



Southwest Climate
Adaptation Science Center

Tribal Engagement Strategy
June 2020

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EXECUTIVE SUMMARY

Throughout history, tribes of the Southwest have adapted to their environment. Although, today they face unique challenges linked to climate change, their deep connection to the natural environment that defines their livelihoods, cultural identity, and ceremonial practices keep them rooted in the systems that allow them to be resilient in the time of crises. Changes to water systems, landscapes, and ecosystems, in combination with socio-economic and political factors, amplify tribal vulnerabilities to climate change.

In the Southwest, tribes are experiencing a range of impacts that can be associated with climate change. These effects include:

1. Major water supply and water quality issues in the context of prolonged drought and extreme rainfall events;
2. Loss of ecosystem services and reduced ability to grow or harvest important traditional foods, plants, and other raw materials;
3. Increased impacts to forest resources from insect infestations and large, landscape-transforming wildfires due to drought and aridity;
4. Health impacts from heat waves, dust storms, and smoke from wildfires; and the potential spread of infectious diseases from geographic shifts in disease vectors.

The Southwest Climate Adaptation Science Center (SW CASC) acknowledges that tribes, as the original stewards of the land, are at the forefront of addressing climate change when their languages, culture, and deep connections to the land remain intact. Innovative strategies, influenced by traditional knowledge, advance their actions in climate change adaptation, and the SW CASC works to collaborate, support, and partner with tribes in their efforts. The SW CASC engages with tribal stakeholders and provides funding opportunities and technical support to advance tribal communities in their climate adaptation initiatives. This strategy provides a vision for tribal engagement in the SW CASC region, which covers California, Nevada, Utah, and Arizona.

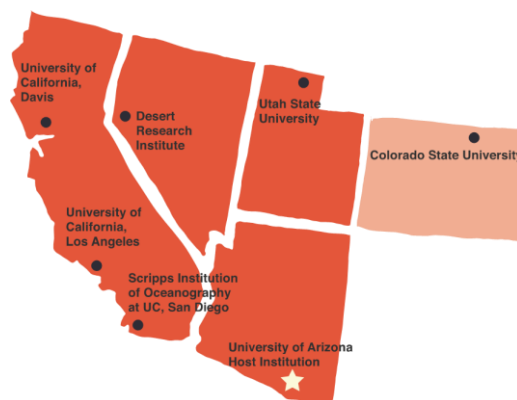


Figure 1 Southwest Climate Adaptation Science Center (SW CASC) region (dark orange), and consortium research partner institutions (named, with approximate locations). The hydrology and human activities west slope of the

Colorado Rocky Mountains strongly influence the Colorado River, a key feature of the SW CASC service area. Hence, Colorado State University is a consortium research partner. The American Indian Higher Education Consortium (AIHEC) is a SW CASC consortium partner, through its SW CASC tribal climate science liaison.

DIVERSITY OF THE SOUTHWEST

The 157 federally recognized tribes across California, Nevada, Utah, and Arizona are highly diverse in terms of geographic location, population, size, infrastructure, natural resources, cultural traditions, and economic portfolios. Their numbers are substantial; the population of Native Americans and Alaska Natives in California exceeds that of any of the other 49 states. The most populous tribe in the United States, the Navajo Nation, calls two states within our service area home—southeastern Utah and northeastern Arizona. The land base of the Navajo Nation spans more than 17 million acres across three states. As of 2019, the four states within the Southwest CASC region have the following number of federally recognized tribes (please note that the number of federally recognized tribes can change):

- California – 110
- Nevada – 19
- Utah – 7
- Arizona – 21

The land base and access to land for the 157 federally recognized tribes in the Southwest is significantly smaller compared to their ancestral homelands, that historically spanned far beyond the four modern state boundaries. Figure 2 refers to a land acknowledgment mapping tool that depicts ancestral homelands across the Southwest and that tribal connections to the land span greater than established reservation boundaries today.

