

Alaska Wildlife Action Plan

What is a wildlife action plan?

Congress asked each state to develop a wildlife action plan, known technically as a comprehensive wildlife conservation strategy (CWCS). These proactive plans examine the health of wildlife and prescribe actions to conserve wildlife and vital habitat before they become more rare and more costly to protect.

Alaska snapshot

Geography: At 365 million acres in land area, Alaska is roughly one-fifth the size of the 48 contiguous states. It contains over a third of the United States' coast and, with over 3 million lakes and extensive wetlands, nearly half the nation's surface waters.

Landscape: Land ownership is largely public (roughly 64% federal, 25% state), with the rest held by Native corporations (10%) and others (0.7%). About 53% of the state is designated in conservation units, from national parks, sanctuaries, and refuges focusing on landscape and species conservation to state forests and other lands designated for multiple uses including resource extraction. Only 18 species (17 animals, 1 plant) are listed as threatened or endangered.

Wildlife highlights: Alaska's location and largely undeveloped landscapes provide productive areas of habitat for many species, including migratory birds. Thriving populations of big mammals, including caribou, brown bear, and mountain goat, along with five species of Pacific salmon, still exist in Alaska. Nearly 1,100 vertebrate species regularly occur; Alaska is



Walrus on pack ice, a diminishing habitat/Joel Garlich-Miller, USFWS

also thought to have thousands of invertebrate species in habitats as varied as subterranean caves, marine and intertidal substrates, many terrestrial habitats, and countless rivers, lakes, and bogs. Alaska offers unique opportunities for scientific

study in multi-disciplinary fields like species formation and dispersal, marine productivity, and effects of climate change. Threespine stickleback populations around Cook Inlet provide subjects for international discoveries in evolutionary biology, animal behavior, ecology, and genetics.

Alaska's planning approach

In creating its CWCS, Alaska conducted a broad initial scoping phase. It then gathered specific information from scientific experts and others who have detailed knowledge of certain species or habitats of conservation need, provided an extensive public review of the draft, and cataloged and incorporated comments before finalizing the document. More than 250 people worked together to generate this conservation planning blueprint. Participants looked at needs for wildlife using a species-based approach and created a multiyear strategy designed to better conserve and manage the full spectrum of Alaska's wildlife, promote coordination among

"I'm excited by the results of this planning effort. It will help ensure that we avoid the need to list additional Alaska species as threatened or endangered. Completing the CWCS is a key step in better managing Alaska's fish and wildlife."

– McKie Campbell,
Commissioner, Alaska

Department of Fish and Game



agencies, organizations, and programs and encourage multi-source funding that will enhance and expand Alaska's wildlife conservation toolbox.

Alaska's CWCS outlines conservation goals and proposed actions for a



Threespine stickleback (Jeffrey S. McKinnon)

diverse array of wildlife. Rather than directing attention to the few species known to be in serious decline, the document highlights conservation needs common to large numbers of species and the habitats that support them.

Meanwhile, it provides specific action plans, including needed research, survey, and monitoring efforts, for 74 featured species and species groups ranging from little known cave insects to familiar species such as loons, owls, and whales.

Primary challenges to conserving wildlife in Alaska

Lack of information and compatible data management systems poses a serious challenge to wildlife conservation in Alaska: With some exceptions, mostly among birds, very little scientific information exists for species that are not commercially or recreationally hunted, trapped or fished. Data on many furbearers and game birds is also lacking. In order to effectively conserve Alaska's wildlife, substantial effort must be devoted to collecting baseline information, including spatial data, for a wide array of species, especially those of conservation concern. To be most useful, such information must be collected and stored in compatible formats.

Climate change is affecting Alaska's weather, landforms, people, wildlife, and habitat, and this trend is expected to continue. As forests dry out, the state is experiencing an increase in forest insect outbreaks and the frequency and severity of wildfires. Drying or flooding of wetland and tundra areas may have profound effects on nesting success of many migratory birds and their predators. The ranges of species from more temperate regions,

Wildlife	Total number of species*	Species in need of conservation**	Threatened/endangered listed species
Invertebrates	Unknown	13	
Fish	485	44	
Amphibians	8	6	
Reptiles	4	4	4
Birds	469	242	4
Mammals	105	116	9
Totals	1071	425	17***

*Excludes subspecies

**Includes subspecies and species groups. The 412 vertebrates listed here are a compilation of 61 vertebrate species and species groups identified during species expert meetings, plus species and subspecies found on lists published by 16 state, national and international conservation organizations; typically these species have one or more characteristics that make them vulnerable, such as small, declining, endemic or isolated populations. Experts later identified 13 invertebrates or invertebrate groups to include among the 74 species and groups featured in the CWCS with specific action plans; although little data exists on these animals, some are believed to be fairly common and representative of broader groups of species in terms of their habitat needs.

***Almost all of these species depend heavily, if not entirely, on the marine environment.

Wildlife Highlights

including nuisance species, will likely expand into higher latitudes and elevations, causing major shifts in types of plants and animals across Alaska. Scientists expect some species that depend on sea ice (e.g., polar bears, walrus and ice seals) to decline and possibly go extinct in the next century.

