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Southwest Climate Hub Bulletin

News and events for the Southwest Hub region

October 2022

Hello from the Hub

In passing the equinox on September 22 we ushered in autumn, one of my favorite times of the year. Along with the changing leaves, harvest, football, and pumpkin spice everything, this season brings a review of the past fiscal year.

I am deeply proud to share that the Southwest Climate Hub team hosted or participated in more than 65 workshops, invited presentations, and webinars reaching nearly 6,000 people directly to advance climate adaptation and mitigation in FY22. I am equally proud to share that the SWCH team contributed to 10 peer-reviewed, published journal articles in FY22. Because of decreasing COVID-19 cases, we were able to host several in-person events and delighted in seeing our partners, colleagues and friends off-screen.

Looking forward, we are thrilled to announce the flagship Climate Hub Fellows program will hire a second cohort of 23 fellows across the Nation in FY23. We are also pleased to cohost the Southwest Adaptation Forum in October with the Southwest Climate Adaptation Science Center (CASC), the South Central CASC, and Southwest Decision Resources.

Read on to learn more about our new county-level quick reference guides and the USDA-wide climate adaptation plans and partnerships for climate-smart commodities. Please keep in touch.

*Sincerely,
Emile Elias, Director*

Climate Quick Reference Guides for Your County

Sara Thompson

Have you ever wondered exactly what weather changes have occurred in your county over the past 30 years? Do you wonder what scientists are projecting for continued changes in our climate? Need answers in 60 seconds? There's a guide for that! Read the full article [here](#).

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USDA Climate Adaptation and Resilience

Emile Elias

Climate-Smart Commodities: USDA recently selected 70 projects under the [Partnerships for Climate-Smart Commodities](#) opportunity. These initial projects are expected to “expand markets for climate-smart commodities, leverage the greenhouse gas benefits of climate-smart commodity production and provide direct, meaningful benefits to production agriculture, including for small and underserved producers”. If you are curious about what research was funded relevant to the Southwest and what this means for producers in the Southwest, then you can comb through projects by State [here](#). Congratulations to the successful applicants. The SWCH team looks forward to synthesizing and sharing project findings to advance climate-smart agriculture and support producers across the region.

Climate Adaptation Plans: In October 2021, USDA released its Department-Wide Action Plan for Climate Adaptation and Resilience, also known as [USDA’s Climate Adaptation Plan](#). Around the same time agencies within the Department began developing their own Climate Adaptation Plans. Those Plans are available [here](#) and by agency below:

- [Natural Resources Conservation Service \(NRCS\)](#) (PDF, 10.1 MB)
- [Farm Service Agency \(FSA\)](#) (PDF, 9.0 MB)
- [Risk Management Agency \(RMA\)](#) (PDF, 2.0 MB)
- [Agricultural Research Service \(ARS\)](#) (PDF, 717 KB)
- [National Institute of Food and Agriculture \(NIFA\)](#) (PDF, 752 KB)
- [Economic Research Service \(ERS\)](#) (PDF, 6.0 MB)
- [National Agricultural Statistics Service \(NASS\)](#) (PDF, 632 KB)
- [Forest Service \(FS\)](#) (PDF, 26.1 MB)
- [Rural Development \(RD\)](#) (PDF, 1.5 MB)
- [Animal and Plant Health Inspection Service \(APHIS\)](#) (PDF, 3.6 MB)
- [Foreign Agricultural Service \(FAS\)](#) (PDF, 338 KB)
- [Agricultural Marketing Service \(AMS\)](#) (PDF, 1.3 MB)
- [Departmental Staff Office Plan](#) (PDF, 2.2 MB)

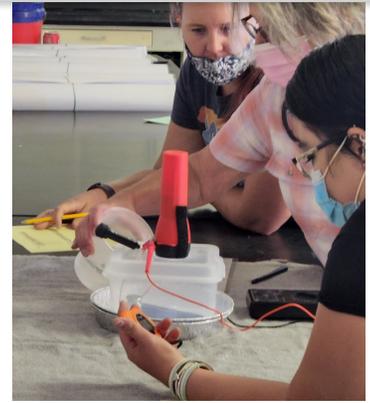
Teacher Trainings this Fall

Kelly Sayanagi

This fall Asombro is taking our show on the road to share the Climate Hub’s resources for teachers! We are inviting teachers from across the southwest to join us at the [New Mexico Science Teachers Association](#) Conference in Socorro, NM and [North](#)

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receive get advice and materials from ASombro's education team. Lessons cover the links between the [water cycle](#), [wildfire](#), [agriculture](#), [sustainable ranching](#) and so much more! Let us know if we can bring a training to your area.



