

PINNIPED RESEARCH

Harbor Seal Aerial Surveys

- Location** Coastal Alaska Haulouts
- Timing** June, August – September
- Funding** NOAA
- Project** Aerial photographic surveys will be conducted to estimate the distribution and abundance of harbor seals in Alaska. The statewide harbor seal range will be sampled, with highest priority given to areas with the highest densities of seals, areas where seal abundance is known to be declining, and areas where existing data are sparse (e.g., western Aleutian Islands).
- Contact** Peter.Boveng@noaa.gov

Harbor Seal Vessel-based Studies

- Location** Disenchantment Bay
- Timing** June
- Funding** NOAA, National Park Service (NPS)
- Project** In collaboration with the NPS, ice-associated harbor seals will be instrumented with satellite-linked tags to study seal activity patterns in areas frequented by tour ships. Small boats will launch daily from a charter vessel and conduct seal capture operations in the floating ice emanating from Hubbard Glacier.
- Contact** Peter.Boveng@noaa.gov

CETACEAN RESEARCH

Cook Inlet Beluga Vessel-based Studies

- Location** Upper Cook Inlet
- Timing** August – September
- Funding** NOAA
- Project** Unmanned aircraft flights and biopsy sampling will be conducted from a small boat in Cook Inlet. Aerial photographs of Cook Inlet beluga whales will be analyzed to identify individual whales and to assign whales to calf, juvenile, and adult age classes based on length, with the goal of providing an annual calf production index. Biopsy samples will be analyzed for hormone levels to determine sexual maturity and pregnancy status, for contaminant burdens, and for stable isotopes and fatty acids for diet studies. Collaborators: Group for Research and Education on Marine Mammals (GREMM).
- Contact** Phillip.Clapham@noaa.gov

Cook Inlet Beluga Passive Acoustic Recorders

- Location** Cook Inlet
- Timing** May – June, September – October
- Funding** NOAA
- Project** Passive acoustic recorders will be used in Cook Inlet to characterize the soundscape and identify major sources of anthropogenic noise. Recordings will also identify year-round spatial habitat use by Cook Inlet belugas in their critical habitat. This project will service three currently deployed mooring packages and deploy one additional package in the Susitna River Delta, and deploy four new mooring packages in other locations (Lower Knik Arm, Kenai River mouth, and mid-inlet between the Forelands and Kalgin Island).
- Contact** Phillip.Clapham@noaa.gov

Eastern Bering Sea Beluga Aerial Surveys

- Location** Norton Sound
- Timing** June
- Funding** NOAA
- Project** This study consists of aerial surveys targeting beluga whales in the eastern Bering Sea, specifically Norton Sound and Yukon River Delta. Information from these aerial surveys will be used to revise estimates of abundance and trends in abundance for the Eastern Bering Sea beluga stock, and to investigate distribution of this stock in relation to environmental and anthropogenic factors. This study will build on previous research conducted by Alaska Beluga Whale Committee between 1992 and 2000. Estimates of abundance and trends in abundance are critical inputs to conservation and management decisions for this stock.
- Contact** Phillip.Clapham@noaa.gov

Marine Mammal Passive Acoustic Recorders

- Location** Bering and Chukchi Seas
- Timing** August – September
- Funding** NOAA, Bureau of Ocean Energy Management (BOEM), North Pacific Research Board (NPRB)
- Project** The passive acoustics group at the AFSC Marine Mammal Laboratory, with funding primarily from BOEM, has maintained nearly a decade of long-term passive acoustic monitoring in the Alaskan Arctic and Bering Sea. These moorings have been distributed throughout the main migratory pathways and in wintering and summering grounds of many Arctic and subarctic marine mammals. Many of these moorings have been co-located with long-term biophysical moorings, providing concurrent sampling of lower and upper trophic level ecosystem components. Collaborators: NOAA Pacific Marine Environmental Lab, NOAA Resource Assessment and Conservation Engineering, Cornell University, and Department of Fisheries and Oceans Canada.
- Contacts** Phillip.Clapham@noaa.gov, Catherine.Berchok@noaa.gov

Aerial Surveys of Arctic Marine Mammals

- Location** Eastern Chukchi and Western Beaufort Seas
- Timing** July – October
- Funding** NOAA, Bureau of Ocean Energy Management (BOEM)
- Project** The BOEM-funded Aerial Surveys of Arctic Marine Mammals (ASAMM) project conducts aerial surveys for marine mammals in the Beaufort and Chukchi seas. Data from these surveys are used to provide real-time data on marine mammal distribution, relative abundance, habitat use, and behavior.
- Contact** Phillip.Clapham@noaa.gov

