

North Central Climate Adaptation Science Center Tribal Engagement Strategy (2019-2024)

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Introduction

The North Central Climate Adaptation Science Center (NC CASC) was established by the U.S. Department of the Interior in 2012 as part of a network of one national and nine regional Climate Adaptation Science Centers ([CASCs](#))¹. The North Central region covers the states of Montana, Wyoming, Colorado, North Dakota, South Dakota, Nebraska, and Kansas. The CASC network works with natural and cultural resource managers to gather scientific information and build the tools needed to manage natural and cultural resources.

Tribal resource managers are priority partners in this work. Tribal partners in this region have deep knowledge related to natural and cultural management and they manage large portions of the resources in the North Central region. The following Tribal Engagement Strategy describes how the NC CASC aims to work with tribal managers, leaders, youth, and other tribal partners. The NC CASC also convenes a regional Advisory Committee and utilizes a regional science plan to guide and inform its work with other partners.

Purpose and Scope

The goal of the NC CASC is to partner with each of the 32 Federally Recognized Tribes² in the North Central region to address climate change impacts. NC CASC tribal engagement supports partners at North Central tribal nations in developing and sustaining climate-resilient programs for natural and cultural resource management. The NC CASC prioritizes an iterative communication process to ensure transparent and legitimate interactions with each of the sovereign, Indigenous nations of the North Central region. The NC CASC focuses on tailoring science and support for end-users to ensure appropriate delivery and use based on partner needs.

In August 2018, the Bureau of Indian Affairs (BIA) Tribal Resilience Program funded the Great Plains Tribal Water Alliance (GPTWA)³ to host regional Tribal Climate Resilience

¹ <https://www.usgs.gov/land-resources/climate-adaptation-science-centers>

² See appendix A for a complete list of the 32 Federally Recognized Tribes in the region; NC CASC will also work with intertribal organizations and non-Federally recognized tribes as appropriate.

³ Great Plains Tribal Water Alliance: <https://www.tribalwateralliance.org/>

Liaisons who work in partnership with the NC CASC⁴. This partnership was renewed in 2022 when BIA awarded the GPTWA five more years as the regional host. The GPTWA serves as an advisory committee to the Great Plains Tribal Chairman's Association on all matters with regard to technical and policy issues regarding the water resources of member Tribal Nations. The Liaisons connect tribal resource managers to climate adaptation information and resources. The Liaisons are responsible for cultivating relationships and developing partnerships between the NC CASC and the 32 tribal nations in the region.

Additionally, the GPTWA is a member of the University Consortium for the NC CASC. In this role, the GPTWA centers and advances tribal climate adaptation efforts in the region. The GPTWA's Principal Investigator has a dual role to serve the GPTWA in the consortium and to connect regional tribal entities to the University of Colorado-Boulder. This adds capacity to outreach and extension efforts, particularly as they relate to working with tribal colleges and universities (detailed below).

Background

The lands that comprise the North Central region are rich with cultural and natural resources from the Missouri River in the east to the Rocky Mountains in the west. Indigenous peoples have been stewards of the land since time immemorial and have a deeply embedded knowledge of place. The 32 Federally Recognized Tribes in the North Central region each have their own histories, cultural practices, and political organizations that are distinct and unique. The NC CASC acknowledges and respects these differences in order to support and collaborate with each tribal nation as effectively as possible. Mutual respect and understanding are critical for working directly with sovereign, Indigenous nations which have their own laws and protocols. Many tribal nations in the North Central region are in the early stages of a climate adaptation planning process. There are few regional inter-tribal climate organizations, with the GPTWA being a notable exception. Many tribal staff and leaders are concerned about the impacts of climate change and are interested in addressing the impacts, but lack the resources to do so. There are numerous opportunities to support the climate adaptation process with tribal partners throughout the region.

⁴ BIA Tribal Resilience Program: <https://www.bia.gov/bia/ots/tribal-resilience-program>

Communications

The NC CASC recognizes the importance of working directly with representatives of tribal councils, tribal departments, tribal colleges and universities, and tribal communities to effectively provide scientific information and support their climate adaptation processes. Relationship building is a key component of the NC CASC's commitment to working with tribal nations and the NC CASC recognizes this relational foundation is a prerequisite to collaboration.

