



## IMPACTS OF CLIMATE CHANGE ON THE NORTH FORK RANCHERIA OF MONO INDIANS OF CALIFORNIA

*Elevated day and nighttime temperatures, drought, wildfire, and flooding due to increasingly variable precipitation patterns are threatening the physical, cultural, and spiritual health of the Tribe, its habitats and ecosystems, and its built environment.*

For thousands of years the North Fork Band of Mono Indians lived throughout and beyond the area currently known as Madera County.

Warming temperatures, increasingly variable precipitation, flooding, drought, and wildfire have impacted the Tribe. The disturbance and decline of native plant and animal species have damaged the Tribe's ecosystem. Traditional hunting and gathering practices have been impacted, leading to the loss of local food, medicinal plants, and materials used for jewelry, ceremonies, and basketry.

The wellness of the North Fork tribal people is tied to the lands. The water, plants, soil, air, minerals, and other resources provide a connection to the landscape that is not easy to convey. For example, when a weaver gathers material for a baby basket, they must know where to go for materials, that material must grow in the right conditions, have plenty of water, and once cleaned and ready to use, the weaver can be overcome with a feeling of reflection and relaxation as they weave the basket for a child.

In general, the area experiences both cold winters with temperatures below freezing, as



**Figure 1. Western Redbud or "Tah-cah-cub" used for basketry**

well as hot summers where temperatures exceed 100°F. However, accelerated warming over the last decade has contributed to warmer winters and hotter summers. This has impacted the both the health of tribal citizens and the plant and animal resources on which they rely.

Particularly important to the tribe has been the decrease in acorn availability. The tribe on the western side of the Sierra Mountains has depended heavily on the acorn as a staple food for thousands of years. Warming temperatures have impacted acorn availability especially during drought.

The increased frequency and severity of drought conditions for the North Fork have important implications for surrounding wildlife and traditional cultural practices. Drought has reduced the availability of materials needed for basket-making, disrupting cultural traditions, and impacting the ability to pass on practices to younger generations.

Drought conditions have had significant impacts on tree mortality in the Sierra National Forest, causing large-scale die offs that are exacerbated by disease, pests, and wildfire events. Fallen trees in the area have reduced the availability of mushrooms, an important food resource to the tribe, which grow when forest soil is exposed to air.

The North Fork Rancheria has also experienced changes in precipitation patterns – both periods of decreased precipitation and periods of heavy rainfall and flooding. Extreme precipitation events impact property, roadways, and plant and animal species. Decreases in precipitation have contributed to lower-than-normal creek flows. Tribal members are dependent on natural water systems, thus a reduction in creek flows has limited tribal access to clean water. Data shows that North Fork is ranked in the 97th percentile compared to other areas across the state for drinking water contamination. Decreased flows can degrade the quality of aquatic ecosystems; the Tribe has observed reduced numbers of culturally important species such as the Central California roach, hardhead, Sacramento pikeminnow, Sacramento hitch, Sacramento perch, and Sacramento tule perch.

Dry conditions, along with the build-up of fuel, facilitate wildfire events, which are further impacting the health of populations and lands. Three of the five largest wildfires impacting the Tribe have occurred in the last 20 years. These fires, along with many smaller fires, have burned significant portions of North Fork lands and lands surrounding the Rancheria. While it has been uncommon for previously burned areas to re-burn, climatic changes are altering the time intervals between re-burns. In total, there have been 73 fires within 10 miles of the North Fork Rancheria between 1950 and 2020. The loss of resources is severe, and it will take generations for the oak, pine, fir, and cedar to regrow. Air pollution from wildfire smoke contributes to negative health outcomes like asthma, cardiovascular disease, and premature death.

Another important consequence of increased frequency and intensity of fires across the state is the reduction in the number of days the tribe is allowed to conduct cultural burning and fire ceremonies. The North Fork Mono have traditionally used regular



**Figure 2. The Creek Fire. North Fork, 2020**

burning to encourage new growth of many species such as deer grass, sourberry and chapparal – materials needed for basket-weaving.

Warming temperatures, drought, wildfires, increasingly variable rainfall – and ensuing floods and erosion have impacted the people of the North Fork Band of Mono Indians and their environment. In addition to exposures to temperatures much warmer than they are acclimated to, these changes have altered and disrupted the ecosystems within and around North Fork, impacting

many species of cultural importance to the Tribe. The community is actively working to understand, adapt to, and mitigate the effects of climate change. With the Tribe's goals of being consistent, transparent and honorable, the North Fork Band of Mono Indians continue to manage and protect their lands and limit the impact of climate change on the North Fork Tribe's right to hunt, fish, gather, and continue their cultural practices and activities that are integral to their cultural, psychosocial health, well-being, and livelihood.