NATIONAL MARINE FISHERIES SERVICE
ENDANGERED SPECIES ACT SECTION 7
BIOLOGICAL OPINION AND CONFERENCE

Title:	Biological Opinion and Conference on the Issuance of Scientific Research Permit Nos. 27499, 27408, and 27503 to the National Marine Fisheries Service's Marine Mammal Laboratory, Alaska Sea Life Center, and Alaska Department of Fish and Game for Research on Steller Sea Lions
Consultation Conducted By:	Endangered Species Act Interagency Cooperation Division, Office of Protected Resources, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce
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1 INTRODUCTION

The Endangered Species Act of 1973, as amended (ESA; 16 U.S.C. 1531 et seq.) establishes a national program for conserving threatened and endangered species of fish, wildlife, plants, and the habitat they depend on. Section 7(a)(2) of the ESA requires Federal agencies to insure that their actions are not likely to jeopardize the continued existence of threatened or endangered species or adversely modify or destroy their designated critical habitat. Federal agencies must do so in consultation with the National Marine Fisheries Service (NMFS) for threatened or endangered species (ESA-listed), or designated critical habitat that may be affected by the action that are under NMFS jurisdiction (50 C.F.R. §402.14(a)). If a Federal action agency determines that an action "may affect, but is not likely to adversely affect" ESA-listed species or designated critical habitat and NMFS concurs with that determination for species under NMFS jurisdiction, consultation concludes informally (50 C.F.R. §402.13(c)).

Section 7(b)(3) of the ESA requires that, at the conclusion of consultation, NMFS provide an opinion stating whether the Federal agency is able to insure its action is not likely to jeopardize ESA-listed species or destroy or adversely modify designated critical habitat. If NMFS determines that the action is likely to jeopardize listed species or destroy or adversely modify designated critical habitat, NMFS provides a reasonable and prudent alternative that allows the action to proceed in compliance with section 7(a)(2) of the ESA. If incidental take of an ESA-listed species is expected, section 7(b)(4) requires NMFS to provide an incidental take statement, which exempts take incidental to an otherwise lawful action, and specifies the impact of any incidental taking, including necessary or appropriate reasonable and prudent measures to minimize such impacts and terms and conditions to implement the reasonable and prudent measures. NMFS, by regulation, has determined that an incidental take statement must be prepared when take is "reasonably certain to occur" as a result of the proposed action (50 C.F.R. §402.14(g)(7)).

The Federal action agency for this consultation is the NMFS, Office of Protected Resources, Permits and Conservation Division (hereafter the Permits and Conservation Division). The Permits and Conservation Division proposes to issue three scientific research permits pursuant to section 10(a)(1)(A) of the ESA, section 104 of the Marine Mammal Protection Act (MMPA) of the 1972, as amended (16 U.S.C. 1361 et seq.), and the Fur Seal Act of 1966, as amended (16 U.S.C. 1151 et seq.). Permit No. 27499 will be issued to NMFS's Marine Mammal Laboratory (MML). Permit No. 27408 will be issued to the Alaska Sea Life Center (ASLC). Permit No. 27503 will be issued to the Alaska Department of Fish and Game (ADF&G). The purpose of the proposed permits is to allow an exception to the moratorium and prohibition on takes established under the MMPA and ESA, respectively, in order to allow the MML, ASLC, and ADF&G to conduct scientific research on Eastern and Western Distinct Population Segment (DPS) of Steller sea lions in the surrounding waters of Alaska. Only the Western DPS of Steller sea lion is listed under the ESA.

Consultation in accordance with section 7(a)(2) of the statute (16 U.S.C §1536(a)(2)), associated implementing regulations (50 C.F.R. Part 402), and agency policy and guidance (USFWS and NMFS 1998) was conducted by the NMFS Office of Protected Resources (OPR) ESA Interagency Cooperation Division (hereafter referred to as 'we' or 'us'). We prepared this biological opinion (opinion) and incidental take statement, and conference, in accordance with section 7(b) of the ESA and implementing regulations at 50 C.F.R. Part 402. This document represents NMFS's opinion on the effects of these actions on: beluga whale (*Delphinapterus leucas*) – Cook Inlet DPS, blue whale (*Balaenoptera musculus*), bowhead whale (*Balaena mysticetus*), fin whale (*Balaenoptera physalus*), gray whale (*Eschrichtius robustus*) – Western North Pacific DPS, humpback whale (*Megaptera novaeangliae*) – Mexico DPS and Western North Pacific DPS, killer whale (*Orcinus orca*) – Southern Resident DPS, North Pacific right whale (*Eubalaena japonica*), sei whale (*Balaenoptera borealis*), sperm whale (*Physeter microcephalus*); bearded seal (*Erignathus barbatus nauticus*) – Beringia DPS, ringed seal (*Phoca hispida hispida*) – Arctic subspecies, Steller sea lion (*Eumetopias jubatus*) – Western DPS; green turtle (*Chelonia mydas*) – East Pacific DPS, leatherback turtle (*Dermochelys coriacea*), loggerhead turtle (*Caretta caretta*) – North Pacific Ocean DPS, olive ridley turtle (*Lepidochelys olivacea*) all other areas/not Mexico's Pacific Coast breeding colonies; eulachon (*Thaleichthys pacificus*) – Southern DPS, green sturgeon (*Acipenser medirostris*) – Southern DPS, steelhead trout (*Oncorhynchus mykiss*) – California Central Valley, Central California Coast, Lower Columbia River, Middle Columbia River, Northern California, Puget Sound, Snake River Basin, South-Central California Coast, Southern California, Upper Columbia River, and Upper Willamette River DPSs; chinook salmon (*Oncorhynchus tshawytscha*) – California Coastal, Central Valley Spring-Run, Lower Columbia River, Puget Sound, Sacramento River Winter-Run, Snake River Fall-Run, Snake River Spring/Summer Run, Upper Columbia River Spring-Run, and Upper Willamette River Evolutionarily Significant Units (ESUs); coho salmon (*Oncorhynchus kisutch*) – Central California Coast, Lower Columbia River, Oregon Coast, and Southern Oregon and Northern California Coasts ESUs; sockeye salmon (*Oncorhynchus nerka*) – Ozette Lake and Snake River ESUs; chum salmon (*Oncorhynchus keta*) – Columbia River and Hood Canal Summer-Run ESUs; proposed sunflower sea star (*Pycnopodia helanthoides*); designated critical habitat of the Cook Inlet DPS of beluga whale, designated critical habitat of the Mexico and Western North Pacific DPSs of humpback whale, designated critical habitat of the North Pacific right whale, designated critical habitat of the Beringia DPS of bearded seal, designated critical habitat of the Arctic subspecies of ringed seal, and designated critical habitat of the Western DPS of Steller sea lion.

Updates to the regulations governing interagency consultation (50 C.F.R. 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 the Services' existing practice in implementing section 7(a)(2) of the ESA (89 FR 24268; 84 FR 45015). We have considered the

prior rules and affirm that the substantive analysis and conclusions articulated in this opinion and incidental take statement would not have been any different under the 2019 regulations or pre-2019 regulations.

A complete record of this consultation is on file electronically at the NMFS Office of Protected Resources in Silver Spring, Maryland.

1.1 Background

The research permit applicants and scientists at the MML, ASLC, and ADF&G have been permit holders for similar research activities in the same area for over 20 years. The purpose of the permits is to allow an exception to the moratorium and prohibition on takes established under the MMPA and ESA, respectively, in order to allow MML, ASLC, and ADF&G to conduct scientific research on Steller sea lions in Alaska. This research is conducted to support recovery efforts as required under the ESA and outlined in the 2008 Steller Sea Lion Recovery Plan (2008). As such, we have previously conducted ESA section 7 consultations on Steller sea lion research permits for these permit holders.

The current (2019–2024) research Permit Nos. 22298, 22293, and 22289 were batched in the 2019 biological opinion (OPR-2019-00001), hereafter the 2019 opinion, which is available online from the NOAA Institutional Repository website. The MML's proposed research activities under Permit No. 27499 are a continuation of work conducted under Permit No. 22298. The ASLC's proposed research activities under Permit No. 27408 are a continuation of work conducted under Permit No. 22293. The ADF&G's proposed research activities under Permit No. 27503 are a continuation of work conducted under Permit No. 22289. Section 1.1 of the 2019 opinion (pages 8–9) briefly describes previous consultations on MML, ASLC, and ADF&G research permits. The 2019 opinion and previous opinions for each of these research permits determined that the authorized research activities were not likely to jeopardize the continued existence of ESA-listed species or adversely modify or destroy designated critical habitat (see Section 1.1, page 9, in the 2019 opinion).

In this consultation, we build upon our long-term evaluation of the MML, ASLC, and ADF&G's research activities from previous consultations, considering those previous research permits as part of the Environmental Baseline (Section 9) in determining the effects of authorizing the MML, ASLC, and ADF&G to continue to conduct research activities under Permit Nos. 27499, 27408, and 27503, respectively, over the next five years, with possible extension.

1.2 Consultation History

This opinion is based on information provided in the applicants' permit applications, correspondence and discussions with the Permits and Conservation Division, previous biological opinions for research permits on activities conducted by the MML, ASLC, and ADF&G, annual reports from previous research activities conducted by researchers at the MML, ASLC, and ADF&G, other similar research activities for which we have conducted ESA section 7 consultations, and the best scientific and commercial data available.

Our communication with the Permits and Conservation Division regarding this consultation is summarized as follows:

- On August 30, 2023, the Permits and Conservation Division requested via email early technical assistance and review of the permit applications by the ESA Interagency Cooperation Division.
- On October 16, 2023, we provided questions and comments on the permit applications to the Permits and Conservation Division via email.
- On November 17, 2024, we provided additional questions on the permit applications to the Permits and Conservation division via email.
- On November 30 and January 8, 2024, the Permits and Conservation Division provided responses to all information requests.
- On January 24, 2024, the Permits and Conservation Division submitted, via email, a memorandum and initiation package requesting formal consultation on the proposed issuance of Permit Nos. 27499, 27408, and 27503.
- On February 6, 2024, applications for Permit Nos. 27499, 27408, and 27503 were published in the *Federal Register* for public comment. The public comment period closed on March 7, 2024.
- On February 23, 2024, we provided the Permits and Conservation Division a memorandum initiating formal consultation via email.
- On April 10, 2024, we received, via email, a request for reinitiation of the 2019 opinion from the Permits and Conservation Division. This reinitiation request was equivalent to the request for formal consultation. We proceeded with an individual consultation for the proposed permits.

2 THE ASSESSMENT FRAMEWORK

Section 7(a)(2) of the ESA requires Federal agencies, in consultation with NMFS, to insure that their actions are not likely to jeopardize the continued existence of threatened or endangered species; or adversely modify or destroy their designated critical habitat.

"Jeopardize the continued existence of" means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of an ESA-listed species in the wild by reducing the reproduction, numbers, or distribution of that species" (50 C.F.R. §402.02).

"Destruction or adverse modification" means a direct or indirect alteration that appreciably diminishes the value of critical habitat for the conservation of an ESA-listed species. Such alterations may include, but are not limited to, those that alter the physical and biological features (PBFs) essential to the conservation of a species or that preclude or significantly delay development of such features (50 C.F.R. §402.02).

The final designations of critical habitat for various species used the term primary constituent element or essential features prior to 2016. The critical habitat regulation revisions (81 FR 7414; February 11, 2016) replaced this term with PBFs. The shift in terminology does not change the approach used in conducting a "destruction or adverse modification" analysis, which is the same regardless of whether the original designation identified primary constituent elements, PBFs, or essential features. In this opinion, we use the term PBFs to mean primary constituent elements or essential features, as appropriate for the specific designated critical habitat in the action area.

An ESA section 7 assessment involves the following steps and analyses:

Description of the Proposed Action (Section 3): We describe the proposed actions and the avoidance and minimization measures that have been incorporated into the project to reduce potential effects to ESA-listed species and designated critical habitat.

Potential Stressors (Section 4): We identify and describe the stressors that could occur because of the proposed action that may result in effects on the physical, chemical, and biotic environment.

Action Area (Section 5): We describe the action area with the spatial extent of those stressors caused by the proposed action.

Endangered Species Act-Listed and Proposed Species and Designated Critical Habitat Present in the Action Area (Section 6): We identify the ESA-listed and proposed species and designated critical habitat subject to this consultation because they co-occur with the stressors produced by the proposed action in space and time.

Species and Critical Habitat Not Likely to be Adversely Affected (Section 7): During consultation, we identify the ESA-listed and proposed species and critical habitat that occur in the action area that are not likely to be adversely affected by the stressors produced by the proposed action, and we detail our analysis for these species and critical habitats.

Species Likely to be Adversely Affected (Section 8): During the ESA section 7 consultation process, we identify the ESA-listed species that are likely be adversely affected. In this section, we describe the status of ESA-listed species that may be adversely affected by the proposed action.

Environmental Baseline *(*Section 9): We describe the environmental baseline, which refers to the condition of the ESA-listed species in the action area, without the consequences to the ESA-listed species caused by the proposed action. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process. The impacts to listed species or designated critical habitat from Federal agency activities or existing Federal agency facilities that are not within the agency's discretion to modify are part of the environmental baseline (50 C.F.R. §402.02).

Effects of the Action (Section 10): Effects of the action are all consequences to ESA-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 but that are not part of the 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 impacts occurring outside the immediate area involved in the action (50 C.F.R. §402.02). The effects analysis is broken into analyses of exposure and response. To characterize exposure, we identify the number, age (or life stage), and gender of ESA-listed individuals that are likely to be exposed to the stressors and populations or subpopulations to which those individuals belong. This is our exposure analysis. We evaluate the available evidence to determine how individuals of those ESA-listed species are likely to respond given their probable exposure. This is our response analysis.

Cumulative Effects (Section 11): Cumulative effects are those effects of future state or private activities that are reasonably certain to occur within the action area of the Federal action subject to consultation (50 C.F.R. §402.02). Effects from future Federal actions that are unrelated to the proposed action are not considered because they require separate ESA section 7 compliance.

Integration and Synthesis (Section 12): In this section, we integrate and synthesize the analyses in the opinion to summarize the consequences of the proposed action to ESA-listed species under NMFS's jurisdiction.

With full consideration of the status of the species, we consider the effects of the actions within the action area on populations or subpopulations when added to the environmental baseline and the cumulative effects to determine whether the action would reasonably be expected to:

- Reduce appreciably the likelihood of survival and recovery of ESA-listed species in the wild by reducing its numbers, reproduction, or distribution, and state our conclusion as to whether the action is likely to jeopardize the continued existence of such species.

The results of our jeopardy analysis are summarized in the Conclusion (Section 13). If, in completing the last step in the analysis, we determine that the action under consultation is likely to jeopardize the continued existence of ESA-listed species or destroy or adversely modify designated critical habitat, then we must identify reasonable and prudent alternative(s) to the action, if any, or indicate that to the best of our knowledge there are no reasonable and prudent alternatives (50 C.F.R. §402.14).

In addition, we include an incidental take statement (Section 14), if necessary, that specifies the impact of the take, reasonable and prudent measures to minimize the impact of the take, and terms and conditions to implement the reasonable and prudent measures (ESA section 7(b)(4); 50 C.F.R. §402.14(i)). We also provide discretionary Conservation Recommendations (Section 15) that may be implemented by the action agency (50 C.F.R. §402.14(j)). Finally, we identify the circumstances in which Reinitiation of Consultation is required (Section 16; 50 C.F.R. §402.16).

To comply with our obligation to use the best scientific and commercial data available, we collected information identified through searches of *Google Scholar*, literature cited sections of peer-reviewed articles, species listing documentation, and reports published by government and private entities. This opinion is based on our review and analysis of various information sources, including:

- Information submitted by the Permits and Conservation Division and applicants;
- Government reports (including NMFS's biological opinions and 5-year reviews);
- NOAA technical memoranda; and
- Peer-reviewed scientific literature.

These resources were used to identify information relevant to the potential stressors and responses of ESA-listed species and designated critical habitat under NMFS's jurisdiction that may be affected by the proposed action to draw conclusions on risks the action may pose to the continued existence of these species and the value of designated critical habitat for the conservation of ESA-listed species. Collectively, we consider the foregoing to comprise the best scientific and commercial information available for this opinion.

3 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 (50 C.F.R. §402.02).

The proposed action addressed by this consultation is the Permits and Conservation Division's issuance of three scientific research permits pursuant to the requirements of the MMPA and ESA, to the MML, ASLC, and ADF&G.

The Permits and Conservation Division proposes to issue scientific research Permit Nos. 27499, 27408, and 27503 to harass, capture, and collect samples from the Eastern DPS and Western DPS of Steller sea lions in Alaska. The proposed research permits are a continuation of current permits (Permit Nos. 22293, 22289, and 22298), which were the subject of the 2019 opinion. Because of similarities in the proposed action (same permit holders, research activities, similar area), we incorporate information from the 2019 opinion, where appropriate. In general, for any section where we have determined that there is no new information requiring an update since 2019, we incorporate the corresponding section from the 2019 opinion, by reference, into this opinion.

Section 3 of the 2019 opinion (pages 13–111) summarizes the MML, ASLC, and ADF&G's research objectives. Research objectives remain the same for the proposed permits.

The Permits and Conservation Division still considers extension requests for MMPA permits for work of a continuing nature if the Permit Holder has submitted a new five-year permit application. However, the Permits and Conservation Division proposes to modify the MMPA regulations to allow for longer duration MMPA permits (89 FR 35769) and, if the proposed rule is made final, these permits could be extended for up to five additional years.

Section 3.1 in the 2019 opinion (pages 42–99) describes the proposed research activities that will continue under Permit Nos. 27499, 27408, and 27503. Section 3.2 in the 2019 opinion (pages 99–111) describes the conservation measures that will be implemented by the MML, ASLC, and ADF&G. Updates to ASLC's proposed research activities under Permit No. 27408 include: maintenance and repair of the remote video/audio system at Chiswell Island up to 12 times per year, at any time of year; scat collection and biopsy darting of non-pups at any time of year, but concentrated during the winter–spring months; no scat and material collections during the pupping/breeding season (May 15–July 15) at any rookery; and pup capture, handling, branding, and sampling occurring between June 25 and July 10, in two out of the five years of the permit duration. Under Permit No. 27503, ADF&G will exclude tooth extraction as a research activity. Due to two pup mortalities in 2023, updates to MML conservation measures will include avoiding moving pups in the area where the mortalities occurred, or any area or beach where there is a similar habitat and topography to the area were the mortalities occurred (i.e., areas with fields of large boulders and unknown depth of ledges). Another update includes lowering the minimum altitude at which unmanned aircraft systems (UAS) can fly to 75 feet (ft; approximately 23 meters [m]), rather than a minimum altitude of 150 ft (approximately 15 m).

Updates to the Western DPS Steller sea lion estimated take numbers, for all proposed permits, and comparison with the take numbers authorized in the 2019 permits, are summarized in Table 1 below. Proposed take for all ESA-listed species under Permit Nos. 27499, 27408, and 27503 are summarized in Table 2, Table 3, Table 4, respectively.

Table 1. Take number comparison between the 2019 permits and 2024 proposed permits for the Western DPS of Steller sea lions.

Permit No.	Activity Type	2019 Take Numbers Authorized Annually	2024 Proposed Take Numbers Annually
MML (NMFS's Marine Mammal Laboratory) Current Permit No. 22289, Proposed Permit No. 27499	Harassment Capture Unintentional Mortality	15,482 595 2 not to exceed 10 over the life of the permit	9,210 617 4 not to exceed 8 over the life of the permit
ASLC (Alaska Sea Life Center) Current Permit No. 22293, Proposed Permit No. 27408	Harassment Capture Unintentional Mortality	18,550 125 4 not to exceed 12 over the life of the permit	6,120 125 4 not to exceed 4 over the life of the permit
ADF&G (Alaska Department of Fish and Game) Current Permit No. 22298, Proposed Permit No. 27503	Harassment Capture Unintentional Mortality	22,090 1,030 3 (15 over the life of the permit)	44,490 1,030 4 not to exceed 8 over the life of the permit

Table 2. Proposed permitted annual MMPA take for ESA-listed species under research activities in Permit No. 27499. See Draft Permit No. 27499 (Appendix I – Draft Permit No. 27499).

Table A1. Annual takes of the Steller sea lion Western DPS[1] in Alaska, including the North Pacific Ocean, Gulf of Alaska, and Bering Sea. Some animals may be harassed more than once per year. Fieldwork may occur year-round. Samples may be imported or exported.									
Line	Species	Stock/ Listing Unit	Life stage	Sex	Take Action	Observe/ Collect Methods	No. Animals per Year	Procedures	Details
1	Sea lion, Steller	Western US (NMFS Endangered)	pup	Male and Female	Harass	Survey, aerial	210	Count/survey; Photograph/Video; Photogrammetry; Remote vehicle, aerial (fixed wing); Remote vehicle, aerial (VTOL)	Breeding season aerial survey by crewed and/or uncrewed (UAS) craft. Some animals may be overflown more than once per year.
2	Sea lion, Steller	Western US (NMFS Endangered)	Non-Pup	Male and Female	Harass	Survey, aerial	2,600	Count/survey; Photograph/Video; Photogrammetry; Remote vehicle, aerial (fixed wing); Remote vehicle, aerial (VTOL)	Breeding season aerial survey by crewed and/or uncrewed (UAS) craft. Some animals may be overflown more than once per year.
3	Sea lion, Steller	Western US (NMFS Endangered)	Non-Pup	Male and Female	Harass	Survey, aerial	500	Count/survey; Photograph/Video; Photogrammetry; Remote vehicle, aerial (fixed wing); Remote vehicle, aerial (VTOL)	Non-breeding season aerial survey by crewed and/or uncrewed (UAS) craft. Some animals may be overflown more than once per year.
9	Sea lion, Steller	Western US (NMFS Endangered)	pup	Male and Female	Harass	Survey, aerial	10	Count/survey; Observation, mark resight; Photograph/Video; Photogrammetry; Remote vehicle, aerial (fixed wing); Remote vehicle, aerial (VTOL)	For mark-resight activities during aerial surveys.
10	Sea lion, Steller	Western US (NMFS Endangered)	Non-Pup	Male and Female	Harass	Survey, aerial	90	Count/survey; Observation, mark resight; Photograph/Video; Photogrammetry; Remote vehicle, aerial (fixed wing); Remote vehicle, aerial (VTOL)	For mark-resight activities during aerial surveys.

[1] Western DPS Steller sea lions in the wild are born west of 144° W Longitude. Due to trans-boundary movements, a proportion of takes may include animals from the Eastern DPS, which is not listed, near the 144° W Longitude boundary.

Table A1. Annual takes of the Steller sea lion Western DPS[1] in Alaska, including the North Pacific Ocean, Gulf of Alaska, and Bering Sea. Some animals may be harassed more than once per year. Fieldwork may occur year-round. Samples may be imported or exported.									
Line	Species	Stock/ Listing Unit	Life stage	Sex	Take Action	Observe/ Collect Methods	No. Animals per Year	Procedures	Details
12	Sea lion, Steller	Western US (NMFS Endangered)	pup	Male and Female	Harass	Survey, vessel	100	Collect, scat; Collect, spew; Count/survey; Import/export/receive, parts; Observation, mark resight; Observation, monitoring; Observations, behavioral; Photograph/Video; Photo-id	For mark-resight activities during vessel surveys. May disembark and opportunistically collect scat/spew.
13	Sea lion, Steller	Western US (NMFS Endangered)	Non-Pup	Male and Female	Harass	Survey, vessel	2,000	Collect, scat; Collect, spew; Count/survey; Import/export/receive, parts; Observation, mark resight; Observation, monitoring; Observations, behavioral; Photograph/Video; Photo-id	For mark-resight activities during vessel surveys. May disembark and opportunistically collect scat/spew.
14	Sea lion, Steller	Western US (NMFS Endangered)	pup	Male and Female	Harass	Survey, ground	100	Collect, scat; Collect, spew; Count/survey; Import/export/receive, parts; Observation, mark resight; Observation, monitoring; Observations, behavioral; Photograph/Video; Photo-id	For mark-resight activities during ground surveys.
15	Sea lion, Steller	Western US (NMFS Endangered)	Non-Pup	Male and Female	Harass	Survey, ground	400	Collect, scat; Collect, spew; Count/survey; Import/export/receive, parts; Observation, mark resight; Observation, monitoring; Observations, behavioral; Photograph/Video; Photo-id	For mark-resight activities during ground surveys.

Table A1. Annual takes of the Steller sea lion Western DPS[1] in Alaska, including the North Pacific Ocean, Gulf of Alaska, and Bering Sea. Some animals may be harassed more than once per year. Fieldwork may occur year-round. Samples may be imported or exported.									
Line	Species	Stock/ Listing Unit	Life stage	Sex	Take Action	Observe/ Collect Methods	No. Animals per Year	Procedures	Details
16	Sea lion, Steller	Western US (NMFS Endangered)	pup	Male and Female	Capture/ Handle/ Release	Hand and/or Dip Net	250	Anesthesia, gas w/cone or mask; Import/export/receive, parts; Instrument, external (e.g., VHF, SLTDR); Mark, flipper tag; Mark, hot brand; Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, hand; Restrain, net; Sample, clip hair; Sample, fecal loop; Sample, other; Sample, skin biopsy; Sample, swab all mucus membranes; Sample, vibrissae (pull); Weigh	Marked with hot brand and limited sample collection. Very young (e.g., under 20 kg or umbilicus present) are not branded. "Sample, other" is for biopsy of skin or oral lesions.
17	Sea lion, Steller	Western US (NMFS Endangered)	pup	Male and Female	Capture/ Handle/ Release	Hand and/or Dip Net	100	Anesthesia, gas w/cone or mask; Bioelectrical impedance (subcutaneous); Import/export/receive, parts; Instrument, external (e.g., VHF, SLTDR); Mark, flipper tag; Mark, hot brand; Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, board; Restrain, hand; Restrain, net; Sample, blood; Sample, blubber biopsy; Sample, clip hair; Sample, fecal loop; Sample, other; Sample, skin biopsy; Sample, swab all mucus membranes; Sample, vibrissae (pull); Ultrasound; Weigh	Marked with hot brand and expanded sample collection. Very young (e.g., under 20 kg or umbilicus present) are not branded. "Sample, other" is for biopsy of skin or oral lesions

Table A1. Annual takes of the Steller sea lion Western DPS[1] in Alaska, including the North Pacific Ocean, Gulf of Alaska, and Bering Sea. Some animals may be harassed more than once per year. Fieldwork may occur year-round. Samples may be imported or exported.									
Line	Species	Stock/ Listing Unit	Life stage	Sex	Take Action	Observe/ Collect Methods	No. Animals per Year	Procedures	Details
18	Sea lion, Steller	Western US (NMFS Endangered)	pup	Male and Female	Capture/ Handle/ Release	Hand and/or Dip Net	200	Instrument, external (e.g., VHF, SLTDR); Import/export/receive, parts; Mark, dye or paint; Measure (standard morphometrics); Photo-id; Photograph/video; Restrain, board; Restrain, hand; Restrain, net; Sample, blood; Sample, clip hair; Sample, fecal loop; Sample, other; Sample, skin biopsy; Sample, swab all mucus membranes; Sample, vibrissae (pull); Ultrasound; Weigh	Capture and limited sampling, no hot branding. "Sample, other" is for biopsy of skin or oral lesions
19	Sea lion, Steller	Western US (NMFS Endangered)	pup	Male and Female	Harass	Survey, ground	1,100	Collect, scat; Collect, spew; Count/survey; Import/export/receive, parts; Observation, mark resight; Observation, monitoring; Observations, behavioral; Photo-id Unintentional harassment	Disturbance during handling activities during breeding season, and opportunistic sampling and observations.
20	Sea lion, Steller	Western US (NMFS Endangered)	Non-Pup	Male and Female	Harass	Survey, ground	1,600	Collect, scat; Collect, spew; Count/survey; Import/export/receive, parts; Observation, mark resight; Observation, monitoring; Observations, behavioral; Photo-id Unintentional harassment	Disturbance during pup handling activities during breeding season, and opportunistic sampling and observations.

Table A1. Annual takes of the Steller sea lion Western DPS[1] in Alaska, including the North Pacific Ocean, Gulf of Alaska, and Bering Sea. Some animals may be harassed more than once per year. Fieldwork may occur year-round. Samples may be imported or exported.

Line	Species	Stock/ Listing Unit	Life stage	Sex	Take Action	Observe/ Collect Methods	No. Animals per Year	Procedures	Details
21	Sea lion, Steller	Western US (NMFS Endangered)	Juvenile	Male and Female	Capture/ Handle/ Release	Other	20	Administer drug, IM ; Administer drug, IV; Administer drug, subcutaneous; Anesthesia, gas w/cone or mask; Anesthesia, gas w/intubation; Anesthesia, injectable sedative; Bioelectrical impedance (subcutaneous); Import/export/receive, parts; Instrument, external (e.g., VHF, SLTDR); Mark, flipper tag; Mark, hot brand; Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, hand; Restrain, net; Sample, blood; Sample, blubber biopsy; Sample, clip hair; Sample, fecal loop; Sample, other; Sample, skin biopsy;; Sample, swab all mucus membranes; Sample, urine catheter; Sample, vibrissae (pull); Stable isotopes and serial blood samples; Ultrasound; Weigh	Other = dart, injectable immobilizing agent; hoop, net; hand. Only one hot brand administered per animal. 2nd take is for instrument retrieval, and resampling. If remote release was used as an attachment but fails a recapture may be required for retrieval. "Sample, other" is for biopsy of skin or oral lesions. Remote darting is not used for young-of-the-year (< = 1 year old).
22	Sea lion, Steller	Western US (NMFS Endangered)	Juvenile	Male and Female	Capture/ Handle/ Release	Dart, injectable immobilizing agent	10	Anesthesia, injectable sedative; Observation, monitoring; Photograph/video	Darted but not captured. May be darted a second time with reversal agents.

Table A1. Annual takes of the Steller sea lion Western DPS[1] in Alaska, including the North Pacific Ocean, Gulf of Alaska, and Bering Sea. Some animals may be harassed more than once per year. Fieldwork may occur year-round. Samples may be imported or exported.

Line	Species	Stock/ Listing Unit	Life stage	Sex	Take Action	Observe/ Collect Methods	No. Animals per Year	Procedures	Details
23	Sea lion, Steller	Western US (NMFS Endangered)	Adult	Female	Capture/ Handle/ Release	Dart, injectable immobilizing agent	20	Administer drug, IM ; Administer drug, IV; Administer drug, subcutaneous; Anesthesia, gas w/cone or mask; Anesthesia, gas w/intubation; Anesthesia, injectable sedative; Bioelectrical impedance (subcutaneous); Import/export/receive, parts; Instrument, external (e.g., VHF, SLTDR); Mark, dye or paint; Mark, flipper tag; Mark, hot brand; Measure (standard morphometrics); Photograph/video; Photo-id; Sample, blood; Sample, blubber biopsy; Sample, clip hair; Sample, fecal loop; Sample, other; Sample, skin biopsy; Sample, swab all mucus membranes; Sample, urine catheter; Sample, vibrissae (pull); Stable isotopes and serial blood samples; Ultrasound; Weigh	2nd take is for instrument retrieval. If remote release fails, a recapture may be attempted. "Sample, other" is for biopsy of skin or oral lesions
24	Sea lion, Steller	Western US (NMFS Endangered)	Adult	Female	Capture/ Handle/ Release	Dart, injectable immobilizing agent	10	Anesthesia, injectable sedative Observation, monitoring; Photograph/video	Adult females darted but not captured. May be darted a second time with reversal agents.

Table A1. Annual takes of the Steller sea lion Western DPS[1] in Alaska, including the North Pacific Ocean, Gulf of Alaska, and Bering Sea. Some animals may be harassed more than once per year. Fieldwork may occur year-round. Samples may be imported or exported.

Line	Species	Stock/ Listing Unit	Life stage	Sex	Take Action	Observe/ Collect Methods	No. Animals per Year	Procedures	Details
25	Sea lion, Steller	Western US (NMFS Endangered)	Sub-adult/ Adult	Male	Capture/ Handle/ Release	Dart, injectable immobilizing agent	5	Administer drug, IM ; Administer drug, IV; Administer drug, subcutaneous; Anesthesia, gas w/cone or mask; Anesthesia, gas w/intubation; Anesthesia, injectable sedative; Bioelectrical impedance (subcutaneous); Import/export/receive, parts; Instrument, external (e.g., VHF, SLTDR); Mark, dye or paint; Mark, flipper tag; Mark, hot brand; Measure (standard morphometrics); Photograph/video; Sample, blood; Sample, blubber biopsy; Sample, clip hair; Sample, fecal loop; Sample, other; Sample, skin biopsy; Sample, swab all mucus membranes; Sample, urine catheter; Sample, vibrissae (pull); Stable isotopes and serial blood samples; Ultrasound; Weigh	Sub-adult and Adult Males. 2nd take is unintentional disturbance. If remote release fails, a recapture may be attempted. "Sample, other" is for biopsy of skin or oral lesions
26	Sea lion, Steller	Western US (NMFS Endangered)	Sub-adult/ Adult	Male	Capture/ Handle/ Release	Dart, injectable immobilizing agent	2	Anesthesia, injectable sedative Observation, monitoring; Photograph/video	Sub-adult and Adult males darted but not captured.

Table A1. Annual takes of the Steller sea lion Western DPS[1] in Alaska, including the North Pacific Ocean, Gulf of Alaska, and Bering Sea. Some animals may be harassed more than once per year. Fieldwork may occur year-round. Samples may be imported or exported.									
Line	Species	Stock/ Listing Unit	Life stage	Sex	Take Action	Observe/ Collect Methods	No. Animals per Year	Procedures	Details
27	Sea lion, Steller	Western US (NMFS Endangered)	Non-Pup	Male and Female	Harass	Survey, ground	500	Collect, scat; Collect, spew; Count/survey; Import/export/receive, parts; Observation, mark resight; Observation, monitoring; Observations, behavioral; Photo-id; Unintentional harassment	Disturbance during capture/handling activities during non-breeding season, and opportunistic sampling and observations.
28	Sea lion, Steller	Western US (NMFS Endangered)	All	Male and Female	Harass/ Sampling	Other	100	Import/export/receive, parts; Necropsy; Salvage (carcass, tissue, parts)	Necropsy and tissue salvage of any dead animal encountered unrelated to our research activities.
30	Sea lion, Steller	Western US (NMFS Endangered)	All	Male and Female	Unintent-ional mortality	Other	4	Intentional (directed) mortality; Import/export/receive, parts; Necropsy; Unintentional mortality	NTE 8 across the life of the permit. Unintentional mortality, including humane euthanasia. Necropsy and salvage of tissues would follow.

*Note: takes represent the maximum number of animals, not necessarily individuals, that may be targeted for research annually for the suite of procedures in each row of the table.

Table 3. Proposed permitted annual MMPA take for ESA-listed species under research activities in Permit No. 27408. See Draft Permit No. 27408 (Appendix II – Draft Permit No. 27408).

Table 1. Annual takes. Most of the work will be concentrated at Chiswell Island (59.602 N, 149.568 W) and rookeries/haulouts between Prince William Sound and Outer Island. Additional work farther west is dependent on funding and research needs.										
Line	Species	Stock/ Listing Unit	Production/ Origin	Life stage	Sex	No. Animals per Year	Take Action	Observe/ Collect Method	Procedures	Details
1	Sea lion, Steller	West of 144° Long (Western US) (NMFS Endangered)	Wild	All	Male and Female	2000	Harass	Other	Count/survey; Incidental disturbance; Remote video monitoring	Disturbance associated with maintenance & repair of remote monitoring equipment (cameras, microphone, control tower); vessel and ground approach to access rookery and haulouts

Table 1. Annual takes. Most of the work will be concentrated at Chiswell Island (59.602 N, 149.568 W) and rookeries/haulouts between Prince William Sound and Outer Island. Additional work farther west is dependent on funding and research needs.

Line	Species	Stock/ Listing Unit	Production/ Origin	Life stage	Sex	No. Animals per Year	Take Action	Observe/ Collect Method	Procedures	Details
2	Sea lion, Steller	West of 144° Long (Western US) (NMFS Endangered)	Wild	Pup	Male and Female	125	Capture/ Handle/ Release	Hand and/or Dip Net	Anesthesia, gas w/cone or mask; Calipers (skin fold); Mark, bleach; Mark, clip fur; Mark, dye or paint; Mark, flipper tag; Mark, hot brand; Measure (standard morphometrics); Photo-id; Photogrammetry; Photograph/Video; Restrain, board; Restrain, hand; Restrain, net; Sample, blood; Sample, clip hair; Sample, skin biopsy; Sample, stomach lavage; Sample, swab all mucus membranes; Sample, vibrissae (pull); Ultrasound; Weigh	Pup capture/sampling/marking; Individual pups will not be marked by more than one method; branding/sampling will occur in only 2 of the 5 years of permit; only 50 pups will have milk samples taken annually
3	Sea lion, Steller	West of 144° Long (Western US) (NMFS Endangered)	Wild	All	Male and Female	500	Harass	Other	Unintentional harassment	Incidental disturbance associated with capture, handling, and sampling of pups
4	Sea lion, Steller	West of 144° Long (Western US) (NMFS Endangered)	Wild	Adult	Male and Female	50	Harass/ Sampling	Other	Count/survey; Photograph/Video; Sample, blubber biopsy; Sample, muscle biopsy; Sample, skin biopsy	Collect method is remote biopsy darting
5	Sea lion, Steller	West of 144° Long (Western US) (NMFS Endangered)	Wild	Juvenile/ Subadult	Male and Female	20	Harass/ Sampling	Other	Sample, blubber biopsy; Sample, muscle biopsy; Sample, skin biopsy	Collect method is remote biopsy darting

Table 1. Annual takes. Most of the work will be concentrated at Chiswell Island (59.602 N, 149.568 W) and rookeries/haulouts between Prince William Sound and Outer Island. Additional work farther west is dependent on funding and research needs.

