



Drought in the NW Climate Hub Region

For the last four weeks, Alaska has reported no dryness or drought, as precipitation has been at or above normal in the state.

Recent precipitation resulted in some modest improvements in drought conditions in Idaho, Oregon, and Washington. Precipitation records were set on 18 September, with Portland, Oregon receiving 1.31 inches; Salem, Oregon receiving 1.13 inches; and Spokane, Washington receiving 0.42 inches. However, not all areas received precipitation recently, and across all three states, areas in D3 extreme (red) and D4 exceptional (dark red) drought will require above-normal precipitation in the next several months to alleviate drought conditions.

Projections on NOAA's current drought reduction tool show the percent of normal precipitation needed to end drought conditions in six months.

NIDIS Historical drought map |
 CoCoRHaS: Community Rain Hail Snow Network |
 U.S. Drought Monitor |
 Drought Conditions & Impacts Reporter

U.S. Drought Monitor

USDA Northwest Climate Hub

September 21, 2021
(Released Thursday, Sep. 23, 2021)
Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0	D1	D2	D3	D4
Current	70.14	2.18	2.80	6.33	10.78	7.76
Last Week 09-14-2021	70.14	1.91	2.42	6.23	11.16	8.15
3 Months Ago 06-22-2021	61.06	13.27	8.16	10.82	6.04	0.64
Start of Calendar Year 12-29-2020	73.72	12.89	4.23	5.64	3.53	0.00
Start of Water Year 09-29-2020	61.33	22.98	6.22	4.96	4.51	0.00
One Year Ago 09-23-2020	53.40	30.56	6.36	5.04	4.64	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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USDA Climate Hubs Strategic Plan 2020-2025

This recently released document provides a brief introduction to the USDA Climate Hubs, describing how we work, who we serve, and the five-year review (2014-2019) of the Climate Hubs. This plan also provides the goals and strategies the USDA Climate Hubs will be working towards into the future.

National Preparedness Level Dropped to PL4

The National Interagency Fire Center has dropped the National Preparedness Level to PL4.

2021 brought the longest period at PL5 since 1990 (July 14 - September 20, 2021) and the longest period at PL4+ (92 days as of September 20, 2021).

Webinars

- Another Climate Report: Responsibility, A Quick Guide and Accountability, TODAY 23 September, 2 pm AKST.** In this webinar, senior climate scientist Dr. John Walsh will highlight a Quick Guide to Climate reports, including their purpose, how they are created, some key messages for Alaska, and how they might be used with other information in climate change adaptation work. Indigenous climate activist and creative, Princess Daazhrai Johnson, explores individual and collective responsibility to act and the need for leadership in all arenas of governance/government to be accountable to the messages in timely climate reports and act on behalf of our children and humanity as a whole.
- Towards a Durable Understanding of Soil Carbon as a Tool for Climate Adaptation and Mitigation** is a webinar series hosted by the International Soil Carbon Network to advance critical questions in soil carbon sequestration technology. Past webinar recordings are available for viewing. Two upcoming webinars include:
 - 29 September, 12 pm PT When can cover crops increase soil carbon, C?
 - 19 October, 12 pm PT How can we increase, C, carbon stocks in deep soil?
- Co-producing Understanding of Drivers and Consequences of Environmental Arctic Change, 5 October, 10-11 am AKST.** The Study of Environmental Arctic Change is beginning a new effort to co-produce syntheses across disciplines and knowledge systems. The syntheses will be made available in formats tailored to diverse decision makers. In this webinar, the Study of Environmental Arctic Change will introduce team leaders, describe their approach, and seek participation of Indigenous, scientific, and decision-making experts.
- Indige-FEWS Native Voices in STEM** is a webinar series of Native scientists, engineers, activists, community members, and leaders to share their personal and professional journeys, providing inspiration to the next generation of change makers. Recordings will be available here.
 - 18 October 3-4 pm MST Soil Science in First Nations Land Management, Dr. Melissa Arcand (Muskeg Lake Cree)
 - 15 November 3-4 pm MST Amplifying Indigenous Voices in Invasive Species and Forest Adaptation Management, Dr. Danielle Ignace (Coeur d'Alene)
- October 2021 National Weather Service Alaska Climate Outlook Briefing, 22 October 2021, 12-1 pm AKDT.** Rick Thoman, Alaska Center for Climate Assessment and Policy at the University of Alaska Fairbanks, will review recent climate conditions around Alaska and some forecast tools, and he will finish with the Climate Prediction Center's forecast for November and the early winter season. Join the gathering online to learn more about Alaska climate and weather.

