

Western Alaska Landscape Conservation Cooperative

Aleutian/Bering Sea Landscape Conservation Cooperative

Purpose

The Western Alaska and Aleutian/Bering Sea Landscape Conservation Cooperatives (LCCs) will facilitate conservation planning and inform resource management actions on broad geographic scales to address landscape-level challenges. While climate change may be the greatest challenge facing these areas, the Western Alaska LCC and the Aleutians/Bering Sea LCC will not limit their scopes of operation solely to climate-driven issues. Rather, they will address any issue that has the potential to affect landscape-level natural resource conservation, including concerns associated with resource extraction (e.g. coal, oil and natural gas), infrastructure expansion, and exotic species invasions.

Collaborative landscape conservation has been identified as an important step in addressing conservation concerns by the State of Alaska as well as the Departments of Interior, Commerce and Agriculture. Pending initial funding for these LCCs from the Department of Interior, partner agencies are beginning to consider how to share expertise and capacity to achieve common landscape conservation goals. Both LCCs will bring together federal, state, tribal, and local governments with private landowners, academia and organizations to develop strategies for understanding and responding to landscape-level impacts.

The interconnected nature of the Western Alaska and Aleutians / Bering Sea LCCs prompted the convening agencies to pilot them both simultaneously in 2010. As scoping and initial discussions by the members of the emerging partnerships evolve, we will explore whether these areas should be treated as a single LCC or remain separate as currently delineated. Whatever the eventual outcome, LCCs



Wintering flock of threatened spectacled eiders in Bering Sea ice south of St. Lawrence Island. Photo by Bill Larned.

need to operate as part of a larger national and international network.

Resource Base

Western Alaska streams are home to the world's largest natural runs of salmon and the adjacent marine waters support the largest commercial fisheries in the U.S. These rich fisheries also support local communities both as an economic source and as a critical component of a subsistence lifestyle.

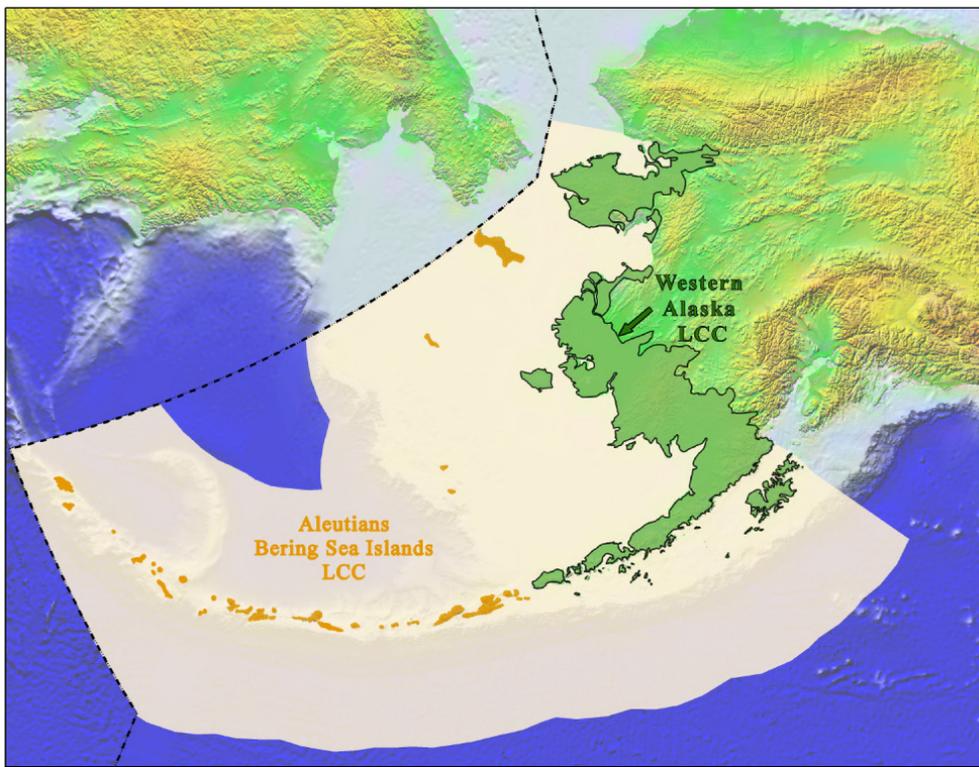
Millions of seabirds breeding along the shore form a strong link between land and sea. Astounding numbers of waterfowl and shorebirds depend upon these areas for breeding, migration, and wintering habitat. Caribou roam the land, as do healthy populations of moose, bears, and wolves.

