temperature angle-resolved photoemission spectroscopy & electron energy loss spectroscopy. Manufacturer: Fermion Instrument, China. Intended Use: The instrument is intended to be used to conduct two different types of experiments: angle-resolved photoemission spectroscopy (ARPES) and electron energy-loss spectroscopy (EELS). ARPES is a technique which allows us to measure directly the momentum-resolved single-particle electronic structure of materials. EELS is a technique which allows us to measure the energy-resolved collective excitations in materials (such as lattice vibrations, plasmons, etc.). We currently have an electron detector that is, in principle, compatible with both techniques. Justification for Duty-Free Entry: According to the applicant, there are no instruments of the same general category manufactured in the United States. Application accepted by Commissioner of Customs: April 2, 2024.

Dated: June 20, 2024.

Gregory W. Campbell,

Director, Subsidies and Economic Analysis, Enforcement and Compliance.

[FR Doc. 2024–13919 Filed 6–24–24; 8:45 am]

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XE014]

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Ferndale Refinery Dock Maintenance and Pile Replacement Activities in Ferndale, Washington

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 Phillips 66 Co. (Phillips 66) for authorization to take marine mammals incidental to Ferndale Refinery Dock Maintenance and Pile Replacement Activities in Ferndale, Washington. 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 July 25, 2024.

ADDRESSES: Comments should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service and should be submitted via email to *ITP.Gatzke@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: Jennifer Gatzke, Office of Protected Resources, NMFS, (301) 427–8401.

SUPPLEMENTARY INFORMATION:

Background

The MMPA prohibits the ''take'' of marine mammals, with certain exceptions. Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct 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 (referred to in shorthand as ''mitigation''); and requirements pertaining to the monitoring and reporting of the takings. The definitions of all applicable MMPA statutory terms cited above are included in the relevant sections below.

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.

We will review all comments submitted in response to this notice prior to concluding our NEPA process or making a final decision on the IHA request.

Summary of Request

On February 29, 2024 we received a request from Phillips 66 for an IHA to take marine mammals incidental to Ferndale Refinery Dock Maintenance and Pile Replacement Activities in Ferndale, Washington. Following NMFS' review of the application, Phillips 66 submitted revised versions on May 16 and May 20, 2024. The

application was deemed adequate and complete on May 21, 2024. Phillips 66 has requested authorization of take by Level B harassment for harbor seal, California sea lion, Steller sea lion and harbor porpoise. Neither Phillips 66 nor NMFS expect serious injury or mortality to result from this activity and, therefore, an IHA is appropriate.

Description of Proposed Activity

Overview

Phillips 66 is proposing to modernize the existing timber loading dock and replace it with a stronger structure that meets current industry best practices. The activity includes installation of steel piles by vibratory driving, and pile removal using an underwater chainsaw or cutting torch.

In-water pile installation construction would occur for 35 days, which would occur intermittently between approximately August 1, 2024 and October 31, 2024. Take of marine mammals is anticipated to occur due to vibratory pile installation. Removal of all piles is expected to take up to 66 days for underwater pile cutting with a chainsaw. Take of marine mammals is not anticipated to occur due to pile removal.

Dates and Duration

This IHA would be valid for 1 year from the date of issuance. Due to in-water work timing restrictions to protect Endangered Species Act (ESA)-listed salmonids, all planned in-water construction in this area is limited to a work window beginning August 1 and ending February 1. However, since the Strait of Georgia is a very large water body with a long fetch, calm in-water work conditions are typically only available from August to the end of October. Pile removal processes are less dependent on good weather, and this portion of the project may occur from approximately August 1 to February 1. Therefore, Phillips 66 expects that in-water pile installation construction work will occur from August 1, 2024 to October 31, 2024. Pile driving is anticipated to take up to 35 days to complete. Work may occur on nonconsecutive days due to weather and other project needs. Pile driving would be completed intermittently throughout daylight hours.

Specific Geographic Region

Phillips 66 maintains and operates a marine dock on the southeastern shoreline of the Strait of Georgia in Ferndale, Washington as shown in figure 1. The Strait of Georgia encompasses the northern marine waters of the Salish Sea, with a long fetch that extends to the northwest between the Canadian mainland and Vancouver Island. The dock is built on aquatic lands leased from the Washington Department of Natural Resources (WDNR), with the lease boundary shown in figure 2. The shoreline and aquatic area surrounding the dock is part of the Cherry Point Aquatic Reserve, a WDNR protected marine environment. The shore area is characterized by wave washed feeder bluffs where sediment transport creates both sandy and cobbled beaches and intertidal zones.

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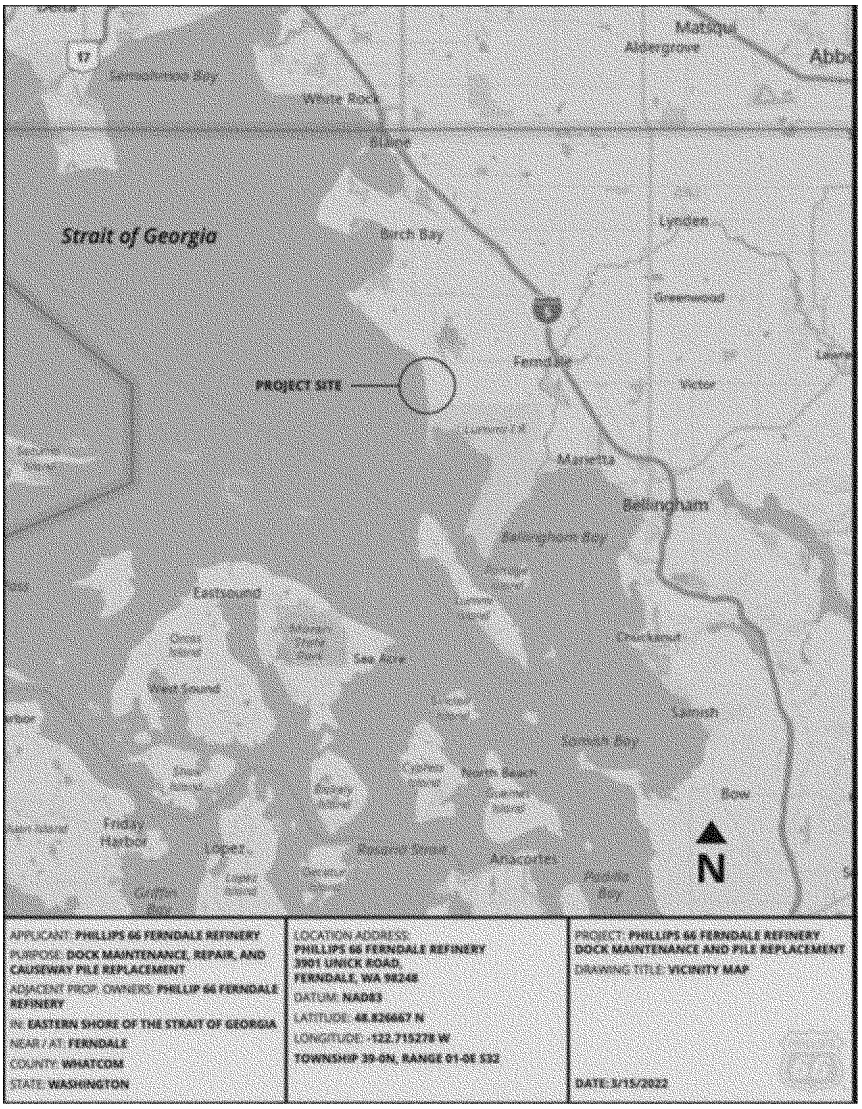

Figure 1—Vicinity Map Showing the Strait of Georgia in the Northeast Puget Sound, WA

