



Drought in the NW Climate Hub Region

In much of the Northwest Climate Hub region, recent precipitation in the last month has eased drought conditions. An atmospheric river event resulted in inches of rain for western Washington and Oregon. However, there are areas that drought conditions have worsen.

In Washington, areas with abnormal dry conditions (D0-yellow) receded completely in the east. In central Washington, areas with moderate (D1-tan), severe (D2-orange) and extreme (D3-red) shrank, but drought conditions persist in the region.



Recent rains eliminated extreme drought conditions (D3-red) throughout western Oregon, although these conditions expanded in the central region. Areas in severe drought (D2-orange), moderate drought (D1-tan) and abnormally dry conditions (D0-yellow) remained widespread throughout the state.

Conditions on Kodiak Island, Alaska have led to drought conditions receding completely since last month. Though abnormal dryness (D0-yellow) did expand westward in the Interior and Southcentral regions and persisted on Seward Peninsula, along with areas to the northwest.

There has been improvement in the Idaho Panhandle after receiving consistent precipitation over the last month (D0-white). However, abnormally dry conditions (D0-yellow) expanded across the northcentral region. Extreme (D3-red), severe (D2-orange), and moderate drought conditions (D1-tan), along with abnormally dry conditions (D0-yellow) persist in the state.



U.S. Drought Monitor

USDA Northwest Climate Hub

January 26, 2021
(Released Thursday, Jan. 28, 2021)
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0	D1	D2	D3	D4
Current	68.71	19.30	4.00	4.93	3.06	0.00
Last Week 01-19-2021	68.91	19.24	3.79	4.85	3.21	0.00
3 Months Ago 10-27-2020	68.12	16.74	5.40	4.72	5.03	0.00
Start of Calendar Year 12-29-2020	73.72	12.89	4.23	5.64	3.53	0.00
Start of Water Year 09-28-2020	61.33	22.98	6.22	4.96	4.51	0.00
One Year Ago 01-28-2020	72.86	20.00	7.14	0.00	0.00	0.00

Intensity:

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate 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>

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Alaska Drought Webinar Series

What does drought look like in Alaska? Hear from Rick Thoman, Alaska climate specialist, who will review past climate information focusing on unusually dry times and will provide a statewide overview. Then, David Simeral, drought monitor author, will present another webinar focused on the U.S. drought monitor process.

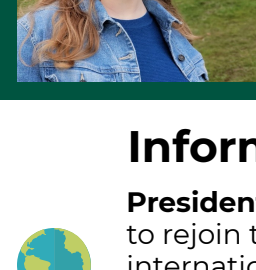


We want to HEAR FROM YOU in regional listening sessions to learn what you have seen or experienced during unusually dry times in Alaska. During previous droughts or dry times, were stream flows so low fish could not pass? Did you need to haul drinking water? Were trees stressed or did they die due to dryness? Was there not enough water for hydropower?



- **16 February (12pm AKST) | Climate review: history of climate extremes focusing on drought**
- **23 February (12pm AKST) | US Drought Monitor Process, understand the drought maps**
- **23 February (2pm AKST) | What does drought look like in Southeast Alaska?**
- **2 March (12pm AKST) | What does drought look like in Southeast Alaska?**
- **9 March (12pm AKST) | What does drought look like in the Aleutian islands & Southwest Alaska?**
- **16 March (12pm AKST) | What does drought look like in Interior Alaska?**
- **23 March (12pm AST) | What does drought look like in Northwest Alaska?**

Northwest Climate Hub Welcomes ORISE Rangelands Fellow, Dr. Anna Maher



As an ORISE Rangelands Fellow, Dr. Anna Maher translates science into resources for rangeland management in a changing climate. She is currently working on summarizing available rangeland management tools for users, with the goal of highlighting their potential role in supporting land manager and rancher preparedness and economic resilience. She is also working on a synthesis of the state of our understanding of climate change impacts to rangeland management in the Northwest.

