



Introduction

The Alaska Fisheries Science Center (AFSC) of the National Marine Fisheries Service (NMFS), National Oceanic & Atmospheric Administration (NOAA), conducts research on marine mammals off the coasts of Alaska, Washington, Oregon, and California. Research projects focus on ecology and behavior, population dynamics, life history, and status and trends. Research results assist NOAA and other agencies in making science-informed decisions for sound management of marine resources. This document is intended to show research planned for the calendar year shown and thus some projects may change in scope and/or timing, or be canceled.

CETACEAN RESEARCH

Marine Mammal Passive Acoustic Recorders

Location Bering, Beaufort, and Chukchi Seas, and Gulf of Alaska
Timing May, August, September, October
Funding NOAA, Alaska Ocean Observing System (AOOS), Bureau of Ocean Energy Management (BOEM), U.S. Navy, North Pacific Research Board (NPRB), Marine Mammal Commission
Project This project continues over a decade of passive acoustic monitoring of marine mammals in the Alaskan high Arctic and Bering Sea. Noise levels from anthropogenic sources are also monitored. Most moorings are co-located with long-term oceanographic moorings. Collaborators include NOAA Pacific Marine Environmental Lab, NOAA Resource Assessment and Conservation Engineering, Cornell University, and Department of Fisheries and Oceans Canada.
Contact Catherine.Berchok@noaa.gov

Cook Inlet Beluga Aerial Surveys

Location Cook Inlet
Timing November 2021, March 2022, June 2022
Funding NOAA, BOEM
Project Aerial surveys will be conducted to estimate winter distribution of belugas in November 2021 and March 2022. A survey to determine abundance and trend will be conducted in June 2022. Tracklines are flown along the entire coast north of Augustine Island and sawtooth tracklines cross the inlet. Observations will be compared to passive acoustic recordings obtained year-round at set locations within the inlet.
Contact Kim.Shelden@noaa.gov

Cook Inlet Beluga Acoustic Monitoring

Location Cook Inlet
Timing May – June, September – October
Funding NOAA, BOEM, ADF&G
Project Passive acoustic recorders will be used in Cook Inlet to identify feeding grounds for the endangered beluga whale population and to characterize potential noise-related disturbance. Recordings will also identify year-round spatial habitat use by other cetaceans such as harbor and Dall's porpoises, and killer whales. This project will maintain thirteen acoustic mooring packages serviced twice per year for its 14th year.
Contact Paul.Wade@noaa.gov

Cook Inlet Beluga Biopsy Study

Location Cook Inlet
Timing August – September
Funding NOAA
Project A boat-based biopsy survey will be conducted to provide information on the sex, genetics, diet, and hormonal status of individual beluga whales. In collaboration with GREMM scientists, blubber samples will be collected using a darting gun. Photographs of each biopsied whale, and associated whales, will be taken and analyzed to identify individuals, which will be matched to the existing photo-ID catalog.
Contact Paul.Wade@noaa.gov

Cook Inlet Beluga Aerial Photogrammetry Study

Location Cook Inlet
Timing August – September
Funding NOAA
Project: Photogrammetry surveys will be conducted to estimate age classes and an index of beluga calf production in late August/early September. A hexacopter uncrewed aircraft system equipped with a high-resolution camera will be used to photograph beluga groups. Individuals will be measured to provide blowhole to dorsal ridge lengths, and whales will be assigned to calf, juvenile, and adult age classes based on relative lengths.
Contact Paul.Wade@noaa.gov

Investigating the Cook Inlet Beluga Behavioral Response to Acoustic Disturbance in Feeding Grounds

Location Upper Cook Inlet
Timing July – August
Funding NOAA, ADF&G
Project Suction cup tags will be deployed on free ranging beluga whales in their main summer feeding ground to characterize their foraging behavior and any responses to exposures of vessel noise. The project aims to better understand feeding habitat preferences, prey selection, and the potential for reduction of foraging opportunities when human disturbance occurs in their feeding grounds.
Contact Manuel.Castellote@noaa.gov

