

[View this email in your browser](#)

Southwest Climate Hub Bulletin

News and events for the Southwest Hub region

September 2023

Happy Autumn from the Southwest Climate Hub Team

As we move into the fall in the Northern Hemisphere, temperatures are cooling and our friends and colleagues across the Southwest are spending more time outside, noticing what plants survived the extreme summer heat. While temperatures are cooling now, several short months ago we endured the hottest July ever recorded. In the height of the summer people across the Southwest yearned to go outside, but it was too hot. For people who work outdoors, such as agricultural workers, extreme heat is especially hazardous. Fortunately, some municipalities, counties, and others are acting. Phoenix leads the nation by having the first permanent, publicly funded **heat office** focused on getting residents inside, to public cooling stations, and encouraging use of water stations throughout the city. In early August, the Biden-Harris Administration announced a dashboard to track **heat-related illness**. To keep up with the latest on extreme heat, we recommend the newsletter of the **Extreme Heat Network** at the University of Arizona.

People of the USDA Southwest Climate Hub

The Southwest Climate Hub is grateful to welcome new members to the team to support science and management information sharing!



Jennifer Holguin is a postdoctoral Research Biologist with the USDA



Akriti Khadka is a Postdoctoral fellow for the ORISE Southwest Climate Hub. She

[Subscribe](#)[Past Issues](#)[Translate ▼](#)[RSS](#)

terrestrial ecosystem ecology, plant ecology, and biogeochemistry to gain a deeper understanding of the impacts of diverse anthropogenic threats, including invasive plant species, nitrogen deposition, and climate change.

Her professional interests revolve around climate vulnerability and adaptation, the human dimension of natural resources management, and environmental justice. She focuses on investigating the interplay between humans and the environment to find sustainable solutions that balance their needs. At the hub, she is developing an assessment of cultural resources for Arizona and New Mexico through spatial analysis of expected changes in temperature, precipitation, streamflow, flood risk, fire risk, and erosion risk.



Mason Gagliardi is originally from Pennsylvania where he received both his bachelor's and master's in geoenvironmental studies from Shippensburg University and focused his course load on water resources and hydrology. Now living in southern New Mexico, he has been enjoying experiencing a new landscape and eating all of southwestern cuisine. Outside of work, Mason spends his time reading, hiking, cooking/baking, and gardening. At the Southwest Climate Hub, he is a Research Assistant working on the Water Adaptations Techniques Atlas (WATA) and, specifically, writing the case studies for Utah. Mason is excited to learn more about the climate adaptation techniques currently being used and how they can be applied to other situations in the future.



Katherine Fernald has BS degrees in Mathematical and Computational Science (always a conversation stopper) and Geology, and MS degrees in Atmospheric Sciences and Earth Sciences. She loves the academic environment and fieldwork. Most recently before coming to the Southwest Climate Hub, she was an instructor at New Mexico State University-Alamogordo. As a research assistant, she works with Noah Silber-Coats and the rest of the team on the Water Adaptation Techniques Atlas.

Students take data-driven action!

Kelly Sayanagi



Testing a Model for the Prediction of Isolated Waters in the Sonoran Desert

Maude Dinan

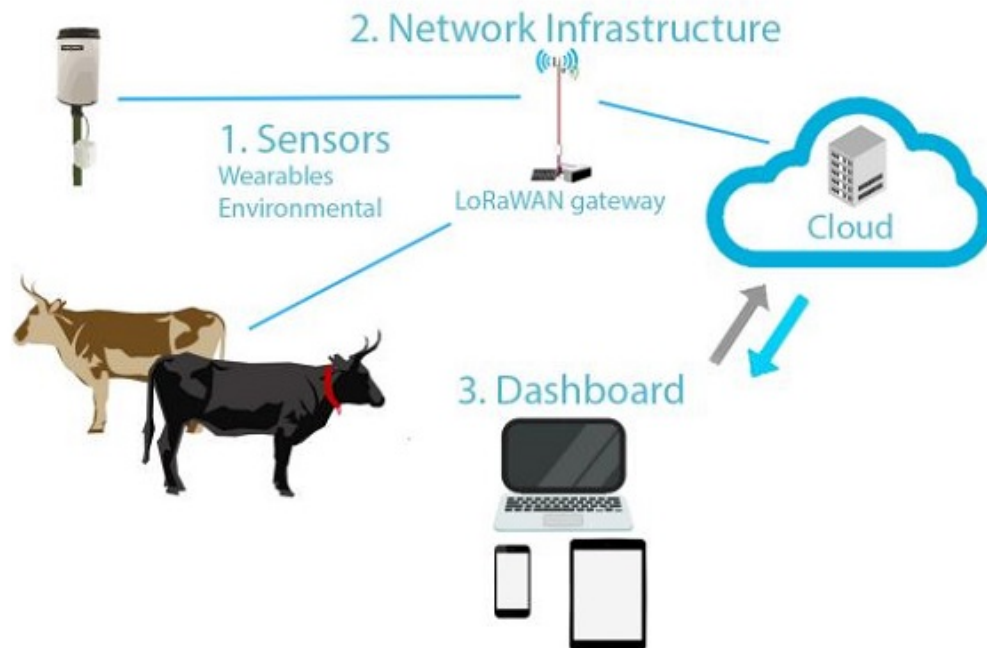
Ephemeral pools of water found in rock (tinajas) or soil (charcos) are abundantly important for desert life, but drought has decreased their quantity and quality. To best manage these water sources, researchers from Texas Tech University developed a model to improve locating tinajas and charcos, minimizing barriers to identification in the field or through satellite imagery. This [CART Case Study](#) details the project!