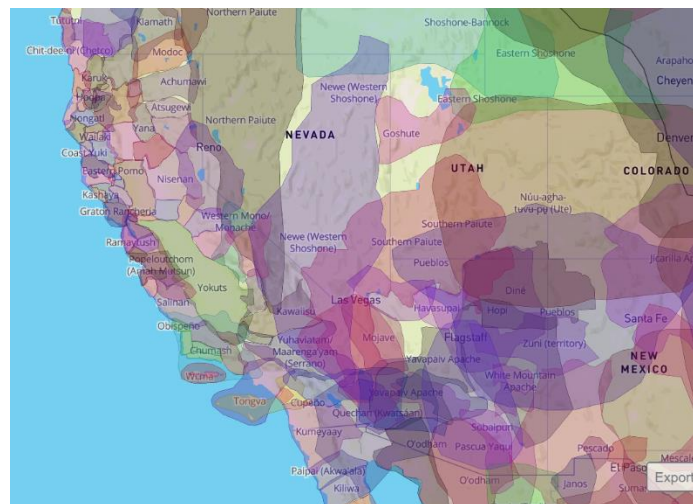


Figure 2 Land acknowledgement mapping tool, which can be further explored at native-land.ca

ACTIONS TAKEN BY TRIBES IN THE SOUTHWEST

Tribes within the SW CASC service area have received climate change funding from a range of sources, including the U.S Environmental Protection Agency, Bureau of Indian Affairs, and Department of Energy. The funding has gone towards initiatives like climate change staff, capacity building,

vulnerability assessments, and renewable energy feasibility studies. Figure 3 provides information on the resilience actions tribes in the Southwest are taking to address climate change impacts. Tribal climate documents funded by the agencies listed above can be obtained from the Institute for Tribal Environmental

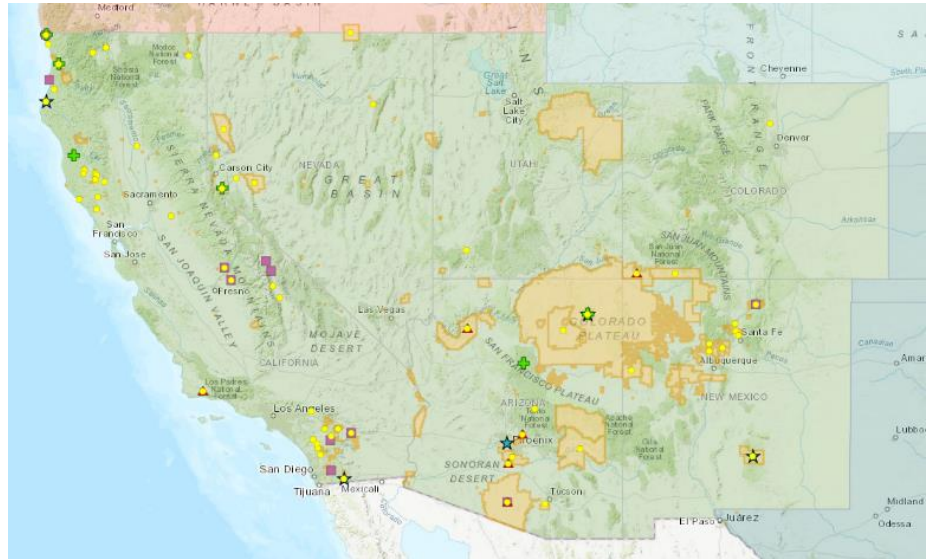


Figure 3 National Climate Assessment – Indigenous Peoples’ Resilience Actions. The map can be accessed at <https://biamaps.doi.gov/nca/>.

Professionals Climate Change (ITEP) [website](#), which provides additional information about climate initiatives taking place across the Southwest and nation.

Some of the tribal climate initiatives in the Southwest include addressing the areas of concern around water quality and quantity, public health, and ecocultural resources. Some of the strategies that the tribes are putting into action include:

- Reestablishing traditional fire regimes
- Enhancing ecosystem resilience
- Strengthening partnerships and increasing interjurisdictional coordination
- Advocating for policy change to increase effectiveness of local strategies
- Expanding research capacities in support of tribal and community science needs

ROLE OF THE SOUTHWEST CLIMATE ADAPTATION SCIENCE CENTER

The Southwest Climate Adaptation Science Center (SW CASC) is a partnership between the US Geological Survey and a consortium of seven research institutions led by the University of Arizona (refer to Figure 1), with the mission of fostering the development and delivery of scientific information relevant to climate adaptation for natural resource managers. The SW

CASC is one of eight regional centers within a national network, the National and Regional Climate Adaptation Science Centers, that serves the resource management agencies of the Department of the Interior, state agencies, and federally recognized tribes. As identified in the SW CASC's 2013 Strategic Science Plan, the SW CASC has three goals:

- Match the information needs of stakeholder communities with the scientific capabilities of research communities
- Foster development of interdisciplinary science to support resource management
- Make relevant scientific and management information available to stakeholders and researchers

The CASCs are being called to assist tribes in determining strategies, like the ones previously mentioned, that reduce the negative impact of climate change on tribal communities. The SW CASC can engage with specific tribes to develop the approaches and tactics that are most important to the tribal stakeholder. Most importantly, the SW CASC will integrate tribal stakeholders into SW CASC research, engagement, and education activities. To this end, SW CASC is placing this Tribal Engagement Strategy at the center of its strategic planning.

