

Summary of Request and Analysis

On August 1, 2025, NMFS issued an LOA to Viridien (90 FR 37842, August 6, 2025) to take marine mammals incidental to a three-dimensional (3D) ocean bottom node (OBN) survey over 2,023 lease blocks in the Garden Banks, Keathley Canyon, East Breaks, and Alaminos Canyon areas, with water depths ranging from approximately 185 to 2,095 meters (m). See section F of the LOA application for a map of the area. Additional description of the planned survey, as well as analysis related to the issuance of that LOA, is available in Viridien's LOA application and the aforementioned **Federal Register** notice of issuance.

On December 9, 2025, Viridien requested the transfer of the LOA to its partner in the planned survey effort (WesternGeco). WesternGeco confirmed to NMFS that it similarly requested transfer of the LOA. With the transfer of the LOA, WesternGeco agrees to comply with the associated terms, conditions, stipulations, and restrictions of the original LOA. No other changes were requested. The revised LOA remains effective through April 19, 2026.

The revised LOA sets forth only a change in the LOA holder. There are no other changes to the LOA as described in the August 6, 2025, **Federal Register** notice of issuance (90 FR 37842): the specified activity; estimated take by incidental harassment; and small numbers analysis and determination; and the period of effectiveness remain unchanged and are herein incorporated by reference.

Authorization

NMFS has determined that the level of taking for this LOA request is consistent with the findings made for the total taking allowable under the incidental take regulations and that the amount of take authorized under the LOA is of no more than small numbers. Accordingly, we have issued an LOA to WesternGeco authorizing the take of marine mammals incidental to its geophysical survey activity, as described above.

Dated: December 19, 2025.

Kimberly Damon-Randall,

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

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648-XF272]

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Pacific Gas & Electric Sediment Remediation Project, Remedial Response Area C, San Francisco Bay

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

ACTION: Notice; proposed incidental harassment authorization; request for comments on proposed authorization and possible renewal.

SUMMARY: NMFS has received a request from Pacific Gas & Electric (PG&E) for authorization to take marine mammals incidental to construction for a sediment remediation project in San Francisco Bay, CA. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue an incidental harassment authorization (IHA) to incidentally take marine mammals during the specified activities. NMFS is also requesting comments on a possible one-time, 1-year renewal that could be issued under certain circumstances and if 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 authorization and agency responses will be summarized in the final notice of our decision.

DATES: Comments and information must be received no later than January 28, 2026.

ADDRESSES: Comments should be addressed to Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service, and should be submitted via email to ITP.jacobus@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: Kristy Jacobus, 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) (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 and 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 and can be found in section 3 of the MMPA (16 U.S.C. 1362) and NMFS regulations at 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. This action is 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, NMFS has preliminarily determined that the issuance of the proposed IHA qualifies to be categorically excluded from further NEPA review.

Summary of Request

On May 4, 2023, NMFS received an application from PG&E requesting the take of marine mammals incidental to construction of a Sediment Remediation Project in Remedial Response Areas A and B, Piers 39 to 43½, San Francisco Bay. NMFS published a notice of a proposed IHA and request for comments in the **Federal Register** on December 27, 2023 (88 FR 82836). We subsequently published the final notice of our issuance of the IHA on January 30, 2024 (89 FR 5865), making the IHA valid from May 1, 2024 through April 30, 2025. Following a request from PG&E, NMFS published a notice of proposed renewal IHA on October 16, 2024 (89 FR 83459) and issued the renewal IHA on November 22, 2024 (89 FR 92649), making the renewal IHA valid from May 1, 2025 to April 30, 2026. The specified activities were expected to result in the take of seven species of marine mammal including the bottlenose dolphin (*Tursiops truncatus*), harbor porpoise (*Phocoena phocoena*), California sea lion (*Zalophus californianus*), northern fur seal (*Callorhinus ursinus*), Steller sea lion (*Eumetopias jubatus*), harbor seal (*Phoca vitulina*), and northern elephant seal (*Mirounga angustirostris*).

On August 11, 2025, NMFS received a request from PG&E for an IHA to take marine mammals incidental to construction in Remedial Response Area C, Pier 41½, San Francisco Bay, as a

part of a continuation of the Sediment Remediation Project. Following NMFS' review of the application, PG&E submitted a revised version on December 18, 2025, which was deemed adequate and complete. PG&E's request is for take of eight species (nine stocks) by Level B harassment only. Neither PG&E nor NMFS expect serious injury or mortality to result from this activity and, therefore, an IHA is appropriate. NMFS previously issued an IHA and renewal IHA to PG&E (herein referred to as the 2024 IHA and 2025 renewal IHA) (89 FR 5865, January 30, 2024; 89 FR 92649, November 24, 2024) to incidentally take marine mammals, by Level B harassment, for similar construction activities in San Francisco Bay, as part of the larger sediment remediation project. Although PG&E is proposing to install many of the same pile types as the 2024 IHA, some pile types differ. In addition, some source levels and harassment distances have been adjusted based on hydroacoustic measurements conducted by PG&E. PG&E is also requesting take of gray whale (*Eschrichtius robustus*) based on recent marine mammal monitoring in San Francisco Bay. The proposed mitigation, monitoring, and reporting measures remain the same as prescribed in the 2024 IHA with slight modifications (*e.g.*, shut down zones distance changes) as described below.

PG&E complied with all the requirements (*e.g.*, mitigation, monitoring, and reporting) of the previous IHA, and information regarding their monitoring results may be found in the Estimated Take of Marine Mammals section.

This proposed IHA would cover 1 year of a larger project for which PG&E obtained prior IHAs and intends to request take authorization for subsequent facets of the project. The larger 5–7 year project involves construction to remediate contaminated sediment.

Description of Proposed Activity

Overview

PG&E is proposing to conduct pile driving to remediate sediments impacted by polycyclic aromatic hydrocarbons (PAHs) around the area

offshore and under Pier 41½ in San Francisco Bay, CA. PG&E would install piles for a turbidity curtain, the temporary relocation of the Blue and Gold Fleet (BGF), and sediment pins for slope stabilization. PG&E plans to use primarily vibratory pile driving. Impact pile driving would only be used as needed to seat piles. Vibratory and impact pile driving would introduce underwater sounds that may result in take, by Level B harassment, of marine mammals. Level A harassment of marine mammals is not expected, and none is proposed for authorization.

Dates and Duration

The proposed IHA would be valid for the statutory maximum of 1 year from the date of effectiveness. It will 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. In-water construction is anticipated to occur over 62 construction days between March and November. However, project delays may occur due to a number of factors, including availability of equipment and/or materials, weather-related delays, equipment maintenance and/or repair, and other contingencies. Pile driving will occur during daylight hours. Any impact pile driving would occur from June 1 to November 30 to protect sensitive life stages of Endangered Species Act (ESA)-listed fish species in the area.

Specific Geographic Region

PG&E's proposed construction activities would occur in San Francisco Bay, CA, about 3.7 miles (mi) (6 kilometers [km]) from the entrance. PG&E's sediment remediation project area encompasses Pier 39, both the Pier 39 East and West Basins, defined by existing breakwaters, and the intertidal and subtidal areas between Pier 39 and 45 along the margin of San Francisco Bay. The project area is divided into five remedial response areas. All pile driving during the timeframe of this proposed IHA would be in Remedial Response Area C, which is the Pier 41½ offshore area and the area under Pier 41½. See figure 1.



Figure 1—Project Location

Detailed Description of the Specified Activity

PG&E proposes to conduct construction in San Francisco Bay to remediate sediments impacted with PAHs. Construction components include installation of piles to attach a turbidity curtain; installation of sediment pins to promote slope stability; removal and installation of piles to relocate the Blue and Gold Fleet (BGF); removal of impacted sediment using mechanical dredges; and capping and armoring of sediment left in place.