New Connectivity Options Fact Sheet

Skye Aney

With a growing number of “smart” devices becoming available for ranch management (e.g., virtual fence technology, water level sensors, etc.) that communicate data in real-time to a phone or computer, there also comes an array of options for getting those devices up and running. Before investing in new technology, it's worth taking some time to consider what kind of wireless network is best for the intended operation, bearing in mind that most devices are not universal. The [Sustainable](#)



Developing a Tool to Help Decision-Makers Navigate Complex Drought Scenarios

Maude Dinan

Since drought has such complex and far-reaching impacts, it can be difficult to know where to begin or who to involve in drought management projects. In response, a team of researchers funded by the Climate Adaptation Science Centers (CASCs) developed a typology to help folks streamline the process of understanding the complexity of their drought issue. Using this resource can correct potential stakeholder exclusion, unexpected impacts, or partner misunderstandings early in project/management plan development phases. This [CART Case Study](#) details the project!

[Subscribe](#)[Past Issues](#)[Translate](#) ▼[RSS](#)

Come Rain or Shine Podcast

The Come Rain or Shine Podcast reports actionable science to facilitate adaptation and resilience in the Southwest. Here's a look at some of our most recent episodes:

Old Growth Grasslands

"Old growth" is a term often associated with forests, however scientists are beginning to realize that this concept also applies to other types of ecosystems, including grasslands, which provide a host of important ecosystem services. We interviewed Dr. Katharine Suding, a researcher at the Institute of Arctic and Alpine Research, University of Colorado Boulder, to learn more about old growth grasslands.

A Closer Look at California Wildfires

What's behind the increasing size and severity of California's wildfires? And if the trajectory continues, what does that mean for people living there? How has this trend already impacted residents? Three co-authors of a recent synthesis on drivers of wildfire in the Golden State share their main findings with us, as well as speculating on some possibilities for future solutions to living alongside increasing fire hazard.

After-Fire Reforestation: The John T. Harrington Forestry Research Center

The John T. Harrington Forestry Research Center in Mora, New Mexico, aims to advance the understanding of restoration activities on forested areas in New Mexico through multidisciplinary research, education, and partner collaborations. The Center also provides science-based solutions for private, tribal, state, and federal forest managers, who face the threat of catastrophic fires due to overgrown forests and the inability of post-fire forest communities and ecosystems to naturally regenerate after fires.

Find us on Buzzsprout at: <https://rainorshine.buzzsprout.com/>

Want to know when a new episode is released? Sign-up for email alerts [here](#).



[Subscribe](#)[Past Issues](#)[Translate ▼](#)[RSS](#)

Carbon Farming in New Mexico

Joel Brown, SW Climate Hub Senior Scientist, was invited to participate in the *Carbon Farming in New Mexico* workshop on 26 July in Albuquerque. The workshop was organized by New Mexico State University extension specialists from throughout the state to explore opportunities created by recent legislation in agriculture for climate mitigation. Speakers who specialized in cropping systems, rangelands, forests, and carbon cycling led discussions of potential practices, rates, and financial and contracting implications. The objectives of the workshop were to introduce extension staff to some of the emerging issues and to develop a public focused conference for 2024.

Save the Date!