A key objective for the NC CASC is contributing to and establishing networks for dialogue between regional tribal nations as they acquire science and use it in their resource planning. For example, starting in 2018, the tribal nations in Nebraska, Kansas, and Iowa developed their own workshop series to provide data training and climate change education for tribal staff. The NC CASC collaborated with this network to provide information synthesis and instructor support. This type of peer-to-peer learning opportunity is often the most effective type of education and training. In other instances, the NC CASC can play a role in facilitating or supporting new convenings. For example, in 2020, we partnered with Ute Mountain Ute's Climate Coordinator to provide a series of workshops for the three federally recognized Ute Tribes: Ute Mountain Ute, Southern Ute, and the Ute Tribe of Utah.

The NC CASC also convenes a regional Advisory Committee, composed of various regional agency representatives, including 3-5 tribal resource managers. The role of the committee is to identify critical science and information needs for the NC CASC. As part of the committee, the tribal representatives have an opportunity to provide feedback about the overall Regional Science Plan and the Tribal Engagement Strategy and to further shape research activities.

Partnerships

To meet the needs of tribal partners, the NC CASC prioritizes collaborative production of science -- where scientists and managers work together to define questions and design products⁵. This iterative process is essential to providing the data, tools, or resources that will best meet the needs of the user. For many tribal employees and leaders, the

⁵ NC CASC video on Creating Actionable Science: https://www.youtube.com/watch?v=5_OW0kAJIzk

major barriers to climate adaptation are capacity and administrative issues. These issues have to do with an insufficient amount of resources, support, training, and expertise. The NC CASC works with tribal employees and leaders to find ways to address these challenges through coalition building, technical expertise, and other available resources.

These ongoing challenges require strong partnerships and commitment on all sides. Working together collaboratively is one strategy to overcome these barriers, and the NC CASC partners with various organizations to meet tribal science needs. Each organization adds value to the partnership through its specialized resources and experience as well as through its commitment to working with tribal representatives. The table below illustrates some of NC CASC's existing partnerships and the support they provide.

Table 1. The table shows key NC CASC partners and their services in working with tribal nations.

Partner Organization	Type of Support
Institute for Tribal Environmental Professionals (ITEP)	Climate adaptation training and education
National Oceanic & Atmospheric Administration (NOAA)	Regional and national climate information
National Integrated Drought Information System (NIDIS)	Drought monitoring, forecasts, and training
National Drought Mitigation Center (NDMC)	Drought workshops, project support, and training
North Central CASC Consortium Partners (University of Colorado-Boulder, University of Montana, South Dakota State University, Great Plains Tribal Water Alliance, Conservation Science Partners, Wildlife Conservation Society)	Ecosystem impacts, climate data training, ecological model choice and specification, identifying and accessing appropriate data, and providing scenario and adaptation planning expertise and facilitation
United States Geological Survey (USGS)	Natural resource, ecosystem, and Earth sciences
Western Water Assessment (WWA)	Impacts to water resources and systems

The Next Generation of Climate Adaptation Professionals

To develop the next generation of climate-informed professionals and citizens, the NC CASC prioritizes engaging tribal youth in professional training and higher education. For example, in 2019 the NC CASC leveraged resources and provided five full scholarships for tribal students to receive a graduate degree at the University of Colorado, Boulder. The NC CASC also provides internships and research opportunities to bring in students whenever possible and incorporate them into the climate adaptation field.

The NC CASC is always looking to partner with tribal colleges and universities to collaborate with professors and students across institutions in the region. There are 20 tribal colleges and universities in our North Central region; the highest concentration of any CASC region in the nation. There is great potential for collaboration, capacity building, and partnerships with these institutions of higher learning. The NC CASC recognizes the importance of these entities and seeks to work with the staff, students, and administration of tribal colleges and universities throughout the region. The focus of these partnerships is to develop and deliver user-driven science and to support the training and education of the next generation of tribal climate professionals. This is critical because preparing and empowering tribal youth is often the highest priority articulated by tribal leaders and staff.

