



IMPACTS OF CLIMATE CHANGE ON THE PALA BAND OF MISSION INDIANS

Rising temperatures, drought, wildfires, and flooding are threatening the physical, cultural, and spiritual health of the Tribe, its habitats and ecosystems, and its built environment

The people of the Pala Band of Mission Indians have lived from time immemorial in what is now known as northern San Diego County. The current Pala Indian Reservation is located on approximately 13,000 acres, roughly 30 miles east of the Pacific Ocean. The lands are next to the Palomar Mountain range. Adjacent to the reservation is the Cleveland National Forest to the north and east, and private agricultural lands to the south and west.

Pala's location in the southwest region of the United States, within the inland valley and mountainous areas of San Diego County, makes it susceptible to a variety of interrelated direct and secondary climatic exposures.

"In recent years, our people have shared growing concern about a new set of threats, including more severe wildfire, drought, temperatures, and flooding. Our climate is changing.

~Chairman Robert Smith

Both the daytime and nighttime temperatures at Pala have been increasing. In 2020 Pala experienced 16 days of temperatures over 100 degrees. Elevated temperatures affect human health, mental health, socio-economic health, and cultural and spiritual health, as well as the plants and animals that are part of Pala.

As temperatures have increased Pala has seen reduced areas of important habitats including chaparral, native grasslands, wetlands, riparian, and upland habitats and increased levels of non-native grasslands.

Rising temperatures threaten cultural expressions and traditional ways of life and impact the psychosocial health of the Pala community.

Increased frequency of extreme heat and drought events have contributed to the decline or disappearance of culturally important plants and animals such as:

- Live oak, Englemann oak, white sage, chia sage, arroyo willow, cottonwood, manzanita, deer grass, yerba mansa, juncus, and rushes



Quino checkerspot butterfly on a wild hyacinth

Source: Pacific Southwest Region USFWS

- Quino checkerspot butterfly, California gnatcatcher, southwestern willow flycatcher, arroyo toad, acorn woodpecker, chuckwalla, badger, yellow-billed cuckoo, steelhead, Pacific lamprey

Health impacts and power disruptions triggered by extreme heat can result in lost work and earnings for tribal businesses, lost school days and closures of school and afterschool activities that impact Pala's youth.

Pala is experiencing the impacts from drought. Since 1895 Pala has received less annual rainfall over time. The Pala Environmental Department staff have observed range shifts of the manzanita

and other upland plants into the riverbed as riparian vegetation and wetlands dry up. Reduced riparian vegetation lowers the area's natural capacity to absorb storm water, which exacerbates flooding threats on the Reservation. Gold spotted oak borer beetles are a concern for the oak groves on the Reservation, due to the toll the drought has taken on native oak species.

When the rain does come, rain events have become more intense, causing flooding. Flooding has become a regular occurrence at Pala with seven major flood events occurring between 1916 and 2019.

Nearly a third of Pala's population lives in a high-risk wildfire area. Historically, large, high intensity fires occurred regularly but infrequently in the region. Southern California's intense Santa Ana winds, increasing temperatures, and severe drought conditions are increasing the wildfire risk near Pala.

Wildfire can destroy culturally important ecosystems, sacred sites, and points of access to culturally important places to Pala. Numerous cultural sites, functions or traditions are in danger of wildfire encroachment and damage. Wildfires can threaten Pala's traditional practices, sovereignty, and community cohesion, which are considered highly important community assets.

There were 38 wildfires during the past 100 years that affected Pala. Three of California's largest wildfires, which occurred recently, burned over 680,000 acres in San Diego County and impacted Pala.

Climate change continues to deeply affect the environment and alter and disrupt the ecosystems within and around Pala. The Pala community is actively working to understand, adapt to, and mitigate the effects of climate change.