STATEMENT OF PRINCIPLES

The SW CASC seeks to partner with tribal communities in the Southwest to share knowledge and co-develop approaches for effective climate adaptation. Most importantly, the SW CASC seeks to integrate tribal stakeholders into all aspects of SW CASC work. To this end, the SW CASC has placed the Tribal Engagement Strategy at the center of its strategic planning process based on the principles discussed below.

Tribal Sovereignty

Native Nations within the United States are sovereign entities, with the right to self-government and self-determination, which derive from their inherent rights to govern their peoples, lands, and resources. The SW CASC recognizes and acknowledges the inherent sovereignty of the Native Nations within the geographical boundaries of the region and recognizes that Native Nations were stewards of those lands prior to non-Native settlement. As a center based at the University of Arizona, we further adhere to the Arizona Board of Regents' Tribal Consultation Policy (Arizona Board of Regents 2016) and the University of Arizona Guidelines for Research and Institutional Engagement with Native Nations (University of Arizona 2019) to maintain respectful government-to-government relations with sovereign Native Nations.

Research Practices

The SW CASC will adhere to appropriate ethical standards when collaborating with Native Nations. We will work according to a set of principles central to research relationships between non-Native researchers and Indigenous peoples and communities (Lomawaima 2000; Chief, Meadow, and Whyte 2016; Fisher and Ball 2003; University of Arizona Native Peoples Technical Assistance Office 2016) including, but not limited to:

Reciprocity – We recognize that the Native Nation should receive real, tangible, and usable benefits from engaging in the research. Benefits to the researcher and/or research institution should be clearly disclosed to community partners prior to the project. When relevant, consideration will be given to Native Nation hiring preference when filling paid positions with the project.

Community Oversight - All research conducted on tribal lands, whether involving people or natural resources, must be approved by a tribal research oversight group, if one exists. If a stand-alone research approval committee does not exist, consent to conduct research will be obtained from tribal governing bodies. In addition, all research that is to be conducted on tribal lands and/or involving members of an Indigenous community will be reviewed by the appropriate university review panel (i.e., Institutional Review Board).

Partner with Native Nations – Whenever possible, Native Nation collaborators will be engaged as full and equal research partners, including sharing in decision-making, scoping of research questions, participating in field work, data analysis, and the dissemination of research findings.

Respect for Tribal Culture and History – SW CASC researchers will take responsibility for understanding the construction of local knowledge and will view local and traditional knowledges as equal and complementary to western scientific knowledge.

Data Sovereignty and Intellectual Property Rights

Indigenous communities have inherent sovereignty over the data collected on or about their communities and lands (Rainie, Rodriguez-Lonebear, and Martinez 2017). This includes traditional intellectual property, such as knowledge by remembered histories and traditions; details of cultural landscapes and particularly sites of cultural significance; records of contemporary events of historical and cultural significance; sacred property, which includes images, sounds, knowledge, material, or anything that is deemed sacred by the community; knowledge of systems of taxonomy of plants, animals, insects, and other beings; knowledge of current use, previous use, and/or potential use of land, water, plant and animal, fish, and insect species; knowledge of planting methods, ecosystem conservation, preparation, formulation, processing or storage of species; biogenetic resources that originate or originated on Native lands

and territories; and cultural images, sound, crafts, art, dance, symbols, motifs, and names, practices and performances (University of Arizona 2019).

Researchers associated with the SW CASC recognize these rights and will act to ensure that Native Nations retain control over such data. Agreements about the use and distribution of data about Native Nations will be negotiated as part of the research approval process.

Cultural Competency

Research conducted through the SW CASC will be sensitive to the traditions, knowledge, and culture of the Native Nations engaged in the project. The SW CASC will work to ensure that researchers associated with the program have opportunities to gain knowledge, skills, and experience working with Indigenous communities to allow them to work effectively in partnership with Indigenous communities.

PROPOSED TRIBAL ENGAGEMENT ACTIVITIES FOR 2020-2022

Proposed activities for 2020-2022, the SW CASC has identified strategic activities to engage with Indigenous communities.