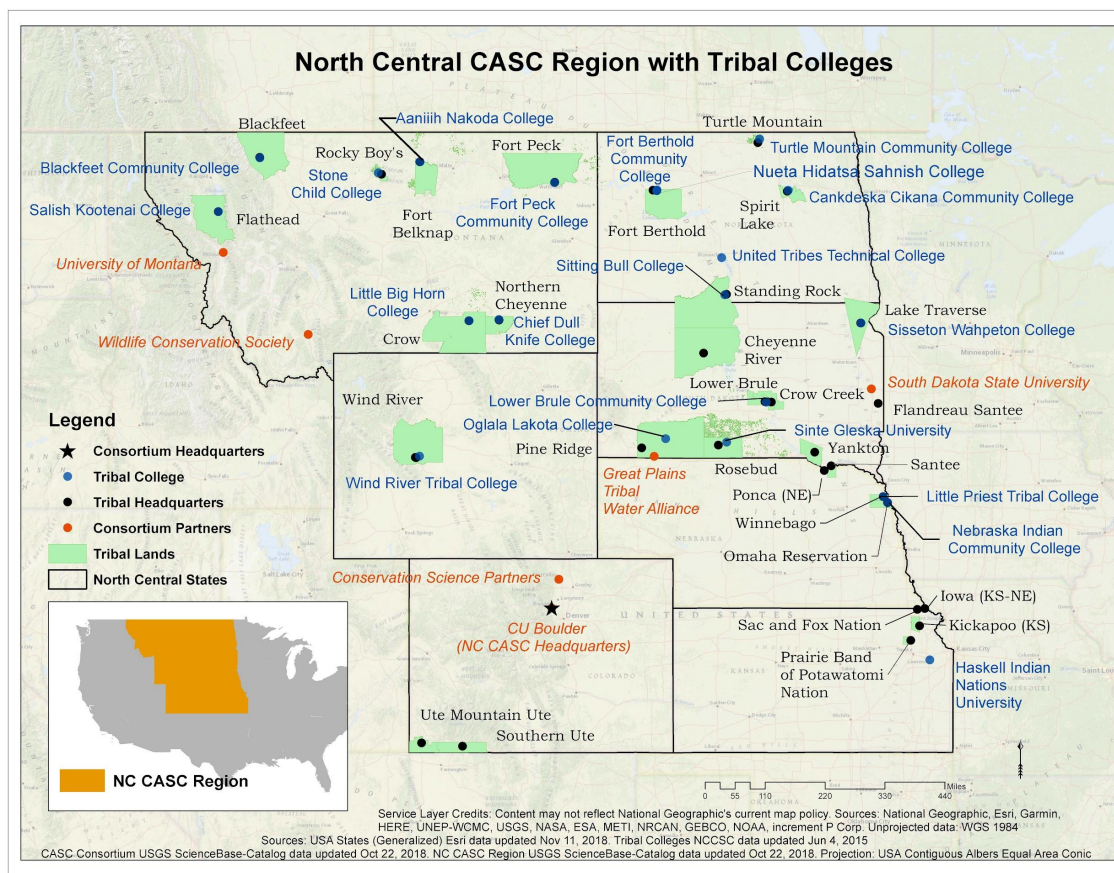


Figure 1. The map depicts regional TCUs and the NC CASC consortium as of 2019 Credit: Alyssa Samoy

Indigenous Knowledges (Traditional Ecological Knowledges)

The NC CASC recognizes the importance and the value of Indigenous Knowledges (IK), also known as Traditional Ecological Knowledges (TEK), for resource managers when making decisions in a changing climate. To make the most informed decisions in times of great uncertainty, resource managers draw from all the relevant information available which may include Indigenous Knowledges. The NC CASC follows the *Guidelines for Considering Indigenous Knowledges in Climate Change Initiatives*⁶ developed by the Climate and Traditional Knowledges Workgroup⁷ of the Department of Interior's Advisory Committee on Climate Change and Natural Resource Science. The Workgroup was composed of Indigenous scholars, tribal government staff, and experts in Indigenous Knowledges. The guidelines establish leading practices for US

⁶ <https://www.sciencebase.gov/catalog/item/5c1d0816e4b0708288c9d0d9>

⁷ <https://climatetkw.wordpress.com/about-2/>

government entities that work with Indigenous nations and are grounded in the principles of free, prior, and informed consent.