Line	Species	Stock/ Listing Unit	Production/ Origin	Life stage	Sex	No. Animals per Year	Take Action	Observe/ Collect Method	Procedures	Details
6	Sea lion, Steller	West of 144° Long (Western US) (NMFS Endangered)	Wild	All	Male and Female	200	Harass	Other	Unintentional harassment	Incidental disturbance associated with biopsy darting
7	Sea lion, Steller	West of 144° Long (Western US) (NMFS Endangered)	Wild	All	Male and Female	350	Harass/ Sampling	Survey, ground	Collect, molt; Collect, scat; Collect, spew; Collect, urine; Salvage (carcass, tissue, parts)	Collect fecal samples, placentas, carcasses, and aborted fetuses
8	Sea lion, Steller	West of 144° Long (Western US) (NMFS Endangered)	Wild	All	Male and Female	2000	Harass	Survey, ground	Unintentional harassment	Incidental disturbance by researchers on ground and associated with material collections and salvage that may include scat, aborted fetuses, placentae, carcasses, spew, other tissues and parts
9	Sea lion, Steller	West of 144° Long (Western US) (NMFS Endangered)	Wild	All	Male and Female	1000	Harass	Other	Count/survey; Observation, mark resight; Photo-id	Disturbance associated with vessel based observations, photo ID and counts. Other = ground or vessel survey
10	Sea lion, Steller	West of 144° Long (Western US) (NMFS Endangered)	Wild	All	Male and Female	4	Unintentional mortality	Other	Intentional (directed) mortality; Necropsy; Salvage (carcass, tissue, parts); Unintentional mortality	Mortality incidental to any research activity or including euthanasia for humane purposes. Full necropsies performed when possible. Not to exceed 4 over the life of the permit.

Table 1. Annual takes. Most of the work will be concentrated at Chiswell Island (59.602 N, 149.568 W) and rookeries/haulouts between Prince William Sound and Outer Island. Additional work farther west is dependent on funding and research needs.										
Line	Species	Stock/ Listing Unit	Production/ Origin	Life stage	Sex	No. Animals per Year	Take Action	Observe/ Collect Method	Procedures	Details
11	Sea lion, Steller	West of 144° Long (Western US) (NMFS Endangered)	Wild	All	Male and Female	1000	Import/ export/ receive only	Other	Import/export/receive, parts	Export of scat hard and soft parts, blubber samples, skin, hair for laboratory analysis

*Note: takes represent the maximum number of animals, not necessarily individuals that may be targeted for research annually for the suite of procedures in each row of the table.

Table 4. Proposed permitted annual MMPA take for ESA-listed species under research activities in Permit No. 27503. See Draft Permit No. 27503 (Appendix III – Draft Permit No. 27503).

Table A2. Annual Western SSL takes. Wild males and females.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe/ Collect Method	Procedures	Details
1	Sea lion, Steller	Western DPS (Endangered)	All	1,390	Harass	Survey, ground	Count/survey; Observation, mark resight; Unintentional harassment	Unintentional disturbance during ground surveys and remote biopsy sampling at haulouts and rookeries.
2	Sea lion, Steller	Western DPS (Endangered)	All	4,000	Harass	Survey, vessel	Count/survey; Observation, mark resight; Unintentional harassment	Unintentional disturbance during vessel surveys and remote biopsy sampling at haulouts and rookeries.

Table A2. Annual Western SSL takes. Wild males and females.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe/ Collect Method	Procedures	Details
3	Sea lion, Steller	Western DPS (Endangered)	All	12,500	Harass	Survey, aerial	Count/survey; Observation, mark resight; remote vehicle (fixed wing); remote vehicle, (VTOL); Unintentional harassment	Unintentional disturbance during SSL aerial surveys. Includes a 0.05%*non-pup count buffer to account for animals in the water. Aerial take includes adjustment to accommodate potential but unlikely disturbance of a very large haulout.
4	Sea lion, Steller	Western DPS (Endangered)	All	22,000	Harass	Other	Collect, scat; Observation, monitoring; Other; Remote video monitoring; Unintentional harassment	Unintentional disturbance associated with ground activities including disturbances of non-target SSL during capture and observation, scat collection, carcass collection, remote biopsy sampling, equipment maintenance, etc. Scat disturbance assumes avg. 400 takes/visit.
5	Sea lion, Steller	Western DPS (Endangered)	All	4,000	Harass	Other	Unintentional harassment	Unintentional disturbance of non-target SSLs associated with pup branding.
6	Sea lion, Steller	Western DPS (Endangered)	Juvenile	300	Harass/ Sampling	Other	Import/export/receive, parts; Other; Photograph/video; Sample, skin biopsy	Other= Remote skin biopsy of juvenile SSLs.
7	Sea lion, Steller	Western DPS (Endangered)	Adult	300	Harass/ Sampling	Other	Import/export/receive, parts; Other; Photograph/video; Sample, skin biopsy	Other= Remote skin biopsy of adult SSLs.

Table A2. Annual Western SSL takes. Wild males and females.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe/ Collect Method	Procedures	Details
8	Sea lion, Steller	Western DPS (Endangered)	pup	300	Capture/ Handle/ Release	Hand and/or Dip net	Administer drug, IM; Administer drug, subcutaneous; Administer drug, topically; Collect, scat; Collect, urine; Import/export/receive, parts; Mark, clip fur; Mark, dye or paint; Mark, flipper tag; Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, board; Restrain, cage; Restrain, hand; Restrain, net; Restrain, other; Sample, blood ; Sample, clip hair; Sample, fecal swab; Sample, skin biopsy; Sample, stomach lavage; Sample, swab all mucus membranes; Sample, vibrissae (pull); Ultrasound; Weigh	June - July. This is Method 1. Manual capture and sampling of pups on their rookery. No branding. Restrain, other = pen, strap, line, mesh blanket
9	Sea lion, Steller	Western DPS (Endangered)	pup	400	Capture/ Handle/ Release	Hand and/or Dip net	Administer drug, IM; Administer drug, subcutaneous; Administer drug, topically; Anesthesia, gas w/cone or mask; Collect, scat; Collect, urine; Import/export/receive, parts; Mark, clip fur; Mark, dye or paint; Mark, flipper tag; Mark, hot brand; Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, board; Restrain, cage; Restrain, hand; Restrain, net; Restrain, other; Sample, clip hair; Sample, skin biopsy; Sample, vibrissae (pull); Weigh	June - July. This is Method 2. Manual capture and minimal sampling of pups on their rookery. Branding optional on pups at least 20 kg or without umbilicus. Restrain, other = pen, strap, line, mesh blanket

Table A2. Annual Western SSL takes. Wild males and females.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe/ Collect Method	Procedures	Details
10	Sea lion, Steller	Western DPS (Endangered)	pup	200	Capture/ Handle/ Release	Hand and/or Dip net	Administer drug, IM; Administer drug, subcutaneous; Administer drug, topically; Anesthesia, gas w/cone or mask; Bioelectrical impedance (subcutaneous); Collect, scat; Collect, urine; Import/export/receive, parts; Mark, clip fur; Mark, dye or paint; Mark, flipper tag; Mark, hot brand; Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, board; Restrain, cage; Restrain, hand; Restrain, net; Restrain, other; Sample, blood ; Sample, clip hair; Sample, clip nail; Sample, fecal loop; Sample, fecal swab; Sample, other; Sample, skin biopsy; Sample, stomach lavage; Sample, swab all mucus membranes; Sample, vibrissae (pull); Ultrasound; Weigh	June - July. This is Method 3. Manual capture and sampling of pups on their rookery. Branding optional on pups at least 20 kg or without umbilicus. Optional sampling added: bioelectrical impedance, blood, clip nail, fecal loop/swab, stomach lavage, swab mucous membranes, ultrasound, other (milk). Restrain, other = pen, strap, line, mesh blanket

Table A2. Annual Western SSL takes. Wild males and females.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe/ Collect Method	Procedures	Details
11	Sea lion, Steller	Western DPS (Endangered)	pup	40	Capture/ Handle/ Release	Hand and/or Dip net	Administer drug, IM; Administer drug, subcutaneous; Administer drug, topically; Anesthesia, gas w/cone or mask; Bioelectrical impedance (subcutaneous); Collect, scat; Collect, urine; Import/export/receive, parts; Mark, clip fur; Mark, dye or paint; Mark, flipper tag; Mark, hot brand; Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, board; Restrain, cage; Restrain, hand; Restrain, net; Restrain, other; Sample, blood ; Sample, blubber biopsy; Sample, clip hair; Sample, clip nail; Sample, fecal loop; Sample, fecal swab; Sample, other; Sample, skin biopsy; Sample, stomach lavage; Sample, swab all mucus membranes; Sample, vibrissae (pull); Ultrasound; Weigh	June - July. This is Method 4. Manual capture and sampling of pups on their rookery. Branding optional on pups at least 20 kg or without umbilicus. Sample, other=milk. Optional sampling added: blubber biopsy. Restrain, other = pen, strap, line, mesh blanket

Table A2. Annual Western SSL takes. Wild males and females.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe/ Collect Method	Procedures	Details
12	Sea lion, Steller	Western DPS (Endangered)	Pup/ Juvenile	45	Capture/ Handle/ Release	Other	Administer drug, IM; Administer drug, subcutaneous; Administer drug, topically; Administer drug, intraperitoneal; Administer drug, IV; Anesthesia, gas w/cone or mask; Anesthesia, gas w/intubation; Anesthesia, injectable sedative; Bioelectrical impedance (subcutaneous); Collect, scat; Collect, urine; Import/export/receive, parts; Instrument, external (e.g., VHF, SLTDR); Mark, clip fur; Mark, dye or paint; Mark, flipper tag; Mark, hot brand; Mark, other (e.g., neoprene patch); Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, cage; Restrain, net; Restrain, other; Sample, blood ; Sample, blubber biopsy; Sample, clip hair; Sample, clip nail; Sample, fecal loop; Sample, fecal swab; Sample, muscle biopsy; Sample, other; Sample, skin biopsy; Sample, stomach lavage; Sample, swab all mucus membranes; Sample, urine catheter; Sample, vibrissae (pull); Stable isotopes and serial blood samples; Ultrasound; Weigh	All year. Capture and handling of immature SSLs > 2 mo. Capture by net, hand, noose pole, remote chemical immobilization (nonpups only). Sample, other=milk. Intended research take is 30 captures; 15 takes are included to account for sea lions struck by a dart but not immobilized and captured. One brand per lifetime. Restrain, other = pen, strap, line, mesh blanket

Table A2. Annual Western SSL takes. Wild males and females.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe/ Collect Method	Procedures	Details
13	Sea lion, Steller	Western DPS (Endangered)	Adult	45	Capture/ Handle/ Release	Other	Administer drug, IM; Administer drug, subcutaneous; Administer drug, topically; Administer drug, intraperitoneal; Administer drug, IV; Anesthesia, gas w/cone or mask; Anesthesia, gas w/intubation; Anesthesia, injectable sedative; Bioelectrical impedance (subcutaneous); Collect, scat; Collect, urine; Import/export/receive, parts; Instrument, external (e.g., VHF, SLTDR); Mark, clip fur; Mark, dye or paint; Mark, flipper tag; Mark, hot brand; Mark, other (e.g., neoprene patch); Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, cage; Restrain, net; Restrain, other; Sample, blood ; Sample, blubber biopsy; Sample, clip hair; Sample, clip nail; Sample, fecal loop; Sample, fecal swab; Sample, milk (lactating females); Sample, muscle biopsy; Sample, skin biopsy; Sample, stomach lavage; Sample, swab all mucus membranes; Sample, urine catheter; Sample, vibrissae (pull); Stable isotopes and serial blood samples; Ultrasound; Weigh	All year. Capture and handling of adult SSLs. Capture by net, hand, noose pole, remote chemical immobilization. Intended research take is 30 captures; 15 takes are included to account for sea lions struck by a dart but not immobilized and captured. One brand per lifetime. Restrain, other = pen, strap, line, mesh blanket

Table A2. Annual Western SSL takes. Wild males and females.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe/ Collect Method	Procedures	Details
14	Sea lion, Steller	Western DPS (Endangered)	All	4	Unintentional mortality	Other	Intentional (directed) mortality; Import/export/receive, parts; Unintentional mortality; Necropsy	Unintentional mortality during research. Intentional (directed) mortality = humane euthanasia. Full necropsies performed when possible. Not to exceed 8 over the duration of the permit.
15	Sea lion, Steller	Western DPS (Endangered)	All	100	Sample	Other	Salvage (carcass, tissue, parts); Import/export, parts	Collect or sample carcasses from (dead) stranded SSLs.
16	Sea lion, Steller	Western DPS (Endangered)	All	100	Import/ export/ receive only	Other	Collect, subsistence harvest; Export; Import, Receive domestically	Receive/import/export carcasses or samples from collected under other authorizations. Includes collection from subsistence animals.

Take Table A3. Annual unintentional harassment of non-target species and import/export/receipt/collection of pinniped parts.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe/ Collect Method	Procedures	Details
9	Seal, ringed	Arctic (NMFS Threatened)	All	50	Harass	Survey, ground	Unintentional harassment	Unintentional disturbance during SSL research activity on land.

Take Table A3. Annual unintentional harassment of non-target species and import/export/receipt/collection of pinniped parts.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe/ Collect Method	Procedures	Details
10	Seal, ringed	Arctic (NMFS Threatened)	All	200	Harass	Survey, aerial	Unintentional harassment	Unintentional disturbance during SSL aerial surveys
11	Seal, bearded	Beringia	All	200	Harass	Survey, aerial	Unintentional harassment	Unintentional disturbance during SSL aerial surveys. No ground surveys.

*Note: takes represent the maximum number of animals, not necessarily individuals, that may be targeted for research annually for the suite of procedures in each row of the table.

4 POTENTIAL STRESSORS

The proposed action involves multiple activities, each of which can create stressors. Stressors are any physical, chemical, or biological entity that may induce an adverse effect in an ESA-listed species or their designated critical habitat. During consultation, we deconstructed the proposed action to identify stressors that are reasonably certain to occur from the proposed action and compared these with the stressors evaluated in the 2019 opinion (Section 6, pages 116–117). The proposed action includes several conservation measures (Section 3) designed to minimize the effects from these potential stressors. Although these conservation measures are important and we expect them to be effective in minimizing the effects of these potential stressors, they do not eliminate the stressors. We treat them as part of the proposed action and fully consider them when evaluating the effects of the proposed action.

Because the proposed action consists of the same research activities as were considered in the 2019 opinion (Section 3.1, pages 42–99), the potential stressors are also the same. Section 6 of the 2019 opinion (pages 116–117) describes the potential stressors associated with the proposed action.

5 ACTION AREA

Action area means all areas affected directly, or indirectly, by the Federal action, and not just the immediate area involved in the action (50 C.F.R. §402.02). The action area for Permit Nos. 27499, 27408, and 27503 include Steller sea lion haulouts and rookeries (Figure 1). The action area also consists of areas where vessels and aircraft will transit during the proposed research activities, including coastal waters around haulouts/rookeries, the Ports of Seward, Adak, Dutch Harbor, Kodiak, Homer, Sand Point, St. George and St. Paul Islands, and Juneau, and any controlled airport, airfield, or occupied aircraft supported/maintained landing sites within coastal Alaska (mainly in Sitka, Homer, Kodiak, Dutch Harbor, Cold Bay, Sand Point, and Adak.

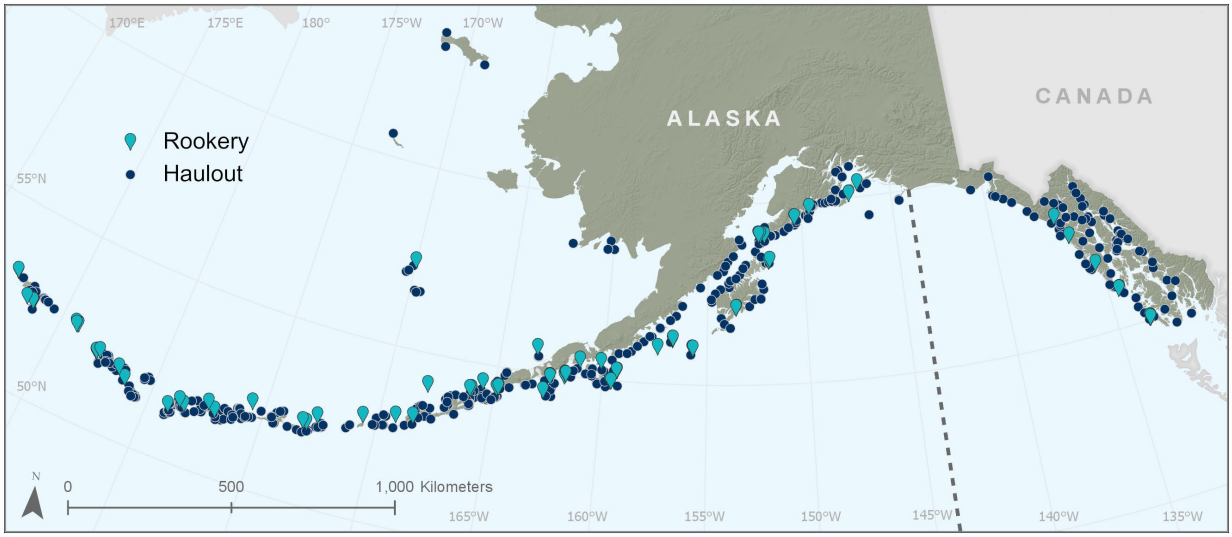

Figure 1. Map of haulouts and rookeries where research activities under Permit Nos. 27499, 27408, and 27503 will occur.

For Permit No. 27408, ASLC will focus research activities at Chiswell Island rookery and adjacent haulouts (Figure 2).

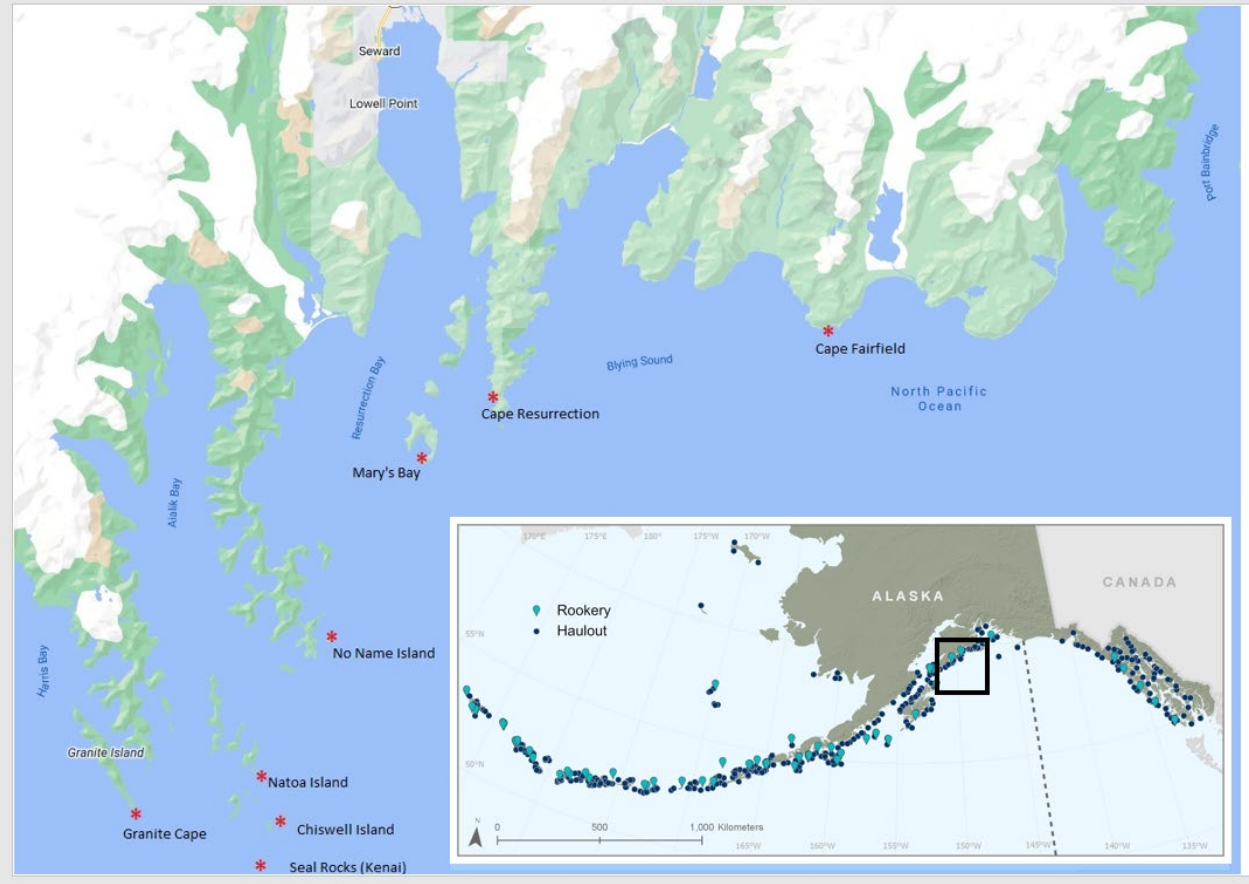

Figure 2. Map of Chiswell Island rookery and adjacent haulouts targeted under Permit No. 27408. Inset figure shows the Chiswell Island rookery and adjacent haulouts relative to the whole action area (black box).

6 Endangered Species Act-Listed and Proposed Species and Designated Critical Habitat in the Action Area

This section identifies the ESA-listed and proposed species and designated critical habitat that may occur within the action area (Table 5) and, thus, may be affected by the stressors in the action area caused by the proposed action.

Table 5. Endangered Species Act-listed threatened and endangered species and designated critical habitat that potentially occur in the action area.

Species	ESA Status	Critical Habitat	Recovery Plan
Marine Mammals – Cetaceans			
Beluga Whale (*Delphinapterus leucas*) – Cook Inlet DPS	E – 73 FR 62919	76 FR 20179	82 FR 1325
Blue Whale (*Balaenoptera musculus)*	E – 35 FR 18319	-- --	07/1998 11/2020

Species	ESA Status	Critical Habitat	Recovery Plan
Bowhead Whale (*Balaena mysticetus*)	E – 35 FR 18319	-- --	-- --
Fin Whale (*Balaenoptera physalus)*	E – 35 FR 18319	-- --	75 FR 47538 07/2010
Gray Whale (*Eschrichtius robustus*) – Western North Pacific DPS	E – 35 FR 18319	-- --	-- --
Humpback Whale (*Megaptera novaeangliae*) – Mexico DPS	T – 81 FR 62259	86 FR 21082	11/1991 06/2022 (Outline)
Humpback Whale (*Megaptera novaeangliae*) – Western North Pacific DPS	E – 81 FR 62259	86 FR 21082	11/1991 06/2022 (Outline)
Killer Whale (*Orcinus orca*) – Southern Resident DPS	E – 70 FR 69903 Amendment 80 FR 7380	Not in action area	73 FR 4176 01/2008
North Pacific Right Whale (*Eubalaena japonica*)	E – 73 FR 12024	73 FR 19000	78 FR 34347 06/2013
Sei Whale (*Balaenoptera borealis*)	E – 35 FR 18319	-- --	12/2011
Sperm Whale (*Physeter macrocephalus*)	E – 35 FR 18319	-- --	75 FR 81584 12/2010
Marine Mammals – Pinnipeds			
Bearded Seal (*Erignathus barbatus nauticus*) – Beringia DPS	T – 77 FR 76739	87 FR 19180	-- --
Ringed Seal (*Phoca hispida hispida*) –Arctic subspecies	T – 77 FR 76706	87 FR 19232	-- --
Steller Sea Lion (*Eumetopias jubatus*) – Western DPS	E – 55 FR 49204	58 FR 45269	73 FR 11872 2008
Marine Reptiles			
Green Turtle (*Chelonia mydas*) – East Pacific DPS	T – 81 FR 20057	Not in action area	63 FR 28359 01/1998

Species	ESA Status	Critical Habitat	Recovery Plan
Leatherback Turtle (*Dermochelys coriacea*)	E – 35 FR 8491	Not in action area	10/1991 – U.S. Caribbean, Atlantic, and Gulf of Mexico 63 FR 28359 05/1998 – U.S. Pacific
Loggerhead Turtle (*Caretta caretta*) – North Pacific Ocean DPS	E – 76 FR 58868	-- --	63 FR 28359
Olive Ridley Turtle (*Lepidochelys olivacea*) All Other Areas/Not Mexico's Pacific Coast Breeding Colonies	T – 43 FR 32800	-- --	-- --
Fishes			
Eulachon (*Thaleichthys pacificus*) – Southern DPS	T – 75 FR 13012	Not in action area	9/2017
Green Sturgeon (*Acipenser medirostris*) – Southern DPS	T – 71 FR 17757	Not in action area	2010 (Outline) 8/2018 (Final)
Steelhead Trout (*Oncorhynchus mykiss*) – California Central Valley DPS	T – 71 FR 834	Not in action area	79 FR 42504
Steelhead Trout (*Oncorhynchus mykiss*) – Central California Coast DPS	T – 71 FR 834	Not in action area	81 FR 70666
Steelhead Trout (*Oncorhynchus mykiss*) – Lower Columbia River DPS	T – 71 FR 834	Not in action area	78 FR 41911
Steelhead Trout (*Oncorhynchus mykiss*) – Middle Columbia River DPS	T – 71 FR 834	Not in action area	74 FR 50165
Steelhead Trout (*Oncorhynchus mykiss*) – Northern California DPS	T – 71 FR 834	Not in action area	81 FR 70666

Species	ESA Status	Critical Habitat	Recovery Plan
Steelhead Trout (*Oncorhynchus mykiss*) – Puget Sound DPS	T – 72 FR 26722	Not in action area	84 FR 71379
Steelhead Trout (*Oncorhynchus mykiss*) – Snake River Basin DPS	T – 71 FR 834	Not in action area	11/2017
Steelhead Trout (*Oncorhynchus mykiss*) – South-Central California Coast DPS	T – 71 FR 834	Not in action area	78 FR 77430
Steelhead Trout (*Oncorhynchus mykiss*) – Southern California DPS	E – 71 FR 834	Not in action area	77 FR 1669
Steelhead Trout (*Oncorhynchus mykiss*) – Upper Columbia River DPS	T – 71 FR 834	Not in action area	72 FR 57303
Steelhead Trout (*Oncorhynchus mykiss*) – Upper Willamette River DPS	T – 71 FR 834	Not in action area	76 FR 52317
Chinook Salmon (*Oncorhynchus tshawytscha)* – California Coastal ESU	T – 70 FR 37160	Not in action area	81 FR 70666
Chinook Salmon (*Oncorhynchus tshawytscha)* – Central Valley Spring-Run ESU	T – 70 FR 37160	Not in action area	79 FR 42504
Chinook Salmon (*Oncorhynchus tshawytscha)* – Lower Columbia River ESU	T – 70 FR 37160	Not in action area	78 FR 41911
Chinook Salmon (*Oncorhynchus tshawytscha)* – Puget Sound ESU	T – 70 FR 37160	Not in action area	72 FR 2493
Chinook Salmon (*Oncorhynchus tshawytscha)* – Sacramento River Winter-Run ESU	E – 70 FR 37160	Not in action area	79 FR 42504
Chinook Salmon (*Oncorhynchus tshawytscha)* – Snake River Fall-Run ESU	T – 70 FR 37160	Not in action area	80 FR 67386 (Draft)

Species	ESA Status	Critical Habitat	Recovery Plan
Chinook Salmon (*Oncorhynchus tshawytscha)* – Snake River Spring/Summer Run ESU	T – 70 FR 37160	Not in action area	81 FR 74770 (Draft)
Chinook Salmon (*Oncorhynchus tshawytscha)* – Upper Columbia River Spring-Run ESU	E – 70 FR 37160	Not in action area	72 FR 57303
Chinook Salmon (*Oncorhynchus tshawytscha)* – Upper Willamette River ESU	T – 70 FR 37160	Not in action area	76 FR 52317
Coho Salmon (*Oncorhynchus kisutch*) – Central California Coast ESU	E – 70 FR 37160	Not in action area	77 FR 54565
Coho Salmon (*Oncorhynchus kisutch*) – Lower Columbia River ESU	T – 70 FR 37160	Not in action area	78 FR 41911
Coho Salmon (*Oncorhynchus kisutch*) – Oregon Coast ESU	T – 73 FR 7816	Not in action area	81 FR 90780
Coho Salmon (*Oncorhynchus kisutch*) – Southern Oregon and Northern California Coasts ESU	T – 70 FR 37160	Not in action area	79 FR 58750
Sockeye Salmon (*Oncorhynchus nerka*) – Ozette Lake ESU	T – 70 FR 37160	Not in action area	74 FR 25706
Sockeye Salmon (*Oncorhynchus nerka*) – Snake River ESU	E – 70 FR 37160	Not in action area	80 FR 32365
Chum Salmon (*Oncorhynchus keta*) – Columbia River ESU	T – 70 FR 37160	Not in action area	78 FR 41911
Chum Salmon (*Oncorhynchus keta*) – Hood Canal Summer-Run ESU	T – 70 FR 37160	Not in action area	72 FR 29121
Marine Invertebrates			
Sunflower Sea Star (*Pycnopodia helanthoides*)	T – 88 FR 16212 (Proposed)	-- --	-- --

DPS=Distinct Population Segment; ESU=Evolutionarily Significant Unit; E=Endangered; T=Threatened; FR=*Federal Register*

7 SPECIES AND DESIGNATED CRITICAL HABITAT NOT LIKELY TO BE ADVERSELY AFFECTED

All actions that may affect ESA-listed species or designated critical habitat must satisfy the requirements of section 7(a)(2) of the ESA. There is an exception to the formal consultation process when an action and all of its resulting stressors may affect, but are not likely to adversely affect, ESA-listed species or designated critical habitat in the action area (50 CFR §402.14(b)). An action warrants a finding of not likely to adversely affect ESA-listed species or designated critical habitat when all of its effects are expected to be discountable, insignificant, or wholly beneficial. Wholly beneficial effects are usually discussed when the project has a clear link to the ESA-listed species or its specific habitat needs and consultation is required because the species may be affected by the action, albeit positively. Discountable effects are those that could occur but, because of the intensity, magnitude, frequency, duration, or timing of the stressor, exposure of an ESA-listed species or PBFs of critical habitat to the stressor is extremely unlikely to occur. Insignificant effects relate to the response of exposed individuals of critical habitat where the response, in terms of an individual's growth, survival, or reproduction, or an impact to the conservation value of a PBF of critical habitat, will be immeasurable or undetectable. For stressors that meet these criteria for wholly beneficial, discountable, or insignificant, the appropriate conclusion is not likely to adversely affect.

In Section 7.1, we evaluate the proposed action's stressors (Section 4, adopted from Section 6, pages 116–117, of the 2019 opinion) that are not likely to adversely affect ESA-listed species and designated critical habitat. In Sections 7.2.1–7.2.6, we identify the remaining stressors from the proposed action and the ESA-listed and proposed species and designated critical habitat (Section 6) that are not likely to be adversely affected by those stressors.

7.1 Stressors Not Likely to Adversely Affect Species or Designated Critical Habitat

Stressors that may affect, but are not likely to adversely affect the ESA-listed cetaceans, pinnipeds, sea turtles, fishes, and designated critical habitat considered in this opinion (see Table 5) include pollution and vessel strike. Section 6.1 in the 2019 opinion (pages 116–117) describes how we reached our not likely to adversely affect determination for these stressors.

7.2 Species or Designated Critical Habitat Not Likely to be Adversely Affected

The remaining potential stressors that may affect ESA-listed species and designated critical habitat within the action area include aerial surveys, vessel surveys, vessel noise, non-invasive terrestrial research activities (i.e., remote video monitoring, photo-id, passive acoustic monitoring, close approach ground surveys, brand resight, behavioral observations, and video/acoustic recording equipment installation/maintenance), non-invasive biological sampling (e.g., scat, spew, molt, and salvage collection), non-chemical captures (hand, hoop net, other net, underwater noose, noose with pole, restraint wrap, board restraint, and squeeze cage), chemical immobilization captures (i.e., darting/injectable immobilization), sedation/anesthesia, handling and biological sampling, external instrument attachment/tagging/marking, and hot branding.

ESA-listed species that are likely to be adversely affected by these stressors are further analyzed and evaluated in Section 10. ESA-listed and proposed species and designated critical habitat that are not likely to be adversely affected by these stressors are evaluated in the subsections below.

7.2.1 Endangered Species Act-Listed Cetaceans, Pinnipeds, Sea Turtles, and Fishes

Sections 7.1–7.4 of the 2019 opinion (pages 122–126) describe the ESA-listed species in the action area that are not likely to be adversely affected by the proposed action. These species include the: Cook Inlet DPS beluga whale; blue whale; bowhead whale; fin whale Western North Pacific DPS gray whale; Mexico and Western North Pacific DPSs of humpback whale; Southern Resident DPS killer whale; North Pacific right whale; sei whale; sperm whale; Beringia DPS bearded seal; Arctic subspecies of ringed seal; East Pacific DPS green turtle; leatherback turtle; North Pacific Ocean DPS loggerhead turtle; non-Mexico Pacific coast breeding areas of olive ridley turtles; Southern DPS of eulachon; Southern DPS of green sturgeon; California Central Valley, Central California Coast, Lower Columbia River, Middle Columbia River, Northern California, Puget Sound, Snake River Basin, South-Central California Coast, Southern California, Upper Columbia River, and Upper Willamette River DPSs of steelhead trout; California Coastal, Central Valley Spring-Run, Lower Columbia River, Puget Sound, Sacramento River Winter-Run, Snake River Fall-Run, Snake River Spring/Summer Run, Upper Columbia River Spring-Run, and Upper Willamette River ESUs of chinook salmon; Central California Coast, Lower Columbia River, Oregon Coast, Southern Oregon and Northern California Coasts ESUs of coho salmon; Ozette Lake and Snake River ESUs of sockeye salmon; and Columbia River and Hood Canal Summer-Run ESUs of chum salmon. The proposed permits will not change any effects to these ESA-listed cetaceans, pinnipeds, sea turtles, and fishes. Therefore, our conclusion that the permitted activities may affect, but are not likely to adversely affect these species remains the same and the species are not discussed further in this opinion.

7.2.2 Proposed Sunflower Sea Star

In 2023, NMFS proposed to list the sunflower sea star as threatened under the ESA (88 FR 16212). The sunflower sea star is bottom-dwelling, can grow up to nearly one meter in diameter, and occurs in the Northeastern Pacific, from the Aleutian Islands to Baja California. They are found in low intertidal and subtidal zones to a depth of 1,427 ft (435 m), but are most commonly found in water depths less than 82 ft (25 m; Fisher 1928; Lambert 2000; Hemery et al. 2016; Gravem et al. 2021). The sunflower sea star is found in a variety of habitats including the outer coasts, glacial fjords, sounds, embayments, tidewater glaciers, kelp forests, rocky intertidal shoals, and eelgrass meadows (Dean and Jewett 2001; Hodin et al. 2021; Gravem et al. 2021). Vessel surveys and ground surveys (when rookeries/haulouts are approached by boat) are the only stressors associated with the proposed research activities that have the potential to affect the sunflower sea star. Specifically, the use of vessels could result in accidental grounding or impacts of propellers or anchors on sea stars or their habitat. However, the proposed research has been ongoing for a number of years and these types of impacts have not been reported so we assume they are rare, if they occur at all. The probability of a vessel encountering a sunflower

sea star during vessel operation associated with surveys is expected to be extremely low given the wide-ranging geographic and depth distributions of the species and localized, temporary nature of the surveys. Given the potential of exposure to stressors from vessel and ground surveys is extremely unlikely and, thus, discountable, we conclude that the proposed research activities may affect, but are not likely to adversely affect the proposed sunflower sea star.

