

THE UNITED STATES} is required to provide the U.S. importer with a copy of this certification and is required to provide U.S. Customs and Border Protection (CBP) and/or the U.S. Department of Commerce (Commerce) with this certification, and any supporting documents, upon request of either agency;

I. I understand that the claims made herein, and the substantiating documentation, are subject to verification by CBP and/or Commerce;

J. I understand that failure to maintain the required certification and supporting documentation, or failure to substantiate the claims made herein, or not allowing CBP and/or Commerce to verify the claims made herein, may result in a *de facto* determination that all sales to which this certification applies are within the scope of the antidumping duty and countervailing duty orders on CWP from China. I understand that such a finding will result in:

(i) suspension of all unliquidated entries (and entries for which liquidation has not become final) for which these requirements were not met;

(ii) the importer being required to post the antidumping duty and countervailing duty cash deposits determined by Commerce; and  
(iii) the seller/exporter no longer being allowed to participate in the certification process.

K. I understand that agents of the seller/exporter, such as freight forwarding companies or brokers, are not permitted to make this certification.

L. This certification was completed and signed, and a copy of the certification was provided to the importer, on, or prior to, the date of shipment if the shipment date is after August 13, 2025. If the shipment date is on or before August 13, 2025, this certification was completed and signed, and a copy of the certification was provided to the importer, by no later than September 8, 2025; and

M. I am aware that U.S. law (including, but not limited to, 18 U.S.C. 1001) imposes criminal sanctions on individuals who knowingly and willfully make material false statements to the U.S. government.

Signature

{NAME OF COMPANY OFFICIAL}

{TITLE OF COMPANY OFFICIAL}

{DATE}

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**BILLING CODE 3510-DS-P**

## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

[RTID 0648-XF037]

#### Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to the Naval Base Point Loma Deperming Pier Replacement Project and the Naval Base San Diego Chollas Creek Quay Wall Repair Project in San Diego Bay, California

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

**ACTION:** Notice; two proposed incidental harassment authorizations; request for comments on two proposed authorizations and possible renewals.

**SUMMARY:** NMFS has received separate requests from the U.S. Navy (Navy) for authorization to take marine mammals incidental to the Naval Base Point Loma (NBPL) Deperming Pier Replacement Project and the Naval Base San Diego (NBSD) Chollas Creek Quay Wall Repair Project, respectively, both in San Diego Bay, California (CA). Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposals to issue separate incidental harassment authorizations (IHAs) to incidentally take marine mammals during the specified activities. NMFS is also requesting comments on a possible one-time, 1-year renewal for each IHA that could be issued under certain circumstances, provided all requirements are met, as described in Request for Public Comments at the end of this notice. NMFS will consider public comments prior to making any final decision on the issuance of the requested MMPA authorizations. Agency responses will be summarized in the final notice of our decision.

**DATES:** Comments and information must be received no later than March 5, 2026.

**ADDRESSES:** Comments should be addressed to the Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service, and should be submitted via email to [ITP.Graham@noaa.gov](mailto:ITP.Graham@noaa.gov). Electronic copies of the application and supporting documents, as well as a list of the references cited in this document, may be obtained online at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities>. In case of problems accessing these

documents, please call the contact listed below.

*Instructions:* NMFS is not responsible for comments sent by any other method, to any other address or individual, or received after the end of the comment period. Comments, including all attachments, must not exceed a 25-megabyte file size. All comments received are a part of the public record and will generally be posted online at <https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act> without change. All personal identifying information (*e.g.*, name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit confidential business information or otherwise sensitive or protected information.

**FOR FURTHER INFORMATION CONTACT:** Krista Graham, Office of Protected Resources, NMFS, (301) 427-8401.

#### SUPPLEMENTARY INFORMATION:

##### Background

The MMPA prohibits the “take” of marine mammals, with certain exceptions. Section 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) directs the Secretary of Commerce (as delegated to NMFS) 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 proposed or, if the taking is limited to harassment, a notice of a proposed IHA is provided to the public for review.

Authorization for incidental takings 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 taking for subsistence uses (where relevant). Further, NMFS must prescribe the permissible methods of taking; other “means of effecting the least practicable adverse impact” on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of the species or stocks for taking for certain subsistence uses (collectively referred to as “mitigation”); and requirements pertaining to the monitoring and reporting of the takings. The definitions of all applicable MMPA statutory terms used above are included in the relevant sections below (*see also* 16 U.S.C. 1362; 50 CFR 216.103).

### National Environmental Policy Act

To comply with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq.*) and NOAA Administrative Order (NAO) 216–6A, NMFS must review our proposed action (*i.e.*, the issuance of an IHA) with respect to potential impacts on the human environment.

These actions are consistent with categories of activities identified in Categorical Exclusion B4 (IHAs with no anticipated serious injury or mortality) of the Companion Manual for NAO 216–6A, which do not individually or cumulatively have the potential for significant impacts on the quality of the human environment and for which we have not identified any extraordinary circumstances that would preclude this categorical exclusion. Accordingly, for both proposed IHAs, NMFS has preliminarily determined that the issuance of the proposed IHA qualifies for categorical exclusion from further NEPA review.

### Summary of Request

On April 23, 2025, NMFS received a request from the Navy for an IHA to authorize incidental take of marine mammals during the NBPL Deperming Pier Replacement Project, which involves removing and replacing damaged fender piles at three large piers at NBPL in San Diego Bay, CA. Then, on April 30, 2025, NMFS received another request from the Navy for an IHA to authorize incidental take during the NBSD Chollas Creek Quay Wall Repair Project, which includes removing and replacing the existing quay wall and dock pilings in Chollas Creek, San Diego Bay, CA. Since both projects are proposed by the Navy and are located in San Diego Bay, CA, and the Navy has requested the authorizations be issued near concurrently, NMFS is announcing its proposals of the two IHAs and soliciting public comment within this single **Federal Register** notice.

Following NMFS' review of the applications, the Navy submitted a revised version of both applications on November 13, 2025. Both applications were deemed adequate and complete on November 19, 2025. For the NBPL

Deperming Pier Replacement Project, the Navy's request is for the take of six species of marine mammals, by Level A harassment and/or Level B harassment only; for the NBSD Chollas Creek Quay Wall Repair Project, the Navy's request is for the take of three species of marine mammals, by Level B harassment only. Neither the Navy nor NMFS expects serious injury or mortality to result from either activity; therefore, an IHA for each project is appropriate. Both IHAs would be valid for the statutory maximum of 1 year from the date of effectiveness, and would become effective upon written notification from the Navy to NMFS, but not beginning later than 1 year from the date of issuance or extending beyond 2 years from the date of issuance.

### Description of Proposed Activity

#### Overview

The purpose of both Navy projects is to maintain structurally sound and operational areas at both naval bases, to continue safely supporting Pacific Fleet surface ships, and to allow berth-side repair, maintenance, and storage of vessels. Both proposed projects are located at naval bases within San Diego Bay, CA, either near the mouth of the Bay at Point Loma (NBPL), or in the south-central part of the Bay, at Chollas Creek (NBSD). The Navy would remove existing piles using a dead pull, high-pressure water jetting, or a vibratory extractor, and install permanent piles using high-pressure water jetting, vibratory hammer, or an impact hammer to replace the existing piers. For the NBPL Project, the proposed activities would result in removing 192 piles and installing 192 piles over approximately 171 in-water work days. For the NBSD Project, 190 in-water work days are estimated to remove 544 piles, and 121 days to install 936 piles. Pile removal via vibratory extractor and pile installation via vibratory hammer or impact hammer have the potential to result in marine mammal harassment, and, therefore, IHAs are warranted.

#### Dates and Duration

Each proposed IHA would be valid for the statutory maximum of 1 year from

the date of effectiveness. They would become effective upon written notification from the applicant to NMFS, but not beginning later than 1 year from the date of issuance or extending beyond 2 years from the date of issuance. Pile driving is expected to occur at NBPL between June 1, 2026, and May 31, 2027, for 171 days. Pile driving is expected to occur at NBSD between January 1, 2027, and December 31, 2027, for 190 days. However, project delays may occur due to several factors, including project funding, permitting requirements, equipment and/or material availability, weather-related delays, equipment maintenance and/or repair, and other contingencies. For both projects, pile removal and driving would occur only during daylight hours.

#### Specific Geographic Region

The NBPL Deperming Pier Replacement Project is located on the peninsula of Point Loma near the mouth and along the northern edge of San Diego Bay, CA. This area, known as North Bay, extends from the Bay mouth to the area offshore Downtown San Diego.

The NBSD Chollas Creek Quay Wall Repair Project is located in the San Diego Bay in an area known as South-Central Bay. Specifically, the project is located at the mouth of Chollas Creek, a highly militarized area on both sides of the Creek.

The U.S. Army Corps of Engineers dredges the main navigation channel into and through San Diego Bay to maintain a depth of 47 feet (ft) (14.3 meters (m)) below mean lower low water (MLLW), ensuring safe passage for private, commercial, and military vessels within the Bay (NOAA 2010). In North Bay, typical depths range from 36 to 38 ft (11.0 to 11.6 m) below MLLW to support large ship turning and anchorage (Merkel & Associates, Inc., 2008, 2009). In Central Bay, typical depths range from 11 to 12 m (35 to 38 ft) below MLLW (Merkel & Associates, 2009).

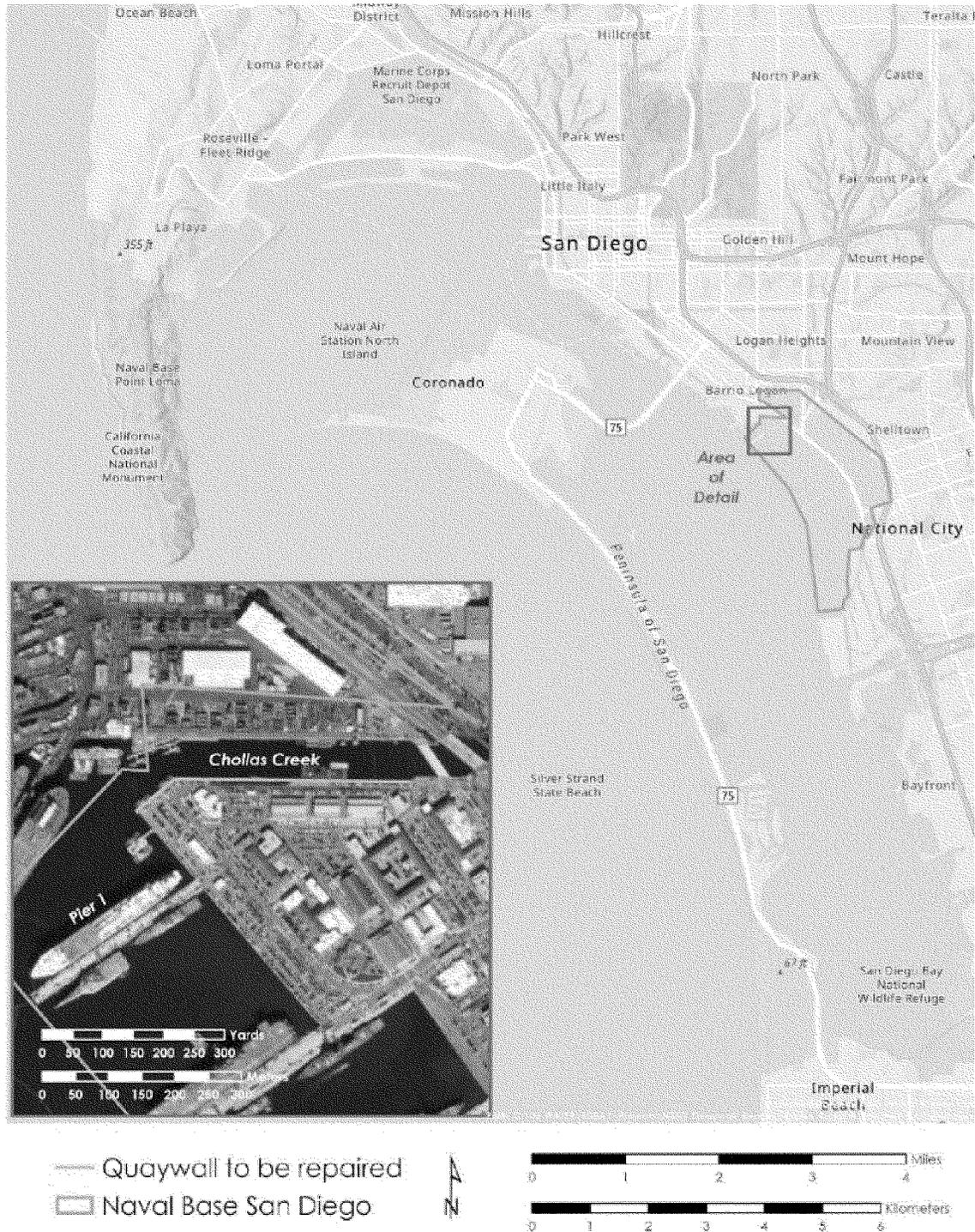
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Figure 1 -- NBPL Deperming Pier Replacement Project area denoted by a pin drop



**Figure 2 -- Zoomed in vicinity map of the NBPL Deperming Pier Replacement Project**



**Figure 3 -- NBSD Chollas Creek Quay Wall Repair Project area**

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*Detailed Description of the Specified Activity*

**NBPL Deperming Pier Replacement Project**

For the NBPL Project, the Navy proposes in-water construction work at three piers: the two Magnetic Silencing

Facility (MSF) piers (i.e., the Deperming Pier and the Electromagnetic Roll Garden (ERG) Pier), and Pier 5002 North Inner Berth. Specifically, the Navy proposes to remove and replace damaged piles at the Deperming Pier and the ERG Pier, and replace plastic fender piles at Pier 5002. The MSF provides mission-critical magnetic

treatment (deperming) of Navy surface vessels, and calibration and testing of magnetic signature reduction systems (degaussing), thereby significantly reducing the risk to Navy ships from magnetic mines. The project would maintain the Deperming Pier, ERG Pier, and Pier 5002 in a structurally sound, operational condition so that the Navy

may safely continue to support Pacific Fleet surface ships.

During construction activities at NBPL, 192 16-inch timber piles would be removed via vibratory extraction over an estimated 86 days. High-pressure water jetting or dead pull may also be used to remove piles. The installation of the 192 16-inch round fiberglass-reinforced plastic piles would be carried out using vibratory or impact hammers over 85 days. High-pressure external water jetting may be used to loosen the soil before vibratory or impact hammering. Two-inch pile sleeves made of high-density polyethylene would be slipped onto the outside of each 16-inch pile to minimize long-term pile degradation (*i.e.*, no pile driving is needed). Each sleeve would be bolted in place to the steel pile above the waterline. Additionally, 8-ft (2.4 m) link chains (one for each replaced piling) would be replaced to connect the pier to the piling for extra support. High-pressure water jetting or dead-pull removal methods are not likely to result in harassment and, therefore, we do not discuss these action components further.

The Navy estimates that 171 days are needed to remove and install a total of 384 piles. A floating barge secured directly to the pier would remove and install between two and four piles per day. The sequence of pile removal and installation involves removing three to four piles, then installing three to four new piles. The barge would then move

to the next section and repeat the process.

The estimated time to remove each timber pile with a vibratory hammer is up to 5 minutes. Installation is expected to take up to 5 minutes per plastic pile using vibratory pile driving, while impact installation may require up to 600 strikes per plastic pile (see table 1). A bubble curtain or similar attenuation method is not proposed (see Proposed Mitigation section below for rationale).

**NBSD Chollas Creek Quay Wall Repair Project**

For this project, the Navy plans to repair Quay Wall Segment B at NBSD along Chollas Creek. This area experienced a catastrophic failure in 2019 due to its age (82 years), which led to undermined sheet piles and the deterioration of utility lines. The project includes demolishing the existing quay wall and associated piles, then building a new quay wall. Additionally, piles would be installed to support a small craft floating dock in the same area as the old location (within Chollas Creek) for berth-side repairs, maintenance, and vessel storage. Repairs would span approximately 1,410 ft (430 m) along the quay wall in about 30 ft (10 m) of water depth. Vibratory extraction would be used to remove the 14-inch steel H piles, 18-inch square concrete fender piles, 18-inch octagonal concrete fender piles, and 24-inch steel sheet piles. Dead pulling would be used to remove the 13-inch round plastic fender piles.

Piles would only be removed if they interfere with the installation of new piles. Vibratory pile driving, impact pile driving, or high-pressure water jetting would be used to install the 24-inch sheet piles, 18-inch square concrete fender piles, 18-inch octagonal concrete guide piles, and the 13-inch round plastic fender piles. For reasons described for the NBPL project above, dead pull and high-pressure water jetting are not expected to have the potential to result in harassment and are not discussed further.

The Navy estimates 190 days of in-water work, conducted only during daylight hours, are necessary for this project. Specifically, the Navy estimates 69 days to remove 544 piles and 121 days to install 936 piles. The sequence of pile removal/installation for this project is less certain but likely involves removing all piles, then installing all new piles. However, the contractor may opt to remove and install all piles of a similar nature (*e.g.*, square and octagonal piles) before moving on to another pile type (*e.g.*, wall sheet piles).

Anywhere from 2 to 12 piles may be removed per day, during daylight hours only, with 4 to 10 piles installed per day. Vibratory pile removal is estimated to take approximately 20 minutes per pile for all pile types; vibratory pile installation is estimated to take anywhere from 1 to 20 minutes per pile, depending on the pile type, whereas impact pile installation is estimated to take 600 strikes per pile (see table 1).