Information

President Biden Returns US to Paris Climate Accord. President Biden signed an executive order to rejoin the Paris Climate Accord on inauguration day. The Paris Agreement is a legally binding international treaty that aims to curb emissions that cause the climate to warm. The binding nature of the agreement is unique and improves the potential for robust mitigation and adaptation planning processes at multiple scales.

Recruiting Stakeholders to Improve Drought-Impact Indicators in the Northwest. The participation of natural resource management, tourism, and recreation partners is requested for a new project to develop drought-impact indicators for the Northwest. Click here to find out how you can get involved and help to spread the word.

A Community-based Response to Flooding, Jay Gordon (Farmer-to-Farmer Case Study Series). Jay Gordon is a dairy farmer in Elma, Washington. After recent flooding events, he has been working with others in his community to develop a strategy for lessening the impacts of future flooding in their watershed. Find out key lessons learned for communities coping with climate change and water-related issues.

Video: introduces Gordon and describes his experience with flooding and helping to organize a response in the Chehalis Valley, where he lives and farms.

Study Provides New Understanding of Plants, Drought, and Climate Change to Improve Models. The National Integrated Drought Information System (NIDIS) and partners have collaborated to develop a new approach to using satellite vegetation data to capture how vegetation interacts with water. The new approach will improve model ability to simulate the effects of drought conditions on vegetation, which can improve mitigation and adaptation efforts.

Oregon Climate Change Research Institute (OCCRI) Fifth Oregon Climate Assessment. The recently published assessment takes a comprehensive look at the state of climate change science for Oregon and covers biological, physical, and social sciences. Hub Director, Jessica Halofsky, contributed to the wildfire chapter. Updated every two years, the assessment translates available science into accessible information about the likely effects of climate change for the State.

Read the full assessment here. Find a summary here.

Pastures: Stewarding a Working Landscape. A new resource from the Oregon State University Extension Land Steward Program provides information about how to improve and preserve soil health to manage forage for grazing and hay production. Management tips address monitoring, pest control, water quality and more. The guide provides informational videos and articles.

Climate Enabling Conditions and Drivers of the Western Oregon Wildfires of 2020. A recent summary from the Climate CIRCulator discusses the multiple factors that contributed to Oregon's unprecedented 2020 wildfire season.

Recurring, Large-Scale Drought Patterns Shape Forest Recovery after Wildfires. Research on ponderosa pine forests in the Interior West suggests that recovery after fire is related to short- and long-term drought, as well as climate conditions in years immediately following fire. Results suggest that a single very-dry year shortly after fire can reduce the longer-term presence of young trees and thus the cumulative likelihood of ponderosa pine presence many decades following fire.

Adaptation Resources for Agriculture: Responding to Changes in Climate in Alaska

The Northwest Climate Hub and partners created an Alaska-specific adaptation workbook that highlights climate impacts on agriculture. The workbook includes a guide that walks producers through the process of adaptation planning for their individual operations and case studies that detail how farmers are currently adapting to climate change.

Funding Opportunities

Agricultural Conservation Easement Program (ACEP). ACEP supports Tribes, ranches, landowners, land trusts, and others to restore and protect working farms, ranches, wetlands, and grasslands through conservation easements. Click here to find compensation details and easement term options. Contact your local USDA Service Center to apply. **Applications due 8 February.**

Farm Service Agency Conservation Reserve Program (CRP). CRP is a voluntary program that works with agricultural producers to improve environmentally sensitive agricultural land through rental payments and cost-share assistance. The land is not farmed or ranched, but instead devoted to conservation benefits like wildlife habitat and water quality. Contract duration is between 10 and 15 years. For details, contact your local FSA office. **Applications due 12 February.**

Smith-Lever Special Needs Competitive Grants Program. This program provides resources for the Cooperative Extension System to provide science-based risk information, education, and communication prior to disasters, or to assist in disaster mitigation and recovery. **Applications due 12 February.**

