DEPARTMENT OF DEFENSE
DEPARTMENT OF THE NAVY

FINDING OF NO SIGNIFICANT IMPACT FOR THE PROGRAMMATIC ENVIRONMENTAL ASSESSMENT FOR WEST COAST CIVILIAN PORT DEFENSE TRAINING, FOR Alternative 2 (Anchorage, AK Proposed Action Area)

Attachments:

(1) Letter of Concurrence for Endangered Species Act Informal Consultation for August 2025 Activities in Anchorage, Alaska

Pursuant to Department of Defense (DoD) National Environmental Policy Act (NEPA) Implementing Procedures of June 30, 2025, the Navy gives notice that a Civilian Port Defense (CPD) Exercise entitled "Arctic Edge 2025" is being conducted in Anchorage, Alaska in August 2025. In February 2020, the Navy prepared a Programmatic Environmental Assessment (PEA) for West Coast CPD activities that analyzed potential environmental impacts at several alternative locations including Anchorage ("Alternative 2"). This Finding of No Significant Impact (FONSI) incorporates the analysis from that PEA for Alternative 2 and validates the assumptions of the PEA as they apply to Arctic Edge 2025. The Navy concludes that an Environmental Impact Statement (EIS) is not required for Arctic Edge 2025. The Navy finds that the Proposed Action through implementation of Alternative 2 will not have a reasonably foreseeable significant effect on the quality of the human environment. The analysis and information presented in the PEA is incorporated by reference into this FONSI. Although Alternative 2 is the Action Alternative selected in support of Arctic Edge 2025, other locations identified in Alternatives 1-10 below have been selected in prior years.

Proposed Action: The Proposed Action is reduced in scope from what was described in the CPD PEA because it will only use up to three seafloor devices compared to the twenty six studied in the PEA, will not include aircraft or towed equipment with expendable cables, and will not use sonar systems such as the AN/SQQ-32 and AN/AQS-20. The Proposed Action is to conduct CPD activities in the waters of Knik Arm, Upper Cook Inlet, between the Port of Alaska and Port MacKenzie, in support of Arctic Edge 2025 exercise (AE25). The exercise will span approximately 15 days, tentatively August 1-15, 2025. U.S. Navy Explosive Ordnance Disposal (EOD) personnel from Expeditionary Mine Countermeasures (ExMCM) Company 9-1 will conduct in-water object detection and clearance training activities including the use of a small boat, moored in-water training mine shapes, unmanned underwater vehicles (UUVs), a remotely operated vehicle (ROV), and Navy divers. This portion of the training is expected to begin on or about 7 August 2025 and end on or about 15 August 2025, depending on weather and operational tempo. The activity includes the following actions, (described in further detail in Attachment 1):

- One small boat will deploy two to three moored training mine shapes, one sunken UUV on the seafloor, a ROV, and divers.
- Up to two UUVs will be deployed from a small boat to survey the bottom for anomalies.
- One ROV will conduct visual inspections of identified targets (i.e., moored training shapes and the sunken UUV).
- Divers will investigate or recover identified targets.
- Upon completion of the exercise, all training mine shapes, UUVs, and ROVs will be recovered.

The anticipated sound source level of the small boat engine is no more than 100 dB based on generally reported in-water sound source levels of outboard engines. The engine is similar to engines used in civilian craft operating in the local area. The acoustic source of the UUV used to survey for the training mine shapes is considered *de minimis* (it produces sound at a higher frequency than can be heard by any biological resources that could be in the Anchorage proposed action area). No explosives will be used during this training.

Purpose and Need: The purpose of the Proposed Action is to support the Department of Defense mission to defend the U.S. territory from attack by State and Non-State entities. Naval forces provide mine warfare capabilities to defend the homeland in support of the Maritime Operational Threat Response Plan (POTUS 8 November 2006).

Alternatives Considered: The PEA analyzed the potential environmental impacts of the following alternatives:

Under the No Action Alternative, no CPD training activities would be conducted in the study area contemplated by this PEA. This alternative required no analysis of potential consequences to environmental resources, as no new action would occur.

Under Alternative 1, CPD training activities would be conducted in the Kodiak, AK proposed action area, in the waters of Chiniak Bay.

Under Alternative 2, CPD training activities would be conducted in the Anchorage, AK proposed action area, in the waters of Cook Inlet. ***This is the Action Alternative that has been selected for implementation in August 2025.***

Under Alternative 3, CPD training activities would be conducted in the Seward, AK proposed action area, in the waters of Resurrection Bay.

Under Alternative 4, CPD training activities would be conducted in the Juneau, AK proposed action area, in the waters of Stephens Passage and Gastineau Channel. *FONSI signed on 27 February 2020 for CPD training in 2020.* A *second FONSI was signed on 18 February 2022 for an additional CPD training in Juneau in 2022.*

Under Alternative 5, CPD training activities would be conducted in the San Francisco, CA proposed action area, in the waters of San Francisco Bay, with a beaching location in San Francisco, CA.

Under Alternative 6, CPD training activities would be conducted in the Richmond, CA proposed action area, in the waters of San Francisco Bay, with a beaching location in Richmond, CA.

Under Alternative 7, CPD training activities would be conducted in the Concord, CA proposed action area, in the waters of San Francisco Bay, with a beaching location in Concord, CA.

Under Alternative 8, CPD training activities would be conducted in the Port Hueneme, CA proposed action area, in the waters of the Pacific Ocean.

Under Alternative 9, CPD training activities would be conducted in the Los Angeles/Long Beach, CA proposed action area, in the waters of San Pedro Bay. *FONSI signed on 1 December 2022 for CPD training occurring in 2023.*

Under Alternative 10, CPD training activities would be conducted in multiple proposed action areas over the course of one year. Events under Alternative 10 could occur either simultaneously or at different times throughout the year, depending on asset availability and schedules.

The location for each alternative was selected based on the following criteria:

- Water depths less than 300 ft (91 m);
- Near shipping lanes proximate to major ports; and,
- Beaching locations outside of sensitive habitats.

Alternatives considered but not carried forward for detailed analysis included 17 additional port locations that did not meet all three selection criteria.

A Preferred Alternative was not identified in the PEA due to the programmatic nature of the analysis. This FONSI, however, has been prepared specifically for planned CPD activities in Anchorage, AK in August 2025 (Alternative 2) in support of AE25.

Although Alternative 2 is the Action Alternative selected in support of the 2025 planned CPD activity, other locations defined by Alternative 1-10 may be selected in subsequent years. When future training activities are proposed, the Navy will review the PEA and supplemental NEPA will be completed as necessary and appropriate. Likewise, consultations will be conducted, as necessary and appropriate, and the Navy will make a final determination as to the

significance of potential impacts to the human and natural environment.

Section 4336b of title 42, U.S. Code, requires agencies to reevaluate the analysis and underlying assumptions in programmatic environmental documents more than five years old to ensure reliance on the analysis remains valid. The Navy has reevaluated the referenced PEA and concluded that there are no substantial changes to the proposed action (CPD activities planned for AE25 under Alternative 2 are at a reduced level from the activities analyzed in the PEA), there is no new information relevant to environmental concerns that was not considered, no significant changes to any underlying assumptions, and no significant changes to the best available scientific information on which the analysis relies. Accordingly, reliance on the PEA remains valid. Additionally, the Navy conducted an informal consultation with the National Marine Fisheries Service (NMFS) under section 7(a)(2) of the Endangered Species Act (ESA) and it was determined that the Proposed Action is not likely to adversely affect listed species or critical habitat (Attachment 1). Based on the valid analysis contained in the PEA, and the results of informal consultation, the Navy has determined that the proposed CPD activities under Alternative 2 to be conducted during AE25 will not have significant impacts, and therefore an EIS need not be prepared.

Environmental Effects: The Proposed Action under Alternative 2 will not have any reasonably foreseeable significant environmental effects. Certain environmental resources (water quality, land use, visual resources, airspace, infrastructure, public health and safety, and hazardous materials and wastes) were not analyzed in detail in the PEA because implementation of the Proposed Action would not be likely to result in environmental impacts on these resources or impacts would be negligible. Potential impacts on physical resources, biological resources, and cultural and socioeconomic resources are summarized here. Stressors that were analyzed in the PEA but are not present or relevant to this Proposed Action were not considered under Alternative 2.

Physical Resources. Physical resources analyzed include air quality, benthic habitat, and ambient acoustic environment. Although the Anchorage proposed action area is a maintenance area under the Clean Air Act for carbon monoxide, under no operating scenario would emissions associated with the Proposed Action (from small boats) reach or exceed the *de minimis* threshold. All mine shapes would be removed during or at the end of the Proposed Action, so no materials would be expended, and the seafloor would not be permanently altered. The benthic habitat within the Anchorage proposed action area is primarily sandy and rocky. Seafloor devices would be deployed in sandy areas where benthic habitat is expected to shift back in the same manner that it would following a disturbance of tidal energy, and no long-term increases in turbidity are anticipated. All sound associated with the Proposed Action would cease upon completion of the training event, and therefore any addition to the ambient noise environment would be

temporary. Increases to the acoustic environment would be insignificant when compared to the typical industrial and commercial shipping traffic transiting in the proposed action area. Therefore, implementation of Alternative 2 would not result in significant impacts on physical resources.

Biological Resources. Biological resources analyzed in the PEA include: marine invertebrates, benthic communities, and marine vegetation; fish; Essential Fish Habitat (EFH); birds; and marine mammals. The AE25 Proposed Action would involve: the movement of vessels, use of in-water devices (i.e., unmanned underwater vehicles and remotely operated vehicles), seafloor devices (deployed and remaining in place for up to one week), vessel noise and active acoustic transmissions. The PEA also analyzes the use of aircraft as part of the Proposed Action, but AE25 will not include aircraft. All active acoustic sources proposed for AE25 are considered *de minimis*, as they produce sound at a higher frequency than can be heard by any biological resources that could be in the Anchorage proposed action area. Sonar systems such as the AN/SQQ-32 and AN/AQS-20, which require quantitative acoustic effects analysis, will not be used in AE25. Therefore, incidental take authorization under the Marine Mammal Protection Act (MMPA) is not necessary and active acoustic sources were not consulted on under the Endangered Species Act (ESA).

Vessel movement, seafloor device presence, and in-water device use were considered in the PEA for their potential impacts to marine invertebrates, benthic communities, and marine vegetation. The PEA concluded that only temporary and localized disturbances would result from CPD training.

Vessel movement, seafloor device presence, in-water device use, and vessel noise were also considered in the PEA for their potential impacts to fish species. No ESA-listed fish are present in the proposed action area, and any impacts to non-ESA-listed fishes would be temporary and insignificant.

Vessel movement, in-water device use, and seafloor devices were considered in the PEA for their potential impacts to salmon EFH designated in the Anchorage proposed action area. However, the PEA did not identify groundfish EFH to be present in the Anchorage proposed action area and therefore did not address impacts to groundfish EFH. Because groundfish EFH is present in the Anchorage proposed action area, further analysis was conducted for impacts on groundfish EFH from AE25. The Anchorage proposed action area is characterized by a large tidal range averaging 26 feet, high tidal velocities up to 7 knots, and turbid water. It is also an area with high vessel traffic due to the nearby Port of Alaska. The AE25 Proposed Action would utilize a maximum of three mine shapes and one sunken UUV placed on the bottom for up to one week, far fewer than the 26 mine shapes that were analyzed in the PEA. Additionally, only one small vessel, two UUVs, and one ROV would be used during AE25. Accordingly, the Navy has determined that the AE25 Proposed Action would not adversely impact

environmental conditions. The PEA analysis also found that the use of vessels and in-water devices would not alter the water column in a measurable or lasting manner and would not impact benthic habitat. Additionally, only some groundfish species with demersal EFH occur within the Anchorage proposed action area during the time of the AE25 Proposed Action. Groundfish species only have egg, larvae, and early juvenile forms present in the Anchorage proposed action area during the summer. A U.S. Army Corps of Engineers survey (Anchorage Harbor Dredging & Disposal Anchorage, Alaska; Environmental Assessment and Finding of No Significant Impact; August 2008) reported that only small numbers of groundfish were collected, with the highest abundances occurring in fall and winter. Additionally, in February 2019, the Navy consulted with NMFS on the impacts on EFH for juvenile and adult salmon for a similar, but larger, civilian port defense exercise in Juneau, Alaska. Compared to the Juneau exercise, the Anchorage exercise would not include in-water devices towed by helicopters or expended fiber optic cables, and in-water devices would only be used during a short window of time during slack tide for about a week. NMFS concluded that all impacts associated with the Juneau exercise would be highly localized and temporary and were therefore unlikely to adversely affect EFH. The Navy also consulted with NMFS for a second CPD exercises in Juneau in January 2022. The 2022 Juneau exercise is similar to the proposed action in that it involved the placement of eight to ten non-explosive mine training shapes. That consultation likewise concluded that the localized and temporary nature of the impacts of seafloor devices would not adversely affect groundfish EFH. Within the Alaska study area (defined in the PEA as Kodiak, Juneau, Seward, and Anchorage), the fisheries management plan contains overlapping EFH for both groundfish and salmon. The Navy has therefore concluded that the same analysis that supported the "not likely to adversely affect" conclusion for the Juneau exercise regarding salmon EFH applies equally to the Proposed Action regarding groundfish EFH. In the Proposed Action, only temporary and localized disturbances are anticipated, and therefore the Proposed Action would not adversely affect the quality or quantity of salmon or groundfish EFH in the Anchorage proposed action area. Therefore, consultation with NMFS pursuant to the Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. § 1801 et seq., is not required.