2024 Southwest Adaptation Forum

February 27-29, 2024 | Desert Diamond Hotel and Conference Center | Tucson, Arizona

The Southwest Adaptation Forum (SWAF) is a bi-annual gathering of practitioners, professionals, community members, and researchers working in diverse ways to address the effects of climate change. Collectively we accelerate the pace and scale of effective climate adaptation and mitigation to reduce the impacts of climate change in communities and landscapes across the Southwest U.S.

Registration information coming soon! For more information please contact Southwest Decision Resources (Colleen Whitaker, colleen@swdresources.com, or Tahnee Robertson, tahnee@swdresources.com)



SAVE THE DATE

FEBRUARY 27-29 2024

DESERT DIAMOND HOTEL & CONFERENCE CENTER
TUCSON, ARIZONA

SOUTHWEST ADAPTATION FORUM 2024

Registration information is forthcoming
Email colleen@swdresources.com for more details

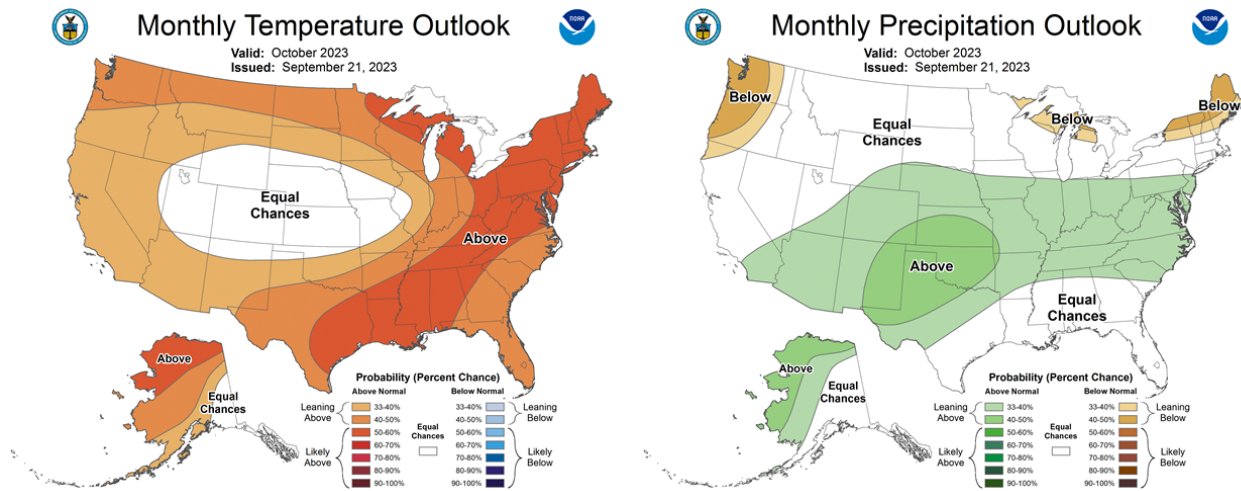
Climate Reporting for the Southwest

As of September 14, 2023, the ENSO alert system status is **El Niño Advisory**. Forecasters announce El Niño conditions are expected to continue into winter. You can read more perspectives and analyses about ENSO available at the NOAA **ENSO Blog**.