Micro-grants Available to Improve Security of Alaska's Food Supply. Scoping applications are now being accepted for three-year grants of up to \$15,000 for individuals, or \$30,000 for qualified organizations. Qualifying activities may include small-scale gardening, small-scale herding and livestock operations, and/or expanding access to food, safe food storage, and knowledge of food security. Scoping **applications are due 15 February.**

Renewable Resources Extension Act-National Focus Fund Projects (RREA-NFF). Funding is available for pilot projects from Land Grant institutions that address emerging forest and rangeland resource issues, have national or regional relevancy, or develop new and innovative projects that can be replicated at other institutions. **Applications due 18 February.**

Supplemental and Alternative Crops (SAC) Competitive Grants Program. This opportunity supports research or technology projects that expand adaptation and increase acres in canola grown for oil and industrial hemp. Funds support enhancing variety performance and production practices that improve production systems. Proposals should include outreach and engagement strategies to transfer results to producers and other users. **Applications due 30 March 2021.**

Rural Health and Safety Education Competitive Grants (RHSE). Proposals for this program should focus on community-based outreach education programs, including extension outreach. Applications can address rural environmental issues that directly impact human health, information about and access to health promotion and educational activities, training for volunteers and health services providers, and more. **Applications are due 29 April 2021.**

Agriculture and Food Research Initiative - Sustainable Agricultural Systems. This opportunity is focused on: (1) sustainable agricultural intensification; (2) agricultural climate adaptation; (3) value-added innovation; and/or (4) food and nutrition translation. Proposed work should result in societal benefits such as rural prosperity and enhancement of quality of life for all those involved in food and agricultural value chains. **Applications due 1 July 2021.**

Agriculture and Food Research Initiative - Foundational and Applied Science Program. Grant funds are available in priority areas, which include plant or animal health, production, and products; food safety, nutrition, and health; bioenergy, natural resources, and environment; agricultural systems and technology; and agriculture economics and rural communities. Research-only, extension-only, and integrated research, education and/or extension projects are eligible. **Applications due 29 July.**

Podcast Highlights

Allie Barker of Chugach Farm in Chickaloon, Alaska is featured by the [Thriving Farmer](#) Podcast to discuss her experience with myriad small-scale, sustainable farming practices. This farmer shares her approach to cover cropping, no-till, and agroforestry practices.

The Mixing Zone. The podcast [Out Here](#) explores the efforts of Nasugraq Rainey Hopson and her project, Gardens in the Arctic. The episode details how high tunnels and other tools are used by the Anaktuvuk Pass community to grow food. It also discusses climate change and highlights the unique food security and nutrition challenges facing rural villages.

Soil: The Dirty Climate Solution. [How to Save a Planet](#) discusses how producers have benefitted from unconventional agricultural practices that prioritize soil health. Hear about how small (10-acre) and large (1,000-acre+) agricultural operations are benefiting from building soil health.

This [Meatcast](#) episode from [Epic Provisions](#) connects no-till practices for soil health with climate change, profitability, and food nutrient quality.

Historical and Volunteer Climate Data. A recent episode from the [Warm Regards](#) podcast discusses a variety of climate data collection efforts and techniques. Hub Climatologist, Holly Prendeville, briefly talks about collecting rain gauge data that are used by area climatologists.

Webinars & Trainings

Course Registration: Societal Impacts of Climate Change, 1-26 February. Two, free, self-paced short courses that cover societal impacts of climate change, including a review of environmental economics, societal vulnerability, and adaptation strategies, will be made available to registrants online. Personalized certificates will be offered to those who complete the courses. **Registration deadline is 31 January.**

PhenoMap: Providing Weekly Vegetation Development Monitoring for Effective Management, 3 February 9 am PST. The webinar will discuss the PhenoMap tool and images of "greenness" in an interactive format that allows users to view local and regional changes in the timing of plant life (e.g., growing and dieback). This information can be useful in tracking effects of climate change on vegetation and inform adaptation strategies.