Eastern Bering Sea (EBS) Beluga Abundance Survey

Location Norton Sound and Yukon River Delta
Timing June 2022 or 2023
Funding NOAA, Alaska Beluga Whale Committee (ABWC)
Project The EBS beluga stock resides in the vicinity of Norton Sound and the Yukon River Delta during the ice-free period from spring breakup to autumn freeze up. An aerial line-transect abundance survey of the Eastern Bering Sea beluga stock will be conducted in late June in either 2022 or 2023.
Contact Megan.Ferguson@noaa.gov

Harbor Porpoise Monitoring

Location Auke Bay, Southeast Alaska
Timing March - June
Funding NOAA
Project: Passive acoustic moorings are proposed for deployment in Auke Bay and nearby comparison sites to determine harbor porpoise occurrence and space use in the area. Resulting acoustic and visual observation data will be used to determine the location of an experiment planned for 2023 to understand the efficacy of acoustic pingers in deterring harbor porpoise.
Contact Kim.Goetz@noaa.gov

PINNIPED RESEARCH

Steller Sea Lion Vessel-based Studies Remote Camera Install



Location Eastern Aleutian Islands and Western Gulf of Alaska
Timing May
Funding NOAA
Project A chartered vessel will be used to access three Steller sea lion rookeries: Sugarloaf, Marmot and Ugamak. Scientists will install remote cameras to collect images of sea lions on these long term study sites. The cameras will replace field camps which are no longer occupied.
Contact Tom.Gelatt@noaa.gov

Steller Sea Lion Vessel-based Studies Eastern Aleutians



Location Eastern Aleutian Islands
Timing June – July
Funding NOAA
Project To estimate survival, reproductive rates, and movements of Steller sea lions, direct observations of sea lions will be made in the eastern Aleutians.
Contact Tom.Gelatt@noaa.gov

Steller Sea Lion Vessel-based Studies



Location Western and Central Aleutian Islands
Timing June – July
Funding NOAA
Project To estimate survival, reproductive rates, and movements of Steller sea lions, direct and indirect (from remote camera installations) observations of sea lions will be made in the western and central Aleutian Islands west of Adak, Alaska. An uncrewed aerial system will be used to supplement crewed aircraft aerial surveys to obtain sea lion counts for determining abundance and distribution. Steller sea lion pups will be captured and sampled for studies of condition and contaminants burden.
Contact Tom.Gelatt@noaa.gov

Steller Sea Lion Aerial Surveys



Location Eastern and Central Aleutian Islands
Timing June – July
Funding NOAA
Project High-resolution aerial photographic surveys of Steller sea lions will be conducted using crewed and uncrewed aircraft during the peak of the breeding season. Sea lion pups, juveniles, and adults hauled out on terrestrial sites will be surveyed throughout the Aleutian Islands west of Samalga Pass using crewed aircraft, while uncrewed aircraft associated with a research vessel will be used in the western and central Aleutian Islands. Time series of counts dating from the mid-1970s are used to track overall and regional trends in population abundance to monitor recovery of the endangered western population.
Contact Tom.Gelatt@noaa.gov

Northern Fur Seal Vital Rates Studies



Location Pribilof Islands
Timing August – November
Funding NOAA
Project Previously tagged seals will be observed to collect information for demographic studies of survival and reproduction by seasonal workers on both islands. In late fall (Sept-Oct), a cohort of pups and adult females will also be tagged.
Contact Tom.Gelatt@noaa.gov

Northern Fur Seal Population Assessment



Location Pribilof Islands
Timing July – August
Funding NOAA
Project Counts will be conducted in early July of adult male fur seals on both Pribilof Islands. In August, a sample of pups will be temporarily marked and counted to provide an estimate of pup production. In the summer of 2022 test flights with uncrewed aircraft will also be tested as a tool for assessing population size.
Contact Tom.Gelatt@noaa.gov

Vessel-based Studies of Ice-associated Seals



Location Bering Sea, ice edge zone
Timing April
Funding NOAA
Project Ribbon, spotted, and bearded seals will be tagged with satellite-linked transmitters and sampled to monitor their abundance, health, condition, foraging ecology, and habitat requirements. Small boats based on the NOAA Research Vessel *Oscar Dyson* will be used to access the seals on the ice floes, and a small uncrewed aircraft system (sUAS), will be used to collect images.
Contact Michael.Cameron@noaa.gov

