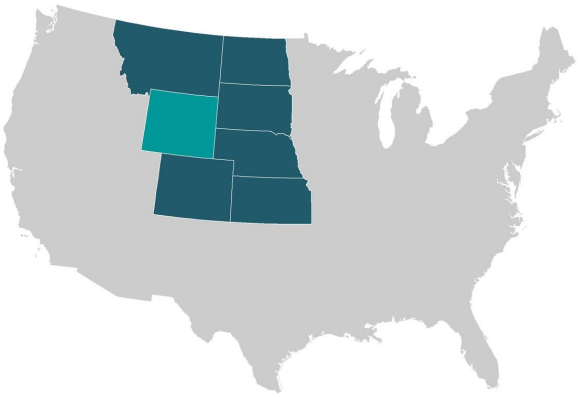
North Central Climate Adaptation Science Center

CLIMATE ADAPTATION SCIENCE CENTERS

WYOMING

Wyoming falls within the domain of the North Central Climate Adaptation Science Center (CASC)



North Central CASC Consortium Institutions

Host: University of Colorado at Boulder

Consortium:

University of Montana
South Dakota State University
Wildlife Conservation Society
Conservation Science Partners
Great Plains Tribal Water Alliance

OUR WORK IN WYOMING

42+
Projects

since **2011**

Key Science Topics

- Wildlife & Plants
- Drought
- Fire
- Forests
- Native Communities

PROJECT HIGHLIGHTS

Preparing for Drought on the Wind River Indian Reservation

The Wind River Indian Reservation, home to the Eastern Shoshone and Northern Arapaho tribes, has experienced frequent severe droughts which have impacted tribal livelihoods and cultural activities. Balancing water resources among competing demands is challenging, particularly given a lack of available data to monitor changing climate conditions on tribal lands.

WHAT: The North Central CASC worked closely with tribal water managers to assess how drought affects the reservation, improve drought preparedness, and develop a reservation-wide drought management plan.

RESULTS: This project forged the development of an online drought decision dashboard for the reservation, a place for easy-to-access, tailored climate information describing current temperature, precipitation, and drought intensity in the Wind River region, as well as future climate outlooks.

IMPACT: Prior to this work, the Wind River Indian Reservation did not have a process for collecting drought-related data or managing for drought conditions. The drought dashboard is helping the reservation make informed water allocation decisions across diverse sectors, ultimately helping to reduce the negative impacts of drought on the reservation's communities.

Predicting Forage Conditions for Elk & Mule Deer

Maintaining healthy elk and mule deer herds not only supports ecosystems, but also hunting and wildlife watching communities. For example, big game hunting contributed over $300 million to Wyoming's economy in 2015. Yet as climate conditions change, the quantity, quality, and timing of vegetation available to elk and mule deer could shift.

WHAT: The North Central CASC is preparing summaries and maps of past and potential future changes in forage in Wyoming to help managers prioritize areas for habitat treatments—actions taken to improve the abundance of desirable plants and reduce the abundance of undesirable plants, such as invasive cheatgrass.

IMPACT: Information on how changing climate conditions could impact forage will help managers with the Wyoming Game and Fish Department, USFWS, BLM, and NPS implement more effective habitat treatment options to support healthy elk and mule deer populations into the future.