Vessel movement, in-water device use, and vessel noise were considered for their potential impacts to marine birds. No ESA-listed marine bird species are expected to be present in the Anchorage proposed action area during the time of the Proposed Action. Any impacts associated with the implementation of Alternative 2 would be short-term and localized to marine birds.

Vessel movement, seafloor device presence, in-water device use, and vessel noise were considered for their potential impacts to marine mammals. Although any associated impacts would be short-term and localized, the Navy prepared an informal consultation under section 7 of the ESA. The Navy consulted with NMFS on the following ESA-listed species: Cook Inlet distinct population segment (DPS) beluga whale

(*Delphinapterus leucas*), western North Pacific DPS humpback whale (*Megaptera novaeangliae*), Mexico DPS humpback whale, and western DPS Steller sea lion (*Eumetopias jubatus*). On July 8, 2025, NMFS concurred with the Navy's assessment that AE25 is not likely to adversely affect humpback whales, Steller sea lions, beluga whales, or critical habitat for beluga whales (Attachment 1). Due to the reduced scope of the proposed activity, there are no predicted "takes" of marine mammals under the MMPA and therefore authorization under the MMPA is not required.

Implementation of AE25 for Alternative 2, in the limited scope identified in this FONSI, would not be expected to have any long-term or population-level effects on biological resources and would not result in significant impacts.

Cultural and Socioeconomic Resources. Cultural resources analyzed include protected historic properties, Alaska heritage resources, and shipwrecks. Socioeconomic resources analyzed include transportation and shipping, commercial and recreational fishing, subsistence use, and tourism. According to the National Register of Historic Places, there are no federally-protected historical resources present within the Anchorage proposed action area, though there are known shipwrecks within the proposed action area. However, these resources would not be impacted.

Issuance of a Notice to Mariners prior to the start of implementation of Alternative 2 would inform any vessels of military activity occurring in the proposed action area, allowing for the activity site to be avoided in advance of the CPD training activity. However, the length of time the space would be restricted would be limited to the duration of the Proposed Action. Additionally, the area where AE25 Proposed Action would occur is closed to commercial salmon fishing. Implementation of Alternative 2, in the limited scope identified in this FONSI, would not result in significant impacts to cultural and socioeconomic resources.

Mitigation Measures: The Navy will implement mitigation measures consistent with its authority to specifically avoid or reduce potential impacts on marine species and socioeconomic resources. These mitigations are found in the section 4.4 of the PEA. Additionally, updated mitigation measures for marine species can be found in Attachment 1.

Public Involvement: The Navy prepared the Final PEA with consideration of comments received during public review of the Draft PEA. The Navy solicited public and agency comments during a public outreach period from December 4, 2019 through January 3, 2020. Notification of Availability was provided via newspaper advertisements throughout each of the proposed action areas. Newspapers that published legal ads soliciting comments included: Kodiak Daily Mirror (Kodiak, AK on December 11, 2019); Anchorage Daily News (Anchorage, AK on December 4,

2019); Peninsula Clarion (Seward, AK on December 15, 2019); Juneau Empire (Juneau, AK on December 15, 2019); San Francisco Chronicle (San Francisco, CA on December 11, 2019); Contra Costa Times (Contra Costa County, CA on December 11, 2019); Alameda Times-Star (Alameda County, CA on December 11, 2019); Vida Newspaper (Oxnard, CA on December 12, 2019); Ventura County Star (Ventura County, CA on December 9, 2019); Los Angeles Daily News (Los Angeles, CA on December 12, 2019); Orange County Register (Orange County, CA on December 5, 2019), and; Long Beach Press Telegram (Long Beach, CA on December 10, 2019). The Draft PEA was available for viewing at libraries throughout Alaska and California, and on a website hosted by the Naval Facilities Engineering Command Northwest (https://navfac.navy.mil/NWNEPA). Libraries acting as repositories for physical and digital copies of the PEA included: Kodiak Public Library (Kodiak, AK), Z.J. Loussac Library (Anchorage, AK), Seward Community Library and Museum (Seward, AK), Juneau Public Library Downtown Branch (Juneau, AK), Alaska State Library (Juneau, AK), San Francisco Public Library (San Francisco, CA), Concord Public Library (Concord, CA), Oakland Public Library (Oakland, CA), Richmond Public Library (Richmond, CA), South Oxnard Public Library (Oxnard, CA), Ray D. Preuter Library (Port Hueneme, CA), Seal Beach Public Library (Seal Beach, CA), Long Beach Public Library (Long Beach, CA), and Los Angeles Central Library (Los Angeles, CA). Digital copies were sent to 51 stakeholders and 10 regional tribal community leaders in total. The Navy received two agency comments in response regarding historic properties, from the National Parks Service and the Alaska State Historic Preservation Office; both comments were considered and addressed in the Final PEA.

Finding of No Significant Impact: Based on the validated analysis presented in the PEA, which was prepared in accordance with the requirements of NEPA, the Navy finds that implementation of the Proposed Action for AE25 will not significantly impact the quality of the human or natural environment. Therefore, an EIS need not be prepared.

Electronic copies of the PEA and FONSI are at https://nepa.navy.mil/CPD-PEA.

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July 8, 2025

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Re: Arctic Edge 2025 Joint Military Exercise – Knik Arm Activities, Letter of Concurrence, AKRO-2025-01630

Dear Applicants:

The National Marine Fisheries Service (NMFS) has completed informal consultation under section 7(a)(2) of the Endangered Species Act (ESA) regarding the proposed Arctic Edge 2025 Joint Military Exercise located in lower Knik Arm, Cook Inlet, Alaska (**Figure 1**). The Department of Defense (DoD) and the U.S. Coast Guard requested written concurrence that the proposed action may affect, but is not likely to adversely affect, Cook Inlet distinct population segment (DPS) beluga whale (*Delphinapterus leucas*), western North Pacific DPS humpback whale (*Megaptera novaeangliae*), Mexico DPS humpback whale, western DPS Steller sea lion (*Eumetopias jubatus*) or critical habitat for the Cook Inlet beluga whale. Based on our analysis of the information you provided to us, and additional literature cited below, NMFS concurs with your determination.

Updates to the regulations governing interagency consultation (50 CFR part 402) were effective on May 6, 2024 (89 FR 24268). We are applying the updated regulations to this consultation. The 2024 regulatory changes, like those from 2019, were intended to improve and clarify the consultation process, and, with one exception from 2024 (offsetting reasonable and prudent measures), were not intended to result in changes to NMFS' existing practice in implementing section 7(a)(2) of the ESA (84 FR at 45015; 89 FR at 24268). We have considered the prior rules and affirm that the substantive analysis and conclusions articulated in this letter of concurrence would not have been any different under the 2019 regulations or pre-2019 regulations.

This letter underwent pre-dissemination review in compliance with applicable Data Quality Act guidelines. A complete administrative record of this consultation is on file in this office.

Consultation History

The DoD initially contacted NOAA on March 3, 2025, and NMFS on March 4, 2025. Between March 4 and June 17, 2025, NMFS provided the DoD (joined on April 2, 2025, by the U.S. Coast Guard) with technical assistance in advance of consultation. NMFS received your joint request for consultation on Cook Inlet beluga whale, western North Pacific DPS and Mexico DPS humpback whale, and western DPS Steller sea lion on May 30, 2025. On June 4, 2025, NMFS requested more information about the project and proposed modifications to the mitigation measures via email. On June 6, 2025, the DoD and U.S. Coast Guard provided NMFS with additional information regarding the project activities, confirmed agreement with the modified mitigation measures, revised the consultation package to include a request for concurrence on effects to Cook Inlet beluga whale critical habitat, and requested discussion regarding the possible addition of uncrewed aerial vehicle (UAV) use as part of the proposed action. In response, on June 7, 2025, NMFS provided the action agencies with proposed mitigation measures for UAV use and a request for additional minor details regarding the action. On June 11, 2025, the U.S. Coast Guard notified NMFS that they would not be adding UAV flights over marine habitat to the proposed action. On June 17, 2025, the action agencies provided, via email to NMFS, the requested additional information about the proposed action. NMFS initiated consultation on June 17, 2025.

Description of the Proposed Action

"Action" means all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies in the United States or upon the high seas. 50 CFR 402.02.

Two branches of the DoD (U.S. Army and U.S. Navy) and the U.S. Coast Guard, supporting the DoD mission, propose to conduct training activities in the waters of Knik Arm, Upper Cook Inlet, between the Port of Alaska (POA) and Port MacKenzie (**Figure 1**), in support of Arctic Edge 2025. The exercise will span over approximately 15 days, anticipated as August 1 through August 15. These proposed training activities are intended to support U.S. Alaska Command (ALCOM) with critical response capabilities and training. The proposed action is composed of the activities described below. These activities may occur separately or simultaneously as dictated by tidal conditions. Communication among exercise vessels and between vessels and shore-based crew will occur in real time via marine radio, cell phone, MARBAND, and/or other communication devices commonly used by the DoD and U.S. Coast Guard.

U.S. Army Activities

Using a contracted civilian tug and barge, the U.S. Army will transport cargo between the two ports up to four times daily from August 1 through August 11, 2025. U.S. Army soldiers will load the barge at the POA's NorthStar Terminal and unload the barge at Port MacKenzie (**Figure 1**). The barge will transport equipment only; no personnel will be transported. Barge trips will occur two hours before or after high tide and the maximum operating time will be 8 hours per day.

The tug and barge have not yet been contracted but the requested size of the barge is a minimum of 141 feet long, 42 feet wide, and 11 feet high, to a maximum of 260 feet long, 72 feet wide, and 16 feet high. The accompanying tug will large enough to support a barge of this size, with an assumed draft of no more than 10 feet based on average draft depths for that style of vessel. DoD anticipates that the sound source level for the tug and barge will be no more than approximately 161 decibels (dB). The barge will be escorted by U.S. Coast Guard patrol boats (see *U.S. Coast Guard Activities*, below*).*

The U.S. Army will station soldiers who have received Navy Marine Species Awareness Training (MSAT), which has been approved by NMFS headquarters, on land at NorthStar Terminal and at Port MacKenzie to serve as Lookouts for protected marine species (see also *Mitigation Measures*).[1] Each Lookout location will be staffed by five trained Lookouts, with one dedicated Lookout on effort at each location, whose sole duty will be to monitor for protected species. If any protected species are observed by land-based U.S. Army Lookouts, they will alert other Lookouts and any exercise vessels on the water in real time.

[1] To maintain consistency with Navy Marine Species Awareness Training (MSAT), this consultation document uses the terms "Lookout" and "Mitigation Zone" in place of the NMFS terms "Protected Species Observer" and "Monitoring Zone", respectively.

The U.S. Army will also conduct terrestrial exercises near Port MacKenzie which will involve the use of tents and generators. No hole-digging or other ground surface alternations will occur and no ammunition or ordinance will be used. These terrestrial exercises are not expected to have any impact on listed marine mammals or critical habitat.

U.S. Coast Guard Activities

The U.S. Coast Guard will operate up to six Transportable Security Boats (patrol boats) throughout the proposed action. Two to four patrol boats will escort the tug and barge between the two port locations. The remaining patrol boats (up to four) will be deployed in the action area to conduct other training activities such as medical evacuation drills and practicing search patterns. None of these training activities will involve lines or other equipment in the water that poses an entanglement risk. The U.S. Coast Guard may also transport Marines between the two ports. The patrol boats will operate at no more than 10 knots.

Each patrol boat will be 32 feet 8 inches in length, with a draft of three feet when the engines are fully down. Each boat will have two 315-horsepower (hp) Yanmar diesel engines, which typically produce sound source levels between approximately 75 to 85 dB. The patrol boats will be transported to the action area overland; there will no in-water transit to or from the exercise location.

Each patrol boat will have a MSAT-trained Lookout onboard, whose sole duty will be to monitor for protected species. In addition, there may be several other personnel onboard each boat who have also received Navy MSAT. A total of 15 U.S. Coast Guard personnel will be trained and distributed among the various patrol boats. If any protected species are observed by U.S. Coast Guard Lookouts, they will alert other Lookouts and any exercise vessels on the water in real time.

U.S. Navy Activities

U.S. Navy Explosive Ordnance Disposal (EOD) personnel from Expeditionary Mine Countermeasures (ExMCM) Company 9-1 will conduct in-water object detection and clearance training activities in Knik Army between POA and Port MacKenzie. The purpose of this activity is to identify and classify objects located on the ocean floor, consistent with mine countermeasure training activities.

To conduct this training activity, the U.S. Navy will use a small combat rubber raiding craft approximately 20 feet long with a draft of approximately 1 foot, equipped with a 40-hp outboard motor. The anticipated sound source level of this engine is no more than 100 dB.

Between August 4 and 7, 2025, the U.S. Navy will rehearse the training event and obtain water and environmental data. During this time, the Navy boat will make one round-trip daily to/from one of the two ports to the exercise location. Up to two undersea uncrewed vehicles (UUVs) will

be deployed from the Navy's boat and will use *de minimis* side scan sonar to survey the bottom for anomalies prior to placement of the mine shapes and sunken UUV[2].

The training itself will commence on approximately August 7 or 8, 2025 with the placement of mine shapes and sunken UUV and end when these have been identified and removed from the water, no later than August 15, 2025. Two to three training mine shapes approximately the size of a 55-gallon drum will be moored to the seafloor by concrete anchors. The sunken UUV will be approximately 10 feet long and 250 lbs. It will be located in the vicinity of Port MacKenzie and attached to a pier at that location to ensure that it does not move from its emplaced location.

