

Arctic Landscape Conservation Cooperative



During the last half-century, northern Alaska has been one of the most rapidly warming regions on earth. Changes already observed in arctic terrestrial landscapes include rapidly eroding shorelines, melting ground ice, and increased shrub growth at high latitudes. Resource managers are increasingly challenged to anticipate the effects of climate-associated habitat change, and incorporate that understanding into conservation planning. Conservation of species, habitats and ecological processes must be addressed at the landscape scale. The complexity of understanding and responding to broad-scale habitat change demands a collaborative effort that closely links science and conservation.

Putting the Power of Collaboration to Work in Conservation

Land and resource management agencies in Alaska are working together to develop scientific capacity to address climate change and other stressors to Arctic wildlife species and habitats in an integrated fashion within a science conservation partnership called the Arctic Landscape Conservation Cooperative (Arctic LCC).

The Arctic LCC will be a self-directed conservation partnership among the federal, state, and local government agencies, Tribes, nongovernmental organizations, academic institutions and other entities operating within Arctic Alaska and northern Canada. The Arctic LCC will leverage funds, expertise and technology to provide the scientific and technical support necessary for maintaining abundant, diverse and healthy populations of fish, wildlife and plants across the Arctic. The Arctic LCC will be part of a seamless national, and ultimately international, network.

Geography

The geographic scope of the Arctic LCC includes the Arctic Plains and Mountains Bird Conservation Region, which encompasses Arctic Alaska and Canada, and extends into adjacent marine areas of the Beaufort and Chukchi seas. Within Alaska, the Arctic LCC encompasses three ecoregions: the rugged slopes and



Caribou on the 1002 Area of the Arctic Refuge coastal plain, with the Brooks Range mountains in the background by USFWS.

valleys of the Brooks Mountain Range, the rolling hills and plateaus of the Arctic Foothills, and the broad Arctic Coastal Plain, with its vast wetlands and abundant lakes.

Priority Species and Habitats

The Arctic provides breeding grounds for millions of birds (more than 100 species), including species that breed nowhere else in the U.S., and provides habitat for listed species (Steller's and spectacled eiders, polar bear), candidate species (yellow-billed loon and Kittlitz's murrelet), and species of conservation concern including walrus and Pacific black brant. The health of the region's resources is intricately tied to the area's human populations who depend on them to maintain economies and culturally important subsistence activities. The Coastal Plain contains one of the largest blocks of sedge wetland in the circumpolar Arctic (one-quarter of global distribution).

Functions

To meet the partnership goal, the Arctic LCC will:

- Convene multiple partners to collaboratively identify and prioritize target species, species assemblages, and habitats, and develop spatially-explicit resource management goals.

- Facilitate communication between scientists and resource managers and provide a forum for continuous exchange among stakeholders.
- Work with the DOI Climate Science Centers to develop coupled bio-climate models that project how natural resources and processes may change.
- Assess vulnerability of priority species, species assemblages and ecosystems.
- Assemble, translate, and deliver scientific data, analyses, and scientific tools required for conservation design and resource management decisions.
- Assess management options and facilitate the development of conservation strategies.
- Help partners design and implement science-based monitoring programs to determine if resource goals are met, and to refine future modeling.
- Coordinate data identification, synthesis, and sharing closely with DOI Climate Science Center and adjacent LCCs.

Partners

The Arctic LCC is expected to have strong partner support and participation, capitalizing on the foundation provided by the 2008 WildREACH workshop, attended by representatives from 18 agency, academic, and non-governmental organizations.

Organization

The Arctic LCC will function through a multi-tiered structure of at-large partners, a core LCC staff, and cooperating agencies and organizations that provide decision-making and oversight functions. The Arctic LCC partners will collectively determine the final structure of the partnership. The USFWS will support several key core staff positions beginning in 2010 including:

- Cooperative coordinator
- Science and technology coordinator
- Geospatial Analyst
- Data Manager

