



Featured Article



Targeted Grazing for Wildfire Fuel Breaks in the Great Basin

Climate change has heightened the risk of large and frequent wildfires in the Great Basin, and caused the region to enter a new era of megafires—fires that burn 100,000 acres or more. As a result, rangeland and fire managers will need management practices that can protect property, wildlife habitat, and resources from wildfire. This Hub Adaptation in Action profile demonstrates that targeted cattle grazing could provide one such management practice. Rangeland scientist Pat Clark and his team at the Agricultural Research Service have worked with partners to implement targeted cattle grazing to create effective wildfire fuel breaks on public rangelands.

Climate Hubs Website Usability Survey



The USDA Climate Hubs want your feedback on our website to help improve our content delivery. This 5-10 minute national-level survey includes five multiple-choice questions and two open-ended questions. If you have specific feedback for the Northwest Climate Hub (and we hope you do!), mention the Hub region (Northwest) in the open-ended response section. If you are open to providing further information about your responses, there is an option to include your email address. Otherwise, the survey is anonymous. This survey's Office of Management and Budget control number is 0503-0024. The survey will be open until 26 January.

Drought Update

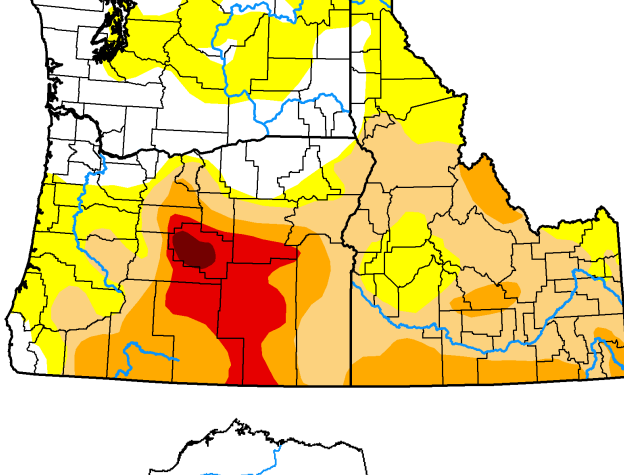
Recent above-normal precipitation improved drought conditions in northwestern Oregon and western and southern Washington, shifting areas of moderate drought (D1 – tan) to abnormally dry (D0 – yellow) or no drought conditions (white areas). In Oregon, 1-category improvements were made to extreme (D3 – red) and severe (D2 – orange) drought in the southeast and near Klamath County based on above-average snow water equivalent and improvements to long-term indicators such as 6- to 24-month precipitation and shallow groundwater. In Idaho, severe (D2 – orange) and moderate (D1 – tan) drought improved where precipitation deficits over the past 12 months and streamflows show improvement. In Oregon, moderate drought (D1 – tan) was introduced in the south Willamette Valley and central Oregon Cascades and moderate (D1 – tan) and severe (D2 – orange) drought expanded in the north-central part of the state. These expansions were in response to below-normal water-year-to-date precipitation on top of longer-term deficits and groundwater impacts.

Alaska remains drought-free.



U.S. Drought Monitor USDA Northwest Climate Hub

January 17, 2023
(Released Thursday, Jan. 19, 2023)
Valid 7 a.m. EST



	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	78.81	23.19	14.35	6.37	1.99	0.16
Last Week 01-10-2023	75.03	24.97	14.17	7.56	3.02	0.16
3 Months Ago 10-18-2022	70.19	29.81	23.56	10.31	3.90	0.16
Start of Calendar Year 01-03-2023	75.01	24.99	15.00	7.57	3.06	0.16
Start of Water Year 09-27-2022	70.29	29.71	18.36	7.80	3.90	0.16
One Year Ago 01-18-2022	74.27	25.73	22.97	14.44	5.45	1.89