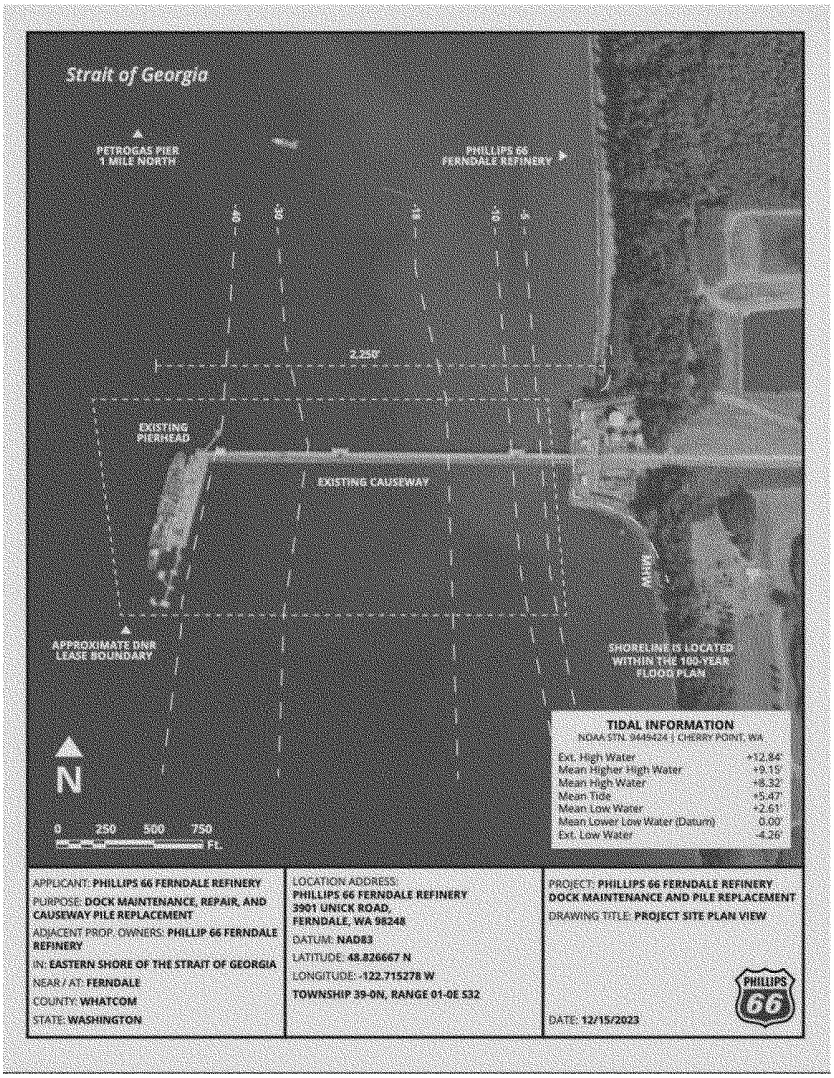

Figure 2—Project Location Showing the WDNR Lease Boundary in Ferndale, WA

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Detailed Description of the Specified Activity

The first phase of in-water construction activity consists of the vibratory installation of 116 steel piles of 20 inch diameter. Piles will be driven to approximately 40 ft (12.19 m) of penetration into the sea floor. Pile driving time is estimated to take 15 minutes per pile. Pile driving will take 35 days and pile driving time is not expected to exceed 4 hours in any 24-hour period.

The next project phase is the removal of the old timber and steel pilings. Note that Phillips 66 is proposing to install the new steel piles before removing the old timber and steel ones in order to minimize facility downtime. Phillips 66 has determined that there is limited access for pile removal via vibratory or direct pull methods due to the location of the piles under the causeway. It may be necessary to utilize a variety of pile removal methods to safely complete this work. The existing 12-inch steel and creosote-treated timber piles (677 in total) will be cut below the mudline with an underwater chainsaw or cutting torch. Underwater chainsaw average underwater SPL (Sound Pressure Level) of 140 dB RMS. However, as noted above, this activity is not expected to cause incidental take of marine mammals as it produces relatively low source levels of noise that is similar to numerous other noise sources at a heavily used industrial marine environment. A cutting torch is not anticipated to generate significant noise. The removed piles will be lifted to a barge for proper disposal. Note that NMFS has determined that use of an underwater chainsaw or cutting torch is not expected to result in take and, therefore, these activities will not be discussed further.

A summary of the proposed pile installation and removal methods for the dock project is presented below in table 1.

TABLE 1—SUMMARY OF IN-WATER PILE REMOVAL AND INSTALLATION AT PHILLIPS 66 DOCK

Pile type and size	Activity	Removal/install method	Number of piles	Total days of in-water work	Approximate piles per day	Hours pile driver in use per day
20-inch steel pipe pile	Install	Vibratory hammer	116	Up to 35	16	4
12-inch timber and steel pipes	Removal	Underwater chainsaw and cutting torch.	677	Up to 66	NA	NA

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

Description of Marine Mammals in the Area of Specified Activities

Sections 3 and 4 of the application summarize available information regarding 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 2 lists all species or stocks for which exposure is expected 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 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' Alaska and Pacific SARs. All values presented in table 2 are the most recent available at the time of publication (including from the draft 2023 SARs) and are available online at: *(https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports).*

TABLE 2—SPECIES FOR WHICH TAKE COULD OCCUR IN THE PROJECT AREA

Common name	Scientific name	Stock	ESA/MMPA status; Strategic (Y/N) [1]	Stock abundance (CV, N_{min}, most recent abundance survey) [2]	PBR	Annual M/SI [3]
Order Artiodactyla—Cetacea—Mysticeti (baleen whales)						
Family Balaenopteridae (rorquals):						
Humpback Whale	*Megaptera novaeangliae*	Central America/Southern Mexico—CA/OR/WA.	E, D, Y	1,494 (0.171, 1,284, 2021)	3.5	14.9
Humpback Whale	*Megaptera novaeangliae*	Mainland Mexico—CA/OR/WA	T, D, Y	3,477 (0.101, 3,185, 2018)	43	22
Humpback Whale	*Megaptera novaeangliae*	Hawaii	-, -, N	11,278 (0.56, 7,265, 2020)	127	27.09
Odontoceti (toothed whales, dolphins, and porpoises)						
Family Delphinidae:						
Killer Whale	*Orcinus orca*	Eastern North Pacific Southern Resident.	E, D, Y	73 (N/A, 73, 2022)	0.13	0
Killer Whale	*Orcinus orca*	West Coast Transient	-, -, N	349 (N/A, 349, 2018)	3.5	0.4
Family Phocoenidae (porpoises):						
Harbor porpoise	*Phocoena phocoena*	Washington Inland Waters	-, -, N	11,233 (0.37, 8,308, 2015)	66	≥7.2
Order Carnivora—Pinnipedia						
Family Otariidae (eared seals and sea lions):						
California Sea Lion	*Zalophus californianus*	U.S.	-,-; N	257,606 (N/A, 233,515, 2014)	14,011	>321
Steller Sea Lion	*Eumetopias jubatus*	Eastern	-,-; N	36,308 (N/A, 36,308, 2022)	2,178	93.2
Family Phocidae (earless seals):						

TABLE 2—SPECIES FOR WHICH TAKE COULD OCCUR IN THE PROJECT AREA—Continued

Common name	Scientific name	Stock	ESA/ MMPA status; Strategic (Y/N) [1]	Stock abundance (CV, N_{min}, most recent abundance survey) [2]	PBR	Annual M/SI [3]
Harbor Seal	*Phoca vitulina*	Washington Northern Inland Waters.	-, -, N	16,451 (0.07, 15,462, 2019) ..	928	40

[1] Information on the classification of marine mammal species follows The Society for Marine Mammalogy's Committee on Taxonomy (*https://www.marinemammalscience.org/science-and-publications/list-marine-mammal-species-subspecies/*).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.

[2] NMFS marine mammal stock assessment reports online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments.* CV is coefficient of variation; Nmin is the minimum estimate of stock abundance. In some cases, CV is not applicable.

[3] 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, vessel strike). Annual M/SI often cannot be determined precisely and is in some cases presented as a minimum value or range.

All species that could potentially occur in the proposed project area are included in table 2 of the IHA application. While the gray whale, minke whale, Dall's porpoise, and the Eastern North Pacific Northern Resident stock of killer whale have been reported in the area, the temporal and/or spatial occurrence of these species is such that take is not expected to occur, and they are not discussed further beyond the explanation provided here. The gray whale is uncommon in the area, but may pass through the Puget Sound during migration. Per the population analysis on gray whales from 1996–2015, from June 1 to November 30, there were only 6 days when sightings were recorded in the Northern Puget Sound. The Northern Puget Sound refers to a study range of the Puget Sound marine waters from Edmonds, WA to the Canadian border (Calambokidis, 2017). Additionally, gray whales would not be migrating when in-water work would most likely occur for this project (*i.e.,* August through October). Therefore, since the occurrence of the gray whale is low at any time of year, and no gray whales are expected to occur during the expected work period, take of this species is not expected. While the minke whale may be observed in the San Juan Islands and southern Puget Sound, reports of minke whales in the Southeastern Strait of Georgia are rare. The Dall's porpoise has historically been present in the Puget Sound, but their numbers have declined significantly and are now also considered to be rare (Evenson 2016, Jefferson *et al.,* 2016, Jefferson 2024). Finally, while the Eastern North Pacific Northern Resident stock of killer whale may occur infrequently in Washington, its primary range is located in British Columbia, Canada, and Southeast Alaska (Dahlheim *et al.,* 1997, Ford *et al.,* 2000), and no take of this stock is expected to occur.

Humpback Whale

Humpback whales are found in coastal waters of Washington as they migrate from feeding grounds in Alaska to California to winter breeding grounds in Central America and Mexico or Hawaii. Humpbacks used to be considered only rare visitors to Puget Sound. In 1976 and 1978, two sightings were reported in Puget Sound and one sighting was reported in 1986 (Osborne *et al.,* 1988; Calambokidis and Steiger 1990; Calambokidis and Baird 1994). Humpback whale occurrence in Puget Sound has been steadily increasing since 2000, with some individuals remaining in the area through the winter (Calambokidis *et al.,* 2018).

On September 8, 2016, NMFS divided the once single species into 14 distinct population segments (DPS) under the ESA, removed the species-level listing as endangered, and, in its place, listed four DPSs as endangered and one DPS as threatened (81 FR 62259, September 8, 2016). The remaining nine DPSs were not listed. There are four DPSs in the North Pacific, including Western North Pacific and Central America, which are listed as endangered, Mexico, which is listed as threatened, and Hawaii, which is not listed.