Technology for Ranch Management

Skye Aney

Precision Livestock Management, while fairly common in intensive animal agriculture systems, like for instance dairy farming, is less commonly found in extensive rangeland agriculture systems. Exciting new breakthroughs in technology, however, are making its adoption in these systems more feasible. On Friday, October 21st, you are invited to attend a demonstration of some of the technology that is available to make ranch management easier or more efficient. The event is presented by the Sustainable Southwest Beef Project and New Mexico State University at the NMSU Southwest Center for Rangeland Sustainability in Corona, NM. [More information here.](#)



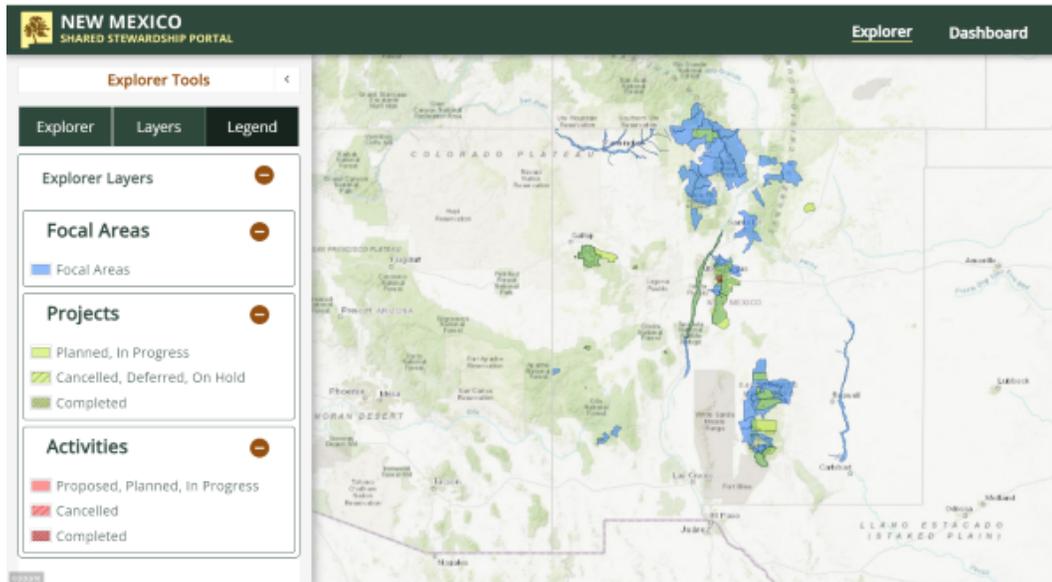
New Mexico Shared Stewardship Portal

Lauren Kramer

In conjunction with the [2020 New Mexico Forest Action Plan](#), the New Mexico Energy, Minerals and Natural Resources Department (EMNRD) has developed the [New Mexico Shared Stewardship Portal](#). The portal improves cross-boundary

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landscape. Most notably, the portal enables the tracking of collaborative partnerships and allows for the discovery of funding opportunities. The portal is available for anyone to use and participate in with an easy-to-use interface and interactive maps. View a demonstration on how to use the portal [here](#).



Developing Case Studies of Fire & Climate Adaptation in the Southwest

Courtney Peterson, Ariel Léger, Megan Rumble

The [Southwest Fire and Climate Adaptation Partnership's \(SWFireCAP\)](#) on-the-ground adaptation roundtable has been working to highlight real-world case studies featuring projects that are at the intersection of fire and climate adaptation in order to share transferable lessons learned among the management community and provide useful tools for those working to help ecosystems adapt to changing climate and fire regimes. In collaboration with the Collaborative Conservation and Adaptation Strategy Toolbox (CCAST) Team, the SWFireCAP highlighted its first case study on [the Adaptive Silviculture for Climate Change Project in the San Juan National Forest](#), providing an example of a co-developed project aimed at helping forests resist, be resilient to, or transition to meet the impacts of projected future climate conditions in fire-adapted ecosystems. Through interviews with the scientists and managers, this case study emphasizes lessons learned throughout the development of collaborative adaptive management plans.