Intensity:
None
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought

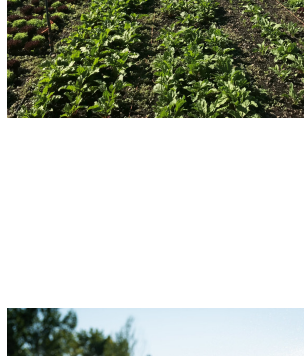
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:
Deborah Bathke
National Drought Mitigation Center



droughtmonitor.unl.edu

Information



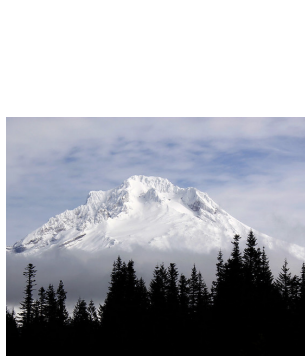
Climate Resilience at Peak of Abundance Urban Farm
As instances of extreme weather increase with climate change, farmers can adjust practices to protect their crops. This Hub Adaptation in Action profile highlights the use of high tunnels, shade cloths, and drip irrigation at Peak of Abundance urban farm in Spokane, Washington.



Northwest Pollinators and Climate Change
In the Northwest, over 30 crops require pollinators for pollination. This Hub article lists important regional pollinators, describes the effects of climate change on Northwest pollinators, and outlines management actions to improve pollinator habitat.



Leasing Partial Water Rights in Washington State
Partial leasing could encourage farmers to participate in water markets and meet diverse water needs as climate change increases the demand on water. Read this Agricultural Climate Network article to learn more.



Southeast Alaska Drought Assessment
Although Southeast Alaska is one of the wettest areas in North America, it was plagued by drought from 2016 to 2019. This report provides comprehensive information on the drought, and can inform planning, adaptation, and mitigation activities.



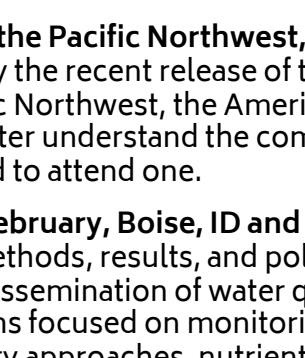
USDA Funds Idaho Renewable Energy Projects
Twelve renewable energy projects in Idaho received funding to lower energy costs, expand access to clean energy, and combat climate change.



Sixth Oregon Climate Assessment
The Oregon Climate Change Research Institute just released the sixth assessment of the state of climate change science as it relates to Oregon and the effects of climate change on the state.



Assessing the U.S. Climate in 2022
This National Oceanic and Atmospheric Administration report discusses the climate in the U.S. in 2022, outlining the year's significant climate anomalies, temperature, precipitation, drought, and climate extremes, among other metrics.



State of Global Water Resources Report
This report assesses the effects of climate, environmental, and societal change on global water resources to support monitoring and management of global freshwater resources.

Workshops and Conferences

Solar Leasing for Agricultural Landowners in the Pacific Northwest, 19 January, 31 January, 16 February, 4 March, Online Only. To accompany the recent release of the guidebook, *Solar Leasing: A Guide for Agricultural Landowners in the Pacific Northwest*, the American Farmland Trust is offering workshops to help agricultural landowners better understand the complexity of solar leases. Each workshop is identical, so landowners only need to attend one.

Annual Idaho Water Quality Workshop, 1-2 February, Boise, ID and online. The 33rd Idaho Water Quality Workshop will discuss water quality methods, results, and policies. Since 1990, this workshop has provided a forum for technical dissemination of water quality topics, networking, and sharing information. This workshop has sessions focused on monitoring technology, the Lower Boise River, streamflow, data, metals, regulatory approaches, nutrients, and habitats in Idaho. Attendance is free, but registration is required.

Alaska Forum on the Environment, 6-10 February, Anchorage, AK and virtual. This is Alaska's largest statewide gathering of environmental professionals and will offer sessions on climate change, energy, environmental regulations, cleanup and remediation, fish and wildlife, solid waste, and more. This year, both in-person and virtual attendance is available for attendees and exhibitors.