7.2.3 Designated Critical Habitat – North Pacific Right Whale, Arctic Subspecies of Ringed Seal, Steller Sea Lion Western Distinct Population Segment

Sections 7.5.2, 7.5.3, and 7.5.4 of the 2019 opinion (pages 127–129) describe the North Pacific right whale, Arctic subspecies of ringed seal, and Western DPS Steller sea lion designated critical habitat that occurs within the action area. Sections 7.5.8.2, 7.5.8.3, and 7.5.8.4 of the 2019 opinion (pages 133–134) describe how we reached our NLAA determination for those critical habitats. The proposed permits will not change any effects to these critical habitats; therefore, these critical habitats are not discussed in this opinion.

7.2.4 Designated Critical Habitat – Beluga Whale Cook Inlet Distinct Population Segment

On May 11, 2011, NMFS designated critical habitat for the Cook Inlet DPS of beluga whale (76 FR 20180). The Cook Inlet beluga whale critical habitat was not considered in the 2019 opinion; thus, we consider it here. Designated critical habitat encompasses approximately 3,013 square miles (7,800 square kilometers [km^2]) of marine habitat and is comprised of two areas: 1) all marine waters of Cook Inlet north of a line from the mouth of the Threemile Creek connecting to Point Possession; and 2) all marine waters of Cook Inlet south of a line from the mouth of the Threemile Creek to Point Possession and north of 60°15.0′N (Figure 3). The PBFs essential to the conservation of Cook Inlet beluga whales are: 1) intertidal and subtidal waters of Cook Inlet with depths <30 ft (<9.1 m) relative to the mean lower low-water line (MLLW) and within 5 miles (8 kilometers) of high and medium flow anadromous fish streams; 2) primary prey species consisting of four species of Pacific salmon, 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; and 5) waters with in-water noise below levels resulting in abandonment of critical habitat areas by Cook Inlet beluga whales.

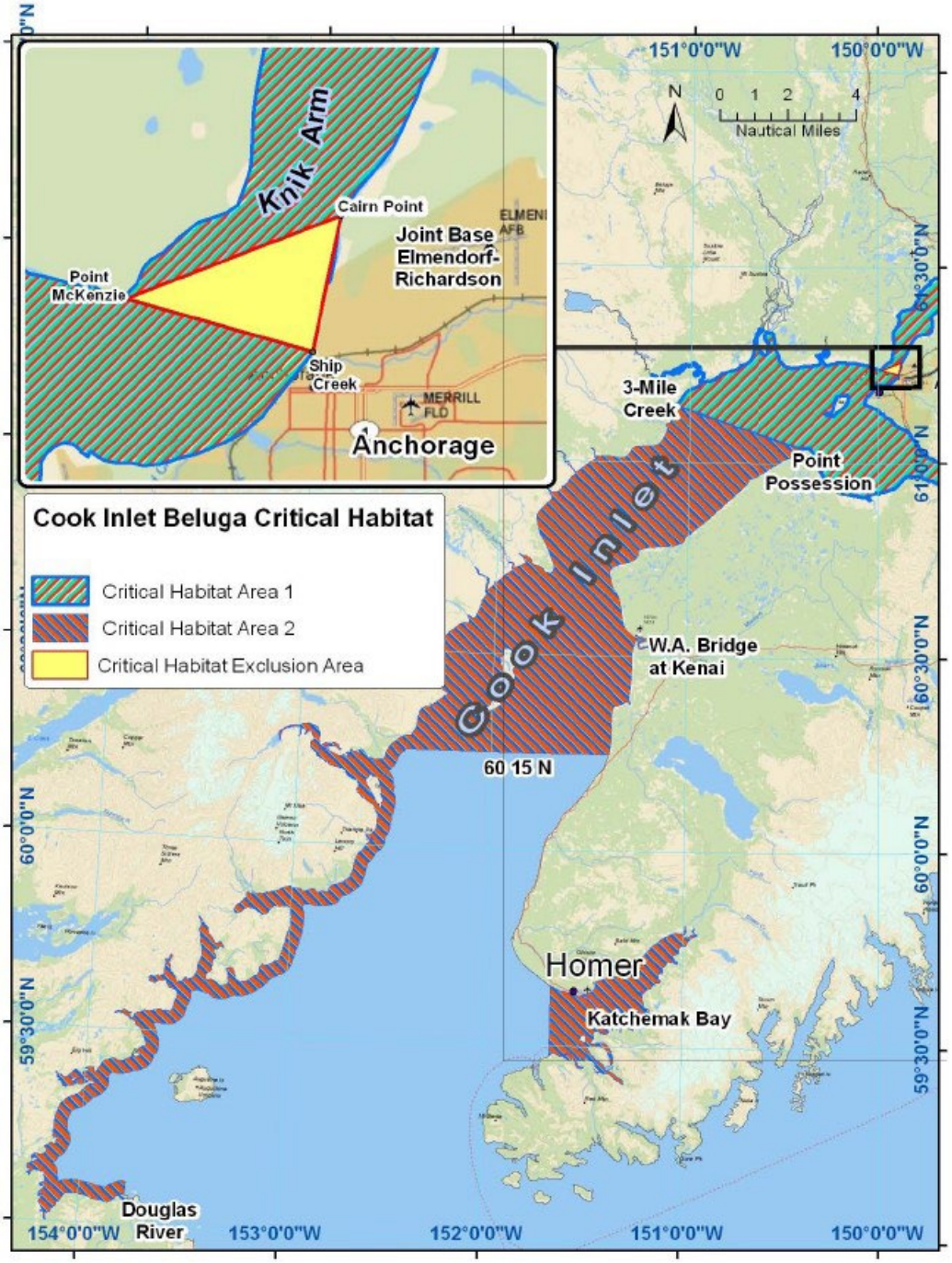

Figure 3. Map of the designated critical habitat for Cook Inlet Distinct Population Segment of beluga whale.

The action area overlaps with small portions of the second critical habitat area; however, research activities will only be temporary and will not affect the first, third, or fourth PBF. We do not expect that research activities would affect prey species; at most, temporary disturbances in local prey distribution may occur with research vessel presence, but would be alleviated when the vessel leaves the area. We also do not expect that noise from the research vessels would result in abandonment of critical habitat areas because vessels will be operating at slow speeds

conducive to surveying Steller sea lions and potential areas for capture, thereby reducing the potential for high noise levels. Further, vessels used for capture activities are smaller than the large research vessels used for vessel surveys, which also reduces the potential for high noise levels in coastal areas where critical habitat overlaps with the action area. Based on the small extent of overlap between the proposed research activities and Cook Inlet beluga whale critical habitat and ephemeral nature of the proposed activities, we expect that effects on the Cook Inlet beluga whale critical habitat from the proposed action to be insignificant. We conclude that the proposed action may affect, but is not likely to adversely affect designated Cook Inlet beluga whale critical habitat.

7.2.5 Designated Critical Habitat – Humpback Whale Mexico and Western North Pacific Distinct Population Segments

On April 21, 2021, NMFS designated critical habitat for the Mexico and Western North Pacific DPSs of humpback whales (86 FR 21082). Specific areas designated as critical habitat for the Mexico DPS of humpback whales contain approximately 116,098 square nautical miles (nm^2; 398,205 km^2) of marine habitat, including areas of the Bering Sea, Gulf of Alaska, and California Current Ecosystem (Figure 4). Specific areas designated as critical habitat for the Western North Pacific DPS of humpback whales contain approximately 59,411 nm^2 (203,774 km^2) of marine habitat, including areas of the Bering Sea and Gulf of Alaska (Figure 5). The PBF essential for the conservation of both Mexico and Western North Pacific DPSs of humpback whales is prey species, primarily euphausiids and small pelagic schooling fishes (species vary with DPS) of sufficient quality, abundance, and accessibility within humpback whale feeding areas to support feeding and population growth.

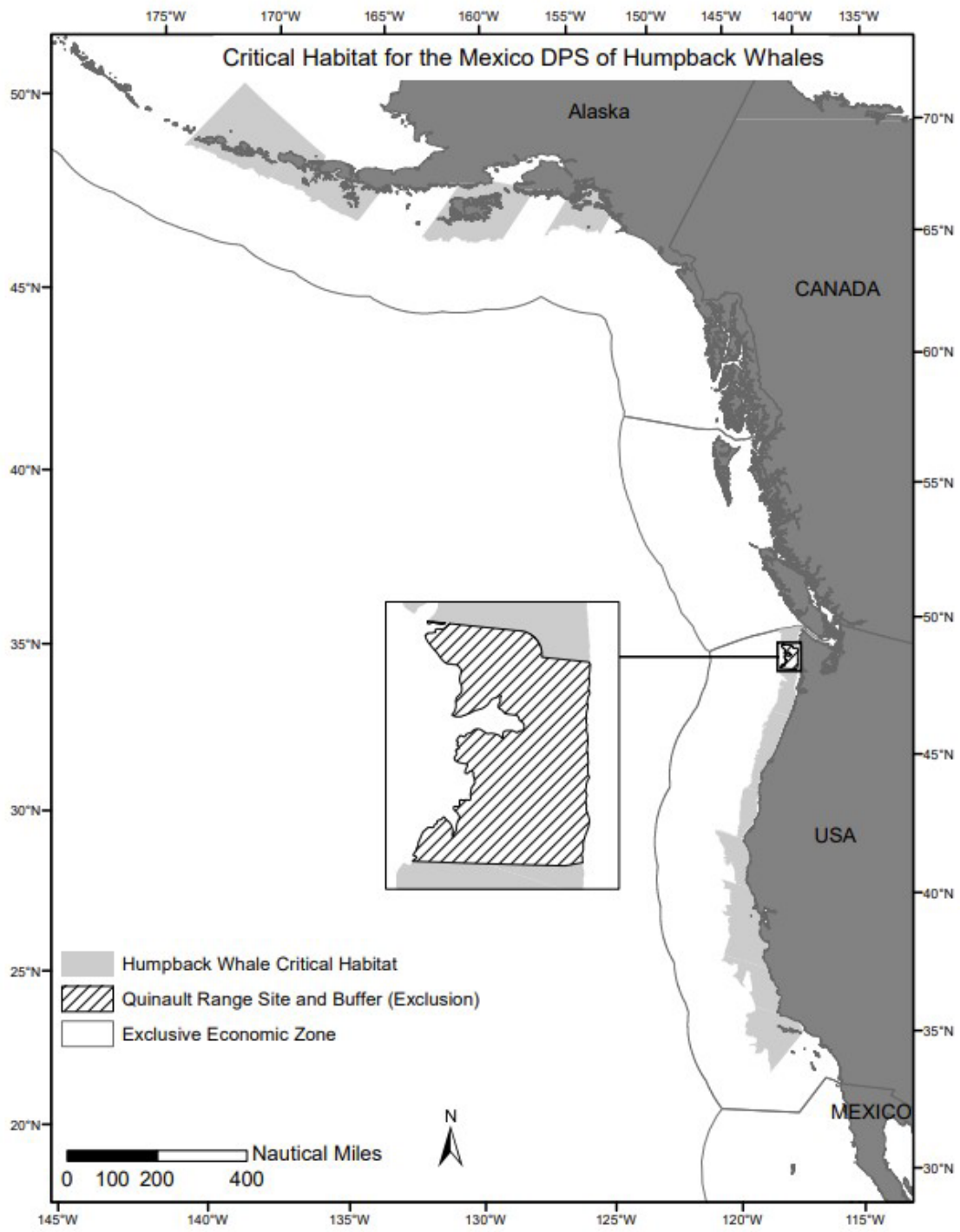

Figure 4. Map of the designated critical habitat for the Mexico Distinct Population Segment of humpback whale.

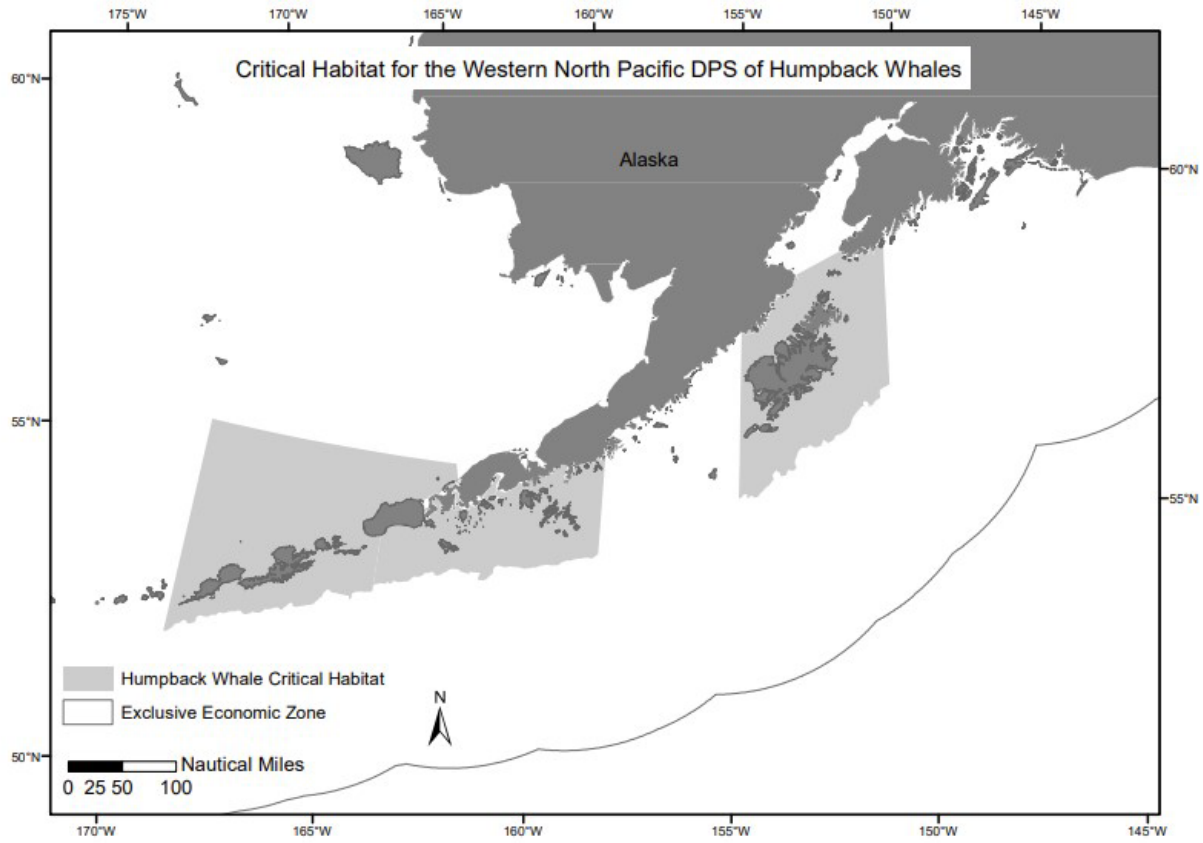

Figure 5. Map of the designated critical habitat for the Western North Pacific Distinct Population Segment of humpback whale.

The action area overlaps with Mexico DPS humpback whale critical habitat (in Alaska) and Western North Pacific DPS humpback whale critical habitat. The proposed research activities will not affect the quality, abundance, or accessibility of prey in feeding areas. At most, vessel surveys may temporarily affect the local distribution of prey due to a startle response, but that impact would only be ephemeral for the time that the vessel is transiting over a specific area where prey aggregations are near the surface. This impact would be so small as to be immeasurable. Therefore, we expect that effects on the Mexico and Western North Pacific DPS humpback whale critical habitat from the proposed action to be insignificant. We conclude that the proposed action may affect, but is not likely to adversely affect designated Mexico and Western North Pacific DPS humpback whale critical habitat.

7.2.6 Designated Critical Habitat – Bearded Seal Beringia Distinct Population Segment

On May 2, 2022, NMFS designated critical habitat for the Beringia DPS of bearded seal (87 FR 19180). The critical habitat includes marine waters within one specific area in the Bering, Chukchi, and Beaufort seas, extending from the shoreward boundary to an offshore limit with a maximum water depth of 656.2 ft (200 m) from the ocean surface. The shoreward boundary, from the Beaufort Sea to the Bering Sea generally follows the 20-m isobath (from the Beaufort

Sea to the northeastern Chukchi Sea), 10-m isobath (to approximately the Cape Prince of Wales), and the 5-m isobath (to approximately the mouth of the Kolovinerak River in the Bering Sea), all relative to MLLW (Figure 6). The PBFs essential to the conservation of Beringia bearded seals are: 1) sea ice habitat suitable for whelping and nursing, which is defined as areas with waters 656.2 ft (200 m) or less in depth containing pack ice of at least 25% concentration and providing bearded seals access to those waters from the ice; 2) sea ice habitat suitable as a platform for molting, which is defined as areas with waters 656.2 ft (200 m) or less in depth containing pack ice of at least 15% concentration and providing bearded seals access to those waters from the ice; and 3) primary prey resources to support bearded seals: waters 656.2 ft (200 m) or less in depth containing benthic organisms, including epifaunal and infaunal invertebrates, and demersal fishes.

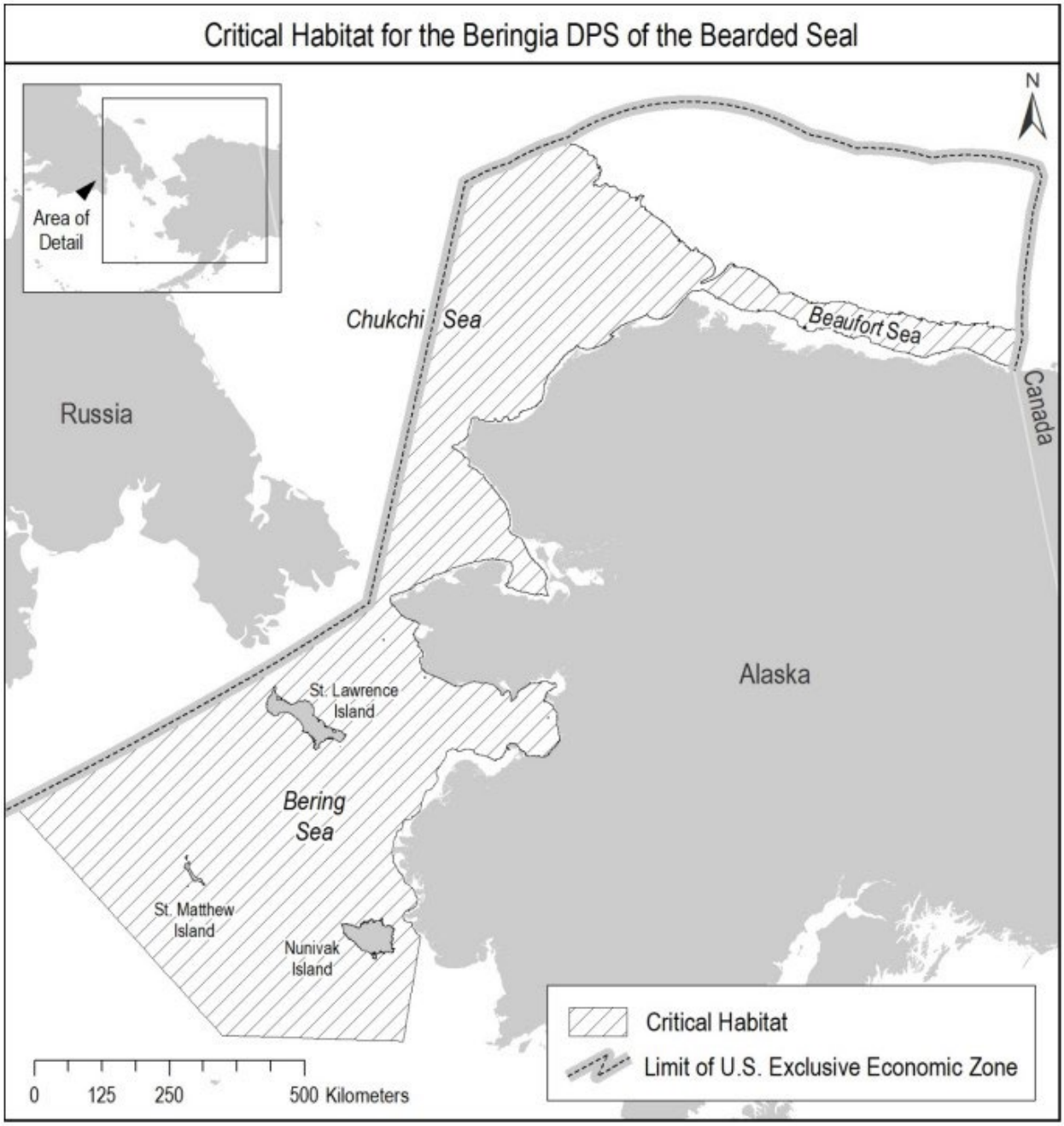

Figure 6. Map of the designated critical habitat for the Beringia Distinct Population Segment of bearded seal.

The action area overlaps with a small portion of the Beringia bearded seal designated critical habitat. Proposed research activities will not affect sea ice habitat. Proposed research activities such as vessel surveys may affect local distribution of prey resources; however, this would be temporary for the short period of time that the vessel would be transiting in those waters. At most, temporary disturbances may occur with research vessel presence, but would be alleviated as the vessel leaves the area. Therefore, we expect that effects on the Beringia DPS bearded seal critical habitat from the proposed action to be so minor as to be insignificant. We conclude that

the proposed action may affect, but is not likely to adversely affect designated Beringia DPS bearded seal critical habitat.

8 SPECIES LIKELY TO BE ADVERSELY AFFECTED

This section identifies and examines aspects of the status of the ESA-listed Western DPS Steller sea lion that are expected to be adversely affected by the proposed research activities. The status includes the existing level of risk that the ESA-listed species face, based on parameters considered in documents such as recovery plans, status reviews, and ESA-listing decisions. The species status section helps to inform the description of the species' current "reproduction, numbers, or distribution," which are part of the jeopardy determination as described in 50 C.F.R. §402.02. More detailed information on the status and trends of the ESA-listed species, and their biology and ecology can be found in the listing regulations and critical habitat designations published in the *Federal Register*, status reviews, recovery plans, and on this NMFS website: https://www.fisheries.noaa.gov/species-directory/threatened-endangered.

Section 9.1 of the 2019 opinion (pages 136–139) describes the range, life history, population dynamics, vocalization and hearing, status, and recovery goals of the Western DPS Steller sea lion. We describe updates to the status of Western DPS Steller sea lion below.

Based on surveys in 2022, the population abundance of Western DPS Steller sea lion in Alaska was estimated at 49,320 individuals, including pups and non-pups (Sweeney et al. 2023). Pup abundance was estimated at 11, 987 individuals (95% Confidence Interval = 11,291–12,703 individuals) and non-pup abundance was estimated at 37,333 individuals (95% Confidence Interval = 34,274–40,245 individuals). Between 2007 and 2022, Western DPS Steller sea lion pups increased by 0.50% per year and non-pups increased by 1.05% per year (Sweeney et al. 2023). However, there is high variability among regions. Abundance of non-pups and pups in the western Aleutian Islands continue to decline, along with abundance of pups in the central Aleutian Islands. Non-pups in the central Aleutian Islands plateaued. In areas east of Samalga Pass (Western DPS), pup production slowed or plateaued in the early 2010's, and non-pup abundance plateaued or declined start in the late 2010's.

Movement of approximately 1,000 non-pups from the eastern to the central Gulf of Alaska regions was documented between 2015 and 2017, although the combined non-pup count in these two regions remained relatively stable over that period (Sweeney et al. 2017). In 2019, pup counts rebounded to 2015 levels; however, there was a decline in non-pup counts in the eastern, central, and western Gulf of Alaska regions (Sweeney et al. 2019).

Hastings et al. (2021) estimated age-specific weaning probability across the Gulf of Alaska and found that weaning occurred later in pups from Southeast Alaska and Prince William Sound, compared to pups farther west. In addition to differences in pup size and survival in weaned versus unweaned yearlings across the region, Hastings et al. (2021) suggest that age at weaning may reflect the differing environmental conditions across the Gulf of Alaska.

Pups born with mitochondrial DNA haplotypes from the Western DPS had reduced body condition and first-year survival compared to pups with Eastern DPS mitochondrial DNA haplotypes (Hastings et al. 2019). Females born in the Western DPS that dispersed to Southeast Alaska (into the Eastern DPS) had higher female survival throughout their first, second, and third years of life, and their female offspring also had higher survival up to breeding age, compared to females that stayed within the Western DPS boundary (Hastings et al. 2019). Additionally, Warlick et al. (2022) estimated lower annual survival probabilities for male pups, female yearlings, and male yearlings born in the Western DPS range compared to those born in the Eastern DPS range.

The minimum estimated mean annual level of human-caused mortality and serious injury for Western DPS Steller sea lion between 2014 and 2018 is 254: 37 in U.S. commercial fisheries, 0.8 in unknown fisheries, 3.6 in marine debris, 3.6 due to other causes (e.g., illegal shooting, mortality incidental to MMPA-authorized research), and 209 in the Alaska Native subsistence harvest (Young et al. 2023). The minimum estimated mean annual U.S. commercial fishery-related mortality and serious injury rate (37 individuals) is more than 10% of the potential biological removal (PBR), which is the established "insignificance threshold" of mortality and serious injury incidental to commercial fishing operations (50 C.F.R. 229.2). Ten percent of PBR is 32 individuals and, therefore, cannot be considered insignificant. The total estimated annual level of human-caused mortality and serious injury (254 individuals) is below the PBR (318 individuals) for this stock (Young et al. 2023).

NMFS categorizes Steller sea lions in the otariid pinniped functional hearing group, with an applied frequency range between 60 Hertz and 39 kiloHertz in water (NMFS 2018).

9 ENVIRONMENTAL BASELINE

The "environmental baseline" refers to the condition of the ESA-listed species or its designated critical habitat in the action area, without the consequences to the ESA-listed species or designated critical habitat caused by the proposed action. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process. The impacts to ESA-listed species or designated critical habitat from Federal agency activities or existing Federal agency facilities that are not within the agency's discretion to modify are part of the environmental baseline (50 C.F.R. §402.02). In this section, we provide an update to the Environmental Baseline from the 2019 opinion (Section 10, pages 139–156). Where there are no changes to baseline conditions, we preserve the sections (including section numbers) from the 2019 baseline and note there are no changes. This update reflects new information relevant to this opinion that has come out since the 2019 opinion was finalized. We incorporate information from the

Environmental Baseline of the 2019 opinion (Section 10, pages 139–156), by reference, into this opinion.

9.1 Climate Change

Sea ice extent in the Bering Sea in 2018 was the lowest recorded in 5,500 years and may currently be even lower as sea ice extent appears to lag atmospheric CO_2 by about two decades (Jones et al. 2021). High Arctic sea ice retreat and increases in the duration of the open-water season has been most pronounced in the Chukchi, Bering, and Beaufort seas (Wang and Overland 2015; Box et al. 2019; Jones et al. 2020). Continued polar amplification of warming has also been observed in high latitudes (Vose et al. 2017; Zhang 2019; Gutiérrez et al. 2021).

The effects of these changes to the marine ecosystems in the action area and how they may affect Western DPS Steller sea lions are uncertain; however, there have been recent studies that observed changes to sea ice habitat, prey, population distribution and health, and exposure to pathogens (e.g., Hastings et al. 2023; Maniscalco 2023). Studies on the 2014–2016 Pacific marine heatwave, an extreme climate event where Gulf of Alaska water temperatures were much higher than normal conditions for an extended period of time, found that Pacific cod (Steller sea lion prey) experienced a 71% decline in abundance between 2015 and 2017 (Barbeaux et al. 2020; Suryan et al. 2021). Other prey species such as capelin, sand lance, and herring populations were also at historically low levels (Arimitsu et al. 2021). In conjunction with the decline in prey populations, diet analysis of Steller sea lions showed they primarily fed on demersal and benthic prey (e.g., skates, snailfish, polychaetes) during the heatwave, rather than their usual prey of epipelagic and mesopelagic fishes (e.g., capelin, walleye Pollock, Pacific cod; Maniscalco 2023). This coincided with observed declines in Steller sea lion pup and non-pup counts during the Pacific marine heatwave on rookeries and the eastern Gulf of Alaska, respectively (Suryan et al. 2021).

9.2 Oceanic Temperature Regimes

Positive phases of the Pacific decadal oscillation can increase the duration and frequency of marine heatwaves in the northeast Pacific Ocean (Ren et al. 2023). Given the information above (Section 9.1), an increase in the duration and frequency of marine heatwaves may influence the availability of Steller sea lion prey and population abundance.

9.3 Subsistence Harvest/Native Harvest

The mean annual subsistence take from this stock for all areas except Saint Paul, Saint George, and Atka Island in 2004 through 2008 (172 individuals) combined with the mean annual take for Saint Paul, Saint George, and Atka Islands in 2014 through 2018 was 209 Western DPS Steller sea lions (Young et al. 2023).

9.4 Illegal Shooting

Between 2014 and 2018, reports to the stranding network resulted in mean annual mortality and serious injury rates of three Steller sea lions illegally shot in the Copper River Delta (within the

Western DPS area; Young et al. 2020). There were 30 documented cases of human-caused mortality of Steller sea lions via firearm injury between 2017–2021 in this area, five of which were documented as Western DPS Steller sea lions (Freed et al. 2023). In August 2023, NMFS published a web story on at least 22 Steller sea lions that were found dead, some with evidence of firearm injury near the Copper River Delta.

9.5 Vessel Disturbance/Strikes

There have been no new reports of Western DPS Steller sea lion vessel strikes. The effects to Western DPS Steller sea lions from vessel strikes in the action area are ongoing and we have no new information to indicate that they have changed appreciably from those discussed in the 2019 opinion.

9.6 Fisheries

The total current estimated mean annual mortality rate of Western DPS Steller sea lions incidental to all U.S. commercial fisheries in Alaskan waters is 37 animals per year (Young et al. 2023). Between 2017 and 2021, there were 244 reported cases of Steller sea lions entangled, entrapped, or hooked in fishing gear, which led to mortality or serious injury. Of those 244, 183 were documented from the Western DPS (Freed et al. 2023).

Other than ongoing Steller sea lion protection measures in Alaska groundfish fisheries implemented by NMFS, which have been in place since 2003 (Bering Sea and Gulf of Alaska) and 2015 (Aleutian Islands), there is no new information on competition between commercial fisheries and Steller sea lions for prey resources.

9.7 Pollution

As discussed in the 2019 opinion (Section 10.7, pages 146–149), within the action area, pollution can pose a threat to ESA-listed Western DPS Steller sea lions. Pollution can come in the form of marine debris, pesticides, contaminants, and hydrocarbons.

9.7.1 Marine Debris

The total current estimated mean annual mortality rate of Western DPS Steller sea lions incidental to marine debris is 3.6 sea lions per year (Young et al. 2023). Between 2017 and 2021, there were 113 reported cases of Steller sea lions entangled or entrapped in marine debris, which led to mortality or serious injury. Of those 113, 77 were documented from the Western DPS (Freed et al. 2023). There were also three records (two from the Eastern DPS and one from the Western or Eastern DPS) of dependent pups considered seriously injured due to the mother being seriously injured due to circumferential neck entanglement in marine debris (Freed et al. 2023).

9.7.2 Pesticides and Contaminants

Recent studies have detected mercury in the blood, tissues, and lanugo (hair grown in utero) of Western DPS Steller sea lion pups (e.g., Levin et al. 2020; Lian et al. 2020; Rea et al. 2020; Castellini et al. 2022). Approximately 20–25% of pups in the western Aleutian Islands had total

mercury levels above the threshold at which other fish-eating mammals may exhibit adverse neurological and reproductive effects, and physiological effects such as immune suppression (leading to increased disease susceptibility), neurotoxicity, and selenium deficiency (Rea et al. 2013; Lian et al. 2020; Rea et al. 2020). Mercury detected in lanugo showed fetal exposure to toxins during late gestation, likely through the diet of the mother (Rea et al. 2020). Immune measurements (e.g., cytokine profiles, white blood cell counts, blood mercury concentrations) in pups varied across the Gulf of Alaska. The measurements suggest that cell-signaling pathways and immune resilience could be impacted (Kennedy et al. 2021). Organochlorine pesticide residues were detected in tissue samples from across the Gulf of Alaska, concentration of contaminants varied with mass and age class (Keogh et al. 2020). While contaminants are hypothesized to contribute to the decline in Western DPS Steller sea lions (e.g., Rea et al. 2013), there is no direct evidence that high levels of contaminants have long-term health impacts to the species.

9.7.3 Hydrocarbons

There are no new reports on the effects of oil spills on Western DPS Steller sea lions. The effects to Western DPS Steller sea lions from oil and gas in the action area are ongoing and we have no new information to indicate that they have changed appreciably from those discussed in the 2019 opinion (Section 10.7.3, pages 148–149). The Bureau of Ocean Energy Management (BOEM) held Cook Inlet OCS Oil and Gas Lease Sale 258 in December 2022. The NMFS biological opinion on Lease Sale 258 estimated approximately 0–13 small oil spills, of 0–10 barrels per year over the 32-years of development, production, and decommissioning. A small oil spill would be localized and would not be expected to permanently affect local fish and invertebrate populations that are Steller sea lion prey.

9.8 Aquatic Nuisance Species

There are no new reports on the effects of aquatic nuisance species on Western DPS Steller sea lions. The effects from aquatic nuisance species to Western DPS Steller sea lions in the action area are ongoing and we have no new information to indicate that they have changed appreciably from those discussed in the 2019 opinion (Section 10.8, pages 149–150).

9.9 Predation

ASLC's annual reports under the existing permit (Permit No. 22293) documented increased transient killer whale activity around the Chiswell Island rookery. ASLC tallied at least 12 days where one or more killer whales were observed harassing or actively hunting sea lions between late summer to fall 2020, and one suspected (but not confirmed) predation in July 2019 of a Steller sea lion under the water's surface. Other than the unconfirmed predation, there are no new reports of natural (killer whale or shark) predation on Western DPS Steller sea lions. The effects to Western DPS Steller sea lions from predation in the action area are ongoing and we have no new information to indicate that they have changed appreciably from those discussed in the 2019 opinion (Section 10.9, pages 150–151).

9.10 Disease and Parasitism

Necropsies and subsequent PCR analysis on 19 Steller sea lion carcasses (premature pups, aborted fetuses, neonates, intrauterine fetuses) across the Gulf of Alaska detected *Brucella* spp., a zoonotic bacteria that is known to cause abortion in wildlife, domestic animals, and humans, in some of the carcasses (Esquible et al. 2019). Esquible et al. (2019) document the first detection of *Brucella* spp. in Steller sea lions. Although *Brucella* spp. has been detected in marine mammals, it is not clear whether it is linked to reproductive failure or disease (Esquible et al. 2019). Esquible et al. (2019) also detected phocine distemper virus in some carcasses.

During ASLC's research activities under the existing permit, two carcasses (one in 2021 and one in 2022) were necropsied. The cause of death for the 2021 animal was determined to be *Salmonella* saintpaul septicemia and meningoencephalitis that was caused by hemorrhagic enteritis due to the *Salmonella* combined with hookworms. Histopathological results are pending for the 2022 carcass.

9.11 Sound

There are no new data on Western DPS Steller sea lion population-level effects from anthropogenic sound since the 2019 opinion (Section 10.11, pages 151–154). We summarize new information available on impacts from each of the sound sources below.

9.11.1 Vessel Sound and Commercial Shipping

In Glacier Bay National Park, vessel noise from cruise ships, yachts, and skiffs during summer decreased the in-water communication space of humpback whales and harbor seals by 13–51% and 32–61%, respectively (Gabriele et al. 2018). Although Gabriele et al. (2018) did not study Steller sea lions directly, humpback whale and harbor seal vocalizations that were analyzed overlap with the frequency range of Steller sea lion vocalizations. Therefore, Steller sea lion communication space may also decrease with increased vessel traffic; however, the extent and degree of decreased space is unknown.

9.11.2 Aircraft

There are no new reports on the effects of aircraft noise on Western DPS Steller sea lions; annual reports from existing research permits documented no unexpected responses from Western DPS Steller sea lion. The effects to Western DPS Steller sea lion from aircraft noise in the action area are ongoing and we have no new information to indicate that they have changed appreciably from those discussed in the 2019 opinion (Section 10.11.2, page 153).

9.11.3 Seismic Surveys

The 2019 Hilcorp Alaska Lower Cook Inlet seismic survey marine mammal monitoring and mitigation report (Fairweather Science 2020) documented no detectable reactions of Steller sea lions during periods of active seismic survey activity.

9.11.4 Marine Construction

The effects to Western DPS Steller sea lion from marine construction in the action area are ongoing and we have no new information to indicate that they have changed appreciably from those discussed in the 2019 opinion (Section 10.11.4, page 154). Marine construction related to maintenance of docks or oil and gas infrastructure in the action area constitute a Federal action and has undergone separate ESA section 7 consultations. Through these consultations, action agencies have implemented monitoring and conservation measures such as use of protected species observers, shutdown/ramp-up procedures, and distance limits for approaching vessels, to avoid or reduce potential impacts from acoustic and physical disturbance, and vessel strike stressors from construction activities on ESA-listed species, including Steller sea lions, in the action area.