Uncrewed Surveys of Pinnipeds in the Aleutian Islands



Location Western Aleutian Islands (Attu, Agattu, Alaid, Nizki, and Shemya Islands)
Timing September
Funding NOAA
Project A medium-range, fixed-wing uncrewed aircraft system (UAS) based at Eareckson Air Station, Shemya Island, will be used to survey Steller sea lion and harbor seal sites in the western Aleutian Islands. Our goals are to evaluate the feasibility of transitioning from crewed to uncrewed aerial surveys of pinnipeds in remote parts of Alaska to reduce risks to NOAA personnel and aircraft.
Contact Michael.Cameron@noaa.gov

Harbor Seal Aerial Surveys

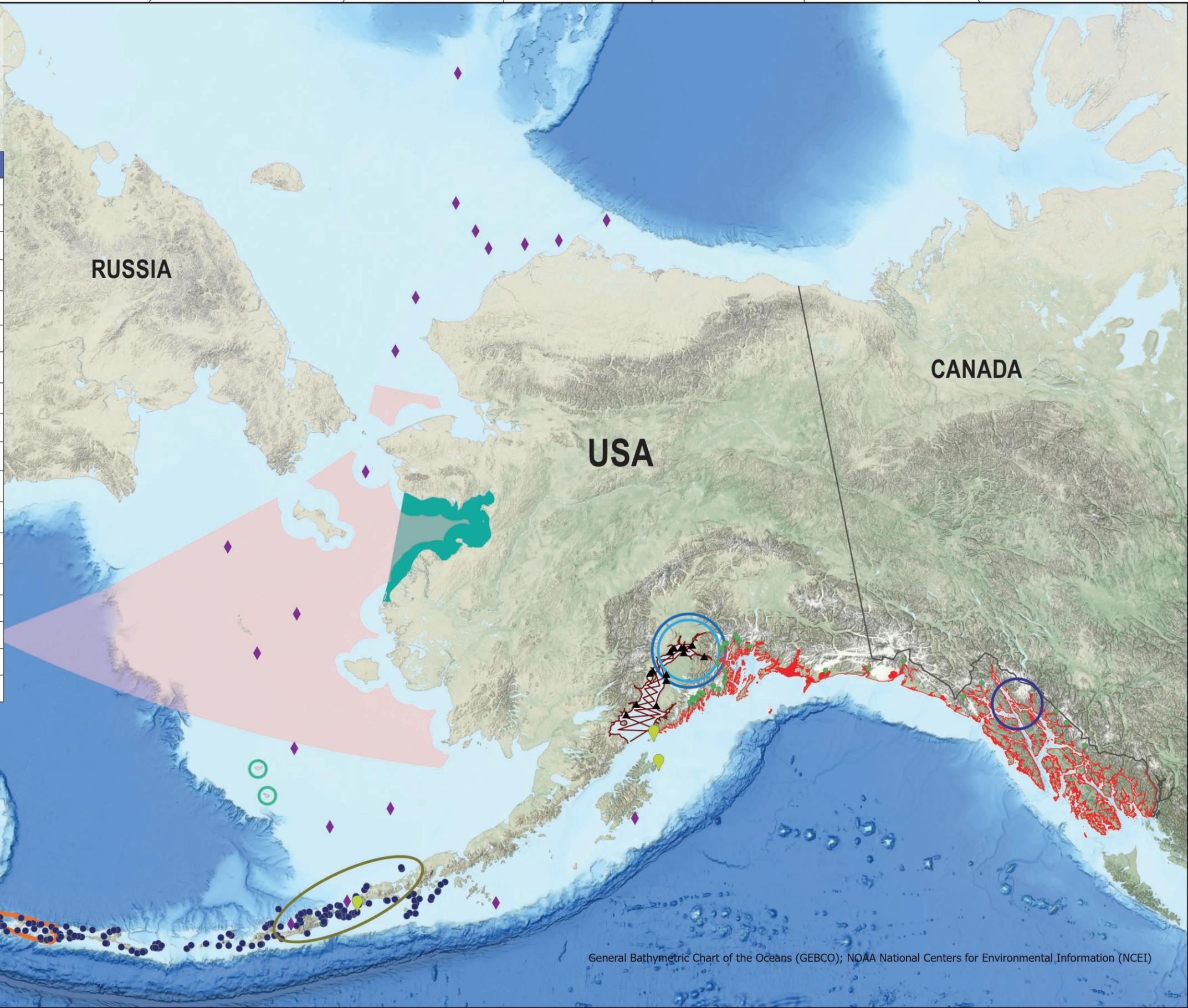


Location Prince William Sound, Gulf of Alaska, and Southeast Alaska
Timing August, September
Funding NOAA
Project Aerial photographic surveys will be conducted using crewed aircraft to estimate the distribution and abundance of harbor seals in Alaska. We will conduct these surveys using a NOAA Twin Otter aircraft and collect visual and infrared imagery of harbor seals resting on ice floes within glacial fjords and along coastal habitats in Prince William Sound, Gulf of Alaska, and Southeast Alaska.
Contact Michael.Cameron@noaa.gov

For more information on marine mammal research conducted by the Alaska Fisheries Science Center please visit the Alaska Fisheries Science Center's Marine Mammal Laboratory website at: <https://www.fisheries.noaa.gov/about/marine-mammal-laboratory>

NOAA FISHERIES
 Alaska Fisheries Science Center
2022 Alaska Marine Mammal Field Work

| Months in which field work will occur (2022) | | M | A | M | J | J | A | S | O | N | |
