

NORTH DAKOTA

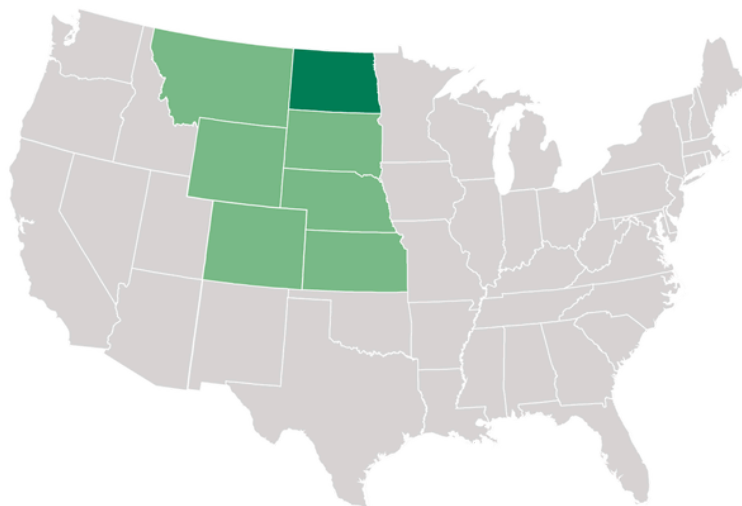


NORTH CENTRAL
Climate Adaptation
Science Center

North Central CASC Consortium Institutions

Host: University of Colorado Boulder

- Colorado State University
- Great Plains Tribal Water Alliance
- South Dakota State University
- The Nature Conservancy
- University of Montana
- University of Wyoming



Key Science Topics



Fish & Wildlife



Grasslands & Plains



Freshwater



Drought



Science Tools
for Managers

Our Work in North Dakota

39+
Projects

since
2011

Learn More

North Central CASC



nccasc.colorado.edu



nccasc@colorado.edu

CASC Network



usgs.gov/casc



casc@usgs.gov

NORTH DAKOTA Project Highlights



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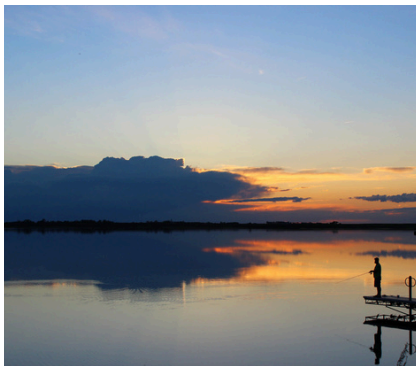
Climate-Driven Shifts in Prairie Pothole Wetlands

Stretching across the northern Great Plains, the Prairie Pothole Region contains wetlands that provide critical breeding habitat for 50-80% of North America's waterfowl. This ecosystem is sensitive to changes in temperature and precipitation, and studies have indicated that climate change could restrict waterfowl habitat, potentially requiring costly wetland restoration efforts.

WHAT: The North Central CASC worked with land managers from the USFWS Chase Lake Wetland Management District to answer two key questions—how will precipitation and temperature in the region change over time, and how will the number and location of wetlands change?

RESULTS: Results show that average temperatures will likely increase throughout the Prairie Pothole Region, while precipitation could either increase or decrease. If a wetter future scenario pans out, the change in wetlands would be negligible. If a dry future scenario unfolds, wetlands could be reduced by 25%.

IMPACT: This project resulted in new, more robust predictions of future wetland habitat status in the Prairie Pothole Region, information which can directly inform climate adaptation planning for waterfowl habitat.



Changing Water Levels & Recreational Fisheries in the Northern Glaciated Plains

Fisheries generates millions of dollars per year for states in the Northern Glaciated Plains. The impacts of climate change on fisheries in the region pose an immediate challenge for managers, as angler access and opportunities can be jeopardized when boat ramps become inaccessible due to changing water levels and altered water quality harms desired fish species.

WHAT: The North Central CASC is partnering with the the North Dakota Game and Fish Department and South Dakota Game, Fish, and Parks to provide fisheries managers with information on how climate change may alter the hydrology of the region and the impacts of those changes on fish and angler access, behavior, and expenditures.

IMPACT: By understanding which lakes will experience change and how, fisheries managers will be able to make decisions about infrastructure development (e.g., the number and location of new boat ramps) and ecosystem management (e.g., species and locations of fish stocking) that will maintain angler satisfaction and the economic benefits of recreational fisheries.