

# **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 eight regional Climate Adaptation Science Centers ([CASCs](#))<sup>1</sup>. The CASC network works with natural and cultural resource managers to gather the scientific information and build the tools needed to help fish, wildlife and ecosystems adapt to the impacts of climate change. Tribal resource managers are particularly critical partners in this work because of the large number of Native Americans in the North Central United States, their deep knowledge of historical ecosystem change, and the importance of landscapes and wildlife to tribal communities.

## Purpose and Scope

This Tribal Engagement Strategy outlines how the NC CASC will work with the 32 Federally Recognized Tribes as well as tribal organizations in Montana, Wyoming, Colorado, North Dakota, South Dakota, Nebraska, and Kansas<sup>2</sup>. The purpose of this engagement is to support North Central tribes in developing and sustaining climate resilient ecosystems, wildlife, and fish. The NC CASC prioritizes an iterative communications process to ensure transparent and legitimate interactions with each of the sovereign, indigenous nations of the North Central region. The NC CASC also focuses on tailoring science and support for specific end-users to ensure it is appropriately delivered for each tribe's progress in the climate adaptation process.

In August 2018, the NC CASC partnered with the Great Plains Tribal Water Alliance (GPTWA)<sup>3</sup> to host the region's Tribal Resilience Liaison funded by the Bureau of Indian Affairs Tribal Resilience Program<sup>4</sup>. The Liaison connects tribal resource managers to information and resources for adapting to climate change. The Liaison is also responsible for cultivating relationships and maintaining communications between the NC CASC and the 32 tribal nations in the region.

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

<sup>2</sup> 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.

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

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

Additionally, the GPTWA is a member of the University consortium for the NC CASC. In this role, the GPTWA helps to advance and focus tribal climate adaptation efforts in the region. Their representative co-investigator has a dual role to serve the GPTWA in the consortium and to connect regional tribal entities to the University of Colorado-Boulder and specifically Earth Lab, which is run by the Cooperative Institute for Research in Environmental Sciences (CIRES)<sup>5</sup>. This adds capacity to the outreach and extension efforts on behalf of the NC CASC particularly as it relates to working with tribal colleges and universities which is 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 people 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, understands, and respects these differences in order to support and collaborate with each tribe as effectively as possible. Mutual respect and understanding is an important foundation for working directly with sovereign, indigenous nations which have their own laws and protocols. Many tribes in the North Central region are still in the early stages of a climate adaptation planning process. Additionally, there are few regional inter-tribal climate organizations, with the GPTWA being a notable exception. Many tribal staff representatives and leaders are concerned about the impacts of climate change and are interested in addressing the impacts, but lack the resources to do so. As a result, there are many opportunities for the NC CASC and its partners to support and provide value to the climate adaptation process with tribes throughout the region.



The Missouri River<sup>6</sup>

<sup>5</sup> <https://cires.colorado.edu/>

<sup>6</sup> <https://www.worldatlas.com/articles/where-does-the-missouri-river-start-and-end.html>

## Communications

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

Contributing to or establishing networks for increasing dialogue between neighboring or regional tribes as they acquire science and use it in their natural resource planning is also a key goal for the NC CASC. For example, the tribes in Nebraska, Kansas, and Iowa have self organized to provide data training and climate change education to tribal staff, and the NC CASC has collaborated with this network to provide information synthesis and instructor support. In other instances, the NC CASC may be able to play a role in facilitating or supporting new convenings. For example, Lakota, Nakota, and Dakota tribes have long collaborated in North and South Dakota on other issues of common concern, but may find value in social networking specific to climate change.

In addition to the work of the Tribal Resilience Liaison, a notable mechanism of NC CASC communication efforts with tribal representatives is through the Joint Stakeholder Committee (JSC). The NC CASC convenes a Joint Stakeholder Committee comprised of approximately 25 regional agency representatives, including 4-6 tribal resource managers. The role of the JSC is to identify critical science and information needs for the NC CASC. As part of the JSC, the tribal representatives have an opportunity to provide feedback about the overall Strategic Science Plan and the Tribal Engagement Strategy and to further shape research activities.

## Partnerships

To meet the needs of tribal science partners, the NC CASC prioritizes collaborative production of science -- where scientists and managers work together to define questions and design products<sup>7</sup>. This iterative process is essential to providing the data, tools, or resources that will best meet the needs of the user. The NC CASC also partners with various organizations to meet tribal science needs. Each organization

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<sup>7</sup> NC CASC video on Creating Actionable Science: [https://www.youtube.com/watch?v=5\\_OW0kAJlzk](https://www.youtube.com/watch?v=5_OW0kAJlzk)

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.

<b>Partner Organization</b>	<b>Type of Support</b>
Institute for Tribal Environmental Professionals (ITEP)	Climate adaptation training and education
High Plains Regional Climate Center (HPRCC)	Tool development and climate data training
National Oceanic & Atmospheric Administration (NOAA)	Regional and national climate information
U.S. Department of Agriculture Climate Hub	Agricultural impacts, tools, 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

For many tribal employees and leaders, the 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 and its partners work 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.

