

# Tribal Climate Resilience Program — Rocky Mountain Region

## **ROCKY MOUNTAIN REGION**

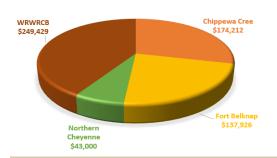
Though only 8 Tribes are located in the Rocky Mountain Region, the total Tribal population on its larger reservations are comparable to other BIA Regions. Extreme weather events have increased over the past decades. Tribes in the area have been

the area have been implementing a variety of strategies to improve energy efficiency, contend with longer dry spells, and innovate with support from both DOI Climate Science Centers ( CSCs ) and Landscape Conservation Cooperatives ( LCCs ).

#### **CLIMATE IMPACTS**

- Heat Waves
- Extended Drought
- Flooding Events
- Changes to Forest Species
- Increase Wildfire
- Wildlife Declines
- Longer, Worse Allergy Season

#### **ROCKY MOUNTAIN TRIBAL AWARDS**



## **FUNDED STRATEGIES**

Both the Chippewa Cree Indians of the Rocky Boy's Reservation and Fort Belknap Indian Community have embarked on a climate adaptation planning process. Rocky Boy's youth also held a mini-conference to present how each youth learned about climate impacts and ways to best address challenges. Tribes have also received funding to attend climate training.

The Blackfeet Tribe has been working closely with the Confederated Salish and Kootenai Tribes (CSKT) and First Nations throughout the Great Northern LCC, and through the Roundtable on the Crown of the Continent to develop youth, staff, and leadership training and plan towards a shared, sustainable future. Youth EAGLES learn hydroponics and more - <a href="http://bit.ly/2n4KXsU">http://bit.ly/2n4KXsU</a>

The Wind River Tribes of Eastern Shoshone and Northern Arapaho have been working with the North Central Climate Science Center (NC

CSC) to understand and plan for changing drought intensity and duration. A recent BIA TCRP grant will use cottonwood trees to reconstruct 250 years of record to aid climate and water monitoring.

Although not funded through the BIA TCRP, the Crow Tribe has been working with the U.S. Forest Service and USGS-Flagstaff, among other partners, to explore how climate change is affecting community health and local ecosystems through the observations of tribal elders - http://bit.ly/2lLXi1f

## **EXAMPLE PROJECTS**

### **Northern Cheyenne Showcase Community**

The Northern Cheyenne Tribe leveraged an EPA Climate Showcase Communities Program grant to train Chief Dull Knife College students on energy-efficient straw bale building techniques. The Tribes also insulated buildings and installed composting toilets and solar panels - <a href="http://bit.ly/2p4a00r">http://bit.ly/2p4a00r</a>



### **Wind River Drought Management**

Scientists with the NC CSC, the National Drought Mitigation Center, and several other university and agency partners, with additional technical and financial support from the High Plains Regional Climate Center and NOAA's National Integrated Drought Information System are working closely with Tribal water managers to assess how drought affects the reservation, integrating climate sciences with local knowledge. The findings will help inform the creation of a climate monitoring system and drought management plan, which will integrate climate science with hydrologic, social, and ecological vulnerabilities and risks, and identify response capacities and strategies to support the Tribal Water Code and related resources management. Ultimately, the plan will help the tribes ensure that agricultural and other societal needs are met during times of drought http://bit.lv/2bPpPT9



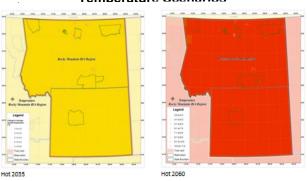
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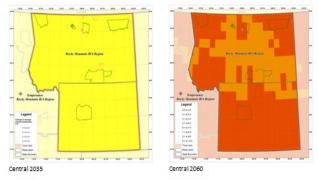
## **CLIMATE SCENARIOS**

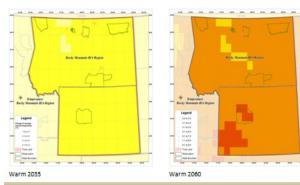
## 2035 and 2060 CMIP5 Climate Projections

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

#### **Temperature Scenarios**

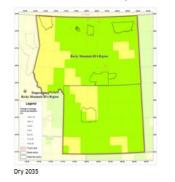




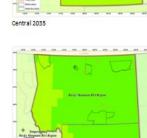


Success at emissions controls over time, as well as development and population trends, will determine the degree of climate change we can anticipate. Managers should test the robustness of decision over a range of potential futures to reduce overall risks and costs.

#### **Precipitation Scenarios**

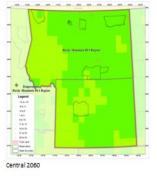


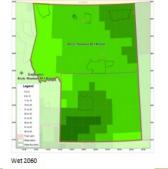






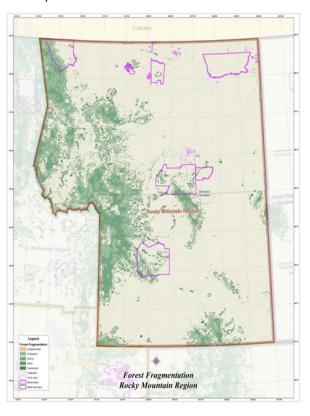






## **DATA ANALYSIS EXAMPLE**

Forest Fragmentation - http://bit.ly/2pNxc2r Fragmentation of forests could increase vulnerability with pressures from new urban development.



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