

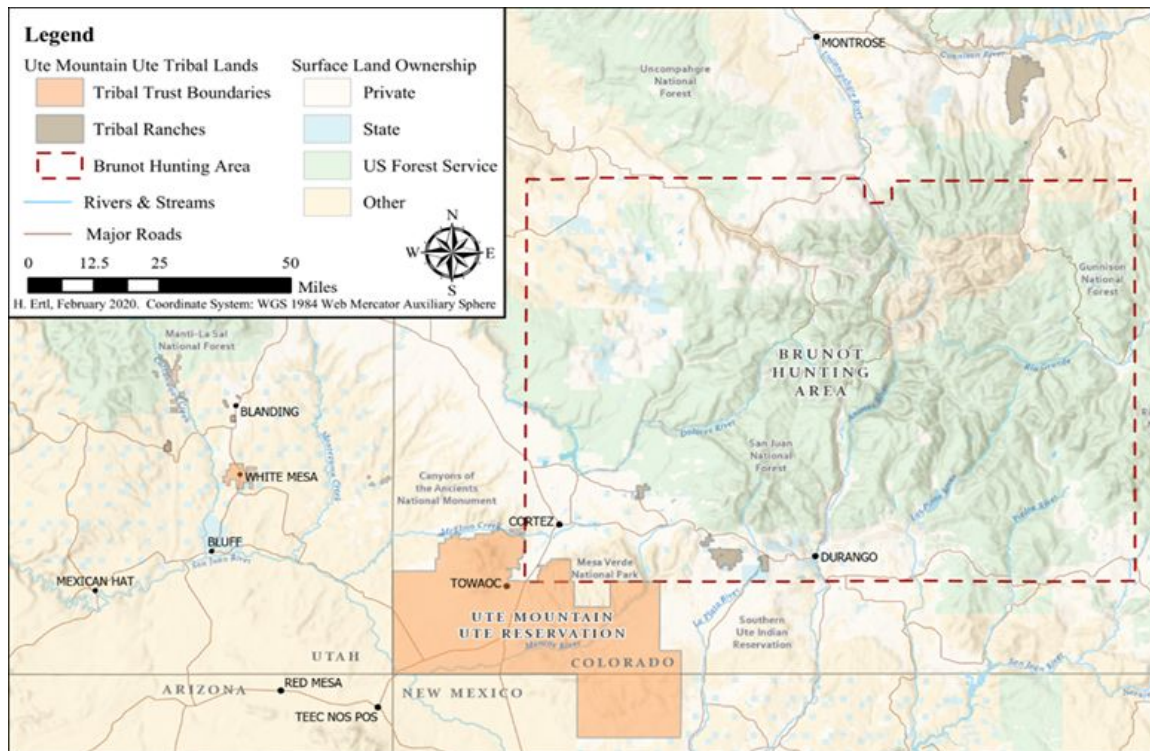


Ute Mountain Ute People: Preparing for a Warmer Climate

The Ute Mountain Ute (or Núchíú) reservation lies in the Four Corners region of the Colorado Plateau covering portions of southeast Utah, southwest Colorado, and northwest New Mexico. Traditional Ute people were nomadic and utilized natural and cultural resources in these areas and beyond. Ute history, passed through generations, says that the people have lived here since the beginning of time.

The Tribal reservation lands are located in the wide open expanses of the semi-arid desert encompassing canyons and segments of the San Juan and Mancos Rivers. The dominant geographic landmark is the Ute Mountain, and the southern section of Mesa Verde National Park borders the reservation. This area, known as the Ute Tribal Park, provides opportunities for tourists to visit undeveloped ancestral Pueblo cliff dwellings with a Ute Mountain Ute guide. Other Ute initiatives include a farm and ranch enterprise, a construction company, two travel centers, and a casino with a hotel and RV park.

The majority of the 2,200 Tribal members reside in the capital of Towaoc near Cortez, Colorado, and there is a smaller community of 250 residents in White Mesa, Utah. The only school on the reservation is for early childhood education. A culturally focused charter school for kindergarten and first grade students will open in the fall of 2021. Students from first through twelfth grades are bussed to the towns of Cortez, Colorado, and Blanding, Utah.



Source: UMU Environmental Programs Department

A Warming, Drying Climate

Much like the rest of the Four Corners region, the Ute Mountain Ute people have seen many climate related changes in the last thirty-plus years, including increases in temperature, reduced precipitation, increased drought conditions, increases in wildfires, more dust storms, and changes in seasonality (such as winter arriving later and the snowpack melting sooner), diminishing spring rains, and higher summer temperatures. All of these factors are leading to springs and streams that are drying up. Culturally important plants and resources are becoming harder to find. Forage for cattle is impacted by drought. Native species such as sagebrush are drying up, and invasive species like tamarisk and cheatgrass are encroaching on the lands. Interviews with elders indicate an increase in chronic respiratory diseases, such as asthma and allergies. The increase in dust storms and drier, hotter air leads to people spending more time indoors and consequently experiencing higher electric bills when trying to keep their homes cool.



Ute Spring. Source: UMU Environmental Programs Department

The Tribe Responds

In response to these growing concerns, the [Ute Mountain Ute Climate Change Program](#) applied to the Bureau of Indian Affairs (BIA) Tribal Resiliency Program to conduct a Climate Change Vulnerability Assessment. In collaboration with Dr. Shannon McNeeley and Colorado State University, the project honored Traditional Ecological Knowledge (TEK) and elders' observations of land and climate changes. The project was designed to: 1) understand the Ute Mountain Ute Tribe's vulnerability to drought and climate changes, 2) involve natural resource managers and co-produce drought and resource information for decision making, 3) engage the community in climate knowledge, and 4) identify actions to be taken to help the Tribe in the present and future conditions.