Ecological Drought National Webinar Series, 3 February - 17 March. Sessions will discuss resilience and drought mitigation, drought planning research and management strategies for preparedness, and more. The series is co-hosted by NIDIS and the USGS National Climate Adaptation and Science Center, featuring speakers from Tribal Nations, researchers, and government agencies. Click on the links below to register.

- 3 February 8:30 am PST** Ecological Drought: An Introduction
- 3 March 1:00 PST** Ecological Drought: Drought, Wildfire, and Recovery

Northwest River Forecast Center Monthly Water Supply Briefing, 4 February 10 am PST. The monthly water supply briefings are held on the first Thursday of each month from January through late spring. Registration is required.

Cross Boundary Fire Risk Mitigation Webinar Series. This series of seven webinars will look at different aspects of risk-boundary fire risk mitigation. Natural resource managers will learn about how to improve collaborative efforts that support and enable successful adaptation to wildfire among different land ownerships and jurisdictions.

- 10 February**, Reducing Cross-boundary Wildfire Risk: What do we Know About the Challenges and How Can we do it Better?

Pacific Northwest Drought & Climate Outlook, 22 February 11 am PST. This series of region-specific drought and climate outlook webinars provide timely information on current drought status and impacts, a preview of current and developing climatic events, and special topics. The February webinar will include talks from Amy Garrett from the Keith Stussel University on outcomes of recent soil health experiments in dry farming and the Oregon Museum of University of Colorado Boulder, who will discuss a recent study of post-fire impacts on snow.

Did you miss the December DEWS webinar? Check out a recording here.

Fire Severity: Mapping Past Fires and Predicting the Future, 3 March 9 am PST. This webinar will discuss new approaches to mapping historical fire severity using satellite imagery and cloud-based computing, with a focus on recent advancements in predicting near-future burn severity. The new products predict the probability of high-severity fire. These tools provide important information for managing fuels and wildland fire.

Tree Regeneration Following Wildfires in the Western US (recording). The webinar covers recently published research on tree regeneration declines and ecosystem shifts following wildfires. Findings suggest that low-elevation, dry forest types show less post-fire tree regeneration than high-elevation forest types (but there are caveats, including regional and species-level variation). The webinar also discusses a related tool that helps users decide where to plant tree seedlings in large high-severity burned patches.

Conferences & Meetings

SoilCon: Washington Soil Health 8-12 February. Washington State University's Soil Health Initiative will bring together soil experts to discuss the status of soil health in the US and Washington State, soil health indicators, soil health specific to Washington's production systems, and lessons learned from long-term soil health research. **Attendance is free and open to anyone.**

2021 Alaska Forum on the Environment Goes Virtual, 8-11 February. This year's forum will take a new form online, including technical sessions and environmental trainings offered through the Alaska Connected platform all year long. To keep with tradition, enhanced content, trainings and world-renowned keynotes will take place February 8-11, 2021. Register here.

Society for Range Management 2021 Virtual Annual Meeting, 15-18 February. The theme of the 2020 meeting is "new frontiers" and will highlight new ideas and endeavors occurring on rangelands across the globe. Registration opens soon.

1st Annual Soil Health Innovations Conference, 8-9 March. Soil health has emerged as a central theme for the future of agriculture. The conference will be online with live-streamed speakers and panels, as well as virtual halls for exhibitors and student posters. Real-time chats will allow participants to network with people who are at the cutting edge of soil health across the country. Topics will include on-farm practices, soil biology, carbon markets, and public policy.

Online scholarship for registration fee free

Northwest Climate Conference, 6-8 April. This conference connects a diverse community of practitioners, scientists, tribal communities, and decision-makers to share knowledge and best practices related to climate change science, impacts, and adaptation across the Northwest. Topics include drought, wildfire, extreme events, coastal flooding, human and ecosystem health, and resiliency planning. Registration opens soon.



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