NC CASC Tribal Focal Areas for 2023 and Beyond

- Provide instructor support for tribal training related to climate 101, vulnerability assessments, and climate adaptation throughout the region;
- Provide direct support services for tribal nations: developing vulnerability assessments, preparing climate adaptation planning proposals, implementing climate adaptation plans, seeking support and funding for implementation projects, and other relevant climate adaptation efforts;
- Assess tribal priorities and needs, identify tribal science gaps, and help define annual research targets;
- Utilize the scientific capacity across the NC CASC university, consortium, and federal team to meet the needs of our tribal partners in addressing their environmental challenges; and
- Connect regional tribal nations and scientists to facilitate user-driven science.

Examples of Past and Present NC CASC Involved Tribal Projects

Tribe(s)	Project Name	Description
Tribes of Nebraska, Kansas, Iowa	Lower Missouri River Tribes Climate Adaptation Workshops (2018-2022)	Series of workshops to support tribal climate adaptation efforts including information gathering, plan development, and learning applicable tools
Wind River Indian Reservation	Vulnerability to the Impacts of Drought and the Development of Decision Tools to Support Drought Preparedness ⁸ (2018)	Assessment of drought impacts on the reservation, integrating social, ecological, and hydro-climatological sciences with local knowledge
Tribes of North and South Dakota	Northern Great Plains Climate Adaptation Workshops (2019-2021)	Series of workshops to develop tools and plan for climate change impacts specifically drought and flood

As noted in the NC CASC Strategic Science Plan⁹, emphasis will be placed on documenting and implementing leading practices for collaboratively creating user-driven science. The NC CASC will utilize survey instruments, direct feedback, and other

⁸ NC CASC funded project led by the National Drought Mitigation Center started in 2015 and completed in March of 2018. <https://www.sciencebase.gov/catalog/item/55159d4be4b03238427817e2>

⁹ NC CASC Draft Strategic Science Plan: <https://nccasc.colorado.edu/science>

available mechanisms to continually refine and improve its mission to provide usable science to Federally Recognized Tribes. This is especially important so that the NC CASC can evaluate and improve its efforts to support tribal nations in continuing as leaders in the field of climate adaptation.

Appendix A: 32 Federally Recognized Tribes of the North Central Region¹⁰

Colorado

- Southern Ute Indian Tribe of the Southern Ute Reservation
- Ute Mountain Tribe of the Ute Mountain Reservation (Colorado, New Mexico and Utah)

Kansas

- Iowa Tribe of Kansas and Nebraska
- Kickapoo Tribe of Indians of the Kickapoo Reservation in Kansas
- Prairie Band Potawatomi Nation
- Sac & Fox Nation of Missouri (Kansas and Nebraska)

Montana

- Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation
- Blackfeet Tribe of the Blackfeet Indian Reservation of Montana
- Chippewa-Cree Indians of the Rocky Boy's Reservation
- Confederated Salish and Kootenai Tribes of the Flathead Reservation
- Crow Tribe of Montana
- Fort Belknap Indian Community of the Fort Belknap Reservation of Montana
- Little Shell Tribe of Chippewa Indians in Montana¹¹
- Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation

Nebraska

- Omaha Tribe of Nebraska
- Ponca Tribe of Nebraska
- Santee Sioux Nation
- Winnebago Tribe of Nebraska

North Dakota

- Spirit Lake Tribe
- Three Affiliated Tribes of the Fort Berthold Reservation (Mandan, Hidatsa, Arikara)
- Turtle Mountain Band of Chippewa Indians of North Dakota
- Standing Rock Sioux Tribe (North Dakota and South Dakota)

South Dakota

- Cheyenne River Sioux Tribe of the Cheyenne River Reservation
- Crow Creek Sioux Tribe of the Crow Creek Reservation

¹⁰<https://www.federalregister.gov/documents/2019/02/01/2019-00897/indian-entities-recognized-by-and-eligible-to-receive-services-from-the-united-states-bureau-of>