1. Communication & Outreach
 - a. Southwest Adaptation Forum (in partnership with the SW CASC Tribal Liaison)
 - i. SWAF is envisioned as a venue to gather climate adaptation and assessment practitioners in the Southwest to share stories, obstacles, and best practices from their work and, together, build a network of partners dedicated to finding integrated, community-based adaptation solutions. Intended outcomes include (1) strengthening existing and building new relationships among partners in the region, (2) identifying gaps in our existing networks, and (3) generating synergy and momentum for future engagement among partners and stakeholder groups. SWAF is part of the regional adaptation forum network co-led by the American Society of Adaptation Professionals and is associated with the biennial National Adaptation Forum.
 - b. Tribal Stakeholder Roundtables (in partnership with the SW CASC Tribal Liaison)
 - i. Included in the formal funding agreement (Cooperative Agreement) between USGS and the SW CASC university consortium, the Stakeholder Roundtables are to increase the feasibility of adaptation actions through iterative, collaborative discussions between researchers and practitioners.
 - c. Tribal Site Visits (in partnership with the SW CASC Tribal Liaison)

- i. Build relationships with tribal nations and communities through proven engagement strategies including in-person communication with Tribal leaders and department directors/staff during site visits.
- 2. Collaboration & Leveraged Partnerships (please also refer to the SW CASC Communication Plan)
 - a. SW CASC BIA Tribal Climate Science Liaison Initiatives – please refer to the Liaison Annual Work Plan
 - b. Consortium Member Tribal Collaborations– Please refer to the SW CASC Tribal Collaborations spreadsheet for examples of current projects with tribes
- 3. Capacity Building
 - a. (SW CASC) Cultural Sensitivity and/or Tribal Engagement training
 - b. (Student) Tribal Fellow
 - i. The SW CASC NRWD Fellowship was developed to provide graduate students with opportunities for training and practice in developing use-inspired and actionable science to inform natural resource management decisions. The SW CASC NRWD Fellowship is funded by the SW CASC and the University of Arizona Graduate College.
 - c. (Tribes) Tribal Travel Support
 - i. The SW CASC commits to supporting the participation of tribal practitioners and leaders in roundtables and annual thematic small regional meetings, through travel funds explicitly available for this purpose.

PARTNERS in TRIBAL ENGAGEMENT

Because the SW CASC has limited resources, we can continue to build upon existing collaborations and relationships to assist in strengthening tribal climate adaptation capacity. Anyone we partner with will adhere to the principles outlined in the Statement of Principles.

- 1. Bureau of Indian Affairs Tribal Resiliency Program
 - i. Southwest CASC Tribal Climate Science Liaison
- 2. American Indian Higher Education Consortium
 - i. Tribal Colleges & Universities in the Southwest
 - i. California Tribal College (CA)
 - ii. Tohono O’odham Community College (AZ)
 - iii. San Carlos Apache College (AZ)
 - iv. Dine College (NM, AZ)
 - v. Navajo Technical University (NM, AZ)
- 3. Other CASCs and Tribal Liaisons
- 4. Institute for Tribal Environmental Professionals
- 5. University of Arizona
 - i. Native Nations Climate Adaptation Program

- ii. Native's Peoples Technical Assistance Office
- iii. Indigenous Peoples Law Program
- iv. Native Nations Institute
- 6. Former Landscape Conservation Cooperatives and associated home agencies (especially U.S. FWS)
- 7. USDA Climate Hubs
- 8. NOAA Regional Integrated Sciences and Assessments (RISA) Program
- 9. Climate Science Alliance Tribal Working Group
- 10. Inter-Tribal Council of Arizona
- 11. Native American Fish & Wildlife Society
- 12. Southwest Practitioners Adaptation Network
- 13. National Park Service: Vanishing Treasures

OPPORTUNITIES FOR TRIBAL ENGAGEMENT

The following list offers a sample of regional and national tribal entities with which the SW CASC can engage and partner on initiatives of mutual interest.

- 1. Inter-Tribal Council of Arizona
- 2. Inter-Tribal Council of California
- 3. California Association of Tribal Governments
- 4. Inter-Tribal Council of Nevada
- 5. Native American Fish Wildlife Society – Regional and national gatherings
- 6. Rising Voices - National gatherings
- 7. Institute for Tribal Environmental Professionals – National gatherings
 - i. National Tribal & Indigenous Climate Conference
 - ii. National Tribal Forum on Air Quality
 - iii. Tribal Lands & Environment Forum
- 8. American Indian Science & Engineering Society – Regional and national gatherings
- 9. American Indian Higher Education Consortium – National gatherings
- 10. National Congress of American Indians Climate Action Task Force
- 11. Tribal/EPA Region 8 and 9 Annual Gatherings
- 12. EPA Regional Tribal Operations Committee Meetings
 - i. Region 8
 - ii. Region 9

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