



Tribal Climate Resilience Program — Western Region

WESTERN REGION

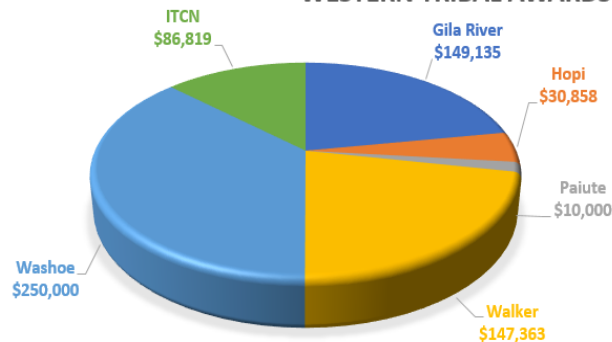
In the Western Region, hotter, drier summers have increased wildfires and invasive species. Regional, State-level, and National intertribal organizations are becoming more active in climate support efforts in partnership with NOAA CLIMAS and the Southwest Climate Science Center, (CSC), Native Nations Climate Adaptation Program (NNCAP), Native Waters on Arid Lands, and the Desert Research Institute - <https://www.dri.edu/>



CLIMATE IMPACTS

- Drought Severity
- Food Scarcity
- Outbreaks of Pests
- Water Availability
- Air Quality / Respiratory Illness
- Increased Wildfires

WESTERN TRIBAL AWARDS



FUNDED STRATEGIES

Individual Tribes including the Gila River Indian Community, AZ, Walker River Paiute Tribe, NV, and the Washoe Tribe, NV have been in the process of developing climate adaptation plans. The Intertribal Council of Nevada is also working to assist all Nevada Tribes to assess climate-related water availability issues.

Other activities in the Western Region not funded by BIA TCRP that support Tribes and Climate include Native Waters on Arid Lands and the Desert Research Institute efforts out of the University of Nevada, Reno. The University of Arizona Southwest Climate Science Center, Native Nations Climate Adaptation Program (NNCAP) works with the Southwest Climate Science Center (CSC) and NOAA CLIMAS to develop Tribal Climate Profiles that support climate adaptation planning. NNCAP also hosts the Southwest Tribal Climate Change Network that provides monthly webinars on a variety of climate topics and other expanding support -

<http://www.nncap.arizona.edu>. BIA TCRP funds a Regional Tribal Climate Liaison through the American Indian Higher Education Consortium (AIHEC) hosted by the SW CSC to better integrate climate science, Tribal needs and incorporate traditional knowledges.

Another innovative adaptation strategy includes a partnership between the Hopi Tribe and Waterrock, L3C to establish Hopi Raincatchers, which trains youth as an alternative career track in advanced rain harvesting methods and native plant reestablishment through diverse funding and international networks of support.

EXAMPLE PROJECT

Waterrock L3C & Hopi - <http://waterockl3c.com/>

The team's practices include teaching youth to become experts in designing and placing rock structures and gabion baskets strategically to restore streams, springs and wetlands, capture more recharge, and reduce erosion. Raincatchers plant seed balls and native plants that can grow in enhanced moisture to protect water quality and create diverse habitat to support culturally important species.

Horizontal Drop Structures enhance dry arroyo



Eroding Spring protected by new cascading design

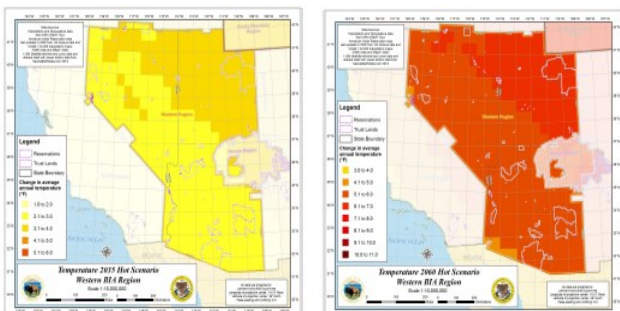




CLIMATE SCENARIOS

2035 and 2060 CMIP5 Climate Projections
from EPA CREAT Projection Map - <http://arcg.is/2cEzv2p>

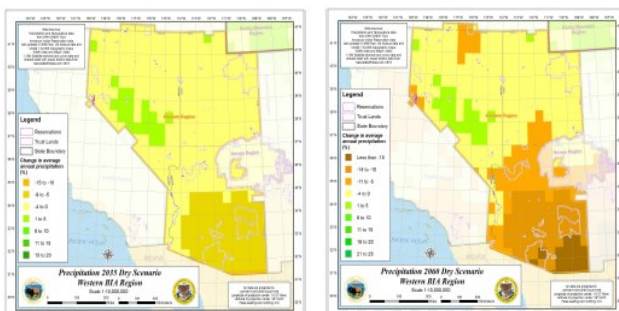
Temperature Scenarios



Hot 2035

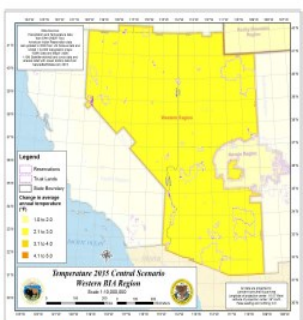
Hot 2060

Precipitation Scenarios



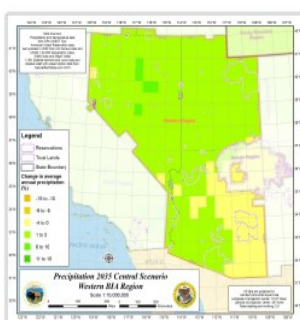
Dry 2035

Dry 2060



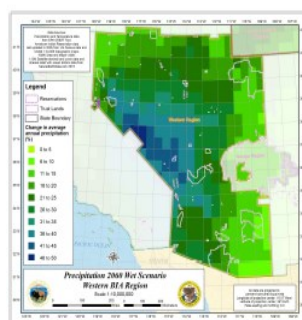
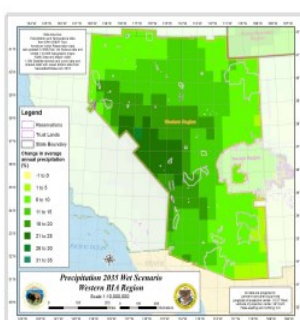
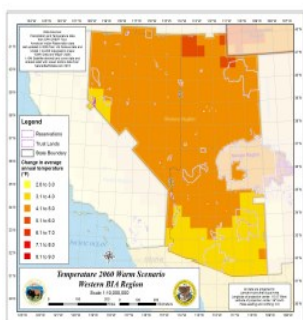
Central 2035

Central 2060



Central 2035

Central 2060



DATA ANALYSIS EXAMPLE

Fire Historic Data

http://sfrs.wr.usgs.gov/Fresc_ScienceData/

The USGS has compiled a fire historical data throughout the western US from 1870-2007 to compare to new fire regimes to better determine unusual trends to address.

Visit the Fires Science Exchange Network - <http://www.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. NASA North American Forest Dynamics consortia is also creating new variation products - <https://go.nasa.gov/2p1TGMS>