Killer Whale Predation Studies

- Location** Bering Sea and Aleutian Islands
- Timing** June – July
- Funding** NOAA, Pollock Conservation Cooperative Center (PCCRC), North Pacific Fisheries Foundation (NPFF)
- Project** This field work will deploy LIMPET SPLASH satellite tags to track killer whale movements and diving behavior. Biopsy samples from killer whales and samples from potential prey will be analyzed for stable isotopes to evaluate killer whale prey.
- Contact** Phillip.Clapham@noaa.gov



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.

PINNIPED RESEARCH

Steller Sea Lion Vessel-based Studies

- Location** Western, Central, and Eastern Aleutian Islands
- Timing** June – July
- Funding** NOAA
- Project** To estimate survival, reproductive rates, and movements of Steller sea lions, pups will be marked at four rookeries and direct and indirect (from remote camera installations) observations will be made in the western, central, and eastern Aleutian Islands. An unmanned aerial vehicle will be used to obtain sea lion counts to determine abundance and distribution to supplement manned aircraft aerial surveys, and scats will be collected to investigate diet.
- Contact** Tom.Gelatt@noaa.gov

Steller Sea Lion Aerial Surveys

- Location** Gulf of Alaska and Aleutian Islands
- Timing** June – July
- Funding** NOAA
- Project** High-resolution aerial photographic surveys of Steller sea lions will be conducted, using manned and unmanned aircraft. Sea lion pups, juveniles, and adults hauled out on terrestrial sites will be surveyed throughout most of the Gulf of Alaska (southeast Alaska through the Kodiak Archipelago) and in portions of the Aleutian Islands during the peak of the breeding season. Time series of counts dating from the mid-1970s are used to track overall and regional trends in population abundance for the two stocks of Steller sea lion in Alaska, and to monitor recovery of the endangered western population.
- Contact** Tom.Gelatt@noaa.gov

Alaska Fisheries Science Center 2017 Alaska Marine Mammal Field Work

Steller Sea Lion Land-based Studies

- Location** Gulf of Alaska and Aleutian Islands
- Timing** May – July
- Funding** NOAA
- Project** Sea lions will be observed at the Marmot Island and Ugamak Island rookeries to estimate and monitor vital rates (survival and natality), breeding behavior and phenology, and movements of Steller sea lions. The determination of changes in rates of survival, reproduction, and emigration/immigration is fundamental to understanding potential causes of Steller sea lion declining abundance in western Alaska, and provides a mechanism to assess its recovery.
- Contact** Tom.Gelatt@noaa.gov

Northern Fur Seal Foraging and Diet Studies

- Location** Pribilof Islands and Bering Sea
- Timing** July – October
- Funding** NOAA, University of Washington
- Project** On the Pribilof Islands, northern fur seals will be equipped with satellite tracking instruments from July to October to examine the influence of prey distribution and abundance on fur seal foraging behavior. To measure prey distribution and abundance, an acoustic prey survey will be conducted in July and August using a SailDrone, a wind and solar-powered autonomous sailing vehicle. The results of this study will contribute to our understanding of relationships between fur seals and their primary prey, walleye pollock, during the critical summer breeding period.
- Contact** Tom.Gelatt@noaa.gov