Case Study, Collaborative Drought Planning for Livestock Grazing on Southwestern National Forests, Now Available on the CCAST Dashboard

Maude Dinan

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CCAST Case Study, which details the process of creating a formal guide to co-developing drought preparation plans for livestock grazing on Southwestern national forests. The online StoryMap may be found [here](#), and its accompanying two-page handout [here](#).

Come Rain or Shine Podcast

Reanna Burnett

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:

Mike Hoffmann on Our Changing Menu: How Climate Change Affects the Foods We Grow, a discussion with Dr. Mike Hoffmann about how climate change is impacting our foods.

Megadrought and Aridity, Dr. Connie Woodhouse and Dr. Mike Crimmins discuss the differences between aridification, drought, and megadrought, as well as the changes they've been observing and hearing about from managers and ranchers in the Southwest.

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

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



Takeaways from the 16th Annual Biennial Conference of Science & Management for the Colorado Plateau & Southwest Region

Lauren Kramer and Maude Dinan

Representatives from the Southwest Climate Hub, Lauren Kramer and Maude Dinan, attended the **16th Annual Biennial Conference of Science & Management for the Colorado Plateau & Southwest Region**. The conference was held at Northern Arizona University (NAU) in Flagstaff, Arizona, and sponsored by NAU, the U.S. Geological Survey (USGS), the Southwest Fire Science Consortium, the Charles Redd Center for Western Studies, the U.S. Forest Service (USFS), and the U.S. Department of Agriculture (USDA). The theme of the conference was "Creating hope through action: advancing solutions to rapid environmental change." Read the full article [here](#).

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Henry Reges (CoCoRaHS) demonstrating a rain gauge with Maude Dinan (SWCH).

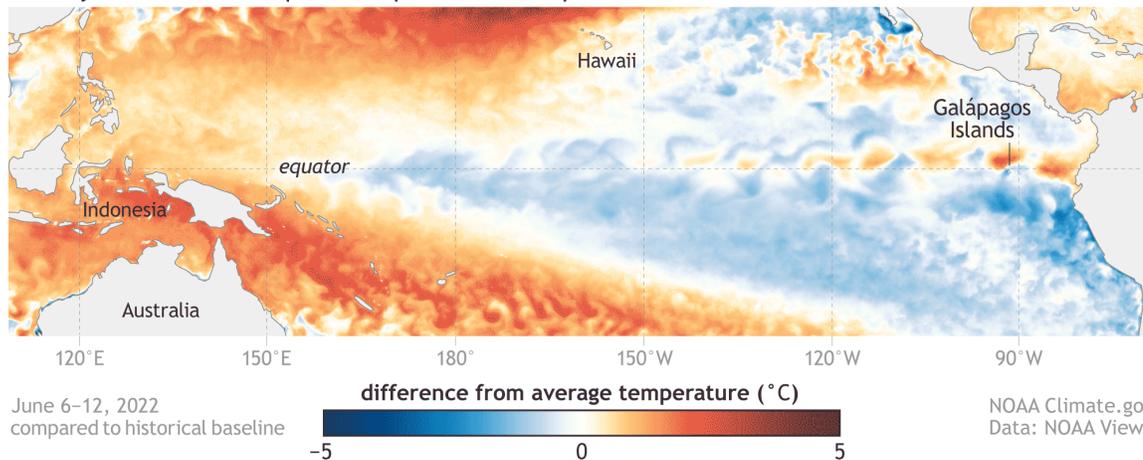
Climate reporting for the Southwest

El Niño/Southern Oscillation (ENSO)

As of September 8, 2022, the ENSO alert system status is **La Niña Advisory**. Forecasters predict a 91% chance of La Niña to continue into November 2022. Learn more about additional ENSO perspectives and analysis available at the NOAA **ENSO Blog** and the **ENSO Tracker - September 2022**, an analysis by CLIMAS.