Between approximately August 9 and 15, 2025, the Navy will identify and retrieve the mine shapes and sunken UUV. One to two additional UUVs will be used for initial identifications and a remotely operated vehicle (ROV) on a tether and/or divers will be used to visually confirm UUV detections. Once detected, the shapes and sunken UUV will be lifted from the sea floor. Once lifted and resting right below the surface (floating using lift balloons) but still underwater, these shapes will be towed from point of origin to a beaching site at POA via a tow line from the boat to training mine shapes, which will be just below the surface. Sidescan sonar is required to operate the UUVs. The estimated sound source level of this sonar is 43.9 to 62.5 dB. The anticipated sound source level of the ROV's electric engine is 40 dB. The UUVs and ROV will operate at speeds of approximately 4 knots.

The U.S. Navy will have at least one dedicated Lookout on effort on the Navy boat while on the water, and all U.S. Navy personnel participating in the exercise will complete Navy MSAT. If any protected species are observed by U.S. Navy Lookouts, they will alert other Lookouts and any exercise vessels on the water in real time.

Action Area

The action area is defined in the ESA regulations (50 CFR 402.02) all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. The action area is distinct from and larger than the project footprint because some elements of the project may affect listed species some distance from the project footprint. The action area, therefore, extends out to a point where no measurable effects from the project are expected to occur.

NMFS defines the action area for this consultation as the waters of lower Knik Arm between POA and Port MacKenzie where exercise vessel traffic and exercise activities are proposed to occur (**Figure 1**), extending at least 100 yards radius from patrol boats and small vessels and at least ~200 yards radius from the tug and barge. The action area also includes adjacent terrestrial lands near Port MacKenzie where the U.S. Army proposes to conduct on-shore portions of the

[2] *De minimis* sources have the following parameters: low source levels, narrow beams, downward directed transmission, short pulse lengths, frequencies above (outside) known marine mammal hearing ranges, or some combination of these factors (Ruppel et al. 2022).

exercise (see *U.S. Army Activities*, above); however, these on-shore activities to are not expected to impact listed marine mammals or critical habitat.

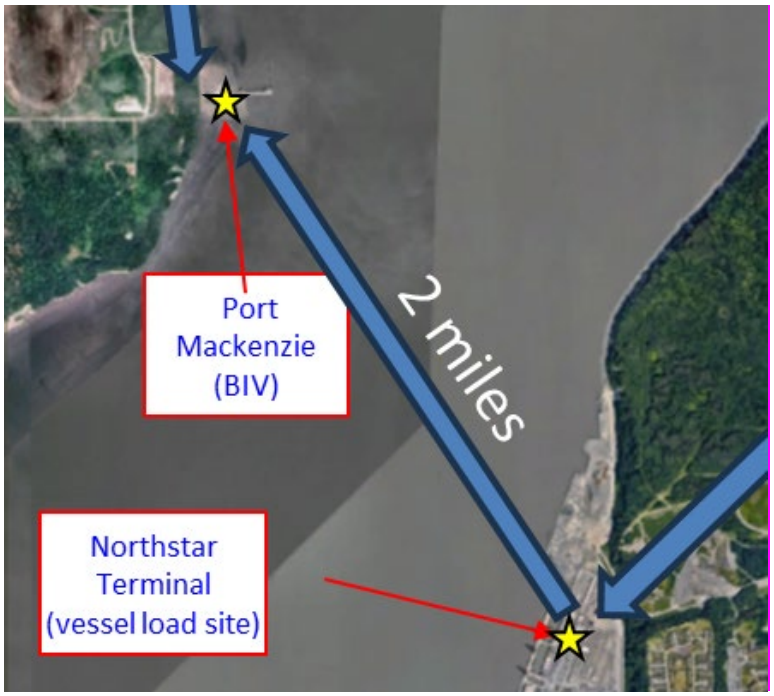

Figure 1. Action area with port locations (yellow stars) and cross-arm barge route (blue arrow between the port locations).

Mitigation Measures

The DoD and the U.S. Coast Guard informed NMFS via email on June 6, 2025, that the proposed action will incorporate the following mitigation measures. These measures were jointly developed with NMFS during technical assistance prior to the initiation of consultation.

For all reporting that results from implementation of these mitigation measures, NMFS will be contacted using the contact information specified in (**Table 2**). In all cases, notification will reference the NMFS consultation tracking number (e.g., AKRO-2025-01630).

General Mitigation Measures

1. The project proponent will inform NMFS of impending in-water activities a minimum of one week prior to the onset of those activities (email information to akr.prd.records@noaa.gov).

2. If activities will occur outside of the time window specified in this letter, the applicant will notify NMFS of the situation at least 60 days prior to the end of the specified time window to allow for reinitiation of consultation.

3. Consistent with AS 46.06.080, trash will be disposed of in accordance with state law. The project proponent will ensure that all closed loops (e.g., packing straps, rings, bands, etc.)

will be cut prior to disposal. In addition, the project proponent will secure all ropes, nets, and other marine mammal entanglement hazards so they cannot enter marine waters.

Lookout Requirements

The Army will ensure that minimum 10 personnel, the USCG will ensure that minimum 15 personnel and the Navy will ensure that all on-water personnel, complete the Navy Marine Species Awareness Training (MSAT), review the Navy Lookout Training Handbook, and a Knik Arm Marine Mammal Identification Card prior to the start of the training activities. The first two resources can be found at https://eims.dc3n.navy.mil/pmap/. In advance of the exercise, NMFS will provide to the DoD and U.S. Coast Guard a Knik Arm Marine Mammal Identification Card, which has been developed by NMFS Alaska Region Protected Resources Division specifically for this proposed action (*Attachment*).

4. Each patrol boat and the Navy's small boat will have one dedicated Lookout when operating, to ensure that water surrounding the vessel can be observed. In addition, the Army will station one dedicated Lookout at each port location while the tug and barge are transiting. These lookouts will be in radio communication with the patrol boats escorting the barge and tug.

5. All Lookouts will have completed the NMFS-approved Navy MSAT and reviewed the Navy Lookout Training Handbook.

6. Navy MSAT includes:

    a. sighting cues of marine mammals and marine mammal behavior;

    b. ESA and Marine Mammal Protection Act (MMPA) regulations;

    c. scanning techniques and methodologies in marine mammal observation and reporting protocols; and

    d. an overview of Lookout roles and responsibilities.

7. Lookouts will be U.S. Navy, U.S. Coast Guard and U.S. Army personnel who have received Navy MSAT and reviewed the Navy Lookout Training Handbook and will not have any other assigned task during their shift.

8. Lookouts will:

    a. collectively be able to effectively observe the entirety of the monitoring zone;

    b. be able to identify marine mammals and accurately record the date, time, and species (as practicable), of all observed marine mammals in accordance with project protocols;

    c. be able to identify listed marine mammals that may occur in the action area, at a distance equal to the outer edge of the applicable morning zone and determine

marine mammal's location and distance from sound source;

d. have the ability to effectively communicate orally, by radio or in person with project personnel to provide real-time information on listed marine mammals;

e. possess a copy of mitigation measures; and

f. possess data forms.

9. Lookouts will not scan for marine mammals for more than four hours without at least a one-hour break from monitoring duties between shifts. Lookouts will not perform Lookout duties for more than 12 hours in a 24-hour period.

Lookout Procedures

10. Lookouts will have the ability, authority, and obligation to direct appropriate mitigation response, including shutdown, to avoid takes of listed marine mammals.

11. One or more Lookouts will perform Lookout duties onsite throughout the authorized activity.

12. For each in-water activity, Lookouts will monitor all marine waters within the indicated mitigation zone radius for that activity (**Table 1**).

Table 1. Mitigation Zones for Each Activity

Activity	Zone Radius (m)
Coast Guard Patrol Boat	91 meters (100 yards)
Barge and Tugboat moving between Port Mackenzie and Northstar terminal (POA)	180 meters (~200 yards)
Navy small boat operation and object detection activity	91 meters (100 yards)

13. Lookouts will be positioned such that they will collectively be able to monitor the entirety of each activity's mitigation zone.

14. Prior to commencing any activity listed in **Table 1**, Lookouts will scan waters within the appropriate mitigation zone and confirm no listed marine mammals are within the mitigation zone for at least 30 minutes immediately prior to initiation of the in-water activity. If one or more listed marine mammals are observed within the mitigation zone, the in-water activity will not begin until the listed marine mammals exit the mitigation zone of their own accord, or the mitigation zone has remained clear of listed marine mammals for 15 minutes immediately prior to the commencement of the activities listed in **Table 1**.

15. The Lookout will continuously monitor the mitigation zone and adjacent waters during

any of the activities listed in **Table 1** for the presence of listed marine mammals.

16. Activities listed in **Table 1** will only take place:

    a. during conditions with a Beaufort Sea State of 4 or less; and

    b. when the entire mitigation zone and adjacent waters are visible (e.g., monitoring effectiveness is not reduced due to rain, fog, snow, haze, or other environmental/atmospheric conditions).

17. If visibility degrades such that Lookouts can no longer ensure that the mitigation zone remains devoid of listed marine mammals during any of the activities listed in **Table 1**, the crew will stop activities until the entire mitigation zone is visible and the Lookout has indicated that the zone remained devoid of listed marine mammals for 15 minutes.

18. If one or more listed marine mammals enters or appears likely to enter a mitigation zone (**Table 1**), the Lookout will order any ongoing object detection and retrieval activities or U.S. Coast Guard training activities in that zone to immediately cease and vessels in that zone to idle. Note: The only exception is that the Navy will not recall divers in this situation, however they will switch the boat engine to neutral as practicable until the listed marine mammal exits the mitigation zone Should it not be feasible to put the vessel in neutral, the vessel will idle and avoid coming closer to the animal.

19. If any of the activities listed in **Table 1** are ceased or vessels put into neutral or idled for less than 30 minutes due to the presence of listed marine mammals in the mitigation zone, the activities may commence when the Lookout provides assurance that listed marine mammals were observed exiting the shutdown zone. Otherwise, the activities may only commence after the Lookout provides assurance that listed marine mammals have not been seen in the mitigation zone for 15 minutes.

20. If a listed marine mammal is observed within a mitigation zone or is otherwise harassed, harmed, injured, or disturbed, the Lookout will immediately report that occurrence to NMFS using the contact information specified in **Table 2**.

<u>Project-Dedicated Vessels</u> (vessel and crew safety should never be compromised)

21. Vessel operators will:

    a. maintain a watch for marine mammals at all times while underway;

    b. stay at least 91 meters (100 yards) away from listed marine mammals (Cook Inlet beluga whale, Stellar sea lion, humpback whale);

    c. travel at less than 5 knots when within 274 meters (300 yards) of a whale;

    d. avoid changes in direction and speed within 274 meters (300 yards) of a whale, unless doing so is necessary for maritime safety;

e. not position vessel(s) in the path of a whale, and will not cut in front of a whale in a way or at a distance that causes the whale to change direction of travel or behavior (including breathing/surfacing pattern);

f. not exceed vessel speeds of 10 knots; and

g. adhere to the Alaska Humpback Whale Approach Regulations when vessels are transiting to and from the project site: (see 50 CFR §§ 216.18, 223.214, and 224.103(b); these regulations apply to all humpback whales). Specifically, pilot and crew will not:

i. approach, by any means, including by interception (i.e., placing a vessel in the path of an oncoming humpback whale), within 100 yards of any humpback whale;

ii. cause a vessel or other object to approach within 100 yards of any humpback whale; or

iii. disrupt the normal behavior or prior activity of a humpback whale by any other act or omission.

22. If a whale's course and speed are such that it will likely cross in front of a vessel that is underway, or approach within 91 meters (100 yards) of the vessel, and if maritime conditions safely allow, the engine will be put in neutral and the whale will be allowed to pass beyond the vessel.

23. Vessels will not allow lines to remain in the water unless both ends are under tension and affixed to vessels or gear.

24. Project-specific barges will travel at 10 knots or less.

Data Collection

Lookouts have the following responsibilities for data collection:

25. Lookouts will record observations on data forms.

26. The project proponent will ensure that Lookout data will be submitted electronically in a format that can be queried such as a spreadsheet or database (i.e., digital images of data sheets are not sufficient).

27. Lookouts will record the following:

a. project name, date, activity start time, and activity stop time;

b. date and time of each reportable event (e.g., a listed marine mammal observation, activity shutdown, reason for activity shutdown, change in weather conditions);

c. weather parameters (e.g., percent cloud cover, percent glare, visibility) and sea state where the Beaufort Wind Force Scale will be used to determine sea state (https://www.weather.gov/mfl/beaufort);

d. species, numbers, and, if possible, sex and age class of observed listed marine mammal;

e. the training activity occurring during each listed marine mammal observation;

f. observations of listed marine mammal behaviors and reactions to anthropogenic sounds and presence;

g. geographic coordinates of initial, closest, and last location of listed species, including distance from observer to the listed species; and

h. whether the presence of a listed species necessitated the implementation of mitigation measures to avoid acoustic impact (i.e., shutdown), and the duration of time that normal operations were affected by the presence of listed species.

Reporting

Unauthorized Take

28. If a listed marine mammal is determined by the Lookout to have been disturbed, harassed, harmed, injured, or killed (e.g., a listed marine mammal is observed entering a mitigation zone before operations can be shut down or vessels idled, or is injured or killed as a direct or indirect result of the action), the action proponent will report the incident to NMFS within one business day, with information submitted to akr.prd.records@noaa.gov. These records will include:

    a. digital, searchable documents containing observations and records, and digital, searchable reports;

    b. the date, time, and location of each event (provide geographic coordinates);

    c. description of the event;

    d. number of individuals of each listed marine mammal species affected;

    e. the time the animal(s) was first observed or entered the mitigation zone, and, if known, the time the animal was last seen or exited the zone, and the fate of the animal;

    f. mitigation measures implemented prior to and after the animal was taken;

    g. if a vessel struck a listed marine mammal, the contact information for the Navy Lookout on duty on the vessel or the contact information for the individual piloting the vessel; and

h. photographs or video footage of the animal(s), if available.