2023 Society for Range Management Annual Meeting, 12-16 February, Boise, ID and virtual. The annual meeting will include technical tours, sessions, and meeting events that focus on rangelands-related topics, including rangeland restoration, climate change adaptation, and wildland fire resilience.

SoilCon 2023, 14-15 February, online only. Soil health is a trending topic in agricultural production and environmental resilience to climate change, but what does the latest research tell us and how can we put it into practice for regional systems? SoilCon aims to address these questions for agriculture or natural resource professionals, producers, consultants, University faculty and students, and interested members of the public.

Climate Change Preparedness Conference, 1-3 March, Washington, D.C. The three-day event will be a convening of climate experts, government officials and policymakers, community organizers, youth leaders, environmental professionals, and other stakeholders to focus on adaptive solutions to foster climate resilience.

2023 Native Youth Climate Adaptation Leadership Congress, 25 June-1 July, Shepherdstown, West Virginia. This experience invites Native communities to work together to address conservation challenges by providing training in leadership principles and conservation skills. Application is open to high schoolers from federally-recognized Tribes in their junior year (11th year). Students must be in a cohort of 3-5 individuals from their Tribe, and they will need a community mentor to accompany them. Applications due 28 February.

Webinars

Climate Mapping for Resilience and Adaptation Portal Webinar, 19 January, 10 am PST. This webinar will introduce the new Climate Mapping for Resilience and Adaptation portal and assessment tool. The web-based tool integrates information from across the federal government to help understand exposure to current and future climate-related hazards.

Tribal Health and Adaptation Peer-Learning Roundtable Webinars, 19 January and 16 February, and every 3rd Tuesday until October 2023, 10 am PST. The January webinar will focus on conducting tribal vulnerability assessments that incorporate traditional ecological knowledge, community input, and Western and Indigenous science, while the February webinar will focus on preparing dynamic and actionable adaptation plans that protect tribal health and wellbeing. These monthly 2-hour webinars will further advance the knowledge, skills, and networks of Tribes adapting to climate change.

Emerald Ash Borer Webinar, 29 January, 7-8:30 pm PST. With the emerald ash borer (EAB) now in Oregon, it is essential to learn how to recognize and report this destructive insect. This Oregon State University webinar will cover identifying EAB, Oregon ash, and other common ash species, current best management practices, and integrated pest management solutions for combatting EAB and slowing ash mortality. As a follow up to this webinar, an in-person workshop will be scheduled in Spring 2023.

Restoring Oregon's Dry Side Forests, 1 and 15 February, and every 1st and 3rd Wednesday until April 2023, 6 pm PST. This series will explore the complexities and realities of "restored" forests and other ecosystems to historical conditions. The 1 February webinar will explore wildfire-friendly wildfire risk reduction, and the 15 February webinar will focus on prescribed fire considerations for private lands. This series is not about telling the listener what is best, but rather collectively thinking about how resiliency in the landscapes we collectively steward can be promoted.

Dry Farming Collaborative Winter Convening, 8 February, 9 am-12 pm PST. Learn about various dry farming research trial results, how to get involved with the dry farming collaborative, and connect with other growers at this Oregon State University gathering. Dry farming can help producers adapt and diversify in response to water availability and changes in climate.

2023 Tribal and Indigenous Climate Speaker Series, 8 February, 11 am-12 pm PST. This series is aimed at federal agencies and departments, and all are welcome to join. Recordings of webinars will be available on this website, including "Guidance on Indigenous Knowledge for Federal Agencies and Departments" from 10 January. The February webinar will discuss cultural resources, sacred sites and climate change.

The Increasing Role of Drought in Ecological Transformation, 9 February, 10-11 am PST. This webinar from the North Central Climate Adaptation Science Center will highlight how the risk of transformational drought is changing in the 21st century, and will provide a broad overview of the phenomenon of transformational ecological droughts, including the diverse pathways by which they lead to transformation.