Weekly sea surface temperature patterns in tropical Pacific

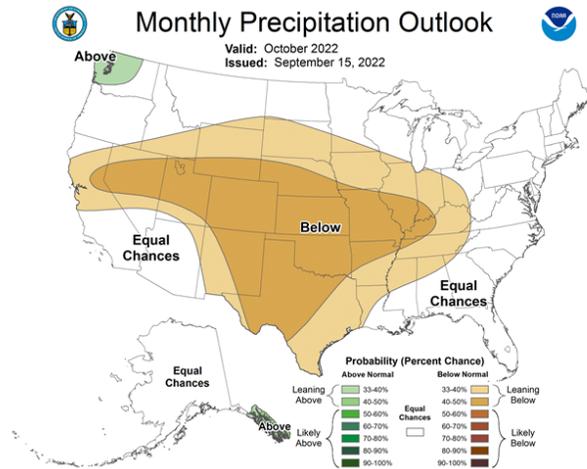
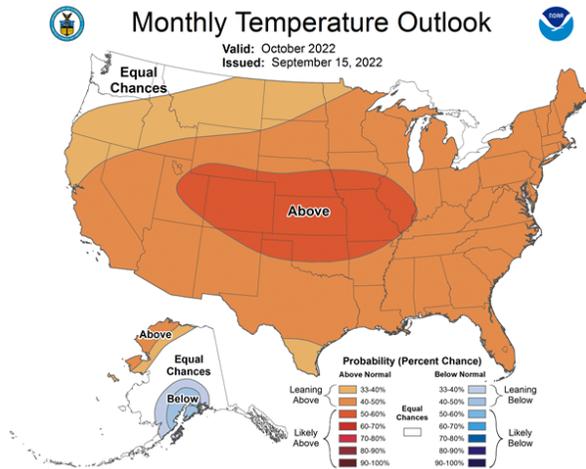
JUNE 6-12



National Weather Service Climate Prediction Center Outlooks

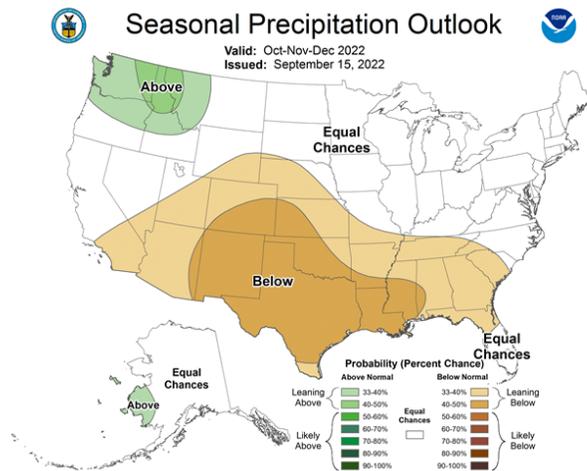
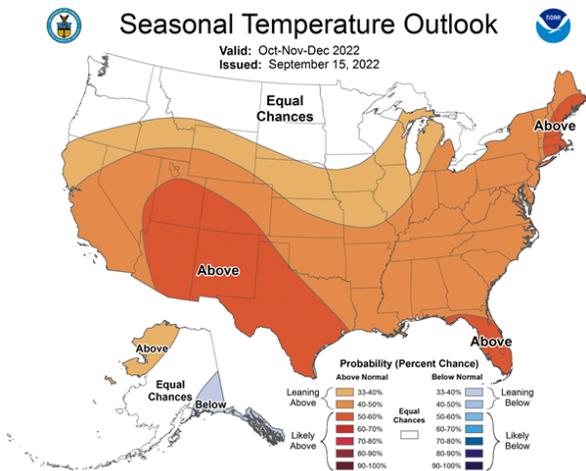
1-month outlook

precipitation for most of Arizona.



3-month outlook

As of September 15, the **three-month outlook** (Oct-Nov-Dec 2022) shows a 33-70% chance of above-normal temperatures for the southwest. There will be a 33-50% chance of below-normal precipitation for most of the southwest and an equal chance for precipitation for much of the Great Basin region. To view more short-term outlooks, please visit the [NOAA's National Weather Service Climate Prediction Center](#).