9.12 Military Activities

The U.S. Navy's Gulf of Alaska Navy Training and Testing activities (2022–2029) overlap with the action area. The U.S. Navy's activities constitute a Federal action and take of ESA-listed marine mammals considered for these activities have previously undergone separate ESA section 7 consultation. Through these consultations with NMFS, the U.S. Navy has implemented monitoring and conservation measures to avoid or reduce potential impacts from acoustic, explosive, and physical disturbance, and vessel strike stressors from training activities on ESA-listed species, including Steller sea lions, in the action area.

9.13 Scientific Research Activities

Scientific research similar to that which will be conducted under Permit Nos. 27499, 27408, and 27503 has and will continue to impact ESA-listed Steller sea lions within the action area. Currently, there are 31 active research permits (including the three permits under this consultation, which would replace the existing permits) that may affect Western DPS Steller sea lions considered during this consultation in the action area. Under permits other than the three renewals considered in this consultation, Western DPS Steller sea lions are not the targets of the permitted research activities, and only five of the 31 permits (Permit Nos. 23283, 23858, 23896, 24359, and 26314) actively target non-Steller sea lion pinnipeds in Alaska. The effects from individual research activities are short-term, lasting hours to days following the research event, and occur over an expansive area. Most research will not overlap in area or timing with the permits under this consultation. Repeated disturbance of individual Western DPS Steller sea lions is further minimized by standard permit requirements to coordinate fieldwork among permit holders working in the same area.

9.14 Impact of the Baseline on Endangered Species Act-Listed Species

Collectively, the baseline described above has had, and likely continues to have, lasting impacts on the ESA-listed species considered in this consultation. Some of these stressors result in mortality or serious injury to individual animals (e.g., subsistence harvesting, predation),

whereas others result in more indirect (e.g., fishing that impacts prey availability) or nonlethal (e.g., vessel noise) impacts.

Assessing the aggregate impacts of these stressors on the species (Western DPS Steller sea lion) considered in this consultation is complex. This complexity is compounded by the fact that Western DPS Steller sea lions in this consultation are wide-ranging and subject to stressors in locations throughout and outside the action area.

We consider the best indicator of the aggregate impact of the Environmental Baseline section on ESA-listed resources to be the status and trends of those species. As noted in Section 8, the Western DPS Steller sea lion are experiencing population abundance increases, plateaus, or declines in different regions across Alaska. Taken together, this indicates that the Environmental Baseline section is impacting the species in different ways. The portion of Western DPS Steller sea lion experiencing increasing population abundances is doing so despite the potential negative impacts of the activities described in the Environmental Baseline section. Therefore, while the stressors that affect the environmental baseline in the action area may slow their recovery, recovery is not being prevented. For the portion of Western DPS Steller sea lion that may be plateauing or declining in abundance, it is possible that the suite of conditions described in the Environmental Baseline section is preventing their recovery. However, it is also possible that their populations are at such low levels that, even when the species' primary threats are removed, the species may not be able to achieve recovery. At small population sizes, species may experience phenomena such as demographic stochasticity, inbreeding depression, and Allee effects, among others, that cause their limited population size to become a threat in and of itself. A review of new information on the status and trends of Western DPS Steller sea lion is in the Status of Species Likely to be Adversely Affected (Section 8) of this opinion, and what this means for the populations is discussed in the Integration and Synthesis (Section 12).

10 EFFECTS OF THE ACTION

Section 7 regulations define "effects of the action" as all consequences to the ESA-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 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 C.F.R. §402.02).

This effects analysis section is organized following the stressor, exposure, response assessment framework describe in Section 2.

In this section, we further describe the potential stressors associated with the proposed action, the probability of individuals of ESA-listed species being exposed to these stressors based on the best scientific and commercial evidence available, and the probable responses of those individuals (given probable exposures) based on the available evidence. As described in Section 10.4, for any responses that would be expected to reduce an individual's fitness (i.e., growth,

survival, annual reproductive success, or lifetime reproductive success), the assessment considers the risk posed to the viability of the population(s) those individuals comprise and to the ESA-listed species those populations represent. For this consultation, we are particularly concerned about behavioral and stress-based physiological disruptions and potential unintentional mortality that may result in sea lions that fail to feed, reproduce, or survive because these responses are likely to have population-level consequences. The purpose of this assessment and, ultimately, of this consultation is to determine if it is reasonable to expect the proposed action to have effects on ESA-listed species that could appreciably reduce their likelihood of surviving and recovering in the wild.

Section 3 of the ESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct" (16 U.S.C. §1532(19)). Harm is defined by regulation (50 C.F.R. §222.102) as "an act which actually kills or injures fish or wildlife. Such an act may include significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including, breeding, spawning, rearing, migrating, feeding, or sheltering." NMFS does not have a regulatory definition of "harass." However, on May 1, 2023, NMFS adopted, as final, the previous interim guidance on the term "harass," defining it as to "create the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to breeding, feeding, or sheltering."

Under the MMPA, take is defined as "to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal (16 U.S.C. 1361 et seq.) and further defined by regulation (50 C.F.R. §216.3) as "to harass, hunt, capture, collect, or kill, or attempt to harass, hunt, capture, collect, or kill any marine mammal." This includes, without limitation, any of the following:

- The collection of dead animals, or parts thereof;
- The restraint or detention of a marine mammal, no matter how temporary;
- Tagging a marine mammal;
- The negligent or intentional operation of an aircraft or vessel;
- The doing of any other negligent or intentional act which results in disturbing or molesting a marine mammal;
- Feeding or attempting to feed a marine mammal in the wild.

For purposes of this action, the two levels of MMPA harassment are further defined under the MMPA as any act or pursuit, torment, or annoyance which:

- Has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or,
- Has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment). Under NMFS

> regulation, MMPA Level B harassment does not include an act that has the potential to injure a marine mammal or marine mammal stock in the wild.

NMFS' ESA harass definition does not specifically equate to MMPA Level A or Level B harassment, but shares some similarities with both in the use of the terms "injury/injure" and a focus on a disruption of behavior patterns. Since the proposed permits will authorize take under both the ESA and MMPA, our ESA analysis, which relies on NMFS' guidance on the ESA term harass, may result in different conclusions than those reached by the Permits and Conservation Division in their MMPA analysis. Given the differences between the MMPA and ESA standards for harassment, there may be circumstances in which an act is considered harassment, and thus take, under the MMPA but not the ESA.

10.1 Stressors Associated with the Proposed Action

During consultation, we determined that aerial surveys, vessel surveys, vessel noise, non-invasive terrestrial research activities (i.e., remote video monitoring, photo-id, passive acoustic monitoring, close approach ground surveys, brand resight, behavioral observations, and video/acoustic recording equipment installation/maintenance), non-invasive biological sampling (i.e., scat, spew, molt, and salvage collection), non-chemical captures (hand, hoop net, other net, underwater noose, noose with pole, restraint wrap, board restraint, and squeeze cage), chemical immobilization captures (darting/injectable immobilization), sedation/anesthesia, handling and biological sampling, external instrument attachment/tagging/marking, hot branding, and unintentional mortality may adversely affect Western DPS Steller sea lions. Each of these stressors and the likely exposure to and response of Western DPS Steller sea lions are discussed in Sections 10.2 and 10.3, respectively.

10.2 Exposure Analysis

Exposure analyses identify the ESA-listed species that are likely to co-occur with the action's effects on the environment in space and time, and identify the nature of that co-occurrence. This section identifies, as possible, the number, age or life stage, and gender of the individuals likely to be exposed to the action's effects and the population(s) or subpopulation(s) those individuals represent.

In this section, we quantify the likely exposure of ESA-listed species to the activities and associated stressors that may result from the proposed action (Section 3) and, when possible, quantify the number of exposures to an individual animal. The stressors we expect individuals of the Western DPS Steller sea lion to be exposed to are listed above (Section 10.1). Table 2, Table 3, and Table 4 specify the applicants' and the Permits and Conservation Division's expected Western DPS Steller sea lion exposure to these stressors.

The MML, ASLC, and ADF&G have explained the MMPA take number estimates in their permit applications for Permit Nos. 27499, 27408, and 27503, respectively. Based on this explanation, our own evaluation of these numbers in comparison to the MML, ASLC, and

ADF&G and other researchers' annual reports for similar species and research activities, and the conservative assumption that all MMPA take that the Permits and Conservation Division authorize *could* occur, we adopt the exposure numbers of ESA-listed species that are reasonably certain to occur as the number of animals specified in **Error! Reference source not found.**, **Error! Reference source not found.**, and **Error! Reference source not found.** as likely to be affected by the specific research activities. Because MML, ASLC, and ADF&G generally survey different haulouts/rookies and coordinate research activities to minimize duplicative efforts, minimize potential disturbance, increase geographic coverage of research activities, and increase sample size, the exposure numbers are totaled across all three permits. These numbers and resulting effects are discussed below.

Under Permit No. 27499, the MML plans to study Steller sea lions throughout offshore and coastal waters of Alaska. During their research, the MML researchers may incur the following MMPA take numbers of individuals from the Western DPS during research activities:

- 3,410 individuals during aerial surveys. This includes 3,190 male and female non-pups and 220 male and female pups;
- 2,100 individuals during vessel surveys. This includes 2,000 male and female non-pups and 100 male and female pups;
- 3,700 individuals during ground surveys, non-invasive terrestrial research activities (i.e., behavioral observation and photo-ID), and non-invasive biological sampling (opportunistic collection of scat, spew, molts, and carcasses). This includes 2,500 male and female non-pups and 1,200 male and female pups;
- 550 individuals from non-chemical capture (i.e., hand or dip net) and handling/sampling (i.e., anesthesia, biological sampling, branding, instrument attachment, and release). This includes only male and female pups;
- 67 individuals from chemical capture (i.e., dart and injectable immobilizing agents) and handling/sampling (i.e., anesthesia, biological sampling, branding, instrument attachment, and release). This includes 20 male and female juveniles that may be darted, immobilized with an injectable agent or hand captured and then handled/sampled; 10 male and female juveniles that will be darted but not captured; 20 adult females that will be darted or injected with an immobilizing agent and handled/sampled; 10 adult females that will be darted but not captured; five subadult/adult males that will be darted or injected with an immobilizing agent and handled/sampled; two subadult/adult males that will be darted but not captured; and
- Four individuals for unintentional mortality (not to exceed eight over the life of the permit). This includes males and females of all life stages.

Under Permit No. 27408, the ASLC plans to study Steller sea lions throughout offshore and coastal waters of the Gulf of Alaska and Aleutian Islands. As stated earlier in Section 3, most of the work will be concentrated at Chiswell Island (59.602°N, 149.568°W) and adjacent rookeries and haulouts between Prince William Sound and Outer Island. Additional work farther west is

dependent on funding and research needs. During their research, the ASLC researchers may annually expose the following numbers of Western DPS Steller sea lions to research activities:

- 1,000 individuals during vessel surveys. This includes males and females of all life stages;
- 500 individuals during ground surveys (only includes incidental disturbance associated with capture, handling, and sampling of pups). This includes males and females of all life stages;
- 2,000 individuals during remote video monitoring activities. This includes males and females of all life stages;
- 2,350 individuals during grounds survey activities associated with the collection of fecal samples, placentas, aborted fetuses, and carcasses. This includes males and females of all life stages;
- 125 individuals from non-chemical capture (i.e., hand or dip net) and handling/sampling (i.e., anesthesia, biological sampling, branding, and release). This includes only male and female pups;
- 70 individuals during remote biopsy darting activities. This includes 50 male and female adults and 20 male and female juveniles/subadults;
- 200 individuals unintentionally harassed during remote biopsy darting activities. This includes males and females of all life stages; and
- Four individuals for unintentional mortality (not to exceed four over the life of the permit). This includes males and females of all life stages.

Under Permit No. 27503, the ADF&G plans to study Steller sea lions throughout offshore and coastal waters of Alaska. During their research, the ADF&G researchers may annually expose the following numbers of Western DPS Steller sea lions to research activities:

- 12,500 individuals to aerial surveys. This includes males and females of all life stages;
- 4,000 individuals during vessel surveys. This includes males and females of all life stages;
- 1,390 individuals during ground surveys. This includes males and females of all life stages;
- 22,000 individuals during ground activities (unintentional disturbance during scat/carcass collection, capture and observation, remote biopsy, and equipment maintenance). This includes males and females of all life stages;
- 4,000 individuals during branding activities (unintentional take during branding activities). This includes males and females of all life stages;
- 600 individuals during remote biopsy activities. This includes 300 male and female juveniles and 300 male and female adults;
- 940 individuals from non-chemical capture (i.e., hand or dip net) and handling/sampling (i.e., anesthesia, biological sampling, branding, instrument attachment, and release). This

includes 300 male and female pups that will not be branded, and 640 male and female pups with optional branding on pups at least 20 kilograms or without umbilicus; and
- 90 individuals from non-chemical (i.e., hand or dip net) or chemical capture (i.e., darting) and handling/sampling. This includes 45 male and female juveniles and 45 male and female adults; and
- Four for unintentional mortality (not to exceed eight over the life of the permit). This includes males and females of all life stages.

10.3 Response Analysis

Response analyses determine how ESA-listed resources, in this case Western DPS Steller sea lions, are likely to respond after exposure to stressors from an action that causes changes to the environment or acts directly on an ESA-listed species. For the purposes of consultation, our assessments try to detect potential lethal, sublethal (or physiological), or behavioral responses that might result in reduced fitness of ESA-listed individuals. Ideally, response analyses consider and weight evidence of adverse consequences, as well as evidence suggesting the absence of such consequences.

Because the proposed research activities and associated stressors have not changed from the 2019 opinion, here we present an update on Western DPS Steller sea lion responses to each research activity the MML, ASLC, and ADF&G propose to conduct. Where there are no updates, we preserve the sections (including section numbers) from the 2019 response analysis and note there are no changes. This update reflects new information relevant to this opinion that has come out since the 2019 opinion was finalized (e.g., annual reports started documenting the percentage of animals exhibiting behavioral disturbance in 2015; thus, disturbance percentages were not available for a majority of research activities in the 2019 opinion). We incorporate information from the Response Analysis of the 2019 opinion (Section 11.2.2, pages 160–180), by reference, into this opinion.

10.3.1 Aerial Surveys

Annual reports from the existing Permit No. 22289 documented behavioral disturbance (i.e., movements of twice the animal's body length or more, changes of direction greater than 90°, or retreating [flushing] to the water) in 3% of Western DPS Steller sea lion non-pups during aerial surveys using a DeHavilland Twin Otter aircraft in 2019. This was similar to annual reports in 2021, when researchers observed behavioral disturbance from aerial surveys in 2.6% of total animals surveyed. This is similar to disturbance percentages from aerial surveys conducted by MML and ADF&G between 2000–2004 (2019 opinion Section 11.2.2.1, page 161).

10.3.2 Vessel Surveys

Annual reports from the existing Permit No. 22293 documented disturbance during boat-based haulout surveys and resightings. During boat-based haulout surveys, researchers observed that >95% of animals only showed increased levels of alertness, 143 individuals were disturbed, and

a few of those individuals flushed into the water. During boat-based resightings, about 50% of animals showed increased levels of alertness, and <25% of individuals flushed into the water.

Annual reports from the existing Permit No. 22298 documented the time it took for juvenile and adult Western DPS Steller sea lions to haulout again after disturbance from vessel surveys. Adults were observed to haulout again within seconds to 30 minutes of being disturbed (similar to the time ADF&G observed during previous permitted vessel surveys (2019 opinion Section 11.2.2.2, page 163), whereas juveniles tended to take longer to haulout again. During some vessel surveys, a small group of juveniles followed the vessel until the vessel left the area.

10.3.3 Non-Invasive Terrestrial Research Activities

Annual reports from existing Permit No. 22293 documented approximately 75% of animals flushing into the water, and 25% of animals showing increased levels of alertness onshore, due to disturbance related to remote video system maintenance. After disturbance, it generally took less than 24 hours for the haulout to repopulate.

10.3.4 Non-Invasive Biological Sampling (Scat/Spew/Molt/Salvage Collection)

Annual reports from existing Permit No. 22293 documented nearly 100% of animals flushing into the water during material collections.

10.3.5 Non-Chemical Capture (Hand, Hoop Net, Other Net, Underwater Noose, Noose with Pole, Restraint Wrap, Restraint Board, and Squeeze Cage)

No injuries or mortalities were documented during captures under the existing Permit Nos. 22289, 22293, and 22298. We have no new information to indicate that Western DPS Steller sea lion responses to non-chemical captures have changed appreciably from those discussed in the 2019 opinion (Section 11.2.2.5, pages 165–166).

10.3.6 Chemical Capture (Darting/Injectable Immobilization)

We have no new information to indicate that Western DPS Steller sea lion responses to chemical captures have changed appreciably from those discussed in the 2019 opinion (Section 11.2.2.6, pages 166–170).

10.3.7 Sedation/Anesthesia

We have no new information to indicate that Western DPS Steller sea lion responses to sedation/anesthesia have changed appreciably from those discussed in the 2019 opinion (Section 11.2.2.7, pages 170–171).

10.3.8 Biopsy (Darting and Punches)

Annual reports from existing Permit No. 22298 documented a variety of Western DPS Steller sea lion reactions to remote biopsy darting. A majority of the time, when darted, the animal was startled and sat up when struck (or was alerted as the dart traveled through the air or the sound of the bow being fired), and vocalized while looking around for the source of disturbance.

Non-target animals were disturbed approximately 50% of the time, generally with the closest one or two animals flushing into the water and, other times, up to five of the nearby animals showing a reaction. After the dart hit an animal, reactions of non-target animals varied based on where the dart landed. Reactions were relatively mild when the dart fell into the water. However, when the dart fell on land (animals could see and hear it striking the ground and rolling around), or when the dart became lodged in the cracks or barnacles along the shore, reactions were stronger (i.e., greater disturbance such as flushing into the water). The strongest disturbances were when the dart became lodged in cracks or barnacles, because researchers had to go onshore to manually retrieve the dart.

After flushing into the water, some animals would haul out again immediately (seconds to a minute) and in the same place where they entered the water. Approximately 50% of the time, animals would haul out again in a different but nearby location, which generally took several minutes, up to 20 minutes. Darting did not seems to change the animals' responses to the presence of researchers in the hours and days after being darted.

10.3.9 Handling and Biological Sampling/Testing of Restrained/Sedated/Anesthetized Sea Lions

We have no new information to indicate that Western DPS Steller sea lion responses to handling and biological sampling/testing while restrained, sedated, or anesthetized have changed appreciably from those discussed in the 2019 opinion (Section 11.2.2.9, pages 173–176).

10.3.10 External Instrument Attachment/Marking

We have no new information to indicate that Western DPS Steller sea lion responses to external instrument attachment/marking have changed appreciably from those discussed in the 2019 opinion (Section 11.2.2.10, pages 176–177).

10.3.11 Hot Branding

We have no new information to indicate that Western DPS Steller sea lion responses to hot branding have changed appreciably from those discussed in the 2019 opinion (Section 11.2.2.11, pages 177–178).

10.3.12 Lethal Take

We have no new information on causes or population-level effects from unintentional mortality of Western DPS Steller sea lions. Under the proposed permits, authorized takes for unintentional mortality across the life of the permits are less than those under the existing permits (

Table 1).

10.3.13 Long-Term Effects from Research Activities

We have no new information to indicate that the long-term impact of research on Western DPS Steller sea lion presence/occurrence, distribution, or behavior throughout Alaska have changed appreciably from those discussed in the 2019 opinion (Section 11.2.2.13, pages 179–180).

10.4 Summary of Effects

Most of the research activities are expected to be short-term, and any injuries from tagging or biopsies are expected to heal in weeks. Unintentional mortalities of up to 12 Western DPS Steller sea lions a year (total across all three permits, but not to exceed 20 individuals over the life of the permits), would have a direct fitness consequence to the individual, possibly leading to lost reproductive potential that the individual might contribute to the population. However, the maximum annual number of unintentional mortalities represents only 0.02% of the population (see Section 8). The maximum annual number of unintentional mortalities is also <4% of the potential biological removal for the Western DPS of Steller sea lion. Over the past 10 years, MML, ASLC, and ADF&G have reported five unintentional mortalities combined. Lessons learned from these unintentional mortalities have led to additional conservation measures associated with the proposed permits (e.g., avoid moving pups into areas similar to the area where the mortalities occurred). Therefore, the low number of expected unintentional mortalities related to research activities is not a significant threat to population recovery and research activities (other than a negligible amount of unintentional lethal take) are not expected to reduce the long-term fitness of any Western DPS Steller sea lion individual. As such, the issuance of Permit Nos. 27499, 27408, and 27503 are not expected to present any long-term risk to the Western DPS of Steller sea lion.

11 CUMULATIVE EFFECTS

"Cumulative effects" are those effects of future state or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation (50 C.F.R. §402.02). Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the ESA.

During this consultation, we searched for information on future state, tribal, local or private (non-Federal) actions reasonably certain to occur in the action areas. We conducted electronic searches of Google and other electronic search engines for other potential future state or private activities that are likely to occur in the action area. We are not aware of any non-Federal actions that are likely to occur in the action area during the foreseeable future that were not considered in the Environmental Baseline (Section 9) of this opinion.

12 INTEGRATION AND SYNTHESIS

The Integration and Synthesis is the final step in our assessment of the risk posed to species and their designated critical habitat as a result of implementing the proposed action. In this section, we add the Effects of the Action (Section 10) to the Environmental Baseline (Section 9) and the Cumulative Effects (Section 11) to formulate the agency's biological opinion as to whether the proposed action is likely to reduce appreciably the likelihood of both the survival and recovery of an ESA-listed species in the wild by reducing its numbers, reproduction, or distribution. This assessment is made in full consideration of the Status of the Species Likely to be Adversely Affected (Section 8).

12.1 Jeopardy Analysis

The jeopardy analysis relies upon the regulatory definition of "to jeopardize the continued existence of a listed species," which is "to engage in an action that would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species" (50 C.F.R. §402.02). Therefore, the jeopardy analysis considers both the survival and recovery of the species.

Based on our effects analysis, adverse effects to ESA-listed Western DPS Steller sea lion are likely to result from the proposed action. The following discussion integrates our exposure and response analyses (Section 10), and summarizes the probable risk that stressors resulting from the proposed action pose to the Western DPS Steller sea lion.

12.2 Steller Sea Lion – Western Distinct Population Segment

A negligible number of estimated unintentional mortalities as a result of the research activities is anticipated to occur during the proposed actions. Based on our analysis of the research activities, we expect a maximum of 12 Western DPS Steller sea lions to succumb annually to unintentional lethal take by the MML, ASLC, and ADF&G during their proposed activities (not to exceed 20 unintentional mortalities over the life of all three permits). As stated in our Summary of Effects (Section 10.4), death of an individual Western DPS Steller sea lion would have a direct fitness consequence to the individual, which could lead to lost reproductive potential that the individual might contribute to the population or subpopulation. This lost reproductive potential will vary depending on the sex (male or female) and maturity of the individual. The death of a male would have less of an effect on the population than the loss of a female. Loss of a sexually mature female will have immediate effects on reproductive potential, while the effects on reproductive potential from the loss of a juvenile female might not be realized for several years. However, the amount of unintentional lethal take resulting from the proposed activities would not surpass the potential biological removal threshold calculated by NMFS (Young et al. 2023). As stated in the Programmatic Environmental Impact Statement for Steller sea lion and Northern fur seal research (NMFS 2007), research-related mortality less than or equal to 10% of the potential biological removal is considered "negligible." A negligible impact would produce no

measureable effects on the geographic distribution or range, and survival or reproductive success of the population (NMFS 2007). As stated in Section 8, as of 2022, the best estimate of Western DPS Steller sea lion population abundance in Alaska was 11, 987 pups and 37,333 non-pups (Sweeney et al. 2023). Maximum annual unintentional lethal take will account for only 0.02% of the population. In addition, current population trend estimates indicate a population growth rate of 0.50% and 1.05% per year for pups and non-pups, respectively (Sweeney et al. 2023).

It should also be noted that the unintentional lethal take numbers considered in this consultation are likely higher than what will occur. In past permits, the amount of Steller sea lion deaths that actually occurred did not reach the levels anticipated in those permits. For example, under the current permits (i.e., in the last five years), a maximum of nine unintentional mortalities per year across all three permits (not to exceed 37 over the life of the permits) were authorized. However, only two unintentional mortalities occurred in that time period. Over the last 10 years of research activities, there were five unintentional mortalities (including the two unintentional mortalities in the last five years). Furthermore, an analysis of long-term population data and anthropogenic threats to the Western DPS Steller sea lions (Atkinson et al. 2008; NMFS 2008) suggest that mortality related to research is not a significant threat to population recovery. As a result of this information, no significant reduction in reproduction or population abundance or distribution is expected to occur as a result of the proposed unintentional lethal take of Western DPS Steller sea lions under Permit Nos. 27499, 27408, and 27503.

In addition to unintentional lethal take, considering the totality of the research activities, individual Western DPS Steller sea lions may experience stress, minor injury from tagging or the taking of a biopsy, or have altered behaviors. Under Permit Nos. 27499, 27408, and 27503, 61,604 live Western DPS Steller sea lions may be exposed to research activities each year. The majority of effects to Steller sea lions are expected to be short-term, low-level behavioral effects from aerial surveys, vessel surveys, ground surveys, non-invasive research activities, and unintentional disturbance from capture and branding activities, which consist of 96% (59,150 individuals) of the 61,604 individuals being impacted. Invasive procedures (i.e., capture, branding, tagging, biopsy, handling, and sampling) which will directly take Western DPS Steller sea lions, will affect 2,454 individuals a year, which make up less than 4% of the Western DPS Steller sea lions that will be impacted by the research activities. Based on reports from previous permits, any injuries from tagging or biopsies are expected to heal within weeks. External instruments and tags are not expected to cause a hindrance to swimming or haulout behavior because of the small size and mass of the tags compared to the size of animal. Behavioral and physiological responses that may be exhibited by Western DPS Steller sea lions upon tagging are expected to return to normal soon after tag attachment. Other than a small amount of proposed unintentional lethal take, none of the research activities are expected to result in any intermediate or long-term fitness consequences for individual Western DPS Steller sea lions. As such, we do not anticipate the proposed research activities will impede the likelihood of survival in the wild for the Western DPS of Steller sea lion.

The Final Recovery Plan for Western DPS of Steller sea lion claims that the ultimate goal of the plan is to promote the recovery of the Western DPS of Steller sea lion, and its ecosystem, to a level sufficient to warrant its removal from the Federal List of Endangered and Threatened Wildlife and Plants under the ESA (NMFS 2008). The intermediate goal is to reclassify the Western DPS from endangered to threatened. The following recovery objectives are relevant to the overall purpose of the proposed actions:

- Continue population monitoring and research on the key threats potentially impeding sea lion recovery.

Due to negligible effects of the research activities on Western DPS Steller sea lions as a result of the proposed action, we do not anticipate the issuance of new research permits will impede the recovery objectives for Western DPS Steller sea lions. In conclusion, we believe the effects associated with the proposed action are not expected to cause a reduction in the likelihood of survival and recovery of Western DPS of Steller sea lion in the wild.

13 CONCLUSION

After reviewing the current status of the ESA-listed species, the environmental baseline within the action area, the effects of the proposed action, and cumulative effects, it is NMFS's biological opinion that the proposed action is not likely to jeopardize the continued existence of Western DPS Steller sea lion or destroy or adversely modify designated critical habitat.

NMFS also concludes the proposed action continues to be not likely to adversely affect the: Cook Inlet DPS of beluga whale; blue whale; bowhead whale; fin whale; Western North Pacific DPS of gray whale; Mexico and Western North Pacific DPSs of humpback whale; Southern Resident DPS of killer whale; North Pacific right whale; sei whale; sperm whale; Beringia DPS of bearded seal; Arctic subspecies of ringed seal; East Pacific DPS of green turtle; leatherback turtle; North Pacific Ocean DPS of loggerhead turtle; non-Mexico's Pacific coast breeding colonies of olive ridley turtle; Southern DPS of eulachon; Southern DPS of green sturgeon; California Central Valley, Central California Coast, Lower Columbia River, Middle Columbia River, Northern California, Puget Sound, Snake River Basin, South-Central California Coast, Southern California, Upper Columbia River, and Upper Willamette River DPSs of steelhead trout; California Coastal, Central Valley Spring-Run, Lower Columbia River, Puget Sound, Sacramento River Winter-Run, Snake River Fall-Run, Snake River Spring/Summer Run, Upper Columbia River Spring-Run, and Upper Willamette River ESUs of chinook salmon; Central California Coast, Lower Columbia River, Oregon Coast, Southern Oregon and Northern California Coasts ESUs of coho salmon; Ozette Lake and Snake River ESUs of sockeye salmon; Columbia River and Hood Canal Summer-Run ESUs of chum salmon; or designated critical habitat of the Cook Inlet DPS of beluga whale, Mexico and Western North Pacific DPSs of humpback whale, North Pacific right whale, Beringia DPS of bearded seal, Arctic subspecies of ringed seal, and Western DPS of Steller sea lion. NMFS's conference determination for the

proposed sunflower sea star is that the proposed action may affect, but is not likely to adversely affect this species.

14 INCIDENTAL TAKE STATEMENT

Section 9 of the ESA and Federal regulations pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without a special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct (16 U.S.C. §1532(19)). "Harm" is further defined by regulation to include significant habitat modification or degradation that results in death or injury to ESA-listed species by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering (50 C.F.R. §222.102). NMFS has not defined "harass" under the ESA in regulation. On May 1, 2023, NMFS adopted, as final, the previous interim guidance on the term "harass", defining it 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." As explained previously, for the purposes of this consultation, we relied on NMFS's definition of ESA harassment to evaluate when the proposed action is likely to harass the Western DPS of Steller sea lion.

Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity (50 C.F.R. §402.02). Section 7(o)(2) provides that taking that is incidental to an otherwise lawful agency action is not considered to be prohibited taking under the ESA if that action is performed in compliance with the terms and conditions of this incidental take statement.

14.1 Amount or Extent of Take

Section 7 regulations require NMFS to specify the impact of any incidental take of endangered or threatened species; that is, the amount or extent of such incidental taking on the species (50 C.F.R. §402.14(i)(1)(I)). ESA section 7(b)(4) states that take of ESA-listed marine mammals must be authorized under MMPA section 101(a)(5) before the Secretary can issue an incidental take statement for ESA-listed marine mammals. NMFS's implementing regulations for MMPA section 101(a)(5)(D) specify that an incidental harassment authorization is required to conduct activities pursuant to any incidental take authorization for a specific activity that will "take" marine mammals. Once NMFS has authorized the incidental take of marine mammals under an incidental harassment authorization under the MMPA, the incidental take of ESA-listed marine mammals is exempt from the ESA take prohibitions as stated in this incidental take statement pursuant to section 7(b)(4) and 7(o)(2). The research activities associated with the issuance of Permit Nos. 27499, 27408, and 27503 involve directed take for the purposes of scientific research. Therefore, NMFS does not expect the proposed action will incidentally take threatened or endangered species. However, we request that the Permits and Conservation Division report to us whether the MMPA-authorized take specified in Table 2, Table 3, and Table 4 actually occurs and the actual numbers of take in comparison to the permitted MMPA take numbers at the

expiration of the permits, as well as any available information on the response animals exhibited to those takes. Such information will be used to inform the Environmental Baseline (Section 9) and Effects of the Action (Section 10) for future consultations for the issuance of permits to the MML, ASLC, and ADF&G, and other similar research activities permitted by the Permits and Conservation Division.

15 CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the ESA directs Federal agencies to use their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on ESA-listed species or critical habitat, to help implement recovery plans or develop information (50 C.F.R. §402.02).

We make the following discretionary conservation recommendations that we believe are consistent with this obligation and may be considered by the Permits and Conservation Division in relation to their 7(a)(1) responsibilities:

- The Permits and Conservation Division should require that researchers thoroughly document the time spent in all attempted capture, handling, sampling, and release activities, and the behavioral or physiological responses of target animals to these activities, in order to assess the animals' stress responses and develop measures to further minimize stress. This information should be provided to the ESA Interagency and Cooperation Division in future Section 7 consultations involving pinniped research.
- The Permits and Conservation Division should gather data from researchers conducting invasive tagging of pinnipeds on tagging success rate (e.g., the number of tags successfully deployed, number of tags unsuccessfully deployed, number of tags that failed to transmit or delayed transmit) and tagged animals' behavioral and physiological responses, in order to inform recommendations related to minimizing impacts of invasive tagging on ESA-listed pinnipeds. This information should be provided to the ESA Interagency and Cooperation Division in future Section 7 consultations involving pinniped research.
- The Permits and Conservation Division should work to establish protocols for data sharing among all permit holders. While many researchers in the community collaborate, having a national standard and protocol for data sharing among all researchers permitted by NMFS will reduce impacts to trusted resources by minimizing duplicative research efforts. This information would further inform the tracking of impacts of multiple research activities on ESA-listed pinnipeds.
- The NMFS Permits and Conservation Division should consider standard procedures and mitigation measures for corralling pups, in order to prevent unnecessary pup deaths caused by overcrowding/stampeding/drowning/etc. during research activities.

We also recommend the MML, as a Federal entity with an obligation to insure their actions are not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of designated critical habitat, initiate ESA section 7 consultation with NMFS on activities they fund and/or carry out that may affect listed species or critical habitat.

In order for ESA Interagency Cooperation Division to be kept informed of actions minimizing or avoiding adverse effects on, or benefiting, ESA-listed species or their proposed or designated critical habitat, the Permits and Conservation Division should notify the ESA Interagency Cooperation Division of any conservation recommendations they implement in their final action.

16 REINITIATION NOTICE

This concludes formal consultation for the Permits and Conservation Division's proposed action to issue Permit Nos. 27499, 27408, and 27503. Consistent with 50 C.F.R. §402.16, reinitiation of consultation is required and shall be requested by the Federal agency, where discretionary Federal involvement or control over the action has been retained (or is authorized by law) and if:

1. The amount or extent of taking specified in the incidental take statement is exceeded;
2. New information reveals effects of the agency action that may affect ESA-listed species or designated critical habitat in a manner or to an extent not previously considered;
3. The identified action is subsequently modified in a manner that causes an effect to ESA-listed species or designated critical habitat that was not considered in this opinion; or
4. A new species is listed or critical habitat designated under the ESA that may be affected by the identified action.

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18 APPENDIX I – DRAFT PERMIT NO. 27499

The text below was taken directly from the proposed permit provided to us in the consultation initiation package from the Permits and Conservation Division. The final permit may have minor changes that will not affection this opinion.

Permit No. 27499

Effective Date: July 1, 2024

Expiration Date: June 30, 2029
Reports Due: October 1, annually

PERMIT TO TAKE PROTECTED SPECIES[2] FOR SCIENTIFIC PURPOSES

I. Authorization

This permit is issued to the National Marine Fisheries Service (NMFS) Marine Mammal Laboratory, 7600 Sand Point Way, NE, Seattle, Washington 98115, (hereinafter "Permit Holder;" Responsible Party: John Bengtson, Ph.D.), pursuant to the provisions of the Marine Mammal Protection Act of 1972 as amended (MMPA; 16 U.S.C. 1361 *et seq.*); the regulations governing the taking and importing of marine mammals (50 CFR Part 216); the Endangered Species Act of 1973 (ESA; 16 U.S.C. 1531 *et seq*.); the regulations governing the taking, importing, and exporting of endangered and threatened species (50 CFR Parts 222-226); and the Fur Seal Act of 1966 (FSA; 16 U.S.C. 1151 *et seq*.).

II. Abstract

The objectives of the permitted activity, as described in the application, are to measure population status, vital rates, foraging ecology, habitat requirements, and effects of natural and anthropogenic factors for Steller sea lions in North Pacific Ocean areas.

[2] "Protected species" include species listed as threatened or endangered under the ESA, and marine mammals.

III. Terms and Conditions

The activities authorized herein must occur by the means, in the areas, and for the purposes set forth in the permit application, and as limited by the Terms and Conditions specified in this permit, including appendices and attachments. Permit noncompliance constitutes a violation and is grounds for permit modification, suspension, or revocation, and for enforcement action.

A. Duration of Permit

1. Personnel listed in Condition C.1 of this permit (hereinafter "Researchers") may conduct activities authorized by this permit through June 30, 2029. This permit may be extended by the Director, National Marine Fisheries Service (NMFS) Office of Protected Resources or the Chief, Permits and Conservation Division (hereinafter "Permits Division"), pursuant to applicable regulations and the requirements of the MMPA and ESA.