Stranded, Injured, Sick or Dead Listed Species (not associated with the project)

29. If the Lookout observes an injured, sick, or dead marine mammal (i.e., stranded), they will notify the Alaska Marine Mammal Stranding Hotline at 877-925-7773. The action proponent will submit photos and available data to aid NMFS in determining how to respond to the stranded animal. If possible, data submitted to NMFS in response to stranded marine mammals will include date/time, location of stranded marine mammal, species and number of stranded individuals, description of the stranded marine mammal's condition, event type (e.g., entanglement, dead, floating), and behavior of live-stranded marine mammals.

Illegal Activities

30. If the Lookout observes listed marine mammals or other marine mammals being disturbed, harassed, harmed, injured, or killed (e.g., feeding or unauthorized harassment), these activities will be reported to NMFS Alaska Region Office of Law Enforcement (**Table 2**; 1-800-853-1964).

31. Data submitted to NMFS will include date/time, location, description of the event, and any photos or videos taken.

Extralimital Sightings

32. All observations of ESA-listed marine mammal species not considered in this consultation will be reported to NMFS within 24 hours. Photographs and/or video should be taken if possible to aid in Photo ID of individual animals. Reports will include all applicable information that would be included in a final report.

Final Report

33. A final report will be submitted to NMFS within 90 calendar days of the completion of the project summarizing the data recorded by emailing it to akr.prd.records@noaa.gov. The report will summarize all in-water activities associated with the proposed action, and results of Lookout monitoring conducted during the in-water activities.

34. The final report for projects will include:

    a. summaries of monitoring efforts, including dates and times of training activities, dates and times of monitoring, dates and times and duration of shutdowns due to listed marine mammal presence;

    b. dates and times of listed marine mammal observations, geographic coordinates of listed marine mammals at their closest approach to the project site, including date, water depth, species, age/size/gender (if determinable), and group sizes.

    c. number of listed marine mammals observed (by species, if determinable);

d. any photos or videos taken of marine mammals; and

e. digital, searchable documents containing Lookout observations and records, and digital, searchable reports.

Table 2. Summary of Agency Contact Information

Reason for Contact	**Contact Information**
Consultation Questions & Unauthorized Take	akr.prd.section7@noaa.gov
Reports & Data Submittal	akr.prd.records@noaa.gov
Stranded, Injured, or Dead Marine Mammals	Stranding Hotline (24/7 coverage) 1-877-925-7773
Oil Spill & Hazardous Materials Response	U.S. Coast Guard National Response Center: 1-800-424-8802 and AKRNMFSSpillResponse@noaa.gov
Illegal Activities *(not related to project activities; e.g., feeding, unauthorized harassment, or disturbance to marine mammals)*	NMFS Office of Law Enforcement (AK Hotline): 1-800-853-1964
In the event that this contact information becomes obsolete	NMFS Anchorage Main Office: 907-271-5006 or NMFS Juneau Main Office: 901-206-4342

Listed Species and Critical Habitat

Cook Inlet Beluga Whale

Cook Inlet beluga whales are geographically and genetically isolated from other beluga whale stocks in Alaska. NMFS designated the Cook Inlet beluga (*Delphinapterus leucas*) population as depleted under the MMPA in 2000 (65 FR 34590; May 31, 2000) after its population dropped from approximately 1,300 individuals in 1979 to 347 in 1998. A lack of subsequent population growth led NMFS to list the Cook Inlet beluga as endangered under the ESA effective on December 22, 2008 (73 FR 62919; October 22, 2008). Currently, the best abundance estimate for the Cook Inlet beluga whale population is 331 whales (95 percent probability interval 290 to 386) based on a 2022 beluga aerial survey (Goetz et al. 2023).

Although they remain year-round in Cook Inlet, they demonstrate seasonal movements within the inlet. In general, during the summer and fall, beluga whales occur in shallow coastal waters and are concentrated near the Susitna River Delta, Knik Arm, Turnagain Arm, Chickaloon Bay, and near Fire Island in the upper inlet (Shelden et al. 2015b; Castellote et al. 2016; McGuire et al. 2020a), and the Kenai River Delta in the lower Inlet (McGuire et al. 2020a; Kumar et al. 2024). During the winter, they are more dispersed, occurring in deeper waters in the mid-inlet to Kalgin Island, and in the shallow waters along the west shore of Cook Inlet to Kamishak Bay. While ice formation in the upper inlet was once thought to restrict beluga's access to nearshore habitat (Ezer et al. 2013), tagging data, acoustic studies, visual surveys, and opportunistic sightings indicate that Cook Inlet belugas continue to occur in the upper inlet throughout the winter months, in particular the coastal areas from Trading Bay to Little Susitna River, with foraging behavior detected in lower Knik Arm and Chickaloon Bay, and also detected in several areas of the lower inlet such as the Kenai River, Tuxedni Bay, Big River, and NW Kalgin Island (Shelden et al. 2015b; Shelden et al. 2018; Castellote et al. 2020; Castellote et al. 2021; Castellote et al. 2023; NMFS unpublished data). The area around the East Forelands between Nikiski, Kenai, and Kalgin Island as well as Tuxedni Bay appears to provide important habitat in winter, early spring, and fall (Castellote et al. 2023; NMFS unpublished data).

The distribution of Cook Inlet belugas has changed significantly since the 1970s. Information on Cook Inlet beluga distribution, including aerial surveys and acoustic monitoring, indicates that the species' range in Cook Inlet has contracted markedly since the 1990s (Shelden and Wade 2019). This distributional shift and range contraction coincided with the decline in abundance (Moore et al. 2000; NMFS 2008a; Goetz et al. 2012).

Cook Inlet beluga whales have diverse diets (Quakenbush et al. 2015; Nelson et al. 2018), foraging on fish and benthos, often at river mouths. Primary prey species consist of four species of Pacific salmon (Chinook, sockeye, chum, and coho), Pacific eulachon, Pacific cod, walleye pollock, saffron cod, and yellowfin sole. Belugas seasonally shift their distribution within Cook Inlet in relation to the timing of fish runs (NMFS 2016).

NMFS categorizes Cook Inlet beluga whales in the mid-frequency cetacean functional hearing group, with an applied frequency range between 150 Hz and 160 kHz (NMFS 2024a).

More information on Cook Inlet beluga whales is available at:

Beluga Whale Species Description

Marine Mammal Stock Assessment: Cetaceans-Small Whales

2022 Status Review

2016 Recovery Plan

Cook Inlet Beluga Critical Habitat

Cook Inlet Beluga Whale Critical Habitat

NMFS published designated critical habitat for the Cook Inlet beluga whale on April 11, 2011 (76 FR 20180), delineating two areas (aptly named Area 1 and Area 2) that generally describe summer (Area 1) vs. winter (Area 2) habitat, respectively (**Figure 2**).

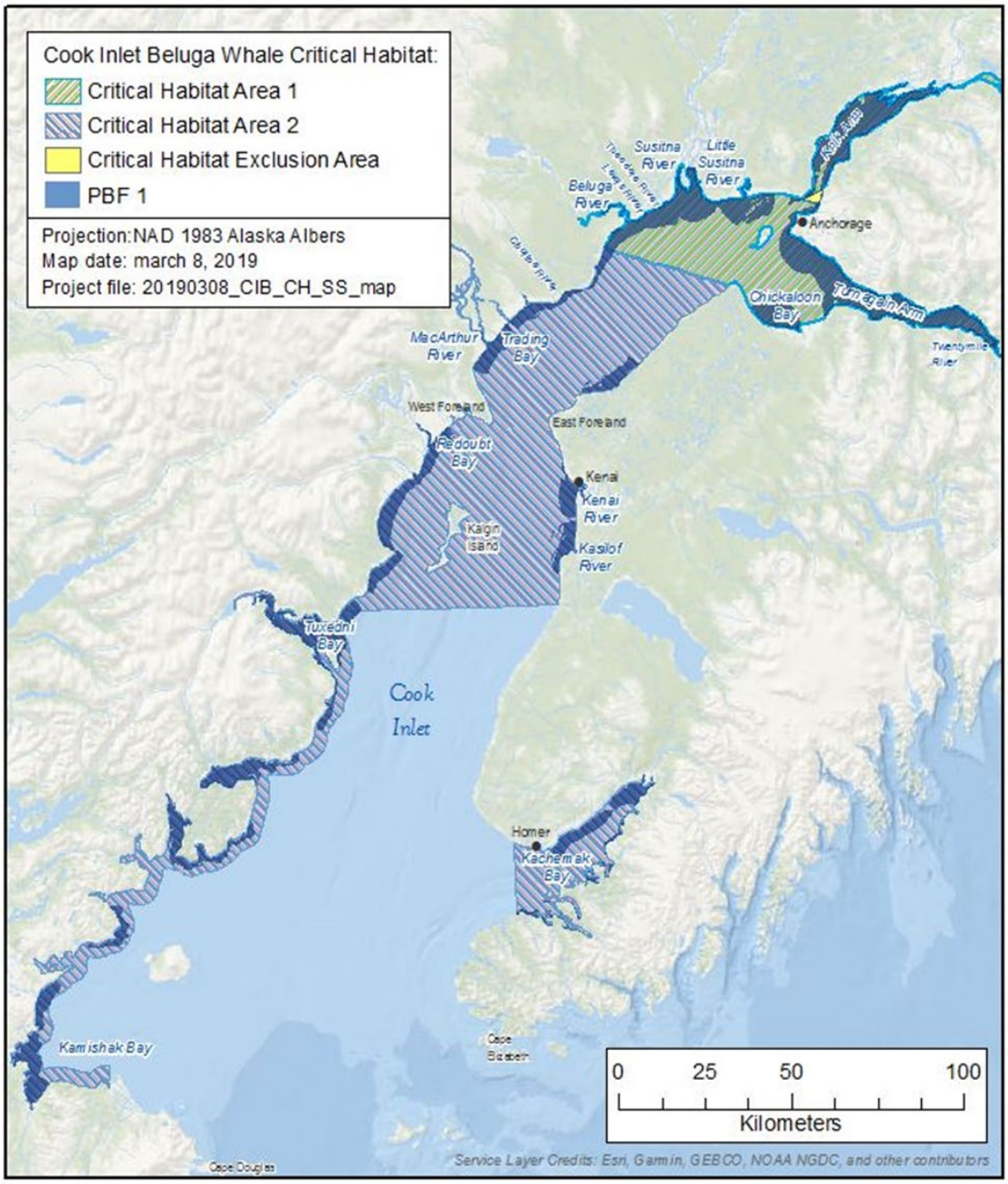

Figure 2. Cook Inlet Beluga Whale Critical Habitat (50 CFR § 226.220).

Cook Inlet beluga whale critical habitat includes five Physical or Biological Features (PBFs) that were deemed essential to the conservation of the stock:

1. Intertidal and subtidal waters of Cook Inlet with depths less than 30 feet mean low low water (MLLW) and within five miles of high and medium flow anadromous fish streams.

2. Primary prey species consisting of four species of Pacific salmon (Chinook, sockeye, chum, and coho), Pacific eulachon, Pacific cod, walleye Pollock, saffron cod, and yellowfin sole.

3. Waters free of toxins or other agents of a type and amount harmful to Cook Inlet beluga whales.

4. Unrestricted passage within or between the critical habitat areas.

5. Waters with in-water noise below levels resulting in the abandonment of critical habitat areas by Cook Inlet beluga whales.

NMFS excluded from critical habitat two areas in upper Cook Inlet near the Port of Anchorage (now POA) and Joint Base Elmendorf-Richardson (JBER) (50 CFR § 226.220).

Cook Inlet beluga whales and critical habitat in the action area

Beluga whales can be found in Knik Arm year-round, but are more frequently observed in the summer and fall. Large concentrations of belugas are present in Knik Arm from August through October (61 North Environmental 2021; 61 North Environmental 2022a; Easley-Appleyard and Leonard 2022) and their movements in the area are typically characterized by traveling to upper Knik Arm with the high tide and following the low tide back down to Eagle Bay and the POA (McGuire and Stephens 2017). Higher densities north of the POA are expected as belugas tend to concentrate in Eagle Bay to forage, whereas lower Knik Arm is more commonly associated with traveling behavior (McGuire and Stephens 2017). Traveling was the predominant behavior observed during recent monitoring efforts at the POA; however, belugas were also frequently observed milling in lower Knik Arm, sometimes for hours (61 North Environmental 2021; 61 North Environmental 2022a; Easley-Appleyard and Leonard 2022). When milling was recorded as one of the behaviors, the sighting duration was more than four hours for approximately nine percent of the beluga sightings (61 North Environmental 2021; 61 North Environmental 2022a; Easley-Appleyard and Leonard 2022).

In the final monitoring report for the North Extension Stabilization project at the POA, travelling was, again, the most commonly documented behavior, followed by milling. Additionally, it was documented that belugas remained milling in potentially biologically important areas (i.e., Ship Creek for feeding) despite ongoing construction activities (61 North Environmental 2025).

Marine mammal monitoring programs have occurred at or in close proximity to the POA, since 2005. **Table 3** summarizes beluga whale observations and monitoring effort in the POA area. In 2024, the dredging crews for the Port of Alaska documented 45 groups of belugas totaling 155 individuals during the North Extension Stabilization project (May through October)[3].

[3] Port of Alaska Modernization Project, North Extension Stabilization Step 1 Marine Mammal Observation Report, 2024

Table 3. Beluga observations and monitoring effort in the POA area.