**TABLE 1—NBPL AND NBSD PILE REMOVAL AND INSTALLATION METHOD, PILE SIZE/TYPE, LOCATION, NUMBER, AND DURATION**

Method	Pile size/type	Pile location	Piles/day	Number of piles	Number of days
<b>NBPL DEPERMING PIER</b>					
<b>Pile Removal<sup>1</sup></b>					
Vibratory Extraction .....	16-inch (41 cm) round timber .....	Deperming Pier Edge .....	4	72	21
		Deperming Pier Corners .....	2	51	26
		ERG Pier Dolphin Clusters .....	2	38	20
		ERG Pier .....	2	28	17
		Pier 5002 .....	2	3	2
<b>Total</b> .....			2–4	192	<sup>2</sup> 86
<b>Pile Installation<sup>1</sup></b>					
Vibratory Hammer/Impact Hammer .....	16-inch (41 cm) round fiberglass-reinforced plastic.	Deperming Pier Edge .....	3	72	24
		Deperming Pier Corners .....	2	51	26
		ERG Pier Dolphin Clusters .....	2	38	19
		ERG Pier .....	2	28	14
		Pier 5002 .....	2	3	2
<b>Totals</b> .....			2–3	192	85
<b>Total in-water pile extraction/installation days</b> .....					171
<b>NBSD CHOLLAS CREEK</b>					
<b>Pile Removal<sup>3</sup></b>					
Vibratory Extraction .....	13-inch round plastic <sup>4</sup> .....	Quay wall corner to channel .....	7	14	2
	18-inch square concrete .....	Quay wall .....	5	140	28

TABLE 1—NBPL AND NBSD PILE REMOVAL AND INSTALLATION METHOD, PILE SIZE/TYPE, LOCATION, NUMBER, AND DURATION—Continued

Method	Pile size/type	Pile location	Piles/day	Number of piles	Number of days
	14-inch steel H .....	Quay wall .....	12	100	9
	18-inch octagonal concrete .....	Small craft dock .....	2	2	1
	24-inch steel sheet <sup>5</sup> .....	Quay wall .....	10	288	29
Totals .....			2–12	544	69
<b>Pile Installation <sup>1</sup></b>					
Vibratory/Impact Hammer .....	13-round plastic .....	Quay wall corner to channel .....	5	14	3
	18-inch square concrete .....	Quay wall .....	6	155	26
	18-inch octagonal concrete .....	Small craft dock .....	4	23	6
	27.5-inch steel sheet <sup>6</sup> .....	Quay wall .....	10	744	86
Total .....			4–10	936	121
Total in-water pile extraction/installation days .....					190

<sup>1</sup> Vibratory pile removal/installation and impact pile installation may occur with or without high-pressure water jetting occurring either simultaneously or separately.  
<sup>2</sup> Contractor added buffer days for some locations.  
<sup>3</sup> While other methods of pile extraction are possible, vibratory extraction is the most likely method that would be used to extract piles. No Level A harassment or Level B harassment (take analysis) is conducted on the other pile extraction methods (*i.e.*, dead pull, water jetting).  
<sup>4</sup> These piles are anticipated to be dead pulled.  
<sup>5</sup> These piles are anticipated to be either vibratory extracted, dead pulled, or clipped at the mud-line and removed. For this IHA, we are assuming vibratory extraction for the demolition of all existing sheet piles.  
<sup>6</sup> Includes extra days as a buffer.

For both projects, only in-water vibratory pile removal and vibratory and impact pile installation are anticipated to result in marine mammal harassment due to elevated underwater noise. Any above-ground activities (*e.g.*, repositioning equipment) are expected to result in only in-air/in-ground construction noise below levels known to affect marine mammals, and thus won't be discussed further. The underwater sound generated by these in-water activities associated with the NBPL Deperming Pier Replacement Project may result in Level A harassment and/or Level B harassment of six marine mammal species, comprising six stocks. For the NBSD Chollas Creek Quay Wall Repair Project, underwater sound may result in Level B harassment of three marine mammal species.

With respect to the ambient or background underwater sound levels (SPL) for San Diego Bay, these levels are reported in the “Compendium of Underwater and Airborne Sound Data during Pile Installation and In-Water Demolition Activities in San Diego Bay, California” (NAVFAC SW, 2020). These sound levels were measured for the NBPL Fuel Pier Replacement Project at two locations. The median background underwater SPL in areas of the Bay subject to project construction noise at NBPL averaged approximately 129.6 dB (referenced to 1 micropascal (re 1 μPa)). As described in the Estimated Take section, pile removal and installation noise for the NBSD Project is likely to become indistinguishable from background noise as it diminishes to

126 dB re 1 μPa with distance from the source (NBSD IHA application, citing Dahl and Dall'Osto, 2019).

Proposed mitigation, monitoring, and reporting measures are described in detail later in this document (please see Proposed Mitigation and Proposed Monitoring and Reporting).

**Description of Marine Mammals in the Area of Specified Activities**

Sections 3 and 4 of the application summarize available information regarding the status and trends, distribution and habitat preferences, and behavior and life history of the potentially affected species. NMFS fully considered all of this information, and we refer the reader to these descriptions in the application instead of reprinting the information. Additional information on population trends and threats may be found in NMFS' Stock Assessment Reports (SARs; <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments>), and more general information about these species (*e.g.*, physical and behavioral descriptions) may be found on NMFS' website (<https://www.fisheries.noaa.gov/find-species>). Furthermore, information may be found in the “U.S. Navy's Dive Distribution and Group Size Parameters for Marine Species Occurring in the U.S. Navy's Atlantic and Hawaii-California Training and Testing Study Areas” (Navy, 2024), available online at [https://www.nepa.navy.mil/Portals/20/Documents/Pacific%20Fleet/HSTTEIS/HCTT/DraftEIS/TechnicalReports/AFTTHCTTDiveProfile\\_TR12243A.pdf](https://www.nepa.navy.mil/Portals/20/Documents/Pacific%20Fleet/HSTTEIS/HCTT/DraftEIS/TechnicalReports/AFTTHCTTDiveProfile_TR12243A.pdf).

Table 2 lists all the species or stocks for which take is expected and proposed to be authorized for these activities and summarizes information related to the population or stock, including regulatory status under the MMPA and Endangered Species Act (ESA), as well as the potential biological removal (PBR), where known. The MMPA defines PBR as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population (as described in NMFS' SARs). While no serious injury or mortality is anticipated or proposed to be authorized for either project, the PBR and annual mortality and serious injury (M/SI) from anthropogenic sources are included here as gross indicators of the status of the species or stocks and other threats.

Marine mammal abundance estimates presented in this document represent the total number of individuals that make up a given stock or the total number estimated within a particular study or survey area. NMFS' stock abundance estimates for most species represent the total estimate of individuals within the geographical area, if known, that comprises that stock. For some species, this area may extend beyond U.S. waters. All managed stocks in this region are assessed in NMFS' U.S. Pacific SARs (Carretta *et al.*, 2025). All values presented in table 2 are the most recent available at the time of publication (including from the draft 2024 SARs) and are available online at: <https://www.fisheries.noaa.gov/>

*national/marine-mammal-protection/  
marine-mammal-stock-assessments.*

TABLE 2—SPECIES, STOCKS, AND THE STATUS OF MARINE MAMMALS WITH ESTIMATED TAKE FROM THE SPECIFIED NBPL AND NBSD ACTIVITIES

Common name <sup>1</sup>	Scientific name	Stock	ESA/ MMPA status; strategic (Y/N) <sup>2</sup>	Stock abundance (CV, N <sub>min</sub> , most recent abundance survey) <sup>3</sup>	PBR	Annual M/S <sup>4</sup>
<b>Order Artiodactyla—Infraorder Cetacea—Mysticeti (baleen whales)</b>						
Family Eschrichtiidae: Gray whale <sup>5</sup> .....	<i>Eschrichtius robustus</i> .....	Eastern North Pacific .....	-,N	25,960 (0.05, 25,849, 2016) ..	801	131
<b>Odontoceti (toothed whales, dolphins, and porpoises)</b>						
Family Delphinidae: Common dolphin (short- beaked) <sup>5</sup> .....	<i>Delphinus delphis</i> .....	CA/OR/WA .....	-,N	1,056,308 (0.21, 888,971, 2018).	8,889	≥30.5
Common dolphin (long- beaked) <sup>5</sup> .....	<i>Delphinus delphis bairdii</i> .....	CA .....	-,N	83,379 (0.216, 69,636, 2018)	668	≥29.7
Common bottlenose dol- phin <sup>5,6</sup> .....	<i>Tursiops truncatus truncatus</i> ..	CA coastal .....	-,N	453 (0.6, 346, 2011) .....	2.7	≥2.0
<b>Order Carnivora—Pinnipedia</b>						
Family Otariidae (eared seals and sea lions): California sea lion <sup>5,6</sup> .....	<i>Zalophus californianus</i> .....	U.S. .....	-,N	257,606 (N/A, 233,515, 2014)	14,011	>321
Family Phocidae (earless seals): Harbor seal <sup>5,6</sup> .....	<i>Phoca vitulina</i> .....	California .....	-,N	30,968 (N/A, 27,348, 2012) ...	1,641	43

<sup>1</sup> Information on the classification of marine mammal species can be found on the web page for The Society for Marine Mammalogy's Committee on Taxonomy (<https://marinemammalscience.org/science-and-publications/list-marine-mammal-species-subspecies/>).

<sup>2</sup> Endangered Species Act (ESA) status: Endangered (E), Threatened (T); MMPA status: Depleted (D). A dash (-) indicates that the species is not listed under the ESA or designated as depleted under the MMPA. Under the MMPA, a strategic stock is one for which the level of direct human-caused mortality exceeds PBR or is determined to be declining and likely to be listed under the ESA within the foreseeable future. Any species or stock listed under the ESA is automatically designated as depleted and as a strategic stock under the MMPA.

<sup>3</sup> NMFS marine mammal stock assessment reports online at <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports>. CV is the coefficient of variation; N<sub>min</sub> is the minimum estimate of stock abundance. In some cases, a CV is not applicable. N/A indicates data are unknown. UND (undetermined) PBR indicates data are available to calculate a PBR level, but a determination has been made that calculating a PBR level using those data is inappropriate (see the SAR for details).

<sup>4</sup> These values, found in NMFS' SARs, represent annual levels of human-caused mortality plus serious injury from all sources combined (e.g., commercial fisheries, ship strikes). Annual M/SI is often not precisely determined and is sometimes reported as a minimum value or a range.

<sup>5</sup> Species occurs in the NBPL Project area; see the *Marine Mammal Species at NBPL* section and table 8 for further information.

<sup>6</sup> Species occurs in the NBSD Project area; see the *Marine Mammal Species at NBSD* section and table 8 for further information.

As indicated above, table 2 lists all six species that temporally and spatially co-occur during all or a portion of the in-water work associated with the proposed activities at NBPL to the degree that incidental take could potentially occur. Thus, the Navy has requested, and NMFS proposes to authorize, the incidental take of these six species. Table 2 also lists the three species that temporally and spatially co-occur during all or a portion of the in-water work associated with the proposed activities at NBSD to the degree that incidental take could potentially occur. Thus, for the NBSD Project, the Navy has requested, and NMFS proposes to authorize, the incidental take of California sea lions, the California coastal stock of the bottlenose dolphins, and harbor seals.

NMFS has previously authorized the incidental take of Risso's dolphins (*Grampus griseus*), northern elephant seals (*Mirounga angustirostris*), and Pacific white-sided dolphins (*Lagenorhynchus obliquidens*) in past IHAs spanning over a decade for Navy

projects in San Diego Bay (see the NBPL Fuel Pier Replacement projects: 78 FR 44539, July 24, 2013 (Year 1 Project); 79 FR 65378, November 4, 2014; (Year 2 Project); 80 FR 62032, October 15, 2015 (Year 3 Project); 81 FR 66628, September 28, 2016 (Year 4 Project); 82 FR 45811, and October 2, 2017 (Year 5 Project); 85 FR 33129, June 1, 2020 (NBPL Floating Dry Dock Project); 86 FR 7993, February 3, 2021 (NBPL Pier 6 Replacement Project), and 86 FR 48986, September 1, 2021 (NBPL Fuel Pier Inboard Pile Removal Project) for examples). However, based on monitoring reports for these projects, sightings of these species were rare or occurred only during an El Niño monitoring year and are not considered representative of typical species occurrences (see 88 FR 6703, February 1, 2024). Therefore, because the temporal and/or spatial occurrence of Risso's dolphins, northern elephant seals, and Pacific white-sided dolphins during in-water activities for both projects is such that incidental take is not expected to occur, the Navy did not

request, and NMFS is not proposing to authorize, the incidental take of these three species, and these species are not discussed further (for either the NBPL or NBSD projects).

The most frequently observed marine mammal in San Diego Bay is the California sea lion, which is considered abundant and often rests on buoys and other man-made structures found throughout the North to North Central Bay. Other species known to occur in San Diego Bay include the California coastal stock of the common bottlenose dolphin, which is seen year-round in the North Bay but sightings are sporadic and highly variable, and the harbor seal, which is relatively uncommon in the North Bay. Gray whales, which are occasionally sighted near the mouth of San Diego Bay during their winter migration, are considered rare/seasonal. Lastly, common dolphins (both short-beaked and long-beaked are occasional visitors to San Diego Bay. Recently, the Committee on Taxonomy (<https://marinemammalscience.org/science-and-publications/list-marine-mammal->

*species-subspecies/*) determined that both the short-beaked and long-beaked common dolphin belong to the same species, and we adopt this taxonomy. However, the SARs still describe the two as separate stocks, and that stock information is presented in table 2.

Sightings of common dolphins (both short-beaked and long-beaked) and gray whales are rare occurrences in San Diego Bay, especially in South-Central San Diego Bay, where Chollas Creek is located. Based on the lack of sightings as documented in the NBSD Pier 6 Replacement Project’s final report (NAVFAC SW, 2024) during 172 monitoring days, the Navy is not requesting, and NMFS is not proposing to authorize, the incidental take for these three species, and they are not discussed further beyond the explanation provided here.

Finally, there are no known biologically important areas (BIAs) for marine mammals near the project sites that would be relevant to the Navy’s proposed activities.

*Marine Mammal Hearing*

Hearing is the most vital sensory modality for marine mammals underwater, and exposure to anthropogenic sound can have deleterious effects. To appropriately assess the potential effects of sound exposure, it is necessary to understand the frequency ranges that marine mammals can hear. Not all marine mammal species have equal hearing capabilities or hear over the same frequency range (*e.g.*, Richardson *et al.*, 1995; Wartzok and Ketten, 1999; Au and Hastings, 2008). To reflect this, Southall *et al.* (2007; 2019) recommended that marine mammals be divided into hearing groups based on directly measured (behavioral or auditory evoked potential techniques) or estimated hearing ranges (behavioral response data, anatomical modeling, *etc.*). Subsequently, NMFS (2018, 2024) described generalized hearing ranges for these marine mammal hearing groups. Generalized hearing ranges were chosen based on the approximately 65-decibel

(dB) threshold from the normalized composite audiograms, with the exception of lower limits for low-frequency cetaceans, where the lower bound was deemed to be biologically implausible, and the lower bound from Southall *et al.* (2007) was retained. In October 2024, NMFS published its 2024 Updated Technical Guidance, which includes updated thresholds and weighting functions to inform auditory injury estimates and replaces the 2018 Technical Guidance referenced above. This 2024 Updated Technical Guidance represents the best available science. Marine mammal hearing groups and their associated hearing ranges are provided in table 3. Of the species potentially present in both proposed action areas, gray whales are considered low-frequency (LF) cetaceans; bottlenose dolphins and short- and long-beaked common dolphins are considered high-frequency (HF) cetaceans; California sea lions are otariid pinnipeds; and harbor seals are phocid pinnipeds.

TABLE 3—MARINE MAMMAL HEARING GROUPS [NMFS, 2024]

Hearing group	Generalized hearing range*
Low-frequency (LF) cetaceans (baleen whales)	7 Hz to 36 kHz.
High-frequency (HF) cetaceans (dolphins, toothed whales, beaked whales, bottlenose whales)	150 Hz to 160 kHz.
Very High-frequency (VHF) cetaceans (true porpoises, <i>Kogia</i> , river dolphins, Cephalorhynchid, <i>Lagenorhynchus cruciger</i> & <i>L. australis</i> ).	200 Hz to 165 kHz.
Phocid pinnipeds (PW) (underwater) (true seals)	40 Hz to 90 kHz.
Otariid pinnipeds (OW) (underwater) (sea lions and fur seals)	60 Hz to 68 kHz.

\* Represents the generalized hearing range for the entire group as a composite (*i.e.*, all species within the group), where individual species’ hearing ranges may not be as broad. Generalized hearing range chosen based on approximately 65 dB threshold from composite audiogram, previous analysis in NMFS (2018), and/or data from Southall *et al.* (2007) and Southall *et al.* (2019). Additionally, animals can detect very loud sounds above and below the “generalized” hearing range.

**Potential Effects of Specified Activities on Marine Mammals and Their Habitat**

This section includes a discussion of how components of the specified activities for both the NBPL and NBSD projects may affect marine mammals and their habitat. The Estimated Take of Marine Mammals section later in this document includes a quantitative analysis of the number of individuals that are expected to be taken by both the NBPL and NBSD activities. The Negligible Impact Analysis and Determination section considers the content of this section, as well as the Estimated Take of Marine Mammals section and the Proposed Mitigation section, to draw conclusions regarding the likely impacts of both of the proposed project activities on the reproductive success or survivorship of individuals and whether those impacts are reasonably expected to, or

reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.