Underwater noise generated by dredging, capping, and armoring are within range of other background noise in San Francisco Bay and are not

anticipated to result in take of marine mammals.

Pile driving to install and remove piles is expected to result in take of marine mammals and these activities are described below in detail.

Turbidity curtain—Because increased water turbidity might occur during dredging and capping activities, a turbidity curtain would be installed across the full depth of the water column extending to the sediment surface. The turbidity curtain would be attached to 20 temporary steel shell piles less than 12 inches (30.5 centimeters [cm]) in diameter. The piles would be installed with primarily vibratory methods. Impact pile driving would be used as needed to seat the piles. The piles would be removed using vibratory methods.

Slope stabilization—In order to prevent rotational or sliding failure in dredged and capped areas, approximately 500 18-inch (45.7-cm) diameter tapered timber piles (referred to as sediment pins) would be installed using vibratory and impact hammers.

BGF Relocation—Relocation of the BGF would require removal of piles and overwater structures at the current location and reinstallation after remediation actions are complete. Eight 24-inch (61-cm) steel shell piles, two 42-inch (106.7-cm) steel shell piles, and five 30-inch (76.2-cm) steel shell piles would be removed using vibratory methods. These piles would then be replaced by eight 30-inch (76.2-cm) steel shell piles, five 36-inch (91.4-cm) steel shell piles, four 24-inch (61-cm) steel shell piles, and four 36-inch (91.4-cm)

steel shell piles. These piles would all be installed using primarily vibratory methods. An impact hammer would be

used only to seat the piles to the required tip elevation.

TABLE 1—OVERVIEW OF PILES FOR INSTALLATION AND REMOVAL

Pile size and type	Hammer type	Total number of piles
Turbidity Curtain		
Steel shell piles <12 inches (30.5 cm)	Vibratory and impact	40 (20 installed, 20 removed).
Slope Stabilization		
18-inch (45.7-cm) tapered timber	Vibratory and impact	500.
BGF Relocation		
24-inch (61-cm) steel shell piles	Vibratory removal	8.
	Vibratory and impact installation	4.
30-inch (76.2 cm) steel shell piles	Vibratory removal	5.
	Vibratory and impact installation	8.
36-inch (91.4-cm) steel shell piles	Vibratory and impact installation	9.
42-inch steel shell piles	Vibratory removal	2.

TABLE 2—ESTIMATED DAYS OF PILE DRIVING

Activity	Total number of piles	Number of piles installed/ removed per day	Days of pile driving
Turbidity Curtain	40 (20 installed, 20 removed)	4	10
Slope stabilization	500	15	* 34
BGF Temporary Relocation	25 (<36 inches [91.4 cm]) (13 removed, 12 installed)	4	* 6
	11 (≥36 inches [91.4 cm])	2	* 6
Total			56
Total +10% buffer			* 62

* Rounded to the nearest whole number.

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

Description of Marine Mammals in the Area of Specified Activities

Sections 3 and 4 of the application summarize available information regarding 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, instead of reprinting the information. Additional information regarding 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>).

Table 3 lists all species or stocks for which take is expected and proposed to be authorized for this activity and summarizes information related to the population or stock, including regulatory status under the MMPA and ESA and potential biological removal (PBR), where known. PBR is defined by the MMPA 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 here, PBR and annual serious injury and mortality (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 geographic area, if known, that comprises that stock. For some species, this geographic area may extend beyond U.S. waters. All managed stocks in this region are assessed in NMFS’ U.S. Pacific and Alaska SARs. All values presented in table 3 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 3—SPECIES ¹ WITH ESTIMATED TAKE FROM THE SPECIFIED ACTIVITIES

Common name	Scientific name	Stock	ESA/ MMPA status; strategic (Y/N) ²	Stock abundance (CV, N _{min} , most recent abundance survey) ³	PBR	Annual M/SI ⁴
Order Artiodactyla—Cetacea—Mysticeti (baleen whales)						
<i>Family Eschrichtiidae:</i>						
Gray whale	<i>Eschrichtius robustus</i>	Eastern North Pacific	-,N	26,960 (0.05, 25,849, 2016) ..	801	131
<i>Family Delphinidae:</i>						
Bottlenose Dolphin	<i>Tursiops truncatus</i>	California Coastal	-,N	453 (0.06, 346, 2011)	2.7	≥2
Harbor porpoise	<i>Phocoena phocoena</i>	San Francisco/Russian River	-,N	7,777 (0.62, 4,811, 2017)	73	≥0.4
Order Carnivora—Pinnipedia						
<i>Family Otariidae (eared seals and sea lions):</i>						
California sea lion	<i>Zalophus californianus</i>	United States	-,N	257,606 (N/A, 233,515, 2014)	14,011	>321
Northern fur seal	<i>Callorhinus ursinus</i>	Eastern Pacific	-, D,Y	626,618 (0.2, 530,376, 2019)	11,403	373
Northern fur seal	<i>Callorhinus ursinus</i>	California	-,N	14,050 (N/A, 7,524, 2013)	451	1.8
Steller sea lion	<i>Eumetopias jubatus</i>	Eastern	-,N	36,308 (N/A, 36,308, 2022) ...	2,178	93.2
<i>Family Phocidae (earless seals):</i>						
Harbor seal	<i>Phoca vitulina</i>	California	-,N	30,968 (N/A, 27,348, 2012) ...	1,641	43
Northern elephant seal	<i>Mirounga angustirostris</i>	California breeding	-, -, N	187,386 (N/A, 85,369, 2013)	5,122	13.7

¹ 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>).

² 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 which 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 under the MMPA as depleted and as a strategic stock.

³ NMFS marine mammal stock assessment reports online at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports-region>. CV is coefficient of variation; N_{min} is the minimum estimate of stock abundance.

⁴ These values, found in NMFS's SARs, represent annual levels of human-caused mortality plus serious injury from all sources combined (e.g., commercial fisheries, ship strike). Annual M/SI often cannot be determined precisely and is in some cases presented as a minimum value or range. A CV associated with estimated mortality due to commercial fisheries is presented in some cases.

As indicated above, all eight species (with nine managed stocks) in table 3 temporally and spatially co-occur with the activity to the degree that take is reasonably likely to occur. While the humpback whale occasionally enters San Francisco Bay, if this species is to approach the Level B harassment zone, construction will be shutdown. Therefore, no take is expected of humpback whale and the species will not be discussed further.

With the exception of the gray whale, a description of all marine mammals proposed for take in this IHA can be found in the notice of the proposed 2024 IHA (88 FR 82836, November 11, 2023), and the information remains applicable to this proposed IHA as well. NMFS has reviewed recent draft Stock Assessment Reports, information on relevant Unusual Mortality Events, and recent scientific literature, and determined that no new information affects our original analysis of impacts to these species under this proposed IHA.

For the 2024 IHA, no take was authorized for gray whales, and PG&E shut down if gray whales approached the estimated Level B harassment isopleth. During construction conducted

under the 2024 IHA, gray whales were present in San Francisco Bay more than expected, resulting in multiple instances of shutdown. Therefore, PG&E is requesting take for small numbers of gray whales by Level B harassment in this IHA. Gray whales will be discussed below.

Gray Whale

During the summer and fall most Eastern North Pacific gray whales feed in the Chukchi, Beaufort, and northwestern Bering Seas, with a small number that summer and feed along the Pacific coast between Kodiak Island, Alaska and northern California. The southward migration generally occurs from December through February and peaks in January, and the northward migration generally occurs from February through May and peaks in March (NOAA National Centers for Coastal Ocean Science, 2007). Although their presence in San Francisco Bay is generally considered uncommon, increased numbers of gray whales have been seen in San Francisco Bay in recent years, and gray whales were observed in San Francisco Bay more often than expected during PG&E's construction under the 2024 IHA (Integral Consulting Inc., 2025a).