Funding Opportunities

- Joint Fire Science Program Funding Opportunity.** The interagency Joint Fire Science Program released a Funding Opportunity Announcements and is requesting proposals related to:
 - Social and ecological recovery of communities impacted by wildfire
 - Collaborative development of ecosystem mapping products for fire and fuels management
 - Graduate Research Innovation (GRIN)
 - Regional fire science exchange and outreach**Proposals are due on 14 October by 4 pm PT.**
- FY 2022 Landscape Scale Restoration Competitive Grant Program,** announced by the Western Forestry Leadership Coalition, is "intended to support high impact projects that promote collaborative, science-based restoration of priority forest landscapes, leverage public and private resources, and advance priorities identified in a State Forest Action Plan or other restoration strategy." **Proposals are due 29 October by 4 pm PT.**
- National Environmental Education Foundation - Greening STEM Grants.** The Greening STEM approach is to make environmental issues more relevant and accessible for both educators and learners. Greening STEM promotes partnerships where formal and informal educators can gain experience and confidence by collaborating to design, develop, and co-deliver standards-based STEM learning activities. Click here to view videos, resources, and specifics for the funding opportunities for \$5,000-\$10,000 to support STEM learning and strategies to assist schools in implementing outdoor education with either Bureau of Land Management or United State Forest Service focus. Proposals are due 31 October.
- Rural Energy for America Program Renewable Energy Systems & Energy Efficiency Improvement Guaranteed Loans & Grants.** This program provides guaranteed loan financing and grant funding to agricultural producers and rural small businesses for renewable energy systems or to make energy efficiency improvements. Agricultural producers may also apply for new energy efficient equipment and new system loans for agricultural production and processing. Increasing energy-efficiency and developing more renewable energy systems is cost effective and reduces the consumption of fuels that generate greenhouse gases, which contribute to climate change. Applications can be for grants of \$20,000 or less or a loan/grant combination of \$20,000 or less. **Applications due by 1 November 2021 or 31 March 31 2022.**
- Western Sustainable Agriculture Research and Education (SARE)** currently has five funding opportunities:
 - Farmer/Rancher:** With the support and guidance of a technical advisor, farmers and ranchers will integrate research and education to conduct on-site/on-farm experiments to improve production, marketing, and the environment. **Proposals due 1 November 2021.**
 - Professional + Producer:** This grant program involves agricultural professionals, in collaboration with producers, implementing projects to address identified needs in sustainable agriculture. **Proposals due 3 November 2021.**
 - Professional Development:** This grant program focuses on training agricultural professionals to help them spread knowledge about sustainable agriculture concepts and practices. **Proposals due 10 November 2021.**
 - Research to Grassroots:** These projects take research results from previously funded SARE projects and bring those results into the field through education to agricultural professionals and producers. **Proposals due 17 November 2021.**
 - Sabbatical Research and Education:** These grants provide an opportunity for faculty around the world to partner with farmers, ranchers, agricultural professionals, and researchers of the Western U.S. region for conducting research, education, and extension activities. Projects focused on unexplored topics in underserved communities and understudied geographic locations are of special interest. **Proposals due 18 November.**
- FY 2021 Building Resilient Infrastructure and Communities (BRIC) and Flood Mitigation Assistance (FMA) Notices of Funding Opportunities.** The Federal Emergency Management Agency (FEMA) released notice of their Hazard Mitigation Assistance grants for BRIC and FMA. Click here to find detailed program information, webinar information, and other grant application and administration requirements. **The application period will open on 30 Sept 2021, and close at 3 pm ET on 28 Jan 2022.**