Acoustic effects on marine mammals during the specified activities for both projects are expected to result from vibratory removal/driving and impact pile driving. While marine mammals in some cases have exhibited little to no obviously detectable response to certain common or routine industrialized activities (Cornick *et al.*, 2011; Horley and Larson, 2023) such as those that occur in San Diego Bay, it is possible that some animals may, at times, be exposed to received levels of sound above the auditory injury (AUD INJ; discussed later) and/or Level B harassment thresholds during the proposed projects. This potential exposure, in combination with the nature of planned activities (*e.g.*, vibratory pile removal/driving and

impact pile driving), means that take by Level A harassment and/or Level B harassment could occur over the total estimated period of activities. Therefore, NMFS, in response to the Navy’s NBPL Deperming Pier Replacement Project IHA application, proposes to authorize take by Level A harassment and/or Level B harassment from the proposed construction activities. Moreover, in response to the Navy’s NBSD Chollas Creek Quay Wall Repair Project IHA application, NMFS proposes to authorize take by Level B harassment only from the proposed construction activities.

NMFS has summarized a brief technical description of the physics of sound and relevant measurement metrics (*i.e.*, RMS, Peak, and SEL) (NMFS, 2024), available online at <https://www.fisheries.noaa.gov/national/marine-mammal-protection/>

*marine-mammal-acoustic-technical-guidance*. We refer readers to this document for definitions of the measurement terms and metrics used herein.

There are a variety of types and degrees of effects on marine mammals, prey species, and habitats that could result from the projects. Since both projects would use the same pile-driving and removal methods, below is a brief description of the sound sources the projects would generate, the general impacts of these activities, and an analysis of the anticipated impacts on marine mammals from the projects, with consideration of the proposed mitigation measures.

#### *Description of Sound Sources for the Specified NBPL and NBSD Activities*

##### Construction Activities

Impact hammers typically operate by repeatedly dropping and/or pushing a heavy piston onto a pile to drive the pile into the substrate. Sound generated by impact hammers is impulsive, characterized by rapid rise times and high peak levels, a potentially injurious combination (Hastings and Popper, 2005). Vibratory hammers install piles by vibrating them and allowing the hammer's weight to drive them into the substrate. Vibratory hammers typically produce less sound (*i.e.*, lower levels) than impact hammers. Peak SPLs may be 180 dB or greater, but are generally 10 to 20 dB lower than SPLs generated during impact pile driving of the same-sized pile (Oestman *et al.*, 2009; California Department of Transportation (CALTRANS), 2015; 2020). Sounds produced by vibratory hammers are non-impulsive; compared to sounds produced by impact hammers, the rise time is slower, reducing the probability and severity of injury, and the sound energy is distributed over a greater amount of time (Nedwell and Edwards, 2002; Carlson *et al.*, 2005).

#### *Potential Effects of Underwater Sound on Marine Mammals*

The introduction of anthropogenic noise into the aquatic environment from vibratory pile removal and vibratory and impact pile installation is the primary means by which marine mammals may be harassed from the Navy's specified activities at both NBPL and NBSD. Anthropogenic sounds span a broad range of frequencies and sound levels and can have highly variable impacts on marine life, from none or minor to potentially severe responses, depending on received levels, duration of exposure, behavioral context, and other factors. Broadly, underwater sound from active

acoustic sources, such as those in these projects, can potentially result in one or more of the following: temporary or permanent hearing impairment, non-auditory physical or physiological effects, behavioral disturbance, stress, and masking (Richardson *et al.*, 1995; Gordon *et al.*, 2003; Nowacek *et al.*, 2007; Southall *et al.*, 2007; Götz *et al.*, 2009).

We describe the more severe effects of certain non-auditory physical or physiological effects only briefly, as we do not expect that the use of impact/vibratory hammers is reasonably likely to result in such effects (see below for further discussion). For non-auditory physical effects, for the NBPL Project, abundant California sea lions are known to haul out at docks associated with Pier 122 (~363 ft (110 m) to the north) and Pier 40 (~192 ft (58 m) to the south). They are also known to haul out at barges associated with the Everingham Brothers' Bait Barge Company that are from 541 ft to 1,003 ft (164 m to 304 m) east of the NBPL Project area. For the NBSD Project, the species is known to haul out near the NBSD security fence and navigation channel marker buoys. However, California sea lions exhibit a high tolerance to human activity (Holcomb *et al.*, 2009) and opportunistically use almost any available structure as a haul out (NAVFAC SW and POSD, 2013). As for the NBSD Project, the relatively uncommon harbor seals also haul out on rocks, buoys, and other structures. As stated above, the nearest pinniped haul outs are a pair of active Navy docks to the north and the south of the Deperming Pier, with a pair of bait barges to the east. Harbor seals are even more uncommon with respect to the NBSD Project. Ultimately, we expect that any visual and/or other non-acoustic stressors would be limited and that any impacts on marine mammals would be acoustic in nature for both projects.

Potential physiological effects from sound sources, particularly impulsive sound, can range from behavioral disturbance or tactile perception to physical discomfort, slight injury to the internal organs and the auditory system, or mortality (Yelverton *et al.*, 1973). Non-auditory physiological effects or injuries that theoretically might occur in marine mammals exposed to high level underwater sound or as a secondary effect of extreme behavioral reactions (*e.g.*, change in dive profile as a result of an avoidance reaction) caused by exposure to sound include neurological effects, bubble formation, resonance effects, and other types of organ or tissue damage (Cox *et al.*, 2006; Southall

*et al.*, 2007; Zimmer and Tyack, 2007; Tal *et al.*, 2015). However, the Project activities considered here do not involve the use of devices such as explosives or mid-frequency tactical sonar that are associated with these types of effects.

In general, animals exposed to natural or anthropogenic sound may experience physical and psychological effects, ranging in magnitude from none to severe (Southall *et al.*, 2007, 2019). Exposure to anthropogenic noise can result in auditory threshold shifts and behavioral responses (*e.g.*, avoidance, temporary cessation of foraging and vocalizing, changes in dive behavior). It can also lead to non-observable physiological responses, such as increased stress hormone levels. Additional noise in a marine mammal's habitat can mask acoustic cues used in daily functions, such as communication and predator and prey detection.

The degree of effect of an acoustic exposure on marine mammals is dependent on several factors, including, but not limited to, sound type (*e.g.*, impulsive vs. non-impulsive), signal characteristics, the species, age, and sex class (*e.g.*, adult male vs. mom with calf), duration of exposure, the distance between the noise source and the animal, received levels, behavioral state at time of exposure, and previous history with exposure (Wartzok *et al.*, 2004; Southall *et al.*, 2007). In general, sudden, high-intensity sounds can cause hearing loss, as can longer exposures to lower-intensity sounds. Moreover, any temporary or permanent loss of hearing, if it occurs at all, would occur almost exclusively for noise within an animal's hearing range. We describe below the specific manifestations of acoustic effects that may occur from the specified activities.

Richardson *et al.* (1995) described zones of increasing effect intensity that might be expected to occur with distance from a source, assuming that the signal is within an animal's hearing range. First (at the greatest distance) is the area within which the acoustic signal would be audible (potentially perceived) to the animal but not strong enough to elicit any overt behavioral or physiological response. The next zone (closer to the receiving animal) corresponds to the area where the signal is audible to the animal and sufficiently intense to elicit behavioral or physiological responsiveness. The third is a zone within which, for high-intensity signals, the received level is sufficient to cause discomfort or tissue damage to auditory or other systems. Overlaying these zones to some extent is the area within which masking (*i.e.*,

when a sound interferes with or masks an animal's ability to detect a signal of interest above the absolute hearing threshold) may occur; the masking zone may vary widely in size.

Below, we provide additional detail regarding the potential impacts on marine mammals and their habitat from noise in general, starting with hearing impairment, as well as from the specific activities the Navy plans to conduct at both project sites, to the extent available.

#### Hearing Threshold Shifts

NMFS defines a noise-induced threshold shift (TS) as a change, usually an increase, in the audibility threshold at a specified frequency or portion of an individual's hearing range above a previously established reference level (NMFS, 2018, 2024). The amount of threshold shift is customarily expressed in dB. A TS can be permanent or temporary. As described in NMFS (2018, 2024), there are numerous factors to consider when examining the consequence of TS, including, but not limited to, the signal temporal pattern (e.g., impulsive or non-impulsive), the likelihood an individual would be exposed for a long enough duration or to a high enough level to induce a TS, the magnitude of the TS, the time to recovery (seconds to minutes or hours to days), the frequency range of the exposure (i.e., spectral content), the hearing frequency range of the exposed species relative to the signal's frequency spectrum (i.e., how the animal uses sound within the frequency band of the signal; e.g., Kastelein *et al.*, 2014), and the overlap between the animal and the source (e.g., spatial, temporal, and spectral).

#### Temporary Threshold Shift

A temporary threshold shift (TTS) is a temporary, reversible increase in the threshold of audibility at a specified frequency or portion of an individual's hearing range above a previously established reference level (NMFS, 2024), and is not considered an AUD INJ. Based on data from marine mammal TTS measurements (see Southall *et al.*, 2007, 2019), a TTS of 6 dB is considered the minimum threshold shift clearly larger than any day-to-day or session-to-session variation in a subject's normal hearing ability (Finneran *et al.*, 2000, 2002; Schlundt *et al.*, 2000). As described in Finneran (2015), marine mammal studies have shown that the amount of TTS increases with the 24-hour cumulative sound exposure level (SEL<sub>24</sub>) in an accelerating fashion: at low exposures with lower SEL<sub>24</sub>, the amount of TTS is typically small, and

the growth curves have shallow slopes. At higher SEL<sub>24</sub> exposures, the growth curves become steeper and approach a linear relationship with the sound exposure level (SEL).

Depending on the degree (elevation of threshold in dB), duration (i.e., recovery time), and frequency range of TTS, and the context in which it is experienced, TTS can have effects on marine mammals ranging from discountable to more impactful (similar to those discussed in auditory masking, below). For example, a marine mammal may readily compensate for a brief, relatively small amount of TTS in a non-critical frequency range that occurs while the animal is traveling through the open ocean, where ambient noise is lower and competing sounds are fewer. Alternatively, a larger amount and longer duration of TTS sustained during times when communication is critical for successful mother/calf interactions could have more severe impacts. We note that reduced hearing sensitivity, as a simple function of aging, has been observed in marine mammals, as well as in humans and other taxa (Southall *et al.*, 2007), suggesting that strategies exist to cope with this condition to some degree, though likely not without cost.

Many studies have examined noise-induced hearing loss in marine mammals (see Finneran (2015) and Southall *et al.* (2019) for summaries). TTS is the mildest form of hearing impairment that can occur during exposure to sound (Kryter, 2013). While experiencing TTS, the hearing threshold rises, so a sound must be louder to be heard. In terrestrial and marine mammals, TTS can last from minutes to hours (in cases of strong TTS) (Finneran, 2015). In many cases, hearing sensitivity recovers rapidly after exposure to the sound ends. For cetaceans, published data on the onset of TTS are limited to captive bottlenose dolphin (*Tursiops truncatus*), beluga whale (*Delphinapterus leucas*), harbor porpoise (*Phocoena phocoena*), and Yangtze finless porpoise (*Neophocoena asiaticaorientalis*) (Southall *et al.*, 2019). For pinnipeds in water, measurements of TTS are limited to harbor seals, northern elephant seals, bearded seals (*Erignathus barbatus*), and California sea lions (Kastak *et al.*, 1999, 2007; Kastelein *et al.*, 2019b, 2019c, 2021, 2022a, 2022b; Reichmuth *et al.*, 2019; Sills *et al.*, 2020). TTS was not observed in spotted (*Phoca largha*) and ringed (*Pusa hispida*) seals exposed to single airgun impulse sounds at levels matching previous predictions of TTS onset (Reichmuth *et al.*, 2016). These studies examine hearing thresholds in marine mammals before and after

exposure to intense or long-duration sound. The difference between the pre-exposure and post-exposure thresholds can be used to determine the amount of threshold shift at various post-exposure times.

The amount and onset of TTS depend on the exposure frequency. Sounds below the region of best sensitivity for a species or hearing group are less hazardous than those near the region of best sensitivity (Finneran and Schlundt, 2013). At low frequencies, onset-TTS exposure levels are higher compared to those in the region of best sensitivity (i.e., a low frequency noise would need to be louder to cause TTS onset when TTS exposure level is higher), as shown for harbor porpoises and harbor seals (Kastelein *et al.*, 2019a, 2019c). Note that in general, harbor seals and harbor porpoises have a lower TTS onset than other measured pinniped or cetacean species (Finneran, 2015). In addition, TTS can accumulate across multiple exposures, but the resulting TTS would be lower than that from a single, continuous exposure with the same SEL (Mooney *et al.*, 2009; Finneran *et al.*, 2010; Kastelein *et al.*, 2014, 2015). This means that TTS predictions based on the total, SEL<sub>24</sub>, will overestimate the amount of TTS from intermittent exposures, such as sonars and impulsive sources. Nachtigall *et al.* (2018) describe measurements of hearing sensitivity of multiple odontocete species (bottlenose dolphin, harbor porpoise, beluga, and false killer whale (*Pseudorca crassidens*)) when a warning sound preceded a relatively loud sound. These captive animals were shown to reduce hearing sensitivity when warned of an impending intense sound. Based on these experimental observations of captive animals, the authors suggest that wild animals may dampen their hearing during prolonged exposures or if conditioned to anticipate intense sounds. Another study showed that echolocating animals (including odontocetes) might have anatomical specializations that enable conditioned hearing reduction and filtering of low-frequency ambient noise, including increased stiffness and control of middle ear structures, as well as placement of inner ear structures (Ketten *et al.*, 2021). Data available on noise-induced hearing loss for mysticetes are currently lacking (NMFS, 2024). Additionally, the existing marine mammal TTS data come from a limited number of individuals within these species.

Relationships between TTS and AUD INJ thresholds have not been studied in marine mammals, and there are no measured PTS data for cetaceans, but

such relationships are assumed to be similar to those in humans and other terrestrial mammals. AUD INJ typically occurs at exposure levels at least several dB above that inducing mild TTS (e.g., a 40-dB threshold shift approximates AUD INJ onset (Kryter *et al.*, 1966; Miller, 1974), while a 6-dB threshold shift approximates TTS onset (Southall *et al.*, 2007, 2019). Based on data from terrestrial mammals, a precautionary assumption is that the AUD INJ thresholds for impulsive sounds (such as impact pile driving pulses as received close to the source) are at least 6 dB higher than the TTS threshold on a peak-pressure basis, and AUD INJ cumulative sound exposure level thresholds are 15 to 20 dB higher than TTS cumulative sound exposure level thresholds (Southall *et al.*, 2007, 2019). Given the higher level of sound or longer exposure duration necessary to cause AUD INJ as compared with TTS, it is considerably less likely that AUD INJ could occur.

#### Auditory Injury

NMFS (2024) defines AUD INJ as damage to the inner ear that can result in tissue destruction, such as loss of cochlear neuron synapses or auditory neuropathy (Houser 2021; Finneran 2024). AUD INJ may or may not result in a permanent threshold shift (PTS). PTS is subsequently defined as a permanent, irreversible increase in the threshold of audibility at a specified frequency or portion of an individual's hearing range above a previously established reference level (NMFS, 2024). PTS generally affects only a limited frequency range, and animals with PTS have some level of hearing loss at the relevant frequencies; typically, animals with PTS or other AUD INJ are not functionally deaf (Au and Hastings, 2008; Finneran, 2016). Available data from humans and other terrestrial mammals indicate that a 40-dB threshold shift approximates the onset of PTS (see Ward *et al.*, 1958, 1959; Ward, 1960; Kryter *et al.*, 1966; Miller, 1974; Ahroon *et al.*, 1996; Henderson *et al.*, 2008). However, a variety of terrestrial and marine mammal studies (see Ward *et al.*, 1958; Ward *et al.*, 1959; Ward, 1960; Miller *et al.*, 1963; Kryter *et al.*, 1966; Finneran *et al.*, 2007; Kastelein *et al.*, 2013) indicate that threshold shifts of up to 40 to 50 dB (measured a few minutes after exposure) may be induced without resulting in PTS. PTS levels for marine mammals are estimates; with the exception of a single study unintentionally inducing PTS in a harbor seal (*Phoca vitulina*) (Kastak *et al.*, 2008), no empirical data measure

PTS in marine mammals largely due to the fact that, for various ethical reasons, experiments involving anthropogenic noise exposure at levels inducing AUD INJ are not typically pursued or authorized (NMFS, 2024). NMFS has set the PTS onset as a threshold shift of 40 dB.

However, after sound exposure ceases or between successive sound exposures, the potential for recovery from hearing loss exists. Thus, because a threshold shift is measured a few minutes after noise exposure does not mean that those initial shifts are persistent (*i.e.*, no recovery). When initial threshold shifts fully recover back to baseline hearing levels, these are considered TTS. PTS indicates there is no full recovery back to baseline hearing levels; however, it does not mean there is no recovery. Rather, PTS indicates incomplete recovery of hearing. Recovery depends on the initial threshold shift amount, the frequency at which the shift occurred, the temporal pattern of exposure (e.g., exposure duration; continuous vs. intermittent exposure), and the physiological mechanisms underlying the shift (e.g., mechanical vs. metabolic). Since recovery is complicated, our current AUD INJ onset criteria do not account for the potential for recovery.

#### Behavioral Effects

Exposure to noise can also behaviorally disturb marine mammals to a level that rises to the definition of harassment under the MMPA. Generally speaking, NMFS considers a behavioral disturbance that rises to the level of harassment under the MMPA a non-minor response. In other words, not every response qualifies as a behavioral disturbance, and for responses that do, those of higher level or longer duration have the potential to affect foraging, reproduction, or survival. Behavioral disturbance may include subtle changes (e.g., minor or brief avoidance of an area or changes in vocalizations), more conspicuous changes in similar behavioral activities, and more sustained and/or potentially severe reactions, such as displacement from or abandonment of high-quality habitat. Behavioral responses may include changing durations of surfacing and dives, changing direction and/or speed; reducing/increasing vocal activities; changing/cessation of certain behavioral activities (such as socializing or feeding); eliciting a visible startle response or aggressive behavior (such as tail/fin slapping or jaw clapping); and avoidance of areas where sound sources are located. In addition, pinnipeds may increase their haul-out time, possibly to

avoid in-water disturbance (Thorson and Reyff, 2006).

