

PINNIPED RESEARCH CON'T

Ice-Associated Seal Vessel-based Studies

Location	Bering Sea, Marginal Ice Zone
Timing	April
Funding	NOAA/AFSC
Project	Ribbon and spotted seals will be instrumented with satellite-linked tags to study their seasonal movements, foraging ecology and dive behavior. Seals will also be sampled for genetics and to assess their health and condition. Small boats based off of the NOAA Vessel Oscar Dyson will provide access to the seal's ice floes.
Contact	Peter.Boveng@noaa.gov

Ice-Assoc. Seal & Polar Bear Aerial Survey

Location	Chukchi Sea
Timing	April – June
Funding	NOAA/AFSC, NOAA/OAR, USFWS
Project	Aerial surveys will be conducted to estimate the distributions and abundances of bearded seals, ringed seals and polar bears. Manned aircraft, based from Barrow and Kotzebue, will utilize high-resolution visual cameras and thermal sensors to survey the sea ice of the U.S. Chukchi Sea. Similar surveys will be conducted in Russian waters to provide for comprehensive estimates.
Contact	Peter.Boveng@noaa.gov

Harbor Seal Studies – Glacial Fjords

Location	Disenchantment Bay
Timing	June
Funding	NPS, NOAA/AFSC
Project	In collaboration with the National Park Service, 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 Yakutat and conduct capture operations in the floating ice near Hubbard Glacier. The goal of the study is to better predict the short- and long-term energetic effects of vessel traffic on these seals.
Contact	Peter.Boveng@noaa.gov

CETACEAN RESEARCH

SE Alaska Harbor Porpoise Research

Location	Inland waters of southeast Alaska
Timing	May - September
Funding	NOAA/OPR
Project	Abundance and stock structure studies will be conducted in May and June on harbor porpoise inhabiting the inland waters of Southeast Alaska. The studies will include both biopsy sampling of harbor porpoise and the collection of water samples in the presence of this species to assess the feasibility of using environmental DNA to address questions on cetacean stock structure. Acoustic studies will also be conducted to determine if signals produced by harbor porpoise and Dall's porpoise can be differentiated.
Contact	Phillip.Clapham@noaa.gov

Killer Whale Predation Studies

Location	Central and western Aleutian Islands
Timing	June – July
Funding	NOAA/AFSC, Pollock Conservation Cooperative Research Center (PCCRC), North Pacific Fisheries Foundation (NPF)
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

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

Marine Mammal Passive Acoustic Recorders

Location	Unimak Pass to Point Barrow, Alaska
Timing	September – October
Funding	NOAA, BOEM
Project	This BOEM-funded field work combines the Arctic Whale Ecology Study (ARCWEST) and the Chukchi Acoustics, Oceanography, and Zooplankton Study: Hanna Shoal (CHAOZ-X) projects. Data collected include measurements of marine mammal acoustics, oceanography, and zooplankton. ARCWEST investigates the transport of cetacean prey north from the Bering Strait as well as cetacean distribution and abundance. CHAOZ-X investigates the circulation of water and the abundance of large planktonic prey around Hanna Shoal. Collaborators: NOAA's Pacific Marine Environmental Lab and Cornell University (CHAOZ-X only).
Contacts	Phillip.Clapham@noaa.gov Catherine.Berchok@noaa.gov

Cook Inlet Beluga Aerial Surveys

Location	Cook Inlet
Timing	Late May-Early June
Funding	NOAA/AFSC
Project	Aerial surveys will be conducted to estimate distribution and abundance of belugas in Cook Inlet. Surveys occurred annually from 1993 through 2012, after which biennial surveys began in 2014. Tracklines are flown along the entire coast, including islands, and sawtooth tracklines cross the inlet. Observer counts and video records of counting passes are fundamental to documenting the trend in abundance for this endangered population.
Contact	Phillip.Clapham@noaa.gov



Introduction

The Alaska Fisheries Science Center (AFSC) of the National Oceanic & Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS), 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