Marine Mammal Hearing

Hearing is the most important sensory modality for marine mammals underwater, and exposure to anthropogenic sound can have deleterious effects. To appropriately assess the potential effects of exposure to sound, it is necessary to understand the frequency ranges marine mammals are able to hear. Not all marine mammal species have equal hearing capabilities (e.g., Au and Hastings, 2008; Richardson *et al.*, 1995; Wartzok and Ketten, 1999). 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.*). Generalized hearing ranges were chosen based on the ~65 decibel (dB) threshold from composite audiograms, previous analyses in NMFS (2018), and/or data from Southall *et al.* (2007, 2019). We note that the names of two hearing groups and the generalized hearing ranges of all marine mammal hearing groups have been recently updated (NMFS, 2024) as reflected below in table 4.

TABLE 4—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, 2019). Additionally, animals are able to detect very loud sounds above and below that "generalized" hearing range.

For more detail concerning these groups and associated frequency ranges, please see NMFS (2024) for a review of available information.

Potential Effects of Specified Activities on Marine Mammals and Their Habitat

A description of the potential effects of the specified activities on marine mammals and their habitat may be found in the notice of the proposed 2024 IHA (88 FR 82836, November 27, 2023).

Estimated Take of Marine Mammals

This section provides an estimate of the number of incidental takes proposed for authorization through the IHA, 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 with respect to 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 causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).

Authorized takes would be by Level B harassment only, in the form of behavioral reactions and/or temporary threshold shift (TTS) for individual marine mammals resulting from exposure to pile driving. Based on the nature of the activity and the anticipated effectiveness of the mitigation measures (*i.e.*, shutdown at the Level A harassment isopleth) discussed in detail below in the Proposed Mitigation section, Level A harassment is neither anticipated nor proposed to be authorized.

As described previously, no serious injury or mortality is anticipated or proposed to be authorized for this 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 there is some reasonable potential for marine mammals to be behaviorally harassed or incur some degree of auditory injury (AUD INJ); (2) the area or volume of water that will 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. We note that 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 be reasonably expected to be behaviorally harassed (equated to Level B harassment) or to incur AUD INJ of some degree (equated to Level A harassment).

Level B Harassment—Though significantly driven by received level, the onset of behavioral disturbance from anthropogenic noise exposure is also informed to varying degrees by other factors 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, 2021; Ellison *et al.*, 2012). Based on what the available science indicates and the practical need to use a threshold based on a metric that is both predictable and measurable for most activities, NMFS typically uses a generalized acoustic threshold based on 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 pressure received levels (RMS SPL) of 120 dB (referenced to 1 micropascal (re 1 μ Pa)) for continuous (*e.g.*, vibratory pile driving, drilling) and above RMS SPL 160 dB re 1 μ Pa for non-explosive impulsive (*e.g.*, seismic airguns) or intermittent (*e.g.*, scientific sonar) sources. Generally speaking, Level B harassment take estimates based on these behavioral harassment thresholds are expected to include any likely takes by TTS as, in most cases, the likelihood of TTS occurs at distances from the source less than those at which behavioral harassment is likely. TTS of a sufficient degree can manifest as behavioral harassment, as reduced hearing sensitivity and the potential reduced opportunities to detect important signals (conspecific communication, predators, prey) may result in changes in behavior patterns that would not otherwise occur.

PG&E's proposed construction activity includes the use of continuous (vibratory pile driving) and impulsive (impact pile driving) sources, and therefore the RMS SPL thresholds of 120 and 160 dB re 1 μ Pa are applicable.

Level A harassment—NMFS' Updated Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 3.0) (Updated Technical Guidance, 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). PG&E's proposed construction includes the use of impulsive (impact pile driving) and non-impulsive (vibratory pile driving) sources.

The 2024 Updated Technical Guidance criteria include both updated thresholds and updated weighting functions for each hearing group. The thresholds are provided in the table below. The references, analysis, and methodology used in the development of the criteria are described in NMFS'

2024 Updated Technical Guidance, which may be accessed at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance-other-acoustic-tools>.

TABLE 5—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 criteria 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 μ Pa, and weighted cumulative sound exposure level ($L_{E,p}$) has a reference value of 1 μ Pa²s. In this table, criteria are abbreviated to be more reflective of International Organization for Standardization standards (ISO, 2017). The subscript "flat" is being included to indicate peak sound pressure 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, it is valuable for action proponents to indicate the conditions under which these criteria will be exceeded.

Ensonified Area

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

The sound field in the project area 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.*, pile driving and removal).

The project includes vibratory pile installation and removal and impact pile installation. Source levels for these activities are based on hydroacoustic monitoring conducted under the 2024 IHA (Reyff and Ambaskar, 2025) and 2025 renewal IHA (Illingworth & Rodkin, 2025) and on reviews of measurements of the same or similar

types and dimensions of piles available in the literature. Source levels for each pile size are presented in table 6. Source levels for vibratory installation and removal of piles of the same diameter are assumed to be the same. PG&E plans to use a bubble curtain for all impact pile driving, and a 5 dB reduction in source level is assumed from those presented in table 6 for impact pile driving due to the use of a bubble curtain.

TABLE 6—SOUND SOURCE LEVELS FOR PILE DRIVING

Pile	Hammer	Source level (at 10 meters [m])			Source
		Peak sound pressure (dB re 1 μPa)	RMS (dB re 1 μPa)	SEL (dB re 1 μPa2 sec)	
Turbidity Curtain					
Steel shell piles <12 inches (30.5 cm)	Vibratory	N/A	157.3	N/A	Illingworth & Rodkin (2025). Caltrans (2015, 2020).
Steel shell piles <12 inches (30.5 cm)	Impact *	192	177	167	
Slope Stabilization					
18-inch (45.7-cm) tapered timber	Vibratory	N/A	158	N/A	Greenbusch Group (2018), Illingworth & Rodkin (2017), Laughlin, (2011), U.S. Navy (2016). Caltrans (2020).
	Impact *	184	157	145	
BGF Relocation					
24-inch (61-cm) steel shell	Vibratory	N/A	160.4	N/A	Reyff and Ambaskar (2025). Illingworth & Rodkin (2014).
	Impact *	208	193	178	
30-inch (76.2-cm) steel shell	Vibratory	N/A	171.8	N/A	Reyff and Ambaskar (2025). Caltrans (2015).
	Impact *	210	190	177	
36-inch (91.4-cm) steel shell	Vibratory	N/A	169.4	N/A	Reyff and Ambaskar (2025). Caltrans, (2015, 2020).
	Impact *	210	193	183	
42-inch (106.7-cm) steel shell	Vibratory	N/A	170	N/A	NMFS 2025 analysis.

*PG&E would use a bubble curtain attenuation system for all impact pile, and NMFS assumes a 5 dB reduction in source level from those presented here due to use of the attenuation system.

Level B Harassment Zones— 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, and bottom composition topography. The general formula for underwater TL is: $TL = B * \log_{10} (R_1/R_2)$,

Where:

TL = transmission loss in dB;

B = transmission loss coefficient;

R_1 = the distance of the modeled SPL from the driven pile; and

R_2 = the distance from the driven pile of the initial measurement.

Absent site-specific data, the recommended TL coefficient for most nearshore environments is the practical spreading value of 15. This value results in an expected propagation environment that would lie between spherical and cylindrical spreading loss conditions, known as practical spreading. As is common practice in coastal waters, here

we assume practical spreading (4.5 dB reduction in sound level for each doubling of distance) for all impact and vibratory installation of piles without site-specific acoustical monitoring (*i.e.*, impact installation of 12-, 24- 30-, and 36-inch [30.5-, 61-, 76.2-, and 91.4-cm] steel shell piles, vibratory and impact installation of 18-inch [45.7-cm] tapered timber piles, and vibratory installation of 42-inch [106.7-cm] steel shell piles).