The 2022 Pacific SARs described a revised stock structure for humpback whales which modifies the previous stocks designated under the MMPA to align more closely with the ESA-designated DPSs (Caretta *et al.,* 2023; Young *et al.,* 2023). Specifically, the three previous North Pacific humpback whale stocks (Central and Western North Pacific stocks and a CA/OR/WA stock) were replaced by five stocks, largely corresponding with the ESA-designated DPSs. These include Western North Pacific and Hawaii stocks and a Central America/Southern Mexico-CA/OR/WA stock (which corresponds with the Central America DPS). The remaining two stocks, corresponding with the Mexico DPS, are the Mainland Mexico-CA/OR/WA and Mexico-North Pacific stocks (Caretta *et al.,* 2023; Young *et al.,* 2023). The former stock is expected to occur along the west coast from California to southern British Columbia, while the latter stock may occur across the Pacific, from northern British Columbia through the Gulf of Alaska and Aleutian Islands/Bering Sea region to Russia.

Within U.S. west coast waters, three current DPSs may occur: The Hawaii DPS (not listed), Mexico DPS (threatened), and Central America DPS (endangered). According to Wade *et al.* (2021), the probability that whales encountered in Washington waters are from a given DPS are as follows: Hawaii, 69 percent; Mexico (CA–OR–WA), 25 percent; Central America, 6 percent.

Humpback whales, while relatively few in number, are regularly seen in the Puget Sound. They are most frequently found in the South Puget Sound, the Strait of Juan De Fuca, the Haro Strait and among the Canadian Gulf Islands. They are found in transit in the southern parts of the Strait of Georgia on occasion, but are not a common occurrence per the sightings archive of the Orca Network *(https://www.orcanetwork.org/recent-sightings, accessed June 2024).*

Killer Whale

There are three distinct ecotypes, or forms, of killer whales recognized in the north Pacific: resident, transient, and offshore. The three ecotypes differ morphologically, ecologically, behaviorally, and genetically. Resident killer whales exclusively prey upon fish, with a clear preference for salmon (Ford and Ellis 2006; Hanson *et al.,* 2010; Ford *et al.,* 2016), while transient killer whales exclusively prey upon marine mammals (Caretta *et al.,* 2019). Less is known about offshore killer whales, but they are believed to consume primarily fish, including several species of shark (Dahlheim *et al.,* 2008). The seasonal movements of

transients are largely unpredictable, although there is a tendency to investigate harbor seal haulouts off Vancouver Island more frequently during the pupping season in August and September (Baird 1994; Ford 2014). Transient killer whales have been observed in central Puget Sound in all months (Orca Network 2021).

Southern Resident killer whales (SRKW) are typically found in the Salish Sea in spring, summer and fall, and are found along the west coast of the United States and British Columbia in the winter (NOAA, 2022). The J pod tends to stay closer to the Puget Sound even during winter. The orca pods travel about the Puget Sound swiftly and, though a rare occurrence, the pods may pass through in the project area. On March 28, 2024, the J pod was sighted in the Strait of Georgia, about 23 miles west of the project area near Mayne Island (Orca Network, June 2024). ESA summer core area critical habitat for SRKW has been designated in Puget Sound, which includes all U.S. marine waters in Whatcom County, WA, where Ferndale Dock is located (50 CFR 226; August 2, 2021).

Harbor Porpoise

Harbor porpoise occur along the U.S. west coast from southern California to the Bering Sea (Carretta *et al.,* 2020). The Washington Inland Waters stock is found from Cape Flattery throughout Puget Sound and the Salish Sea region. In southern Puget Sound, harbor porpoise were common in the 1940s, but marine mammal surveys, stranding records since the early 1970s, and harbor porpoise surveys in the early 1990's indicated that harbor porpoise abundance had declined (Carretta *et al.,* 2020). Annual winter aerial surveys conducted by the Washington Department of Fish and Wildlife from 1995 to 2015 revealed an increasing trend in harbor porpoise in Washington inland waters, including the return of harbor porpoise to Puget Sound (Carretta *et al.,* 2020). Seasonal surveys conducted in spring, summer, and fall 2013–2015 in Puget Sound and Hood Canal documented substantial numbers of harbor porpoise in Puget Sound. Observed porpoise numbers were twice as high in spring as in fall or summer, indicating a seasonal shift in distribution.

Harbor porpoise reside in the Puget Sound year-round. Data from harbor porpoise sightings indicate that distribution is heterogeneous with some areas consistently suggesting higher densities of harbor porpoise. The British Columbia Cetacean Sightings Network (BCCSN) reports summer concentrations in areas that include the South-Central Strait of Georgia (Canadian side), Haro Strait, Boundary Pass and sites further north in British Columbia. Winter concentrations include the Port of San Juan, Haro Strait, Swanson Channel, and the central Strait of Georgia (in British Columbia) (Zier, 2015).

California Sea Lion

California sea lions occur from Vancouver Island, British Columbia, to the southern tip of Baja California. They breed on the offshore islands of southern and central California from May through July (Heath and Perrin, 2008). During the non-breeding season, adult and subadult males and juveniles migrate northward along the coast to central and northern California, Oregon, Washington, and Vancouver Island (Jefferson *et al.,* 1993). They return south the following spring (Heath and Perrin 2008, Lowry and Forney, 2005). Females and some juveniles tend to remain closer to rookeries (Antonelis *et al.,* 1990; Melin *et al.,* 2008).

California sea lions regularly occur on rocks, buoys and other structures, and are the most frequently sighted otariid found in Washington waters. Some 3,000 to 5,000 animals are estimated to move into Pacific Northwest waters of Washington and British Columbia during the fall (September) and remain until the late spring (May) when most return to breeding rookeries in California and Mexico (Jeffries *et al.,* 2000). Peak counts of over 1,000 animals have been made in Puget Sound (Jeffries *et al.,* 2000).

There are no known haulouts in close proximity to the proposed project area but California sea lions may be in the vicinity foraging as they move through the wider area. While California sea lions can be found throughout the Puget Sound, estimates place the number of California sea lions in the springtime at an average of 450 in the Puget Sound proper (Jefferson, *et al.,* 2023). There are two documented haulouts in the southern Strait of Georgia, both along the western coast of the Strait of Georgia in British Columbia, Canada. The closest haulout is near Tumbo Island on the eastern edge of the Gulf Islands, over 15 miles from the project site (LeValley, E., 2021).

Steller Sea Lion

Steller sea lions in the project area are expected to be from the Eastern U.S. stock. The Eastern U.S. stock of Steller sea lions is found along the coasts of southeast Alaska to northern California where they occur at rookeries and numerous haulout locations along the coastline (Jeffries *et al.,* 2000; Scordino, 2006; NMFS, 2013).

In Washington waters, numbers decline during the summer months, which correspond to the breeding season at Oregon and British Columbia rookeries (approximately late May to early June) and peak during the fall and winter month.

The majority of Steller sea lion population in Washington is found on the west coast but there are consistently used haulouts and breeding sites throughout the Puget Sound. These sites are typically rocky, gravel or sand beaches, ledges and reefs. There are two documented haulouts in the southern Strait of Georgia. The first is near Tumbo Island on the eastern edge of the Gulf Islands in British Columbia, Canada, (west coast of the Strait of Georgia), approximately 15 miles from the project area. The second is on Sucia Island (LeValley, E. 2021), approximately 10 miles distant from the project area, at the southern end of the Strait of Georgia.

Harbor Seal

Harbor seals are the most common, widely distributed marine mammal found in Washington marine waters and are frequently observed in the nearshore marine environment. They occur year-round and breed in Washington. They are frequently found in saltwater bays, estuaries and inlets. Their preferred haulouts include intertidal and subtidal rocks, beaches, sandbars, rocky reefs, log booms and floats.

There are 3 delineated stocks in the Puget Sound. These stocks include the Hood Canal stock, the Northern Inland Waters stock and the Southern Puget Sound stock.

This project is only likely to affect the Northern Inland Waters Stock, which is the most wide-spread stock throughout the Puget Sound, from Cape Flattery, to the Strait of Georgia, to the Tacoma Narrows Bridge (NOAA, 2022). Haulouts may be just a few individuals but may range beyond 500 individuals. Harbor seals generally live and feed in a limited range but may travel up to 400 miles for seasonal prey. The Strait of Georgia is a very large body of water with no haulouts in the immediate vicinity of the project. The closest documented haulouts are two different low population (>100 individuals) locations approximately 5 miles from the project site, one to the north and one to the south (Jeffries *et al.,* 2000). To the southwest and west of the project location are 14 other haulouts dotted throughout a few of the small northern San Juan Islands (North of Orcas Island)

within 10 miles of the project (Jeffries *et al.,* 2000).

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.,* Richardson *et al.,* 1995; Wartzok and Ketten, 1999; Au and Hastings, 2008). To reflect this, Southall *et al.* (2007, 2019) recommended that marine mammals be divided into hearing groups based on directly measured (behavioral or auditory evoked potential techniques) or estimated hearing ranges (behavioral response data, anatomical modeling, *etc.*). Note that no direct measurements of hearing ability have been successfully completed for mysticetes (*i.e.,* low-frequency cetaceans). Subsequently, NMFS (2018) described generalized hearing ranges for these marine mammal hearing groups. Generalized hearing ranges were chosen based on the approximately 65 decibel (dB) threshold from the normalized composite audiograms, with the exception for lower limits for low-frequency cetaceans where the lower bound was deemed to be biologically implausible and the lower bound from Southall *et al.* (2007) retained. Marine mammal hearing groups and their associated hearing ranges are provided in table 3.