Northern Fur Seal Studies

Location	Pribilof Islands
Timing	June – October
Funding	NOAA/AFSC
Project	On the Pribilof Islands, counts of adult male fur seals and estimates of pup production will be collected to assess status and trends of the Eastern Pacific stock. Seals will also be tagged and observed during June-October to determine demographic mechanisms underlying ongoing population declines, and some will be outfitted with satellite-linked instruments to collect movement and diving behavior data during the summer breeding season and winter migrations.
Contact	Tom.Gelatt@noaa.gov

Harbor Seal Aerial Surveys

Location	Coastal Alaska haulouts
Timing	August – September
Funding	NOAA/AFSC
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 on 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 Aleutians).
Contact	Peter.Boveng@noaa.gov

Harbor Seal Vessel-based Studies

Location	Aleutian Islands
Timing	September – October
Funding	NOAA/AFSC
Project	Harbor seals will be instrumented with satellite-linked tags to study the seals' seasonal movements, foraging ecology, and dive behavior. Small boats based off of a charter vessel will provide access to the haul out sites on land.
Contact	Peter.Boveng@noaa.gov

Alaska Fisheries Science Center 2016 Alaska Marine Mammal Field Work

Steller Sea Lion Aerial Survey

Location	Gulf of Alaska and Aleutian Islands
Timing	June – July
Funding	NOAA/AFSC
Project	A high-resolution aerial photographic survey will be conducted using manned and unmanned aircraft, of Steller sea lion pups, juveniles, and adults hauled out on terrestrial sites throughout the western Gulf of Alaska and 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 Steller sea lion population.
Contact	Tom.Gelatt@noaa.gov