2. Researchers must immediately stop permitted activities and the Permit Holder or Principal Investigator must contact the Chief, Permits Division for written permission to resume:

   a. If serious injury or mortality[3] of protected species reaches that specified in Table A1 of Appendix A.

   c. If authorized take[4] is exceeded in any of the following ways:

[3] This permit allows for unintentional serious injury and mortality caused by the presence or actions of researchers up to the limit in Table A1 of Appendix A. This includes, but is not limited to: deaths of dependent young by starvation following research-related death of a lactating female; deaths resulting from infections related to sampling procedures or invasive tagging; and deaths or injuries sustained by animals during capture and handling, or while attempting to avoid researchers or escape capture. Note that for marine mammals, a serious injury is defined by regulation as any injury that will likely result in mortality.

[4] By regulation, a take under the MMPA means to harass, hunt, capture, collect, or kill, or attempt to harass, hunt, capture, collect, or kill any marine mammal. This includes, without limitation, any of the following: the collection of dead animals, or parts thereof; the restraint or detention of a marine mammal, no matter how temporary; tagging a marine mammal; the negligent or intentional operation of an aircraft or vessel, or the doing of any other negligent or intentional act which results in disturbing or molesting a marine mammal; and feeding or attempting to feed a marine mammal in the wild. Under the ESA, a take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to do any of the preceding. A take or taking under the FSA means to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill. The FSA authorizes the taking, transportation, importation, exportation, or possession of northern fur seals or their parts for educational, scientific, or exhibition purposes.

i. More animals are taken than allowed in Table A1 of Appendix A.

ii. Animals are taken in a manner not authorized by this permit.

iii. Protected species other than those authorized by this permit are taken.

d. Following incident reporting requirements at Condition E.2.

B. Number and Kinds of Protected Species, Locations and Manner of Taking

1. The table in Appendix A outlines the authorized species and stock or distinct population segment (DPS); number of animals to be taken; number of animals from which parts may be received, imported and exported; and the manner of take, locations, and time period.

2. Researchers working under this permit may collect images (e.g., photographs, video) and audio recordings in addition to the photo-identification or behavioral photo-documentation authorized in Appendix A as needed to document the permitted activities, provided the collection of such images or recordings does not result in takes.

3. The Permit Holder may use visual images and audio recordings collected under this permit, including those authorized in Table A1 of Appendix A, in printed materials (including commercial or scientific publications) and presentations provided the images and recordings are accompanied by a statement indicating that the activity was conducted pursuant to NMFS ESA/MMPA Permit No. 27499. This statement must accompany the images and recordings in all subsequent uses or sales.

4. The Chief, Permits Division may grant written approval for personnel performing activities not essential to achieving the research objectives (e.g., a documentary film crew) to be present, provided:

a. The Permit Holder submits a request to the Permits Division specifying the purpose and nature of the activity, location, approximate dates, and number and roles of individuals for which permission is sought.

b. Non-essential personnel/activities will not influence the conduct of permitted activities or result in takes of protected species.

c. Persons authorized to accompany the Researchers for the purpose of such non-essential activities will not be allowed to participate in the permitted activities.

d. The Permit Holder and Researchers do not require compensation from the individuals in return for allowing them to accompany Researchers.

5. Researchers must comply with the following conditions related to the manner of taking:

Counting and Reporting Takes of Pinnipeds

a. For pinnipeds on land during ground, vessel, and aerial surveys, count 1 take per animal per day for those animals that react to the permitted activities in these ways:

i. Movements of twice the animal's body length or more,

ii. Changes of direction greater than 90 degrees, or

iii. Retreats (flushes) to the water.

b. For pinnipeds in water during ground, vessel, and aerial surveys, count 1 take per animal per day for those that exhibit a noticeable adverse behavioral response from your activities.

c. Count every animal netted or captured even if immediately released.

d. Do not count takes of pinnipeds as you are transiting between locations and not actively conducting research or enhancement.

Manned Aerial Surveys

e. Researchers must conduct manned aerial surveys at a minimum altitude of 700 feet.

Unmanned Aircraft Systems

f. Researchers may use up to two UAS at one time; the UAS may be fixed wing or vertical take-off and landing.

g. Researchers must operate UAS at a minimum altitude of 75 feet.

Capture and Handling

h. Researchers must carry out activities efficiently and use biologists experienced in capture and sampling techniques to complete the activities as quickly and safely as possible to reduce disturbance and minimize handling time.

i. To the maximum extent feasible to minimize disturbance:

   i. Take target animals, retrieve carcasses, or collect opportunistic samples (e.g., scat) when other pinnipeds are not in the immediate vicinity, particularly mother/pup pairs; and

   ii. Move carcasses to a secure area away from other pinnipeds for necropsies.

j. Efforts to approach and capture a particular pinniped or lactating female and pup must be immediately terminated if there is any evidence that the activities may be life-threatening to the animals.

k. Researchers must take reasonable steps to identify pups of lactating females before attempting to immobilize a lactating female during permitted activities.

l. Researchers must minimize the time lactating females are removed or otherwise separated from their dependent offspring as a result of permitted activities.

m. Researchers must use sterile disposable needles, biopsy punches, and other sampling tools to the maximum extent practicable (always use disposable needles for blood sampling and injections). Researchers must thoroughly clean and disinfect non-disposable equipment between animals and, as

needed, immediately prior to each use.

n. Researchers must immediately cease permitted procedures if a pinniped is showing signs (e.g., overexertion, constant muscle tension, abnormal respiration or heart rate) that may lead to serious injury, capture myopathy, other disease conditions, or death; and monitor and treat the animal as determined appropriate by the Principal Investigator (PI), Co-Investigator (CI), or attending veterinarian.

o. Researchers must ensure that pinnipeds that have been captured and anesthetized or administered immobilizing drugs have an opportunity to recover after release without undue risk of drowning or injury from other animals

Remote Sedation

p. Researchers must halt the use of remote sedation and in-water capture/sedation techniques and consult with NMFS if three or more pinnipeds are sedated and disappear so that their fate cannot be determined or suffer unanticipated adverse effects, including entering the water and drowning.

Salvage

q. The Permit Holder must coordinate with the NMFS XXXX Region Stranding Coordinator (phone: XXX-XXX-XXXX; email: XXXX@noaa.gov) or NMFS XXXX Region Stranding Coordinator (phone: XXX-XXX-XXXX; email: XXXX@noaa.gov) as applicable prior to collecting samples or carcasses of any dead stranded ESA-listed marine mammals. The Stranding Coordinator may require the Permit Holder to collect specific data and samples and provide these to the NMFS XXXX Regional Office.

r. For any parts salvaged, the Permit Holder must submit a Level A data sheet (https://www.fisheries.noaa.gov/national/marine-mammal-protection/level-data-collection-marine-mammal-stranding-events), or a report with enough information to prepare a Level A data sheet, to the NMFS XXXX Region Stranding Coordinator (phone: XXX-XXX-XXXX) within 30 days of the end of any field effort where parts were salvaged.

Mortalities

s. In the event an animal dies as a result of research activities, the Permit Holder must, within two weeks, submit an incident report as described in Condition E.2. A necropsy should be performed, except where not feasible such as in remote areas with limited personnel. Gross necropsy findings should be included as part of an incident report. Final necropsy findings (e.g., histology and other analyses) must be submitted when complete.

t. To the maximum extent practical without causing further disturbance, researchers must monitor study sites following any disturbance (e.g., surveys or sampling activities) to determine if any animals have been seriously injured or killed, or if any pups have been abandoned. Any observed serious injury to or death of a marine mammal or observed abandonment of a dependent pup is to be reported as indicated below and in Condition E.2.

u. If a lactating female dies as a result of the permitted activities and her dependent pup can be identified, or if a dependent pup is abandoned, the PI or CI present will evaluate the pup's age, health, and ability to survive on its own. If the pup is determined not likely to survive, Researchers must immediately contact the NMFS Alaska Regional Stranding Network Coordinator [(877) 925-7773, http://www.nmfs.noaa.gov/pr/health/coordinators.htm] and proceed as directed. If the pup is not likely to survive and the Coordinator determines the pup is not a candidate for rehabilitation, or rehabilitation is not logistically feasible, the PI/CI or veterinarian will determine the proper course of action (e.g., euthanasia) in accordance with the approved IACUC protocols and the pup must be counted as a research-related mortality.

v. In the rare event a nursing pup is orphaned as a result of any activities authorized in this permit, the pup must be humanely provided for (i.e., placed in a Stranding facility for rehabilitation or humanely euthanized). Rehabilitation must be done in consultation with the Marine Mammal Health and Stranding Response Program (MMHSRP) and under the authority of the MMHSRP permit. Pups that are euthanized count against the total number of animals authorized for unintentional mortality in Appendix A, Table A1.

Euthanasia

w. An experienced veterinarian or qualified researcher must conduct the euthanasia. After necropsy, parts not retained from pinnipeds chemically euthanized must be collected for environmentally safe disposal.

x. In the event a pinniped is euthanized, a written incident report must be submitted to the Chief, Permits Division in accordance with Condition E.2.

Non-target Species

y. This permit does not authorize takes of any protected species not identified in Appendix A, including those species under the jurisdiction of the United States Fish and Wildlife Service (USFWS). Should other protected species be encountered during the research activities authorized under this permit, researchers must exercise caution and remain a safe distance from the animals to avoid take, including harassment.

Cetaceans

z. Count and report a take of a cetacean following the guidance below regardless of whether you observe a behavioral response to the permitted activity.

aa. During UAS and manned aerial surveys flown at an altitude lower than 1,000 feet, count and report 1 take per cetacean flown over per day, regardless of the number of passes.

bb. Do not count takes of cetaceans as you are transiting between locations and not actively conducting research or enhancement.

cc. For specific permit conditions to minimize disturbance to marine mammals under the jurisdiction of USFWS, please see Appendix C.

6. The Permit Holder must comply with the following conditions, and the regulations at 50 CFR 216.37, for biological samples[5] acquired[6] or possessed under authority of this permit.

a. The Permit Holder is ultimately responsible for compliance with this permit and applicable regulations related to the samples unless the samples are permanently transferred per Conditions at B.6.d.

[5] Biological samples include, but are not limited to: carcasses (whole or parts); and any tissues, fluids, or other specimens from live or dead protected species; except feces, urine, and spew collected from the water or ground.
[6] Authorized methods of sample acquisition are specified in Appendix A.

b. Samples must be maintained according to accepted curatorial standards and must be labeled with a unique identifier (e.g., alphanumeric code) that is connected to on-site records with information identifying the following:

   i. Species and, where known, age and sex;

   ii. Date of collection, acquisition, or import;

   iii. Type of sample (e.g., blood, skin, bone);

   iv. Origin (i.e., where collected or imported from); and

   v. Legal authorization for original sample collection or import.

c. For temporary transfers:

   i. The Permit Holder may designate Authorized Recipients (ARs) for analysis and curation of samples related to the permit objectives. The Permit Holder must maintain a record of the transfer including the following:

      1. Name and affiliation of the AR;

      2. Address of the AR;

      3. Types of samples sent (species, tissue type);

      4. Type of analysis; and

      5. Whether samples will be consumed in analysis, returned to the Permit Holder, curated, or destroyed.

   ii. The Permit Holder must provide a written copy of the AR designation and the permit per Condition D.3 when transferring samples to the AR (contact your permit analysts for an example letter).

   iii. Samples remain in the legal custody of the Permit Holder while in

the possession of ARs. The Permit Holder remains responsible for the samples, including any reporting requirements.

d. For permanent transfers: If the Permit Holder wishes to permanently transfer marine mammal samples (i.e., relinquish custody), recipients must have separate authorization pursuant to 50 CFR 216.37 (e.g., permit, regional authorization letter) prior to transfer.

e. This permit does not authorize the creation or use of marine mammal cell lines.

f. Samples cannot be bought or sold. This does not apply to reimbursement associated with actual costs (e.g., shipment or transport costs).

g. After meeting the permitted objectives, the Permit Holder may continue to possess and use biological samples acquired under this permit, including after permit expiration, without additional written authorization. The samples must be maintained as specified in the permit and a copy of the permit must be kept with the samples forever.

C. Qualifications, Responsibilities, and Designation of Personnel

1. At the discretion of the Permit Holder, the following Researchers may participate in the conduct of the permitted activities in accordance with their qualifications and the limitations specified herein:

a. Principal Investigator – Tom Gelatt, Ph.D.

b. Co-Investigators –See Appendix B for list of names and corresponding activities.

c. Research Assistants – personnel identified by the Permit Holder or Principal Investigator and qualified to act pursuant to Conditions C.2, C.3, and C.4 of this permit.

2. Individuals conducting permitted activities must possess qualifications commensurate with their roles and responsibilities. The roles and responsibilities of personnel operating under this permit are as follows:

    a. The Permit Holder is ultimately responsible for activities of individuals operating under the authority of this permit. Where the Permit Holder is an institution/facility, the Responsible Party is the person at the institution/facility who is responsible for the supervision of the Principal Investigator.

    b. The Principal Investigator (PI) is the individual primarily responsible for the taking, import, export and related activities conducted under the permit. This includes coordination of field activities of all personnel working under the permit. The PI must be on site during activities conducted under this permit unless a Co-Investigator named in Condition C.1 is present to act in place of the PI.

    c. Co-Investigators (CIs) are individuals who are qualified to conduct activities authorized by the permit, for the objectives described in the application, without the on-site supervision of the PI. CIs assume the role and responsibility of the PI in the PI's absence.

    d. Research Assistants (RAs) are individuals who work under the direct and on-site supervision of the PI or a CI. RAs cannot conduct permitted activities in the absence of the PI or a CI.

3. Personnel involved in permitted activities must be reasonable in number and essential to conduct of the permitted activities. Essential personnel are limited to:

    a. Individuals who perform a function directly supportive of and necessary to the permitted activity (including operation of vessels or aircraft essential to conduct of the activity),

    b. Individuals included as backup for those personnel essential to the conduct of the permitted activity, and

c. Individuals included for training purposes.

4. Persons who require state or Federal licenses or authorizations (e.g., veterinarians, pilots – including UAS operators) to conduct activities under the permit must be duly licensed/authorized and follow all applicable requirements when undertaking such activities.

5. Permitted activities may be conducted aboard vessels or aircraft, or in cooperation with individuals or organizations, engaged in commercial activities, provided the commercial activities are not conducted simultaneously with the permitted activities.

6. The Permit Holder cannot require or receive direct or indirect compensation from a person approved to act as PI, CI, or RA under this permit in return for requesting such approval from the Permits Division.

7. The Permit Holder or PI may designate additional CIs without prior approval from the Chief, Permits Division provided:

a. A copy of the letter designating the individual and specifying their duties under the permit is forwarded to the Permits Division by email on the day of designation.

b. The copy of the letter is accompanied by a summary of the individual's qualifications to conduct and supervise the permitted activities.

c. The Permit Holder acknowledges that the designation is subject to review and revocation by the Chief, Permits Division.

7. The Responsible Party may request a change of PI by submitting a request to the Chief, Permits Division that includes a description of the individual's qualifications to conduct and oversee the activities authorized under this permit.

8. Submit requests to add CIs or change the PI by one of the following:

a. The APPS system at https://apps.nmfs.noaa.gov;

b. An email attachment to the permit analysts for this permit; or

c. A hard copy mailed to the Chief, Permits Division, Office of Protected Resources, NMFS, 1315 East-West Highway, Room 13705, Silver Spring, MD 20910; phone (301)427-8401.

D. Possession of Permit

1. This permit cannot be transferred or assigned to any other person.

2. The Permit Holder and persons operating under the authority of this permit must possess a copy of this permit when:

a. Engaged in a permitted activity.

b. A protected species is in transit incidental to a permitted activity.

c. A protected species taken or imported under the permit is in the possession of such persons.

3. A duplicate copy of this permit must accompany or be attached to the container, package, enclosure, or other means of containment in which a protected species or protected species part is placed for purposes of storage, transit, supervision or care.

E. Reporting

1. The Permit Holder must submit incident and annual reports containing the information and in the format specified by the Permits Division.

a. Reports must be submitted to the Permits Division by one of the following:

i. The APPS system at https://apps.nmfs.noaa.gov;

ii. An email attachment to the permit analysts for this permit; or

iii. A hard copy mailed to the Chief, Permits Division.

b. You must contact your permit analysts for a reporting form if you do not submit reports through the APPS.

c. Additional information on reports can be found at https://www.fisheries.noaa.gov/national/reports-protected-species-permits.

2. Incident Reporting

a. If the total number of mortalities is reached, or authorized takes have been exceeded as specified in Conditions A.2 and B.5, the Permit Holder must:

i. Email your permit analysts or call the Permits Division (301-427-8401) as soon as possible, but no later than 2 business days of the incident;

ii. Submit a written report within 2 weeks of the incident as specified below; and

iii. Receive approval from the Permits Division before resuming work. The Permits Division may grant authorization to resume permitted activities based on review of the incident report and in consideration of the Terms and Conditions of this permit.

b. Any time a serious injury or mortality of a protected species occurs, a written report must be submitted within two weeks.

c. The incident report must include 1) a complete description of the events, and 2) identification of steps that will be taken to reduce the potential for additional serious injury and research-related mortality or exceeding authorized take.

3. Annual reports describing activities conducted during the previous permit year (from July 1 to June 30) must:

a. Be submitted by October 1 each year for which the permit is valid, and

b. Include a tabular accounting of takes and a narrative description of activities and their effects.

4. A joint annual/final report including a discussion of whether the objectives were

achieved must be submitted by October 1, 2029, or, if the research concludes prior to permit expiration, within 90 days of completion of the research.

5. Research results must be published or otherwise made available to the scientific community in a reasonable period of time. Copies of technical reports, conference abstracts, papers, or publications resulting from permitted research must be submitted to the Permits Division upon request.

F. Notification and Coordination

1. NMFS Regional Offices are responsible for ensuring coordination of the timing and location of all research activities in their areas to minimize unnecessary duplication, harassment, or other adverse impacts from multiple researchers.

2. The Permit Holder must ensure written notification of planned field work for each project is provided to the NMFS Regional Office listed below at least two weeks prior to initiation of each field trip/season.

   a. Notification must include the following:

      i. Locations of the intended field study and/or survey routes;

      ii. Estimated dates of activities; and

      iii. Number and roles of participants (for example: PI, CI, veterinarian, boat driver, animal restrainer, Research Assistant "in training").

   b. Notification must be sent to the Assistant Regional Administrator for Protected Resources: For activities in AK; Arctic Ocean; and Bering, Beaufort, and Chukchi Seas: Alaska Region, NMFS, P.O. Box 21668, Juneau, AK 99802-1668; phone (907)586-7235; fax (907)586-7012.

3. Researchers must coordinate their activities with other permitted researchers to avoid unnecessary disturbance of animals or duplication of efforts. Contact the Regional Office listed above for information about coordinating with other Permit Holders.

G. Observers and Inspections

1. NMFS may review activities conducted under this permit. At the request of NMFS, the Permit Holder must cooperate with any such review by:

   a. Allowing an employee of NOAA or other person designated by the Director, NMFS Office of Protected Resources to observe and document permitted activities; and

   b. Providing all documents or other information relating to the permitted activities.

H. Modification, Suspension, and Revocation

1. Permits are subject to suspension, revocation, modification, and denial in accordance with the provisions of subpart D [Permit Sanctions and Denials] of 15 CFR Part 904.

2. The Director, NMFS Office of Protected Resources may modify, suspend, or revoke this permit in whole or in part:

   a. In order to make the permit consistent with a change made after the date of permit issuance with respect to applicable regulations prescribed under Section 103 of the MMPA and Section 4 of the ESA;

   b. In a case in which a violation of the terms and conditions of the permit is found;

   c. In response to a written request[7] from the Permit Holder;

[7] The Permit Holder may request changes to the permit related to: the objectives or purposes of the permitted activities; the species or number of animals taken; and the location, time, or manner of taking or importing protected species. Such requests must be submitted in writing to the Permits Division in the format specified in the

d. If NMFS determines that the application or other information pertaining to the permitted activities (including, but not limited to, reports pursuant to Section E of this permit and information provided to NOAA personnel pursuant to Section G of this permit) includes false information.

3. Issuance of this permit does not guarantee or imply that NMFS will issue or approve subsequent permits or amendments for the same or similar activities, including those of a continuing nature, requested by the Permit Holder.

I. Penalties and Permit Sanctions

1. A person who violates a provision of this permit, the MMPA, ESA, or the regulations at 50 CFR Part 216 and 50 CFR Parts 222-226 is subject to civil and criminal penalties, permit sanctions, and forfeiture as authorized under the MMPA, ESA, and 15 CFR Part 904.

2. The NMFS Office of Protected Resources shall be the sole arbiter of whether a given activity is within the scope and bounds of the authorization granted in this permit.

a. The Permit Holder must contact the Permits Division for verification before conducting the activity if they are unsure whether an activity is within the scope of the permit.

b. Failure to verify, where the NMFS Office of Protected Resources subsequently determines that an activity was outside the scope of the permit, may be used as evidence of a violation of the permit, the MMPA, the ESA, and applicable regulations in any enforcement actions.

J. Acceptance of Permit

1. In signing this permit, the Permit Holder:

a. Agrees to abide by all terms and conditions set forth in the permit, all restrictions and relevant regulations under 50 CFR Parts 216, and 222-226, and all restrictions and requirements under the MMPA, and the ESA, and the FSA;

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application instructions.

b. Acknowledges that the authority to conduct certain activities specified in the permit is conditional and subject to authorization by the Office Director; and

c. Acknowledges that this permit does not relieve the Permit Holder of the responsibility to obtain any other permits, or comply with any other Federal, State, local, or international laws or regulations.

_____ _____

Kimberly Damon-Randall Date

Director, Office of Protected Resources

National Marine Fisheries Service

_____ _____

John Bengtson, Ph.D. Date

Director, Marine Mammal Laboratory

National Marine Fisheries Service

Responsible Party

Appendix A: Tables Specifying the Kind(s) of Protected Species, Location(s), and Manner of Taking

Table A1. Annual takes of the Steller sea lion Western DPS[8] in Alaska, including the North Pacific Ocean, Gulf of Alaska, and Bering Sea. Some animals may be harassed more than once per year. Field work may occur year-round. Samples may be imported or exported.

Line	Species	Stock/ Listing Unit	Life stage	Sex	Take Action	Observe/ Collect Methods	No. Animals per Year	Procedures	Details
1	Sea lion, Steller	Western US (NMFS Endangered)	pup	Male and Female	Harass	Survey, aerial	210	Count/survey; Photograph/Video; Photogrammetry; Remote vehicle, aerial (fixed wing); Remote vehicle, aerial (VTOL)	Breeding season aerial survey by crewed and/or uncrewed (UAS) craft. Some animals may be overflown more than once per year.
2	Sea lion, Steller	Western US (NMFS Endangered)	Non-Pup	Male and Female	Harass	Survey, aerial	2,600	Count/survey; Photograph/Video; Photogrammetry; Remote vehicle, aerial (fixed wing); Remote vehicle, aerial (VTOL)	Breeding season aerial survey by crewed and/or uncrewed (UAS) craft. Some animals may be overflown more than once per year.
3	Sea lion, Steller	Western US (NMFS Endangered)	Non-Pup	Male and Female	Harass	Survey, aerial	500	Count/survey; Photograph/Video; Photogrammetry; Remote vehicle, aerial (fixed wing); Remote vehicle, aerial (VTOL)	Non-breeding season aerial survey by crewed and/or uncrewed (UAS) craft. Some animals may be overflown more than once per year.

[8] Western DPS Steller sea lions in the wild are born west of 144° W Longitude. Due to trans-boundary movements, a proportion of takes may include animals from the Eastern DPS near the 144˚ W Longitude boundary.

Table A1. Annual takes of the Steller sea lion Western DPS[8] in Alaska, including the North Pacific Ocean, Gulf of Alaska, and Bering Sea. Some animals may be harassed more than once per year. Field work may occur year-round. Samples may be imported or exported.

Line	Species	Stock/ Listing Unit	Life stage	Sex	Take Action	Observe/ Collect Methods	No. Animals per Year	Procedures	Details
4	Sea lion, Steller	Eastern US	pup	Male and Female	Harass	Survey, aerial	100	Count/survey; Photograph/Video; Photogrammetry; Remote vehicle, aerial (fixed wing); Remote vehicle, aerial (VTOL)	Breeding season aerial survey by crewed and/or uncrewed (UAS) craft. Some animals may be overflown more than once per year.
5	Sea lion, Steller	Eastern US	Non-Pup	Male and Female	Harass	Survey, aerial	500	Count/survey; Photograph/Video; Photogrammetry; Remote vehicle, aerial (fixed wing); Remote vehicle, aerial (VTOL)	Breeding season aerial survey by crewed and/or uncrewed (UAS) craft. Some animals may be overflown more than once per year.
6	Seal, harbor	Alaska Stocks	All	Male and Female	Harass	Survey, aerial	75	Unintentional harassment	Harassment during crewed/uncrewed aerial surveys
7	Sea lion, California	US Stock	Non-Pup	Male and Female	Harass	Survey, aerial	100	Unintentional harassment	Harassment during crewed/uncrewed aerial surveys
8	Seal, Northern fur	Eastern Pacific Stock	All	Male and Female	Harass	Survey, aerial	800	Unintentional harassment	Harassment during crewed/uncrewed aerial surveys

Table A1. Annual takes of the Steller sea lion Western DPS[8] in Alaska, including the North Pacific Ocean, Gulf of Alaska, and Bering Sea. Some animals may be harassed more than once per year. Field work may occur year-round. Samples may be imported or exported.

Line	Species	Stock/ Listing Unit	Life stage	Sex	Take Action	Observe/ Collect Methods	No. Animals per Year	Procedures	Details
9	Sea lion, Steller	Western US (NMFS Endangered)	pup	Male and Female	Harass	Survey, aerial	10	Count/survey; Observation, mark resight; Photograph/Video; Photogrammetry; Remote vehicle, aerial (fixed wing); Remote vehicle, aerial (VTOL)	For mark-resight activities during aerial surveys.
10	Sea lion, Steller	Western US (NMFS Endangered)	Non-Pup	Male and Female	Harass	Survey, aerial	90	Count/survey; Observation, mark resight; Photograph/Video; Photogrammetry; Remote vehicle, aerial (fixed wing); Remote vehicle, aerial (VTOL)	For mark-resight activities during aerial surveys.
11	Sea lion, Steller	Eastern US	Non-Pup	Male and Female	Harass	Survey, aerial	90	Count/survey; Observation, mark resight; Photograph/Video; Photogrammetry; Remote vehicle, aerial (fixed wing); Remote vehicle, aerial (VTOL)	For mark-resight activities during aerial surveys.
12	Sea lion, Steller	Western US (NMFS Endangered)	pup	Male and Female	Harass	Survey, vessel	100	Collect, scat; Collect, spew; Count/survey; Import/export/receive, parts; Observation, mark resight; Observation, monitoring; Observations, behavioral; Photograph/Video; Photo-id	For mark-resight activities during vessel surveys. May disembark and opportunistically collect scat/spew.

Table A1. Annual takes of the Steller sea lion Western DPS[8] in Alaska, including the North Pacific Ocean, Gulf of Alaska, and Bering Sea. Some animals may be harassed more than once per year. Field work may occur year-round. Samples may be imported or exported.

Line	Species	Stock/ Listing Unit	Life stage	Sex	Take Action	Observe/ Collect Methods	No. Animals per Year	Procedures	Details
13	Sea lion, Steller	Western US (NMFS Endangered)	Non-Pup	Male and Female	Harass	Survey, vessel	2,000	Collect, scat; Collect, spew; Count/survey; Import/export/receive, parts; Observation, mark resight; Observation, monitoring; Observations, behavioral; Photograph/Video; Photo-id	For mark-resight activities during vessel surveys. May disembark and opportunistically collect scat/spew.
14	Sea lion, Steller	Western US (NMFS Endangered)	pup	Male and Female	Harass	Survey, ground	100	Collect, scat; Collect, spew; Count/survey; Import/export/receive, parts; Observation, mark resight; Observation, monitoring; Observations, behavioral; Photograph/Video; Photo-id	For mark-resight activities during ground surveys.
15	Sea lion, Steller	Western US (NMFS Endangered)	Non-Pup	Male and Female	Harass	Survey, ground	400	Collect, scat; Collect, spew; Count/survey; Import/export/receive, parts; Observation, mark resight; Observation, monitoring; Observations, behavioral; Photograph/Video; Photo-id	For mark-resight activities during ground surveys.

Table A1. Annual takes of the Steller sea lion Western DPS[8] in Alaska, including the North Pacific Ocean, Gulf of Alaska, and Bering Sea. Some animals may be harassed more than once per year. Field work may occur year-round. Samples may be imported or exported.									
Line	Species	Stock/ Listing Unit	Life stage	Sex	Take Action	Observe/ Collect Methods	No. Animals per Year	Procedures	Details
16	Sea lion, Steller	Western US (NMFS Endangered)	pup	Male and Female	Capture/ Handle/ Release	Hand and/or Dip Net	250	Anesthesia, gas w/cone or mask; Import/export/receive, parts; Instrument, external (e.g., VHF, SLTDR); Mark, flipper tag; Mark, hot brand; Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, hand; Restrain, net; Sample, clip hair; Sample, fecal loop; Sample, other; Sample, skin biopsy; Sample, swab all mucus membranes; Sample, vibrissae (pull); Weigh	Marked with hot brand and limited sample collection. Very young (e.g., under 20 kg or umbilicus present) are not branded. "Sample, other" is for biopsy of skin or oral lesions.

Table A1. Annual takes of the Steller sea lion Western DPS[8] in Alaska, including the North Pacific Ocean, Gulf of Alaska, and Bering Sea. Some animals may be harassed more than once per year. Field work may occur year-round. Samples may be imported or exported.									
Line	Species	Stock/ Listing Unit	Life stage	Sex	Take Action	Observe/ Collect Methods	No. Animals per Year	Procedures	Details
17	Sea lion, Steller	Western US (NMFS Endangered)	pup	Male and Female	Capture/ Handle/ Release	Hand and/or Dip Net	100	Anesthesia, gas w/cone or mask; Bioelectrical impedance (subcutaneous); Import/export/receive, parts; Instrument, external (e.g., VHF, SLTDR); Mark, flipper tag; Mark, hot brand; Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, board; Restrain, hand; Restrain, net; Sample, blood; Sample, blubber biopsy; Sample, clip hair; Sample, fecal loop; Sample, other; Sample, skin biopsy; Sample, swab all mucus membranes; Sample, vibrissae (pull); Ultrasound; Weigh	Marked with hot brand and expanded sample collection. Very young (e.g., under 20 kg or umbilicus present) are not branded. "Sample, other" is for biopsy of skin or oral lesions

Table A1. Annual takes of the Steller sea lion Western DPS[8] in Alaska, including the North Pacific Ocean, Gulf of Alaska, and Bering Sea. Some animals may be harassed more than once per year. Field work may occur year-round. Samples may be imported or exported.

Line	Species	Stock/ Listing Unit	Life stage	Sex	Take Action	Observe/ Collect Methods	No. Animals per Year	Procedures	Details
18	Sea lion, Steller	Western US (NMFS Endangered)	pup	Male and Female	Capture/ Handle/ Release	Hand and/or Dip Net	200	Instrument, external (e.g., VHF, SLTDR); Import/export/receive, parts; Mark, dye or paint; Measure (standard morphometrics); Photo-id; Photograph/video; Restrain, board; Restrain, hand; Restrain, net; Sample, blood; Sample, clip hair; Sample, fecal loop; Sample, other; Sample, skin biopsy; Sample, swab all mucus membranes; Sample, vibrissae (pull); Ultrasound; Weigh	Capture and limited sampling, no hot branding. "Sample, other" is for biopsy of skin or oral lesions
19	Sea lion, Steller	Western US (NMFS Endangered)	pup	Male and Female	Harass	Survey, ground	1,100	Collect, scat; Collect, spew; Count/survey; Import/export/receive, parts; Observation, mark resight; Observation, monitoring; Observations, behavioral; Photo-id Unintentional harassment	Disturbance during handling activities during breeding season, and opportunistic sampling and observations.

Table A1. Annual takes of the Steller sea lion Western DPS[8] in Alaska, including the North Pacific Ocean, Gulf of Alaska, and Bering Sea. Some animals may be harassed more than once per year. Field work may occur year-round. Samples may be imported or exported.

Line	Species	Stock/ Listing Unit	Life stage	Sex	Take Action	Observe/ Collect Methods	No. Animals per Year	Procedures	Details
20	Sea lion, Steller	Western US (NMFS Endangered)	Non-Pup	Male and Female	Harass	Survey, ground	1,600	Collect, scat; Collect, spew; Count/survey; Import/export/receive, parts; Observation, mark resight; Observation, monitoring; Observations, behavioral; Photo-id Unintentional harassment	Disturbance during pup handling activities during breeding season, and opportunistic sampling and observations.

Table A1. Annual takes of the Steller sea lion Western DPS[8] in Alaska, including the North Pacific Ocean, Gulf of Alaska, and Bering Sea. Some animals may be harassed more than once per year. Field work may occur year-round. Samples may be imported or exported.

Line	Species	Stock/ Listing Unit	Life stage	Sex	Take Action	Observe/ Collect Methods	No. Animals per Year	Procedures	Details
21	Sea lion, Steller	Western US (NMFS Endangered)	Juvenile	Male and Female	Capture/ Handle/ Release	Other	20	Administer drug, IM ; Administer drug, IV; Administer drug, subcutaneous; Anesthesia, gas w/cone or mask; Anesthesia, gas w/intubation; Anesthesia, injectable sedative; Bioelectrical impedance (subcutaneous); Import/export/receive, parts; Instrument, external (e.g., VHF, SLTDR); Mark, flipper tag; Mark, hot brand; Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, hand; Restrain, net; Sample, blood; Sample, blubber biopsy; Sample, clip hair; Sample, fecal loop; Sample, other; Sample, skin biopsy;; Sample, swab all mucus membranes; Sample, urine catheter; Sample, vibrissae (pull); Stable isotopes and serial blood samples; Ultrasound; Weigh	Other = dart, injectable immobilizing agent; hoop, net; hand. Only one hot brand administered per animal. 2nd take is for instrument retrieval, and resampling. If remote release was used as an attachment but fails a recapture may be required for retrieval. "Sample, other" is for biopsy of skin or oral lesions. Remote darting is not used for young-of-the-year (< = 1 year old).

Table A1. Annual takes of the Steller sea lion Western DPS[8] in Alaska, including the North Pacific Ocean, Gulf of Alaska, and Bering Sea. Some animals may be harassed more than once per year. Field work may occur year-round. Samples may be imported or exported.

Line	Species	Stock/ Listing Unit	Life stage	Sex	Take Action	Observe/ Collect Methods	No. Animals per Year	Procedures	Details
22	Sea lion, Steller	Western US (NMFS Endangered)	Juvenile	Male and Female	Capture/ Handle/ Release	Dart, injectable immobilizing agent	10	Anesthesia, injectable sedative; Observation, monitoring; Photograph/video	Darted but not captured. May be darted a second time with reversal agents.

Table A1. Annual takes of the Steller sea lion Western DPS[8] in Alaska, including the North Pacific Ocean, Gulf of Alaska, and Bering Sea. Some animals may be harassed more than once per year. Field work may occur year-round. Samples may be imported or exported.

Line	Species	Stock/ Listing Unit	Life stage	Sex	Take Action	Observe/ Collect Methods	No. Animals per Year	Procedures	Details
23	Sea lion, Steller	Western US (NMFS Endangered)	Adult	Female	Capture/ Handle/ Release	Dart, injectable immobilizing agent	20	Administer drug, IM ; Administer drug, IV; Administer drug, subcutaneous; Anesthesia, gas w/cone or mask; Anesthesia, gas w/intubation; Anesthesia, injectable sedative; Bioelectrical impedance (subcutaneous); Import/export/receive, parts; Instrument, external (e.g., VHF, SLTDR); Mark, dye or paint; Mark, flipper tag; Mark, hot brand; Measure (standard morphometrics); Photograph/video; Photo-id; Sample, blood; Sample, blubber biopsy; Sample, clip hair; Sample, fecal loop; Sample, other; Sample, skin biopsy; Sample, swab all mucus membranes; Sample, urine catheter; Sample, vibrissae (pull); Stable isotopes and serial blood samples; Ultrasound; Weigh	2nd take is for instrument retrieval. If remote release fails a recapture may be attempted. "Sample, other" is for biopsy of skin or oral lesions

Table A1. Annual takes of the Steller sea lion Western DPS[8] in Alaska, including the North Pacific Ocean, Gulf of Alaska, and Bering Sea. Some animals may be harassed more than once per year. Field work may occur year-round. Samples may be imported or exported.

Line	Species	Stock/ Listing Unit	Life stage	Sex	Take Action	Observe/ Collect Methods	No. Animals per Year	Procedures	Details
24	Sea lion, Steller	Western US (NMFS Endangered)	Adult	Female	Capture/ Handle/ Release	Dart, injectable immobilizing agent	10	Anesthesia, injectable sedative Observation, monitoring; Photograph/video	Adult females darted but not captured. May be darted a second time with reversal agents.

Table A1. Annual takes of the Steller sea lion Western DPS[8] in Alaska, including the North Pacific Ocean, Gulf of Alaska, and Bering Sea. Some animals may be harassed more than once per year. Field work may occur year-round. Samples may be imported or exported.