TABLE 3—MARINE MAMMAL HEARING GROUPS

[NMFS, 2018]

Hearing group	Generalized hearing range *
Low-frequency (LF) cetaceans (baleen whales)	7 Hz to 35 kHz.
Mid-frequency (MF) cetaceans (dolphins, toothed whales, beaked whales, bottlenose whales)	150 Hz to 160 kHz.
High-frequency (HF) cetaceans (true porpoises, *Kogia,* river dolphins, Cephalorhynchid, *Lagenorhynchus cruciger* & *L. australis*).	275 Hz to 160 kHz.
Phocid pinnipeds (PW) (underwater) (true seals)	50 Hz to 86 kHz.
Otariid pinnipeds (OW) (underwater) (sea lions and fur seals)	60 Hz to 39 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 are typically not as broad. Generalized hearing range chosen based on ~65 dB threshold from normalized composite audiogram, with the exception for lower limits for LF cetaceans (Southall *et al.* 2007) and PW pinniped (approximation).

The pinniped functional hearing group was modified from Southall *et al.* (2007) on the basis of data indicating that phocid species have consistently demonstrated an extended frequency range of hearing compared to otariids, especially in the higher frequency range (Hemilä *et al.,* 2006; Kastelein *et al.,* 2009; Reichmuth *et al.,* 2013).

For more detail concerning these groups and associated frequency ranges, please see NMFS (2018) for a review of available information.

Potential Effects of Specified Activities on Marine Mammals and Their Habitat

This section provides a discussion of the ways in which components of the specified activity may impact marine mammals and their habitat. The Estimated Take of Marine Mammals section later in this document includes a quantitative analysis of the number of individuals that are expected to be taken by this activity. The Negligible Impact Analysis and Determination section considers the content of this section, the Estimated Take of Marine Mammals section, and the Proposed Mitigation section, to draw conclusions regarding the likely impacts of these activities on the reproductive success or survivorship of individuals and whether those impacts are reasonably expected to, or reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.

Description of Sound Sources

The marine soundscape is comprised of both ambient and anthropogenic sounds. Ambient sound is defined as the all-encompassing sound in a given place and is usually a composite of sound from many sources both near and far. The sound level of an area is defined by the total acoustical energy being generated by known and unknown sources. These sources may include physical (*e.g.,* waves, wind, precipitation, earthquakes, ice, atmospheric sound), biological (*e.g.,* sounds produced by marine mammals, fish, and invertebrates), and anthropogenic sound (*e.g.,* vessels, dredging, aircraft, construction).

The sum of the various natural and anthropogenic sound sources at any given location and time—which comprise ''ambient'' or ''background'' sound—depends not only on the source levels (as determined by current weather conditions and levels of biological and shipping activity) but also on the ability of sound to propagate through the environment. In turn, sound propagation is dependent on the spatially and temporally varying properties of the water column and sea floor, and is frequency-dependent. As a result of the dependence on a large number of varying factors, ambient sound levels can be expected to vary widely over both coarse and fine spatial and temporal scales. Sound levels at a given frequency and location can vary by 10 to 20 dB from day to day (Richardson *et al.,* 1995). The result is that, depending on the source type and its intensity, sound from the specified activity may be a negligible addition to the local environment or could form a distinctive signal that may affect marine mammals.

In-water construction activities associated with the project would include vibratory pile driving, and vibratory pile removal. The sounds produced by these activities are considered non-impulsive. Impulsive sounds (*e.g.,* explosions, gunshots, sonic booms, impact pile driving) are typically transient, brief (less than 1 second), broadband, and consist of high peak sound pressure with rapid rise time and rapid decay (ANSI, 1986; NIOSH, 1998; ANSI, 2005; NMFS, 2018). Non-impulsive sounds (*e.g.,* aircraft, machinery operations such as drilling or dredging, vibratory pile driving, and active sonar systems) can be broadband, narrowband or tonal, brief or prolonged (continuous or intermittent), and typically do not have the high peak sound pressure with raid rise/decay time that impulsive sounds do (ANSI, 1995; NIOSH, 1998; NMFS, 2018). The distinction between these two sound types is important because they have differing potential to cause physical effects, particularly with regard to hearing (*e.g.,* Southall *et al.,* 2007).

Only one type of pile hammer would be used on this project: vibratory. Vibratory hammers install piles by vibrating them and allowing the weight of the hammer to push them into the sediment. Vibratory hammers produce significantly less sound than impact hammers. Peak sound pressure levels (SPLs) may be 180 dB or greater, but are generally 10 to 20 dB lower than SPLs generated during impact pile driving of the same-sized pile (Oestman *et al.,* 2009). Rise time is slower, reducing the probability and severity of injury, and sound energy is distributed over a greater amount of time (Nedwell and Edwards, 2002; Carlson, *et al.,* 2005).

The likely or possible impacts of activity proposed by Phillips 66 on marine mammals could involve both non-acoustic and acoustic stressors. Potential non-acoustic stressors include the physical presence of the equipment and personnel; however, any impacts to marine mammals are expected to primarily be acoustic in nature.

Auditory Effects

The introduction of anthropogenic noise into the aquatic environment from pile driving is the primary means by which marine mammals may be harassed from the Phillips 66 specified activity. In general, animals exposed to natural or anthropogenic sound may experience physical and behavioral effects, ranging in magnitude from none to severe (Southall *et al.,* 2007, 2021). Exposure to pile driving noise has the potential to result in auditory threshold shifts (TS) and behavioral reactions (*e.g.,* avoidance, temporary cessation of foraging and vocalizing, changes in dive behavior). Exposure to anthropogenic noise can also lead to non-observable physiological responses such an increase in stress hormones. Additional noise in a marine mammal's habitat can mask acoustic cues used by marine mammals to carry out daily functions such as communication and predator and prey detection. The effects of pile driving noise on marine mammals are dependent on several factors, including, but not limited to, sound type (*e.g.,* impulsive vs. non-impulsive), the species, age and sex class (*e.g.,* adult male vs. mom with calf), duration of exposure, the distance between the pile and the animal, received levels, behavior at time of exposure, and previous history with exposure (Wartzok *et al.,* 2004; Southall *et al.,* 2007). Here we discuss physical auditory effects (TSs) followed by behavioral effects and potential impacts on habitat.

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

Permanent Threshold Shift (PTS)—NMFS defines PTS as a permanent, irreversible increase in the threshold of audibility at a specified frequency or portion of an individual's hearing range above a previously established reference level (NMFS 2018). Available data from humans and other terrestrial mammals indicate that a 40 dB threshold shift approximates PTS onset (Ward *et al.,* 1958, 1959; Ward, 1960; Kryter *et al.,* 1966; Miller, 1974; Ahroon *et al.,* 1996; Henderson *et al.,* 2008). PTS levels for marine mammals are estimates, as with the exception of a single study unintentionally inducing PTS in a harbor seal (Kastak *et al.,* 2008), there are no empirical data measuring PTS in marine mammals largely due to the fact that, for various ethical reasons, experiments involving anthropogenic noise exposure at levels inducing PTS are not typically pursued or authorized (NMFS, 2018).

Temporary Threshold Shift (TTS)—A temporary, reversible increase in the threshold of audibility at a specified frequency or portion of an individual's hearing range above a previously established reference level (NMFS, 2018). Based on data from cetacean TTS measurements (Southall *et al.,* 2007), a TTS of 6 dB is considered the minimum threshold shift clearly larger than any day-to-day or session-to-session variation in a subject's normal hearing ability (Schlundt *et al.,* 2000; Finneran *et al.,* 2000, 2002). As described in Finneran (2015), marine mammal studies have shown the amount of TTS increases with cumulative sound exposure level (SELcum) in an accelerating fashion: At low exposures with lower SELcum, the amount of TTS is typically small and the growth curves have shallow slopes. At exposures with higher SELcum, the growth curves become steeper and approach linear relationships with the noise SEL.

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

Currently, TTS data only exist for four species of cetaceans (bottlenose dolphin (*Tursiops truncatus*), beluga whale (*Delphinapterus leucas*), harbor porpoise, and Yangtze finless porpoise (*Neophocoena asiaeorientalis*)) and five species of pinnipeds exposed to a limited number of sound sources (*i.e.,* mostly tones and octave-band noise) in laboratory settings (Finneran, 2015). TTS was not observed in trained spotted (*Phoca largha*) and ringed (*Pusa hispida*) seals exposed to impulsive noise at levels matching previous predictions of TTS onset (Reichmuth *et al.,* 2016). In general, harbor seals and harbor porpoises have a lower TTS onset than other measured pinniped or cetacean species (Finneran, 2015). Additionally, the existing marine mammal TTS data come from a limited number of individuals within these species. No data are available on noise-induced hearing loss for mysticetes. For summaries of data on TTS in marine mammals or for further discussion of TTS onset thresholds, please see Southall *et al.* (2007), Finneran and Jenkins (2012), Finneran (2015), and table 5 in NMFS (2018).

Installing piles for this project requires vibratory pile driving. For the project, there would likely be pauses in

activities producing the sound during each day. Given these pauses and that many marine mammals are likely moving through the action area and not remaining for extended periods of time, the potential for TS declines, and is considered unlikely for this project.