Behavioral responses to sound are highly variable and context-specific, and any reactions depend on numerous intrinsic and extrinsic factors (e.g., species, state of maturity, experience, current activity, reproductive state, auditory sensitivity, time of day), as well as the interplay between factors (e.g., Richardson *et al.*, 1995; Wartzok *et al.*, 2004; Southall *et al.*, 2007, 2019; Weilgart, 2007; Archer *et al.*, 2010). Behavioral reactions can vary not only among individuals but also within an individual, depending on previous experience with a sound source, context, and numerous other factors (Ellison *et al.*, 2012), and can vary depending on characteristics associated with the sound source (e.g., whether it is moving or stationary, number of sources, distance from the source). In general, pinnipeds seem more tolerant of, or at least habituate more quickly to, potentially disturbing underwater sound than do cetaceans, and generally seem to be less responsive to exposure to industrial sound than most cetaceans. Please see Appendices B and C of Southall *et al.* (2007) and Gomez *et al.* (2016) for reviews of studies involving marine mammal behavioral responses to sound.

Habituation can occur when an animal's response to a stimulus wanes with repeated exposure, usually in the absence of unpleasant associated events (Wartzok *et al.*, 2004). Animals are most likely to habituate to predictable, unvarying sounds. It is important to note that habituation is appropriately considered as a "progressive reduction in response to stimuli that are perceived as neither aversive nor beneficial," rather than as, more generally, moderation in response to human disturbance (Bejder *et al.*, 2009). The opposite process is sensitization, in which an unpleasant experience leads to subsequent responses, often in the form of avoidance, at lower levels of exposure.

As noted above, behavioral state may affect the type of response. For example, resting animals may show greater behavioral change in response to disturbing sound levels than highly motivated animals that are highly motivated to remain in an area for feeding (Richardson *et al.*, 1995; Wartzok *et al.*, 2004; National Research Council (NRC), 2005). Controlled experiments with captive marine mammals have shown pronounced behavioral reactions, including avoidance of loud sound sources (Ridgway *et al.*, 1997; Finneran *et al.*, 2003). Observed responses of wild

marine mammals to loud pulsed sound sources (e.g., seismic airguns) have been varied but often consist of avoidance behavior or other behavioral changes (Richardson *et al.*, 1995; Morton and Symonds, 2002; Nowacek *et al.*, 2007).

Available studies show wide variation in response to underwater sound; therefore, it is difficult to predict specifically how any given sound in a particular instance might affect marine mammals perceiving the signal (e.g., Erbe *et al.*, 2019). If a marine mammal briefly reacts to an underwater sound by changing its behavior or moving a small distance, the resulting change is unlikely to be significant to the individual, let alone the stock or population. If a sound source displaces marine mammals from an important feeding or breeding area for a prolonged period, impacts on individuals and populations could be significant (e.g., Lusseau and Bejder, 2007; Weilgart, 2007; NRC, 2005). However, there are broad categories of potential response, which we describe in greater detail here, that include alteration of dive behavior, alteration of foraging behavior, effects on breathing, interference with or alteration of vocalization, avoidance, and flight.

#### Avoidance and Displacement

Changes in dive behavior can vary widely and may consist of increased or decreased dive times and surface intervals as well as changes in the rates of ascent and descent during a dive (e.g., Frankel and Clark, 2000; Costa *et al.*, 2003; Ng and Leung, 2003; Nowacek *et al.*, 2004; Goldbogen *et al.*, 2013a, 2013b; Blair *et al.*, 2016). Variations in dive behavior may reflect interruptions in biologically significant activities (e.g., foraging) or they may be of little biological significance. The impact of an alteration in dive behavior resulting from acoustic exposure depends on what the animal is doing at the time of exposure and on the type and magnitude of the response.

Disruption of feeding behavior can be difficult to correlate with anthropogenic sound exposure, so it is usually inferred by observed displacement from known foraging areas, the appearance of secondary indicators (e.g., bubble nets or sediment plumes), or changes in dive behavior. As for other types of behavioral response, the frequency, duration, and temporal pattern of signal presentation, as well as differences in species sensitivity, are likely contributing factors to differences in response in any given circumstance (e.g., Croll *et al.*, 2001; Nowacek *et al.*, 2004; Madsen *et al.*, 2006; Yazvenko *et al.*, 2007). A determination of whether

foraging disruptions incur fitness consequences would require information on, or estimates of, the energetic requirements of the affected individuals, the relationship between prey availability, foraging effort, and success, and the animal's life history stage.

Respiration rates vary naturally with different behaviors, and alterations in breathing rate, as a function of acoustic exposure, can be expected to co-occur with other behavioral reactions, such as a flight response or an alteration in diving. However, respiration rates in and of themselves may be representative of annoyance or an acute stress response. Various studies have shown that respiration rates may either be unaffected or could increase, depending on the species and signal characteristics, again highlighting the importance of understanding species differences in the tolerance of underwater noise when determining the potential for impacts resulting from anthropogenic sound exposure (e.g., Kastelein *et al.*, 2001; 2005; 2006; Gailey *et al.*, 2007). For example, harbor porpoise respiration rates increased in response to pile driving sounds at and above a received broadband SPL of 136 dB (zero-peak SPL: 151 dB re 1  $\mu$ Pa; SEL of a single strike (SEL<sub>ss</sub>): 127 dB re 1  $\mu$ Pa<sup>2</sup>-s) (Kastelein *et al.*, 2013).

Avoidance is the displacement of an individual from an area or migration path due to the presence of a sound or other stressors, and is one of the most obvious manifestations of disturbance in marine mammals (Richardson *et al.*, 1995). Avoidance may be short-term, with animals returning to the area once the noise has ceased (e.g., Bowles *et al.*, 1994; Goold, 1996; Stone *et al.*, 2000; Morton and Symonds, 2002; Gailey *et al.*, 2007). Longer-term displacement is possible, however, which may lead to changes in the abundance or distribution patterns of the affected species in the affected region if habituation to the sound does not occur (e.g., Blackwell *et al.*, 2004; Bejder *et al.*, 2006; Teilmann *et al.*, 2006).

A flight response is a dramatic change in normal movement, with directed, rapid movement away from the perceived location of a sound source. The flight response differs from other avoidance responses in its intensity (e.g., directed movement and travel rate). Relatively little information exists on the flight responses of marine mammals to anthropogenic signals, although observations of flight responses to the presence of predators have been made (Connor and Heithaus, 1996; Bowers *et al.*, 2018). The result of a flight response could range from brief,

temporary exertion and displacement from the area where the signal provokes flight to, in extreme cases, marine mammal strandings (England *et al.*, 2001). However, it should be noted that response to a perceived predator does not necessarily invoke flight (Ford and Reeves, 2008), and whether individuals are solitary or in groups may influence the response.

Behavioral disturbance can also affect marine mammals in more subtle ways. Increased vigilance may incur costs from the diversion of attention (i.e., when a response requires heightened vigilance, it may come at the expense of reduced attention to other critical behaviors, such as foraging or resting). These effects have generally not been demonstrated in marine mammals, but studies of fishes and terrestrial animals have shown that increased vigilance may substantially reduce feeding rates (e.g., Beauchamp and Livoreil, 1997; Fritz *et al.*, 2002; Purser and Radford, 2011). In addition, chronic disturbance can cause population declines through reductions in fitness (e.g., declines in body condition) and subsequent reductions in reproductive success, survival, or both (e.g., Harrington and Veitch, 1992; Daan *et al.*, 1996; Bradshaw *et al.*, 1998). However, Ridgway *et al.* (2006) reported that increased vigilance in bottlenose dolphins exposed to sound over a 5-day period did not result in sleep deprivation or stress.

Many animals perform vital functions, such as feeding, resting, traveling, and socializing, on a diel cycle (24-hour cycle). Disruption of such functions resulting from reactions to stressors, such as sound exposure, is more likely to be significant if it lasts more than one diel cycle or recurs on subsequent days (Southall *et al.*, 2007). Consequently, a behavioral response lasting less than one day and not recurring on subsequent days is not considered particularly severe unless it could directly affect reproduction or survival (Southall *et al.*, 2007). Note that there is a difference between multi-day substantive (i.e., meaningful) behavioral reactions and multi-day anthropogenic activities. For example, just because an activity lasts multiple days does not necessarily mean that individual animals are exposed to activity-related stressors for multiple days, or, further, exposed in a manner that results in sustained, multi-day, substantive behavioral responses.

#### Physiological Stress Responses

An animal's perception of a threat may be sufficient to trigger stress responses that include some

combination of behavioral, autonomic nervous system, neuroendocrine, and immune responses (e.g., Selye, 1950; Moberg, 2000). In many cases, an animal's first and sometimes most economical response (in terms of energetic costs) is behavioral avoidance of the potential stressor. Autonomic nervous system responses to stress typically involve changes in heart rate, blood pressure, and gastrointestinal activity. These responses have a relatively short duration and may or may not have a significant long-term effect on an animal's fitness.

Neuroendocrine stress responses often involve the hypothalamus-pituitary-adrenal system. Virtually all neuroendocrine functions that are affected by stress—including immune competence, reproduction, metabolism, and behavior—are regulated by pituitary hormones. Stress-induced changes in pituitary hormone secretion have been implicated in reproductive failure, altered metabolism, reduced immune competence, and behavioral disturbances (e.g., Moberg, 1987; Blecha, 2000). Increases in glucocorticoid levels are also associated with stress (Romano *et al.*, 2004).

The primary distinction between stress (which is adaptive and does not normally place an animal at risk) and "distress" is the cost of the response. During a stress response, an animal uses its glycogen stores, which can be quickly replenished once the stress is alleviated. In such circumstances, the cost of the stress response would not pose serious fitness consequences. However, when an animal does not have sufficient energy reserves to satisfy the energetic costs of a stress response, energy resources must be diverted from other functions. This state of distress will last until the animal replenishes its energy reserves to a sufficient level to restore normal function.

Relationships between these physiological mechanisms, animal behavior, and the costs of stress responses are well-studied through controlled experiments and for both laboratory and free-ranging animals (e.g., Holberton *et al.*, 1996; Hood *et al.*, 1998; Jessop *et al.*, 2003; Krausman *et al.*, 2004; Lankford *et al.*, 2005; Ayres *et al.*, 2012; Yang *et al.*, 2022). Stress responses to exposure to anthropogenic sounds or other stressors, and their effects on marine mammals, have also been reviewed (Fair and Becker, 2000; Romano *et al.*, 2002b) and, more rarely, studied in wild populations (e.g., Romano *et al.*, 2002a). For example, Rolland *et al.* (2012) found that noise reduction from reduced ship traffic in the Bay of Fundy was associated with

decreased stress in North Atlantic right whales. In addition, Lemos *et al.* (2022) observed a correlation between higher levels of fecal glucocorticoid metabolite concentrations (indicative of a stress response) and vessel traffic in gray whales. Yang *et al.* (2022) studied behavioral and physiological responses in captive bottlenose dolphins exposed to playbacks of "pile-driving-like" impulsive sounds, finding significant changes in cortisol and other physiological indicators, but only minor behavioral changes. These and other studies lead to a reasonable expectation that some marine mammals will experience physiological stress responses upon exposure to acoustic stressors, and that some of these responses may be classified as "distress." In addition, any animal experiencing TTS would likely also experience stress responses (NRC, 2005); however, distress is unlikely to result from these projects based on observations of marine mammals during previous, similar construction projects in San Diego Bay.

#### Vocalizations and Auditory Masking

Since many marine mammals rely on sound to find prey, moderate social interactions, and facilitate mating (Tyack, 2008), noise from anthropogenic sound sources can interfere with these functions, but only if the noise spectrum overlaps with the hearing sensitivity of the receiving marine mammal (Southall *et al.*, 2007; Clark *et al.*, 2009; Hatch *et al.*, 2012). Chronic exposure to excessive, though not high-intensity, noise could cause masking at specific frequencies for marine mammals that rely on sound for vital biological functions (Clark *et al.*, 2009). Acoustic masking is when other noises, such as from human sources, interfere with an animal's ability to detect, recognize, or discriminate between acoustic signals of interest (e.g., those used for intraspecific communication and social interactions, prey detection, predator avoidance, navigation) (Richardson *et al.*, 1995; Erbe *et al.*, 2016).

The frequency range of the potentially masking sound is important in determining any potential behavioral impacts. For example, low-frequency signals may have less effect on high-frequency echolocation sounds produced by odontocetes but are more likely to affect the detection of mysticete communication calls and other potentially important natural sounds such as those produced by surf and some prey species. The masking of communication signals by anthropogenic noise may be considered as a reduction in the communication

space of animals (e.g., Clark *et al.*, 2009), and may result in energetic or other costs as animals change their vocalization behavior (e.g., Miller *et al.*, 2000; Foote *et al.*, 2004; Parks *et al.*, 2007; Di Iorio and Clark, 2010; Holt *et al.*, 2009). Masking can be reduced in situations where the signal and noise come from different directions (Richardson *et al.*, 1995), through amplitude modulation of the signal, or through other compensatory behaviors, including modifications of the acoustic properties of the signal or the signaling behavior (Hotchkiss and Parks, 2013). Masking can be tested directly in captive species (e.g., Erbe, 2008), but in wild populations it must be either modeled or inferred from evidence of masking compensation. Few studies have addressed real-world masking sounds likely to be experienced by marine mammals in the wild (e.g., Branstetter *et al.*, 2013).

Masking occurs in the frequency band that the animals use, and is more likely to occur in the presence of broadband, relatively continuous noise sources such as vibratory pile removal or installation. The energy distribution of pile-driving sound spans a broad frequency spectrum and is expected to fall within the audible range of marine mammals present in the project areas. Since noises generated from the proposed construction activities are mostly concentrated at low frequencies (<2 kHz), these activities likely have less effect on mid-frequency echolocation sounds produced by odontocetes (toothed whales). However, lower-frequency noises are more likely to affect the detection of communication calls and other potentially important natural sounds, such as surf and prey noise. Low-frequency noise may also affect communication signals when they occur near the noise band, thereby reducing the communication space of animals (e.g., Clark *et al.*, 2009) and increasing stress levels (e.g., Holt *et al.*, 2009). Unlike TS, masking, which can occur over large temporal and spatial scales, can potentially affect the species at population, community, or even ecosystem levels, in addition to individual levels. Masking affects both senders and receivers of signals, and at higher levels and for longer durations could have long-term chronic effects on marine mammal species and populations. However, the noise generated by the Navy's proposed activities would occur only intermittently, across an estimated 171 and 190 days, respectively, at both proposed activity locations (NBPL and NBSD) during the authorization periods,

in a relatively small area focused around the proposed construction sites. Thus, while the Navy's proposed activities may mask some acoustic signals relevant to the daily behavior of marine mammals, the short-term duration and limited areas affected make it very unlikely that the fitness of individual marine mammals would be affected.

The ability of a noise source to mask biologically important sounds depends on the characteristics of both the noise source and the signal of interest (e.g., signal-to-noise ratio, temporal variability, direction), in relation to each other and to an animal's hearing abilities (e.g., sensitivity, frequency range, critical ratios, frequency discrimination, directional discrimination, age, or TTS hearing loss), and existing ambient noise and propagation conditions (Hotchkiss and Parks, 2013).

Marine mammals vocalize for different purposes and across multiple modes, such as whistling, echolocation click production, calling, and singing. Changes in vocalization behavior in response to anthropogenic noise can occur across any of these modes and may result from a need to compete with increased background noise, or may reflect increased vigilance or a startle response. For example, in the presence of potentially masking signals, humpback whales (*Megaptera humpback*) and killer whales (*Orcinus orca*) have been observed to increase the length of their songs (Miller *et al.*, 2000; Frstrup *et al.*, 2003) or vocalizations (Foote *et al.*, 2004), respectively, while North Atlantic right whales (*Eubalaena glacialis*) have been observed to shift the frequency content of their calls upward while reducing the rate of calling in areas of increased anthropogenic noise (Parks *et al.*, 2007). Fin whales (*Balaenoptera physalus physalus*) have also been documented to lower the bandwidth, peak frequency, and center frequency of their vocalizations in the presence of increased background noise from large vessels (Castellote *et al.*, 2012). Other alterations to communication signals have also been observed. For example, gray whales, in response to playback experiments that exposed them to vessel noise, have been observed to increase their vocalization rate and produce louder signals during periods of increased outboard engine noise (Dahlheim and Castellote, 2016). Alternatively, in some cases, animals may cease sound production during the production of aversive signals (Bowles *et al.*, 1994; Wisniewska *et al.*, 2018).

Under certain circumstances, marine mammals that experience significant

masking could also be impaired in maximizing their performance fitness for survival and reproduction. Therefore, when the coincident (masking) sound is human-made, it may be considered harassment if it disrupts or alters critical behaviors. It is important to distinguish TTS and PTS, which persist after the sound exposure, from masking, which occurs during the sound exposure. Because masking (without resulting in TS) is not associated with abnormal physiological function, it is not considered a physiological effect but rather a potential behavioral effect (though not necessarily one associated with harassment). Therefore, under certain circumstances, marine mammals whose acoustic sensors or environment are severely masked could also be impaired in maximizing their performance fitness for survival and reproduction.