Line	Species	Stock/ Listing Unit	Life stage	Sex	Take Action	Observe/ Collect Methods	No. Animals per Year	Procedures	Details
25	Sea lion, Steller	Western US (NMFS Endangered)	Sub-adult/ Adult	Male	Capture/ Handle/ Release	Dart, injectable immobilizing agent	5	Administer drug, IM ; Administer drug, IV; Administer drug, subcutaneous; Anesthesia, gas w/cone or mask; Anesthesia, gas w/intubation; Anesthesia, injectable sedative; Bioelectrical impedance (subcutaneous); Import/export/receive, parts; Instrument, external (e.g., VHF, SLTDR); Mark, dye or paint; Mark, flipper tag; Mark, hot brand; Measure (standard morphometrics); Photograph/video; Sample, blood; Sample, blubber biopsy; Sample, clip hair; Sample, fecal loop; Sample, other; Sample, skin biopsy; Sample, swab all mucus membranes; Sample, urine catheter; Sample, vibrissae (pull); Stable isotopes and serial blood samples; Ultrasound; Weigh	Subadult and Adult Males. 2nd take is unintentional disturbance. If remote release fails a recapture may be attempted. "Sample, other" is for biopsy of skin or oral lesions

Table A1. Annual takes of the Steller sea lion Western DPS[8] in Alaska, including the North Pacific Ocean, Gulf of Alaska, and Bering Sea. Some animals may be harassed more than once per year. Field work may occur year-round. Samples may be imported or exported.

Line	Species	Stock/ Listing Unit	Life stage	Sex	Take Action	Observe/ Collect Methods	No. Animals per Year	Procedures	Details
26	Sea lion, Steller	Western US (NMFS Endangered)	Sub-adult/ Adult	Male	Capture/ Handle/ Release	Dart, injectable immobilizing agent	2	Anesthesia, injectable sedative Observation, monitoring; Photograph/video	Subadult and Adult males darted but not captured.
27	Sea lion, Steller	Western US (NMFS Endangered)	Non-Pup	Male and Female	Harass	Survey, ground	500	Collect, scat; Collect, spew; Count/survey; Import/export/receive, parts; Observation, mark resight; Observation, monitoring; Observations, behavioral; Photo-id; Unintentional harassment	Disturbance during capture/handling activities during non-breeding season, and opportunistic sampling and observations.
28	Sea lion, Steller	Western US (NMFS Endangered)	All	Male and Female	Harass/ Sampling	Other	100	Import/export/receive, parts; Necropsy; Salvage (carcass, tissue, parts)	Necropsy and tissue salvage of any dead animal encountered unrelated to our research activities.
29	Sea lion, Steller	Eastern US	All	Male and Female	Harass/ Sampling	Other	100	Import/export/receive, parts; Necropsy; Salvage (carcass, tissue, parts)	Necropsy and tissue salvage of any dead animal encountered unrelated to our research activities.
30	Sea lion, Steller	Western US (NMFS Endangered)	All	Male and Female	Unintent-ional mortality	Other	4	Intentional (directed) mortality; Import/export/receive, parts; Necropsy; Unintentional mortality	NTE 8 across the life of the permit. Unintentional mortality, including humane euthanasia. Necropsy and salvage of tissues would follow.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
1315 East-West Highway
Silver Spring, Maryland 20910

Appendix B: NMFS-Approved Personnel for Permit No. 27499.

Table B1. The following individuals are approved personnel pursuant to the terms and conditions under Section C (Qualifications, Responsibilities, and Designation of Personnel) of this permit.

	G. Brady	B. Birkmeier	M.Cameron	C. Christman	S. Dahle	B. Fadely	T.Gelatt (PI)	J.Jansen	M. Keogh	M. Lander	J.London	K. E. Luxa	L. Rea	R.Ream	M. Rehberg	J. Sterling	K. Sweeney	R.Towell	H. Ziel
Administer drug, IM						X	S		X	X			X	X	S			x	
Administer drug, IV						X	S			S			X		S	s			
Administer drug, subcutaneous						X	X			S				X	S	s		x	
Administer drug, topical						X	X		X	X				X	S	s		x	
Aerial surveys (manned)	X	X	X	X	X		S	X		X	X	X		X			X		X
Aerial surveys (unmanned)		X				S	S							S	S		X	X	X
Anesthesia, injectable						X	X			S				X	S			x	
Anesthesia, cone						S	S			S				S	S				
Anesthesia, mask						S	S			S				S	S				
Anesthesia, intubation						S	S			S				S	S				
Bioelectrical impedence						X	X		X	S			X		S				
Capture, hand						X	X		X	X			X	X	X	x		x	
Capture, hoop						X	X		X	X			X	X	X	x		x	
Capture, underwater noose						X	X			S			X	X	X			x	
Capture, remote dart						X	S			S					S			x	
Collect, scat, spew, urine						X	X		X	X		X	X	X	X	x		x	
Count/survey						X	X			X		X	X	X	X	x	X	x	
Instrument, external (e.g.,VHF, SLTDR)						X	X			X			X	X	X	x		x	
Mark, (bleach, clip fur, dye/paint, flipper tag)						X	X		X	X			X	X	X	x		x	
Marking (hot brand)						S	X			X			X		S	s		x	
Measure and weigh						X	X		X	X			X	X	X	x		x	
Observations						X	X			X		X	X	X	X	x	X	x	

Photo ID						X	X			X				X	S		X	x	
Photogrammetry						X	X			S				X			X		
Photograph/video						X	X			X		X		X	S	x	X	x	
Remote video monitoring						X	X			S				X	X		X		
Restrain (board, cage, hand, or net)						X	X		X	X			X	X	X	x		x	
Sample, blood						X	S		X	X			X	X	S	s		x	
Sample, serial blood samples (Evans blue, hormones, isotopes)						X	S		X	S			X	X	S	s			
Sample, biopsy (blubber, skin)						X	X		X	X			X		S	s		x	
Sample, (hair, or vibrissae)						X	X		X	X			X	X	X			x	
Sample, swab (anal, nasal, ocular, oral, fecal, or all mucus membranes)						X	X		X	X			X	X		s		x	
Sample, milk, fecal (loop), urine						X	X		X	X			X	X	S	s		x	
Ultrasound (external)						X	S		X	X			X	S	S	s			
Ultrasound (internal)						S	S			S				S	S				

X = qualified to perform procedure

S = qualified to supervise procedure

Appendix C: Conditions to Minimize Disturbance and Prevent Level B Harassment of Marine Mammal Species under the Jurisdiction of the U.S. Fish and Wildlife Service

Pacific Walruses:

1) For activities in areas where Pacific walruses may be encountered, the Permit Holder or PI must follow these conditions to prevent interactions with walruses:

a. Avoid concentrations or groups or walruses hauled out onto land or ice and conduct activities at the maximum distance possible from known or observed concentrations of animals. Motor vessels should maintain a buffer from walruses hauled out on land or ice to avoid disturbance:

Recommendations for operation of marine vessels:

i. Reduce speed and maintain a minimum 0.5 mile separation distance from the vessel to groups of walruses encountered in the water. Steer around animals when observed in water. Boat strikes can result in death.
ii. Vessels traveling in a predictable manner appear to be less disturbing to animals. Avoid excessive speed or sudden changes in speed or direction when operating near walruses in the water, and do not restrict the animals' movements.
iii. If walruses approach, place boat engines in neutral and allow the animals to pass.

iv. Sound carries a long way across the water and often reverberates off of cliffs and bluffs adjacent to coastal walrus haulouts amplifying the level of noise. Avoid sudden changes in engine noise, using loud speakers, loud deck equipment or other operations that produce noise when in the vicinity of walruses.
v. Marine vessels 50 feet in length or less should remain at least 0.5 mile away from hauled out walruses.
vi. Marine vessels 50 - 100 feet should remain at least 1 mile from hauled out walruses.
vii. The Native Village of Point Lay (NVPL) requests that all marine vessels remain a minimum of 5 miles off shore unless servicing the community. Please consult with NVPL if you anticipate operations to occur within 5 miles of the haulout while walrus are on shore.

Recommendations for aircraft operation in the vicinity of terrestrial walrus haulouts or walrus hauled out on ice:

Walruses are particularly sensitive to changes in engine noise and are more likely to stampede off beaches or leave ice floes when aircraft turn or fly overhead. Aerial photography of walruses from manned aircraft or unmanned aircraft systems (drones) poses a high potential for disturbance.

i. Pilots of single engine manned aircraft should not knowingly fly over or fly within 0.5 mile of walruses hauled out on land or ice to avoid causing a disturbance. If weather or aircraft safety require flight operations within 0.5 mile of walruses, aircrafts should maintain a 2000’ minimum altitude.
ii. UAS devices should not be flown within 0.5 miles of walruses hauled out on land or ice to avoid causing a disturbance.
iii. Pilots of helicopters and multi-engine aircraft should not knowingly fly over or fly within 1 mile of walruses hauled out on land or ice to avoid causing a disturbance. If weather or aircraft safety require flight operations within 1 mile of a haulout site, helicopters and multi-engine aircraft should maintain a 3000’ minimum altitude.
iv. The NVPL requests that aircraft do not make direct fly overs of the Pt Lay haulout at any altitude. Please consult with NVPL is you anticipate aircraft operations near the haulout while occupied.
v. Landings, take-offs, and taxiing should not occur within 0.5 mile of hauled out walruses for single engine aircraft or within 1 mile for multiple engine aircraft and helicopters.
vi. Avoid unnecessary circling or turning near walruses hauled out on land or ice.
vii. Please be aware that some locations have stricter recommendations (such as Round Island within the Walrus Islands State Game Sanctuary). Pilots are requested to maintain a minimum altitude of 5,000 feet above ground level within a 3 mile radius of Round Island (58° 36' N. 159° 58' W.). Access to Round Island or adjacent waters requires written permission from ADF&G. Please check with the Alaska Department of Fish and Game for additional restrictions.

Recommendations for land based approaches and observation:

Approach walruses hauled out on land unobtrusively. Observations should be accomplished without the animal's awareness of your presence. You may not be the only one that day that has approached these same animals, please be aware that increasing levels of disturbance may occur with each successive visit. Using binoculars and telephoto lenses to view or photograph animals from a safe distance can help ensure that animals are not disturbed.

i. Avoid detection by sight, smell or sound:
   - Do not approach on motorized vehicles. Park vehicles out of sight at least 0.5 mile away and approach by foot, moving slowly and staying hidden behind natural cover.
   - Approach viewing areas quietly, avoid conversation, noisy movements and loose clothing that may flap in the wind.
   - Approach from downwind; avoid smoking and use of scented and fragrant products.
   - Keep a low profile and avoid being backlit against skylines, or other light backgrounds.
   - Do not wear brightly colored clothes.

2) If a walrus is injured or killed while conducting the activities authorized under this permit:

a. Such activity must be suspended unless it would result in the death of the animal(s) being rescued.

b. Immediately contact the USFWS for instruction (see contact information below).

c. For any activities which result in the injury or death of a walrus, a written report must be submitted to USFWS Division of Management Authority (DMA) and the appropriate regional or field office (see contact information below) within 30 days detailing the circumstances that led to the injury or mortality and suggesting measures to prevent or minimize the chances of future injuries or mortalities. A necropsy (if applicable) should be performed by a qualified veterinarian and details of the cause of death included in the written report.

d. The USFWS may subsequently recommend continuation of the suspended activities with any necessary modifications/conditions.

Polar Bears:

1) For activities in areas where polar bears may be encountered, the Permit Holder or PI must follow these conditions to reduce interactions with polar bears:
   a. Be alert to potential presence of polar bears, visually monitor the area and adjacent waters.

b. Avoid polar bears on land, ice, and water. Conduct activities at the maximum distance possible from polar bears.
c. Do not use nets of any kind if polar bears are observed in the water, are on land within 1 mile of the coast, and/or are on barrier islands and associated spits.
d. Navigate slowly, steer around polar bears, and do not approach, circle, pursue or otherwise force bears to change direction when observed in the water.
e. Avoid multiple changes in direction and speed and do not restrict bears' movements on land or sea.
f. Do not conduct activities within 1 mile of known or suspected polar bear dens.
g. For field camps and crews, ensure teams are trained on bear safety and all attractants are secured to minimize human-bear conflicts.
h. If conducting operations in polar bear habitat, have a human-bear interaction plan and know what to do if a bear is encountered. Contact USFWS Marine Mammals Management (MMM) (phone: 800-362-5148; e-mail: FW7_AK_Marine_Mammals@fws.gov) with any questions about developing a plan.

2) If a polar bear is injured or killed while conducting the activities authorized under this permit:
a. Such activity must be suspended unless it could result in the death of the animal(s), as specified in the permit, being rescued.
b. Immediately (within 24 hours) contact the USFWS for instruction (see contact information below).
c. For any activities which result in the injury or death of a polar bear, a written report must be submitted to USFWS Division of Management Authority (DMA) and the appropriate regional or field office (see contact information below) detailing the circumstances that led to the injury or mortality and suggesting measures to prevent or minimize the chances of future injuries or mortalities. A necropsy (if applicable) should be performed by a qualified veterinarian and details of the cause of death included in the written report.
d. The USFWS may subsequently recommend continuation of the suspended activities with any necessary modifications/conditions.

Northern Sea Otters:

1) For activities in areas where sea otters may be encountered, the Permit Holder or PI must follow these conditions to prevent interactions with sea otters:

a. Obey all speed zones and drive slowly in all areas with sea otters. Boat strikes are a cause of death for sea otters.

b. If sea otters are observed prior to an encounter, avoid approaching them directly and maintain a minimum distance of 20 meters (66 feet) at all times.

c. If sea otters approach, place boat engines in neutral and allow the animals to pass.

d. If the sea otters are located during aerial surveys, altitudes should be increased to 500 feet for manned aircraft or 330 feet for UAS, and surveys should cease if the sea otters appear to be affected by the over flight.

2) During capture events in waters where sea otters may be present, the Permit Holder or PI must follow these conditions to prevent interactions with sea otters:

a. Netting activities must cease if a sea otter is sighted within 100 meters.

b. If a sea otter is accidentally captured:

i. Devote all staff efforts to freeing the animal. Remember that a sea otter must surface approximately every few minutes. The Permit Holder or PI shall brief all participants to ensure that they understand that freeing a sea otter can be dangerous. This briefing will caution people to keep fingers out of the nets, that no jewelry should be worn, that sea otters can reach all parts of their body with their mouth (due to their lack of blubber and need to constantly groom) and deliver a bite that could result in serious injury, and that they give the animal adequate time and room to breathe as they are freeing it.

ii. As appropriate, turn off the vessel motors or put the engine in neutral. Propellers can seriously injure or kill sea otters.

iii. Release tension on the net to allow the animal the opportunity to free itself. Exercise caution when attempting to assist the animal. Sea otters can thrash violently if captured or entangled in a net. Quick action is essential to protect the sea otter. Ensure that the animal does not escape with net still attached to it.

iv. Contact the USFWS offices to report any gear or vessel interactions with sea otters.

3) If a sea otter is injured or killed during research activities, in addition to the requirements in Condition A.2.b of the permit:

a. Research must be suspended and the U.S. Fish and Wildlife Service (USFWS) immediately contacted (see contact information below); and

b. Within 30 days of the injury or mortality, a report detailing the circumstances that led to the injury or mortality and suggesting measures to prevent or minimize the chances of future injuries or mortalities must also be sent to: USFWS Division of Management Authority (DMA) (phone: 1-800-358-2104; fax: 703-358-2281, e-mail: Permits@fws.gov).

c. In the event of a death of a sea otter, a necropsy should be performed by a qualified veterinarian and details of the cause of death included in the written report in 3.b above.

d. The USFWS may subsequently recommend continuation of the suspended activities with any necessary modifications/conditions.

U.S. Fish and Wildlife Service Offices for Marine Mammal Encounters and Reporting:

For All Species:

USFWS/Division of Management Authority, Branch of Permits, MS: IA, 5275 Leesburg Pike, Falls Church, VA 22041-3803 (phone 1-800-358-2104; fax 703-358-2281)

For Northern Sea Otters in Alaska and Pacific Walrus:

USFWS Marine Mammals Management Office, 1011 East Tudor Road, MS-341, Anchorage, AK 99503 (phone 907-786-3800 or 800-362-5148; fax 907-786-3816).

19 APPENDIX II – DRAFT PERMIT NO. 27408

The text below was taken directly from the proposed permit provided to us in the consultation initiation package from the Permits and Conservation Division. The final permit may have minor changes that will not affection this opinion.

Permit No. 27408

Expiration Date: month dd, yyyy
Reports Due: month dd, annually

PERMIT TO TAKE PROTECTED SPECIES[9] FOR SCIENTIFIC PURPOSES

I. Authorization

This permit is issued to the Alaska SeaLife Center (hereinafter "Permit Holder"), 301 Railway Avenue, P.O. Box 1329, Seward, AK 99664 (Responsible Party: Wei Ying Wong, Ph.D.), pursuant to the provisions of the Marine Mammal Protection Act of 1972 as amended (MMPA; 16 U.S.C. 1361 *et seq.*); the regulations governing the taking and importing of marine mammals (50 CFR Part 216); the Endangered Species Act of 1973 (ESA; 16 U.S.C. 1531 *et seq*.); and the regulations governing the taking, importing, and exporting of endangered and threatened species (50 CFR Parts 222-226).

II. Abstract

The objectives of the permitted activity, as described in the application, are to conduct population monitoring and health, nutrition, and foraging studies to provide data on pup and juvenile survival, reproductive rates, diet, epidemiology, endocrinology, immunology, physiology, ontogenetic and annual body condition cycles, and behavior of Steller sea lions of the Western distinct population segment (DPS).

III. Terms and Conditions

[9] "Protected species" include species listed as threatened or endangered under the ESA, and marine mammals.

The activities authorized herein must occur by the means, in the areas, and for the purposes set forth in the permit application, and as limited by the Terms and Conditions specified in this permit, including appendices and attachments. Permit noncompliance constitutes a violation and is grounds for permit modification, suspension, or revocation, and for enforcement action.

A. Duration of Permit

1. Personnel listed in Condition C.1 of this permit (hereinafter "Researchers") may conduct activities authorized by this permit through month dd, yyyy. This permit may be extended by the Director, National Marine Fisheries Service (NMFS) Office of Protected Resources or the Chief, Permits and Conservation Division (hereinafter "Permits Division"), pursuant to applicable regulations and the requirements of the MMPA and ESA.

2. Researchers must immediately stop permitted activities and the Permit Holder or Principal Investigator must contact the Chief, Permits Division for written permission to resume:

   a. If serious injury or mortality[10] of protected species reaches that specified in Table 1of Appendix A.

   b. If authorized take[11] is exceeded in any of the following ways:

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[10] This permit allows for unintentional serious injury and mortality caused by the presence or actions of researchers up to the limit in Table 1of Appendix A. This includes, but is not limited to: deaths of dependent young by starvation following research-related death of a lactating female; deaths resulting from infections related to sampling procedures or invasive tagging; and deaths or injuries sustained by animals during capture and handling, or while attempting to avoid researchers or escape capture. Note that for marine mammals, a serious injury is defined by regulation as any injury that will likely result in mortality.

[11] By regulation, a take under the MMPA means to harass, hunt, capture, collect, or kill, or attempt to harass, hunt, capture, collect, or kill any marine mammal. This includes, without limitation, any of the following: the collection of dead animals, or parts thereof; the restraint or detention of a marine mammal, no matter how temporary; tagging a marine mammal; the negligent or intentional operation of an aircraft or vessel, or the doing of any other negligent or intentional act which results in disturbing or molesting a marine mammal; and feeding or attempting to feed a

i. More animals are taken than allowed in Table 1 of Appendix A.
ii. Animals are taken in a manner not authorized by this permit.
iii. Protected species other than those authorized by this permit are taken.

c. Following incident reporting requirements at Condition E.2.

B. Number and Kinds of Protected Species, Locations and Manner of Taking

1. The table in Appendix A outlines the authorized species and stock or distinct population segment (DPS); number of animals to be taken; number of animals from which parts may be exported; and the manner of take, locations, and time period.

2. Researchers working under this permit may collect images (e.g., photographs, video) and audio recordings in addition to the photo-identification or behavioral photo-documentation authorized in Appendix A as needed to document the permitted activities, provided the collection of such images or recordings does not result in takes.

3. The Permit Holder may use visual images and audio recordings collected under this permit, including those authorized in Table 1 of Appendix A, in printed materials (including commercial or scientific publications) and presentations provided the images and recordings are accompanied by a statement indicating that the activity was conducted pursuant to NMFS ESA/MMPA Permit No. 27408. This statement must accompany the images and recordings in all subsequent uses or sales.

4. The Chief, Permits Division may grant written approval for personnel performing activities not essential to achieving the research objectives (e.g., a documentary film crew) to be present, provided:

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marine mammal in the wild. Under the ESA, a take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to do any of the preceding.

a. The Permit Holder submits a request to the Permits Division specifying the purpose and nature of the activity, location, approximate dates, and number and roles of individuals for which permission is sought.

b. Non-essential personnel/activities will not influence the conduct of permitted activities or result in takes of protected species.

c. Persons authorized to accompany the Researchers for the purpose of such non-essential activities will not be allowed to participate in the permitted activities.

d. The Permit Holder and Researchers do not require compensation from the individuals in return for allowing them to accompany Researchers.

5. Researchers must comply with the following conditions related to the manner of taking:

Counting and Reporting Takes of Pinnipeds

a. For pinnipeds on land, you will count 1 take per animal per day for those animals that react to the research activities in these ways:

i. Movements of twice the animal's body length or more,

ii. Changes of direction greater than 90 degrees, or

iii. Retreats (flushes) to the water.

b. For pinnipeds in water, count 1 take per animal per day for those that exhibit a noticeable adverse behavioral response from your activities.

c. Count every animal netted or captured even if immediately released.

d. Do not count takes of pinnipeds as you are transiting between research locations and not actively conducting research.

Capture and Handling

e. Researchers must carry out activities efficiently and use biologists experienced in capture and sampling techniques to complete the activities as quickly as possible to reduce disturbance and minimize handling time.

f. To the maximum extent feasible to minimize disturbance :

i. Take target animals, retrieve carcasses, or collect opportunistic samples (e.g., scat) when other pinnipeds are not in the immediate vicinity, particularly mother/pup pairs; and

ii. Move carcasses to a secure area away from other pinnipeds for necropsies.

g. Efforts to approach and/or capture a particular pinniped or lactating female and pup must be immediately terminated if there is any evidence that the activities may be life-threatening to the animals.

h. Researchers must take reasonable steps to identify pups of lactating females before attempting to immobilize a lactating female during permitted activities.

i. Researchers must minimize the time lactating females are removed or otherwise separated from their dependent offspring as a result of permitted activities.

j. Researchers must capture and handle pinnipeds in groups small enough so that all animals can be adequately monitored to prevent drowning, overheating, suffocation, and injury.

k. Researchers must use sterile disposable needles, biopsy darts, and other sampling tools to the maximum extent practicable (always use disposable needles for blood sampling and injections). Researchers must thoroughly clean and disinfect non-disposable equipment between animals and, as needed, immediately prior to each use.

l. For activities involving the use of anesthesia and sedatives, researchers

must ensure that an experienced marine mammal veterinarian or veterinary technician is present.

m. Researchers must continuously monitor sedated animals.

n. Researchers must immediately cease research-related procedures if a pinniped is showing signs (e.g., overexertion, constant muscle tensions, abnormal respiration or heart rate) that may lead to serious injury, capture myopathy, other disease conditions, or death; and monitor and treat the animal as determined appropriate by the Principal investigator (PI), Co-investigator (CI), or attending veterinarian.

o. Researchers must ensure that pinnipeds that have been captured and anesthetized or administered immobilizing drugs have an opportunity to recover after release without undue risk of drowning or injury from other animals.

Mortalities

p. In the event an animal dies, is euthanized, or if a dependent pup is abandoned as a result of research activities, the Permit Holder must, within two weeks, submit an incident report as described in Condition E.2. A necropsy should be performed, except where not feasible such as in remote areas with limited personnel. Gross necropsy findings should be included as part of an incident report. Final necropsy findings (e.g., histology and other analyses) must be submitted when complete.

q. To the maximum extent practical without causing further disturbance, researchers must monitor study sites following any disturbance (e.g., surveys or sampling activities) to determine if any animals have been seriously injured or killed, or if any pups have been abandoned. Any observed serious injury to or death of a marine mammal or observed abandonment of a dependent pup is to be reported as indicated below and in Condition E.2.

r. If a lactating female dies as a result of the permitted activities and her dependent pup can be identified, or if a dependent pup is abandoned, the PI, CI or veterinarian present will evaluate the pup's age, health, and ability to survive on its own. If the pup is not likely to survive and the pup is not a candidate for rehabilitation, or rehabilitation is not logistically feasible, the PI/CI and/or veterinarian will determine the proper course of action (e.g., euthanasia) in accordance with the approved Institutional

Animal Care and Use Committees (IACUC) protocols and the pup must be counted as a research-related mortality.

Euthanasia

s. An experienced veterinarian or qualified researcher must conduct the euthanasia. After necropsy, parts not retained from pinnipeds chemically euthanized must be collected for environmentally safe disposal.

t. In the event a pinniped is euthanized, a written incident report must be submitted to the Chief, Permits Division in accordance with Condition E.2.

Salvage

u. The Permit Holder must coordinate with the NMFS Alaska Region Stranding Coordinator (phone 907-586-7248) prior to collecting samples or carcasses of any dead stranded ESA-listed marine mammals. The Stranding Coordinator may require the Permit Holder to collect specific data and samples and provide these to the NMFS Alaska Regional Office.

Non-target Species

v. This permit does not authorize takes of any protected species not identified in Appendix A, including those species under the jurisdiction of the United States Fish and Wildlife Service (USFWS). Should other protected species be encountered during the research activities authorized under this permit, researchers must exercise caution and remain a safe distance from the animal(s) to avoid take, including harassment.

Sea Otters

w. For activities in areas where sea otters may be encountered, the Permit Holder or PI must follow these conditions to prevent interactions with sea otters:

i. Obey all speed zones and drive slowly in all areas with sea otters. Boat strikes are a cause of death for sea otters.

ii. If sea otters are observed prior to an encounter, avoid approaching them directly and maintain a minimum distance of 20 meters (66 feet) at all times.

iii. If sea otters approach, place boat engines in neutral and allow the animals to pass.

x. During capture events in waters where sea otters may be present, the Permit Holder or PI must follow these conditions to prevent interactions with sea otters:

i. Netting activities must cease if a sea otter is sighted within 100 meters.

ii. If a sea otter is accidentally captured:

1. Devote all staff efforts to freeing the animal. Remember that a sea otter must surface approximately every few minutes. The Permit Holder or PI shall brief all participants to ensure that they understand that freeing a sea otter can be dangerous. This briefing will caution people to keep fingers out of the nets, that no jewelry should be worn, that sea otters can reach all parts of their body with their mouth (due to their lack of blubber and need to constantly groom) and deliver a bite that could result in serious injury, and that they give the animal adequate time and room to breathe as they are freeing it.

2. As appropriate, turn off the vessel motors or put the engine in neutral. Propellers can seriously injure or kill sea otters.

3. Release tension on the net to allow the animal the opportunity to free itself. Exercise caution when attempting to assist the animal. Sea otters can thrash violently if captured or entangled in a net. Quick action is essential to protect the sea otter. Ensure that the animal does not escape with net still attached to it.

4. Contact the USFWS offices to report any gear or vessel interactions with sea otters.

y. If a sea otter is injured or killed during research activities, in addition to the requirements in Condition A.2 above:

i. Research must be suspended and the U.S. Fish and Wildlife Service (USFWS) immediately contacted (see contact information below); and

ii. Within 30 days of the injury or mortality, a report detailing the circumstances that led to the injury or mortality and suggesting measures to prevent or minimize the chances of future injuries or mortalities must also be sent to: USFWS Division of Management Authority (DMA) (phone: 1-800-358-2104; fax: 703-358-2281, e-mail: Permits@fws.gov); and the USFWS Ventura Fish and Wildlife Office (VFWO), 2493 Portola Road, Suite B, Ventura, CA 93003,(805-644-1766), Lilian_Carswell@fws.gov.

iii. In the event of a death of a sea otter, a necropsy should be performed by a qualified veterinarian and details of the cause of death included in the written report in B.5.y.ii above.

iv. The USFWS may subsequently recommend continuation of the suspended activities with any necessary modifications/conditions.

6. The Permit Holder must comply with the following conditions, and the regulations at 50 CFR 216.37, for biological samples[12] acquired[13] or possessed under authority of this permit.

a. The Permit Holder is ultimately responsible for compliance with this permit and applicable regulations related to the samples unless the samples are permanently transferred per Condition B.6.d.

b. Samples must be maintained according to accepted curatorial standards and must be labeled with a unique identifier (e.g., alphanumeric code) that is connected to on-site records with information identifying the following:

i. Species and, where known, age and sex;

ii. Date of collection or acquisition;

[12] Biological samples include, but are not limited to: carcasses (whole or parts); and any tissues, fluids, or other specimens from live or dead protected species; except feces, urine, and spew collected from the water or ground.

[13] Authorized methods of sample acquisition are specified in Appendix A.

iii. Type of sample (e.g., whisker, hair, milk);

iv. Origin (i.e., where collected); and

v. Legal authorization for original sample collection.

c. For temporary transfers:

i. In addition to the Authorized Recipients (ARs) identified in the enclosed AR letter, the Permit Holder may designate ARs for analysis and curation of samples related to the permit objectives. The Permit Holder must maintain a record of the transfer including the following:

1. Name and affiliation of the AR;

2. Address of the AR;

3. Types of samples sent (species, tissue type);

4. Type of analysis; and

5. Whether samples will be consumed in analysis, returned to the Permit Holder, curated, or destroyed.

ii. The Permit Holder must provide a written copy of the AR designation and the permit per Condition D.3 when transferring samples to the AR (contact your permit analysts for an example letter).

iii. Samples remain in the legal custody of the Permit Holder while in the possession of ARs. The Permit Holder remains responsible for the samples, including any reporting requirements.

d. For permanent transfers: If the Permit Holder wishes to permanently transfer marine mammal samples (i.e., relinquish custody), recipients must have separate authorization pursuant to 50 CFR 216.37 (e.g., permit, regional authorization letter) prior to transfer.

e. This permit does not authorize the creation or use of marine mammal cell lines.

f. Samples cannot be bought or sold. This does not apply to reimbursement associated with actual costs (e.g., shipment or transport costs).

g. After meeting the permitted objectives, the Permit Holder may continue to possess and use biological samples acquired under this permit, including after permit expiration, without additional written authorization. The samples must be maintained as specified in the permit and a copy of the permit must be kept with the samples forever.

C. Qualifications, Responsibilities, and Designation of Personnel

1. At the discretion of the Permit Holder, the following Researchers may participate in the conduct of the permitted activities in accordance with their qualifications and the limitations specified herein:

a. Principal Investigator – John M. Maniscalco, Ph.D.

b. Co-Investigators – See Appendix B for list of names and corresponding activities.

c. Research Assistants – personnel identified by the Permit Holder or Principal Investigator and qualified to act pursuant to Conditions C.2, C.3, and C.4 of this permit.

2. Individuals conducting permitted activities must possess qualifications commensurate with their roles and responsibilities. The roles and responsibilities of personnel operating under this permit are as follows:

a. The Permit Holder is ultimately responsible for activities of individuals operating under the authority of this permit. Where the Permit Holder is an institution/facility, the Responsible Party is the person at the institution/facility who is responsible for the supervision of the Principal Investigator.

b. The Principal Investigator (PI) is the individual primarily responsible for the taking, import, export and related activities conducted under the permit. This includes coordination of field activities of all personnel working under the permit. The PI must be on site during activities conducted under this permit unless a Co-Investigator named in Condition C.1 is present to act in place of the PI.

c. Co-Investigators (CIs) are individuals who are qualified to conduct activities authorized by the permit, for the objectives described in the application, without the on-site supervision of the PI. CIs assume the role and responsibility of the PI in the PI's absence.

d. Research Assistants (RAs) are individuals who work under the direct and on-site supervision of the PI or a CI. RAs cannot conduct permitted activities in the absence of the PI or a CI.

3. Personnel involved in permitted activities must be reasonable in number and essential to conduct of the permitted activities. Essential personnel are limited to:

a. Individuals who perform a function directly supportive of and necessary to the permitted activity (including operation of vessels or aircraft essential to conduct of the activity),

b. Individuals included as backup for those personnel essential to the conduct of the permitted activity, and

c. Individuals included for training purposes.

4. Persons who require state or Federal licenses or authorizations (e.g., veterinarians) to conduct activities under the permit must be duly licensed/authorized and follow all applicable requirements when undertaking such activities.

5. Permitted activities may be conducted aboard vessels or aircraft, or in cooperation with individuals or organizations, engaged in commercial activities, provided the commercial activities are not conducted simultaneously with the permitted activities.

6. The Permit Holder cannot require or receive direct or indirect compensation from a person approved to act as PI, CI, or RA under this permit in return for requesting such approval from the Permits Division.

7. The Permit Holder or PI may add CIs by submitting a request to the Chief, Permits Division that includes a description of the individual's qualifications to conduct and oversee the activities authorized under this permit. If a CI will only be responsible for a subset of permitted activities, the request must also specify the activities for which they would provide oversight.

8. The Responsible Party may request a change of PI by submitting a request to the Chief, Permits Division that includes a description of the individual's qualifications to conduct and oversee the activities authorized under this permit.

9. Submit requests to add CIs or change the PI by one of the following:

a. The APPS system at https://apps.nmfs.noaa.gov;

b. An email attachment to the permit analysts for this permit; or

c. A hard copy mailed to the Chief, Permits Division, Office of Protected Resources, NMFS, 1315 East-West Highway, Room 13705, Silver Spring, MD 20910; phone (301)427-8401.

D. Possession of Permit

1. This permit cannot be transferred or assigned to any other person.

2. The Permit Holder and persons operating under the authority of this permit must possess a copy of this permit when:

   a. Engaged in a permitted activity.

   b. A protected species is in transit incidental to a permitted activity.

   c. A protected species taken under the permit is in the possession of such persons.

3. A duplicate copy of this permit must accompany or be attached to the container, package, enclosure, or other means of containment in which a protected species or protected species part is placed for purposes of storage, transit, supervision or care.

E. Reporting

1. The Permit Holder must submit incident and annual reports containing the information and in the format specified by the Permits Division.

   a. Reports must be submitted to the Permits Division by one of the following:

      i. The APPS system at https://apps.nmfs.noaa.gov;

      ii. An email attachment to the permit analysts for this permit; or

      iii. A hard copy mailed to the Chief, Permits Division.

b. You must contact your permit analysts for a reporting form if you do not submit reports through the APPS.

c. Additional information on reports can be found at https://www.fisheries.noaa.gov/national/reports-protected-species-permits.

2. Incident Reporting

a. If the total number of mortalities is reached, or authorized takes have been exceeded as specified in Conditions A.2 and B.5.q. and s., the Permit Holder must:

i. Email your permit analysts or call the Permits Division (301-427-8401) as soon as possible, but no later than 2 business days of the incident;

ii. Submit a written report within 2 weeks of the incident as specified below; and

iii. Receive approval from the Permits Division before resuming work. The Permits Division may grant authorization to resume permitted activities based on review of the incident report and in consideration of the Terms and Conditions of this permit.

b. Any time a serious injury or mortality of a protected species occurs, a written report must be submitted within two weeks.

c. The incident report must include 1) a complete description of the events, and 2) identification of steps that will be taken to reduce the potential for additional serious injury and research-related mortality or exceeding authorized take.

3. Annual reports describing activities conducted during the previous permit year (from month/day to month/day) must:

a. Be submitted by [insert date here and at top of first page] each year for which the permit is valid, and

b. Include a tabular accounting of takes and a narrative description of activities and their effects.

4. A joint annual/final report including a discussion of whether the objectives were achieved must be submitted by (insert date), or, if the research concludes prior to permit expiration, within 90 days of completion of the research.

5. Research results must be published or otherwise made available to the scientific community in a reasonable period of time. Copies of technical reports, conference abstracts, papers, or publications resulting from permitted research must be submitted to the Permits Division upon request.

F. Notification and Coordination

1. NMFS Regional Offices are responsible for ensuring coordination of the timing and location of all research activities in their areas to minimize unnecessary duplication, harassment, or other adverse impacts from multiple researchers.

2. The Permit Holder must ensure written notification of planned field work for each project is provided to the NMFS Regional Office listed below at least two weeks prior to initiation of each field trip/season.

   a. Notification must include the following:

      i. Locations of the intended field study and/or survey routes;

      ii. Estimated dates of activities; and

      iii. Number and roles of participants (for example: PI, CI, veterinarian, boat driver, safety diver, animal restrainer, Research Assistant "in training").

   b. Notification must be sent to the Assistant Regional Administrator for Protected Resources:

      Alaska Region, NMFS, P.O. Box 21668, Juneau, AK 99802-1668; phone (907)586-7235; fax (907)586-7012.