## Tribal Colleges and Universities (TCUs)

There are 20 tribal colleges and universities across the 7 state 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.

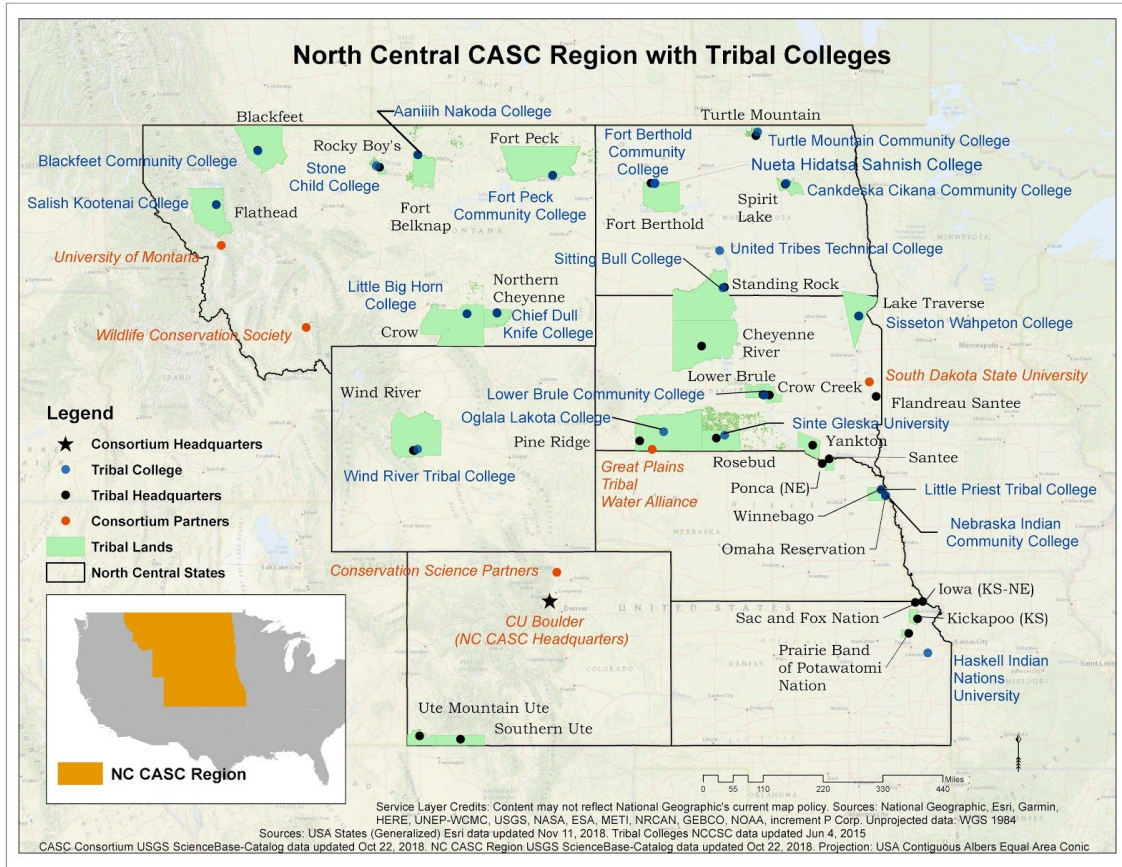


Figure 1. The map depicts regional TCUs and the NC CASC consortium as of 2019 Credit: Alyssa Samoy

## Indigenous Knowledges (Traditional Ecological Knowledges)

The NC CASC recognizes the importance and the value of Indigenous Knowledges, also known as Traditional Ecological Knowledges, 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*<sup>8</sup> which were

<sup>8</sup> <https://www.sciencebase.gov/catalog/item/5c1d0816e4b0708288c9d0d9>

originally developed to inform the Department of Interior’s Advisory Committee on Climate Change and Natural Resource Science. These guidelines were developed by the Climate and Traditional Knowledges Workgroup<sup>9</sup> comprised of indigenous scholars, tribal government staff, and experts in Indigenous Knowledges. The guidelines establish best practices for US 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 2020 and Beyond

- Provide instructor support for tribal trainings related to climate 101, vulnerability assessments, and climate adaptation throughout the region;
- Provide consultative services for tribes: 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;
- Use the results of needs assessment for identifying tribal science gaps in defining annual research targets;
- Utilize the data analytics capacity within Earth Lab<sup>10</sup> at the University of Colorado-Boulder to meet the needs of our tribal partners in addressing their environmental challenges; and
- Connect regional tribes 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	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 <sup>11</sup>	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	Series of workshops to develop tools and plan for climate change impacts specifically drought and flood

<sup>9</sup> <https://climatetkw.wordpress.com/about-2/>

<sup>10</sup> Earth Lab is directed by NC CASC University Director, Dr. Jennifer Balch, with a mission to harness big data in addressing environmental challenges. <https://www.colorado.edu/earthlab/>

<sup>11</sup> 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>

As noted in the NC CASC Strategic Science Plan<sup>12</sup>, emphasis will be placed on documenting and implementing best practices for collaboratively creating user-driven science. The NC CASC will utilize survey instruments, direct feedback, and other available mechanisms to continually refine and improve its mission to provide useable 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 becoming leaders in the field of climate adaptation.