Drought

Drought conditions remain in the southwest however there 1-3 class improvements for portions of New Mexico, Arizona, Utah and Nevada. The image below is an **animation map** for the past 12 weeks of the drought monitor maps. The second image below is the **change map**, it 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](#).

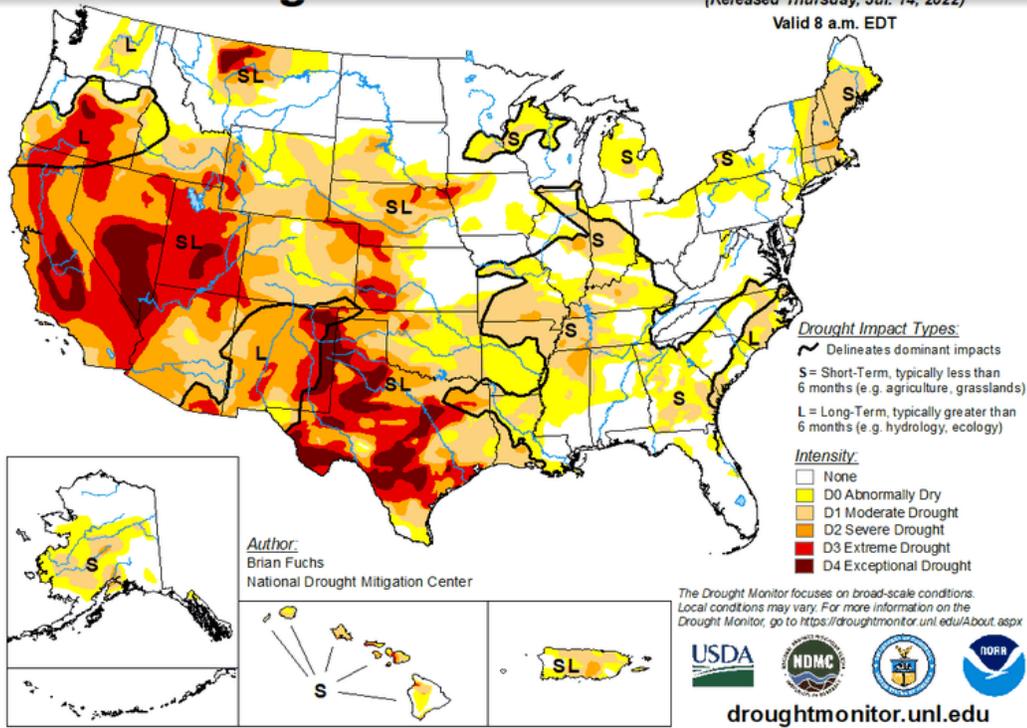
Animation Map (July 12 - September 27, 2022)