#### Airborne Acoustic Effects

Pinnipeds occurring near either project site could be exposed to airborne sounds associated with construction activities, depending on their distance from these activities, which could cause behavioral harassment. Airborne noise would primarily be an issue for pinnipeds that are swimming or hauled out near either project site, within the range of noise levels elevated above the airborne acoustic harassment criteria. Although pinnipeds are known to haul out regularly on man-made objects, we believe that incidents of take resulting solely from airborne sound are unlikely due to the proximity between the proposed project areas and the known haul out sites (e.g., on docks associated with Pier 122 and Pier 40 for the NBPL project, and on the security fencing and barges associated with the Everingham Brothers' Bait Barge Company for the NBSD project) in San Diego Bay. Cetaceans are not expected to be exposed to airborne sounds that would result in harassment as defined under the MMPA.

We recognize that pinnipeds in the water may be exposed to airborne sound that could result in behavioral harassment when they lift their heads above the water or when they haul out. Most likely, airborne sound would cause behavioral responses similar to those discussed above in relation to underwater sound. For instance, anthropogenic sound could cause hauled-out pinnipeds to exhibit changes in their normal behavior, such as a reduction in vocalizations, or to flush from haulouts, temporarily abandon the area, and/or move further from the source. However, these animals previously would have been "taken"

because 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. Therefore, we do not believe that authorization of additional incidental take resulting from airborne sound for pinnipeds is warranted for either project, and airborne sound is not discussed further here.

#### Potential Effects on Marine Mammal Habitat

The Navy's proposed activities for both projects could have localized, temporary impacts on marine mammal habitat, including prey, due to increased in-water noise levels. Increased noise levels may affect the acoustic habitat and adversely affect marine mammal prey in the vicinity of the project areas (see discussion below). Elevated levels of underwater noise would ensnare the project areas where both fishes and mammals occur and could affect foraging success. Additionally, marine mammals may avoid the area during the proposed construction activities; however, any displacement due to noise is expected to be temporary and not to result in long-term effects on individuals or populations.

The total area likely impacted by the Navy's proposed activities at NBPL and NBSD is relatively small compared to the available habitat within and outside of San Diego Bay. Avoidance by potential prey (*i.e.*, fish) of the immediate areas due to increased noise is possible. The duration of fish and marine mammal avoidance of this area after construction stops is unknown, but a rapid return to normal recruitment, distribution, and behavior is anticipated. Any behavioral avoidance by fish or marine mammals of either disturbed area would still leave significantly large areas of fish and marine mammal foraging habitat in the nearby vicinity.

The proposed projects would occur within the same footprint as existing marine infrastructure. The nearshore and intertidal habitats where the proposed projects would occur are in industrialized areas with relatively high marine vessel traffic. Temporary, intermittent, and short-term habitat alteration may result from increased noise levels during the proposed construction activities. Effects on marine mammal habitat would be limited to temporary displacement from pile removal and installation noise, and effects on prey species would be similarly limited in time and space.

## Water Quality

Temporary and localized reduction in water quality would occur as a result of in-water construction activities. Most of this effect would occur during the removal and installation of piles, when bottom sediments are disturbed, and may temporarily increase suspended sediment in the project area. During pile extraction, sediment attached to the pile moves vertically through the water column causing a sediment plume. However, since currents are so strong in the area, following the completion of sediment-disturbing activities, suspended sediment in the water column should dissipate and quickly return to background levels across all construction scenarios.

Turbidity in the water column can reduce dissolved oxygen levels and irritate the gills of prey fish in the proposed project areas. Studies of the effects of turbid water on fish (marine mammal prey) suggest that concentrations of suspended sediment can reach thousands of milligrams per liter before an acute toxic reaction is expected (Burton, 1993). However, turbidity plumes associated with the projects would be temporary and localized, and fish in the proposed project areas would be able to move away from and avoid the areas where plumes may occur.

Overall, the water quality in the immediate area that is likely impacted by the proposed construction activities for both projects is relatively small compared to the available marine mammal habitat within and surrounding San Diego Bay. Therefore, it is expected that water quality impacts on prey fish species due to turbidity, and therefore on marine mammals, would be minimal and temporary.

## Potential Effects on Prey

Sound may affect marine mammals by altering the abundance, behavior, or distribution of prey species (e.g., crustaceans, cephalopods, fishes, zooplankton). Marine mammal prey varies by species, season, and location, and for some, it is not well documented. Studies regarding the effects of noise on known marine mammal prey are described here.

Fishes use the soundscape and components of sound in their environment to perform important functions such as foraging, predator avoidance, mating, and spawning (e.g., Zelick *et al.*, 1999; Fay, 2009). Depending on their hearing anatomy and peripheral sensory structures, which vary among species, fishes hear sounds using pressure- and particle-

motion sensitivity and detect the motion of surrounding water (Fay *et al.*, 2008). The potential effects of noise on fishes depends on the overlapping frequency range, distance from the sound source, water depth of exposure, and species-specific hearing sensitivity, anatomy, and physiology. Key impacts on fishes may include behavioral responses, hearing damage, barotrauma (pressure-related injuries), and mortality.

Fish react to especially strong and/or intermittent low-frequency sounds, and behavioral responses such as flight or avoidance are the most likely effects. Short-duration, sharp sounds can cause overt or subtle changes in fish behavior and local distribution. The reaction of fish to noise depends on their physiological state, past exposures, motivation (e.g., feeding, spawning, migration), and other environmental factors. Hastings and Popper (2005) identified several studies that suggest fish may relocate to avoid certain areas of sound energy. Additional studies have documented effects of pile driving on fishes (e.g., Scholik and Yan, 2001, 2002; Popper and Hastings, 2009). Several studies have demonstrated that impulse sounds might affect the distribution and behavior of some fishes, potentially impacting foraging opportunities or increasing energetic costs (e.g., Fewtrell and McCauley, 2012; Pearson *et al.*, 1992; Skalski *et al.*, 1992; Santulli *et al.*, 1999; Paxton *et al.*, 2017). However, some studies have shown no or slight reaction to impulse sounds (e.g., Peña *et al.*, 2013; Wardle *et al.*, 2001; Jorgenson and Gyselman, 2009; Cott *et al.*, 2012). More commonly, though, the impacts of noise on fishes are temporary.

SPLs of sufficient strength have been known to cause injury to fishes and fish mortality (summarized in Popper *et al.*, 2014). However, in most fish species, hair cells in the ear continuously regenerate, and loss of auditory function is likely restored when damaged cells are replaced with new cells. Halvorsen *et al.* (2012b) showed that a TTS of 4–6 dB was recoverable within 24 hours in one species. Impacts would be most severe when the individual fish is near the source, and the exposure duration is long. Injury caused by barotrauma can range from slight to severe and can cause death, and is most likely for fish with swim bladders. Barotrauma injuries have been documented during controlled exposure to impact pile driving (Halvorsen *et al.*, 2012a; Casper *et al.*, 2013, 2017).

Fish populations in the proposed project area that serve as prey for marine mammals could be temporarily affected by noise from pile removal and

installation. The frequency range in which fishes generally perceive underwater sounds is 50 to 2,000 Hz, with peak sensitivities below 800 Hz (Popper and Hastings, 2009). Fish behavior or distribution may change, especially in response to strong and/or intermittent sounds that could harm fish. High underwater SPLs have been documented to alter behavior, cause hearing loss, and injure or kill individual fish by causing serious internal injury (Hastings and Popper, 2005).

Zooplankton is a food source for several marine mammal species, as well as a food source for fish that are then preyed upon by marine mammals. Population effects on zooplankton could indirectly affect marine mammals. Data are limited on the effects of underwater sound on zooplankton species, particularly sound from construction (Erbe *et al.*, 2019). Popper and Hastings (2009) reviewed information on the effects of human-generated sound and concluded that no substantive data are available on whether sound levels from pile driving, seismic activity, or other human-made sources would have physiological effects on invertebrates. Any such effects would be limited to the area very near (1 to 5 m) the sound source and would result in no population effects because of the relatively small area affected at any one time and the reproductive strategy of most zooplankton species (short generation, high fecundity, and very high natural mortality). No adverse impact on zooplankton populations is expected from the specified activities, due in part to their large reproductive capacity and naturally high levels of predation and mortality. Any mortalities or impacts that might occur would be negligible.

The greatest potential impact on marine mammal prey during construction would occur during impact pile driving. Vibratory pile removal/installation may elicit behavioral responses in fishes, such as temporary avoidance of the area, but is unlikely to cause injuries to fishes or have persistent effects on local fish populations. In-water construction activities would only occur during daylight hours, allowing fish to forage and transit the project area in the evening. Construction would also have minimal permanent and temporary impacts on benthic invertebrate species, a marine mammal prey source. Additionally, the proposed project areas are low-quality habitats, as both areas are already highly developed and experience high levels of anthropogenic

noise from regular naval operations and other vessel traffic.

#### Potential Effects on Foraging Habitat

The proposed projects are not expected to result in any habitat-related effects that could cause significant or long-term negative consequences for individual marine mammals or their populations, since removal and installation of in-water piles would be temporary and intermittent. The areas affected by these projects are relatively small compared to the available habitat just outside the project areas, and neither project would affect any areas of particular importance. Any behavioral avoidance by fish of the disturbed areas would still leave significantly large areas of fish and marine mammal foraging habitat in the nearby vicinity. As described in the preceding, the potential for the Navy's construction at NBPL or NBSD to affect the availability of prey to marine mammals or to meaningfully impact the quality of physical or acoustic habitat is considered to be insignificant. Therefore, the impacts of the projects are not likely to adversely affect marine mammal foraging habitat in the proposed project areas.

In summary, given the relatively small areas being affected, as well as the temporary and mostly transitory nature of the proposed construction activities, any adverse effects from the Navy's NBPL or NBSD activities on prey habitat or prey populations are expected to be minor and temporary. The most likely impact on fishes at the project sites would be temporary avoidance of the area. Any behavioral avoidance by fish of the disturbed areas would still leave significantly large areas of fish and marine mammal foraging habitat in the nearby vicinity. Thus, we preliminarily conclude that the impacts of the specified activities at both the NBPL and NBSD are not likely to have more than short-term adverse effects on any prey habitat or populations of prey species. Further, any impacts on marine mammal habitat are not expected to result in significant or long-term consequences for individual marine mammals or to contribute to adverse impacts on their populations.

#### Estimated Take of Marine Mammals

This section provides an estimate of the number of incidental takes proposed for authorization under both IHAs, which will inform NMFS' consideration of "small numbers," the negligible impact determinations, and impacts on subsistence uses.

Harassment is the only type of take expected to result from these activities.

Except for certain activities not pertinent here, section 3(18) of 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 disrupting behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).

Authorized takes would predominantly be by Level B harassment for both the NBPL and NBSD Projects, as using acoustic sources (*i.e.*, vibratory and impact pile driving) can potentially disrupt behavioral patterns for individual marine mammals. There is also some potential for AUD INJ (Level A harassment) to result for six species of marine mammals incidental to the NBPL Project. As for the NBSD Project, due to the location within South-Central San Diego Bay in Chollas Creek, AUD INJ is not anticipated to occur for any of the three species for which harassment is proposed for authorization due to the low noise energy marine mammals may be exposed (resulting in very small distances to the Level A harassment threshold as described below). The proposed mitigation and monitoring measures for both projects are expected to minimize the amount and severity of the taking to the extent practicable.

As previously described, no serious injury or mortality is anticipated or proposed to be authorized for either proposed activity. Below, we describe how the proposed take numbers are estimated.

For acoustic impacts, generally speaking, we estimate take by considering (1) acoustic criteria above which NMFS believes the best available science indicates that there is some reasonable potential for marine mammals to be behaviorally harassed or incur some degree of AUD INJ; (2) the area or volume of water that would be ensonified above these levels in a day; (3) the density or occurrence of marine mammals within these ensonified areas; and, (4) the number of days of activities. While these factors can contribute to a basic calculation to provide an initial prediction of potential takes, additional information that can qualitatively inform take estimates is also sometimes available (*e.g.*, previous monitoring results or average group size). Below, we describe the factors considered here in more detail and present the proposed take estimates.

#### Acoustic Criteria

NMFS recommends the use of acoustic criteria that identify the received level of underwater sound above which exposed marine mammals would reasonably expect to be behaviorally harassed (equated to Level B harassment) or incur AUD INJ of some degree (equated to Level A harassment). Below, we describe the thresholds used by the Navy and NMFS for this analysis.

#### Level B Harassment

Though significantly driven by the received level, the onset of behavioral disturbance from anthropogenic noise exposure is also informed by varying degrees by other factors. These factors are related to the source or exposure context (*e.g.*, frequency, predictability, duty cycle, duration of the exposure, signal-to-noise ratio, distance to the source), the environment (*e.g.*, bathymetry, other noises in the area, predators in the area), and the receiving animals (hearing, motivation, experience, demography, life stage, depth) and can be difficult to predict (*e.g.*, Southall *et al.*, 2007; Ellison *et al.*, 2012). Based on available science and the practical need to use a threshold based on a predictable, measurable metric for most activities, NMFS typically uses a generalized acoustic threshold based on the received level to estimate the onset of behavioral harassment. NMFS generally predicts that marine mammals are likely to be behaviorally harassed in a manner considered to be Level B harassment when exposed to underwater anthropogenic noise above root-mean-squared sound pressure levels (RMS SPL) of 120 dB re 1  $\mu$ Pa for continuous (*e.g.*, vibratory pile driving, drilling) and above RMS SPL 160 dB re 1  $\mu$ Pa for non-explosive impulsive (*e.g.*, seismic airguns) or intermittent (*e.g.*, scientific sonar) sources. Level B harassment take estimates based on these behavioral harassment thresholds potentially include TTS, as, in most cases, TTS likely occurs at distances from the source less than those at which behavioral harassment may occur. TTS of sufficient degree can manifest as behavioral harassment and reduced hearing sensitivity, and the potential reduction in opportunities to detect important signals (conspecific communication, predators, prey) may result in behavior patterns that would not otherwise occur.

The Navy's proposed activities for projects at NBPL and NBSD include continuous (vibratory pile driving) and impulsive (impact pile driving) sources. As previously discussed, the Navy has

measured and reported background noise in San Diego Bay (NAVFAC SW, 2020) above 120 dB re 1 μPa. Therefore, the RMS SPL thresholds of 129.6 dB and 160 dB re 1 μPa are applicable to the NBPL Project, and the thresholds of 126 dB and 160 dB re 1 μPa are applicable to the NBSD Project.

*Level A Harassment*

NMFS' Updated Technical Guidance for Assessing the Effects of

Anthropogenic Sound on Marine Mammal Hearing (Version 3.0) (NMFS, 2024) identifies dual criteria to assess AUD INJ (Level A harassment) to five different underwater marine mammal groups (based on hearing sensitivity) as a result of exposure to noise from two different types of sources (impulsive or non-impulsive). It includes updated thresholds and updated weighting functions for each hearing group,

provided in table 4 below. The references, analysis, and methodology used to develop the criteria are described in NMFS' 2024 Updated Technical Guidance, available at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance-other-acoustic-tools>.

TABLE 4—THRESHOLDS IDENTIFYING THE ONSET OF AUDITORY INJURY

Hearing group	AUD INJ onset acoustic thresholds* (received level)	
	Impulsive	Non-impulsive
Low-Frequency (LF) Cetaceans .....	Cell 1: $L_{pk,flat}$ : 222 dB; $L_{E,LF,24h}$ : 183 dB .....	Cell 2: $L_{E,LF,24h}$ : 197 dB.
High-Frequency (HF) Cetaceans .....	Cell 3: $L_{pk,flat}$ : 230 dB; $L_{E,HF,24h}$ : 193 dB .....	Cell 4: $L_{E,HF,24h}$ : 201 dB.
Very High-Frequency (VHF) Cetaceans .....	Cell 5: $L_{pk,flat}$ : 202 dB; $L_{E,VHF,24h}$ : 159 dB .....	Cell 6: $L_{E,VHF,24h}$ : 181 dB.
Phocid Pinnipeds (PW) (Underwater) .....	Cell 7: $L_{pk,flat}$ : 223 dB; $L_{E,PW,24h}$ : 183 dB .....	Cell 8: $L_{E,PW,24h}$ : 195 dB.
Otariid Pinnipeds (OW) (Underwater) .....	Cell 9: $L_{pk,flat}$ : 230 dB; $L_{E,OW,24h}$ : 185 dB .....	Cell 10: $L_{E,OW,24h}$ : 199 dB.

\* Dual metric criteria for impulsive sounds: Use whichever criterion results in the larger isopleth for calculating AUD INJ onset. If a non-impulsive sound has the potential of exceeding the peak sound pressure level criteria associated with impulsive sounds, the PK SPL criteria are recommended for consideration for non-impulsive sources.

**Note:** Peak sound pressure level ( $L_{p,0-pk}$ ) has a reference value of 1 μPa, and weighted cumulative sound exposure level ( $L_{E,p}$ ) has a reference value of 1 μPa<sup>2</sup>s. In this table, criteria are abbreviated to better reflect International Organization for Standardization (ISO) standards (ISO, 2017). The subscript “flat” is being included to indicate that peak sound pressures are flat weighted or unweighted within the generalized hearing range of marine mammals underwater (*i.e.*, 7 Hz to 165 kHz). The subscript associated with cumulative sound exposure level criteria indicates the designated marine mammal auditory weighting function (LF, HF, and VHF cetaceans, and PW and OW pinnipeds) and that the recommended accumulation period is 24 hours. The weighted cumulative sound exposure level criteria could be exceeded in a multitude of ways (*i.e.*, varying exposure levels and durations, duty cycle). When possible, action proponents should indicate the conditions under which these criteria would be exceeded.

*Ensonified Area*

Here, we describe the operational and environmental parameters of the activity used to estimate the area ensonified above the acoustic thresholds, including source levels and the transmission loss coefficient.