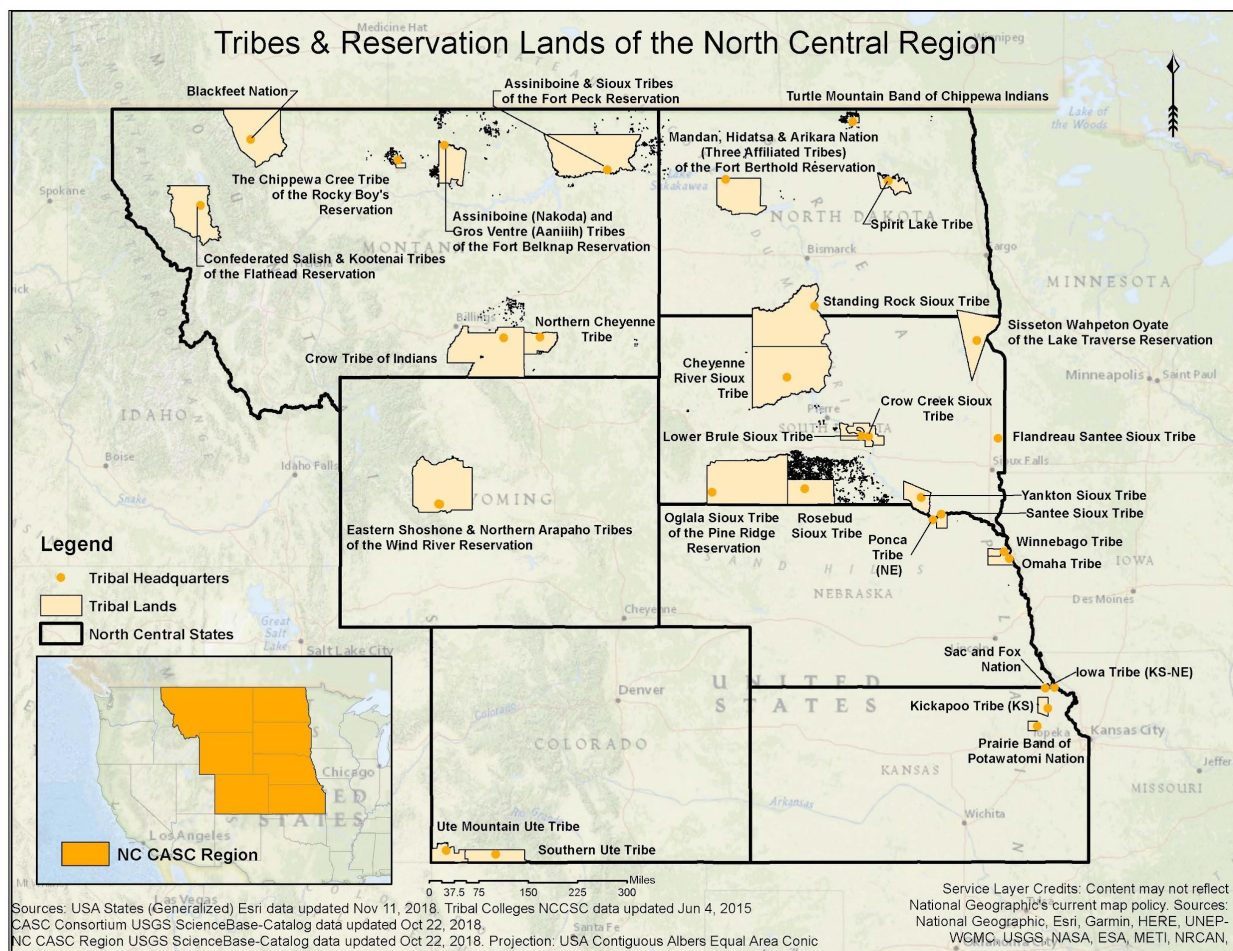
¹¹ <https://www.congress.gov/bills/116th-congress/senate-bill/51/text>

- Flandreau Santee Sioux Tribe of South Dakota
- Lower Brule Sioux Tribe of the Lower Brule Reservation
- Oglala Sioux Tribe (previously listed as Oglala Sioux Tribe of the Pine Ridge Reservation)
- Rosebud Sioux Tribe of the Rosebud Indian Reservation
- Sisseton-Wahpeton Oyate of the Lake Traverse Reservation
- Yankton Sioux Tribe of South Dakota

Wyoming

- N Arapaho Tribe of the Wind River Reservation
- E Shoshone Tribe of the Wind River Reservation

Appendix B: Map of Tribal Lands and Reservations



2019 Map of Tribal Lands and Reservations in the North Central region Credit: Alyssa Samoy