Steller Sea Lion Vessel-based Studies

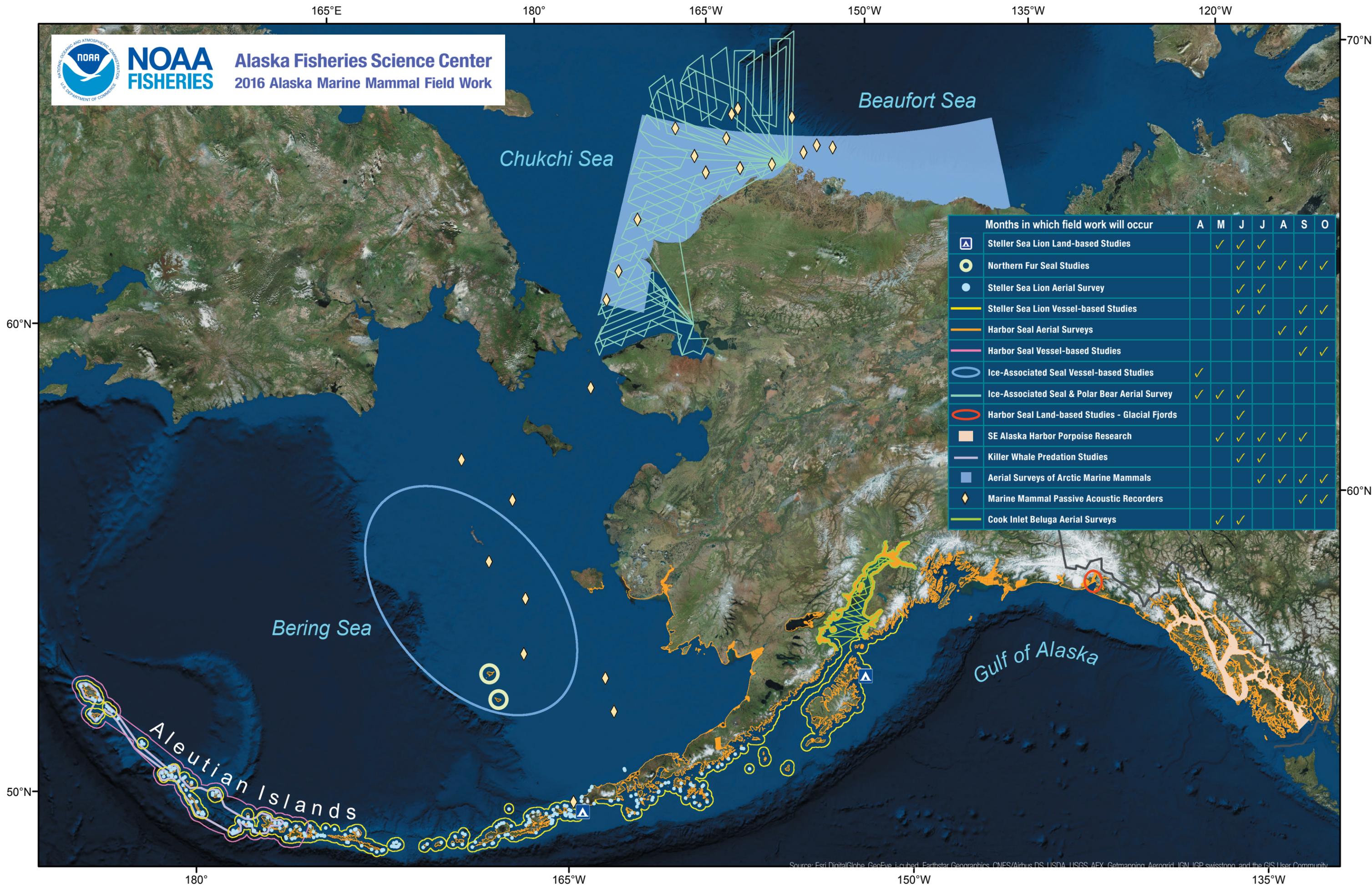
Location	Gulf of Alaska and Aleutian Islands
Timing	June – July, September – October
Funding	NOAA/AFSC
Project	To estimate survival and reproductive rates and movements of sea lions, direct and indirect (from remote camera installations) observations will be made. An unmanned aerial vehicle will be used to obtain sea lion counts to determine abundance and distribution to supplement manned aircraft aerial surveys, and scats will be collected to investigate diet. During September-October in the western-central Aleutian Islands, adult females will be captured to attach satellite-linked instruments that track movements and diving behavior.
Contact	Tom.Gelatt@noaa.gov

Steller Sea Lion Land-based Studies

Location	Gulf of Alaska and Aleutian Islands
Timing	May – July
Funding	NOAA/AFSC
Project	Sea lions will be observed at 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, or emigration/immigration is fundamental to understanding potential causes of the Steller sea lion declining abundance in Alaska and provides a mechanism to assess its recovery.
Contact	Tom.Gelatt@noaa.gov



Alaska Fisheries Science Center
2016 Alaska Marine Mammal Field Work



Months in which field work will occur		A	M	J	J	A	S	O
	Steller Sea Lion Land-based Studies		✓	✓	✓			
	Northern Fur Seal Studies			✓	✓	✓	✓	✓
	Steller Sea Lion Aerial Survey			✓	✓			
	Steller Sea Lion Vessel-based Studies			✓	✓		✓	✓
	Harbor Seal Aerial Surveys					✓	✓	
	Harbor Seal Vessel-based Studies						✓	✓
	Ice-Associated Seal Vessel-based Studies	✓						
	Ice-Associated Seal & Polar Bear Aerial Survey	✓	✓	✓				
	Harbor Seal Land-based Studies - Glacial Fjords			✓				
	SE Alaska Harbor Porpoise Research		✓	✓	✓	✓	✓	
	Killer Whale Predation Studies			✓	✓			
	Aerial Surveys of Arctic Marine Mammals				✓	✓	✓	✓
	Marine Mammal Passive Acoustic Recorders						✓	✓
	Cook Inlet Beluga Aerial Surveys		✓	✓				

Source: Esri DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEY, Getmapping, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community