The sound field in the project areas is the existing background noise plus additional construction noise from the proposed project. Marine mammals are expected to be affected via sound generated by the primary components of the project (*i.e.*, vibratory pile removal, vibratory pile driving, and impact pile driving). The source levels assumed for

both removal and installation activities are based on reviews of measurements of piles of the same or similar types and dimensions available in the scientific literature and from similar coastal construction projects. The source level for the piles and activities (*i.e.*, installation or removal) at both NBPL and NBSD is presented in table 5.

TABLE 5—PROXY SOUND SOURCE LEVELS FOR PILE SIZES AND DRIVING METHODS

Method	Pile size/type	Peak SPL (dB re 1μPa) <sup>1</sup>	RMS SPL (dB re 1μPa) <sup>1</sup>	SEL (dB re 1μPa) <sup>1</sup>	Source
<b>NBPL DEPERMING PIER REPLACEMENT PROJECT</b>					
<b>Pile Removal Activities</b>					
Vibratory Extraction .....	16-inch round timber .....	.....	162	.....	Naval Submarine Base New London Monitoring Report (NAVFAC Mid-Atlantic, 2022); NMFS interim proxy level (2024).
<b>Pile Installation Activities</b>					
Vibratory Pile Driving .....	16-inch round plastic .....	.....	162	.....	Naval Submarine Base New London Monitoring Report (NAVFAC Mid-Atlantic, 2022); NMFS interim proxy level (2024).
Impact Hammer .....	.....	196	182	170	.....
<b>NBSD CHOLLAS CREEK QUAY WALL REPAIR PROJECT</b>					
<b>Pile Removal Activities</b>					
Vibratory Extraction .....	14-inch steel H .....	.....	150	.....	California Department of Transportation (Caltrans, 2020); Chevron Long Wharf (Richmond, CA).
.....	24-inch steel sheet .....	.....	160	.....	Caltrans (2020); Berth 23 (Port of Oakland).
.....	18-inch square concrete .....	.....	155	.....	NAVFAC SW (2024); NBSD Pier 6 Pier Replacement. <sup>2</sup>

TABLE 5—PROXY SOUND SOURCE LEVELS FOR PILE SIZES AND DRIVING METHODS—Continued

Method	Pile size/type	Peak SPL (dB re 1µPa) <sup>1</sup>	RMS SPL (dB re 1µPa) <sup>1</sup>	SEL (dB re 1µPa) <sup>1</sup>	Source
	18-inch octagonal concrete ...	.....	155	.....	NAVFAC SW (2024); NBSD Pier 6 Pier Replacement. <sup>2</sup>
<b>Pile Installation Activities</b>					
Vibratory Pile Driving .....	13-inch round plastic .....	.....	159	.....	NAVFAC SW (2024); NBSD Pier 6 Pier Replacement. <sup>3</sup>
	18-inch octagonal concrete ...	.....	155	.....	NAVFAC SW (2024); NBSD Pier 6 Replacement. <sup>2</sup>
Impact Hammer .....	27.5-inch steel sheet .....	.....	160	.....	Caltrans (2020); Berth 23 (Port of Oakland).
	18-inch octagonal concrete ...	185	170	160	NMFS Interim Proxy Level based on Caltrans (2020). <sup>2</sup>
	18-inch square concrete .....	185	170	160	NMFS Interim Proxy Level based on Caltrans (2020).

<sup>1</sup> As measured, or calculated, at 10 m (33 ft).

<sup>2</sup> 20-inch square concrete piles used as a proxy; based on the maximum value between 56–61 m of 149.5 dB (rounded to 150 dB) @ 61 m, and back-calculated to the source (10 m).

<sup>3</sup> 12-inch round plastic piles used as a proxy; based on an RMS average of 159.4 dB and back-calculated to the source (10 m). Data show that the 12-inch plastic proxy source level is louder than the 20-inch concrete pile proxy source due to reverberation from the lighter plastic pile.

Transmission loss (TL) is the decrease in acoustic intensity as an acoustic pressure wave propagates out from a source. TL parameters vary with frequency, temperature, sea conditions, current, source and receiver depth, water depth, water chemistry, bottom composition, and topography. The general formula for underwater TL is:  $TL = B * \text{Log}_{10} (R_1/R_2)$ ,

where:

TL = transmission loss in dB

B = transmission loss coefficient; for practical spreading equals 15

R<sub>1</sub> = the distance of the modeled SPL from the driven pile, and

R<sub>2</sub> = the distance from the driven pile of the initial measurement.

This formula neglects loss due to scattering and absorption, which is assumed to be zero here. The degree to which underwater sound propagates away from a sound source depends on various factors, most notably the water bathymetry and the presence or absence of reflective or absorptive conditions, including in-water structures and sediments. Spherical spreading occurs in a perfectly unobstructed (free-field) environment not limited by depth or water surface, resulting in a 6 dB reduction in sound level for each doubling of distance from the source (20\*log[range]). Cylindrical spreading

occurs in an environment in which sound propagation is bounded by the water surface and sea bottom, resulting in a reduction of 3 dB in sound level for each doubling of distance from the source (10\*log[range]). A practical spreading value of 15 is often used in shallow-water coastal conditions, such as those found in the NBPL and NBSD projects. In these environments, sound waves repeatedly reflect off the surface and bottom, reflecting an expected propagation environment between spherical and cylindrical spreading-loss conditions. Therefore, the default coefficient of 15 is used to calculate distances to the Level A harassment and Level B harassment thresholds.

Assuming practicable spreading and other assumptions regarding the source characteristics and operational logistics (e.g., source level, number of strikes per pile, number of piles per day), the Navy calculated distances to the Level A harassment and Level B harassment thresholds and associated ensonified areas. Because an ensonified area associated with Level A harassment is more technically challenging to predict given the accounting for a cumulative energy component that changes over time, to assist applicants in assessing the potential for Level A harassment without the need for complex modeling,

NMFS developed an optional User Spreadsheet tool to accompany the 2024 Updated Technical Guidance (see <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance-other-acoustic-tools>). This relatively simple tool can be used to calculate a Level A harassment isopleth distance for use in conjunction with marine mammal density or occurrence data to predict the amount of take that may occur incidental to an activity. We note that, because of some of the assumptions in the methods underlying this spreadsheet tool, we anticipate that the resulting isopleths would typically be overestimates, which may lead to an overestimate of potential exposures from Level A harassment. However, this optional tool offers a practical alternative for estimating isopleth distances when more sophisticated modeling methods are unavailable or are impractical. For stationary sources such as impact or vibratory pile driving and removal, the optional User Spreadsheet tool predicts the distance at which, if a marine mammal remained at that distance for the duration of the activity within 24 hours, it would be expected to incur AUD INJ. Inputs used in the optional User Spreadsheet tool are contained within table 6.

TABLE 6—USER SPREADSHEET INPUT PARAMETERS USED FOR CALCULATING LEVEL A HARASSMENT ISOPLETHS

Equipment type	Vibratory pile removal				Vibratory pile installation			Impact pile installation					
	16" round timber <sup>1</sup>	13" round plastic <sup>2,3</sup>	18" square concrete <sup>2</sup>	18" octagonal concrete <sup>2</sup>	14" steel H <sup>2</sup>	24" steel sheet <sup>2,4</sup>	16" round plastic <sup>1</sup>	13" round plastic <sup>2,5</sup>	18" octagonal concrete (small float) <sup>2,5</sup>	27.5" steel sheet <sup>2</sup>	16" round plastic <sup>1</sup>	18" square concrete <sup>2,5</sup>	18" octagonal concrete <sup>2,5</sup>
Spreadsheet Tab Used.	A.1) Vibratory pile driving.												
Source Level (dB re: 1 µPa).	162 RMS ...	Dead pull ...	155 RMS ...	155 RMS ...	150 RMS ...	160 RMS ...	162 RMS ...	159 RMS ...	155 RMS ...	160 RMS ...	196 Peak ... 182 RMS ... 170 SEL ...	185 Peak ... 170 RMS ... 160 SEL ...	185 Peak ... 170 RMS ... 160 SEL ...
Weighting Factor Adjustment (kHz).	2.5												
Activity Duration within 24 Hours.	5 min/pile ... * 4 piles = ... 20 min ...	.....	20 min/ pile* 5 piles = ... 100 min ...	20 min/ pile* 2 piles = ... 40 min ...	20 min/ pile* 12 piles = ... 240 min ...	20 min/ pile* 10 piles = ... 200 min ...	5 min/ pile* 4 piles = ... 20 min ...	1 min/ pile* 5 piles = ... 5 min ...	20 min/ pile* 4 piles = ... 80 min ...	20 min/ pile* 10 piles = ... 200 min ...	.....	.....	.....
Strikes per Second. Number of strikes per pile.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.01 .....	.....	0.01 .....
Number of piles per day.	4 .....	7 .....	5 .....	2 .....	12 .....	10 .....	3 .....	5 .....	4 .....	10 .....	.....	.....	.....
Propagation (xLogR). Distance of SPL Measurement.	15												
Acoustic threshold (dB RMS).	129.6 dB ....	.....	.....	.....	126 dB	.....	129.6 dB ....	.....	126 dB	.....	.....	.....	160 dB.

<sup>1</sup> NBPL Deperring Pier Replacement Project. See table 6-4 in the application.  
<sup>2</sup> NBSD Chollas Creek Quay Wall Repair Project. See table 1-4 in the application.  
<sup>3</sup> These piles are anticipated to be dead pulled.  
<sup>4</sup> These piles are anticipated to be either vibratory extracted, dead pulled, or clipped at the mud-line and removed. For this IHA, we are assuming vibratory extraction for the demolition of all existing sheet piles.  
<sup>5</sup> Vibratory and/or impact pile driving are the most likely methods that would be used to install piles. High-pressure water jetting may be used either separately from or in conjunction with impact pile installation.

Using the practical spreading model and source assumptions identified in table 6, the Navy calculated, and NMFS has carried forward into this analysis, the distances to the Level A harassment and Level B harassment thresholds for marine mammals for both the NBPL and the NBSD projects (table 7).

TABLE 7—CALCULATED DISTANCES TO THE LEVEL A HARASSMENT AND LEVEL B HARASSMENT THRESHOLDS BY MARINE MAMMAL HEARING GROUP AND ACTIVITY

Site, activity, pile size/type	Level A harassment zone (m)	All marine mammals Level B harassment zone (m)			
		LFC Gray whales	HFC bottlenose, common dolphins	OW CSL	PW Harbor seals
<b>NBPL DEPERMING PIER</b>					
<b>Pile Removal Activities</b>					
Vibratory Extraction 16" round timber .....	5.2	2.0	2.2	6.7	1,445
<b>Pile Installation Activities</b>					
Vibratory Hammer 16" round plastic .....	5.2	2.0	6.7	2.2	1,455
Impact Hammer 16" round plastic .....	242.5	30.9	80.3	215.4	293
<b>NBSD CHOLLAS CREEK <sup>1</sup></b>					
<b>Pile Removal Activities</b>					
Vibratory Extraction 14" steel H .....	.....	1.6	1.9	5.5	398
Vibratory Extraction 18" octagonal concrete .....	.....	1.1	1.2	3.6	858
Vibratory Extraction 18" square concrete .....	.....	2.0	2.2	6.6	858
Vibratory Extraction 24" steel sheet .....	.....	6.8	7.6	22.7	1,848
<b>Pile Installation Activities</b>					
Vibratory Driving 13" round plastic .....	.....	0.5	0.6	1.8	1,685
Vibratory Driving 18" octagonal concrete (small float) .....	.....	1.1	1.2	3.6	858
Vibratory Driving 27.5" steel sheet .....	.....	6.8	7.6	22.7	1,848
Impact Driving 18" octagonal concrete .....	.....	6.7	17.3	46.4	46
Impact Driving 18" square concrete .....	.....	8.7	22.7	60.8	46

Abbreviations: LCF = Low-Frequency Cetacean; HFC = High-Frequency Cetacean; OW = Otariid; PW = Phocid; CSL = California sea lions.

*Marine Mammal Occurrence*

In this section, we provide information on the anticipated occurrence of marine mammals present in the project areas during the proposed NBPL and NBSD Projects. This occurrence information then informs the take calculations in the following section (see *Take Estimation* and table 9).

For all species, the best available scientific information was considered to estimate occurrence. First, the Navy considered density data contained within the U.S. Navy Marine Species Density Database for the Hawaii-Southern California Training and Testing Study Area technical report (U.S. Navy, 2024), which includes San Diego Bay. However, the Navy determined that a density-based

approach would overestimate take as evidenced in previous monitoring reports (NAVFAC SW 2016, 2017a, 2017b, 2018a, 2018b).

To more accurately inform take estimates, the Navy reviewed IHA applications and monitoring reports for previous projects at both NBPL and NBSD to develop more site-specific occurrence estimates for each species. Except for California sea lions, the average number of observations of marine mammals during the NBPL Fuel Pier Replacement Project monitoring periods, years 2–5 (2015–2018), was used by the Navy to estimate the expected average number of individuals observed daily for the current NBPL Project (NAVFAC SW 2016, 2017a, 2017b, 2018a, 2018b). The Navy also used observations presented in the final monitoring report for the NBSD Pier 6

Replacement Project (NAVFAC SW, 2024) to estimate the expected average number of individuals observed daily for the current NBSD Project. Except for California sea lions, the average daily occurrence per species over the NBPL Fuel Pier's 4 years was deemed to provide a reasonably representative daily occurrence estimate. As for California sea lions, due to the close proximity of the NBPL Project to the Everingham Brothers' Bait Barge, which sea lions regularly use as a haul-out location, the Navy used the highest number of individuals observed per day (from the NBPL Fuel Pier monitoring period year 2, 2015) to estimate the expected number of individuals observed per day for the current NBPL Project (*i.e.*, 25.09 sea lions expected to be observed daily).

TABLE 8—ESTIMATED OCCURRENCE OF MARINE MAMMAL SPECIES

Species/location	Relative occurrence in north and south-central San Diego Bay	Expected number of individuals observed/day
<i>Naval Base Point Loma</i>		
California sea lion .....	Abundant .....	25.09
Harbor seal .....	Relatively Uncommon .....	0.56
Bottlenose dolphin .....	Sporadic .....	1.29
Short-beaked common dolphin .....	Occasional .....	0.10
Long-beaked common dolphin .....	Occasional .....	.....
gray whale .....	Rare/Seasonal .....	0.02
<i>Naval Base San Diego</i>		
California sea lion .....	Abundant .....	1.38
Harbor seal .....	Relatively Uncommon .....	0.01
Bottlenose dolphin .....	Sporadic .....	0.5

*Take Estimation*

In this section, we describe how the project scope, ensonified area, and species occurrence information provided above are used to produce a quantitative estimate of the take that could occur and is proposed for authorization. We first describe the take estimation process for the NBPL Project, then for the NBSD Project.

**NBPL Deperming Pier Replacement Project**

To calculate the estimated take that may occur incidental to the NBPL Project, the Navy used the following methods, and we have carried them forward in this analysis. In summary, the Navy calculated estimated exposures at each pier for each activity using the following equation:  
 # of individuals/day × days per pier and activity × ensonified area

The number of individuals per day used in the calculations is found in table 8. The number of days used in the calculations is as follows:

*Vibratory pile extraction:* Deperming Pier 47 days, ERG Pier 37 days, and Pier 5002 2 days;

*Vibratory pile driving:* Deperming Pier 50 days, ERG Pier 33 days, and Pier 5002 2 days; and

*Impact pile driving:* Deperming Pier 50 days, ERG Pier 33 days, and Pier 5002 2 days. The Navy then summed the exposure estimates across the three piers to obtain a total exposure estimate for each species.

Please see section 6.9 and Appendix B of the NBPL IHA application for a detailed description of exposure estimates and take calculations, and tables of all of the calculations for each species, at each pier, and for each pile method (vibratory pile extraction, vibratory pile driving, and impact pile driving).

Because take by both behavioral harassment and AUD INJ could occur incidentally to impact pile driving, the Navy allocated the total exposures for this activity by Level A harassment and Level B harassment at each of the three piers. To do so, the Navy identified the Level A harassment area percentage relative to the Level B harassment area at each pier for impact pile driving using the following equation:

$$\text{Level A harassment ensonified area (km}^2\text{) / Level B harassment ensonified area (km}^2\text{) = Level A harassment ensonified area percentage}$$

Using impact pile driving for California sea lions at the Deperming Pier as an example, the Level A harassment ensonified area (0.025390 km<sup>2</sup>) divided by the Level B harassment ensonified area (0.201349 km<sup>2</sup>) equals 10.61 percent.

The Navy then multiplied each species' total impact pile driving exposure estimates at each pier by the Level A harassment ensonified area percentage:

$$\text{Impact pile driving exposure estimate at each pier} \times \text{Level A harassment ensonified area percentage} = \text{Level A take at each pier}$$

Again, using impact pile driving on California sea lions at the Deperming Pier as an example, the exposure estimate for the species (1,254.50 individuals) multiplied by the Level A harassment ensonified area percentage (10.61 percent) equals 158.19 Level A takes.

The Navy then summed the results from all three piers to obtain the total requested amount of Level A harassment take. Using the example above, 159.18 + 106.46 + 5.04 equals 270 California sea lion Level A harassment takes.

To calculate Level B harassment for each species at each pier, the Navy conducted a similar process, accounting for the ensonified area already considered in the Level A harassment calculations. The Navy used the following formula to estimate the Level B harassment ensonified area percentage:

$$\text{Level B harassment ensonified area (km}^2\text{) - Level A harassment ensonified area (km}^2\text{) / Level B harassment ensonified area (km}^2\text{) = Level B harassment ensonified area percentage}$$

Again, using impact pile driving on California sea lions at the Deperming Pier as an example, the Level B harassment ensonified area (0.201349 km<sup>2</sup>) minus the Level A harassment ensonified area (0.025390 km<sup>2</sup>) divided by the Level B harassment ensonified area (0.201349 km<sup>2</sup>) equals 87.39 percent.

