* Conduct education and outreach to foster good stewardship principles and broad and direct public participation in the Council decision-making process by supporting education and outreach activities related to sustainable fisheries management of pelagic fisheries in the PRIA.

*Objective 3.* Promote regional cooperation to manage domestic and international fisheries, by participating in international fishery policy development in Pacific Regional Fishery Management Organizations.

*Objective 4.* Encourage development of technologies and methods to achieve the most effective level of monitoring, control, and surveillance and to ensure safety at sea.

a. Support pilot programs to test new technologies for information gathering,