National Weather Service Climate Prediction Center Outlooks

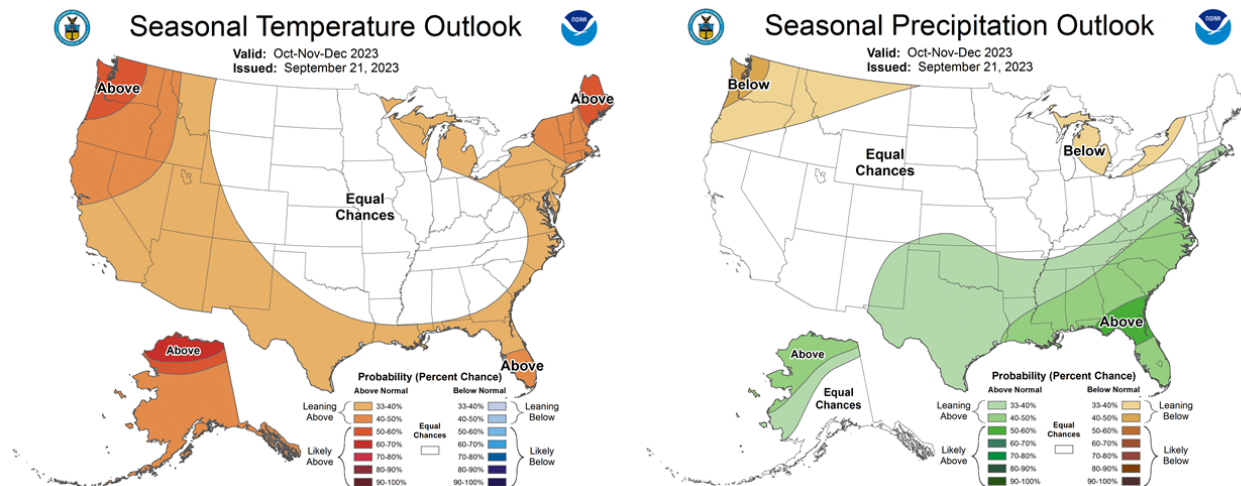
1-month outlook

As of September 21, the **one-month outlook** for October 2023 shows above-normal temperatures for the southwest. There will be a 33-50% chance for above-normal precipitation for southeast Utah, Arizona, and New Mexico.