Habitat fragmentation and loss occurs when land alteration (e.g., logging, wetland fill) and urbanization (expanding communities and transportation systems) break up large landscapes into smaller blocks. Adverse effects on wildlife can include altered migration routes, disrupted dispersal, and reduced reproduction; as an example, amphibian species that overwinter in forested areas must be able to reach their spring breeding grounds in order to survive. Newly opened corridors can act as conduits for invasive species, or make a secretive species more visible to its predators. Also, even in very small remote communities, food, trash, and habitat changes linked to human activities can boost numbers of predators like ravens, with serious effects for at-risk species like Bristle-thighed Curlew nesting nearby.

Some of the greatest pressures on wildlife occur in riparian areas and coastal ecoregions, the primary focus of Alaska's growth in human population, development, and tourism. Habitat alteration can affect forest-dwelling animals like Sitka black-tailed deer, little brown bats, Northern flying squirrels, Marbled Murrelets, and songbirds like Townsend's Warbler. In the same way, filling and loss of mudflats and eelgrass beds affects many species, such as Dunlin that depend on ice-free foraging grounds during spring migration, Black Scoters that feed in these areas through the winter, and fish like herring and juvenile salmon that use eelgrass beds as nurseries. For many species, Alaska's lack of baseline data and GIS capability makes documenting effects of fragmentation and urbanization nearly impossible.


Working together for Alaska's wildlife

At the start of the CWCS project, in order to get broad input on process, goals, and species with conservation needs, the planning team reached out to a range of partners including government agencies, conservation interests, landowners, resource users, representatives of the Native community, and the state's 77 fish and game advisory committees, as well as to the general public. This was followed by two-day meetings and months of work with more than 100 scientific experts, peers, and others with Alaskan expertise on species and habitats in 14 major animal groups.

The planning team provided an eight-week window in which to review the draft CWCS, announcing the opportunity via email or letter to nearly 2,000 individuals and groups, and notice to the general public through a press release, newsletters, Alaska's CWCS website, and a notice published in major in-state newspapers. The team considered hundreds of comments received from universities, government agencies, and organizations including The Wildlife Society, Tanana Tribal Council, National Rifle Association, Territorial Sportsmen, Defenders of Wildlife, and Alaska Bird Observatory.

"Alaska is characterized by diversity —in its ecosystems, habitats, and wildlife species. Many species are important for harvest or appreciation by the diversity of peoples, both urban and rural, who live in or visit the state. Diversity also exists among the agencies, organizations, businesses, and individuals involved in managing Alaska's wildlife. Completing a comprehensive wildlife conservation strategy is of major importance in planning for the long term future of Alaska's wildlife."

- David R. Klein, Professor Emeritus,
Institute of Arctic Biology,
University of Alaska Fairbanks



"We were very impressed by how many experts from around Alaska were involved in developing the CWCS. It gives recognition to the fact that local users have valuable information about fish and wildlife, and they care deeply about protecting it."

- David Banks,
Executive Director, The
Nature Conservancy,
Alaska Field Office

Key Habitats	Wildlife (examples)	Issue (examples)	Action (examples)
Sea Ice	Arctic cod; Spectacled Eider; Walrus; Bearded seal	Melting/thinning sea ice; coastal pollution & development; airborne contaminants	Identify & conserve polar bear dens and ringed seal lairs in areas of industrial development, through research, regulation, and education; to reduce impacts from Bering Sea crab fishery, design gear less likely to entangle bowhead whales
Karst Caves	Cave invertebrates; Keen's bat; Long-legged myotis	Land use practices that alter water & landscape quality; tourism pressure	Develop best management practices, including setting water flow reservations, to protect cave watersheds from land altering actions; develop a GIS database of cave locations and geographic areas likely to contain caves
Forests	Rough-skinned newt; Queen Charlotte Goshawk; Red Crossbill; Kenai marten	Habitat loss & fragmentation; increased insect outbreaks & wildfire	Monitor changes in forest cover by compiling data on timber and salvage harvest and reforestation activities on an annual or biennial basis; develop survey & monitoring methods for hard-to-detect forest birds and those with low numbers
Marine and Coastline Habitats	Eelgrass shrimp; Forage fish species; Red-faced Cormorant; Black Oystercatcher	Coastal dredging & development; invasive/ introduced species; spills/ discharges; tourism pressure	Identify remote sensing methods for large-scale mapping/monitoring of eelgrass beds; protect sensitive island ecosystems from introduction of rats, foxes, and reindeer; educate mariners to provide verifiable records of beaked whales across the North Pacific
Tundra	Yellow-billed Loon; Long-tailed Duck; Snowy Owl; Barrow ground squirrel	Contaminants; invasive & introduced species; plant, prey & lake changes	Identify sources of contaminants in loons & prey; following fox removal, reintroduce Rock Ptarmigan to islands they previously inhabited; establish long-term monitoring to identify marmot population shifts in alpine tundra habitats
Wetlands	Western toad; Horned Grebe; Solitary Sandpiper; Rusty Blackbird	Dredge & fill, pollution; habitat change due to use of ATVs; water level & plant changes	Obtain local information on Alaska blackfish distribution, relative abundance, and harvest; develop a central statewide amphibian database; continue Alaska wetlands mapping inventory
Freshwater Aquatic	Yukon floater; River lamprey; Arctic Tern; Dusky shrew	Degraded water quality, quantity, & connectivity; invasive & introduced species	Develop criteria and an approach for identifying juvenile and adult lampreys; identify mussels' host species, and habitats used; inventory & replace blocked culverts

Recommended actions to conserve Alaska's wildlife

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