As described above, PG&E conducted hydroacoustic monitoring for the vibratory installation of 12-, 24-, 30-, and 36-inch (61-, 76.2-, and 91.4-cm) steel shell piles, and the TL coefficients were 22, 24.9, 22.5, and 23.9, respectively (Reyff and Ambaskar, 2025, Illingworth & Rodkin, 2025). PG&E proposes to use these site specific TL coefficients for the respective piles, and NMFS concurs.

The ensonified area associated with Level A harassment is more technically challenging to predict due to the need to account for a duration component. Therefore, NMFS developed an optional User Spreadsheet tool to accompany the

2024 Updated Technical Guidance that can be used to relatively simply predict an isopleth distance for use in conjunction with marine mammal density or occurrence to help predict potential takes. We note that because of some of the assumptions included in the methods underlying this optional tool, we anticipate that the resulting isopleth estimates are typically going to be overestimates of some degree, which may result in an overestimate of potential take by Level A harassment. However, this optional tool offers the best way to estimate isopleth distances when more sophisticated modeling methods are not available or practical. For stationary sources, such as pile driving, the optional User Spreadsheet tool predicts the distance at which, if a marine mammal remained at that distance for the duration of the activity, it would be expected to incur AUD INJ. Inputs used in the NMFS User Spreadsheet are provided in table 7. Level A and Level B harassment isopleths are provided in table 8.

TABLE 7—NMFS USER SPREADSHEET INPUTS

Pile size/type	Hammer type	Piles per day	Strikes per pile	Duration to drive pile (min)	TL coefficient	Weighting factor adjustment (WFA)
Turbidity Curtain						
Steel shell piles <12 inches (30.5 cm)	Vibratory	4	N/A	20	22	2.5
	Impact	4	25	N/A	15	2
Slope Stabilization						
18-inch (45.7-cm) tapered timber	Vibratory	15	N/A	20	15	2.5
	Impact	15	400	N/A	15	2
BGF Relocation						
24-inch (61-cm) steel shell	Vibratory	4	N/A	20	24.9	2.5
	Impact	4	25	N/A	15	2
30-inch (76.2-cm) steel shell	Vibratory	4	N/A	20	22.5	2.5
	Impact	4	25	N/A	15	2
36-inch (91.4 cm) steel shell	Vibratory	2	N/A	20	23.9	2.5
	Impact	2	50	N/A	15	2
42-inch (106.7-cm) steel shell	Vibratory	2	N/A	20	15	2.5

TABLE 8—LEVEL A AND LEVEL B HARASSMENT ISOPLETHS

Pile	Level A harassment isopleth (m)					Level B harassment isopleth (m)
	LF	HF	VHF	Phocids	Otariid	
Turbidity Curtain						
Steel shell pile <12 inch (30.5 cm) (vibratory)	7	4	6	9	4	496
Steel shell pile <12 inch (30.5 cm) (impact, attenuated) *	10	1	13	8	3	63
Slope Stabilization						
18-inch (45.7-cm) tapered timber (vibratory)	17	7	14	22	7	3,415
18-inch (45.7-cm) tapered timber (impact, attenuated) *	5	1	7	4	2	3

TABLE 8—LEVEL A AND LEVEL B HARASSMENT ISOPLETHS—Continued

Pile	Level A harassment isopleth (m)					Level B harassment isopleth (m)
	LF	HF	VHF	Phocids	Otariid	
BGF Relocation						
24-inch (61-cm) steel shell (vibratory)	10	6	9	12	6	419
24-inch (61-cm) steel shell (impact, attenuated) *	46	6	72	41	15	736
30-inch (76.2-cm) steel shell (vibratory)	33	17	28	39	19	2,006
30-inch (76.2-cm) steel shell (impact, attenuated) *	40	5	61	35	13	464
36-inch (91.4-cm) steel shell (vibratory)	18	10	16	21	11	1,167
36-inch (91.4-cm) steel shell (impact, attenuated) *	100	13	154	88	33	736
42-inch (106.7-cm) steel shell (vibratory)	28	11	23	36	12	21,544

* 5 dB reduction in sound assumed due to use of bubble curtain.

Marine Mammal Occurrence

In this section we provide information about the occurrence of marine mammals, including density or other relevant information which will inform the take calculations.

Because reliable marine mammal density information is not available for San Francisco Bay, PG&E reviewed several resources and datasets to estimate marine mammal occurrence. These datasets include (but are not limited to):

- 5 years of sighting and stranding data from The Marine Mammal Center (TMMC) (NMFS, 2021b as cited by Integral Consulting Inc., 2025a) and California Academy of Sciences (CAS) (NMFS, 2021a as cited by Integral Consulting Inc., 2025a);
- Monitoring data collected over 5 days in Remedial Response Areas A, B, and C in 2020 during sediment investigations in the initial phase of the sediment remediation project (Haase, 2021);
- Monitoring data collected over 11 days of construction in Remedial Response Areas A and B in the Spring of 2025 (Integral Consulting Inc., 2025b);
- Counts from nearby haulouts; and
- Citizen-reported live sightings from <https://www.iNaturalist.org>;

Depending on the distribution of sightings and granularity of data, different sources have been used to estimate the number of individuals of each species with the potential to occur in the vicinity of the project.

Gray Whale

Gray whales may enter the Bay in late winter and early spring or in the fall during their migrations and, in recent years, there have been an increased number of gray whales in the western and Central Bay (Integral Consulting Inc., 2025a). During construction in March-April 2025, multiple gray whales were observed in San Francisco Bay

(Integral Consulting Inc., 2025b).

According to TMMC, in June 2025, 9 individual gray whales were observed in June over 14 days (TMMC, unpublished data). PG&E estimates that one gray whale will occur in the project area every other day (0.5 whales/day), and NMFS concurs with this approach.

Bottlenose Dolphin

Historically, observations of bottlenose dolphins have occurred west of Treasure Island and were concentrated along the nearshore area of San Francisco south to Redwood City. Since 2016, one individual has been regularly seen near the former Alameda Air Station, and five animals were regularly seen in the summer and fall of 2018 in the same location (Integral Consulting Inc., 2025a). In February 2019, an adult and juvenile were seen on two separate occasions northwest of the Oakland Inner Harbor, approximately 4 mi (6.4 km) from PG&E's proposed project area (Integral Consulting Inc., 2025a). No bottlenose dolphins were observed during pre-construction monitoring in 2020 (Haase, 2021) or during construction in the spring of 2025 (Integral Consulting Inc., 2025b). Although bottlenose dolphins are relatively uncommon in San Francisco Bay, NMFS conservatively assumes that one group of bottlenose dolphins will be present in the project area per month of construction. A group size is estimated to be five animals based on sightings of bottlenose dolphins in San Francisco Bay (Integral Consulting Inc., 2025a).

Harbor Porpoise

Harbor porpoise are primarily seen near the Golden Gate Bridge, Marin County, and the city of San Francisco on the northwest side of San Francisco Bay (Keener *et al.*, 2012; Stern *et al.*, 2017). CAS recorded 29 harbor porpoises (only 2 of which were alive) over the past 5 years, and <https://www.iNaturalist.org>

recorded 11 harbor porpoise in San Francisco Bay over the past 2 years. During 2020 monitoring, an individual harbor porpoise was seen within the project area on 2 of the 5 monitoring days (Haase, 2021), and a single harbor porpoise was observed within the Level B harassment zone during 11 days of monitoring in the spring of 2025 (Integral Consulting Inc., 2025b). PG&E estimates that two harbor porpoises will occur within the project area per day, and NMFS concurs.