3. Researchers must coordinate their activities with other permitted researchers to avoid unnecessary disturbance of animals or duplication of efforts. Contact the Regional Office listed above for information about coordinating with other Permit Holders.

G. Observers and Inspections

1. NMFS may review activities conducted under this permit. At the request of NMFS, the Permit Holder must cooperate with any such review by:

   a. Allowing an employee of NOAA or other person designated by the Director, NMFS Office of Protected Resources to observe and document permitted activities; and

   b. Providing all documents or other information relating to the permitted activities.

H. Modification, Suspension, and Revocation

1. Permits are subject to suspension, revocation, modification, and denial in accordance with the provisions of subpart D [Permit Sanctions and Denials] of 15 CFR Part 904.

2. The Director, NMFS Office of Protected Resources may modify, suspend, or revoke this permit in whole or in part:

a. In order to make the permit consistent with a change made after the date of permit issuance with respect to applicable regulations prescribed under Section 103 of the MMPA and Section 4 of the ESA;

b. In a case in which a violation of the terms and conditions of the permit is found;

c. In response to a written request[14] from the Permit Holder;

d. If NMFS determines that the application or other information pertaining to the permitted activities (including, but not limited to, reports pursuant to Section E of this permit and information provided to NOAA personnel pursuant to Section G of this permit) includes false information; or

e. If NMFS determines that the authorized activities will operate to the disadvantage of threatened or endangered species or are otherwise no longer consistent with the purposes and policy in Section 2 of the ESA.

[14] The Permit Holder may request changes to the permit related to: the objectives or purposes of the permitted activities; the species or number of animals taken; and the location, time, or manner of taking or importing protected species. Such requests must be submitted in writing to the Permits Division in the format specified in the application instructions.

3. Issuance of this permit does not guarantee or imply that NMFS will issue or approve subsequent permits or amendments for the same or similar activities, including those of a continuing nature, requested by the Permit Holder.

I. Penalties and Permit Sanctions

1. A person who violates a provision of this permit, the MMPA, ESA, or the regulations at 50 CFR Part 216 and 50 CFR Parts 222-226 is subject to civil and criminal penalties, permit sanctions, and forfeiture as authorized under the MMPA, ESA, and 15 CFR Part 904.

2. The NMFS Office of Protected Resources shall be the sole arbiter of whether a given activity is within the scope and bounds of the authorization granted in this permit.

a. The Permit Holder must contact the Permits Division for verification before conducting the activity if they are unsure whether an activity is within the scope of the permit.

b. Failure to verify, where the NMFS Office of Protected Resources subsequently determines that an activity was outside the scope of the permit, may be used as evidence of a violation of the permit, the MMPA, the ESA, and applicable regulations in any enforcement actions.

J. Acceptance of Permit

1. In signing this permit, the Permit Holder:

a. Agrees to abide by all terms and conditions set forth in the permit, all restrictions and relevant regulations under 50 CFR Parts 216, and 222-226, and all restrictions and requirements under the MMPA, and the ESA;

b. Acknowledges that the authority to conduct certain activities specified in the permit is conditional and subject to authorization by the Office Director; and

c. Acknowledges that this permit does not relieve the Permit Holder of the responsibility to obtain any other permits, or comply with any other Federal, State, local, or international laws or regulations.

Kimberly Damon-Randall
Director, Office of Protected Resources
National Marine Fisheries Service

Date Issued

Wei Ying Wong, Ph.D.
President and CEO
Alaska SeaLife Center
Responsible Party

Date Effective

Appendix A: Table Specifying the Kinds of Protected Species, Locations, and Manner of Taking

Table 1. Annual takes. Most of the work will be concentrated at Chiswell Island (59.602 N, 149.568 W) and rookeries/haulouts between Prince William Sound and Outer Island. Additional work farther west is dependent on funding and research needs.

Line	Species	Stock/ Listing Unit	Production/ Origin	Life stage	Sex	No. Animals per Year	Take Action	Observe/ Collect Method	Procedures	Details
1	Sea lion, Steller	West of 144° Long (Western US) (NMFS Endangered)	Wild	All	Male and Female	2000	Harass	Other	Count/survey; Incidental disturbance; Remote video monitoring	Disturbance associated with maintenance & repair of remote monitoring equipment (cameras, microphone, control tower); vessel and ground approach to access rookery and haulouts
2	Sea lion, Steller	West of 144° Long (Western US) (NMFS Endangered)	Wild	Pup	Male and Female	125	Capture/ Handle/ Release	Hand and/or Dip Net	Anesthesia, gas w/cone or mask; Calipers (skin fold); Mark, bleach; Mark, clip fur; Mark, dye or paint; Mark, flipper tag; Mark, hot brand; Measure (standard morphometrics); Photo-id; Photogrammetry; Photograph/Video; Restrain, board; Restrain, hand; Restrain, net; Sample, blood; Sample, clip hair; Sample, skin biopsy; Sample, stomach lavage; Sample, swab all mucus membranes; Sample, vibrissae (pull); Ultrasound; Weigh	Pup capture/sampling/marking; Individual pups will not be marked by more than one method; branding/sampling will occur in only 2 of the 5 years of permit; only 50 pups will have milk samples taken annually

Table 1. Annual takes. Most of the work will be concentrated at Chiswell Island (59.602 N, 149.568 W) and rookeries/haulouts between Prince William Sound and Outer Island. Additional work farther west is dependent on funding and research needs.										
Line	Species	Stock/ Listing Unit	Production/ Origin	Life stage	Sex	No. Animals per Year	Take Action	Observe/ Collect Method	Procedures	Details
3	Sea lion, Steller	West of 144° Long (Western US) (NMFS Endangered)	Wild	All	Male and Female	500	Harass	Other	Unintentional harassment	Incidental disturbance associated with capture, handling, and sampling of pups
4	Sea lion, Steller	West of 144° Long (Western US) (NMFS Endangered)	Wild	Adult	Male and Female	50	Harass/ Sampling	Other	Count/survey; Photograph/Video; Sample, blubber biopsy; Sample, muscle biopsy; Sample, skin biopsy	Collect method is remote biopsy darting
5	Sea lion, Steller	West of 144° Long (Western US) (NMFS Endangered)	Wild	Juvenile/ Subadult	Male and Female	20	Harass/ Sampling	Other	Sample, blubber biopsy; Sample, muscle biopsy; Sample, skin biopsy	Collect method is remote biopsy darting
6	Sea lion, Steller	West of 144° Long (Western US) (NMFS Endangered)	Wild	All	Male and Female	200	Harass	Other	Unintentional harassment	Incidental disturbance associated with biopsy darting

Table 1. Annual takes. Most of the work will be concentrated at Chiswell Island (59.602 N, 149.568 W) and rookeries/haulouts between Prince William Sound and Outer Island. Additional work farther west is dependent on funding and research needs.										
Line	Species	Stock/ Listing Unit	Production/ Origin	Life stage	Sex	No. Animals per Year	Take Action	Observe/ Collect Method	Procedures	Details
7	Sea lion, Steller	West of 144° Long (Western US) (NMFS Endangered)	Wild	All	Male and Female	350	Harass/ Sampling	Survey, ground	Collect, molt; Collect, scat; Collect, spew; Collect, urine; Salvage (carcass, tissue, parts)	Collect fecal samples, placentas, carcasses, and aborted fetuses
8	Sea lion, Steller	West of 144° Long (Western US) (NMFS Endangered)	Wild	All	Male and Female	2000	Harass	Survey, ground	Unintentional harassment	Incidental disturbance by researchers on ground and associated with material collections and salvage that may include scat, aborted fetuses, placentae, carcasses, spew, other tissues and parts
9	Sea lion, Steller	West of 144° Long (Western US) (NMFS Endangered)	Wild	All	Male and Female	1000	Harass	Other	Count/survey; Observation, mark resight; Photo-id	Disturbance associated with vessel based observations, photo ID and counts. Other = ground or vessel survey
10	Sea lion, Steller	West of 144° Long (Western US) (NMFS Endangered)	Wild	All	Male and Female	4	Unintentional mortality	Other	Intentional (directed) mortality; Necropsy; Salvage (carcass, tissue, parts); Unintentional mortality	Mortality incidental to any research activity or including euthanasia for humane purposes. Full necropsies performed when possible. Not to exceed 4 over the life of the permit.

Table 1. Annual takes. Most of the work will be concentrated at Chiswell Island (59.602 N, 149.568 W) and rookeries/haulouts between Prince William Sound and Outer Island. Additional work farther west is dependent on funding and research needs.										
Line	Species	Stock/ Listing Unit	Production/ Origin	Life stage	Sex	No. Animals per Year	Take Action	Observe/ Collect Method	Procedures	Details
11	Sea lion, Steller	West of 144° Long (Western US) (NMFS Endangered)	Wild	All	Male and Female	1000	Import/ export/ receive only	Other	Import/export/receive, parts	Export of scat hard and soft parts, blubber samples, skin, hair for laboratory analysis
12	California sea lion	US Stock	Wild	All	Male and Female	10	Harass	Other	Unintentional harassment	Unintentional harassment associated with maintenance & repair of remote monitoring equipment (cameras, microphone, control tower); vessel and ground approach to access rookery and haulouts

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
1315 East-West Highway
Silver Spring, Maryland 20910

Appendix B: NMFS-Approved Personnel for Permit No. 27408.

Table B1. The following individuals are approved personnel pursuant to the terms and conditions under Section C (Qualifications, Responsibilities, and Designation of Personnel) of this permit.

Name/Affiliation	Role	Activities
John Maniscalco, Ph.D. Alaska SeaLife Center Seward, AK	Principal Investigator	Supervise and perform all activities under the permit excluding anesthesia during capture
Pamela Parker, M.S. Alaska SeaLife Center Seward, AK	Co-investigator	Remote and field-based monitoring, capture, handling, morphometrics of pups, collection of scats, spews, tissues, and carcasses
Jared Guthridge, M.S. Alaska SeaLife Center Seward, AK	Co-investigator	Field-based monitoring, capture/handling/morphometrics of pups, collection of scats, spews, tissues, and carcasses
Carrie Goertz, Ph.D. Alaska SeaLife Center Seward, AK	Veterinarian	Supervise and perform anesthesia, animal health assessments, capture and handling

Name and Affiliation	Sample	Disposition
Lorrie Rea, Ph.D. University of Alaska Fairbanks, AK	Authorized Recipient	Receive hair, vibrissae, whole blood, pup carcasses

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Mandy Keogh, Ph.D. NOAA Fisheries Juneau, AK	Authorized Recipient	Receive whole blood, serum, hair, vibrissae, feces
Kathy Burek Huntington, Ph.D. Alaska Vet. Pathology Services Eagle River, AK	Authorized Recipient	Fixed tissue samples, blood, whole carcasses, tissue and mucous swabs
Sara Iverson, Ph.D. Dalhousie University Halifax, Nova Scotia, Canada	Authorized Recipient	Milk and blubber fatty acid extractions for identification
Susan Crockford Pacific ID Victoria, B.C., Canada	Authorized Recipient	Hard part remains from scat and spew for identification.
Greg O'Corry Crowe Harbor Branch Oceanogr. Inst. Fort Pierce, FL	Authorized Recipient	Skin biopsy or punches for genetic analysis

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20 APPENDIX III – DRAFT PERMIT NO. 27503

The text below was taken directly from the proposed permit provided to us in the consultation initiation package from the Permits and Conservation Division. The final permit may have minor changes that will not affection this opinion.

Permit No. 27503

Expiration Date: month dd, yyyy
Reports Due: month dd, annually

PERMIT TO TAKE PROTECTED SPECIES[15] FOR SCIENTIFIC PURPOSES

I. Authorization

This permit is issued to Alaska Department of Fish and Game (ADF&G), P.O. Box 25526, Juneau, AK 99802, (hereinafter "Permit Holder;" Responsible Party: Michael Rehberg), pursuant to the provisions of the Marine Mammal Protection Act of 1972 as amended (MMPA; 16 U.S.C. 1361 *et seq.*); the regulations governing the taking and importing of marine mammals (50 CFR Part 216); the Endangered Species Act of 1973 (ESA; 16 U.S.C. 1531 *et seq.*); the regulations governing the taking, importing, and exporting of endangered and threatened species (50 CFR Parts 222-226); and the Fur Seal Act of 1966 (FSA; 16 U.S.C. 1151 *et seq.*).

II. Abstract

The objectives of the permitted activity, as described in the application, are to continue the long-term Steller sea lion (*Eumetopias jubatus*) research program, to investigate recovery trends, collecting survival and reproduction data, investigate movement between and within the populations, and monitor threats.

III. Terms and Conditions

[15] "Protected species" include species listed as threatened or endangered under the ESA, and marine mammals.

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The activities authorized herein must occur by the means, in the areas, and for the purposes set forth in the permit application, and as limited by the Terms and Conditions specified in this permit, including appendices and attachments. Permit noncompliance constitutes a violation and is grounds for permit modification, suspension, or revocation, and for enforcement action.

A. Duration of Permit

1. Personnel listed in Condition C.1 of this permit (hereinafter "Researchers") may conduct activities authorized by this permit through month dd, yyyy. This permit may be extended by the Director, National Marine Fisheries Service (NMFS) Office of Protected Resources or the Chief, Permits and Conservation Division (hereinafter "Permits Division"), pursuant to applicable regulations and the requirements of the MMPA and ESA.

2. Researchers must immediately stop permitted activities and the Permit Holder or Principal Investigator must contact the Chief, Permits Division for written permission to resume:

b. If serious injury or mortality[16] of protected species reaches that specified in Tables A1 and A2 of Appendix A.

e. If authorized take[17] is exceeded in any of the following ways:

iv. More animals are taken than allowed in the Tables of Appendix A.

[16] This permit allows for unintentional serious injury and mortality caused by the presence or actions of researchers up to the limit in Tables A1 and A2 of Appendix A. This includes, but is not limited to: deaths of dependent young by starvation following research-related death of a lactating female; deaths resulting from infections related to sampling procedures or invasive tagging; and deaths or injuries sustained by animals during capture and handling, or while attempting to avoid researchers or escape capture. Note that for marine mammals, a serious injury is defined by regulation as any injury that will likely result in mortality.

[17] By regulation, a take under the MMPA means to harass, hunt, capture, collect, or kill, or attempt to harass, hunt, capture, collect, or kill any marine mammal. This includes, without limitation, any of the following: the collection of dead animals, or parts thereof; the restraint or detention of a marine mammal, no matter how temporary; tagging a marine mammal; the negligent or intentional operation of an aircraft or vessel, or the doing of any other negligent or intentional act which results in disturbing or molesting a marine mammal; and feeding or attempting to feed a marine mammal in the wild. Under the ESA, a take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to do any of the preceding. A take or taking under the FSA means to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill. The FSA authorizes the taking, transportation, importation, exportation, or possession of northern fur seals or their parts for educational, scientific, or exhibition purposes.

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v. Animals are taken in a manner not authorized by this permit.

vi. Protected species other than those authorized by this permit are taken.

f. Following incident reporting requirements at Condition E.2.

B. Number and Kinds of Protected Species, Locations and Manner of Taking

1. The tables in Appendix A outline the authorized species and stock or distinct population segment (DPS); number of animals to be taken; number of animals from which parts may be received, imported and exported; and the manner of take, locations, and time period.

2. Researchers working under this permit may collect images (e.g., photographs, video) and audio recordings in addition to the photo-identification or behavioral photo-documentation authorized in Appendix A as needed to document the permitted activities, provided the collection of such images or recordings does not result in takes.

3. The Permit Holder may use visual images and audio recordings collected under this permit, including those authorized in Appendix A, in printed materials (including commercial or scientific publications) and presentations provided the images and recordings are accompanied by a statement indicating that the activity was conducted pursuant to NMFS ESA/MMPA Permit No. 27503. This statement must accompany the images and recordings in all subsequent uses or sales.

4. The Chief, Permits Division may grant written approval for personnel performing activities not essential to achieving the research objectives (e.g., a documentary film crew) to be present, provided:

d. The Permit Holder submits a request to the Permits Division specifying the purpose and nature of the activity, location, approximate dates, and number and roles of individuals for which permission is sought.

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e. Non-essential personnel/activities will not influence the conduct of permitted activities or result in takes of protected species.

f. Persons authorized to accompany the Researchers for the purpose of such non-essential activities will not be allowed to participate in the permitted activities.

d. The Permit Holder and Researchers do not require compensation from the individuals in return for allowing them to accompany Researchers.

5. Researchers must comply with the following conditions related to the manner of taking:

Counting and Reporting Takes of Pinnipeds

a. For pinnipeds on land during ground, vessel, and aerial surveys, count 1 take per animal per day for those animals that react to the permitted activities in these ways:

i. Movements of twice the animal's body length or more,

ii. Changes of direction greater than 90 degrees, or

iii. Retreats (flushes) to the water.

b. For pinnipeds in water during ground, vessel, and aerial surveys, count 1 take per animal per day for those that exhibit a noticeable adverse behavioral response from your activities.

c. Count every animal netted or captured even if immediately released.
d. Do not count takes of pinnipeds as you are transiting between locations and not actively conducting research or enhancement.

Manned Aerial Surveys

e. Researchers must conduct manned aerial surveys at an altitude of 150 meters (m) or higher.

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Unmanned Aircraft Systems (UAS)

f. Researchers may use up to one vertical take-off and landing UAS at one time.

g. Researchers must operate UAS at an altitude of 45 m or higher.

Capture and Handling

h. Researchers must carry out activities efficiently and use biologists experienced in capture and sampling techniques to complete the activities as quickly and safely as possible to reduce disturbance and minimize handling time.

i. To the maximum extent feasible to minimize disturbance:

i. Take target animals, retrieve carcasses, or collect opportunistic samples (e.g., scat) when other pinnipeds are not in the immediate vicinity, particularly mother/pup pairs; and

ii. Move carcasses to a secure area away from other pinnipeds for necropsies.

j. Efforts to approach and/or capture a particular pinniped or lactating female and pup must be immediately terminated if there is any evidence that the activities may be life-threatening to the animals.

k. Researchers must take reasonable steps to identify pups of lactating females before attempting to immobilize a lactating female during permitted activities.

l. Researchers must minimize the time lactating females are removed or otherwise separated from their dependent offspring as a result of permitted activities.

m. Researchers must use sterile disposable needles, biopsy punches, and other sampling tools to the maximum extent practicable (always use disposable needles for blood sampling and injections). Researchers must thoroughly

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clean and disinfect non-disposable equipment between animals and, as needed, immediately prior to each use.

n. For activities involving the use of anesthesia and sedatives, researchers must ensure that an experienced marine mammal veterinarian or veterinary technician is present.

o. Researchers must immediately cease permitted procedures if a pinniped is showing signs (e.g., overexertion, constant muscle tension, abnormal respiration or heart rate) that may lead to serious injury, capture myopathy, other disease conditions, or death; and monitor and treat the animal as determined appropriate by the Principal Investigator (PI), Co-Investigator (CI), or attending veterinarian.

p. Researchers must ensure that pinnipeds that have been captured and anesthetized or administered immobilizing drugs have an opportunity to recover after release without undue risk of drowning or injury from other animals.

Remote Sedation

q. Researchers must halt the use of remote sedation and in-water capture/sedation techniques and consult with NMFS if three or more pinnipeds are sedated and disappear so that their fate cannot be determined or suffer unanticipated adverse effects, including entering the water and drowning.

Salvage

r. The Permit Holder must coordinate with the NMFS Alaska Region Stranding Coordinator (phone: 907-586-7349; email: mandy.keogh@noaa.gov; https://www.fisheries.noaa.gov/contact-directory/marine-mammal-stranding-network-coordinators) prior to collecting samples or carcasses of any dead stranded marine mammals. The Stranding Coordinator may require the Permit Holder to collect specific data and samples and provide these to the NMFS Alaska Regional Office.

s. For any parts salvaged, the Permit Holder must submit a Level A data sheet (https://www.fisheries.noaa.gov/national/marine-mammal-protection/level-data-collection-marine-mammal-stranding-events), or a report with enough information to prepare a Level A data sheet, to the

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NMFS Alaska Region Stranding Coordinator within 30 days of the end of any field effort where parts were salvaged.

Mortalities

t. In the event an animal dies as a result of research activities, the Permit Holder must, within two weeks, submit an incident report as described in Condition E.2. A necropsy should be performed, except where not feasible such as in remote areas with limited personnel. Gross necropsy findings should be included as part of an incident report. Final necropsy findings (e.g., histology and other analyses) must be submitted when complete.

u. To the maximum extent practical without causing further disturbance, researchers must monitor study sites following any disturbance (e.g., surveys or sampling activities) to determine if any animals have been seriously injured or killed, or if any pups have been abandoned. Any observed serious injury to or death of a marine mammal or observed abandonment of a dependent pup is to be reported as indicated below and in Condition E.2.

v. If a lactating female dies as a result of the permitted activities and her dependent pup can be identified, or if a dependent pup is abandoned, the PI, CI or veterinarian present will evaluate the pup's age, health, and ability to survive on its own. If the pup is determined not likely to survive, Researchers must immediately contact the NMFS Alaska Regional Stranding Network Coordinator mandy.keogh@noaa.gov or 907-586-7349, and proceed as directed. If the pup is not likely to survive and the Coordinator determines the pup is not a candidate for rehabilitation, or rehabilitation is not logistically feasible, the PI/CI or veterinarian will determine the proper course of action (e.g., euthanasia) in accordance with the approved Institutional Animal Care and Use Committee (IACUC) protocols and the pup must be counted as a research-related mortality.

w. In the rare event a nursing pup is orphaned as a result of any activities authorized in this permit, the pup must be humanely provided for (i.e., placed in a Stranding facility for rehabilitation or humanely euthanized). Rehabilitation must be done in consultation with the Marine Mammal Health and Stranding Response Program (MMHSRP) and under the authority of the MMHSRP permit. Pups that are euthanized count against the total number of animals authorized for unintentional mortality in Appendix A, Tables A1 and A2.

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Euthanasia

x. An experienced veterinarian or qualified researcher must conduct the euthanasia. After necropsy, parts not retained from pinnipeds chemically euthanized must be collected for environmentally safe disposal.

y. In the event a pinniped is euthanized, a written incident report must be submitted to the Chief, Permits Division in accordance with Condition E.2.

Non-target Species

z. This permit does not authorize takes of any protected species not identified in Appendix A, including those species under the jurisdiction of the United States Fish and Wildlife Service (USFWS). Should other protected species be encountered during the research activities authorized under this permit, researchers must exercise caution and remain a safe distance from the animal(s) to avoid take, including harassment.

aa. See Appendix C for Conditions to Minimize Disturbance and Prevent Harassment of Marine Mammal Species under the Jurisdiction of the USFWS (e.g., walrus, polar bear, and sea otters).

For Capture Activities

bb. Bycatch: Release all incidentally captured species (e.g., fishes and birds) alive as soon as possible.

cc. If any listed non-target species are taken (captured, injured, etc.) during research, Researchers must stop activities per Condition A.2 and submit an incident report per Condition E.2. Document adverse interactions in the report, including any pertinent details of the interaction (gear type, what was done to handle and release the animals, location, date, visual estimation of size, water and air temperature, and photos if possible).

Humpback Whales in Alaska

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dd. If a humpback whale is observed in the area, Researchers and vessels must maintain a distance of at least 91.4 meters (100 yards).

6. The Permit Holder must comply with the following conditions, and the regulations at 50 CFR 216.37, for biological samples[18] acquired[19] or possessed under authority of this permit.

h. The Permit Holder is ultimately responsible for compliance with this permit and applicable regulations related to the samples unless the samples are permanently transferred per Condition B.6.d.

i. Samples must be maintained according to accepted curatorial standards and must be labeled with a unique identifier (e.g., alphanumeric code) that is connected to on-site records with information identifying the following:

i. Species and, where known, age and sex;

ii. Date of collection, acquisition, or import;
iii. Type of sample (e.g., blood, skin);

iv. Origin (i.e., where collected or imported from); and

v. Legal authorization for original sample collection or import.

j. For temporary transfers:

i. In addition to the Authorized Recipients (ARs) identified in the enclosed AR letter, the Permit Holder may designate ARs for analysis and curation of samples related to the permit objectives. The Permit Holder must maintain a record of the transfer including the following:

1. Name and affiliation of the AR;

[18] Biological samples include, but are not limited to: carcasses (whole or parts); and any tissues, fluids, or other specimens from live or dead protected species; except feces, urine, and spew collected from the water or ground.
[19] Authorized methods of sample acquisition are specified in Appendix A.

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2. Address of the AR;

3. Types of samples sent (species, tissue type);

4. Type of analysis; and

5. Whether samples will be consumed in analysis, returned to the Permit Holder, curated, or destroyed.

ii. The Permit Holder must provide a written copy of the AR designation and the permit per Condition D.3 when transferring samples to the AR (contact your permit analysts for an example letter).

iii. Samples remain in the legal custody of the Permit Holder while in the possession of ARs. The Permit Holder remains responsible for the samples, including any reporting requirements.

k. For permanent transfers: If the Permit Holder wishes to permanently transfer marine mammal samples (i.e., relinquish custody), recipients must have separate authorization pursuant to 50 CFR 216.37 (e.g., permit, regional authorization letter) prior to transfer.

l. This permit does not authorize the creation or use of marine mammal cell lines.

m. Samples cannot be bought or sold. This does not apply to reimbursement associated with actual costs (e.g., shipment or transport costs).

n. After meeting the permitted objectives, the Permit Holder may continue to possess and use biological samples acquired under this permit, including after permit expiration, without additional written authorization. The samples must be maintained as specified in the permit and a copy of the permit must be kept with the samples forever.

C. Qualifications, Responsibilities, and Designation of Personnel

1. At the discretion of the Permit Holder, the following Researchers may participate in the conduct of the permitted activities in accordance with their qualifications and the limitations specified herein:

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a. Principal Investigator – Christine Bubac, Ph.D., See Appendix B for authorized activities.

b. Co-Investigators –See Appendix B for list of names and corresponding activities.

c. Research Assistants – personnel identified by the Permit Holder or Principal Investigator and qualified to act pursuant to Conditions C.2, C.3, and C.4 of this permit.

2. Individuals conducting permitted activities must possess qualifications commensurate with their roles and responsibilities. The roles and responsibilities of personnel operating under this permit are as follows:

a. The Permit Holder is ultimately responsible for activities of individuals operating under the authority of this permit. Where the Permit Holder is an institution/facility, the Responsible Party is the person at the institution/facility who is responsible for the supervision of the Principal Investigator.

b. The Principal Investigator (PI) is the individual primarily responsible for the taking, import, export and related activities conducted under the permit. This includes coordination of field activities of all personnel working under the permit. The PI must be on site during activities conducted under this permit unless a Co-Investigator named in Condition C.1 is present to act in place of the PI.

c. Co-Investigators (CIs) are individuals who are qualified to conduct activities authorized by the permit, for the objectives described in the application, without the on-site supervision of the PI. CIs assume the role and responsibility of the PI in the PI's absence.

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d. Research Assistants (RAs) are individuals who work under the direct and on-site supervision of the PI or a CI. RAs cannot conduct permitted activities in the absence of the PI or a CI.

3. Personnel involved in permitted activities must be reasonable in number and essential to conduct of the permitted activities. Essential personnel are limited to:

a. Individuals who perform a function directly supportive of and necessary to the permitted activity (including operation of vessels or aircraft essential to conduct of the activity),

b. Individuals included as backup for those personnel essential to the conduct of the permitted activity, and

c. Individuals included for training purposes.

4. Persons who require state or Federal licenses or authorizations (e.g., veterinarians, pilots – including UAS operators) to conduct activities under the permit must be duly licensed/authorized and follow all applicable requirements when undertaking such activities.

5. Permitted activities may be conducted aboard vessels or aircraft, or in cooperation with individuals or organizations, engaged in commercial activities, provided the commercial activities are not conducted simultaneously with the permitted activities.

9. The Permit Holder cannot require or receive direct or indirect compensation from a person approved to act as PI, CI, or RA under this permit in return for requesting such approval from the Permits Division.

10. The Permit Holder or PI may add CIs by submitting a request to the Chief, Permits Division that includes a description of the individual's qualifications to conduct and oversee the activities authorized under this permit. If a CI will only be responsible for a subset of permitted activities, the request must also specify the activities for which they would provide oversight.

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11. The Responsible Party may request a change of PI by submitting a request to the Chief, Permits Division that includes a description of the individual's qualifications to conduct and oversee the activities authorized under this permit.

12. Submit requests to add CIs or change the PI by one of the following:

d. The APPS system at https://apps.nmfs.noaa.gov;

e. An email attachment to the permit analysts for this permit; or

f. A hard copy mailed to the Chief, Permits Division, Office of Protected Resources, NMFS, 1315 East-West Highway, Room 13705, Silver Spring, MD 20910; phone (301)427-8401.

D. Possession of Permit

1. This permit cannot be transferred or assigned to any other person.

2. The Permit Holder and persons operating under the authority of this permit must possess a copy of this permit when:

a. Engaged in a permitted activity.

b. A protected species is in transit incidental to a permitted activity.

c. A protected species taken or imported under the permit is in the possession of such persons.

3. A duplicate copy of this permit must accompany or be attached to the container, package, enclosure, or other means of containment in which a protected species or protected species part is placed for purposes of storage, transit, supervision or care.

E. Reporting

5. The Permit Holder must submit incident and annual reports containing the information and in the format specified by the Permits Division.

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a. Reports must be submitted to the Permits Division by one of the following:

iv. The APPS system at https://apps.nmfs.noaa.gov;

v. An email attachment to the permit analysts for this permit; or

vi. A hard copy mailed to the Chief, Permits Division.

d. You must contact your permit analysts for a reporting form if you do not submit reports through the APPS.

e. Additional information on reports can be found at https://www.fisheries.noaa.gov/national/reports-protected-species-permits.

6. Incident Reporting

d. If the total number of mortalities is reached, or authorized takes have been exceeded as specified in Conditions A.2 and B.t, the Permit Holder must:

iv. Email your permit analysts or call the Permits Division (301-427-8401) as soon as possible, but no later than 2 business days of the incident;

v. Submit a written report within 2 weeks of the incident as specified below; and

vi. Receive approval from the Permits Division before resuming work. The Permits Division may grant authorization to resume permitted activities based on review of the incident report and in consideration of the Terms and Conditions of this permit.

e. Any time a serious injury or mortality of a protected species occurs, a written report must be submitted within two weeks.

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f. The incident report must include 1) a complete description of the events, and 2) identification of steps that will be taken to reduce the potential for additional serious injury and research-related mortality or exceeding authorized take.

7. Annual reports describing activities conducted during the previous permit year (from month/day to month/day) must:

a. Be submitted by date each year for which the permit is valid, and

b. Include a tabular accounting of takes and a narrative description of activities and their effects.

5. A joint annual/final report including a discussion of whether the objectives were achieved must be submitted by (insert date), or, if the research concludes prior to permit expiration, within 90 days of completion of the research.

6. Research results must be published or otherwise made available to the scientific community in a reasonable period of time. Copies of technical reports, conference abstracts, papers, or publications resulting from permitted research must be submitted to the Permits Division upon request.

F. Notification and Coordination

1. NMFS Regional Offices are responsible for ensuring coordination of the timing and location of all research activities in their areas to minimize unnecessary duplication, harassment, or other adverse impacts from multiple researchers.

4. The Permit Holder must ensure written notification of planned field work for each project is provided to the NMFS Regional Office listed below at least two weeks prior to initiation of each field trip/season.

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c. Notification must include the following:

i. Locations of the intended field study and/or survey routes;

ii. Estimated dates of activities; and

iii. Number and roles of participants (for example: PI, CI, veterinarian, boat driver, animal restrainer, Research Assistant "in training").

d. Notification must be sent to the following Assistant Regional Administrator for Protected Resources:

Alaska Region, NMFS, P.O. Box 21668, Juneau, AK 99802-1668; phone (907)586-7235; fax (907)586-7012;

5. Researchers must coordinate their activities with other permitted researchers to avoid unnecessary disturbance of animals or duplication of efforts. Contact the Regional Office listed above for information about coordinating with other Permit Holders.

G. Observers and Inspections

1. NMFS may review activities conducted under this permit. At the request of NMFS, the Permit Holder must cooperate with any such review by:

a. Allowing an employee of NOAA or other person designated by the Director, NMFS Office of Protected Resources to observe and document permitted activities; and

b. Providing all documents or other information relating to the permitted activities.

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H. Modification, Suspension, and Revocation

1. Permits are subject to suspension, revocation, modification, and denial in accordance with the provisions of subpart D [Permit Sanctions and Denials] of 15 CFR Part 904.

2. The Director, NMFS Office of Protected Resources may modify, suspend, or revoke this permit in whole or in part:

   a. In order to make the permit consistent with a change made after the date of permit issuance with respect to applicable regulations prescribed under Section 103 of the MMPA and Section 4 of the ESA;

   b. In a case in which a violation of the terms and conditions of the permit is found;

   c. In response to a written request[20] from the Permit Holder;

   d. If NMFS determines that the application or other information pertaining to the permitted activities (including, but not limited to, reports pursuant to Section E of this permit and information provided to NOAA personnel pursuant to Section G of this permit) includes false information; or

   e. If NMFS determines that the authorized activities will operate to the disadvantage of threatened or endangered species or are otherwise no longer consistent with the purposes and policy in Section 2 of the ESA.

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[20] The Permit Holder may request changes to the permit related to: the objectives or purposes of the permitted activities; the species or number of animals taken; and the location, time, or manner of taking or importing protected species. Such requests must be submitted in writing to the Permits Division in the format specified in the application instructions.

3. Issuance of this permit does not guarantee or imply that NMFS will issue or approve subsequent permits or amendments for the same or similar activities, including those of a continuing nature, requested by the Permit Holder.

I. Penalties and Permit Sanctions

1. A person who violates a provision of this permit, the MMPA, ESA, or the regulations at 50 CFR Part 216 and 50 CFR Parts 222-226 is subject to civil and criminal penalties, permit sanctions, and forfeiture as authorized under the MMPA, ESA, and 15 CFR Part 904.

2. The NMFS Office of Protected Resources shall be the sole arbiter of whether a given activity is within the scope and bounds of the authorization granted in this permit.

c. The Permit Holder must contact the Permits Division for verification before conducting the activity if they are unsure whether an activity is within the scope of the permit.

d. Failure to verify, where the NMFS Office of Protected Resources subsequently determines that an activity was outside the scope of the permit, may be used as evidence of a violation of the permit, the MMPA, the ESA, and applicable regulations in any enforcement actions.

J. Acceptance of Permit

1. In signing this permit, the Permit Holder:

a. Agrees to abide by all terms and conditions set forth in the permit, all restrictions and relevant regulations under 50 CFR Parts 216, and 222-226, and all restrictions and requirements under the MMPA, and the ESA, and the FSA;

b. Acknowledges that the authority to conduct certain activities specified in the permit is conditional and subject to authorization by the Office Director; and

c. Acknowledges that this permit does not relieve the Permit Holder of the responsibility to obtain any other permits, or comply with any other Federal, State, local, or international laws or regulations.

DRAFT

Kimberly Damon-Randall

Director, Office of Protected Resources

National Marine Fisheries Service

Date Issued

Michael Rehberg

Wildlife Biologist

Alaska Department of Fish and Game

Responsible Party

Date Effective

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Appendix A: Tables Specifying the Kinds of Protected Species, Locations, and Manner of Taking

Table A1. Annual SSL Eastern DPS. Wild male and females.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe/ Collect Method	Procedures	Details
1	Sea lion, Steller	East of 144 (Eastern US)	All	1,390	Harass	Survey, ground	Count/survey; Observation, mark resight; Unintentional harassment	Unintentional disturbance during ground surveys and remote biopsy sampling at haulouts and rookeries.
2	Sea lion, Steller	East of 144 (Eastern US)	All	5,000	Harass	Survey, vessel	Count/survey; Observation, mark resight; Unintentional harassment	Unintentional disturbance during vessel surveys and remote biopsy sampling at haulouts and rookeries.
3	Sea lion, Steller	East of 144 (Eastern US)	All	10,000	Harass	Survey, aerial	Count/survey; Observation, mark resight; remote vehicle (fixed wing); remote vehicle, (VTOL); Unintentional harassment	Unintentional disturbance during SSL aerial surveys. Assumes 1.3% of animals present are disturbed. Includes a 0.05%*non-pup count buffer to account for animals in the water. Aerial take includes adjustment to accommodate potential but unlikely disturbance of a very large haulout surveyed each spring.