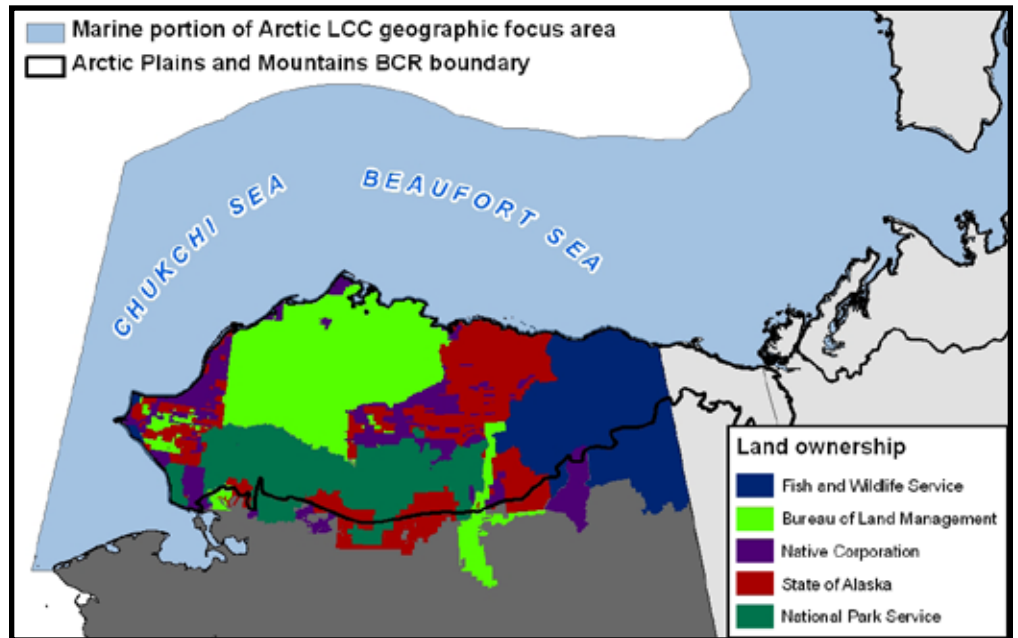
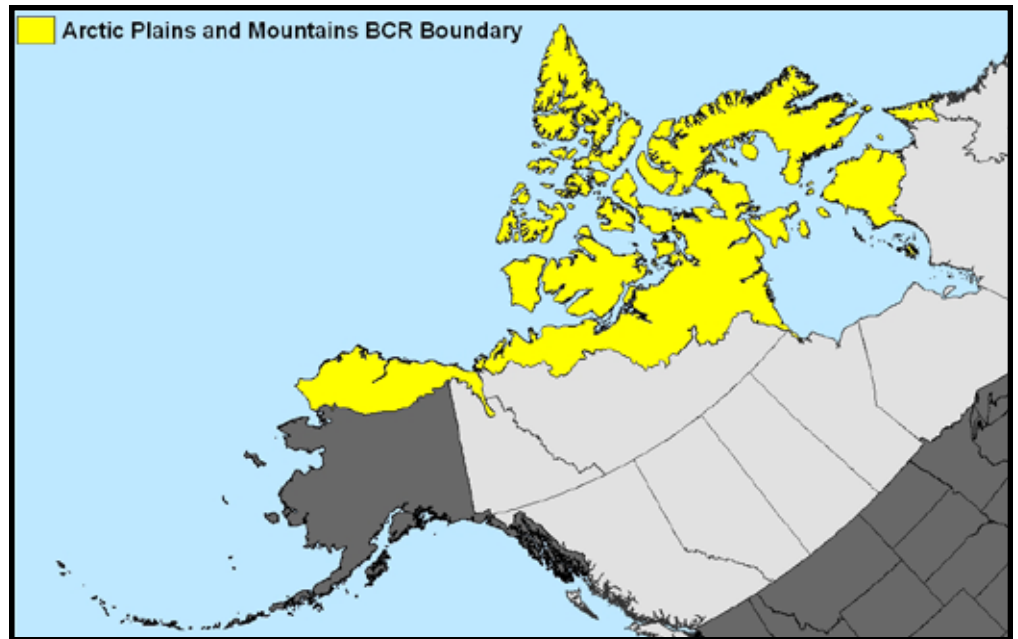
Additional staff will be added in the future depending upon identified needs and partner capacities. Other capacities may include remote sensing and image processing specialist, population and habitat modelers, biometrician, spatial statistician, conservation geneticist, and Web designer/manager.

Next Steps

Over the next 18 months to 2 years, the Arctic LCC will:

- Build a durable management framework
- Develop a process for identifying focal species
- Develop and implement a process for identifying science needs for 2011 and beyond.

During 2010, the LCC will initiate projects considered fundamental to the development of scientific information, tools and techniques that resource managers can apply to anticipate, monitor and adapt to climate and other stressors. Priorities are based on the conclusions from existing collaborative deliberations, including the WildREACH workshop



and the North Slope Science Initiative Emerging Issues. These include:

- Hydrology
- Coastal Processes
- Vegetation Change
- Trophic Systems
- Geospatial Data Development and Dissemination
- Data Integration

Contacts

For more information:

Philip Martin
Interim Arctic LCC Coordinator
Fairbanks Fish and Wildlife Field Office
907/456 0325 or philip_martin@fws.gov