California Sea Lion

Remedial Response Area C, where PG&E proposes to conduct construction, is adjacent to the Pier 39 K-Dock where California sea lions regularly haul out. The Sea Lion Center at Pier 39 regularly counted the sea lions at K-Dock from 1991 through 2018, and from 2016 through 2018, the yearly average ranged from 89 to 229 animals per day, and the average over all 3 years was 191 (Integral Consulting Inc., 2025a). Over 5 days of monitoring in 2020, a total of 463 sea lions were observed, ranging from 56 to 129 per day (Haase, 2021). During construction in March and April 2025, California sea lions were seen on each of 11 monitoring days, with a total of 92 California sea lions seen, ranging from 3 to 18 California sea lions per day (Integral Consulting Inc., 2025b). Although there are times of year when the K-Dock is unoccupied or there are few individuals present, it is difficult to predict abundance based on the time of year. Therefore, PG&E is conservatively assuming 191 sea lions per day, based on the average K-dock counts, and NMFS concurs.

Northern Fur Seal

TMMC recorded 44 northern fur seals in San Francisco Bay from 2016 to 2021 (NMFS, 2021b). CAS recorded an additional 3 for a total of 47 over 5 years (NMFS, 2021a), yielding 0.03 northern fur seals per day, or approximately 10

northern fur seals per year. No fur seals were observed during monitoring efforts in 2020 and 2025 (Integral Consulting Inc., 2025b; Haase, 2021). In the fall and winter, northern fur seals occasionally strand on Yerba Buena Island and Treasure Island (Integral Consulting Inc., 2025a), approximately 2 mi (3.2 km) from PG&E’s proposed project area. Using PG&E’s assumption of approximately 0.03 fur seals per day over the course of 62 days of pile driving plus a history of known fur seal strandings near the project area, NMFS has determined it appropriate to assume 5 fur seals in the project area over the course of construction.

Steller Sea Lion

Steller sea lions are rare in San Francisco Bay. TMMC recorded four Steller sea lions in San Francisco Bay from 2016 to 2021 (NMFS, 2021b), and CAS recorded no Steller sea lions over the same time frame (NMFS, 2021a). On rare occasions, Steller sea lions are seen on the Pier 39 K-Dock haulout. An adult male was spotted there in May 2023 (Segura, 2023), and, in previous years, a single male Steller sea lion had been observed using the Pier 39 K-Dock haulout intermittently during July and August and occasionally September (Integral Consulting Inc., 2025a). No Steller sea lions were observed during the 2020 or 2025 monitoring (Haase, 2021; Integral Consulting Inc., 2025b). Given the known occasional occurrences of Steller sea lions at Pier 39, NMFS feels it is appropriate to assume five Steller sea lions in PG&E’s proposed project area during the time period of construction.

Harbor Seal

Harbor seals in San Francisco Bay forage mainly within 7 mi (11.3 km) of their primary haulout site (Grigg *et al.*, 2012) and often within just 1–3 mi (1.6–4.8 km) (Torok, 1994). The only harbor seal haulout within 7 mi (11.3 km) of the project site is Yerba Buena Island, which is 3.1 mi (5 km) to the east of the Project Area. Aside from the vibratory

removal of 42-inch (106.7-cm) steel shell piles, the largest Level B harassment zone is 2,006 m (vibratory installation of 30-inch [76.2 cm]), and the Level B harassment isopleths are not expected to reach the Yerba Buena haulout. However, harbor seals that use this haulout are likely to forage within ensonified areas from the project. During 5 days of monitoring in 2020, 60 harbor seals were observed, with a maximum of 20 seals observed in one day (Haase, 2021). During 11 days of monitoring in 2025, two harbor seals were observed in the project area (Integral Consulting Inc., 2025b). Based on this data, PG&E assumes 20 harbor seals will be within the Level B harassment isopleth per day, and NMFS concurs.

PG&E proposes to conduct vibratory removal of 42-inch (106.7-cm) steel shell piles over 2 days (one pile per day). The Level B harassment isopleth for the vibratory removal of the 42-inch (106.7-cm) steel shell pile is 21,544 m. This isopleth would extend to Castro Rocks in northern San Francisco Bay, which is a well-known harbor seal haulout, and therefore, PG&E proposes to add harbor seals from Castro Rocks haulout to the take determined by the daily occurrence estimate described above. The National Park Service conducts annual surveys of haulouts in San Francisco Bay. Over the past 10 years of surveys, the highest mean number of harbor seals observed at Castro Rocks was 237 seals (in 2019) (Codde, 2020; Codde & Allen, 2017, 2018, 2020, 2025). The vibratory removal of 42-inch (106.7-cm) steel shell piles is expected to last approximately 20 minutes each day. PG&E estimates that 50 harbor seals from Castro Rocks will occur within the Level B harassment isopleth during each day of vibratory removal of 42-inch (106.7-cm) steel shell piles, resulting in 100 harbor seals.

Northern Elephant Seal

TMMC recorded 903 northern elephant seals in San Francisco Bay

from 2016 to 2021 (NMFS, 2021b). The CAS reported an additional 6 northern elephant seals over the same time frame (NMFS, 2021a), for a total of 909 seals, yielding an average of 0.5 elephant seals per day. No northern elephant seals were observed during monitoring efforts conducted in 2020 and 2025 (Haase, 2021; Integral Consulting Inc., 2025b). In order to ensure sufficient authorization of northern elephant seal takes, PG&E assumed 0.5 elephant seals will occur in the proposed project area per day (*i.e.*, one elephant seal every 2 days). NMFS concurs with this assumption.

Take Estimation

Here we describe how the information provided above is synthesized to produce a quantitative estimate of the take that is reasonably likely to occur and proposed for authorization.

To estimate take by Level B harassment for gray whale, harbor porpoise, California sea lion, and northern elephant seal the expected daily occurrence was multiplied by the estimated number of 62 pile driving days (see table 9). Similarly, for harbor seals, the expected daily occurrence was multiplied by the estimated number of 62 pile driving days and 100 harbor seals was added to this number to account for take of harbor seals at Castro Rocks during 2 days of vibratory removal of 42-inch (106.7-cm) steel shell piles (50 harbor seals per day) (see table 9). For northern fur seals and Steller sea lions, PG&E is assuming five animals of each species will occur in the proposed project area during the course of PG&E’s construction (see table 9). For bottlenose dolphins, PG&E estimates that one group of five bottlenose dolphins will occur in the proposed project area per month of pile driving. Based on 5 months of pile driving, NMFS proposes to authorize 25 takes of bottlenose dolphins by Level B harassment (table 9).

TABLE 9—ESTIMATED TAKE BY LEVEL B HARASSMENT PROPOSED FOR AUTHORIZATION

Species	Stock	Expected occurrence	Estimated take by Level B harassment	Stock abundance	Percent of stock
Gray whale	Eastern North Pacific	0.5 whales/day	31	26,960	0.1
Bottlenose dolphin	California coastal	5 dolphins/month of construction	25	453	5.5
Harbor porpoise	San Francisco/Russian River.	2 porpoises/day	124	7,777	1.6
California sea lion	United States	191 sea lions/day	11,842	257,606	4.6
Northern fur seal	Eastern Pacific	5 seals over project duration	5	626,618	<0.1
	California			14,050	<0.1
Steller sea lion	Eastern	5 sea lions over project duration	5	36,308	<0.1

TABLE 9—ESTIMATED TAKE BY LEVEL B HARASSMENT PROPOSED FOR AUTHORIZATION—Continued

Species	Stock	Expected occurrence	Estimated take by Level B harassment	Stock abundance	Percent of stock
Harbor seal	California	20 harbor seals/day for 62 days +50 seals/day for 2 days of vibratory removal of 42-inch steel shell piles (see <i>Marine Mammal Occurrence</i> section above).	1,340	30,968	4.3
Northern elephant seal ..	California breeding	0.5 seals/day	31	187,386	<0.1

Proposed Mitigation

In order to issue an IHA under section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to 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 (ITAs) to include information about the availability and feasibility (economic and technological) of equipment, methods, and 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) The manner in which, and the degree to which, the successful implementation of the measure(s) is expected to reduce impacts to marine mammals, marine mammal species or stocks, and their habitat. This considers the nature of the potential adverse impact being mitigated (likelihood, scope, range). It further considers the likelihood that the measure will be effective if implemented (probability of accomplishing the mitigating result if implemented as planned), the likelihood of effective implementation (probability implemented as planned), and;

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

The mitigation requirements described in the following were proposed by PG&E in its adequate and complete application or are the result of subsequent coordination between NMFS and PG&E. PG&E has agreed that all of the mitigation measures are practicable. NMFS has fully reviewed the specified activities and the mitigation measures to determine if the mitigation measures would result in the least practicable

adverse impact on marine mammals and their habitat, as required by the MMPA, and has determined the proposed measures are appropriate. NMFS describes these below as proposed mitigation requirements, and has included them in the proposed IHA.