Oregon Badlands Wilderness Area. Photo by Bob Wick, BLM.

Funding

January

Matching Awards Program - National Forest Foundation. The National Forest Foundation Matching Awards Program provides funding for results-oriented on-the-ground projects that enhance forest health and outdoor experiences on National Forests and Grasslands. Healthy forests will be more prepared to deal with climate change. **Round 1 applications due 23 January.**

March

The Northwest Climate Resilience Collaborative Community Grants Program. The Resilience Collaborative seeks to fund justice-focused environmental and climate projects that advance community-centered resilience priorities. The Collaborative is particularly interested in supporting frontline communities and Tribes, or nonprofits and community organizations, that serve frontline communities and Tribes. Awardees must be based in Washington, Idaho, or Oregon. The University of Washington will host an informational webinar about the funding opportunity on 20 January. **Letter of interest due 28 February.**

Building Resilient Infrastructure and Communities Program. This program funds states, U.S territories, Indian tribal governments, and local communities for pre-disaster mitigation, with a focus on disasters, risks, and hazards, including those associated with climate change. The program offers support through capability- and capacity-building, innovation, promoting partnerships and enabling investments to reduce risk from natural hazards, equity, and supporting building codes, standards, and policies that will protect the health, safety, and welfare of the public. **Applications due 27 January.**

Earth Science Applications: Ecological Conservation, National Aeronautics and Space Administration (NASA). The NASA Earth Science Division is calling for proposals that will improve or develop decision-making activities to combat the spread of invasive species, advance the use of ecosystem service assessment for decision making, and inform management, protection, and establishment of protected areas. These will help ecosystems prepare for climate change. **Letter of intent due 14 March.**

February

Clean Energy Technology Deployment on Tribal Lands. The Department of Energy Office of Indian Energy is soliciting applications from Tribes to install clean energy generating system(s) and energy efficiency measure(s) for Tribal buildings; deploy community-scale clean energy generating system(s) or energy storage on Tribal lands; or install integrated energy system(s) for autonomous operation to power essential Tribal facilities during emergency situations or for Tribal community resilience. Individual awards vary depending on type of project with a range from \$100,000 to \$4,000,000. **Applications due 9 February.**

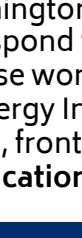
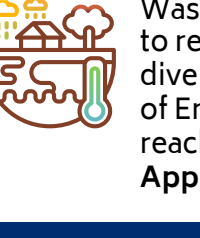
Rural Energy for America Fiscal Year 2023 Grants. This USDA Rural Development program provides guaranteed loan financing and grant funding to agricultural producers and rural small businesses for renewable energy systems or energy-efficiency improvements. Agricultural producers may also apply for new energy-efficient equipment and new system loans for agricultural production and processing. **Applications due 31 March.**

April

Funding Tomorrow Revolving Loan Fund Program. The Federal Emergency Management Agency (FEMA) is launching a new revolving loan fund to allow local jurisdictions to reduce vulnerability to hazards, foster greater community resilience, and reduce suffering after disasters. The program provides funding to states and federally recognized Tribes that received a major disaster declaration during the five-year period ending on 1 January 2021. **Applications due 28 April.**

Ongoing

Weatherization Pilot Program, Emerald Cities Collaborative. Low-income weatherization programs have been instrumental in improving lives and meeting energy efficiency goals in Washington. Emerald Cities Collaborative Northwest is working to refresh these programs in order to respond to climate change with more resources, collaboration with frontline communities, and a diverse workforce to implement these actions. This pilot program is funded through a Department of Energy Innovation Grant and aims to reach a majority of eligible low-income residents in hard-to-reach, frontline communities. **View this webinar to learn how to apply (start webinar at 11:24). Applications opened 30 November.**



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