Behavioral harassment—Exposure to noise from pile driving and removal also has the potential to behaviorally disturb marine mammals. Available studies show wide variation in response to underwater sound; therefore, it is difficult to predict specifically how any given sound in a particular instance might affect marine mammals perceiving the signal. If a marine mammal does react briefly to an underwater sound by changing its behavior or moving a small distance, the impacts of the change are unlikely to be significant to the individual, let alone the stock or population. However, if a sound source displaces marine mammals from an important feeding or breeding area for a prolonged period, impacts on individuals and populations could be significant (*e.g.,* Lusseau and Bejder, 2007; Weilgart, 2007; NRC, 2005, Southall *et al.,* 2021).

Disturbance may result in changing durations of surfacing and dives, number of blows per surfacing, or moving direction and/or speed; reduced/increased vocal activities; changing/cessation of certain behavioral activities (such as socializing or feeding); visible startle response or aggressive behavior (such as tail/fluke slapping or jaw clapping); avoidance of areas where sound sources are located. Pinnipeds may increase their haul out time, possibly to avoid in-water disturbance (Thorson and Reyff, 2006). Behavioral responses to sound are highly variable and context-specific and any reactions depend on numerous intrinsic and extrinsic factors (*e.g.,* species, state of maturity, experience, current activity, reproductive state, auditory sensitivity, time of day), as well as the interplay between factors (*e.g.,* Richardson *et al.,* 1995; Wartzok *et al.,* 2003; Southall *et al.,* 2007, 2021; Weilgart, 2007; Archer *et al.,* 2010). Behavioral reactions can vary not only among individuals but also within exposures of an individual, depending on previous experience with a sound source, context, and numerous other factors (Ellison *et al.,* 2012, Southall *et al.,* 2021), and can vary depending on characteristics associated with the sound source (*e.g.,* whether it is moving or stationary, number of sources, distance from the source). In general, pinnipeds seem more tolerant of, or at least habituate more quickly to, potentially disturbing underwater sound than do cetaceans, and generally seem to be less responsive to exposure to industrial sound than most cetaceans. For a review of studies involving marine mammal behavioral responses to sound, see Southall *et al.,* 2007; Gomez *et al.,* 2016; and Southall *et al.,* 2021 reviews.

Disruption of feeding behavior can be difficult to correlate with anthropogenic sound exposure, so it is usually inferred by observed displacement from known foraging areas, the appearance of secondary indicators (*e.g.,* bubble nets or sediment plumes), or changes in dive behavior. As for other types of behavioral response, the frequency, duration, and temporal pattern of signal presentation, as well as differences in species sensitivity, are likely contributing factors to differences in response in any given circumstance (*e.g.,* Croll *et al.,* 2001; Nowacek *et al.,* 2004; Madsen *et al.,* 2006; Yazvenko *et al.,* 2007). A determination of whether foraging disruptions incur fitness consequences would require information on estimates of the energetic requirements of the affected individuals and the relationship between prey availability, foraging effort and success, and the life history stage of the animal.

Masking—Sound can disrupt behavior through masking, or interfering with, an animal's ability to detect, recognize, or discriminate between acoustic signals of interest (*e.g.,* those used for intraspecific communication and social interactions, prey detection, predator avoidance, navigation) (Richardson *et al.,* 1995). Masking occurs when the receipt of a sound is interfered with by another coincident sound at similar frequencies and at similar or higher intensity, and may occur whether the sound is natural (*e.g.,* snapping shrimp, wind, waves, precipitation) or anthropogenic (*e.g.,* pile driving, shipping, sonar, seismic exploration) in origin. The ability of a noise source to mask biologically important sounds depends on the characteristics of both the noise source and the signal of interest (*e.g.,* signal-to-noise ratio, temporal variability, direction), in relation to each other and to an animal's hearing abilities (*e.g.,* sensitivity, frequency range, critical ratios, frequency discrimination, directional discrimination, age or TTS hearing loss), and existing ambient noise and propagation conditions. Masking of natural sounds can result when human activities produce high levels of background sound at frequencies important to marine mammals. Conversely, if the background level of underwater sound is high (*e.g.,* on a day with strong wind and high waves), an anthropogenic sound source would not be detectable as far away as would be possible under quieter conditions and would itself be masked. Ferndale Dock services barges, tanker ships, and other vessels. Approximately 3,000 ships travel through the Strait of Georgia to visit Vancouver. Therefore, background sound levels in the project area are likely already elevated.

Marine Mammal Habitat Effects

The proposed Phillips 66 construction activities could have localized, temporary impacts on marine mammal habitat by increasing in-water SPLs and slightly decreasing water quality. Construction activities are of short duration and would likely have temporary impacts on marine mammal habitat through increases in underwater sound. Increased noise levels may affect acoustic habitat (see masking discussion above) and adversely affect marine mammal prey in the vicinity of the project area (see discussion below). During pile driving, elevated levels of underwater noise would ensonify waters around the dock, where both fish and mammals may occur, and could affect foraging success.

In-water pile driving and pile removal would also cause short-term effects on water quality due to increased turbidity. Local currents are anticipated to disburse suspended sediments produced by project activities at moderate to rapid rates, depending on tidal stage. Phillips 66 would employ standard construction best management practices, thereby reducing any impacts. Considering the nature and duration of the effects, combined with the measures to reduce turbidity, the impact from increased turbidity levels is expected to be discountable.

Pile installation may temporarily increase turbidity resulting from suspended sediments. Any increases would be temporary, localized, and minimal. Phillips 66 must comply with state water quality standards during these operations by limiting the extent of turbidity to the immediate project area. In general, turbidity associated with pile installation is localized to about a 25-feet (ft) radius around the pile (Everitt *et al.,* 1980). Cetaceans are not expected to be close enough to the project pile driving areas to experience effects of turbidity, and any pinnipeds would likely be transiting the area and could avoid localized areas of turbidity. Therefore, the impact from increased turbidity levels is expected to be discountable to marine mammals. Furthermore, pile driving at the project site would not obstruct movements or migration of marine mammals.

Effects on Prey

Construction activities would produce continuous (*i.e.,* vibratory pile driving) sounds. Fish react to sounds that are especially strong and/or intermittent low-frequency sounds. Short duration, sharp sounds can cause overt or subtle changes in fish behavior and local distribution. Hastings and Popper (2005) identified several studies that suggest fish may relocate to avoid certain areas of sound energy. Additional studies have documented effects of pile driving on fish, although several are based on studies in support of large, multiyear bridge construction projects (*e.g.,* Scholik and Yan, 2001, 2002; Popper and Hastings, 2009). Sound pulses at received levels may cause noticeable changes in behavior (Pearson *et al.,* 1992; Skalski *et al.,* 1992). SPLs of sufficient strength have been known to cause injury to fish and fish mortality. Since only continuous vibratory piling will be used in this project, impacts are expected to be less.

Impacts on marine mammal prey (*i.e.,* fish or invertebrates) of the immediate area due to the acoustic disturbance are possible. The duration of fish or invertebrate avoidance or other disruption of behavioral patterns in this area after pile driving stops is unknown, but a rapid return to normal recruitment, distribution and behavior is anticipated. Further, significantly large areas of fish and marine mammal foraging habitat are available in the nearby waters.

The duration of the construction activities is relatively short, with pile driving activities expected to take only 35 days. There will be no more than a total of 4 hours vibratory driving per day and pile driving activities would be restricted to daylight hours. The most likely impact to fish from pile driving activities at the project area would be temporary behavioral avoidance of the area. In general, impacts to marine mammal prey species are expected to be minor and temporary due to the short timeframe for the project.

Construction activities, in the form of increased turbidity, have the potential to adversely affect fish in the project area. Increased turbidity is expected to occur in the immediate vicinity of construction activities. However, suspended sediments and particulates are expected to dissipate quickly within a single tidal cycle. Given the limited area affected and high tidal dilution rates, any effects on fish are expected to be minor or negligible. In addition, best management practices would be in effect, which would limit the extent of turbidity to the immediate project area.

In summary, given the relatively short daily duration of sound associated with individual pile driving and events and the relatively small areas being affected, pile driving activities associated with the proposed action are not likely to have a permanent, adverse effect on any fish habitat, or populations of fish species. Thus, we conclude that impacts of the specified activity are not likely to have more than short-term adverse effects on any prey habitat or populations of prey species. Further, any impacts to marine mammal habitat are not expected to result in significant or long-term consequences for individual marine mammals, or to contribute to adverse impacts on their populations.

Estimated Take of Marine Mammals

This section provides an estimate of the number of incidental takes proposed for authorization 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, as use of the acoustic stressors (*i.e.,* pile driving) has the potential to result in disruption of behavioral patterns for individual marine mammals. The proposed mitigation and monitoring measures are expected to minimize the severity of the taking to the extent practicable.

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 thresholds above which NMFS believes the best available science indicates marine mammals will be behaviorally harassed or incur some degree of permanent hearing impairment; (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 Thresholds

NMFS recommends the use of acoustic thresholds 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).

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 µPa)) for continuous (*e.g.,* vibratory pile driving, drilling) and above RMS SPL 160 dB (re 1 µPa) 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.

The Phillips 66 proposed activity includes the use of continuous sound sources (vibratory driving), and therefore the RMS SPL threshold of 120 dB re 1 µPa is applicable.