Year	Monitoring Project	Project Dates	Monitoring Effort		Total # of Groups	Total # of Belugas
			# of Days	# of Hours		
2005	MTRP[1]	August 2–November 28	51	374	21	157
2006	MTRP[1]	April 26–November 3	95	564	25	82
2007	MTRP[1]	October 9–November 20	28	139	14	61
2008	MTRP[1]	June 24–November 14	86	612	74	283
	MTRP[2]	July 24–December 2	108	607	59	431
2009	MTRP[1]	May 4–November 18	86	783	54	166
	MTRP[2]	March 28–December 14	214	3,322	NA	1,221
2010	MTRP[1]	June 29–November 19	87	600	42	115
	MTRP[2]	July 21–November 20	106	862	103	731
2011	MTRP[1]	June 28–November 15	104	1,202	62	290
	MTRP[2]	July 17–September 27	16	NA	5	48
2016	Port MacKenzie	April 18–April 30	12	98	12	113
	Test Pile Program	May 3–June 21	19	85.3	9	10
2017	Ship Creek Boat Launch	August 23–September 11	16	41.7	34	153
2018	POA Dredging	April 2–October 31	141	NA	NA	121
2019	PCT Dredging	May 8–September 17	133	NA	66	797
	POA Fender Pile	May 16–October 30	28	NA	1	3
2020	PCT Construction	April 27–November 24	128	1,238.7	245	987
2021	POA Dredging	April 7–October 31	140	NA	NA	1,527
	PCT Construction	April 26–September 29	74	734.9	132	517
	NMFS	July 9–October 17	29	231.6	113	578

Year	Monitoring Project	Project Dates	Monitoring Effort		Total # of Groups	Total # of Belugas
			# of Days	# of Hours		
2022	PCT/SFD Dredging	May 3–August 24	70	727	90	529
	SFD Construction	May 20–June 11	13	108.2	9	41
	POA Geotechnical Survey	November 18–December 7	7	41.63	1	2
	Hilcorp Jack Up Rig Moving	June 2-3, September 15-16	2, 2	86, 29.8	1, 3	20, 25
	Seward Highway Improvement (MP 75-90)	January - December (no work July/Aug)	149	2820	5	29
2023	Hilcorp Jack Up Rig Moving (2023)	June 8-9, July 13-14	2, 2	46.1, 27.4	28, 10	175, 101-106
	Seward Highway Improvement (MP 75-90)	February-November	82	1159	0*	0*
2024	POA North Extension Stabilization	June 1- October	96	993.3	433	1,924

[1]Marine Terminal Redevelopment Project (MTRP) Scientific Monitoring
[2] MTRP Construction Monitoring
*Belugas were spotted in October and November but the number of groups and individuals were not submitted in the monitoring report.

NOAA's Alaska Beluga Monitoring Program (AKBMP)[4], a citizen science project established in 2019, includes a monitoring location at the Ship Creek small boat launch located in Knik Arm just south of the POA. Monitoring sessions are typically two hours long and are scheduled around the tide cycle; belugas pass the POA as they move in and out of Knik Arm with the tides. AKBMP initiated spring monitoring sessions in 2021. A summary of AKBMP beluga monitoring sessions is provided in **Table 4**.

[4] www.akbmp.org, accessed on April 7, 2025. Spring 2025 data was provided by pers. comm. with M. Trifari, AKBMP Coordinator, on June 6, 2025.

Table 4. Beluga observations and monitoring effort during AKBMP sessions at Ship Creek.

Year	Season	Dates	#of days monitored	# of hours monitored	Total number of belugas sighted
2019	Fall	August 15-November 5	69	148.4	75
2020	Fall	August 15-November 14	53	117.7	95
2021	Spring	March 18-May 30	50	125.1	0
2021	Fall	August 15-November 6	48	115.9	83
2022	Spring	March 15-May 31	37	83.8	1
2022	Fall	August 2-November 27	68	157	202
2023	Spring	March 29-May 31	36	93.9	5
2023	Fall	August 1-November 20	82	246.6	389
2024	Spring	March 20-May 31	50	125.5	12
2024	Fall	August 1-November 30	75	191.13	279
2025*	Spring	March 1 – May 31	71	207.42	11

* Spring 2025 numbers are preliminary

On April 11, 2011 NMFS designated two areas as Cook Inlet beluga whale critical habitat and excluded two areas in upper Cook Inlet near the POA and JBER (76 FR 20180; 50 CFR § 226.220) (**Figure 2**). Portions of the action area is located within designated Cook Inlet Beluga Whale Critical Habitat Area 1, while other portions are located within the POA critical habitat exclusion area.

Humpback Whale

The humpback whale (*Megaptera novaeangliae*) was listed as endangered under the ESCA in 1970 (35 FR 8491, June 2, 1970 (baleen whales listing); 35 FR 18319, December 2, 1970 (humpback whale listing)). Congress replaced the ESCA with the ESA in 1973, and humpback whales continued to be listed as endangered. NMFS conducted a global status review that led to changing the status of humpback whales under the ESA and dividing the species into 14 distinct

population segments (DPS) (81 FR 62260, September 8, 2016). Of these 14 DPSs, NMFS listed four as endangered, one as threatened, and delisted the remaining nine. Three DPSs occur in waters of Alaska. The Western North Pacific DPS is listed as endangered; the Mexico DPS is listed as threatened; and the Hawaii DPS is not listed (81 FR 62260, September 8, 2016).

The Hawaii DPS population is estimated to be 11,540 animals (CV=0.04) with an annual growth rate between 5.5 and 6.0 percent. The Mexico DPS is comprised of approximately 2,913 animals (CV=0.7; Wade 2021) with an unknown, but likely declining, population trend (81 FR 62260; September 8, 2016). Approximately 1,084 animals (CV=0.09) comprise the Western North Pacific DPS (Wade 2021). Humpback whales in the Western North Pacific remain rare in some parts of their former range, such as the coastal waters of Korea, and have shown little sign of recovery in those locations.

Whales from these three DPSs overlap on feeding grounds off Alaska, and are visually indistinguishable unless individuals have been photo-identified on breeding grounds and again on feeding grounds. All waters off the coast of Alaska may contain ESA-listed humpbacks.

Humpback whales produce a variety of vocalizations ranging from 20 Hz to 10 kHz (Silber 1986; Richardson et al. 1995; Au 2000; Erbe 2002; Au et al. 2006; Vu et al. 2012). NMFS categorizes humpback whales in the low-frequency cetacean functional hearing group, with an applied frequency range between 7 Hz and 35 kHz (NMFS 2018; NMFS 2024b).

Bering Sea/Aleutian Islands/Chukchi and Beaufort Seas

The abundance estimate for humpback whales in the Bering Sea and Aleutian Islands is estimated to be 7,758 (CV= 0.2) animals, which includes whales from the unlisted Hawaii DPS (91 percent), threatened Mexico DPS (7 percent), and endangered Western North Pacific DPS (2 percent; NMFS 2021; Wade 2021) (**Table 5**). These same DPS proportions apply for the Chukchi and Beaufort seas. Humpback whales have increasingly been recorded during surveys in the eastern Chukchi Sea (67°–72°N, 157°–169°W) from July to October primarily over the continental shelf (Brower et al. 2018). During similar aerial surveys in 1982–1991, there was a complete lack of sightings of these whales (Brower et al. 2018). It is unknown if this is an indicator of population recovery, climate change, or increased survey effort (Brower et al. 2018).

The area around the Aleutian Islands from Umnak Island northeastward along the Alaska Peninsula has been identified as a Biologically Important Area for humpback whales (Brower et al. 2022). Telemetry data from Kennedy et al. (2014) supported findings of historical data showing that humpback whales congregate in the shallow, highly productive coastal waters north of the eastern Aleutian Islands, between Unimak and Samalga Passes. The extremely high proportion of foraging within the narrow band 200 km east and west of Unalaska Bay further emphasizes the importance of the waters off the eastern Aleutian Islands for humpback whales (Kennedy et al. 2014). Annual vessel-based, photo-identification surveys in the Shumagin Islands from 1999 to 2015 identified 654 unique individual humpback whales between June and September (Witteveen and Wynne 2017).

Gulf of Alaska

The abundance estimate for humpback whales in the Gulf of Alaska is 2,129 (CV=0.08) animals, which includes whales from the unlisted Hawaii DPS (89 percent), threatened Mexico DPS (11 percent), and endangered Western North Pacific DPS (1 percent; Wade 2021) (**Table 5**). Humpback whales occur throughout the central and western Gulf of Alaska from Prince William Sound to the Shumagin Islands. Seasonal concentrations are found in coastal waters of Prince William Sound, Barren Islands, Kodiak Archipelago, Shumagin Islands, and south of the Alaska Peninsula. Large numbers of humpbacks have also been reported in waters over the continental shelf, extending up to 100 nm offshore in the western Gulf of Alaska (Rone et al. 2017; Wade 2021).

Southeast Alaska

Relatively high densities of humpback whales occur throughout much of Southeast Alaska and northern British Columbia, particularly during the summer months. The abundance estimate for humpback whales in Southeast Alaska is estimated to be 5,890 (CV= 0.08) animals, which includes whales from the unlisted Hawaii DPS (98 percent) and threatened Mexico DPS (2 percent; Wade 2021) (**Table 5**). Although migration timing varies among individuals, most whales depart for Hawaii or Mexico in fall or winter and begin returning to Southeast Alaska in spring, with continued returns through the summer and a peak occurrence in Southeast Alaska during late summer to early fall. However, there are significant overlaps in departures and returns (Baker et al. 1985; Straley 1990).

Table 5. Percent probability of encountering humpback whales from each DPS in the North Pacific Ocean (columns) in various feeding areas (on left; Wade 2021).

Summer Feeding Areas	North Pacific Distinct Population Segments (DPS) (percent)			
	Western North Pacific (endangered)	**Hawaii (not listed)**	**Mexico (threatened)**	**Central America (endangered)**
Kamchatka	91	9	0	0
Aleutian I / Bering / Chukchi Seas	2	91	7	0
Gulf of Alaska	1	89	11	0
Southeast Alaska / Northern BC	0	98	2	0
Southern BC / WA	0	69	25	6
OR/CA	0	0	58	42
Note that in the past iteration of this guidance, upper confidence intervals were used for endangered DPSs. However, the revised estimates do not have associated coefficients of variation to cite. Therefore, the point estimate is being used for each probability of occurrence.				

Additional information on humpback whale biology and natural history is available at:

Humpback Whale Species Description

Marine Mammal Stock Assessment Reports: Cetaceans-Large Whales

Humpback Whale Critical Habitat

Occurrence of Listed Humpback Whales off Alaska

Humpback whales in the action area

Humpback whales have been observed throughout Cook Inlet, but are primarily found in the lower inlet. NMFS aerial surveys for Cook Inlet belugas recorded 88 sightings of 192 humpbacks between 1993 and 2016 (**Figure 3**); all were located in lower Cook Inlet (Rugh et al. 2000; Rugh et al. 2005; Shelden et al. 2013; Shelden et al. 2015a; Shelden et al. 2017).

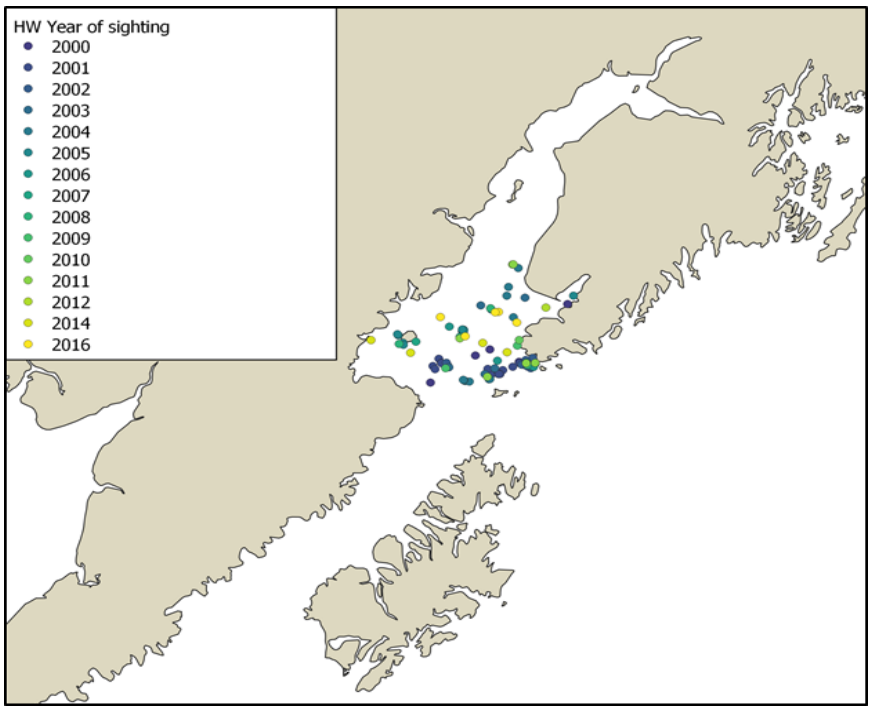

Figure 3. Humpback whale sightings recorded during NMFS Cook Inlet beluga whale aerial surveys from 2000-2016.

Two humpbacks were observed north of the Forelands during marine mammal monitoring in May and June of 2015 (Jacobs Engineering Group 2017). Marine mammal monitoring near the mouth of Ship Creek also recorded two humpback whale sightings, likely of the same individual, in September 2017 (ABR 2017). Three humpback whales were recorded near Ladd Landing, north of the Forelands, in 2018 during marine mammal monitoring (Sitkiewicz et al. 2018). One humpback was observed in July 2022 during transitional dredging at the POA (61 North Environmental 2022b). Deceased humpbacks were reported in upper Cook Inlet in 2015, 2017, and 2019. In April 2025, a humpback was sighted in Knik Arm near Port MacKenzie on multiple occasions over a period of several days (NMFS, unpublished). Sightings of humpback whales in the action area are rare, and few, if any, are expected.

