

# Plains and Prairie Potholes Landscape Conservation Cooperative

## Landscape Conservation Cooperatives Overview

The sustainability of natural and cultural resources and landscapes are important to quality of life and local economies.

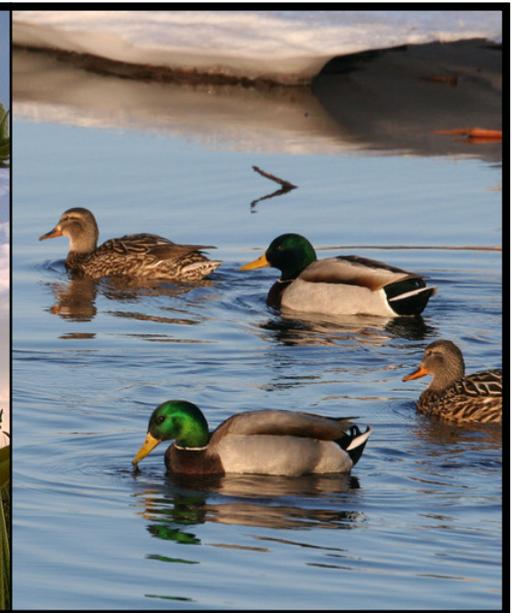
Landscape Conservation Cooperatives (LCCs) address large scale natural resource challenges that transcend political and jurisdictional boundaries and require a networked approach to conservation—holistic, collaborative, and grounded in science – to ensure the sustainability of America’s land, water, wildlife and cultural resources.

LCCs collectively form a national network of land, water, wildlife, and cultural resource managers, scientists, and interested public and private organizations—within the U.S. and across our international borders—that share a common need for scientific information in conservation.

## The Plains and Prairie Potholes Landscape Conservation Cooperative

The Plains and Prairie Potholes LCC is dedicated to the conservation of three main sub-units that transcend existing regional boundaries and the international border with Canada. Those geographic areas include the Prairie Pothole Region, Northern Great Plains, and the riparian corridors of several major river systems.

LCC partners are working to develop and apply the scientific tools necessary to determine how climate change, coupled with existing stressors such as the conversion of native prairie for agricultural purposes may affect the health and productivity of shared natural resources in this



*Left: Prairie skyline in the upper Midwest. Right: Prairie potholes are also known as breeding grounds for America’s waterfowl. U.S. Fish and Wildlife Service photos.*

landscape. The actions of the LCC will support and supplement State Wildlife Action Plans and enhance protection for fish and wildlife resources in the region.

The Prairie Pothole Region includes millions of wetlands that constitute one of the richest wetland and grassland systems in the world. Ecologically, the Northern Great Plains is the most diverse subunit within the LCC but also the least protected with less than two percent of the area’s 180 million acres managed for wildlife conservation. Rivers in the Plains and Prairie Pothole LCC are notorious for their extensive flooding, meandering channels, and for their ability to transport massive amounts of sediment. The upper Missouri River system and its major tributaries, such as the Yellowstone River, provide vital habitat for many threatened and endangered fish and wildlife species.

Partners of this LCC include federal agencies, fish and wildlife agencies of all included states, as well as Native American tribes and Canadian federal and provincial agencies and many nongovernmental and interjurisdictional organizations.

The LCC is co-chaired by the U.S. Fish and Wildlife Service (Service) and North Dakota Fish and Game Department.

Established in 2010, the LCC was founded and organized by more than 20 federal, state and private conservation organizations.

## Contact

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## Geographic Area



*Geographic area defined by the Plains and Prairie Potholes Landscape Conservation Cooperative outlined in red.*

## 2012 Activities

The following research received funding from the Plains and Prairie Potholes LCC in 2012:

*Livestock grazing and climate change impacts to sagebrush ecosystems and migratory birds*  
Livestock grazing practices are managed by private landowners, federal and state agencies across the western U.S. This project will evaluate the impact of specific livestock grazing practices and climate changes on migratory bird species associated with sagebrush habitat to better inform management practices.

*Groundtruthing aquatic habitat models*  
This project will validate the accuracy of current aquatic habitat models developed by Midwest and Great Plains Fish Habitat Partnerships that set specific habitat restoration targets to achieve fish population objectives.

*Effects of oil and gas development on grassland birds*  
Oil and gas development in North

Dakota is taking place at a rapid rate, and few managers and biologists are equipped to address and minimize damage from oil development and related activities on fish and wildlife habitat. This project aims to gather information on impacts to grassland birds from oil and gas development to better inform conservation managers.

*Climate change impacts to water in wetlands*

Wetland hydroperiod, the length of time water is available in wetlands, is particularly sensitive to changes in precipitation, temperature and timing due to climate variation. Truncated hydroperiod has major implications for wetland-dependent species and human water allocation. This study aims to link hydroperiod to current climatic variation and use this relationship to predict wetland hydroperiod across the sage steppe to grasslands landscape of the Plains and Prairie Pothole LCC.

*Climate change and energy development impacts to large and small fish*

This study will examine the swimming abilities of large river and small stream prairie fish to determine the potential impacts of changing water flow due to climate change in addition to the impacts of fish barriers associated with energy development. This information will assist fisheries biologists and managers in prioritizing fish passage and aquatic restoration work.