These two LCCs are home to threatened sea otters, spectacled and Steller's eiders and walrus, a

species of concern. Steller sea lions, short-tailed albatrosses, and eight species of whales in this region are endangered. Villagers throughout this region practice a subsistence lifestyle that is dependent upon the continued health of both marine and terrestrial ecosystems.

Climate Change Conservation Concerns in These Regions

Climate change is likely the greatest conservation challenge facing the world today. Changing ocean temperatures, circulation patterns and acidity in the Western Alaska and Aleutians/Bering Sea LCCs are expected to alter the availability of prey for important commercial and subsistence fisheries, seabirds, and marine mammals. Changes in the timing of sea ice melt alter ice-edge plankton bloom dynamics and earlier loss of seasonal ice is detrimental to the offshore benthic community (crabs, clams) upon which walrus, eiders and people depend.



Western Alaska and Aleutians/Bering Sea LCC boundaries. Map by Bob Platte/USFWS.

Wetlands and estuaries critical to shorebirds, waterfowl, and salmon may be affected by sea-level rise, coastal erosion, and changing salinity.

The alpine ecology of this region may shrink as shrubs and trees establish themselves further up-slope. Introduced plant species may increase their range and degree of invasiveness. Increasingly severe storm events may increase the likelihood of catastrophic ship wrecks and spills.

Coastal erosion accelerated by increased storm activity is already forcing some villages in this area to relocate. In addition, much of the permafrost in this region is near its melting point, creating thaw slumps as permafrost melts, increasing erosion and sedimentation in rivers and changing surface hydrology. This could adversely affect hatching rates of fish eggs, aquatic and riparian invertebrate populations and the availability of nesting and brood-rearing habitat for many bird species. Increasing freeze/thaw events, may affect survival of tundra browsers.

Climate-related changes greatly complicate resource management since such changes affect abundance and distribution of fish and wildlife populations and make it more difficult

to predict effects of other activities on these populations.

Organization and Partnerships

In 2010, the first steps are underway to pilot the Western Alaska and Aleutian/Bering Sea Islands LCCs. Representatives from State and Federal agencies have recently begun discussing how to convene the partnerships, but have not yet determined the degree of involvement each agency will assume. There will soon be efforts to include all of the potential partners from the local borough governments, Alaska Native organizations and tribes, other government and non-government organizations and academia. Strong partnerships already exist in this region and the LCCs will work with these partnerships to better address shared conservation goals.

Capacity

The Alaska Region of the U.S. Fish and Wildlife Service is filling the LCC Coordinator and LCC Science Coordinator (Karen Murphy) for the Western Alaska LCC. The Bureau of Land Management is initiating its ecoregional assessment process in the northern extent of the Western AK LCC which complements the LCC efforts and increases capacity and staff resources

to the region. The newly established Alaska Climate Science Center is working closely with LCC staff to identify existing and future research funding opportunities. The National Park Service's Vital Signs program is prepared to partner with the LCC to explore how existing monitoring data can be used and which data are missing to inform conservation actions. The Nature Conservancy and other non-governmental organizations have expressed interest becoming partners.

Expected Products and Outcomes

Successful implementation of these LCCs will provide additional science and planning tools that are fundamental to strategic landscape conservation. The LCCs will provide increased baseline ecological data access and integration; risk and vulnerability assessments for species, habitats and ecological processes; and identification of locations for high priority on-the-ground conservation efforts. By serving as the nexus to link land managers and researchers, these LCCs will help ensure that our conservation actions maximize our conservation impact on America's fish, wildlife and habitat.

Next Steps

- Initiate outreach and scoping (March-May 2010);
- Collaborate/coordinate with existing climate change conservation programs;
- Expand outreach to potential partners;
- Convene partners to identify science and management needs (October – November 2010);
- Identify initial State and Federal Steering Committee members;
- Begin gap analysis to identify information/data needed to manage resources.

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Additional LCC information:
<http://www.doi.gov/whatwedo/climate/strategy/index.cfm>