Shutdown Zones

PG&E must establish shutdown zones for all pile driving activities. The purpose of a shutdown zones 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). Shutdown zones will vary based on the activity type and marine mammal hearing group (see table 10). Specifically, PG&E will establish shutdown zones for otariids based on the otariid Level A harassment zone and shutdown zones for all other marine mammals based on the largest Level A harassment zone for each pile size/type and driving method, as shown in table 10. A minimum shutdown zone of 10 m would be required for all in-water construction activities to avoid physical interaction with marine mammals.

TABLE 10—PROPOSED SHUTDOWN ZONES

Pile type	Hammer type	Otariid shutdown zone (m)	Shutdown zone for all other marine mammals (m)
Turbidity Curtain			
Steel shell pile <12 inch	Vibratory	10	10
Steel shell pile <12 inch	Impact (attenuated)	10	15
Slope Stabilization			
18-inch tapered timber	Vibratory	10	25
18-inch tapered timber	Impact (attenuated)	10	10
BGF Relocation			
24-inch steel shell	Vibratory	10	15
24-inch steel shell	Impact (attenuated)	15	75
30-inch steel shell	Vibratory	20	40
30-inch steel shell	Impact (attenuated)	15	65
36-inch steel shell	Vibratory	15	25
36-inch steel shell	Impact (attenuated)	35	155
42-inch steel shell	Vibratory	15	40

Prior to pile driving, shutdown zones will be established based on zones represented in table 10. Protected species observers (PSOs) will survey the shutdown zones for at least 30 minutes before pile driving activities start. If marine mammals are found within the shutdown zone, pile driving will be delayed until the animal has moved out of the shutdown zone, either verified by a PSO or by waiting until 15 minutes has elapsed without a sighting. If a marine mammal approaches or enters the shutdown zone during pile driving, the activity will be halted. Pile driving may resume after the animal has moved out of and is moving away from the shutdown zone or after at least 15 minutes has passed since the last observation of the animal.

If a species for which authorization has not been granted, or a species which has been granted but the authorized takes are met, is observed approaching or within the Level B harassment zone, pile driving activities will be shutdown. Activities will not resume until the animal has been confirmed to have left the area or 15 minutes has elapsed with no sighting of the animal.

Protected Species Observers

The placement of PSOs during all pile driving activities (described in the *Proposed Monitoring and Reporting* section) would ensure that the entire shutdown zone is visible. Should environmental conditions deteriorate such that the entire shutdown zone would not be visible (e.g., fog, heavy rain), pile driving would be delayed until the PSO is confident marine mammals within the shutdown zone could be detected. PSOs would monitor the full shutdown zones and as much of the Level B harassment zones as possible.

Pre- and Post-Activity Monitoring

Monitoring must take place from 30 minutes prior to initiation of pile driving activities (i.e., pre-clearance monitoring) through 30 minutes post-completion of pile driving. Prior to the start of daily in-water construction activity, or whenever a break in pile driving of 30 minutes or longer occurs, PSOs would observe the shutdown zones for a period of 30 minutes. The shutdown zone would be considered cleared when a marine mammal has not been observed within the zone for a 30-minute period. If a marine mammal is observed within shutdown zones, pile driving activity would be delayed or halted. When a marine mammal for which take by Level B harassment is authorized is present in the Level B harassment zone, activities may begin

and take by Level B harassment will be recorded. If work ceases for more than 30 minutes, the pre-activity monitoring of the shutdown zones would commence. A determination that the shutdown zone is clear must be made during a period of good visibility (i.e., the entire shutdown zone and surrounding waters must be visible to the naked eye).

Soft-Start Procedures

Soft-start procedures are used to provide additional protection to marine mammals by providing warning and/or giving marine mammals a chance to leave the area prior to the hammer operating at full capacity. For impact pile driving, contractors would be required to provide an initial set of three strikes from the hammer at reduced energy, followed by a 30-second waiting period, then two subsequent reduced-energy strike sets. 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

A bubble curtain must be employed during all impact pile driving. The bubble curtain must distribute air bubbles around 100 percent of the piling circumference for the full depth of the water column. The lowest bubble ring must be in contact with the mudline for the full circumference of the ring. The weights attached to the bottom ring must ensure 100 percent substrate contact. No parts of the ring or other objects may prevent full substrate contact. Air flow to the bubble rings must be balanced around the circumference of the pile.

NMFS conducted an independent evaluation of the proposed measures, and 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, paying particular attention to rookeries, mating grounds, and areas of similar significance.

Proposed Monitoring and Reporting

In order to issue an IHA for an activity, section 101(a)(5)(D) of the MMPA states that NMFS must set forth requirements pertaining to the monitoring and reporting of such taking. The MMPA implementing regulations at 50 CFR 216.104(a)(13) indicate that requests for 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 both to compliance as well as ensuring that the most value is obtained from the required monitoring.

Monitoring and reporting requirements prescribed by NMFS should contribute to improved 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 monitoring and reporting requirements described in the following were proposed by PG&E in its adequate and complete application and/or are the result of subsequent coordination between NMFS and PG&E. PG&E has agreed to the requirements. NMFS describes these below as requirements and has included them in the proposed IHA.

Visual Monitoring

Marine mammal monitoring must be conducted in accordance with the conditions in this section and the IHA. Marine mammal monitoring during pile driving and removal must be conducted by NMFS-approved PSOs in a manner consistent with the following:

- PSOs must be independent of the activity contractor (for example,

employed by a subcontractor) 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;
- Other PSOs may substitute education (degree in biological science or related field) or training for experience;
- 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;
- PSOs must be approved by NMFS prior to beginning any activity subject to the IHA.

PSOs should have the following additional qualifications:

- Ability to conduct field observations and collect data according to assigned protocols;
- Experience or training in the field identification of marine mammals, including the identification of behavior;
- Sufficient training, orientation, or experience with the construction operation to provide for personal safety during observations;
- Writing skills sufficient to prepare a report of observations including but not limited to the number and species of marine mammals observed; dates and times when in-water construction activities were conducted; dates, times, and reason for implementation of mitigation (or why mitigation was not implemented when required); and marine mammal behavior; and
- Ability to communicate orally, by radio or in person, with project personnel to provide real-time information on marine mammals observed in the area as necessary.

PG&E would have between one and three PSOs on site at all times during pile driving activities. One PSO would be designated as the Lead PSO and would receive updates from the other PSOs. The Lead PSO would be stationed at the active pile driving rig or at the best vantage point practicable to monitor the shutdown zones and implement shutdown and delay procedures. The other PSOs would be stationed at the best vantage points practicable to observe the monitoring zones. Exact locations would be determined in the field based on the pile driving site, field conditions, and in coordination with contractors, but may include docks, barges, and tower structures. PSOs would be equipped with high quality binoculars or spotting scopes for monitoring and radios and

cell phones for maintaining contact with other observers and work crew.

