



# Tribal Climate Resilience Program — Pacific Region

## PACIFIC REGION

In the Pacific Region - in California temperature increases are causing prolonged droughts, warming ocean waters, extreme wildfires, and heat stress. In contrast, “atmospheric river storms” are anticipated to escalate in frequency and intensity, causing severe flooding and debris flows from prior burned areas. BIA staff and Tribes work closely with regional Tribal groups, state and state-wide nonprofit organizations, and CA and other regional LCCs to foster collaboration among the relatively small, but numerous Rancherias and a few somewhat larger Tribal reservations.



### CLIMATE IMPACTS

- Warming Ocean Temperature
- Drought
- Coastal Erosion
- Flooding
- Native Food Scarcity

## FUNDED STRATEGIES

BIA TCRP Funding for Tribes in the Pacific Region has supported regional training in both northern and southern California, participation in the CA LCC, fisheries and temperature vulnerability studies, youth elder interviews, plans that incorporate traditional ecological knowledge to aid wildfire risk reduction efforts, ocean monitoring and coastal resource management, how logging and other practices have affect ecosystems, and ways to adapt practices towards more long-term sustainability. Recently, some CA Tribes have received \$50,000 toward capacity building, while others have leveraged funds from other BIA and federal partnerships to expand projects beyond Tribal borders. The Native American Environmental Protection Coalition supports joint development of climate adaptation plans for eight Tribes in the coalition - <http://naepc.com> Tolowa Dee-Ni' Nation is conducting a Baseline and

Vulnerability Assessment of Da'-me' - their Smith River Estuary. The Quartz Valley Indian Community seeks to integrate western science and traditional ecological knowledge (TEK) for climate change adaptation in the Klamath Basin. The Santa Ynez Band of Chumash Indians (SYBCI) has improved energy efficiency through as an EPA Climate Community Showcase Program and their Environmental Office (SYCEO) has developed a database of over 320 native and culturally important plant species and a gardening program for native plants - <http://bit.ly/2q66ItQ>

## EXAMPLE PROJECTS

### Leadership as a Regional Emergency Center

As a Whitehouse Climate Action Champion, the Blue Lake Rancheria has committed to greenhouse gas emission reductions through solar, energy efficiency, microgrids, and an innovative biochar gasification system, while serving as a regional off-grid emergency center - <http://bit.ly/2mfvDqg>

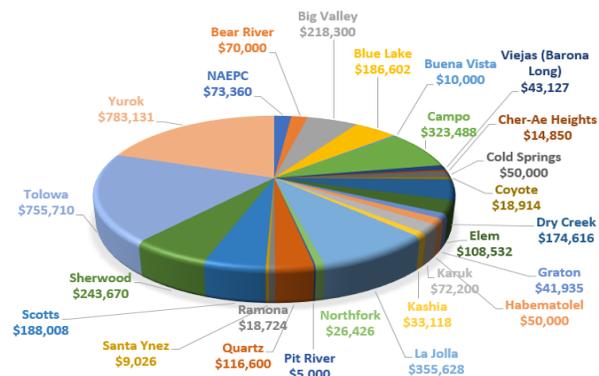


### Karuk Tribe Fire Adaptation Strategies

The Karuk Tribe's proactive cultural use of fire protects the Klamath River basin by reducing the availability of forest fuels—and thus reducing the risk of high-severity wildfire that can threaten people, their homes and businesses, and natural systems such as forests and wetlands near rivers and streams. By removing accumulated fuels, fire makes room for new growth and change. This renewal helps ensure the quality of traditional foods and cultural materials and serves as a medium of cultural education. Ceremonies surrounding fire strengthen the Tribe's social networks and enhance its members' physical and mental health. - <http://bit.ly/2p3VgPq>



PACIFIC TRIBAL AWARDS





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## CLIMATE SCENARIOS

### 2035 and 2060 CMIP5 Climate Projections

From EPA CREAT Projection Map - <http://arcg.is/2cEzv2p>

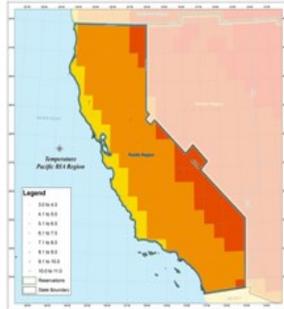
Success at emissions controls over time, as well as development and population trends, will determine the degree of climate change we can anticipate. Managers should test the robustness of decision over a range of potential futures, while ways to reduce overall risks and costs.

#### Temperature Scenarios

#### Precipitation Scenarios



Hot 2035



Hot 2060



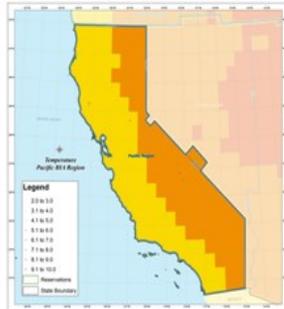
Dry 2035



Dry 2060



Central 2035



Central 2060



Central 2035



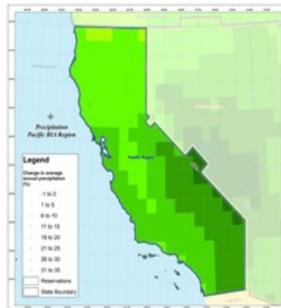
Central 2060



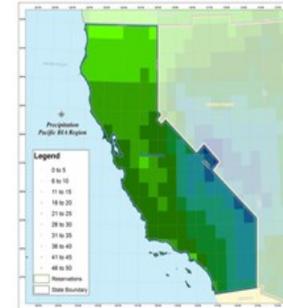
Warm 2035



Warm 2060



Wet 2035



Wet 2060

## DATA ANALYSIS EXAMPLE

### Fire Hazard Sensitive Zones

[http://www.fire.ca.gov/fire\\_prevention/fire\\_prevention\\_wildland\\_statewide](http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_statewide)

California State has proposed a state wide Fire Hazard Sensitive Zones maps for state and local responsibility lands. Visit [FireScience.gov](http://FireScience.gov) to obtain information from local experts and scientists working in your area, attend training, share data, and plan and test management strategies together with others facing similar concerns.