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<sup>12</sup> NC CASC Draft Strategic Science Plan: <https://nccasc.colorado.edu/science>



## Appendix A: 32 Federally Recognized Tribes of the North Central Region<sup>13</sup>

### **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 Montana<sup>14</sup>
- 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

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<sup>13</sup><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>

<sup>14</sup> <https://www.congress.gov/bill/116th-congress/senate-bill/51/text>

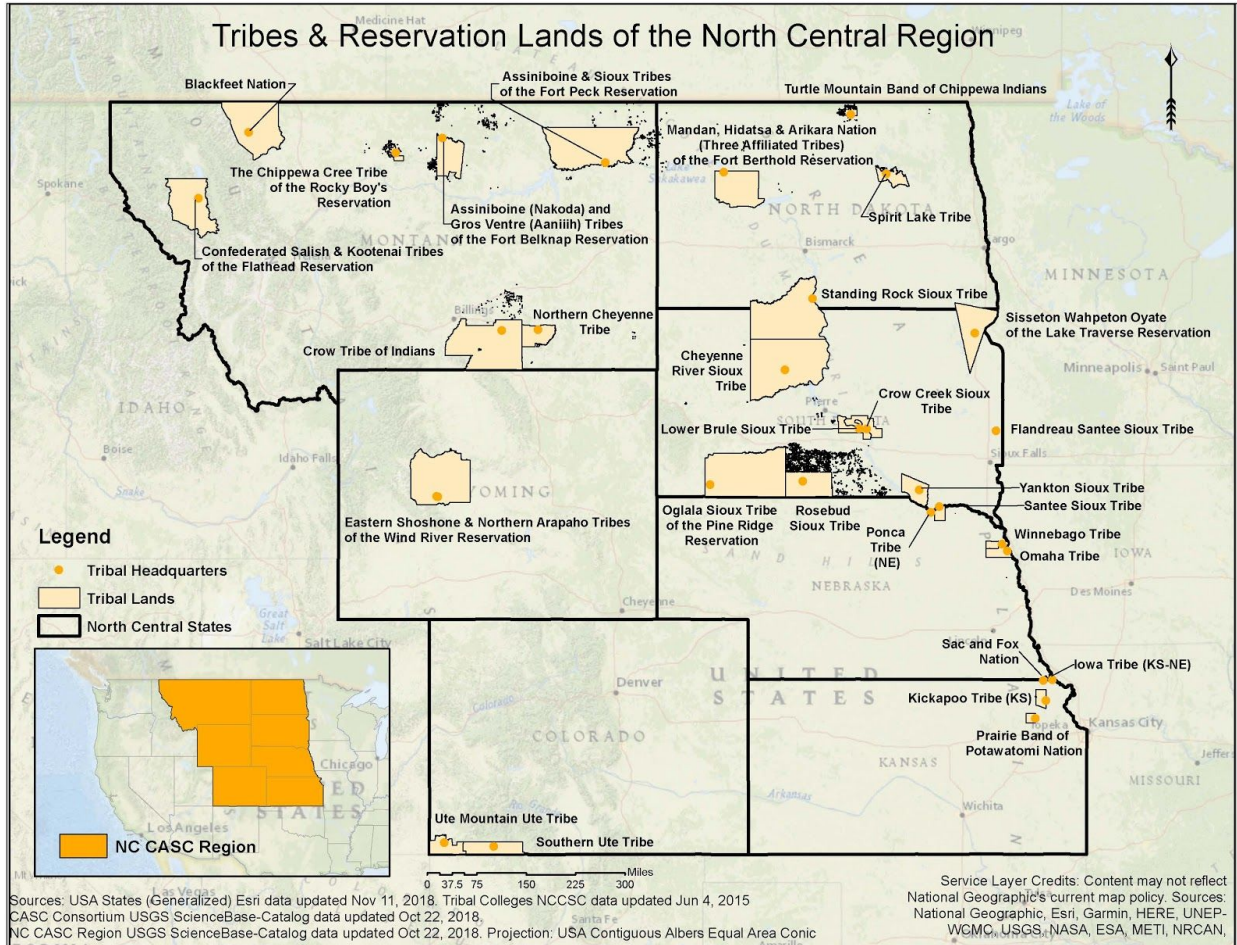
**DRAFT FOR PARTNER REVIEW - LAST UPDATED 1/20/20**

- 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