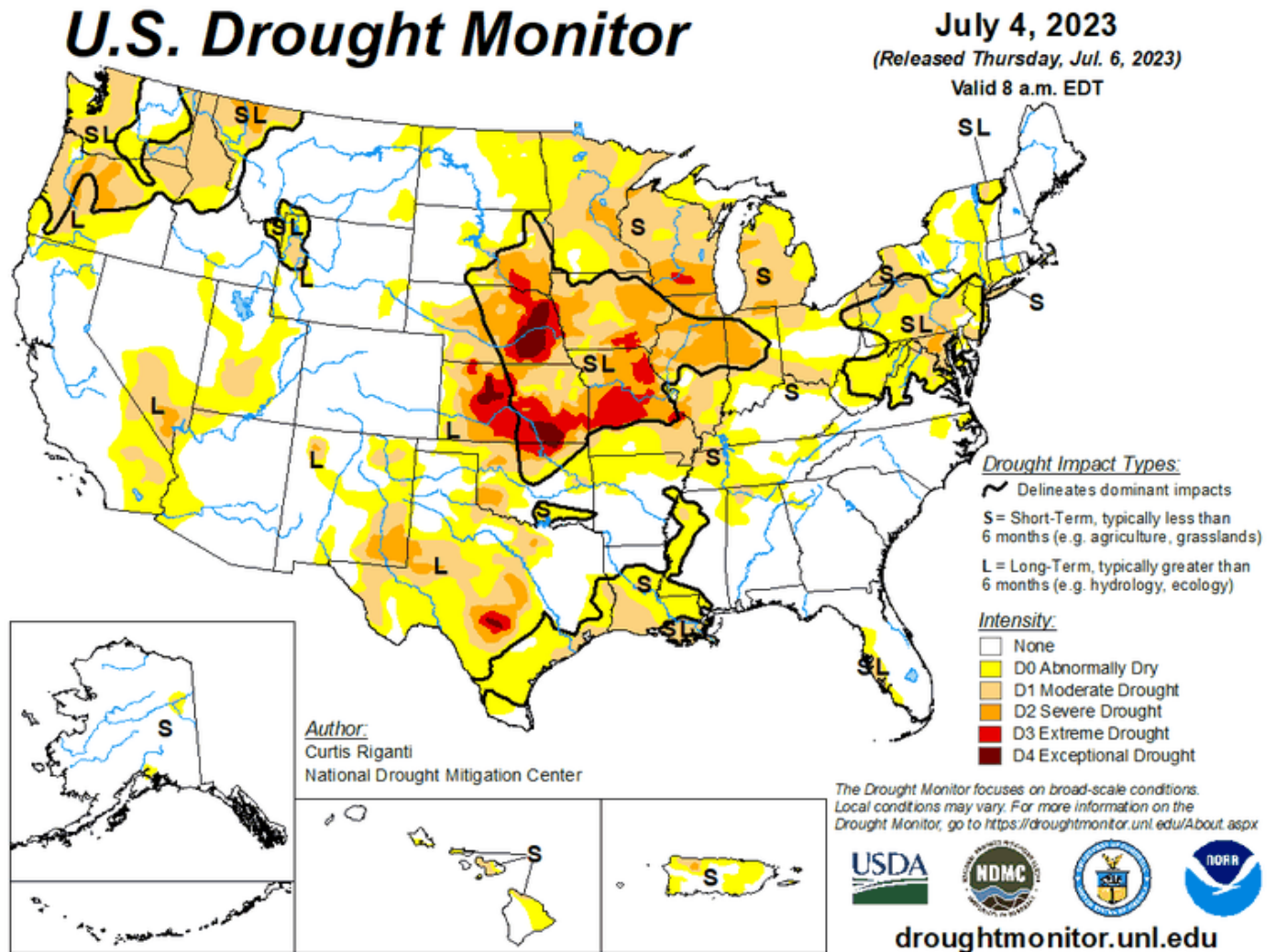
3-month outlook

As of September 21, the **three-month outlook** (Oct-Nov-Dec 2023) shows a 33-40% chance of above-normal temperatures for the Southwest. There will be an equal chance of precipitation for much of the southwest and a 33-40% chance of above-normal precipitation for eastern New Mexico. To view more short-term outlooks, please visit the **NOAA's National Weather Service Climate Prediction Center**.



The [animation map](#) is a compilation of the past 12 weeks of the drought monitor maps. The [change map](#) illustrates the difference in drought class changes for the past 12 weeks. For a more detailed drought summary in your area of interest, visit the U.S. Drought Monitor [website](#).

Animation Map (July 4 - September 19, 2023)



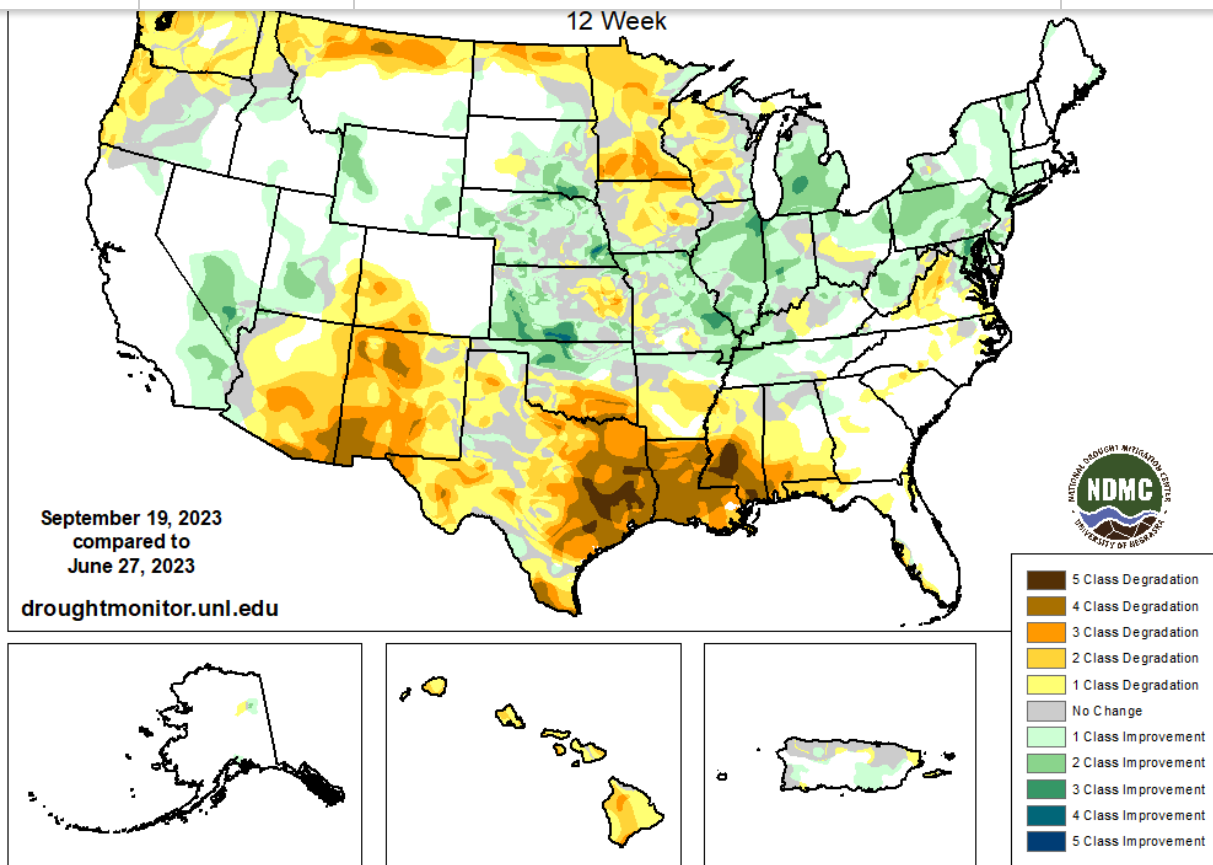
Change Map (June 27 - September 19, 2023)