The Navy then multiplied the total species' impact pile driving exposure estimates by the Level B harassment ensonified area percentage for each species at each pier to obtain the requested amount of takes by Level B harassment using the following formula:

$$\text{Exposure estimate per pier} \times \text{Level B harassment ensonified area percentage} = \text{Level B take per pier}$$

Again, using impact pile driving on California sea lions at the Deperming Pier as an example, the exposure estimate for the species (1,254.50) multiplied by the Level B harassment ensonified area (87.39 percent) equals 1,096 takes of Level B harassment.

The Navy then summed the takes by Level B harassment per species at each of the three piers. (see table 9).

Of note, for the NBPL Project, the Navy combined sighting information/species occurrence for the short- and long-beaked common dolphins, as both

species are difficult to differentiate in the wild. For the take estimates, we have authorized a single amount of take for both species combined. We also note a minor discrepancy in the calculations for the combined short- and long-beaked common dolphins, specifically for impact pile driving at the ERG Pier. We calculated 0.08 Level A harassment exposures for the species, whereas the application shows 1.00 Level A harassment exposure; and we calculated 3.22 Level B harassment exposures, whereas the application shows 2.30 Level B harassment exposures. This error, when carried through and using standard rounding at the end (*i.e.*, where a number of five or greater is rounded up), resulted in the Navy calculating 2 takes by Level A harassment and 18 takes by Level B harassment for the combined short- and long-beaked common dolphins, whereas we calculated 0 takes by Level A harassment and 18 takes by Level B harassment for the combined species.

NMFS confirmed with the Navy that our calculations are correct (K. LeRoy, pers. comm., January 16, 2026); therefore, they are applied in this proposed IHA. See table 9 below for the estimated takes by Level A harassment and Level B harassment proposed to be authorized for the NBPL Project.

#### NBSD Chollas Creek Quay Wall Repair Project

To calculate the estimated takes by Level B harassment that may occur incidental to the NBSD Project, the Navy used the following formula, and we have carried forward this analysis:

$$N \times D = \text{Estimated takes by Level B Exposure}$$

Where:

N = the average number of individuals observed/day, and

D = the total days of pile extraction/installation (190 days).

See table 9 for the number of takes by Level B harassment proposed to be authorized.

As described above, the Navy did not request, and NMFS does not propose, to authorize take by Level A harassment for any of the three species that may occur in the NBSD Chollas Creek area—California sea lions, bottlenose dolphins, and harbor seals.

Based on the best available science, NMFS generally finds the Navy's estimates of the types and amounts of take for each species and each project to be a reasonable representation of the amount of take that could occur from the project. NMFS has identified the minor discrepancy in the NBPL Project take estimation section for short- and long-beaked common dolphins discussed above and has carried forward our calculations. Table 9 below summarizes the number of takes by Level A harassment and/or Level B harassment, and the total proposed take per stock as a percentage of stock abundance for both projects.

TABLE 9—PROPOSED AUTHORIZED TAKE BY LEVEL A HARASSMENT AND LEVEL B HARASSMENT AND AS A PERCENTAGE OF STOCK ABUNDANCE FOR THE NBPL PROJECT AND NBSD PROJECT

Common name	Stock abundance <sup>1</sup>	Avg. number of indiv./day		NBPL IHA proposed take			Percent of stock	NBSD IHA proposed take			Percent of stock
		NBPL	NBSD	Level A	Level B	Total proposed take		Level A	Level B	Total proposed take	
CA sea lion .....	257,606	25.09	1.38	270	4,291	4,561	1.77	0	262	262	0.10
Bottlenose dolphin .....	453	1.29	0.5	3	221	224	249.39	0	95	95	20.97
Harbor seal .....	30,968	0.56	0.01	30	96	106	0.41	0	2	2	0.00
Short-beaked common dolphin.	1,056,308	0.10	.....	0	18	18	0.00	.....	.....	.....	.....
Long-beaked common dolphin.	83,379	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gray whale .....	25,960	0.02	.....	0	4	4	0.02	.....	.....	.....	.....

<sup>1</sup>The values presented here are based on if all takes were to a different individual. This is not likely the case, however, for California sea lions, harbor seals, and bottlenose dolphins due to their presumed persistence at a location (i.e., repeated takes of the same individual may occur across multiple days).

<sup>2</sup>The percentage of the stock for the California coastal stock of bottlenose dolphins presented here is a simplistic calculation that considers each take is of a unique individual, which is not likely the case. Please see the Small Numbers section for more rationale.

**Proposed Mitigation**

To issue an IHA under section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to the activity, and other means of effecting the least practicable impact on the species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of the species or stock for taking for certain subsistence uses (latter not applicable for this action). NMFS regulations require applicants for incidental take authorizations (ITA) to include information about the availability and feasibility (economic and technological) of equipment, methods, and the manner of conducting the activity or other means of effecting the least practicable adverse impact upon the affected species or stocks, and their habitat (50 CFR 216.104(a)(11)).

In evaluating how mitigation may or may not be appropriate to ensure the least practicable adverse impact on species or stocks and their habitat, as well as subsistence uses where applicable, NMFS considers two primary factors:

(1) How and to what degree the successful implementation of the measure(s) is expected to reduce impacts on marine mammal species or stocks and their habitat. This considers the nature of the potential adverse impact being mitigated (its likelihood, scope, and range). It further considers the likelihood that the measure would be effective if implemented (probability of accomplishing the mitigating result if implemented as planned), the likelihood of effective implementation (probability of implementation as planned); and

(2) The practicability of the measures for applicant implementation, which may consider such things as cost and impact on operations.

The number and/or intensity of takes would be minimized by incorporating the mitigation measures proposed by the Navy in its adequate and complete applications for both the NBPL Project and the NBSD Project. The Navy has agreed that all of the mitigation measures are practicable. As required by the MMPA, we concurred that these measures are sufficient to achieve the least practicable adverse impact on the affected marine mammal species or stocks and their habitat. NMFS describes these below and has included them as proposed mitigation requirements in each of the proposed IHAs.

*Establishment of Shutdown Zones*

The Navy proposed, and NMFS would require, the establishment of shutdown zones with radial distances, as identified in table 10, for all construction activities. The purpose of a shutdown is generally to define an area within which shutdown of the activity would occur upon sighting of a marine mammal (or in anticipation of an animal entering the defined area) to minimize potential instances of AUD INJ and more severe behavioral disturbances by delaying the start of an activity if marine mammals are near the activity. Additionally, the Navy would be required to shut down in the event that an unauthorized species is present to avoid taking that unauthorized species. Shutdown zones would be cleared before activities begin, and would vary by activity type and marine mammal hearing group.

The placement of up to three PSOs during all pile-driving activities for both projects (as described in the Proposed Monitoring and Reporting section) would ensure that the entire shutdown zone is visible. Should environmental conditions deteriorate to the point that the entire shutdown zone is not visible

(e.g., fog, heavy rain), pile driving would be delayed until the PSO is confident that marine mammals within the shutdown zone can be detected. Limiting construction activities to daylight hours only for both projects would also increase the detectability of marine mammals in the area.

If a marine mammal is observed entering or within the shutdown zones indicated in table 10, pile-driving activity must be delayed or halted, unless in the case of human safety concerns or pile refusal/instability.

If pile driving is delayed or halted due to the presence of a marine mammal, the activity may not begin or resume until either the animal has voluntarily exited and been visually confirmed beyond the shutdown zone, or 15 minutes have passed without re-detection of the animal.

During all in-water pile-driving activities for both projects, the Navy would implement a minimum 20 m (66 ft) shutdown zone for activities where the calculated Level A harassment distances were less than 20 m (66 ft). For activities where the calculated Level A harassment distance was greater than 20 m (66 ft), these distances were rounded up to the nearest 10 m (33 ft) (e.g., a calculated Level A harassment distance of 46 m would correspond to a 50 m shutdown zone). The Navy must also avoid direct physical interaction with marine mammals during construction activity through the implementation of a 10 m shutdown zone for activities other than pile driving. Adherence to these shutdown zones would minimize the potential number and intensity of Level A harassment during impact pile driving for the NBPL and NBSD Projects. See table 10 below for shutdown zones and Level B harassment zones.

**TABLE 10—SHUTDOWN ZONES AND LEVEL B HARASSMENT ZONES FOR THE NBPL DEPERMING PIER REPLACEMENT PROJECT AND NBSD CHOLLAS CREEK QUAY WALL PROJECT**

Site, activity, pile size/type	Shutdown zone (m) <sup>1</sup>				All marine mammals Level B harassment zone (m)
	LFC Gray whales	HFC bottlenose, common dolphins	OW CSL	PW Harbor seals	
<b>NBPL DEPERMING PIER IHA</b>					
<b>Pile Removal Activities</b>					
Vibratory Extraction 16" round timber .....	20	20	20	20	1,450
<b>Pile Installation Activities</b>					
Vibratory Hammer 16" round plastic .....	20	20	20	20	1,450
Impact Hammer 16" round plastic .....	250	40	90	220	300

TABLE 10—SHUTDOWN ZONES AND LEVEL B HARASSMENT ZONES FOR THE NBPL DEPERMING PIER REPLACEMENT PROJECT AND NBSD CHOLLAS CREEK QUAY WALL PROJECT—Continued

Site, activity, pile size/type	Shutdown zone (m) <sup>1</sup>				All marine mammals Level B harassment zone (m)
	LFC Gray whales	HFC bottlenose, common dolphins	OW CSL	PW Harbor seals	
<b>NBSD CHOLLAS CREEK IHA</b>					
<b>Pile Removal Activities</b>					
Vibratory Extraction 14" steel H .....	.....	20	20	20	400
Vibratory Extraction 18" octagonal concrete .....	.....	20	20	20	860
Vibratory Extraction 18" square concrete .....	.....	20	20	20	860
Vibratory Extraction 24-steel sheet .....	.....	20	20	30	1,850
<b>Pile Installation Activities</b>					
Vibratory Driving 13" round plastic .....	.....	20	20	20	1,690
Vibratory Driving 18" octagonal concrete (small float) .....	.....	20	20	20	860
Vibratory Driving 27.5" steel sheet .....	.....	20	20	30	1,850
Impact Driving 18" octagonal concrete .....	.....	20	20	50	50
Impact Driving 18" square concrete .....	.....	20	30	70	50

<sup>1</sup> The shutdown zone must be clear of marine mammals 30 minutes prior to commencing pile removal or installation. If a marine mammal is observed entering or within the shutdown zone during pile removal or installation, pile driving must cease until the animal has cleared the zone or not been re-sighted within 15 minutes. NMFS recognizes that pile driving may not cease in the case of safety concerns or pile refusal/instability.

Abbreviations: LFC = Low-Frequency Cetacean; HFC = High-Frequency Cetacean; OW = Otariid; PW = Phocid; CSL = California sea lions.

*Pre- and Post-Activity Marine Mammal Monitoring*

Monitoring would take place from 30 minutes prior to initiation of pile driving activity (*i.e.*, pre-start clearance monitoring) through 30 minutes post-completion of pile driving activity. In addition, monitoring for 30 minutes would take place whenever a break in the specified activity (*i.e.*, impact pile driving, vibratory pile driving) of 30 minutes or longer occurs. Pre-start clearance monitoring would be conducted during periods of sufficient visibility for the lead PSO to determine that the shutdown zones indicated in table 10 are clear of marine mammals. Pile driving may commence following 30 minutes of observation when the determination is made that the shutdown zones are clear of marine mammals. If a marine mammal is observed entering or within the shutdown zones, pile driving activity must be delayed or halted. If pile driving is delayed or halted due to the presence of a marine mammal, the activity may not commence or resume until either the animal has voluntarily exited and been visually confirmed beyond the shutdown zone, or 15 minutes have passed without re-detection of the animal. Finally, if a shutdown and/or clearance procedure would result in an imminent safety concern, as determined by the Navy, the in-water activity would be allowed to continue until the safety concern has been addressed, and the animal would

be continuously monitored. The Navy Point of Contact would be consulted before resuming any activities.

*Soft-Start*

The Navy would use soft-start techniques when impact pile driving. Soft-start procedures are used to provide additional protection to marine mammals by issuing a warning and/or giving them a chance to leave the area before the hammer operates at full capacity. Soft-start requires contractors to provide an initial set of three strikes at reduced energy, followed by a 30-second waiting period, then two subsequent reduced-energy strike sets. A soft-start would be implemented at the start of each day's impact pile driving, and at any time following cessation of impact pile driving for a period of 30 minutes or longer.

*Bubble Curtain*

The Navy has not proposed to use a bubble curtain to attenuate in-water construction noise during any of the proposed pile driving activities presented herein for either project. The Navy asserted that due to strong tidal fluctuations and associated currents in San Diego Bay, bubble curtains would not be effective in this environment (Navy pers. comm., September 3, 2025). NMFS agrees that the use of a bubble curtain would not appreciably decrease noise levels such that impacts on marine mammals would be reduced.

In summary, based on our evaluation of the Navy's proposed mitigation

measures for both the NBPL and NBSD projects, NMFS has preliminarily determined that the proposed mitigation measures provide the means of effecting the least practicable impact on the affected species or stocks and their habitat, with particular focus on rookeries, mating grounds, and similar areas of significance.

**Proposed Monitoring and Reporting**

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 authorizations 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 while conducting the activities. Effective reporting is critical to both compliance and ensuring the most value is obtained from the required monitoring.

Monitoring and reporting requirements prescribed by NMFS should help improve the understanding of one or more of the following:

- Occurrence of marine mammal species or stocks in the area in which take is anticipated (*e.g.*, presence, abundance, distribution, density);
- Nature, scope, or context of likely marine mammal exposure to potential

stressors/impacts (individual or cumulative, acute or chronic), through better understanding of: (1) action or environment (e.g., source characterization, propagation, ambient noise); (2) affected species (e.g., life history, dive patterns); (3) co-occurrence of marine mammal species with the activity; or (4) biological or behavioral context of exposure (e.g., age, calving or feeding areas);

- Individual marine mammal responses (behavioral or physiological) to acoustic stressors (acute, chronic, or cumulative), other stressors, or cumulative impacts from multiple stressors;
- How anticipated responses to stressors impact either: (1) long-term fitness and survival of individual marine mammals; or (2) populations, species, or stocks;
- Effects on marine mammal habitat (e.g., marine mammal prey species, acoustic habitat, or other important physical components of marine mammal habitat); and
- Mitigation and monitoring effectiveness.

The Navy would abide by all monitoring and reporting measures contained within the IHA, if issued, and their Protected Species Monitoring Plans (see NMFS' website at <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities>). NMFS describes these below as requirements and has included them in the proposed IHA.

#### Visual Monitoring

All PSOs must be NMFS-approved and have no other assigned tasks during monitoring periods. At least one PSO would have prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued ITA. The Navy would have between one and three PSOs actively monitoring on-site at all times during pile-driving activities. Where a team of three or more PSOs is required, a lead observer or monitoring coordinator would be designated. The lead observer would be required to have prior experience working as a marine mammal observer during construction. Additional PSOs may be employed during periods of low or obstructed visibility to ensure the entirety of the shutdown zone is monitored.

#### Reporting

The Navy would be required to submit a draft report(s) on all construction activities and marine mammal monitoring results to NMFS within 90 days of the completion of

monitoring, or 60 days prior to the requested issuance of any subsequent IHAs or similar activity at the same location, whichever comes first. The information required to be collected and reported to NMFS is included in the draft IHA available at <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities>. In summary, the report would include, but not be limited to, information regarding activities that occurred, marine mammal sighting data, and whether mitigative actions were taken or could not be taken. The Navy would also be required to submit reports on any observed injured or dead marine mammals. If the death or injury was clearly caused by the specified activity, the Navy would immediately cease the specified activities until NMFS is able to review the circumstances of the incident and determine what, if any, additional measures are appropriate to ensure compliance with the terms of the IHA. The Navy would not resume its activities until notified by NMFS.

Specific proposed mitigation, monitoring, and reporting requirements can be found in the draft IHAs found at <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities>.

#### Negligible Impact Analysis and Determination

NMFS defines negligible impact as an effect of the specified activity that cannot reasonably be expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival (50 CFR 216.103). A negligible impact finding is based on the absence of likely adverse effects on annual recruitment or survival rates (i.e., population-level effects). An estimate of the number of takes alone is insufficient to support an impact determination. In addition to considering estimates of the number of marine mammals that might be "taken" through harassment, NMFS considers other factors, such as the likely nature of any impacts or responses (e.g., intensity, duration), the context of any impacts or responses (e.g., critical reproductive time or location, foraging impacts affecting energetics), effects on habitat, and the likely effectiveness of the mitigation. We also assess the number, intensity, and context of estimated takes by evaluating them against population status. Consistent with the 1989 preamble to NMFS' implementing regulations (54 FR 40338, September 29, 1989), impacts from other past and ongoing anthropogenic

activities are incorporated into this analysis via their effects on the baseline (e.g., as reflected in the regulatory status of the species, population size and growth rate where known, ongoing sources of human-caused mortality, or ambient noise levels).

To avoid repetition, the discussion of our analysis applies to all species listed in table 9 and to both projects, given that the anticipated effects of the NBPL and NBSD Project activities on these different marine mammal stocks are expected to be similar. There is little information on the nature or severity of the impacts, or on the size, status, or structure of any of these species or stocks, that would lead to a different analysis for this activity.