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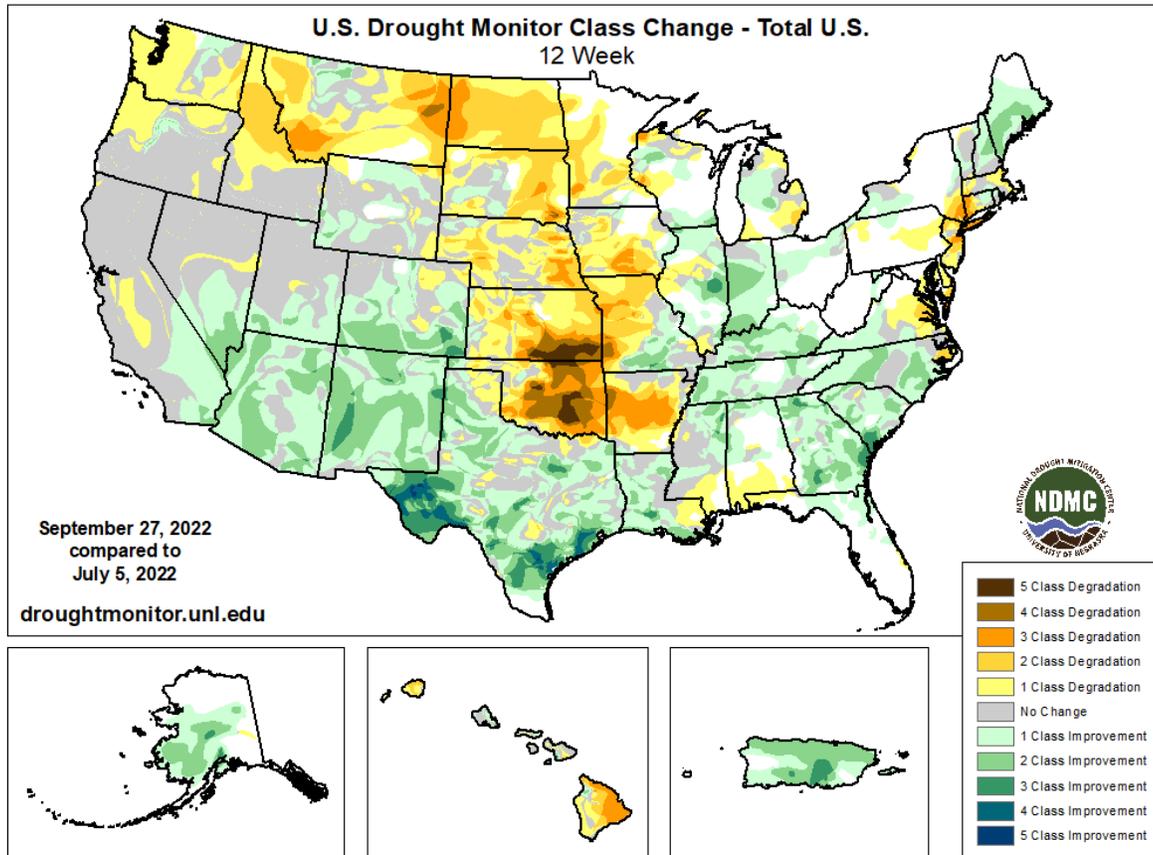
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Change Map (July 5, 2022 - September 27, 2022)



Announcements

Southwest Adaptation Forum

The 2022 SWAF, hosted by the [Southwest Climate Adaptation Science Center](#), [South Central Climate Adaptation Science Center](#), [USDA Southwest Climate Hub](#), and [Southwest Decision Resources](#), will be held at the [Indian Pueblo Cultural Center](#) in Albuquerque, NM. The forum will be held on October 10-12, 2022, and will build on work started at the [2018](#) and [2021](#) SWAFs, further exploring topics relevant to adaptation practitioners in the Southwest, such as cultural burning, drought, and ecosystem transformation. Space is limited, please [register](#) by October 3, 2022.



Fall Science Meeting

November 9-11, 2022

The South Central Climate Adaptation Science Center will be hosting our Fall Science Meeting at LSU. This year's meeting will emphasize partnerships between scientists and resource managers. There will be a special focus on how to market your science, including a poster session designed to showcase your work and network with other attendees. This is an excellent opportunity to display the amazing work you have done and connect with others! While you're there, enjoy a field trip to the Center for River Studies and indulge in amazing Louisiana food! The registration form for the event can be completed [here](#). Registration for the Fall Science Meeting closes October 31st. We hope to see you there!

Farmer/Rancher Research & Education Grant

November 2, 2022

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. [More information here.](#)

Funding Opportunities

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Award Ceiling: \$10,000,000

Agriculture and Food Research Initiative Competitive Grants Program Education and Workforce Development Program

Deadline: October 27, 2022

Award Ceiling: \$10,000,000

Agriculture and Food Research Initiative - Foundational and Applied Science Program

Deadline: December 31, 2022

Award Ceiling: \$15,000,000

Events

- October 10-12, 2022 - [Southwest Adaptation Forum](#)
- October 11, 2022, 1:00 pm MT - [October Southwest Drought Briefing](#)
- October 17, 2022, 5:30 pm MT - [Four Corners Region Seasonal Outlooks and Forecast](#)
- October 18, 2022, 3:00 pm MT - [How Communities Contend with Climate: Rainwater Harvesting and Restoration](#)
- October 25-27, 2022 - [National Adaptation Forum](#)
- October 26-27, 2022 - [New Mexico Water Conference](#)
- November 28-30, 2022 - [National Tribal Leaders Climate Change Summit](#)
- December 6-8, 2022 - [Intertribal Agriculture Council](#)
- January 8-12, 2023 - [American Meteorological Society](#)

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