Northern Fur Seal Demographic Studies

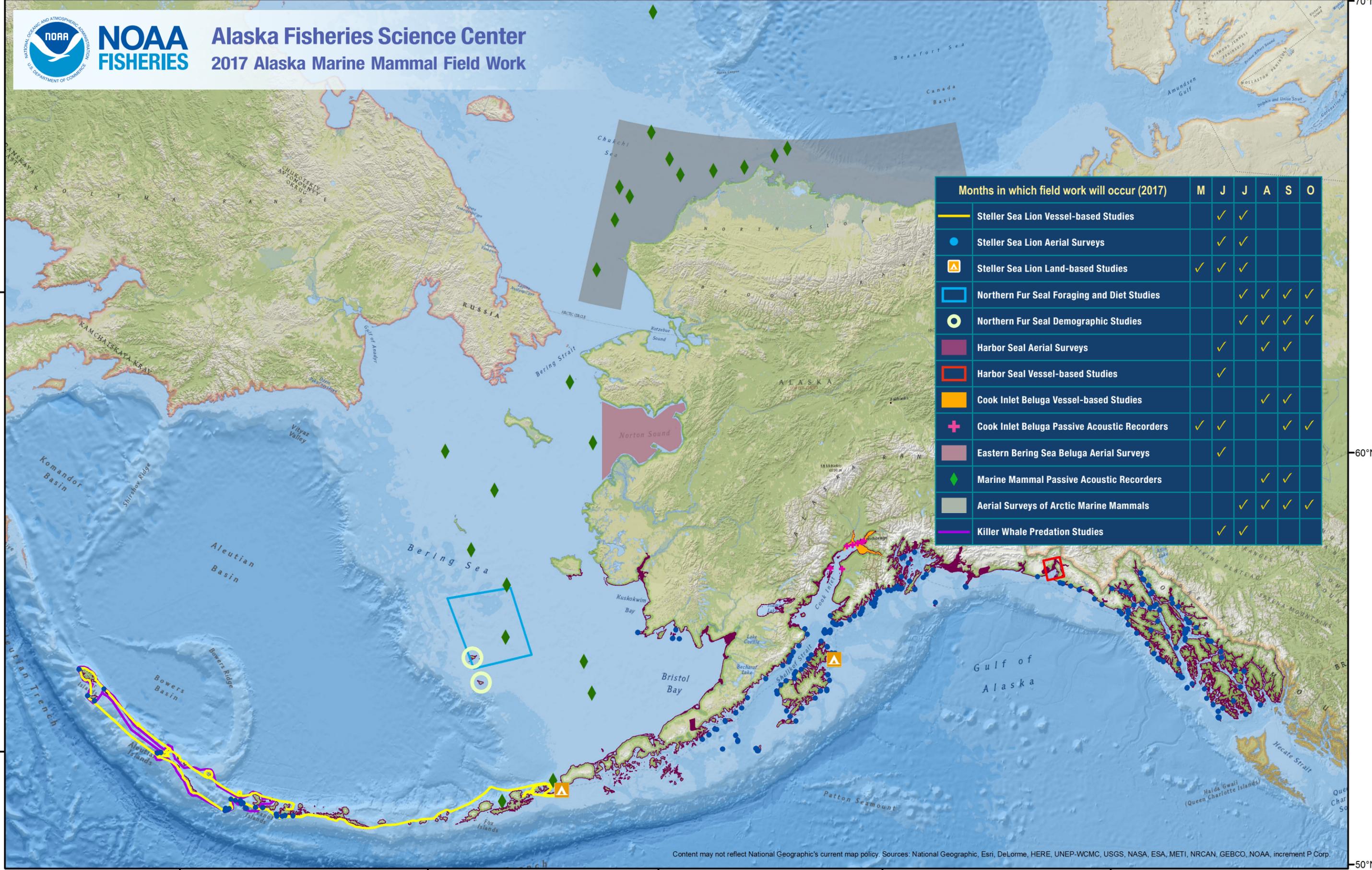
- Location** Pribilof Islands
- Timing** July – October
- Funding** NOAA
- Project** Counts of adult male northern fur seals on the Pribilof Islands will be made to assess status and trends of the Eastern Pacific stock. Seals will also be sampled, tagged, and observed from July to October to determine demographic mechanisms underlying ongoing population declines.
- Contact** Tom.Gelatt@noaa.gov



150°E 160°E 170°E 180° 170°W 160°W 150°W 140°W 130°W 120°W 110°W 70°N 60°N 50°N



Alaska Fisheries Science Center 2017 Alaska Marine Mammal Field Work



Months in which field work will occur (2017)	M	J	J	A	S	O
Steller Sea Lion Vessel-based Studies		✓	✓			
Steller Sea Lion Aerial Surveys		✓	✓			
Steller Sea Lion Land-based Studies	✓	✓	✓			
Northern Fur Seal Foraging and Diet Studies			✓	✓	✓	✓
Northern Fur Seal Demographic Studies			✓	✓	✓	✓
Harbor Seal Aerial Surveys		✓		✓	✓	
Harbor Seal Vessel-based Studies		✓				
Cook Inlet Beluga Vessel-based Studies				✓	✓	
Cook Inlet Beluga Passive Acoustic Recorders	✓	✓			✓	✓
Eastern Bering Sea Beluga Aerial Surveys		✓				
Marine Mammal Passive Acoustic Recorders				✓	✓	
Aerial Surveys of Arctic Marine Mammals			✓	✓	✓	✓
Killer Whale Predation Studies	✓	✓				

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180° 170°W 160°W 150°W 140°W