Monitoring would be conducted 30 minutes before, during, and 30 minutes after all in-water construction activities. PSOs would record all incidents of marine mammal occurrence, regardless of distance from activity, and would document any behavioral reactions in concert with distance from piles being driven or removed. Pile driving activities include the time to install or remove a single pile or series of piles, as long as the time elapsed between uses of the pile driving equipment is no more than 30 minutes.

Hydroacoustic Monitoring

Hydroacoustic monitoring, to be conducted for purposes of measuring sound source levels and sound propagation, will be conducted in accordance with a NMFS-approved acoustic monitoring plan. PG&E plans to conduct hydroacoustic monitoring throughout the entirety of the sediment remediation project, which is expected to span over multiple ITAs. Across the entire project, PG&E will collect data on a representative number of piles (at least 10 percent of each pile type and installation method). Given that PG&E's proposed hydroacoustic monitoring effort would span multiple IHAs, specific effort under any given IHA may vary. Therefore, under this proposed IHA, PG&E will only conduct hydroacoustic monitoring for pile types/installation methods for which hydroacoustic monitoring has not been previously conducted. PG&E may request that NMFS adjust the shutdown zones and revise the Level A and Level B harassment zones, as appropriate, pending NMFS' review and approval of the results of acoustic monitoring.

Reporting

Marine Mammal Monitoring Report

PG&E must submit a draft marine mammal monitoring report to NMFS within 90 days after the completion of pile driving activities, or 60 days prior to the requested issuance of any future IHAs for the project, or other projects at the same location, whichever comes first. A final report must be prepared and submitted within 30 calendar days of following receipt of any NMFS comments on the draft report. If no comments are received from NMFS within 30 calendar days of receipt of the draft report, the report shall be considered final. The marine mammal report would include an overall description of work completed, a narrative regarding marine mammal sightings, and associated PSO data

sheets and/or raw sighting data.

Specifically, the report would include:

- Dates and times (begin and end) of all marine mammal monitoring;
- Construction activities occurring during each daily observation period, including: (a) the number and type of piles that were driven and the method (e.g., impact, vibratory); and (b) total duration of driving time for each pile (vibratory driving) and number of strikes for each pile (impact driving);
- PSO locations during marine mammal monitoring;
- Environmental conditions during monitoring periods (at beginning and end of PSO shift and whenever conditions change significantly), including Beaufort sea state and any other relevant weather conditions including cloud cover, fog, sun glare, and overall visibility to the horizon, and estimated observable distance;
- Upon observation of a marine mammal, the following information must be recorded: (a) name of PSO who sighted the animal(s) and PSO location and activity at time of sighting; (b) time of sighting; (c) identification of the animal(s) (e.g., genus/species, lowest possible taxonomic level, or unidentified), PSO confidence in identification, and the composition of the group if there is a mix of species; (d) distance and location of each observed marine mammal relative to the pile being driven for each sighting; (e) estimated number of animals (min/max/best estimate); (f) estimated number of animals by cohort (adults, juveniles, neonates, group composition, etc.); (g) animal's closest point of approach and estimated time spent within the harassment zone; (h) description of any marine mammal behavioral observations (e.g., observed behaviors such as feeding or traveling), including an assessment of behavioral responses thought to have resulted from the activity (e.g., no response or changes in behavioral state such as ceasing feeding, changing direction, flushing, or breaching); and (i) description of any actions implemented in response to the sighting (e.g., delays, shutdown) and time and location of the action;
- Number of marine mammals detected within the harassment zones, by species; and
- Summary information about implementation of any mitigation (e.g., shutdowns and delays), a description of specific actions that ensued, and resulting changes in behavior of the animal(s), if any.

Hydroacoustic Monitoring Report

The hydroacoustic monitoring report must, at minimum, include the following:

- Hydrophone equipment and methods, recording device, sampling rate, distance (m) from the pile where recordings were made; depth of water and recordings device(s);
- Type and size of pile being driven, substrate type, method of driving during recordings (e.g., hammer model and energy), and total pile driving duration;
- Whether a sound attenuation device is used and, if so, a detailed description of the device used and the duration of its use per pile;
- For impact pile driving (per pile): Number of strikes and strike rate; depth of substrate to penetrate; pulse duration and mean, median, and maximum sound levels (dB re: 1 μ Pa); root mean square sound pressure level (SPL_{rms}); cumulative sound exposure level (SEL_{cum}), peak sound pressure level (SPL_{peak}), and single-strike sound exposure level (SEL_{ss});
- For vibratory driving/removal (per pile): Duration of driving per pile; mean, median, and maximum sound levels (dB re: 1 μ Pa); root mean square sound pressure level (SPL_{rms}), cumulative sound exposure level (SEL_{cum}) (and timeframe over which the sound is averaged);
- One-third octave band spectrum and power spectral density plot; and
- Transmission loss values for each pile size and type and installation method, when appropriate.

Reporting Injured or Dead Marine Mammals

In the event that personnel involved in the construction activities discover an injured or dead marine mammal, PG&E must report the incident to the Office of Protected Resources, NMFS (PR.ITP.MonitoringReports@noaa.gov) and to the West Coast regional stranding network (866-767-6114) as soon as feasible. If the death or injury was clearly caused by the specified activity, PG&E 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. PG&E would not resume their activities until notified by NMFS. The report would include the following information:

- Time, date, and location (latitude/longitude) of the first discovery (and updated location information if known and applicable);
- Species identification (if known) or description of the animal(s) involved;

- Condition of the animal(s) (including carcass condition if the animal is dead);
- Observed behaviors of the animal(s), if alive;
- If available, photographs or video footage of the animal(s); and
- General circumstances under which the animal was discovered.

Negligible Impact Analysis and Determination

NMFS has defined negligible impact as an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (*i.e.*, population-level effects). An estimate of the number of takes alone is not enough information on which to base 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), as well as effects on habitat, and the likely effectiveness of the mitigation. We also assess the number, intensity, and context of estimated takes by evaluating this information relative to population status. Consistent with the 1989 preamble for NMFS’ implementing regulations (54 FR 40338, September 29, 1989), the impacts from other past and ongoing anthropogenic activities are incorporated into this analysis via their impacts 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 the species listed in table 3, given that the anticipated effects of this activity on these different marine mammal stocks are expected to be similar. There is little information about the nature or severity of the impacts, or the size, status, or structure of any of these species or stocks that would lead to a different analysis for this activity.

Level A harassment is extremely unlikely given the small size of the Level A harassment isopleths and the required mitigation measures designed to minimize the possibility of injury to

marine mammals. No serious injury or mortality is anticipated given the nature of the activity.

Pile driving activities have the potential to disturb or displace marine mammals. Specifically, the project activities may result in take, in the form of Level B harassment from underwater sounds generated from impact and vibratory pile driving activities. Potential takes could occur if individuals move into the ensonified zones when these activities are underway.

The takes by Level B harassment would be due to potential behavioral disturbances. The potential for harassment is minimized through construction methods and the implementation of planned mitigation strategies (see Proposed Mitigation section).

Behavioral responses of marine mammals to pile driving at the project site, if any, are expected to be mild and temporary. Marine mammals within the Level B harassment zone may not show any visual cues they are disturbed by activities or could become alert, avoid the area, leave the area, or display other mild responses that are not observable such as changes in vocalization patterns. Given the short duration of noise-generating activities per day and that pile driving and removal would occur over approximately 62 days during a span of 5 months, any harassment would be temporary. There are no other areas or times of known biological importance for any of the affected species.

Take would occur within a limited, confined area of each stock’s range. Further, the amount of take authorized is extremely small when compared to stock abundance.

No marine mammal stocks for which incidental take authorization is proposed are listed as threatened or endangered under the ESA. Only one stock, the Eastern North Pacific Stock of the northern fur seal, is listed as depleted under the MMPA. However, we do not expect the proposed authorizations in this action to affect the stock. No injury or mortality is proposed for authorization, take by Level B harassment is limited (five takes over the duration of the project), and the proposed action should have no effect on the reproduction of this species. In addition, the five authorized takes for the northern fur seal include both the depleted Eastern North Pacific Stock and the California stock, which is not depleted.