These thresholds are provided in the table 4 below. The references, analysis, and methodology used in the development of the thresholds are described in NMFS' 2018 Technical Guidance, which may be accessed at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance.*

TABLE 4—THRESHOLDS IDENTIFYING THE ONSET OF PERMANENT THRESHOLD SHIFT

Hearing group	PTS Onset Acoustic Thresholds * (Received Level)	
	Impulsive	Non-impulsive
Low-Frequency (LF) Cetaceans	*Cell 1:* $L_{pk,flat}$: 219 dB; $L_{E,LF,24h}$: 183 dB	*Cell 2:* $L_{E,LF,24h}$: 199 dB.
Mid-Frequency (MF) Cetaceans	*Cell 3:* $L_{pk,flat}$: 230 dB; $L_{E,MF,24h}$: 185 dB	*Cell 4:* $L_{E,MF,24h}$: 198 dB.
High-Frequency (HF) Cetaceans	*Cell 5:* $L_{pk,flat}$: 202 dB; $L_{E,HF,24h}$: 155 dB	*Cell 6:* $L_{E,HF,24h}$: 173 dB.
Phocid Pinnipeds (PW) (Underwater)	*Cell 7:* $L_{pk,flat}$: 218 dB; $L_{E,PW,24h}$: 185 dB	*Cell 8:* $L_{E,PW,24h}$: 201 dB.
Otariid Pinnipeds (OW) (Underwater)	*Cell 9:* $L_{pk,flat}$: 232 dB; $L_{E,OW,24h}$: 203 dB	*Cell 10:* $L_{E,OW,24h}$: 219 dB.

* Dual metric acoustic thresholds for impulsive sounds: Use whichever results in the largest isopleth for calculating PTS onset. If a non-impulsive sound has the potential of exceeding the peak sound pressure level thresholds associated with impulsive sounds, these thresholds should also be considered.

Note: Peak sound pressure (L_{pk}) has a reference value of 1 µPa, and cumulative sound exposure level (L_E) has a reference value of 1µPa²s. In this table, thresholds are abbreviated to reflect American National Standards Institute standards (ANSI 2013). However, peak sound pressure is defined by ANSI as incorporating frequency weighting, which is not the intent for this Technical Guidance. Hence, the subscript "flat" is being included to indicate peak sound pressure should be flat weighted or unweighted within the generalized hearing range. The subscript associated with cumulative sound exposure level thresholds indicates the designated marine mammal auditory weighting function (LF, MF, and HF cetaceans, and PW and OW pinnipeds) and that the recommended accumulation period is 24 hours. The cumulative sound exposure level thresholds 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 acoustic thresholds 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 TL 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.,* vibratory pile driving). Additionally, vessel traffic and other commercial and industrial activities in the project area may contribute to elevated background noise levels which may mask sounds produced by the project.

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 and topography. The general formula for underwater *TL* is:

$$TL = B * \mathrm{Log}_{10}(R_1/R_2),$$

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

This formula neglects loss due to scattering and absorption, which is assumed to be zero here. The degree to which underwater sound propagates away from a sound source is dependent on a variety of factors, most notably the water bathymetry and presence or absence of reflective or absorptive conditions including in-water structures and sediments. Spherical spreading occurs in a perfectly unobstructed (free-field) environment not limited by depth or water surface, resulting in a 6-dB reduction in sound level for each doubling of distance from the source (20*log[range]). Cylindrical spreading occurs in an environment in which sound propagation is bounded by the water surface and sea bottom, resulting in a reduction of 3 dB in sound level for each doubling of distance from the source (10*log[range]). A practical spreading value of 15 is often used under conditions, such as the project site, where water increases with depth as the receiver moves away from the shoreline, resulting in an expected propagation environment that would lie between spherical and cylindrical spreading loss conditions. Practical spreading loss is assumed here.

The intensity of pile driving sounds is greatly influenced by factors such as the type of piles, hammers, and the physical environment in which the activity takes place. In order to calculate the distances to the Level B harassment sound thresholds for the method and piles being used in this project, NMFS used acoustic monitoring data from other locations to develop proxy source levels for the various pile types, sizes and methods. The project includes vibratory pile installation of 20-in steel piles. Source levels for the pile size and driving method are presented in table 5. The closest representative pile size for reference sound levels was 24-inch piles (WSDOT 2020).

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

Equipment used	Noise level			Distance from measurement
	dB Peak	dB rms	dB SEL	
Vibratory pile driving 24-inch steel piles [1]	181	153	.....	10 m

[1] Caltrans 2020.

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 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 impact or vibratory pile driving and removal, the optional User Spreadsheet tool predicts the distance at which, if a marine mammal remained at that distance for the duration of the activity, it would be expected to incur PTS. Inputs used for impact driving in the optional NMFS User Spreadsheet tool, and the resulting estimated isopleths, are reported below in tables 6 and table 7 below.

TABLE 6—USER SPREADSHEET INPUTS FOR LEVEL A HARASSMENT ISOPLETHS

Inputs	20-in steel vibratory installation
Spreadsheet Tab Used	Vibratory Pile Driving (Stationary: non-impulsive, Continuous)
Source Level (Single Strike/shot SEL)	
Peak	
RMS	153
Weighting Factor Adjustment (kHz)	2.5
Strikes per pile	
Piles per day	16
Propagation (xLogR)	15
Duration	15
Distance of source level measurement (meters)+	10

TABLE 7—CALCULATED LEVEL A AND LEVEL B HARASSMENT ISOPLETHS (m) AND ENSONIFIED AREAS

[km^2 in Parentheses]

Pile size/type	Level A pinnipeds		Level A cetaceans			Level B
	Harbor seal	Sea lions	LF	MF	HF	
Vibratory Installation						120 dB threshold.
20-in steel	3.1 (.003)	<1 (.000)	5 (.005)	<1 (.000)	7.5 (.007)	1585 (1.5)

*The Level A harassment isopleths associated with vibratory installation are all below the minimum shutdown zone and result in very small ensonified areas. Therefore they are not provided in this table but will be included in the following calculated take tables.

Marine Mammal Occurrence and Take Estimation

In this section we provide information about the occurrence of marine mammals, including density or other relevant information which will inform the take calculations. The primary source for density estimates is from the Navy Marine Species Density Database (NMSDD) Phase III for the Northwest Training and Testing Study Area (Navy, 2019). These density estimates are shown in table 8 and will be used to calculate take due to the lack of site-specific data that is available.

To quantitatively assess potential exposure of marine mammals to noise levels from pile driving over the NMFS threshold guidance, the following equation was first used to provide an estimate of potential exposures within estimated harassment zones:

Exposure estimate = N × harassment zone (km^2) × maximum days of pile driving where

N = density estimate (animals per km^2) used for each species.

TABLE 8—MARINE MAMMAL SPECIES DENSITIES USED FOR EXPOSURE CALCULATIONS

Species	Region characterized	Density (animals/km^2)
Humpback Whale	North Puget Sound/San Juan Islands (Fall and Winter)	0.0027
Killer Whale (Southern Resident)	North Puget Sound/San Juan Islands (Fall and Winter)	0.0078
Killer Whale (Transient)	North Puget Sound/San Juan Islands (Fall and Winter)	0.0031
Harbor Porpoise	North Puget Sound	2.16
Steller Sea Lion	North Puget Sound/San Juan Islands (Fall)	0.0027
California Sea Lion	North Puget Sound/San Juan Islands (Fall)	0.0179
Harbor Seal	North Puget Sound/San Juan Islands (Fall)	0.76

Source: Navy 2019.

Potential Level A harassment zones were all calculated to less than 10 meters. As seen from table 7, marine mammals will have to be very close to the vibratory driving activity to be within the estimated Level A harassment zone. Marine mammal monitors will be in place, closely monitoring this zone and stopping work before any marine mammal gets near the largest Level A harassment zone of 6.2m from the project source. Based on the estimated Level A harassment zones, and density-based calculations for all species, no take by Level A Harassment was estimated (all less than 1.0). Harbor porpoise is the species with the highest density at 2.16 per km, multiplied by the Level A harassment zone of .007 km (table 7), and 35 days of work yields 0.53 individuals exposed to Level A harassment. Therefore, when considered in context of planned mitigation, no take by Level A harassment is expected. Table 9 below shows the total calculated take by Level B harassment over the 35 in-water work days proposed for the Phillips 66 activity resulting in total calculated take.

TABLE 9—CALCULATED AND REQUESTED TAKE BY LEVEL B HARASSMENT FROM VIBRATORY PILE INSTALLATION

35 Days of 20-inch pile installation by vibratory hammer		
Species	Total level B harassment calculated	Level B harassment proposed for authorization
Harbor Porpoise	447	447
Steller Sea Lion	1	35
California Sea Lion	4	105
Harbor Seal	157	157

Humpback Whale

Humpback whales are an uncommon occurrence near the project area but they do have the potential to be in the area as they migrate to feeding grounds to the north and mating grounds far south. Based on best available density estimates, Phillips 66 has calculated the potential take of one humpback whale, by Level B harassment only. However, Phillips 66 proposes to shut down whenever humpback whales approach the Level B harassment zone. Given the low density of humpback whales in the project area, the ability to detect the whales visually from a considerable distance, the capacity to track whales through the Orca Network, and the anticipated efficacy of proposed mitigation and monitoring measures, Phillips 66 determined that no take of humpback whales is likely to occur and did not request that any such take be authorized. NMFS concurs with this request and, therefore, is not proposing to authorize take of humpback whales.