Western DPS Steller Sea Lion

The Steller sea lion (*Eumetopias jubatus*) was listed as a threatened species under the ESA effective December 4, 1990 (55 FR 49204, November 26, 1990). Based on genetic, morphological, ecological, and population trend data, NMFS reclassified the Steller sea lion into two DPS's, effective June 4, 1997 (62 FR 24345, May 5, 1997). The western DPS, comprised of animals originating from breeding sites west of 144° W longitude, was listed as endangered due to persistent decline and lack of recovery, while the eastern DPS remained listed as threatened. Effective on December 4, 2013, the eastern DPS was removed from the endangered species list (78 FR 66140, November 4, 2013).

The western stock of the Steller sea lion decreased from 220,000 to 265,000 animals in the late 1970s to less than 50,000 in 2000 (Loughlin et al. 1984; Loughlin and York 2000; Burkanov and Loughlin 2005). The sharp drop in abundance of the western DPS observed in the 1980s was caused largely by a steep decline in juvenile survival and a smaller decline in adult survival (York 1994; Holmes and York 2003). The minimum population estimate for the U.S. portion of the range of western DPS Steller sea lions in 2023 was 49,320 Steller sea lions; 11,987 pups (95% credible interval of 11,291-12,703) and 37,333 non-pups (95% credible interval of 34,274-40,245), respectively (Sweeney et al. 2023). Non-pups and pups in the western DPS of Alaska increased 1.05 and 0.50% y-1, respectively, between 2007 and 2022; however, there was high variability among regions (Sweeney et al. 2023). Steller sea lions in the western Aleutian Islands region continued to decline, along with pups in the adjacent central Aleutian Islands region. East of Samalga Pass, Aleutian Islands, pup production slowed or plateaued in the early 2010s, with subsequent non-pup plateauing or declines starting in the late 2010s in all regions (Sweeney et al. 2023). The 2014-2016 North Pacific marine heatwave (PMH), one of the most severe heatwaves ever recorded, resulted in reduced survival of adult female Steller sea lions in the Gulf of Alaska and reduced survival of adult female and adult male Steller sea lions in Southeast Alaska (Hastings et al. 2023) indicating that Steller sea lion populations in Alaska remain sensitive to environmental anomalies such as these (Suryan et al. 2021; Hastings et al. 2023).

Steller sea lions range throughout the North Pacific Ocean occurring from central California along the Pacific Rim through Alaska and Russia to Japan (Kenyon and Rice 1961; Loughlin et al. 1984). The western DPS of Steller sea lions are primarily found north of Sumner Strait in Southeast Alaska (Hastings et al. 2020). Most adult Steller sea lions occupy rookeries during the summer pupping and breeding season (mid-May through July) and exhibit a high level of site fidelity (Raum-Suryan et al. 2002; Hastings et al. 2017). During the breeding season, some juveniles and non-breeding adults occur at or near the rookeries, but most are on haulouts (sites that provide regular retreat from the water on exposed rocky shoreline, gravel beaches, and ice) (Call and Loughlin 2005; Ban and Trites 2007). Steller sea lions disperse widely after the breeding season, likely to access seasonally important prey resources (Gende and Sigler 2006; Sigler et al. 2009; Womble et al. 2009). During fall and winter many sea lions disperse from rookeries and increase use of haulouts, particularly on terrestrial sites but also on sea ice in the Bering Sea (Calkins 1998).

Steller sea lions forage near and off shore, in both benthic and pelagic zones, and eat a wide variety of prey, including many species of fish and cephalopods (including squid and octopus) (Pitcher and Calkins 1981; Calkins and Goodwin 1988; Calkins 1998; Sinclair et al. 2013; Tollit

et al. 2017), and occasionally other marine mammals and birds (Pitcher and Fay 1982; NMFS 2008b). During the breeding season, adult females must forage close enough to her rookery to return often to nurse her pup. Females attending pups usually forage within 20 nm of breeding rookeries (Merrick and Loughlin 1997), which is the basis for designated critical habitat around rookeries and major haulout sites. Steller sea lions are not known to migrate annually, but individuals, especially juveniles and males, may disperse widely outside of the breeding season (Raum-Suryan et al. 2004; Trites et al. 2006; Lander et al. 2009; Jemison et al. 2013; Fritz et al. 2016; Sigler et al. 2017; Jemison et al. 2018).

The ability to detect sound and communicate underwater is important for a variety of Steller sea lion life functions, including reproduction and predator avoidance. NMFS categorizes Steller sea lions in the otariid pinniped functional hearing group, with an applied frequency range between 60 Hz and 39 kHz in water (NMFS 2024a).

Information on Steller sea lion biology and habitat is available at:

Steller Sea Lion Species Description

Marine Mammal Stock Assessment Reports: Pinnipeds-Otariids

2020 Status Review

Occurrence of Western DPS Steller Sea Lions East of 144º W. Longitude

Steller Sea Lion Critical Habitat

WDPS Steller sea lions in the action area

Sightings of Steller sea lions in middle and upper Cook Inlet are rare, and density data are not available for this region. The majority of Steller sea lion sightings recorded during NMFS aerial surveys for Cook Inlet belugas were located south of the Forelands (Rugh et al. 2005; Shelden et al. 2013).

POA projects in recent years have recorded several Steller sea lions during monitoring efforts. During Phase 1 PCT construction monitoring from the end of May to the end of June 2020, up to six Steller sea lions were observed; at least two of these observations may have been re-sightings of the same individual, as they occurred on the same day (61 North Environmental 2021). Between the end of May and the end of September 2021, nine Steller sea lions were observed during monitoring associated with Phase 2 PCT construction (61 North Environmental 2022a; Easley-Appleyard and Leonard 2022). An additional seven unidentified pinnipeds were observed in 2020 and another one in 2021, which could have been harbor seals or Steller sea lions (61 North Environmental 2021; 61 North Environmental 2022a). Three Steller sea lions were observed between mid-May and mid-June 2022 during the South Floating Dock construction monitoring (61 North Environmental 2022c).

About 3,600 Steller sea lions use terrestrial sites in the lower Cook Inlet area (Sweeney et al. 2017), with additional individuals foraging in the area. The nearest major rookery or haulout site to the POA is over 200 kilometers away (**Figure 4**).

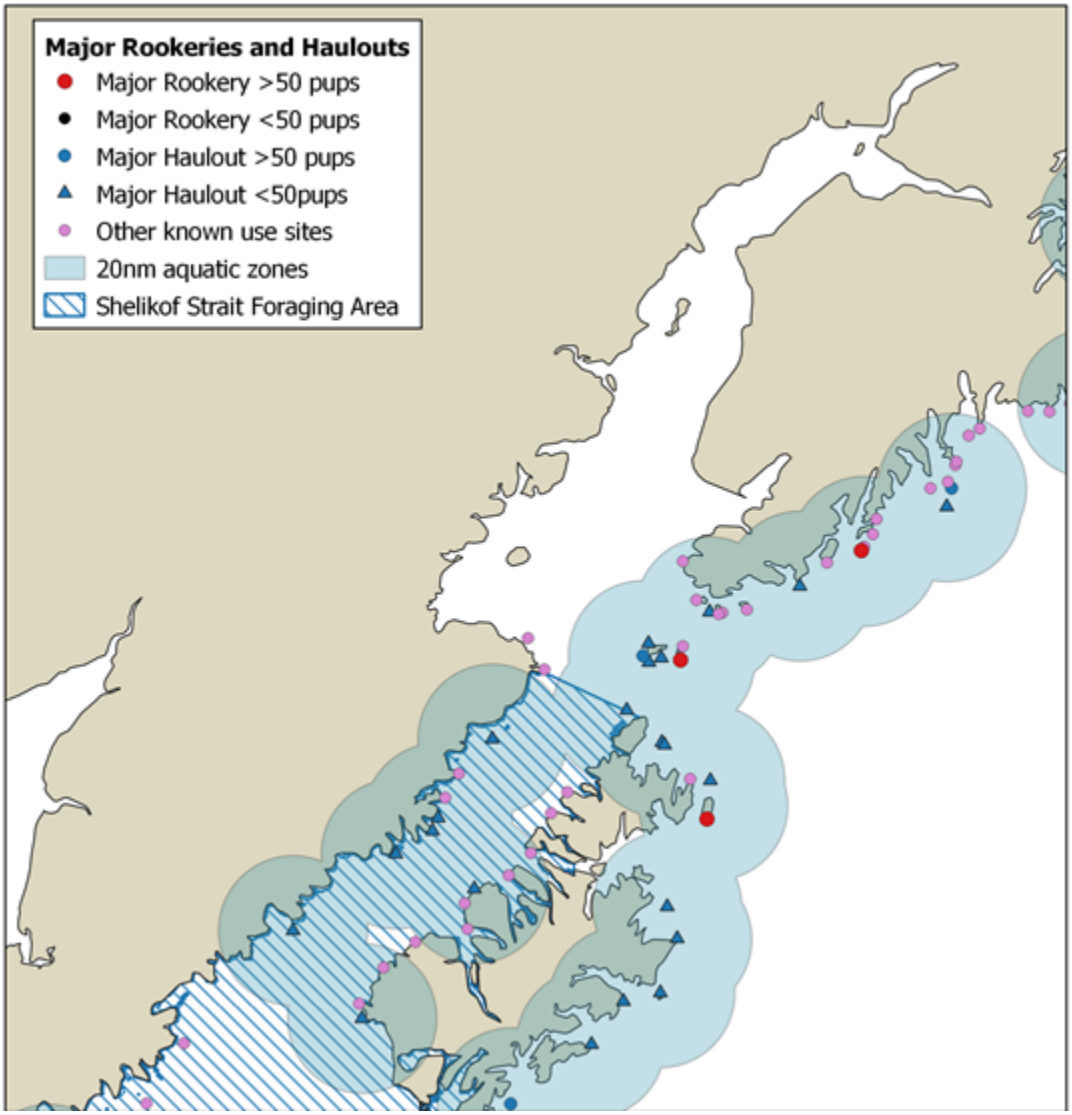

Figure 4. Steller sea lion major rookeries and haulouts in the lower Cook Inlet area.

Effects of the Action

"Effects of the action" are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action (50 CFR 402.02). The applicable standard to find that a proposed action may affect but is "not likely to adversely affect" listed species or critical habitat is that all of the effects of the action are expected to be insignificant, extremely unlikely to occur, or completely beneficial. "Insignificant effects" relate to the magnitude of the impact and are those that one would not be able to meaningfully measure, detect, or evaluate; insignificant effects should never reach the scale where take occurs.

While the ESA does not define "harass," NMFS issued guidance interpreting the term "harass" under the ESA as to: "create the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering" (Wieting 2016). NMFS considers the following steps to assess whether proposed activities are likely to harass.

1. Whether an animal is likely to be exposed to a stressor or disturbance (i.e., an annoyance).

2. The nature of that exposure in term of magnitude, frequency, duration, etc. Included in this may be type and scale as well as considerations of the geographic area of exposures (e.g., is the annoyance within a biologically important location for the species, such as a foraging area, spawning/breeding area, or nursery area?).

3. The expected response of the exposed animal to a stressors or disturbance (e.g., startle, flight, alteration [including abandonment] of important behaviors).

4. Whether the nature and duration or intensity of that response is a significant disruption of those behavior patterns which include, but are not limited to, breeding, feeding, sheltering, resting, or migrating.

The potential effects of the proposed action on listed species and critical habitat include:

- disturbance from the sounds and presence of vessels and in-water object detection and clearance training activities,
- injury or mortality from vessel strike,
- injury or mortality from entanglement,
- injury, illness, or mortality from pollutant/contaminant exposure,
- impacts to prey species, and
- habitat alterations from project noise and pollutants/contaminants.

Acoustic Thresholds

Since 1997, NMFS has used generic sound exposure thresholds to determine whether an activity produces underwater sounds that might result in impacts to marine mammals (70 FR 1871, 1872, January 11, 2005). NMFS developed comprehensive guidance on sound levels likely to cause injury to marine mammals through onset of permanent and temporary threshold shifts (PTS (Level A harassment) and TTS; 83 FR 28824, June 21, 2018). NMFS is in the process of developing guidance for behavioral disruption (Level B harassment). However, until such guidance is available, NMFS uses the following conservative thresholds of underwater sound pressure levels, expressed in root mean square (rms), from broadband sounds that cause behavioral disturbance, and referred to as Level B harassment under section 3(18)(A)(ii) of the Marine Mammal Protection Act (MMPA; 16 U.S.C. 1362(18)(A)(ii)):

- impulsive sound: 160 dB_{rms} re 1 µPa
- continuous sound: 120 dB_{rms} re 1µPa

The generalized hearing range for each hearing group is provided in **Table 6**.

Table 6. Underwater marine mammal hearing groups (NMFS 2024a).