[Subscribe](#)

[Past Issues](#)

[Translate](#) ▼

[RSS](#)



Partner Announcements

Pilina Aina: Providing Access to Place-Based, Biocultural Stewardship Learning Opportunities for Hawaii's Students and Teachers

This project will expand culturally based learning and stewardship opportunities for underserved students and teachers. The curriculum emphasizes the social significance of trees to indigenous lands and the ecological benefits trees provide to island people. Read more [here](#).

WestWide Drought Tracker Maps Have Arrived

The WestWide Drought Tracker is getting a major upgrade! New and improved maps are now available by clicking on the link below. We strongly encourage using the new maps application. Continue to use the legacy application for time series and archive features until they are upgraded at a later date.

[Launch the WestWide Drought Tracker](#)

[Visit the legacy WWDT page](#)

[Subscribe](#)[Past Issues](#)[Translate ▼](#)[RSS](#)

The USGS Climate Adaptation Science Centers are thrilled to announce that Dr. Suzanne Van Cooten will be the new Regional Administrator of the South Central Climate Adaptation Science Center. In this position (formerly known as “Director”), Suzanne is looking forward to working with Tribal Nations and climate experts in the four-state region to make climate adaptation science accessible to all. Read more [here](#).

Director of Extension Programs at Southwestern Indian Polytechnic Institute

Dr. Dennis Dye has been appointed as Director of Extension Programs at Southwestern Indian Polytechnic Institute (SIPI) in Albuquerque, NM. Dennis has led SIPI’s Geospatial Information Technology academic program since 2018. As Extension Director he will be developing new education and training programs that serve Tribal communities in the Southwest and beyond. Priority topics for the SIPI Extension Program include environmental monitoring, precision agriculture, agri-technology and related applications to climate-smart agriculture and natural resources management. Contact: dennis.dye@bie.edu, 505-346-7714.

Funding Opportunities

Annual Awards Program to Support Tribal Climate Resilience for Federally Recognized Tribes and Authorized Tribal Organizations

Deadline October 13, 2023

The Secretary of the Interior (Secretary), through the Bureau of Indian Affairs (BIA) Office of Trust Services, Branch of Tribal Climate Resilience (TCR or Branch) solicits proposals from Federally recognized Tribes and authorized Tribal organizations to receive awards to support Tribal climate resilience planning and strategy implementation. The Branch supports Tribes as they prepare for climate change impacts on Tribal Treaty and Trust resources, economies, regenerative agriculture and food sovereignty, conservation practices, infrastructure, and human health and safety. The Branch’s Annual Awards Program will provide funding for projects that support Tribal climate resilience as Tribes incorporate science, Indigenous Knowledge (IK), Indigenous languages, and technical information. More information [here](#).

Farmer/Rancher Grant

Deadline: October 25, 2023

The Western SARE Farmer/Rancher Research & Education Grant Program focuses on advancing on-farm sustainability solutions by funding innovative producer-driven research and outreach. This grant program involves agricultural producers (main applicants) and technical advisor(s) implementing projects to address identified needs in sustainable agriculture. Learn more about Farmer/Rancher grant [here](#) and find more Western SARE grants [here](#).

NIDIS Coping With Drought: Building Tribal Drought Resilience With Support From The Inflation Reduction Act (IRA)

Deadline for Letters of Intent: November 2, 2023

NOAA’s National Integrated Drought Information System (NIDIS) [has announced](#) approximately \$2 million in funding for projects to support tribal drought resilience as part of President Biden’s [Investing in America agenda](#). This investment will help tribal nations address current and future drought risk on tribal lands across the Western U.S. while informing decision-making and strengthening tribal drought resilience in a changing climate.

Subscribe

Past Issues

Translate ▼

RSS

information [here](#).

Join our mailing list

 Southwest Climate Hub  Email  SW Climate Hub

 Come Rain or Shine  @USDAClimateHubs

Copyright © 2023 USDA Southwest Climate Hub, All rights reserved.

Want to change how you receive these emails?
You can [update your preferences](#) or [unsubscribe from this list](#).