Killer Whales

Both SRKW and transient killer whales could potentially occur near the project area. Based on best available density estimates, Phillips 66 has calculated that up to two SRKWs and one transient whale could be taken, by Level B harassment only. Even though the project site is located in summer core area critical habitat, and the project may begin August 1, the southeastern corner of the Strait of Georgia (where the project is located) is not a location where SRKW are commonly sighted. According to the monthly ORCA network reports of September through October, from 2016–2023, the occurrence of killer whales from any stock was uncommon in the southeastern corner of the Strait of Georgia. When compared to transient killer whales, sightings of SRKWs were far less prevalent (ORCA 2024). Mitigation requires that pile driving activity shut down whenever a killer whale from any stock is observed approaching a harassment zone. Given the ability to visually detect killer whales from proposed PSO locations (including boats), the capacity to track this species through contact with the ORCA Network, and the expected efficacy of proposed mitigation and monitoring measures, Phillips 66 elected to not request take. Due to the expansive range of SRKWs; the relatively small area of their habitat that may be affected by the proposed project; the ready availability of habitat of similar or higher value, and the short-term nature of installation construction (35 days), Phillips 66 determined that no take of killer whales is likely to occur and did not request that any such take be authorized. NMFS concurs with this request and, therefore, is not proposing to authorize take of killer whales.

Steller Sea Lion

Calculated take based upon the species density in the Strait of Georgia yielded one potential take by Level B harassment during the 35 days of in-water pile driving work. While there are no known nearby haulouts, there are haulouts in the greater Strait of Georgia. Phillips 66 determined, based on anecdotal sightings at the facility, that the calculated value was too low. In addition, this species is known to travel significant distances in search for prey, possibly into the surrounding marine waters of the Cherry Point Aquatic Reserve.

NMFS reviewed other IHA monitoring reports from Puget Sound and found that the Seattle Pier 63 construction project (87 FR 31985, May 26, 2022) reported a maximum of one animal present per day over 17 in-water work days between October 12 and November 30, 2022. Therefore, NMFS assumes a similar rate of occurrence and is proposing to authorize 35 (one/day) takes of Steller sea lion by Level B harassment.

California Sea Lion

Calculated take based upon the species density in the Strait of Georgia found 4 potential takes by Level B harassment during the 35 days of pile driving work at the Phillips 66 dock. While there are no known nearby haulouts, there are haulouts in the greater Strait of Georgia. Phillips 66 determined, based on anecdotal sightings at the facility, that the calculated value was too low. In addition, this species is known to travel significant distances in search for prey, possibly into the surrounding marine waters of the Cherry Point Aquatic Reserve.

NMFS reviewed other IHA monitoring reports from Puget Sound and found that the Seattle Pier 63 construction project (87 FR 31985, May 26, 2022) reported a maximum of three California sea lions present per day over 17 in-water work days between October 12 and November 30, 2022. Therefore, NMFS assumes a similar rate of occurrence and is proposing to authorize 105 (three/day) takes of

California sea lions by Level B Harassment.

Details of proposed takes by Level B harassment as a percentage of stocks are shown in table 10.

TABLE 10—PROPOSED TAKE OF MARINE MAMMALS BY LEVEL B HARASSMENT BY SPECIES, STOCK, AND PERCENT OF TAKE BY STOCK

Common name	Stock	Stock abundance	Total proposed take	Proposed take as percentage of stock
Harbor porpoise	Washington Inland Waters	11,233	447	3.97
Steller sea lion	Eastern U.S	36,308	35	0.10
California sea lion	U.S	257,606	105	0.04
Harbor seal	Washington Northern Inland	16,451	157	0.95

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. NMFS regulations require applicants for incidental take authorizations 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, impact on operations.

Pre-start Clearance Monitoring—Prior to the start of daily in-water construction activity, or whenever a break in pile driving/removal of 30 minutes or longer occurs, PSOs would observe the shutdown and monitoring 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 that 30-minute period. If a marine mammal is observed within the shutdown zone, a soft-start (discussed below) cannot proceed until the animal has left the zone or has not been observed for 15 minutes. If the monitoring zone has been observed for 30 minutes and marine mammals are not present within the zone, soft-start procedures can commence and work can continue. Pre-start clearance monitoring must be conducted during periods of visibility sufficient for the lead PSO to determine that the shutdown zones, indicated in table 11, are clear of marine mammals. Pile driving may commence following 30 minutes of observation, when the determination is made that the shutdown zones are clear of marine mammals. If work ceases for more than 30 minutes, the pre-activity monitoring of both the monitoring zone and shutdown zone would commence.

Implementation of Shutdown Zones—For all pile driving activities, Phillips 66 would implement shutdowns within designated zones. The purpose of a shutdown zone is generally to define an area within which shutdown of activity would occur upon sighting of a marine mammal (or in anticipation of an animal entering the defined area). Implementation of shutdowns would be used to avoid takes by Level A harassment from vibratory pile driving for all four species for which take may occur.

A minimum shutdown zone of 10 m would be required for all in-water construction activities to avoid physical interaction with marine mammals. Proposed shutdown and monitoring zones for each activity type are shown in table 11.

TABLE 11—SHUTDOWN ZONES DURING PILE INSTALLATION AND REMOVAL (m)

Pile size/type	Shutdown zones			Level B harassment monitoring zone
	HF	Phocid	Otariid	
20-in steel Vibratory	10	10	10	1,585

All marine mammals would be monitored in the Level B harassment zones and throughout the area as far as visual monitoring can take place. If one of the four species of marine mammal for which take would be authorized enters the Level B harassment zone, in-water activities would continue and PSOs would document the animal's presence within the estimated harassment zone.

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 shut down immediately. 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.

Coordination With Local Marine Mammal Research Network—Prior to the start of pile driving for the day the

PSOs would contact the Orca Network to find out the location of the nearest sightings of any killer whales or humpback whales. Phillips 66 must delay or halt pile driving activities if any killer whales or humpback whales are sighted within the vicinity of the project area and are approaching the Level B harassment zones (table 11) during in-water activities. Finally, if a SRKW, unidentified killer whale, or humpback whale enters the Level B harassment zone undetected, in-water pile driving must be suspended immediately upon detection and must not resume until the animal exits the Level B harassment zone or 15 minutes have passed without re-detection of the animal.

Based on our evaluation of the applicant's proposed measures, NMFS has preliminarily determined that the proposed mitigation measures provide the means of effecting the least practicable impact on the affected species or stocks and their habitat, 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.

Visual Monitoring

Monitoring shall be conducted by NMFS-approved observers. Trained observers shall be placed from the best vantage point(s) practicable to monitor for marine mammals and implement shutdown or delay procedures when applicable through communication with the equipment operator. Observer training must be provided prior to project start, and shall include instruction on species identification (sufficient to distinguish the species in the project area), description and categorization of observed behaviors and interpretation of behaviors that may be construed as being reactions to the specified activity, proper completion of data forms, and other basic components of biological monitoring, including tracking of observed animals or groups of animals such that repeat sound exposures may be attributed to individuals (to the extent possible).

Monitoring would be conducted 30 minutes before, during, and 30 minutes after pile driving activities. In addition, observers shall record all incidents of marine mammal occurrence, regardless of distance from activity, and shall document any behavioral reactions in concert with distance from piles being driven. 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.

A minimum of two PSOs would be on duty during all in-water pile driving activities. One 'shore-based' observer will be stationed at locations offering best line of sight views to monitor the entirety of the shutdown zones and provide the most complete coverage of the monitoring zones. Additionally, Phillips 66 proposes to deploy one boat-based PSO that will be positioned at a location or moving in a pattern that offers the most complete visual coverage of the monitoring zone. Note, however, PSO position(s) may vary based on construction activity and location of piles or equipment.

PSOs would scan the waters using binoculars and would use a handheld range-finder device to verify the distance to each sighting from the project site. All PSOs would be trained in marine mammal identification and behaviors and are required to have no other project-related tasks while conducting monitoring. In addition, monitoring would be conducted by qualified observers, who would be placed at the best vantage point(s) practicable to monitor for marine mammals and implement shutdown/delay procedures when applicable by calling for the shutdown to the hammer operator via a radio. Phillips 66 would adhere to the following observer qualifications:

1. PSOs must be independent of the activity contractor (for example, employed by a subcontractor) and have no other assigned tasks during monitoring periods,
2. At least one PSO must have prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization,
3. Other PSOs may substitute other relevant experience, education (degree in biological science or related field), or training for prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization,
4. Where a team of three or more PSOs is required, a lead observer or monitoring coordinator must be designated. The lead observer must have prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization,
5. PSOs must be approved by NMFS prior to beginning any activity subject to this IHA.

Additional standard observer qualifications include:

- 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 behaviors;
- Sufficient training, orientation, or experience with the construction operation to provide for personal safety during observations;
- Writing skills sufficient to prepare a report of observations including but not limited to the number and species of

marine mammals observed; dates and times when in-water construction activities were conducted; dates and times when in-water construction activities were suspended to avoid potential incidental injury from construction sound of marine mammals observed within a defined shutdown zone; and marine mammal behavior; and,

- Ability to communicate orally, by radio or in person, with project personnel to provide real-time information on marine mammals observed in the area as necessary.