The relatively low marine mammal occurrences in the area, shutdown zones, and planned monitoring make

injury of marine mammals unlikely. The shutdown zones would be thoroughly monitored before the pile driving activities begin, and activities would be postponed if a marine mammal is sighted within the shutdown zone. There is a high likelihood that marine mammals would be detected by trained observers under environmental conditions described for the project. Limiting pile driving activities to daylight hours would also increase detectability of marine mammals in the area. Therefore, the mitigation and monitoring measures are expected to eliminate the potential for injury and Level A harassment as well as reduce the amount and intensity of Level B behavioral harassment. Furthermore, the pile driving activities analyzed here are similar to, or less impactful than, numerous construction activities conducted in other similar locations which have occurred with no reported injuries or mortality to marine mammals, and no known long-term adverse consequences from behavioral harassment.

The project is not expected to have significant adverse effects on marine mammal habitat. There are no known Biologically Important Areas (BIAs) or ESA-designated critical habitat within the project area, and the activities would not permanently modify existing marine mammal habitat.

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

- No serious injury or mortality is anticipated or authorized;
- The specified activities and associated ensounded areas are very small relative to the overall habitat ranges of all species;
- The project area does not overlap known BIAs or ESA-designated critical habitat;
- The lack of anticipated significant or long-term effects or marine mammal habitat; and
- The presumed efficacy of the mitigation measures in reducing the effects of the specified activity.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the proposed monitoring and mitigation measures, NMFS preliminarily finds that the total marine mammal take from the proposed activity will 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 and so, in practice, where estimated numbers are available, NMFS compares the number of individuals taken to the most appropriate estimation of abundance of the relevant species or stock in our determination of 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.

The amount of take NMFS proposes to authorize is below one-third of the estimated stock abundances for all stocks (table 9). These are all likely conservative estimates because they assume all takes are of different individual animals which is likely not the case. Some individuals may return multiple times in a day, but PSOs would count them as separate takes if they cannot be individually identified.

Based on the analysis contained herein of the proposed activity (including the proposed mitigation and monitoring measures) and the anticipated take of marine mammals, NMFS preliminarily finds 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 would not have an unmitigable adverse impact on the availability of such species or stocks for taking 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 ensures 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 for the issuance of ITAs, NMFS consults internally whenever we propose to authorize take for 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 Authorization

As a result of these preliminary determinations, NMFS proposes to issue an IHA to PG&E for conducting pile driving activities in San Francisco Bay, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. A draft of the proposed IHA 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 authorization, and any other aspect of this notice of proposed IHA for the proposed construction. We also request comment on the potential renewal of this proposed IHA 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 this IHA or a subsequent renewal IHA.

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: December 19, 2025.

Kimberly Damon-Randall,

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

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

U.S. Integrated Ocean Observing System (IOOS®) Advisory Committee Public Meeting

AGENCY: U.S. Integrated Ocean Observing System (IOOS®), National Ocean Service (NOS), National Oceanic and Atmospheric Administration (NOAA), Department of Commerce.

ACTION: Notice of open meeting; opportunity for public comment.

SUMMARY: Notice is hereby given of a hybrid meeting of the U.S. Integrated Ocean Observing System (IOOS®) Advisory Committee (Committee). The meeting is open to the public and an opportunity for oral and written comments will be provided.

DATES: The meeting will be held virtually and in-person on January 20, 2026 from 8:45 a.m. to 5 p.m. Eastern Standard Time (EST) and January 21, 2026 from 8:45 a.m. to 12 p.m. (EST). Registration is required to attend either virtually or in person; please register online at <https://forms.gle/J514DTapodxShqFC8> or email laura.gewain@noaa.gov. If attending in-person, registration is required by 5 p.m. EST on January 13, 2026 to meet security requirements for visitor access at this location. If attending virtually, registration is required by 5 p.m. EST on January 16, 2026.

ADDRESSES: The meeting will be held in-person at 1315 East-West Hwy., Silver Spring, MD, 4th Floor Conference Room. To register for the meeting and/or submit public comments, use this link <https://forms.gle/J514DTapodxShqFC8> or email laura.gewain@noaa.gov. See **SUPPLEMENTARY INFORMATION** for instructions and other information about public participation and special accommodations.

FOR FURTHER INFORMATION CONTACT:

Krisa Arzayus, Designated Federal Official, U.S. IOOS Advisory Committee, U.S. IOOS Program, 240–533–9455, krisa.arzayus@noaa.gov or visit the U.S. IOOS Advisory Committee website at <http://ioos.noaa.gov/community/u-s-ioos-advisory-committee/>.

SUPPLEMENTARY INFORMATION:

I. Background

The Committee was established by the NOAA Administrator as directed by section 12304(d) of the Integrated Coastal and Ocean Observation System Act (the Act) as amended by Section 103 of the Coordinated Ocean Observations and Research Act of 2020 (COORA) (Pub. L. 116–271, Title I). 33 U.S.C. 3603(d). The Committee advises the NOAA Administrator and the Interagency Ocean Observation Committee (IOOC) on matters related to the responsibilities and authorities set forth in the Act and other appropriate matters as the Administrator, the Ocean Policy Committee described at 33 U.S.C. 3603(c)(1), and IOOC may refer to the Committee for review and advice. The charter and summaries of prior meetings can be found online at <https://ioos.noaa.gov/community/u-s-ioos-advisory-committee/>.

II. Matters To Be Considered

The meeting will focus on: (1) updates from NOAA and key partners, including the NOAA Administrator, and (2) working sessions on work plan topics. The latest version of the agenda will be posted at <http://ioos.noaa.gov/community/u-s-ioos-advisory-committee/>. The times and the agenda topics described here are subject to change.

III. Public Comment Instructions

The meeting will be open to public participation (check agenda on website to confirm time). The Committee expects that public statements presented at its meetings will not be repetitive of previously submitted verbal or written statements. In general, each individual or group making a verbal presentation

will be limited to a total time of three (3) minutes. Written comments should be received by January 12, 2026 11:59 p.m. EST, to provide sufficient time for Committee review. Written comments received after January 12, 2026 11:59 p.m. EST, will be distributed to the Committee, but may not be reviewed prior to the meeting date. To submit written comments, please fill out the brief form at <https://forms.gle/J514DTapodxShqFC8> or email your comments and your organization/company affiliation to laura.gewain@noaa.gov. All comments received are a part of the public record. All personally identifiable information (name, address, etc.), confidential business information, or otherwise sensitive information submitted voluntarily by the commenter will be publicly accessible. The written comment is considered the official comment and should include discussion of all points you wish to make. The Federal agencies will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the web, cloud, or other file sharing system). Comments that are not responsive or contain profanity, vulgarity, threats, or other inappropriate language will not be considered. This NOAA public meeting will be recorded for use in preparation of minutes. If you have a public comment, you acknowledge that you will be recorded and are aware you can opt out of the meeting. Participation in the meeting constitutes consent to the recording.

IV. Special accommodations

These meetings are physically accessible to people with disabilities. Requests for sign language interpretation or other auxiliary aids should be directed to Krisa Arzayus, Designated Federal Official by phone (240–533–9455) or email (krisa.arzayus@noaa.gov) or to Laura Gewain (laura.gewain@noaa.gov) by January 6, 2026 11:59 p.m.

Authority: Integrated Coastal and Ocean Observation System Act, part of the Omnibus Public Land Management Act of 2009 (Pub. L. 111–11), and the Coordinated Ocean Observations and Research Act of 2020 (Pub. L. No. 116–271).

Jeffrey L. Payne,

Acting Director, U.S. IOOS Program National Ocean Service, National Oceanic and Atmospheric Administration.

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