



OKLAHOMA

Oklahoma falls within the domain of the South Central Climate Adaptation Science Center (SC CASC)



South Central CASC Consortium Institutions

Host: University of Oklahoma

Consortium:

- | | |
|----------------------------|---------------------------|
| Chickasaw Nation | Oklahoma State University |
| Choctaw Nation of Oklahoma | Texas Tech University |
| Louisiana State University | University of New Mexico |

OUR WORK IN OKLAHOMA

36+
Projects

since **2012**

Key Science Topics



Wildlife & Plants



Drought



Fire



Freshwater



Native Communities



MANAGING FOR DROUGHT IN THE RED RIVER VALLEY

The Red River is a vital source of water for Oklahoma, supporting municipal drinking water supplies, crop irrigation, and recreational fishing for trophy catfish, bass, and gar.

WHAT:

The South Central CASC modeled future temperature and precipitation changes in the Red River Basin to assess how streamflow might change in the future.

RESULTS:

The western part of the Red River Basin is at the greatest risk of experiencing reduced flow. Throughout the basin, peak flows will be higher and low flows will be lower—a finding that is consistent with the expectation that future floods will be more severe and droughts will be more extreme.

IMPACT:

The Chickasaw Nation is using these models in its drought contingency planning efforts to prepare for changes in water supply.



TRIBAL PLANNING FOR EXTREME WEATHER

Climate change is poised to increase the frequency and intensity of extreme weather events, which may damage buildings and infrastructure, cause economic hardship, and endanger people's health—especially for tribal communities, who often lack the resources to prepare and respond.

WHAT:

The South Central CASC trained tribal environmental professionals to identify their community's vulnerabilities and provided them with resources to support planning for extreme weather events.

RESULTS:

The connections formed through the CASC's work have resulted in the University of Oklahoma's Planning Division providing in-depth planning assistance to the Citizen Potawatome Nation, Kaw Nation, Otoe-Missouria Tribe, Fort Sill Apache Nation, and Wichita and Affiliated Tribes.

IMPACT:

Tribal communities in Oklahoma have increased capacity to address extreme weather events and minimize damaging impact to their communities and lands.