Hearing Group^	ESA-listed Marine Mammals in the Action Area	Generalized Hearing Range*
Low-frequency (LF) cetaceans *(Baleen whales)*	Western North Pacific DPS humpback whale, Mexico DPS humpback whale	7 Hz to 36+ kHz
High-frequency (HF) cetaceans *(dolphins, toothed whales, beaked whales)*	Cook Inlet beluga whale DPS	150 Hz to 160 kHz
Very High-frequency (VHF) cetaceans *(true porpoises)*	None	200 Hz to 165 kHz
Phocid pinnipeds (PW) *(true seals)*	None	40 Hz to 90 kHz
Otariid pinnipeds (OW) *(sea lions and fur seals)*	Western DPS Steller sea lion	60 Hz to 68 kHz

^ Southall et al. (2019) indicates that as more data become available there may be separate hearing group designations for Very Low-Frequency cetaceans (blue, fin, right, and bowhead whales) and Mid-Frequency cetaceans (sperm, killer, and beaked whales). However, at this point, all baleen whales are part of the LF cetacean hearing group, and sperm, killer, and beaked whales are part of the HF cetacean hearing group. Additionally, recent data indicate that as more data become available for Monachinae seals, separate hearing group designations maybe appropriate for the two phocid subfamilies (Ruscher et al. 2021; Sills et al. 2021).

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

+ NMFS is aware that the National Marine Mammal Foundation successfully collected preliminary hearing data on two minke whales during their third field season (2023) in Norway. These data have implications for not only the generalized hearing range for low-frequency cetaceans but also on their weighting function. However, at this time, no official results have been published. Furthermore, a fourth field season (2024) is proposed, where more data will likely be collected. Thus, it is premature for us to propose any changes to our current Updated Technical Guidance. However, mysticete hearing data is identified as a special circumstance that could merit re-evaluating the acoustic criteria in this document. Therefore, we anticipate that once the data from both field seasons are published, it will likely necessitate updating this document (i.e., likely after the data gathered in the summer 2024 field season and associated analysis are published).

Disturbance from Vessel Traffic and Training Devices

As described in the proposed activities, the exercise will be supported by six U.S. Coast Guard patrol boats, one small combat rubber raiding craft, and one tug-and-barge combination. Movement of these vessels will be localized within the vicinity of the POA and Port MacKenzie, and will temporarily increase the number of vessels present in the area as well as the number of daily vessel transits between the two ports. In addition, in-water object detection and clearance training activities will employ up to two UUVs and an ROV.

Auditory or visual disturbance to listed species could occur during vessel activities associated with the project. A listed species could react to project activities by either investigating or being startled by vessels. Disturbance from vessels could temporarily increase stress levels or displace an animal from its habitat. Underwater noise from vessels may temporarily disturb or mask communication of marine mammals. Behavioral reactions from vessels can vary depending on the type and speed of the vessel, the spatial relationship between the animal and the vessel, the species, and the behavior of the animal prior to the disturbance from the vessel. Response also varies between individuals of the same species exposed to the same sound.

Behavioral responses of beluga whales to vessels include changing swimming direction, increasing swim speed, altering diving, surfacing, and breathing patterns, and changes in vocalizations (Wartzok et al. 2003). Past experiences with vessels, age, and activity during the vessel encounter appear to be important factors when considering the response of an animal (Wartzok et al. 2003; McQuinn et al. 2011). Older animals respond more often than younger animals, and belugas respond less often when engaged in feeding or traveling than during other activities. However, when whales did respond, the response was typically more pronounced (Fish and Vania 1971; Stewart et al. 1982; Blane and Jaakson 1994).

Cetaceans, including belugas, have been documented altering their calling rates and duration in noisy environments (Finley et al. 1990; Wright et al. 2007; Dunlop et al. 2014; Erbe et al. 2018). Belugas also change their vocalization frequency and intensity in response to noise in their environment (Au et al. 1985). Changes in calling rates, repetition of calls, increase in call duration, and upward shift in frequency of beluga vocalizations were observed in response to vessel noise in the St. Lawrence River (Lesage et al. 1999; Scheifele et al. 2005). Vocal responses were more persistent when the whales were exposed to noise from a ferry compared to a small motorboat (Lesage et al. 1999). Beluga vocalizations and echolocation can also be masked by vessel sound. In Cook Inlet, the communication band of belugas was found to be fully masked by ambient noise and anthropogenic noise from a containership positioned at 5,000 meters (Brewer et al. 2023; Eickmeier and Vallarta 2023) . The echolocation band was partially masked at shorter ranges up to 2,500 meters (Eickmeier and Vallarta 2023).

Some baleen whales have adjusted their communication frequencies, intensity, and call rate to limit masking effects from anthropogenic sounds such as shipping traffic. Baleen whales may also exhibit behavioral changes in response to vessel noise. Marine mammals that have been disturbed by anthropogenic noise and vessel approaches are commonly reported to shift from resting behavioral states to active behavioral states, suggesting an energetic cost to the affected animal. Humpback cow-calf pairs significantly reduced the amount of time spent resting and milling when vessels approached (Morete et al. 2007). Responding to vessels is likely stressful to

humpback whales, but the biological significance of that stress is unknown (Bauer and Herman 1986) .

Potential impacts of vessel disturbance on Steller sea lions have not been well studied, and the responses will likely depend on the season and stage in the reproductive cycle (NMFS 2008b). Steller sea lions are more likely to be disturbed at haulouts and near rookeries, where in-air vessel noise or visual presence could cause behavioral responses such as avoidance of the sound source, spatial displacement from the immediate surrounding area, trampling, and abandonment of pups (Calkins and Pitcher 1982; Kucey 2005). The proposed activities will not occur near any Steller sea lion haulouts or rookeries. The effects of vessel presence on western DPS Steller sea lion in open water is likely to be temporary as the vessel approaches and passes. Increases in ambient noise from vessel traffic, however temporary, has the potential to mask communication between sea lions, and may affect their ability to detect predators (Richardson and Malme 1993; Weilgart 2007).

(Blackwell and Greene 2003) recorded underwater noise produced by both large and small vessels near the Port of Alaska. The larger tugboat *Leo* produced the highest broadband levels, 149 dB re 1 µPa at a distance of 335 feet (102 meters), when pushing against a dock at the Port of Alaska; while the docked *Northern Lights* (cargo freight ship) produced broadband sound levels of 126 dB re1 µPa at 374 feet (114 meters). Of the vessels that will be employed during the proposed action, the tug is the only sound source expected to exceed Level B take thresholds (**Table 7**).

Table 7. Anticipated sound source levels of vessels and devices proposed for use for Arctic Edge 25 Knik Arm marine activities.

Vessel/Device Type	Anticipated Sound Source Level (dB)
UUV side scan sonar (*de minimus* sonar)	~ 44-63 dB
ROV electric motor	≤ ~ 40 dB
U.S. Coast Guard Patrol Boat (two 315-hp diesel engines)	~75-85 dB
U.S. Navy small boat (40-hp outboard engine)	≤ ~100 dB
Barge and Tugboat moving between Port Mackenzie and POA Northstar terminal	~161 dB

Research on animal reactions to UUVs and ROVs is extremely limited. NMFS expects any reaction would be comparable to that described above for vessels. Physical disturbance from the use of these in-water devices would not be expected to result in more than a momentary

behavioral response in listed marine mammals. Any change in an individual animal's behavior from in-water devices is not expected to result in long-term effects.

Implementation of the mitigation measures, including dedicated Lookouts when vessels are underway and when in-water devices are in use, staying 91 meters or more from listed marine mammals (**Table 1**), speed restrictions, avoiding changing direction and speed and reducing speed when visibility is reduced, will minimize the risk of disturbance from project related vessels and in-water devices.

The impact of vessel and in-water device sound and presence is very minor, and thus adverse effects to Cook Inlet beluga whales, western North Pacific DPS and Mexico DPS humpback whales, or western DPS Steller sea lions will be immeasurably small. Therefore, we conclude that the adverse effects from vessel and in-water device sound and presence on Cook Inlet beluga whales, western North Pacific DPS and Mexico DPS humpback whales, or western DPS Steller sea lions are insignificant.

Disturbance of Prey

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. Injury to fish depends more on the magnitude of particle motion than on sound levels as mammals perceive it (Popper and Hawkins 2019). It is likely that fish will avoid sound sources within ranges that may be harmful (McCauley et al. 2003). The most likely impact to fish from project activities in the action area would be temporary behavioral avoidance. The duration of fish avoidance of the area is unknown, but a rapid return to normal recruitment, distribution, and behavior is expected.

We expect fish will be capable of moving away from project activities to avoid exposure to noise. Any behavioral avoidance by fish of the disturbed area would still leave significantly large areas of fish and marine mammal foraging habitat in the nearby vicinity. We consider potential adverse impacts to fish from project activities in the action area to be immeasurably small.

Studies on euphausiids and copepods, two of the more abundant and biologically important groups of zooplankton, have documented some sensitivity of zooplankton to sound (Chu et al. 1996; Wiese 1996); however, any effects of project noise on zooplankton are be expected to be restricted to the area within a few meters of the activity and would likely be sub-lethal. Any mortality or impacts on zooplankton as a result of operations is immaterial as compared to the naturally occurring reproductive and mortality rates of these species. We consider potential adverse impacts to zooplankton to be immeasurably small.

The impact of project acoustic disturbance of prey is negligible, and thus adverse effects to Cook Inlet beluga whales, western North Pacific DPS humpback whales, Mexico DPS humpback whales, or western DPS Steller sea lions will be immeasurably small. Therefore, we conclude that the adverse effects from acoustic disturbance of prey on western North Pacific DPS humpback whales, Mexico DPS humpback whales, Cook Inlet beluga whales, or western DPS Steller sea lions are insignificant.

Vessel and In-Water Device Strike

Ship strikes can cause major wounds or death to marine mammals. An animal at the surface could be struck directly by a vessel, a surfacing animal could hit the bottom of a vessel, or a vessel propeller could injure or kill an animal below the water surface. From 1978 to 2021, there were 153 recorded whale-vessel collisions in Alaska, with the majority occurring in Southeast Alaska between May and September and involving humpback whales (Neilson et al. 2012; Helker et al. 2019; Freed et al. 2023). Small recreational vessels traveling at speeds over 13 knots were most commonly involved in ship strike encounters; however, all types and sizes of vessels were reported (Neilson et al. 2012). The majority of vessel strikes involved humpback whales (86 percent) and the number of humpback whale strikes increased annually by 5.8 percent from 1978 to 2011. Forty-four humpback whales were reported struck by vessels in Alaskan waters between 2013 and 2021 (Delean et al. 2020; Freed et al. 2022; Freed et al. 2023). There have been two reported ship strikes of unidentified large cetaceans in Kachemak Bay, lower Cook Inlet between 2000 and 2021.

Ship strikes of smaller cetaceans are less common than large whales, possibly due to their size and more agile nature. Cook Inlet beluga whales have been photographed with propeller scars (McGuire et al. 2020b). Individual belugas photographed between 2005 and 2017, along with stranding records, were examined to determine prevalence of scars indicative of anthropogenic trauma (McGuire et al. 2020b). Out of 78 whales examined, 14 percent had signs of confirmed or possible vessel strikes. Vessel strikes of belugas have also been documented in the St. Lawrence River Estuary (Lair et al. 2015), in Bristol Bay (McGuire 2014), and in August 2024, a beluga sustained a propeller strike injury from a small vessel strike in upper Cook Inlet that involved slow speeds (NMFS 2024c). However, smaller boats traveling at higher speeds with frequent changes in direction present a greater threat than larger, slower vessels moving in straight lines.

Steller sea lions are likely more susceptible to ship strike mortality or injury in harbors or in areas where animals are concentrated, e.g., near rookeries or haulouts (NMFS 2008b). The risk of vessel strike, however, has not been identified as a significant concern for Steller sea lions. Between 2012 and 2021, there were no reports of ship strikes for Steller sea lions in Alaska (Helker et al. 2019; Freed et al. 2023). Steller sea lions are not concentrated in any locations near the action area, therefore the risk of project vessels striking Steller sea lions is extremely low.

Vessel traffic associated with the action will increase the likelihood of a vessel strike, however, vessel speed is a primary factor in whether a strike occurs and the severity of injury. (Laist et al. 2001) determined that most lethal or severe injuries involved ships traveling 14 knots or faster. Serious injuries were found to occur infrequently at vessel speeds below 14 knots, and rarely at speeds below 10 knots. (Vanderlaan and Taggart 2007) found the greatest rate of change in the probability of a lethal injury to a large whale occurs between vessel speeds of 8.6 and 15 knots, and the probability of a lethal injury drops below 50 percent at 11.8 knots. Implementation of mitigation measures, including speed limits and dedicated Lookouts when vessels are underway, will reduce the likelihood of strike from the action.

The UUVs and ROV could also strike listed marine mammals. However, these devices will move slowly through the water (at approximately 4 knots) and are highly unlikely to make physical contact with Cook Inlet beluga whales, humpback whales or Stellar sea lions because

the animals can easily avoid the devices. UUVs and ROVs are frequently used by the U.S. Navy during marine training exercises and there have been no recorded instances of marine species strikes from these devices.

The risk of vessel or in-water device strike from the action is extremely low, and thus adverse effects to Cook Inlet beluga whales, western North Pacific DPS humpback whales, Mexico DPS humpback whales, or western DPS Steller sea lions are extremely unlikely to occur. Therefore, we conclude that the adverse effects from vessel or in-water device strike on western North Pacific DPS humpback whales, Mexico DPS humpback whales, Cook Inlet beluga whales, or western DPS Steller sea lions are discountable.

Entanglement

The proposed exercise includes activities that require the placement of lines in the water. These lines, as well as any others incidentally placed in the water, create an entanglement risk to listed marine mammals. The proposed action may also generate trash and that trash and debris could be released into the marine environment and result in entanglement.

Humpback whales have been killed and injured during interactions with commercial fishing gear; however, the frequency of these interactions does not appear to have a significant adverse consequence for humpback whale populations. In Alaska, most humpbacks become entangled with gear between early June and early September while foraging in nearshore waters. A photographic study of humpback whales in Southeast Alaska found at least 53 percent of individuals showed some kind of scarring from fishing gear entanglement (Neilson et al. 2005).