Reporting

A draft marine mammal monitoring report would be submitted to NMFS within 90 days after the completion of pile driving and removal activities. It would include an overall description of work completed, a narrative regarding marine mammal sightings, and associated PSO data sheets. Specifically, the report must include:

- Dates and times (begin and end) of all marine mammal monitoring,
- Construction activities occurring during each daily observation period, including the number and type of piles driven or removed and by what method, and the total equipment duration or total number of minutes for each pile (vibratory 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: Name of PSO who sighted the animal(s) and PSO location and activity at time of sighting; Time of sighting; 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; Distance and bearing of each marine mammal observed relative to the pile being driven for each sighting (if pile driving was occurring at time of sighting); Estimated number of animals (min/max/best estimate); Estimated number of animals by cohort (adults, juveniles, neonates, group composition, *etc.*); Animal's closest point of approach and estimated time spent within the harassment zone; and 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),
- Number of marine mammals detected within the harassment zone, by species,
- Detailed information about any implementation of any mitigation triggered (*e.g.,* shutdowns and delays), a description of specific actions that ensued, and resulting changes in behavior of the animal(s), if any.

If no comments are received from NMFS within 30 days, the draft final report would constitute the final report. If comments are received, a final report addressing NMFS comments must be submitted within 30 days after receipt of comments.

Reporting Injured or Dead Marine Mammals

In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by the IHA (if issued), such as an injury, serious injury or mortality, Phillips 66 would immediately cease the specified activities and report the incident to the Office of Protected Resources, NMFS, and the West Coast Region regional stranding coordinator. The report would include the following information:

- Description of the incident;
- Environmental conditions (*e.g.,* Beaufort sea state, visibility);
- Description of all marine mammal observations in the 24 hours preceding the incident;
- Species identification or description of the animal(s) involved;
- Fate of the animal(s); and
- Photographs or video footage of the animal(s) (if equipment is available).

Activities would not resume until NMFS is able to review the circumstances of the prohibited take. NMFS would work with Phillips 66 to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. Phillips 66 would not be able to resume their activities until notified by NMFS.

In the event that Phillips 66 discovers an injured or dead marine mammal, and the lead PSO determines that the cause of the injury or death is unknown and the death is relatively recent (*e.g.,* in less than a moderate state of decomposition as described in the next paragraph), Phillips 66 would immediately report the incident to the Office of Protected Resources (*PR.ITP.MonitoringReports@noaa.gov*), NMFS and to the West Coast Region regional stranding coordinator as soon as feasible. The report would include the same information identified in the paragraph above. Activities would be able to continue while NMFS reviews the circumstances of the incident. NMFS would work with Phillips 66 to determine whether modifications in the activities are appropriate.

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 majority of our analysis applies to all the species listed in table 9, given that many of the anticipated effects of this project on different marine mammal stocks are expected to be relatively similar in nature. Where there are meaningful differences between species or stocks, or groups of species, in anticipated individual responses to activities, impact of expected take on the population due to differences in population status, or impacts on habitat, they are described independently in the analysis below.

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

Take by Level B harassment would be due to potential behavioral disturbance, and TTS. No serious injury or mortality is anticipated or proposed for authorization given the nature of the activity and measures designed to minimize the possibility of injury to marine mammals. The potential for harassment is minimized through the construction method and the implementation of the planned mitigation measures (see Proposed Mitigation section).

Based on reports in the literature as well as monitoring from other similar activities, behavioral disturbance (*i.e.,* Level B harassment) would likely be limited to reactions such as increased swimming speeds, increased surfacing time, or decreased foraging (if such activity were occurring) (*e.g.,* Thorson and Reyff, 2006; HDR, Inc., 2012; Lerma, 2014). Most likely for pile driving, individuals would simply move away from the sound source and be temporarily displaced from the areas of pile driving, although even this reaction has been observed primarily only in association with impact pile driving. The pile driving activities analyzed here are similar to, or less impactful than, numerous other construction activities conducted in Washington, which have taken place with no observed severe responses of any individuals or known long-term adverse consequences. The impact of Level B harassment takes on the affected individuals would be minimized through use of mitigation measures described herein and, if sound produced by project activities is sufficiently disturbing, animals are likely to simply avoid the area while the activity is occurring. The project site itself is frequented by large tankers every few days, but the majority of sound fields produced by the specified activities are relatively close to the dock. Animals disturbed by project sound would be expected to avoid the area and use nearby higher-quality habitats.

The project also is not expected to have significant adverse effects on affected marine mammals' habitat. The project activities would not modify existing marine mammal habitat for a significant amount of time. The activities may cause some fish or invertebrates to leave the area of disturbance, thus temporarily impacting marine mammals' foraging opportunities in a limited portion of the foraging range; but, because of the intermittent driving schedule (35 in-water work days between August 1 and October 31, 2024); short duration of the activities (no more than 4 hours per day vibratory driving); the relatively small area of the habitat that may be affected; and the availability of nearby habitat of similar or higher value, the impacts to marine mammal habitat are not expected to cause significant or long-term negative consequences.

While there are haulouts for pinnipeds in the area, these locations are some distance from the actual project site. There are two documented California sea lion haulouts in the southern Strait of Georgia, both on the western coast of the Strait in British Columbia. The closest haulout in near Tumbo Island on the eastern edge of the Gulf Island, over 15 miles from the project site. The closest documented Steller sea lion haulout location is over 10 miles from the project site, on Sucia Island (Jeffries *et al.,* 2000). The closest documented harbor seal haulouts are two different low population (≤100 individuals) locations approximately 5 miles from the project site, one to the north and one to the south (Jeffries *et al.,* 2000). To the southwest and west of the project location are 14 other haulouts dotted throughout a few of the small northern San Juan Islands (North of Orcas Island) within 10 miles of the project (Jeffries *et al.,* 2000).

While repeated exposures of individuals to this pile driving activity could cause limited Level B harassment in harbor seals, harbor porpoises, and sea lions, they are unlikely to considerably disrupt foraging behavior or result in significant decrease in fitness, reproduction, or survival for the affected individuals.

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 anticipated incidents of Level B harassment would consist of, at worst, temporary modifications in behavior that would not result in fitness impacts to individuals;
- The ensonifed area from the project is very small relative to the overall habitat ranges of all species and stocks, and no habitat of particular importance would be impacted;
- Repeated exposures of marine mammals to this pile driving activity could cause Level B harassment in seals, harbor porpoise and sea lion species, but are unlikely to considerably disrupt foraging behavior or result in significant decrease in fitness, reproduction, or survival for the affected individuals. In all, there would be no adverse impacts to the stocks as a whole; and
- The proposed mitigation measures are expected to reduce the effects of the specified activity by minimizing the intensity and/or duration of harassment events.

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 sections 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. Additionally, other qualitative factors may be considered in the analysis, such as the temporal or spatial scale of the activities.

Table 8 demonstrates the number of instances in which individuals of a given species could be exposed to received noise levels that could cause take of marine mammals. Our analysis shows that the total taking proposed for authorization is less than 4 percent of the best available population abundance estimate for all species.

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 Endangered Species Act of 1973 (ESA; 16 U.S.C. 1531 *et seq.*) requires that each Federal agency insure 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 IHAs, NMFS consults internally whenever we propose to authorize take for endangered or threatened 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 Phillips 66 for conducting in-water pile driving activities at the Phillips 66 Ferndale Refinery Dock in Ferndale Washington from August 1, 2024 through July 31, 2025, 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 activities. 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), and

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, and

- 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: June 18, 2024.

Kimberly Damon-Randall,

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

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

Agency Information Collection Activities; Submission to the Office of Management and Budget (OMB) for Review and Approval; Comment Request; Evaluation of Public Visitors' Experience at the National Marine Sanctuaries Visitor Centers and Exhibits

AGENCY: National Oceanic & Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of information collection, request for comment.

SUMMARY: The Department of Commerce, in accordance with the Paperwork Reduction Act of 1995 (PRA), invites the general public and other Federal agencies to comment on proposed, and continuing information collections, which helps us assess the impact of our information collection requirements and minimize the public's reporting burden. The purpose of this notice is to allow for 60 days of public comment preceding submission of the collection to OMB.

DATES: To ensure consideration, comments regarding this proposed information collection must be received on or before August 26, 2024.

ADDRESSES: Interested persons are invited to submit written comments to Adrienne Thomas, NOAA PRA Officer, at *NOAA.PRA@noaa.gov.* Please reference OMB Control Number 0648–0582 in the subject line of your comments. Do not submit Confidential Business Information or otherwise sensitive or protected information.

FOR FURTHER INFORMATION CONTACT: Requests for additional information or specific questions related to collection activities should be directed to Dr. Giselle Samonte, Economist, NOAA Office of National Marine Sanctuaries, 1305 East West Highway, SSMC4, 10th Floor, Silver Spring, MD 20910; (301) 427–8606 or email address: *Giselle.Samonte@noaa.gov.*

SUPPLEMENTARY INFORMATION:

I. Abstract

The Office of National Marine Sanctuaries (ONMS) is requesting revision and extension of a currently approved information collection. The evaluation of visitor demographics, experiences, and opinions about visitor centers and exhibits is needed to support the conservation, education, and management goals of ONMS to strengthen and improve the