Pile driving and removal associated with the project, as outlined previously, have the potential to disturb or displace marine mammals. Specifically, the specified activities may result in take in the form of Level A harassment (NBPL Project only) and/or Level B harassment from underwater sounds generated from pile driving and removal. Potential takes could occur if individuals of these species are present in zones ensounded above the thresholds for Level A harassment and/or Level B harassment identified above when these activities are underway.

Given the nature of the proposed activities, NMFS does not anticipate serious injury or mortality due to the Navy's proposed projects, even in the absence of required mitigation. The Level A harassment zones identified in table 7 are based upon an animal exposed to vibratory pile driving/removal and/or impact pile driving for periods ranging from 20 to 240 minutes of vibratory pile removal/installation, and impact pile driving of 3 to 6 piles per day. Exposures of this length are, however, unlikely for vibratory driving/removal scenarios, given marine mammal movement throughout the area. Even during impact driving scenarios, an animal exposed to the accumulated sound energy would likely only experience a small degree of AUD INJ at the lower frequencies where pile driving energy is concentrated. Moreover, an individual may recover from hearing loss after exposure to the sound has ceased. The level of recovery is based on the initial threshold shift amount, the frequency at which the shift occurred, and the duration of exposure. While not able to be quantified, as described in the Effects to Marine Mammal and Their Habitat section, some recovery is expected to occur.

As stated in the Proposed Mitigation section, the Navy would implement shutdown zones that equal or exceed

many of the Level A harassment isopleths shown in table 7. Take by Level A harassment is proposed for three of the six marine mammal species during construction activities associated with the project at the NBPL; no take by Level A harassment for species that occur at the NBSD site is anticipated or proposed for authorization. The proposed take by Level A harassment for species at the NBPL site is precautionary to account for the potential that an animal could enter and remain within the area between a Level A harassment zone and the shutdown zone for long enough to be taken by Level A harassment. Additionally, in some cases, this precaution would account for the possibility that an animal could enter a shutdown zone without detection, given the various obstructions along the shoreline, and remain in the Level A harassment zone for a duration long enough to be taken by Level A harassment before being observed and a shutdown occurring. That said, any take by Level A harassment is expected to arise from, at most, a small degree of AUD INJ because animals would need to be exposed to higher levels and/or longer duration than are expected to occur here to incur any more than a small degree of AUD INJ. Given the proximity to the shore, exposure over extended time periods is unlikely to occur before the animal is observed by PSOs, and before the proposed mitigation measures are implemented. Additionally, as noted previously, some subset of individuals who are behaviorally harassed during the activities could also simultaneously incur some small degree of TTS for a short duration. However, because of the anticipated small degree of possible overlap of sound exposure, duration, and hearing frequency with species occurrence, any AUD INJ or TTS potentially incurred here is not expected to adversely affect an animal's individual fitness, let alone annual rates of recruitment or survival. No AUD INJ for the NBSD Chollas Creek project is expected or proposed to be authorized.

For all species and stocks, take is expected to occur within a limited, confined area (adjacent to the project sites) of the species' range. The intensity and duration of take by Level A harassment and/or Level B harassment would be minimized through the proposed mitigation measures described herein. Furthermore, the amount of take proposed for authorization is small compared to the relative stock's abundance, even assuming that every take for any particular species could

wholly occur to individuals of an individual stock.

Behavioral responses of marine mammals to pile driving and removal at the project sites, if any, are expected to be mild, short-term, and temporary. Given that the removal of 192 piles would occur over 86 days and the installation of 192 piles would occur over 85 days for the NBPL Project, and the removal of 544 piles would occur over 69 days and the installation of 936 piles would occur over 121 days for the NBSD Project, respectively (all of which may not necessarily be consecutive), any harassment is expected to be temporary and intermittent. Marine mammals within the Level B harassment zones may not show any visual cues that they are disturbed by activities, or they may become alert, avoid the area, leave the area, or display other mild responses that are not observable, such as changes in vocalization patterns. Additionally, many of the species present in the region would be present only temporarily, based on seasonal patterns or during active transit between other habitats. Most likely, during pile driving, individuals would be expected to move away from the sound source and be temporarily displaced from the areas of pile driving. However, this reaction has been observed primarily associated with impact pile driving. While vibratory pile driving associated with the proposed projects may produce sound at distances of many kilometers from the project sites, thus overlapping with some likely less-disturbed habitat, the project sites are located in a busy bay, and the majority of sound fields produced by the specified activities are close to the bay. Animals disturbed by project sounds would be expected to avoid the area and use nearby higher-quality habitats. Pinnipeds in the area would be able to haul out on nearby man-made structures to avoid the activities, and no in-air harassment is anticipated from the construction.

The potential for harassment is minimized by implementing the proposed mitigation measures. During all impact driving, the implementation of soft-start procedures and the monitoring of established shutdown zones by trained and qualified PSOs shall be required, significantly reducing the risk of injury. Given sufficient notice through soft start (for impact driving), marine mammals are expected to move away from an irritating sound source before it becomes potentially injurious.

Any impact on marine mammal prey that would occur during the Navy's proposed activities would have, at most, short-term effects on the foraging of

individual marine mammals, and likely no effect on the populations of marine mammals as a whole. Indirect effects on marine mammal prey during construction are expected to be minor, and these effects are unlikely to cause substantial individual-level impacts on marine mammals, with no expected impact on annual recruitment or survival rates.

In addition, it is unlikely that minor noise effects in a small, localized area of habitat would have any effect on the reproduction or survival of any individual, much less the stocks' annual rates of recruitment or survival. Taken together, we believe that these factors, along with the available body of evidence from similar activities, demonstrate that the potential effects of the specified activities would be only minor and short-term for individuals. Overall, the specified activities for the NBPL and NBSD are not expected to impact rates of recruitment or survival; therefore, these effects would not be expected to result in population-level impacts.

In summary and as described above, the following factors primarily support our preliminary determinations that the impacts resulting from the two separate specified activities are not expected to adversely affect any of the species or stocks through effects on annual rates of recruitment or survival:

- No mortality or serious injury is anticipated or proposed for authorization, and no Level A harassment (AUD INJ) is anticipated or proposed for authorization incidental to the NBSD Chollas Creek Quay Wall Repair Project;
- Any Level A harassment (AUD INJ) is anticipated to be slight AUD INJ (*i.e.*, of a few decibels) within the lower frequencies associated with pile driving and not encompassing a species' full hearing range;
- The anticipated incidents of Level B harassment would consist of, at worst, temporary modifications in behavior that would not result in fitness impacts on individuals;
- The area affected by the specified activity is very small relative to the overall habitat ranges of all species, does not include any rookeries, does not include ESA-designated critical habitat, and does include any BIAs;
- Effects on species that serve as prey for marine mammals from the activities are expected to be short-term and, therefore, any associated impacts on marine mammal feeding are not expected to result in significant or long-term consequences for individuals, or to accrue adverse impacts on their populations;

- The project area is located in a highly industrialized and commercial bay; therefore, species are likely acclimated to anthropogenic activities and behavioral reactions are expected to be minor (if at all); and

- The proposed mitigation measures, such as soft-starts, and shutdowns, are expected to reduce the effects of the specified activity to the least practicable adverse impact level.

Based on the analysis contained herein of the likely effects of the specified activities on marine mammals and their habitat, and taking into consideration the implementation of the proposed monitoring and mitigation measures, NMFS preliminarily finds for both of the two separate proposed IHAs that the total marine mammal take from the proposed activities would have a negligible impact on all affected marine mammal species or stocks.

### Small Numbers

As noted previously, only take of small numbers of marine mammals may be authorized under section 101(a)(5)(A) and (D) of the MMPA for specified activities other than military readiness activities. The MMPA does not define small numbers, so, in practice, when estimated numbers are available, NMFS compares the number of individuals taken to the most appropriate abundance estimate for the relevant species or stock in determining whether an authorization is limited to small numbers of marine mammals. When the predicted number of individuals to be taken is fewer than one-third of the species or stock abundance, the take is considered to be of small numbers (see 86 FR 5322, January 19, 2021). Additionally, other qualitative factors may be considered in the analysis, such as the temporal or spatial scale of the activities.

For the NBPL Project, with the exception of the California coastal stock of bottlenose dolphin (see below), the maximum proposed number of instances of takes by Level A harassment and Level B harassment, relative to the best available population abundance, is less than one-third for five of the species impacted. For the NBSD Project, the maximum proposed number of instances of takes by Level B harassment is less than one-third for the three species impacted (see table 9).

For the NBPL Project, the total number of takes proposed to be authorized for the California coastal stock of bottlenose dolphins ( $n = 224$ ) is 49.39 percent of the total stock abundance estimate (453), assuming each take is to a different individual (*i.e.*, no repeated takes to the same

individual). However, it is likely that a relatively small subset of California coastal bottlenose dolphins would be incidentally harassed repeatedly by NBPL Project activities, and therefore, the number of individuals taken is less than 49.39 percent of the population. California coastal bottlenose dolphins range from San Francisco Bay to San Diego (and south into Mexico), and the specified activity would be stationary within an enclosed water body that is not recognized as an area of any special significance for coastal bottlenose dolphins (and is, therefore, not an area of dolphin aggregation, as evident in Navy observational records and monitoring reports (*e.g.*, see NAVFAC SW, 2014; NAVFAC SW, 20015)). We, therefore, believe that the estimated number of takes likely represents repeated exposures of a much smaller number of bottlenose dolphins and that, based on the limited region of exposure in comparison with the known distribution of the coastal bottlenose dolphin, these estimated incidents of take represent small numbers of bottlenose dolphins.

Based on the analysis contained herein of the proposed activities (including the proposed mitigation and monitoring measures) and the anticipated take of marine mammals, NMFS preliminarily finds for both of the two separate proposed IHAs that small numbers of marine mammals would be taken relative to the population size of the affected species or stocks.

### Unmitigable Adverse Impact Analysis and Determination

There are no relevant subsistence uses of the affected marine mammal stocks or species implicated by this action. Therefore, NMFS has determined that the total taking of affected species or stocks for both the NBPL and NBSD Projects would not have an unmitigable adverse impact on the availability of such species or stocks for subsistence purposes.

### Endangered Species Act

Section 7(a)(2) of the ESA of 1973 (16 U.S.C. 1531 *et seq.*) requires that each Federal agency ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat. To ensure ESA compliance in issuing an ITA, NMFS consults internally whenever we propose to authorize take of ESA-listed species.

No incidental take of ESA-listed species is proposed for authorization or expected to result from this activity. Therefore, NMFS has determined that formal consultation under section 7 of the ESA is not required for this action.

### Proposed Authorizations

As a result of these preliminary determinations, NMFS proposes to issue two IHAs to the Navy: one IHA authorizing harassment incidental to the Deperming Pier Replacement Project at Naval Base Point Loma, and one IHA authorizing harassment incidental to the Chollas Creek Quay Wall Repair Project at Naval Base San Diego, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. Drafts of both proposed IHAs can be found at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities>.

### Request for Public Comments

We request comment on our analyses, the proposed authorizations, and any other aspect of this notice. We also request comments on the potential renewal of each of these proposed IHAs as described in the paragraph below. Please include with your comments any supporting data or literature citations to help inform decisions on the request for these IHAs or a subsequent IHA renewal.

On a case-by-case basis, NMFS may issue a one-time, 1-year renewal IHA following notice to the public providing an additional 15 days for public comments when (1) up to another year of identical or nearly identical activities as described in the Description of Proposed Activity section of this notice is planned or (2) the activities as described in the Description of Proposed Activity section of this notice would not be completed by the time the IHA expires and a renewal would allow for completion of the activities beyond that described in the *Dates and Duration* section of this notice, provided all of the following conditions are met:

- A request for renewal is received no later than 60 days prior to the needed renewal IHA effective date (recognizing that the renewal IHA expiration date cannot extend beyond 1 year from expiration of the initial IHA).

- The request for renewal must include the following:

1. An explanation that the activities to be conducted under the requested renewal IHA are identical to the activities analyzed under the initial IHA, are a subset of the activities, or include changes so minor (*e.g.*,

reduction in pile size) that the changes do not affect the previous analyses, mitigation and monitoring requirements, or take estimates (with the exception of reducing the type or amount of take).

2. A preliminary monitoring report showing the results of the required monitoring to date and an explanation showing that the monitoring results do not indicate impacts of a scale or nature not previously analyzed or authorized.

- Upon review of the request for renewal, the status of the affected species or stocks, and any other pertinent information, NMFS determines that there are no more than minor changes in the activities, the mitigation and monitoring measures will remain the same and appropriate, and the findings in the initial IHA remain valid.

Dated: January 30, 2026.

**Kimberly Damon-Randall,**

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

[FR Doc. 2026-02173 Filed 2-2-26; 8:45 am]

**BILLING CODE 3510-22-P**

## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

[RTID 0648-XF509]

#### Gulf Fishery Management Council; Public Meeting

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

**ACTION:** Notice of a public meeting.

**SUMMARY:** The Gulf Fishery Management Council (Gulf Council) will hold a half day virtual meeting of its Ecosystem Technical Committee (ETC).

**DATES:** The meeting will take place Tuesday, March 3, 2026, from 1 p.m. to 4 p.m., EST.

**ADDRESSES:** This will be a virtual (webinar) meeting only. Registration information will be available on the Council's website by visiting [www.gulfcouncil.org](http://www.gulfcouncil.org) and clicking on the ETC meeting on the calendar.

*Council address:* Gulf Council, 4107 W Spruce Street, Suite 200, Tampa, FL 33607; telephone: (813) 348-1630.

**FOR FURTHER INFORMATION CONTACT:** Dr. Verena Wang, Ecosystem Analyst, Gulf Council; [verena.wang@gulfcouncil.org](mailto:verena.wang@gulfcouncil.org), telephone: (813) 348-1630.

**SUPPLEMENTARY INFORMATION:**

**Tuesday, March 3, 2026, 1 p.m.–4 p.m., EST**

The meeting will begin with Introductions of Members, Adoption of Agenda, and Scope of Work. The Committee will review and discuss Ecosystem and climate readiness project updates, including Inflation Reduction Act projects and the Gulf Ecosystem Status Report. The Committee will discuss the draft Gulf Fishery Ecosystem Plan (FEP), including a presentation, draft document, and background materials.

Lastly, the committee will receive Public Comment and discuss any Other Business items.

—*Meeting Adjourns*

The meeting will also be broadcast via webinar. You may register for the webinar by visiting [www.gulfcouncil.org](http://www.gulfcouncil.org) and clicking on the Technical Committee meeting on the calendar. The Agenda is subject to change, and the latest version along with other meeting materials will be posted on [www.gulfcouncil.org](http://www.gulfcouncil.org) as they become available.

Although other non-emergency issues not on the agenda may come before the Technical Committee for discussion, in accordance with the Magnuson-Stevens Fishery Conservation and Management Act, those issues may not be the subject of formal action during this meeting. Actions of the Technical Committee will be restricted to those issues specifically identified in the agenda and any issues arising after publication of this notice that require emergency action under Section 305(c) of the Magnuson-Stevens Fishery Conservation and Management Act, provided the public has been notified of the Council's intent to take action to address the emergency.

*Authority:* 16 U.S.C. 1801 *et seq.*

Dated: January 30, 2026.

**Becky J. Curtis,**

*Acting Deputy Director, Office of Sustainable Fisheries, National Marine Fisheries Service.*

[FR Doc. 2026-02195 Filed 2-2-26; 8:45 am]

**BILLING CODE 3510-22-P**

## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

[RTID 0648-XF510]

#### Gulf Fishery Management Council; Public Meeting

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

**ACTION:** Notice of a public meeting.

**SUMMARY:** The Gulf Fishery Management Council (Gulf Council) will hold a 3 day in-person meeting of its Standing and Special Shrimp Scientific and Statistical Committees (SSCs).

**DATES:** The meeting will be in-person Tuesday, February 24–Thursday, February 26, 2026. Daily schedule as follows: Tuesday and Wednesday from 8:30 a.m.–5 p.m., EST daily and Thursday from 8:30 a.m.–2 p.m.

**ADDRESSES:** The meeting will be held at Gulf Council office in Tampa, FL. Virtual connection information will be available on the Council's website at [www.gulfcouncil.org](http://www.gulfcouncil.org) and clicking on the "meeting tab".

*Council address:* Gulf Fishery Management Council, 4107 W Spruce Street, Suite 200, Tampa, FL 33607; telephone: (813) 348-1630.

**FOR FURTHER INFORMATION CONTACT:** Mr. Ryan Rindone, Lead Fishery Biologist, Gulf Fishery Management Council; [ryan.rindone@gulfcouncil.org](mailto:ryan.rindone@gulfcouncil.org), telephone: (813) 348-1630.

**SUPPLEMENTARY INFORMATION:**

**Tuesday, February 24, 2026; 8:30 a.m.–5 p.m. EST**

The meeting will begin with Introductions and Adoption of Agenda, review and approval of Meeting Minutes from the January 2026 SSC webinar and Scope of Work.

The Standing and Shrimp SSCs will then review Southeast Data Assessment and Review (SEDAR) 87 stock assessments of Gulf Penaeid Shrimp and Shrimp Bycatch Methodology Working Group Recommendations for Finfish Species, including presentations, background materials and SSC discussions.

Public comments will be heard at the end of the day, if any.

**Wednesday, February 25, 2026; 8:30 a.m.–5 p.m., EST**

The Standing SSC will reassemble to review Management Strategy Evaluations (MSE) of Marine Recreation Information Program-Fishing Effort Survey (MRIP-FES) Recalibrations, Greater Amberjack Interim Analysis and Catch Advice, and Southeast Fishery Science Center (SEFSC) Stakeholder Participatory Workshops, including presentations, background materials and SSC discussions.

The SSC will also receive presentations on research about Gray Triggerfish discard mortality and in-season management of a recreational fishery, including background materials and SSC discussions.