The Ute Mountain Ute's Climate Change Program relied on in-depth interviews with community members, elders, and natural resource managers in Towaoc and White Mesa to inform the vulnerability assessment. Twenty-nine elders and five natural resource managers were interviewed between June 2017 and January 2018. The interview results indicated community concern about the changing climate, and mirrored the climate change trends occurring in the Four Corners region. The project results, which highlighted the need to move towards adaptation planning, were shared with elders, Tribal leadership, natural resource managers, and community members. The next step was to apply for a BIA climate resilience grant. Fortunately, in 2018, the grant was awarded.

Climate Action Plan

One of the greatest strengths the Tribe experienced during the climate action planning process was having the support of the Tribal Council, elders, Natural Resources Interdisciplinary Team, and community members. A climate change action working group was formed that included one councilman and staff from several departments. Tribal members stressed that they wanted the plan to reflect the community values and guiding principles of natural resources and culture,

and the sacredness of water, community, family, and traditions. The Elders Committee was involved throughout the process and their voices were included in the plan.

The format for the [Ute Mountain Ute Climate Action Plan](#) was derived from the Institute for Tribal Environmental Professionals' (ITEPs') materials and workshops, and the Tribal Climate Adaptation Guidebook from Oregon State University. Expertise for the project was provided by Dr. Shannon McNeeley and her support staff. The group focused on six planning areas including health and livelihoods, water resources, water ecosystems, rangelands and forests, terrestrial and aquatic wildlife, and energy. The plan proposes specific actions and funding sources for each area. The Climate Action Plan was approved by the Tribal Council on July 29, 2020.

One challenge the climate adaptation working group experienced was connecting with Tribal youth. Since the students spend most of their days off the reservation attending school, they were less available for input. The Climate Change Program staff has and will continue to develop summer camp opportunities to talk about science and climate change in ways that are engaging and fun for the youth. These concepts will also be included in Towaoc science nights with middle school aged youth. Additionally, the Program intends to develop an outreach plan and secure additional funding to ensure the implementation of the Climate Action Plan.

Further Climate Change Actions

Beyond these grant-funded adaptation projects, the Ute Mountain Ute Tribe has and is undertaking many climate change mitigation and adaptation actions. They recently constructed a [1 MW community solar project](#), which offsets a portion of community members' and Tribal government electric bills. The reduction in energy bills is a welcome respite, as is the reduction in fossil fuel usage. Commissioned in March 2020, the 3600 PV panel solar power system generated close to 2 million KWh of electricity in its first 10 months of operation. Additional community scale solar projects are scheduled for the White Mesa and Towaoc communities.

A cornerstone of the Tribe's response to climate change is a transition from its former economic model that relied heavily on fossil fuels (oil and gas) to a greener alternative. The Tribe has worked with the Department of Energy and its national labs: Sandia Labs assisted with energy planning and strategy and the National Renewable Energy Lab assisted with youth outreach and other technical assistance. The Department of Energy Tribal Program cost-shared energy efficiency planning, the Towaoc Community Solar project, and is poised to cost-share the White Mesa Solar Initiative in 2021. As envisioned by its Renewable Energy Team and the strategic planning with Sandia Labs, the community solar projects are a stepping stone to embrace the technology, and look towards larger commercial scale projects. The Tribe is actively working with multiple entities to plan, fund, and build commercial scale solar and energy storage projects thousands of times the size of the Towaoc project. The Tribal Councils have committed to cost-sharing approximately \$1.5 million in community solar projects in the last five years. Commitment of land and other resources to commercial scale renewable energy projects is anticipated on a large scale in the next five years. The Tribal Leaders are embracing the transition to greener revenue sources.



Towaoc Community Solar power plant - over 3800 PV panels, creatively net-metered, Ute Peak in background

Other adaptation actions in response to increasing droughts and wildfires include a range assessment/inventory to learn how the rangelands are being impacted; a groundwater monitoring and protection program; an [air quality program](#) to track and assess air pollutants in and around Tribal lands; water efficiency projects such as the Farm and Ranch enterprise implementing water efficient irrigation and micro-hydroelectric installations; invasive tamarisk removal along the Mancos and San Juan Rivers, funded by the BIA, to encourage the return of native plants; fire prevention strategies such as creating clear spaces between homes and the forest; native fish recovery efforts; and the securing of water rights.

In 2020, the Tribe received a BIA Tribal Resilience grant to sponsor the Tri-Ute Climate Adaptation Workshops series. These sessions will prepare the three tribes of the Ute nation for the current and future threats from a warming climate. The Ute Tribe, Southern Ute Tribe, and the Ute Mountain Ute Tribe are connected through traditions and family.

Starting in 2021, the Environmental Programs Department program will begin a revegetation project in the Mancos Canyon. This action is part of a collaborative effort known as the Mancos River Resiliency Project. The staff will also work with Mesa Verde National Park and the USGS to study the challenges with reforestation after pinyon juniper forests burn.

The Ute Mountain Ute people understand the high desert and how to live in a region known for wide open expanses, canyons, and mountains. Climate change is warming up their lands and occasionally polluting their air with dust and smoke. But resilience and tenacity shines through them, in their willingness to develop, communicate, and implement critical adaptation and mitigation strategies. More information can be found at: www.utemountainuteenvironmental.org.



View to the south :UMU Environmental Programs Department