Between 2016 and 2020 human-caused mortality and injury of the Western DPS Steller sea lions (n = 148) was primarily caused by entanglement in fishing gear, in particular, commercial trawl gear (n=113; Freed et al. 2022). This mortality and serious injury estimate results from an actual count of verified human-caused deaths and serious injuries, and is a minimum because not all entangled animals strand nor are all stranded animals found, reported, or have the cause of death determined. Overall, the relative impact on the recovery of the Western DPS of Steller sea lion due to entanglement is ranked as low (NMFS 2008b).

Entanglements of Cook Inlet belugas are rare but do occur. As the listed species most likely to be encountered during the proposed action, they are at the greatest risk of entanglement. The only confirmed mortality to date was a young Cook Inlet beluga carcass recovered from a subsistence set net in 2012. Three entanglements have been documented; in 2005, a beluga entangled in an unknown object, perhaps a tire rim or a culvert liner, was photographed in Eagle Bay (McGuire et al. 2014), and another was repeatedly photographed in 2010–2013 with what appeared to be a rope entangled around the upper portion of its body near the pectoral flippers (McGuire et al. 2014). It is unknown if these animals were able to disentangle themselves or if they died as a result of the entanglements (NMFS 2016).

On October 1, 2024, PSOs working on the POA's North Extension Stabilization (NES) project spotted a Cook Inlet beluga whale entangled in an unknown object (possibly a tire inner-tube) near the POA (61 North Environmental 2025). The whale was sighted again on October 2 but was not seen after that time. Video footage of the individual was taken, and the whale was

determined to be a subadult, at least seven years old (NMFS 2024d). The entanglement was determined to be life-threatening, but the whale was not seen after October 2, and no disentanglement effort was possible. Like the individuals mentioned above, to date it is unknown whether or not this whale was able to free itself from the object or if it has died.

While the proposed action will increase the risk of entanglement, the DoD and U.S. Coast Guard will ensure that all ropes, nets, and other marine mammal entanglement hazards associated with the proposed action are secured so they cannot enter marine waters, with the exception of lines that are necessary for execution of the proposed action (e.g., lines tethering mine training shapes to anchors). These excepted lines will be kept under tension at both ends and affixed to the vessel or gear. In addition, consistent with AS 46.06.080, the action agencies will ensure that trash is disposed of in accordance with state law and will ensure that all closed loops (e.g., packing straps, rings, bands, etc.) will be cut prior to disposal, which will reduce the likelihood of impacts from trash and debris to negligible levels.

The risk for entanglement is extremely low, and thus adverse effects to Cook Inlet beluga whales, western North Pacific DPS humpback whales, Mexico DPS humpback whales, or western DPS Steller sea lions are extremely unlikely to occur. Therefore, we conclude that the adverse effects from entanglement on western North Pacific DPS humpback whales, Mexico DPS humpback whales, Cook Inlet beluga whales, or western DPS Steller sea lions are discountable.

Pollutant/Contaminant Exposure

Marine mammals could be exposed to authorized discharges from project vessels and in-water devices. Discharges associated with some marine commercial vessels are covered under the National Pollutant Discharge Elimination System (NPDES) Vessel General Permit (VGP) for Discharges Incidental to the Normal Operation of Vessels.

Accidental spills could occur from a vessel leak or onboard spill. The size of the spill influences the number of individuals that will be exposed and the duration of that exposure. Contact with spilled pollutants through the skin, eyes, inhalation, or ingestion can result in temporary irritation or long-term endocrine or reproductive impacts, depending on the duration of exposure. The greatest threat to cetaceans is likely from inhalation of volatile toxic hydrocarbon fractions of fresh oil, which can damage the respiratory system (Hansen 1985; Neff 1990), cause neurological disorders or liver damage (Geraci and Aubin 1980), have anesthetic effects (Neff 1990), and cause death (Geraci and Aubin 1980). However, toxic fumes from small spills are expected to rapidly dissipate into the atmosphere as fresh refined oil ages quickly, limiting the potential exposure of whales. Ingestion of hydrocarbons can irritate and destroy epithelial cells in the stomach and intestine of marine mammals, affecting motility, digestion, and absorption, which may result in death or reproductive failure (Geraci and Aubin 1980). Direct ingestion of oil, ingestion of contaminated prey, or inhalation of volatile hydrocarbons transfers toxins to body fluids and tissues causing effects that can lead to death (Geraci and Aubin 1980; Engelhardt 1982; Frost et al. 1994; Spraker et al. 1994; Jenssen 1996; Jenssen et al. 2003).

Exposure to contaminants such as petroleum products can cause abnormal development and growth, reproductive damage, and behavioral changes that can affect the fitness of a population

of fish or zooplankton. Other sublethal effects on fish may include changes in behavior and feeding habits. Zooplankton can become coated in oil and other pollutants, which can result in suffocation or reduced ability to feed and move. We expect impacts to zooplankton from any small spills or discharges to be extremely localized and immeasurably small compared to the naturally occurring reproductive and mortality rates of these species.

It is possible that a vessel may discharge small volumes of light molecular weight refined petroleum products. However, small spills are unlikely to occur as a result of the small amount of project-related vessel traffic, and any spills would be localized to a small area and have a discountably small probability of affecting listed marine mammals. The spill will likely dissipate or evaporate due to wind, wave, and tidal current action long before an ESA-listed animal could come into contact with it. Therefore, the impact of a small, refined oil or petroleum spill from project vessels is very minor and thus adverse effects to Cook Inlet beluga whales, western North Pacific DPS humpback whales, Mexico DPS humpback whales, or western DPS Steller sea lions, will be immeasurably small. Furthermore, the probability of a small, refined oil or petroleum spill occurring is very small, and thus adverse effects to Cook Inlet beluga whales, western North Pacific DPS humpback whales, Mexico DPS humpback whales, or western DPS Steller sea lions are extremely unlikely to occur.

The risk of pollutant/contaminant exposure from the proposed action is extremely unlikely and, if it occurred, the impacts of such would be negligible. Thus, the adverse effects of pollutant/contaminant exposure to Cook Inlet beluga whales, western North Pacific DPS humpback whales, Mexico DPS humpback whales, or western DPS Steller sea lions are insignificant and discountable.

Habitat Alternation

Noise, increased turbidity, and any accidental small spills or discharges resulting from the proposed activities will affect the quality of marine habitat for Cook Inlet beluga whales, western North Pacific DPS humpback whales, Mexico DPS humpback whales, or western DPS Steller sea lions.

As discussed in *Disturbance from Vessel Traffic and Training Devices*, anthropogenic sound from the proposed activities can displace marine mammals from habitat; the introduction of a significant amount of noise for extended periods of time can reduce the quality of the habitat and make it less desirable to marine mammals and their prey, and can mask important communication and echolocation calls. Given the short duration of the exercise, and with implementation of the mitigation measures such as shutdown zones, noise impacts substantial enough to cause marine mammals or their prey to avoid or abandon the habitat, thus reducing its value, are extremely unlikely to occur. We therefore consider habitat alteration due to project-generated noise to be discountable.

Spills and discharges into the marine environment contaminate the habitat, impacting water quality and exposing both marine mammals and their prey to hazardous chemicals. As discussed in *Pollutant/Contaminant Exposure*, the likelihood of impacts from small spills and discharges is very low due to the limited amount of project vessel traffic, the rapid dilution and dispersal facilitated by the strong currents and tides in the Inlet. We therefore consider habitat alteration

due to spills and discharges to be extremely unlikely and if they were to occur impacts, if any, would be very minor.

Turbidity affects the ability of light to penetrate water and therefore can affect the amount of primary productivity or plant growth in an area. During placement and retrieval of the mine training shapes, a temporary and localized increase in turbidity is anticipated to occur. Knik Arm is already a highly turbid ecosystem, however, with high and variable concentrations of suspended sediments such as silts and clays. Plant growth in parts of Cook Inlet with high turbidity levels is already limited, and therefore a temporary increase in turbidity in the action area is not likely to produce detectable effects on plant growth.

Suspended sediments are not expected to persist in the area for more than a few hours because tidal action will sufficiently disperse re-suspended sediments to a point where they are not detectably different from surrounding waters. Much of the larger diameter re-suspended sediment is expected to quickly settle back into the substrate. The small number of prey that may be affected by temporarily increased turbidity will have no measurable effect on overall prey availability in the area. Increases in turbidity will be temporary, localized, and difficult to detect in waters that have a very high concentration of suspended solids because of glacial runoff and extreme tidal exchange. Impacts on zooplankton, fish, and marine mammals are expected to be brief, intermittent, and minor, if impacts occur at all. It is not anticipated that the proposed activity would elevate suspended sediment levels above typical levels for the area and, therefore, effects to ESA-listed species from increased turbidity levels will be immeasurably small.

The risk of habitat alteration from the action is extremely unlikely and, if it occurred the impacts of such alteration from the action would be negligible. Thus, the adverse effects from habitat alteration to Cook Inlet beluga whales, western North Pacific DPS humpback whales, Mexico DPS humpback whales, or western DPS Steller sea lions are insignificant and discountable.

Analyzing Effects Upon Critical Habitat

Cook Inlet Beluga Whale Critical Habitat

NMFS identified five PBEs essential for the conservation of Cook Inlet beluga whales in the final rule to designate critical habitat (76 FR 20180; April 11, 2011). The action area is within Area 1 of Cook Inlet beluga designated critical habitat – summer habitat. The project may impact Cook Inlet beluga whale critical habitat by the introduction of vessel noise (PBFs 4 and 5), by impacting the availability of prey via noise and temporary effects to prey habitat (PBF 2), and increasing the risk of contamination from small spills (PBF 3). We evaluate effects to each of the physical and biological features (50 CFR 226.220(c)) below.

1. Intertidal and subtidal waters of Cook Inlet with depths <30 feet MLLW and within 5 miles of high and medium flow anadromous fish streams.

The action will not alter the water depth of intertidal and subtidal waters and there will be no temporary or permanent loss of critical habitat acreage. Therefore, there will be no impact to PBF 1 from the action.

2. Primary prey species consisting of four species of Pacific salmon (Chinook, sockeye,

chum, and coho), Pacific eulachon, Pacific cod, walleye pollock, saffron cod, and yellowfin sole.

As discussed above in, prey species may be affected by the action through disturbance from anthropogenic noise, temporarily increased turbidity, and small spills and discharges. A decrease in the availability and/or nutritional quality of primary prey species through displacement, declines in spawning or foraging success due to habitat alteration, or contaminant exposure would therefore be an impact to PBF 2. Given the short-term, temporary, and localized nature of such impacts, and the low probability of contamination from small spills and discharges, effects to PBF 2 are very unlikely to occur and, if they did occur, will be immeasurably small. Therefore, we conclude that impacts to PBF 2 from the action are insignificant and discountable.

3. Waters free of toxins or other agents of a type and amount harmful to Cook Inlet beluga whales.

As discussed above in *Pollutant/Contaminant Exposure*, small spills and discharges from project-related vessels may occur in the marine portion of the action area. However, these are very unlikely to occur and would be localized to a small area, dissipating or evaporating quickly. Therefore, we conclude that impacts to PBF 3 from the action are insignificant and discountable.

4. Unrestricted passage within or between the critical habitat areas.

With the exception of the POA and JBER exclusion areas, marine waters of Knik Arm are part of critical habitat Area 1, i.e., all waters of upper Cook Inlet excepting the critical habitat exclusion areas (**Figure 2**). As discussed in *Disturbance from Vessel Traffic and Training Devices*, with implementation of the mitigation measures, impacts to Cook Inlet beluga whales from the noise and physical presence of project vessels are expected to be insignificant and we do not anticipate that Cook Inlet beluga whale movement will be restricted. Therefore, we conclude that the impacts to PBF 4 from the action are insignificant.

5. Waters with in-water noise below levels resulting in the abandonment of critical habitat areas by Cook Inlet beluga whales.

The action will introduce anthropogenic noise into Cook Inlet beluga whale critical habitat. However, as discussed in *Disturbance from Vessel Traffic and Training Devices*, the low sound source levels generated by the majority of the vessels and equipment, and implementation of the mitigation measures, in particular the use of trained Lookouts and mitigation zones (e.g., vessel traffic), are expected to prevent project noise from reaching disturbance thresholds that would result in measurable changes in beluga behavior, including abandonment of the action area. Therefore, we conclude that impacts to PBF 5 from the action are insignificant.

Conclusion

Based on this analysis, NMFS concurs with your determination that the proposed action may affect, but is not likely to adversely affect, Cook Inlet DPS beluga whale, western North Pacific DPS humpback whale, Mexico DPS humpback whale, western DPS Steller sea lion or critical habitat for the Cook Inlet beluga whale. Reinitiation of consultation is required where

discretionary federal involvement or control over the action has been retained or is authorized by law and if (1) take of listed species occurs, (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered, (3) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this concurrence letter, or (4) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16).

Please direct any questions regarding this letter to Jill Seymour at jill.seymour@noaa.gov or (323) 372-3328, and to akr.prd.section7@noaa.gov.

Sincerely,

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Attachment: Knik Arm Marine Mammal ID Card

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Attachment: Knik Arm Marine Mammal Identification Card

The following Knik Arm Marine Mammal Identification Card (aka Guide) was developed by NMFS Alaska Region Protected Resources Division specifically for the Arctic Edge 25 military training exercises in Knik Arm, Cook Inlet, Alaska. The purpose of this guide is to aid DoD and U.S. Coast Guard exercise participants in identifying marine mammals that may occur in the exercise action area in August 2025.