|--|--|--------------------------------------|---|---|---|---|---|---|---|---|--|
| ◆ | Marine Mammal Passive Acoustic Recorders | | | ✓ | | | ✓ | ✓ | ✓ | | |
| — | Cook Inlet Beluga Aerial Surveys | November 2021, March 2022, June 2022 | | | | | | | | | |
| ▲ | Cook Inlet Beluga Acoustic Monitoring | | | ✓ | ✓ | | | ✓ | ✓ | | |
| ○ | Cook Inlet Beluga Biopsy and Photogrammetry Study | | | | | | ✓ | ✓ | | | |
| ○ | Investigating the Cook Inlet Beluga Behavioral Response to Acoustic Disturbance in Feeding Grounds | | | | | ✓ | ✓ | | | | |
| ■ | Eastern Bering Sea (EBS) Beluga Abundance Survey | June 2022 or 2023 | | | | | | | | | |
| ○ | Harbor Porpoise Monitoring | ✓ | ✓ | ✓ | ✓ | | | | | | |
| ● | Steller Sea Lion Vessel-based Studies Remote Camera Install | | | ✓ | | | | | | | |
| ○ | Steller Sea Lion Vessel-based Studies - Eastern Aleutian Islands | | | | ✓ | ✓ | | | | | |
| — | Steller Sea Lion Vessel-based Studies | | | | ✓ | ✓ | | | | | |
| ● | Steller Sea Lion Aerial Surveys (UAS) | | | | ✓ | ✓ | | | | | |
| ● | Steller Sea Lion Aerial Surveys | | | | ✓ | ✓ | | | | | |
| ○ | Northern Fur Seal Vital Rates Studies | | | | | | ✓ | ✓ | ✓ | ✓ | |
| ○ | Northern Fur Seal Population Assessment | | | | | ✓ | ✓ | | | | |
| ■ | Vessel-based Surveys of Ice-associated Seals | | ✓ | | | | | | | | |
| ■ | Uncrewed Surveys of Pinnipeds in the Aleutian Islands | | | | | | | ✓ | | | |
| ■ | Harbor Seal Aerial Surveys (Coastal) | | | | | | ✓ | ✓ | | | |
| ● | Harbor Seal Aerial Surveys (Glacial Fjord Sites) | | | | | | ✓ | ✓ | | | |



General Bathymetric Chart of the Oceans (GEBCO); NOAA National Centers for Environmental Information (NCEI)