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Table A1. Annual SSL Eastern DPS. Wild male and females.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe/ Collect Method	Procedures	Details
4	Sea lion, Steller	East of 144 (Eastern US)	All	22,000	Harass	Other	Collect, scat; Import/export/receive, parts; Observation, monitoring; Other; Remote video monitoring; Unintentional harassment	Unintentional disturbance associated with ground activities including disturbances of non-target SSL during capture and observation, scat collection, carcass collection, remote biopsy sampling, equipment maintenance, etc. Scat disturbance assumes avg. 400 takes/visit.
5	Sea lion, Steller	East of 144 (Eastern US)	All	5,000	Harass	Other	Unintentional harassment	Unintentional disturbance of non-target SSLs associated with pup branding.
6	Sea lion, Steller	East of 144 (Eastern US)	Juvenile	300	Harass/ Sampling	Other	Import/export/receive, parts; Other; Photograph/video; Sample, skin biopsy	Other = Remote skin biopsy of juvenile SSLs.
7	Sea lion, Steller	East of 144 (Eastern US)	Adult	300	Harass/ Sampling	Other	Import/export/receive, parts; Other; Photograph/video; Sample, skin biopsy	Other = Remote skin biopsy of adult SSLs.

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Table A1. Annual SSL Eastern DPS. Wild male and females.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe/ Collect Method	Procedures	Details
8	Sea lion, Steller	East of 144 (Eastern US)	pup	200	Capture/ Handle/ Release	Hand and/or dip net	Administer drug, IM; Administer drug, subcutaneous; Administer drug, topically; Collect, scat; Collect, urine; Import/export/receive, parts; Mark, clip fur; Mark, dye or paint; Mark, flipper tag; Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, board; Restrain, cage; Restrain, hand; Restrain, net; Restrain, other; Sample, blood; Sample, clip hair; Sample, fecal swab; Sample, skin biopsy; Sample, stomach lavage; Sample, swab all mucus membranes; Sample, vibrissae (pull); Ultrasound; Weigh	June – July. This is Method 1. Manual capture and sampling of pups on their rookery. No branding. Restrain, other = pen, strap, line, mesh blanket

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Table A1. Annual SSL Eastern DPS. Wild male and females.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe/ Collect Method	Procedures	Details
9	Sea lion, Steller	East of 144 (Eastern US)	pup	200	Capture/ Handle/ Release	Hand and/or dip net	Administer drug, IM; Administer drug, subcutaneous; Administer drug, topically; Anesthesia, gas w/cone or mask; Collect, scat; Collect, urine; Import/export/receive, parts; Mark, clip fur; Mark, dye or paint; Mark, flipper tag; Mark, hot brand; Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, board; Restrain, cage; Restrain, hand; Restrain, net; Restrain, other; Sample, clip hair; Sample, skin biopsy; Sample, vibrissae (pull); Weigh	June – July. This is Method 2. Manual capture and minimal sampling of pups on their rookery. Branding optional on pups at least 20 kg or without umbilicus. Restrain, other = pen, strap, line, mesh blanket

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Table A1. Annual SSL Eastern DPS. Wild male and females.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe/ Collect Method	Procedures	Details
10	Sea lion, Steller	East of 144 (Eastern US)	pup	150	Capture/ Handle/ Release	Hand and/or dip net	Administer drug, IM; Administer drug, subcutaneous; Administer drug, topically; Anesthesia, gas w/cone or mask; Bioelectrical impedance (subcutaneous); Collect, scat; Collect, urine; Import/export/receive, parts; Mark, clip fur; Mark, dye or paint; Mark, flipper tag; Mark, hot brand; Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, board; Restrain, cage; Restrain, hand; Restrain, net; Restrain, other; Sample, blood ; Sample, clip hair; Sample, clip nail; Sample, fecal loop; Sample, fecal swab; Sample, skin biopsy; Sample, stomach lavage; Sample, swab all mucus membranes; Sample, vibrissae (pull); Ultrasound; Weigh	June – July. This is Method 3. Manual capture and sampling of pups on their rookery. Branding optional on pups at least 20 kg or without umbilicus. Optional sampling added: bioelectrical impedance, blood, clip nail, fecal loop/swab, stomach lavage, swab mucous membranes, ultrasound Restrain, other = pen, strap, line, mesh blanket

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Table A1. Annual SSL Eastern DPS. Wild male and females.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe/ Collect Method	Procedures	Details
11	Sea lion, Steller	East of 144 (Eastern US)	pup	20	Capture/ Handle/ Release	Hand and/or dip net	Administer drug, IM; Administer drug, subcutaneous; Administer drug, topically; Anesthesia, gas w/cone or mask; Bioelectrical impedance (subcutaneous); Collect, scat; Collect, urine; Import/export/receive, parts; Mark, clip fur; Mark, dye or paint; Mark, flipper tag; Mark, hot brand; Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, board; Restrain, cage; Restrain, hand; Restrain, net; Restrain, other; Sample, blood; Sample, blubber biopsy; Sample, clip hair; Sample, clip nail; Sample, fecal loop; Sample, fecal swab; Sample, skin biopsy; Sample, stomach lavage; Sample, swab all mucus membranes; Sample, vibrissae (pull); Ultrasound; Weigh	June – July. This is Method 4. Manual capture and sampling of pups on their rookery. Branding optional on pups at least 20 kg or without umbilicus. Optional sampling added: blubber biopsy. Restrain, other = pen, strap, line, mesh blanket

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12	Sea lion, Steller	East of 144 (Eastern US)	Pup/ Juvenile	45	Capture/ Handle/ Release	Other	Administer drug, IM; Administer drug, subcutaneous; Administer drug, topically; Administer drug, intraperitoneal; Administer drug, IV; Anesthesia, gas w/cone or mask; Anesthesia, gas w/intubation; Anesthesia, injectable sedative; Bioelectrical impedance (subcutaneous); Collect, scat; Collect, urine; Import/export/receive, parts; Instrument, external (e.g., VHF, SLTDR); Mark, clip fur; Mark, dye or paint; Mark, flipper tag; Mark, hot brand; Mark, other (e.g., neoprene patch); Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, cage; Restrain, net; Restrain, other; Sample, blood ; Sample, blubber biopsy; Sample, clip hair; Sample, clip nail; Sample, fecal loop; Sample, fecal swab; Sample, muscle biopsy; Sample, other; Sample, skin biopsy; Sample, stomach lavage; Sample, swab all mucus membranes; Sample, urine catheter; Sample, vibrissae (pull); Stable isotopes and serial blood samples; Ultrasound; Weigh	All year. Capture and handling of immature SSLs > 2 mo. Capture by, net, hand, noose pole, remote chemical immobilization (non pups only). Sample, other=milk. One brand per lifetime. Intended research take is 30 captures; 15 takes are included to account for sea lions struck by a dart but not immobilized and captured. Restrain, other = pen, strap, line, mesh blanket

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13	Sea lion, Steller	East of 144 (Eastern US)	Adult	20	Capture/ Handle/ Release	Other	Administer drug, IM; Administer drug, subcutaneous; Administer drug, topically; Administer drug, intraperitoneal; Administer drug, IV; Anesthesia, gas w/cone or mask; Anesthesia, gas w/intubation; Anesthesia, injectable sedative; Bioelectrical impedance (subcutaneous); Collect, scat; Collect, urine; Import/export/receive, parts; Instrument, external (e.g., VHF, SLTDR); Mark, clip fur; Mark, dye or paint; Mark, flipper tag; Mark, hot brand; Mark, other (e.g., neoprene patch); Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, cage; Restrain, net; Restrain, other; Sample, blood; Sample, blubber biopsy; Sample, clip hair; Sample, clip nail; Sample, fecal loop; Sample, fecal swab; Sample, milk (lactating females); Sample, muscle biopsy; Sample, skin biopsy; Sample, stomach lavage; Sample, swab all mucus membranes; Sample, urine catheter; Sample, vibrissae (pull); Stable isotopes and serial blood samples; Ultrasound; Weigh	All year. Capture and handling of adult SSLs. Capture by net, hand, noose pole, remote chemical immobilization. Intended research take is 30 captures; 15 takes are included to account for sea lions struck by a dart but not immobilized and captured. One brand per lifetime. Restrain, other = pen, strap, line, mesh blanket

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Table A1. Annual SSL Eastern DPS. Wild male and females.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe/ Collect Method	Procedures	Details
14	Sea lion, Steller	East of 144 (Eastern US)	All	4	Unintentional mortality	Other	Intentional (directed) mortality; Import/export/receive, parts; Unintentional mortality; Necropsy	Unintentional mortality during research. Intentional (directed) mortality = humane euthanasia. Full necropsies performed when possible. Not to exceed 8 over the duration of the permit.
15	Sea lion, Steller	East of 144 (Eastern US)	All	100	Sample	Other	Salvage (carcass, tissue, parts); Import/export, parts	Collect or sample carcasses from (dead) stranded SSLs.
16	Sea lion, Steller	East of 144 (Eastern US)	All	100	Import/export/receive only	Other	Collect, subsistence harvest; Export; Import; Receive, domestically	Receive/import/export of carcasses or samples collected under other authorizations. Includes collection from subsistence animals.
17	Sea lion, Steller	East of 144 (Eastern US)	All	2,000	Harass	Survey, ground	Count/survey; Observation, mark resight; Unintentional harassment	May - August. Unintentional disturbance during ground surveys at haulouts and rookeries (Forrester Island Complex).
18	Sea lion, Steller	East of 144 (Eastern US)	All	3,500	Harass	Survey, vessel	Count/survey; Observation, mark resight; Unintentional harassment	May - August. Unintentional disturbance during vessel surveys at haulouts and rookeries (Forrester Island Complex).

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Table A2. Annual Western SSL takes. Wild males and females.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe / Collect Method	Procedures	Details
1	Sea lion, Steller	Western DPS (Endangered)	All	1,390	Harass	Survey, ground	Count/survey; Observation, mark resight; Unintentional harassment	Unintentional disturbance during ground surveys and remote biopsy sampling at haulouts and rookeries.
2	Sea lion, Steller	Western DPS (Endangered)	All	4,000	Harass	Survey, vessel	Count/survey; Observation, mark resight; Unintentional harassment	Unintentional disturbance during vessel surveys and remote biopsy sampling at haulouts and rookeries.
3	Sea lion, Steller	Western DPS (Endangered)	All	12,500	Harass	Survey, aerial	Count/survey; Observation, mark resight; remote vehicle (fixed wing); remote vehicle, (VTOL); Unintentional harassment	Unintentional disturbance during SSL aerial surveys. Includes a 0.05%*non-pup count buffer to account for animals in the water. Aerial take includes adjustment to accommodate potential but unlikely disturbance of a very large haulout.

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Table A2. Annual Western SSL takes. Wild males and females.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe / Collect Method	Procedures	Details
4	Sea lion, Steller	Western DPS (Endangered)	All	22,000	Harass	Other	Collect, scat; Observation, monitoring; Other; Remote video monitoring; Unintentional harassment	Unintentional disturbance associated with ground activities including disturbances of non-target SSL during capture and observation, scat collection, carcass collection, remote biopsy sampling, equipment maintenance, etc. Scat disturbance assumes avg. 400 takes/visit.
5	Sea lion, Steller	Western DPS (Endangered)	All	4,000	Harass	Other	Unintentional harassment	Unintentional disturbance of non-target SSLs associated with pup branding.
6	Sea lion, Steller	Western DPS (Endangered)	Juvenile	300	Harass/ Sampling	Other	Import/export/receive, parts; Other; Photograph/video; Sample, skin biopsy	Other= Remote skin biopsy of juvenile SSLs.
7	Sea lion, Steller	Western DPS (Endangered)	Adult	300	Harass/ Sampling	Other	Import/export/receive, parts; Other; Photograph/video; Sample, skin biopsy	Other= Remote skin biopsy of adult SSLs.

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Table A2. Annual Western SSL takes. Wild males and females.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe / Collect Method	Procedures	Details
8	Sea lion, Steller	Western DPS (Endangered)	pup	300	Capture/ Handle/ Release	Hand and/or Dip net	Administer drug, IM; Administer drug, subcutaneous; Administer drug, topically; Collect, scat; Collect, urine; Import/export/receive, parts; Mark, clip fur; Mark, dye or paint; Mark, flipper tag; Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, board; Restrain, cage; Restrain, hand; Restrain, net; Restrain, other; Sample, blood ; Sample, clip hair; Sample, fecal swab; Sample, skin biopsy; Sample, stomach lavage; Sample, swab all mucus membranes; Sample, vibrissae (pull); Ultrasound; Weigh	June - July. This is Method 1. Manual capture and sampling of pups on their rookery. No branding. Restrain, other = pen, strap, line, mesh blanket

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Table A2. Annual Western SSL takes. Wild males and females.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe / Collect Method	Procedures	Details
9	Sea lion, Steller	Western DPS (Endangered)	pup	400	Capture/ Handle/ Release	Hand and/or Dip net	Administer drug, IM; Administer drug, subcutaneous; Administer drug, topically; Anesthesia, gas w/cone or mask; Collect, scat; Collect, urine; Import/export/receive, parts; Mark, clip fur; Mark, dye or paint; Mark, flipper tag; Mark, hot brand; Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, board; Restrain, cage; Restrain, hand; Restrain, net; Restrain, other; Sample, clip hair; Sample, skin biopsy; Sample, vibrissae (pull); Weigh	June - July. This is Method 2. Manual capture and minimal sampling of pups on their rookery. Branding optional on pups at least 20 kg or without umbilicus. Restrain, other = pen, strap, line, mesh blanket

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Table A2. Annual Western SSL takes. Wild males and females.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe / Collect Method	Procedures	Details
10	Sea lion, Steller	Western DPS (Endangered)	pup	200	Capture/ Handle/ Release	Hand and/or Dip net	Administer drug, IM; Administer drug, subcutaneous; Administer drug, topically; Anesthesia, gas w/cone or mask; Bioelectrical impedance (subcutaneous); Collect, scat; Collect, urine; Import/export/receive, parts; Mark, clip fur; Mark, dye or paint; Mark, flipper tag; Mark, hot brand; Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, board; Restrain, cage; Restrain, hand; Restrain, net; Restrain, other; Sample, blood ; Sample, clip hair; Sample, clip nail; Sample, fecal loop; Sample, fecal swab; Sample, other; Sample, skin biopsy; Sample, stomach lavage; Sample, swab all mucus membranes; Sample, vibrissae (pull); Ultrasound; Weigh	June - July. This is Method 3. Manual capture and sampling of pups on their rookery. Branding optional on pups at least 20 kg or without umbilicus. Optional sampling added: bioelectrical impedance, blood, clip nail, fecal loop/swab, stomach lavage, swab mucous membranes, ultrasound, other (milk). Restrain, other = pen, strap, line, mesh blanket

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Table A2. Annual Western SSL takes. Wild males and females.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe / Collect Method	Procedures	Details
11	Sea lion, Steller	Western DPS (Endangered)	pup	40	Capture/ Handle/ Release	Hand and/or Dip net	Administer drug, IM; Administer drug, subcutaneous; Administer drug, topically; Anesthesia, gas w/cone or mask; Bioelectrical impedance (subcutaneous); Collect, scat; Collect, urine; Import/export/receive, parts; Mark, clip fur; Mark, dye or paint; Mark, flipper tag; Mark, hot brand; Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, board; Restrain, cage; Restrain, hand; Restrain, net; Restrain, other; Sample, blood ; Sample, blubber biopsy; Sample, clip hair; Sample, clip nail; Sample, fecal loop; Sample, fecal swab; Sample, other; Sample, skin biopsy; Sample, stomach lavage; Sample, swab all mucus membranes; Sample, vibrissae (pull); Ultrasound; Weigh	June - July. This is Method 4. Manual capture and sampling of pups on their rookery. Branding optional on pups at least 20 kg or without umbilicus. Sample, other=milk. Optional sampling added: blubber biopsy. Restrain, other = pen, strap, line, mesh blanket

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12	Sea lion, Steller	Western DPS (Endangered)	Pup/ Juvenile	45	Capture/ Handle/ Release	Other	Administer drug, IM; Administer drug, subcutaneous; Administer drug, topically; Administer drug, intraperitoneal; Administer drug, IV; Anesthesia, gas w/cone or mask; Anesthesia, gas w/intubation; Anesthesia, injectable sedative; Bioelectrical impedance (subcutaneous); Collect, scat; Collect, urine; Import/export/receive, parts; Instrument, external (e.g., VHF, SLTDR); Mark, clip fur; Mark, dye or paint; Mark, flipper tag; Mark, hot brand; Mark, other (e.g., neoprene patch); Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, cage; Restrain, net; Restrain, other; Sample, blood ; Sample, blubber biopsy; Sample, clip hair; Sample, clip nail; Sample, fecal loop; Sample, fecal swab; Sample, muscle biopsy; Sample, other; Sample, skin biopsy; Sample, stomach lavage; Sample, swab all mucus membranes; Sample, urine catheter; Sample, vibrissae (pull); Stable isotopes and serial blood samples; Ultrasound; Weigh	All year. Capture and handling of immature SSLs > 2 mo. Capture by net, hand, noose pole, remote chemical immobilization (nonpups only). Sample, other=milk. Intended research take is 30 captures; 15 takes are included to account for sea lions struck by a dart but not immobilized and captured. One brand per lifetime. Restrain, other = pen, strap, line, mesh blanket

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13	Sea lion, Steller	Western DPS (Endangered)	Adult	45	Capture/ Handle/ Release	Other	Administer drug, IM; Administer drug, subcutaneous; Administer drug, topically; Administer drug, intraperitoneal; Administer drug, IV; Anesthesia, gas w/cone or mask; Anesthesia, gas w/intubation; Anesthesia, injectable sedative; Bioelectrical impedance (subcutaneous); Collect, scat; Collect, urine; Import/export/receive, parts; Instrument, external (e.g., VHF, SLTDR); Mark, clip fur; Mark, dye or paint; Mark, flipper tag; Mark, hot brand; Mark, other (e.g., neoprene patch); Measure (standard morphometrics); Photograph/video; Photo-id; Restrain, cage; Restrain, net; Restrain, other; Sample, blood ; Sample, blubber biopsy; Sample, clip hair; Sample, clip nail; Sample, fecal loop; Sample, fecal swab; Sample, milk (lactating females); Sample, muscle biopsy; Sample, skin biopsy; Sample, stomach lavage; Sample, swab all mucus membranes; Sample, urine catheter; Sample, vibrissae (pull); Stable isotopes and serial blood samples; Ultrasound; Weigh	All year. Capture and handling of adult SSLs. Capture by net, hand, noose pole, remote chemical immobilization. Intended research take is 30 captures; 15 takes are included to account for sea lions struck by a dart but not immobilized and captured. One brand per lifetime. Restrain, other = pen, strap, line, mesh blanket

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Table A2. Annual Western SSL takes. Wild males and females.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe / Collect Method	Procedures	Details
14	Sea lion, Steller	Western DPS (Endangered)	All	4	Unintentional mortality	Other	Intentional (directed) mortality; Import/export/receive, parts; Unintentional mortality; Necropsy	Unintentional mortality during research. Intentional (directed) mortality = humane euthanasia. Full necropsies performed when possible. Not to exceed 8 over the duration of the permit.
15	Sea lion, Steller	Western DPS (Endangered)	All	100	Sample	Other	Salvage (carcass, tissue, parts); Import/export, parts	Collect or sample carcasses from (dead) stranded SSLs.
16	Sea lion, Steller	Western DPS (Endangered)	All	100	Import/ export/ receive only	Other	Collect, subsistence harvest; Export; Import, Receive domestically	Receive/import/export carcasses or samples from collected under other authorizations. Includes collection from subsistence animals.

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Take Table A3. Annual unintentional harassment of non-target species and import/export/receipt/collection of pinniped parts.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe/ Collect Method	Procedures	Details
1	Sea lion, California	US Stock	All	400	Harass	Survey, ground	Unintentional harassment	Unintentional disturbance during SSL research activity on land.
2	Sea lion, California	US Stock	All	445	Harass	Survey, vessel	Unintentional harassment	Unintentional disturbance during SSL research activity aboard skiffs or vessels.
3	Sea lion, California	US Stock	All	3,300	Harass	Survey, aerial	Unintentional harassment	Unintentional disturbance during SSL aerial surveys
4	Seal, harbor	Range-wide	All	550	Harass	Survey, ground	Unintentional harassment	Unintentional disturbance during SSL research activity on land.
5	Seal, harbor	Range-wide	All	1,880	Harass	Survey, vessel	Unintentional harassment	Unintentional disturbance during SSL research activity aboard skiffs or vessels.
6	Seal, harbor	Range-wide	All	5,000	Harass	Survey, aerial	Unintentional harassment	Unintentional disturbance during SSL aerial surveys.
7	Seal, harbor	Range-wide	All	100	Sample	Other	Salvage (carcass, tissue, parts); Import/export, parts	Collect or sample carcasses from (dead) stranded harbor seals.
8	Seal, spotted	Alaska Stock	All	1,000	Harass	Survey, aerial	Unintentional harassment	Unintentional disturbance during SSL aerial surveys. No ground surveys.

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Take Table A3. Annual unintentional harassment of non-target species and import/export/receipt/collection of pinniped parts.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe/ Collect Method	Procedures	Details
9	Seal, ringed	Arctic (NMFS Threatened)	All	50	Harass	Survey, ground	Unintentional harassment	Unintentional disturbance during SSL research activity on land.
10	Seal, ringed	Arctic (NMFS Threatened)	All	200	Harass	Survey, aerial	Unintentional harassment	Unintentional disturbance during SSL aerial surveys
11	Seal, bearded	Beringia	All	200	Harass	Survey, aerial	Unintentional harassment	Unintentional disturbance during SSL aerial surveys. No ground surveys.
12	Seal, ribbon	Alaska Stock	All	200	Harass	Survey, aerial	Unintentional harassment	Unintentional disturbance during SSL aerial surveys. No ground surveys.
13	Seal, Northern fur	Eastern Pacific Stock	All	70	Harass	Survey, ground	Unintentional harassment	Unintentional disturbance during SSL research activity on land.
14	Seal, Northern fur	Eastern Pacific Stock	All	220	Harass	Survey, vessel	Unintentional harassment	Unintentional disturbance during SSL research activity aboard skiffs or vessels.
15	Seal, Northern fur	Eastern Pacific Stock	All	120	Harass	Survey, aerial	Unintentional harassment	Unintentional disturbance during SSL aerial surveys.

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Take Table A3. Annual unintentional harassment of non-target species and import/export/receipt/collection of pinniped parts.								
Line	Species	Stock/ Listing Unit	Life stage	No. Animals	Take Action	Observe/ Collect Method	Procedures	Details
15	Seal, Northern fur	Eastern Pacific Stock	All	100	Sample	Other	Salvage (carcass, tissue, parts); Import/export, parts	Collect or sample carcasses from (dead) stranded Norther fur seals.
16	Pinniped, unidentified	N/A	All	250	Import / export / receive only	Other	Collect, subsistence harvest; Export; Import, Receive domestically	Receipt, import, and export of marine mammal parts collected under other authorizations. Includes collection from subsistence animals. Unlimited number of samples per animal.

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Appendix B: NMFS-Approved Personnel for Permit No. 27503.

Table B1. The following individuals are approved personnel pursuant to the terms and conditions under Section C (Qualifications, Responsibilities, and Designation of Personnel) of this permit.

	C Bubac, PI	M Rehberg, CI	L Polasek, CI	L Jemison, CI	K Hastings, CI	J Jenniges, CI	S Lewis, CI	E Van Burgh, CI	G Snedgen, CI	T Gage, CI	M Archibald, CI	J Avery, CI	M Kemp, CI	S Longson, CI	J Moran, CI	G Sheffield, CI	S Oehlers, CI	N Olmsted, CI	C Osburn, CI	L Rea, CI	K Beckmen, CI	A Roug, CI	K Savage, CI	M Keogh, CI	T Gelatt, CI	B Fadely, CI	J Womble, CI	G Pendleton, CI	M Piche, CI	K Raum-Suryan, CI	S Karpovich, CI	R Morill, CI	B Taras, CI	S Walker, CI
Administer drug, IM, IV, subQ, topical			X									X								X	X	X	X		X	X				X			
Aerial surveys (manned)	X		X	X											X	X	X						X				X			X		X		X
UAS pilot							X																				X							
Anesthesia, injectable			X																		X	X	X			X					X			
Anesthesia, cone or mask																					X	X	X			X								
Anesthesia, with intubation																					X	X	X											
Bioelectrical impedance		X	X									X								X	X			X	X	X					X			
Capture, hand		X	X	X	X	X			X	X										X	X	X	X	X	X	X				X	X		X	
Capture, net	X	X	X	X	X	X	X		X	X										X	X	X	X	X	X	X				X	X			
Capture, hoop		X	X	X	X	X			X	X										X	X	X	X	X	X	X				X	X			
Capture, remote dart						X															X	X	X											
Collect molt, scat, spew, urine	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X		
Instrument, external (e.g.,VHF, SLTDR)		X	X	X		X														X	X		X	X	X	X				X				

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	C Bubac, PI	M Rehberg, CI	L Polasek, CI	L Jemison, CI	K Hastings, CI	J Jenniges, CI	S Lewis, CI	E Van Burgh, CI	G Snedgen, CI	T Gage, CI	M Archibald, CI	J Avery, CI	M Kemp, CI	S Longson, CI	J Moran, CI	G Sheffield, CI	S Oehlers, CI	N Olmsted, CI	C Osburn, CI	L Rea, CI	K Beckmen, CI	A Roug, CI	K Savage, CI	M Keogh, CI	T Gelatt, CI	B Fadely, CI	J Womble, CI	G Pendleton, CI	M Piche, CI	K Raum-Suryan, CI	S Karpovich, CI	R Morill, CI	B Taras, CI	S Walker, CI
Mark (bleach, clip fur, dye/paint, flipper tag)	X	X	X	X	X	X	X		X	X		X								X	X		X	X	X	X	X			X				
Marking (hot brand)						X			X	X										X					X									
Measure and weigh	X	X	X	X	X	X	X	X	X	X		X		X		X				X	X	X	X	X	X	X	X			X	X			
Count/survey (vessel; land), Observations, photograph/video, Photo-ID, Remote video monitoring, photogrammetry	X	X	X	X	X	X	X	X	X	X	X		X		X	X		X	X	X	X		X		X	X	X	X		X	X	X	X	X
Remote biopsy						X	X	X																											
Restrain (board, cage, hand, or net)	X	X	X	X	X	X		X	X	X		X								X	X	X	X	X	X	X	X			X	X	X		
Sample, blood			X									X								X	X	X	X	X	X	X				X				
Sample, biopsy (skin)	X	X	X	X	X	X	X			X		X								X	X		X	X	X	X	X			X	X			
Sample, biopsy (blubber or muscle)			X			X						X								X	X		X	X	X	X					X			
Sample, (nail, hair, or vibrissae)		X	X	X		X				X		X		X						X	X	X	X	X	X	X	X			X	X			
Sample, swab (all mucus membranes)			X	X		X				X		X		X						X	X	X	X	X	X	X	X				X			
Sample, milk, fecal (enema or loop), urine, or stomach lavage			X			X				X		X								X	X		X	X	X	X								
Ultrasound			X									X								X	X		X	X		X					X			
Salvage of dead pinnipeds (carcass/parts)	X		X	X	X	X	X	X	X		X		X	X	X	X		X		X	X		X	X	X	X	X	X		X				X

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Appendix C. Conditions to Minimize Disturbance and Prevent Harassment of Marine Mammal Species under the Jurisdiction of the U.S. Fish and Wildlife Service (USFWS)

Pacific Walruses

a. For activities in areas where Pacific walruses may be encountered, the Permit Holder or PI must follow these conditions to prevent interactions with walruses:

   i. Avoid concentrations or groups or walruses hauled out onto land or ice and conduct activities at the maximum distance possible from known or observed concentrations of animals. Motor vessels should maintain a buffer from walruses hauled out on land or ice to avoid disturbance:

b. Recommendations for operation of marine vessels:

   i. Reduce speed and maintain a minimum 0.5 mile separation distance from the vessel to groups of walruses encountered in the water. Steer around animals when observed in water. Boat strikes can result in death.

   ii. Vessels traveling in a predictable manner appear to be less disturbing to animals. Avoid excessive speed or sudden changes in speed or direction when operating near walruses in the water, and do not restrict the animals' movements.

   iii. If walruses approach, place boat engines in neutral and allow the animals to pass.

   iv. Sound carries a long way across the water and often reverberates off of cliffs and bluffs adjacent to coastal walrus haulouts amplifying the level of noise. Avoid sudden changes in engine noise, using loud speakers, loud deck equipment or other operations that produce noise when in the vicinity of walruses.

   v. Marine vessels 50 feet in length or less should remain at least 0.5 mile away from hauled out walruses.

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vi. Marine vessels 50 - 100 feet should remain at least 1 mile from hauled out walruses.

vii. The Native Village of Point Lay (NVPL) requests that all marine vessels remain a minimum of 5 miles off shore unless servicing the community. Please consult with NVPL if you anticipate operations to occur within 5 miles of the haulout while walrus are on shore.

b. Recommendations for aircraft operation in the vicinity of terrestrial walrus haulouts or walrus hauled out on ice:

i. Walruses are particularly sensitive to changes in engine noise and are more likely to stampede off beaches or leave ice floes when aircraft turn or fly overhead. Aerial photography of walruses from manned aircraft or unmanned aircraft systems (drones) poses a high potential for disturbance.

ii. Pilots of single engine manned aircraft should not knowingly fly over or fly within 0.5 mile of walruses hauled out on land or ice to avoid causing a disturbance. If weather or aircraft safety require flight operations within 0.5 mile of walruses, aircrafts should maintain a 2000' minimum altitude.

iii. UAS devices should not be flown within 0.5 miles of walruses hauled out on land or ice to avoid causing a disturbance.

iv. Pilots of helicopters and multi-engine aircraft should not knowingly fly over or fly within 1 mile of walruses hauled out on land or ice to avoid causing a disturbance. If weather or aircraft safety require flight operations within 1 mile of a haulout site, helicopters and multi-engine aircraft should maintain a 3000' minimum altitude.

v. The NVPL requests that aircraft do not make direct fly overs of the Pt Lay haulout at any altitude. Please consult with NVPL is you anticipate aircraft operations near the haulout while occupied.

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vi. Landings, take-offs, and taxiing should not occur within 0.5 mile of hauled out walruses for single engine aircraft or within 1 mile for multiple engine aircraft and helicopters.

vii. Avoid unnecessary circling or turning near walruses hauled out on land or ice.

viii. Please be aware that some locations have stricter recommendations (such as Round Island within the Walrus Islands State Game Sanctuary). Pilots are requested to maintain a minimum altitude of 5,000 feet above ground level within a 3 mile radius of Round Island (58° 36' N. 159° 58' W.).

c. Recommendations for land based approaches and observation:

i. Approach walruses hauled out on land unobtrusively. Observations should be accomplished without the animal's awareness of your presence. You may not be the only one that day that has approached these same animals, please be aware that increasing levels of disturbance may occur with each successive visit. Using binoculars and telephoto lenses to view or photograph animals from a safe distance can help ensure that animals are not disturbed.

ii. Avoid detection by sight, smell or sound:

iii. Do not approach on motorized vehicles. Park vehicles out of sight at least 0.5 mile away and approach by foot, moving slowly and staying hidden behind natural cover.

iv. Approach viewing areas quietly, avoid conversation, noisy movements and loose clothing that may flap in the wind.

v. Approach from downwind; avoid smoking and use of scented and fragrant products.

vi. Keep a low profile and avoid being backlit against skylines, or other light backgrounds.

vii. Do not wear brightly colored clothes.

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d. If a walrus is injured or killed while conducting the activities authorized under this permit:

i. Such activity must be suspended unless it would result in the death of the animal(s) being rescued.

ii. Immediately contact the USFWS for instruction (see contact information below).

iii. For any activities which result in the injury or death of a walrus, a written report must be submitted to USFWS Division of Management Authority (DMA) and the appropriate regional or field office (see contact information below) within 30 days detailing the circumstances that led to the injury or mortality and suggesting measures to prevent or minimize the chances of future injuries or mortalities. A necropsy (if applicable) should be performed by a qualified veterinarian and details of the cause of death included in the written report.

iv. The USFWS may subsequently recommend continuation of the suspended activities with any necessary modifications/conditions.

Polar Bears

e. For activities in areas where polar bears may be encountered, the Permit Holder or PI must follow these conditions to reduce interactions with polar bears:

i. Be alert to potential presence of polar bears, visually monitor the area and adjacent waters.

ii. Avoid polar bears on land, ice, and water. Conduct activities at the maximum distance possible from polar bears.

iii. Do not use nets of any kind if polar bears are observed in the water, are on land within 1 mile of the coast, and/or are on barrier islands and associated spits.

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iv. Navigate slowly, steer around polar bears, and do not approach, circle, pursue or otherwise force bears to change direction when observed in the water.

v. Avoid multiple changes in direction and speed and do not restrict bears' movements on land or sea.

vi. Do not conduct activities within 1 mile of known or suspected polar bear dens.

vii. For field camps and crews, ensure teams are trained on bear safety and all attractants are secured to minimize human-bear conflicts.

viii. If conducting operations in polar bear habitat, have a human-bear interaction plan and know what to do if a bear is encountered. Contact USFWS Marine Mammals Management (MMM) (phone: 800-362-5148; e-mail: FW7_AK_Marine_Mammals@fws.gov) with any questions about developing a plan.

f. If a polar bear is injured or killed while conducting the activities authorized under this permit:

i. Such activity must be suspended unless it could result in the death of the animal(s), as specified in the permit, being rescued.

ii. Immediately (within 24 hours) contact the USFWS for instruction (see contact information below).

iii. For any activities which result in the injury or death of a polar bear, a written report must be submitted to USFWS Division of Management Authority (DMA) and the appropriate regional or field office (see contact information below) detailing the circumstances that led to the injury or mortality and suggesting measures to prevent or minimize the chances of future injuries or mortalities. A necropsy (if applicable) should be performed by a qualified veterinarian and details of the cause of death included in the written report.

iv. The USFWS may subsequently recommend continuation of the suspended activities with any necessary modifications/conditions.

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Northern Sea Otters

g. For activities in areas where sea otters may be encountered, the Permit Holder or PI must follow these conditions to prevent interactions with sea otters:

   i. Obey all speed zones and drive slowly in all areas with sea otters. Boat strikes are a cause of death for sea otters.

   ii. If sea otters are observed prior to an encounter, avoid approaching them directly and maintain a minimum distance of 20 meters (66 feet) at all times.

   iii. If sea otters approach, place boat engines in neutral and allow the animals to pass.

   iv. If the sea otters are located during aerial surveys, altitudes should be increased to 500 feet for manned aircraft or 330 feet for UAS, and surveys should cease if the sea otters appear to be affected by the over flight.

h. During capture events in waters where sea otters may be present, the Permit Holder or PI must follow these conditions to prevent interactions with sea otters:

   i. Netting activities must cease if a sea otter is sighted within 100 meters.

   ii. If a sea otter is accidentally captured:

      a. Devote all staff efforts to freeing the animal. Remember that a sea otter must surface approximately every few minutes. The Permit Holder or PI shall brief all participants to ensure that they understand that freeing a sea otter can be dangerous. This briefing will caution people to keep fingers out of the nets, that no jewelry should be worn, that sea otters can reach all parts of their body with their mouth (due to their lack of blubber and need to constantly groom) and deliver a bite that could result in serious injury, and that they give the animal adequate time and room to breathe as they are freeing it.

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b. As appropriate, turn off the vessel motors or put the engine in neutral. Propellers can seriously injure or kill sea otters.

c. Release tension on the net to allow the animal the opportunity to free itself. Exercise caution when attempting to assist the animal. Sea otters can thrash violently if captured or entangled in a net. Quick action is essential to protect the sea otter. Ensure that the animal does not escape with net still attached to it.

d. Contact the USFWS offices to report any gear or vessel interactions with sea otters.

iii. If a sea otter is injured or killed during research activities, in addition to the requirements in Condition A.2.b of the permit:

a. Research must be suspended and the U.S. Fish and Wildlife Service (USFWS) immediately contacted (see contact information below); and

b. Within 30 days of the injury or mortality, a report detailing the circumstances that led to the injury or mortality and suggesting measures to prevent or minimize the chances of future injuries or mortalities must also be sent to: USFWS Division of Management Authority (DMA) (phone: 1-800-358-2104; fax: 703-358-2281, e-mail: Permits@fws.gov).

c. In the event of a death of a sea otter, a necropsy should be performed by a qualified veterinarian and details of the cause of death included in the written report in x above.

d. The USFWS may subsequently recommend continuation of the suspended activities with any necessary modifications/conditions.

i. USFWS Offices for Marine Mammal Encounters and Reporting

For All Species:

USFWS/Division of Management Authority, Branch of Permits, MS: IA, 5275 Leesburg Pike, Falls Church, VA 22041-3803 (phone 1-800-358-2104; fax 703-358-2281)

For Northern Sea Otters in Alaska, Pacific Walrus, and Polar Bears:

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USFWS Marine Mammals Management Office, 1011 East Tudor Road, MS-341, Anchorage, AK 99503 (phone 907-786-3800 or 800-362-5148; fax 907-786-3816)

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