2021 Building Resilient Infrastructure and Communities and Flood Mitigation Assistance Webinar Series

Information

- Status of Tribes and Climate Change (STACC) Report** demonstrates the unique climate change impacts experienced by Tribes and the many ways they are responding. This report was written for a diverse audience and seeks to uplift and honor the voices of Indigenous peoples across the U.S. to increase understanding of Tribal lifeways, cultures, and worldviews, the climate change impacts Tribes are experiencing, the solutions they are implementing, and ways that all of us can support Tribes in adapting to our changing world.
- Findings on Disproportionate Risks of Climate Change to American Indian and Alaska Native Individuals,** a fact sheet from the Environmental Protection Agency, provides a summary of a recent report, Climate Change and Social Vulnerability in the United States: A Focus on Six Impacts.
- State of the Climate** is the authoritative annual summary of the global climate published as a supplement to the Bulletin of the American Meteorological Society. The report provides a summary of climate in the following chapters: global climate, global oceans, the tropics, Arctic, Antarctica and the Southern Ocean, regional climates (e.g., North America: United States), and relevant datasets and sources that informed the report.

Executive summary with takeaway points
- A typology of drought decision making: Synthesizing across cases to understand drought preparedness and response actions** is a recent paper that summaries drought case studies across the western U.S. to create a framework describing how diverse actors, from private landowners to federal resource managers, make complex decisions about preparing for and responding to drought.
- Here's the Dirt on Carbon Sequestration Potential in Cropland Soils,** an AgClimate Network article, discusses soil carbon and what drives its accumulation. This article details what is known about the carbon sequestration potential of cropland soils in the Inland Northwest, and some of the practices that can favor sequestration, by reducing losses or increasing inputs.
- Disaster Resiliency and Recovery Resources - A Guide for Rural Communities,** developed by USDA Rural Development (RD), is a resource for rural communities seeking disaster resiliency and recovery assistance. The guide highlights USDA RD programs and servicing options that can help rural residents, businesses, and communities impacted by disaster, and support long-term planning and recovery efforts that build for the future.
- Wildfire and climate change adaptation of western North American forests: a case for intentional management** is a recent publication in Ecological Applications which reviews science-based adaptation strategies for western North American forests, which include restoring active fire regimes and fostering resilient structure and composition of forested landscapes. This paper examines ten common questions associated with climate adaptation and fuel treatments.
- Forest Health Highlights in Oregon – 2020** is a report that highlights major agents of damage or mortality in Oregon forests over the past year and provides updates on chronic issues.

Trainings and Meeting

- Integrating Climate into Hazard Mitigation Plans, 18-21 October,** is a virtual course that will build upon the previous course, "Climate Series #1: Climate Change 101." This second course will provide information on how climate change considerations can be mainstreamed into Federal Emergency Management Agency (FEMA) multi-hazard mitigation plans, while considering cultural values, priorities, and indigenous knowledges. The course agenda will include tribal studies and representatives from FEMA, Institute for Tribal Environmental Professionals (ITEP), and the Northwest and Southwest Climate Adaptation Science Centers, to provide knowledge and guidance on the process.
- Farm Planning for Climate Resilience for Oregon Agricultural Professionals, Save the Date: 2-4 November.** Virtual sessions will be held from 10 am to 12 pm and 1 pm to 3 pm PT each day. This training will advance your knowledge of farm-based solutions for climate resilience to reduce risks from extreme weather events, store more carbon, and work for a farmer's bottom-line, and create a community of practice in Oregon dedicated to supporting, improving, and better understanding farming for climate resilience in Oregon.
- Oregon-Washington Water Year Meeting, 16-17 November.** This virtual meeting will recap 2021 and provide an outlook for 2022 water years. The goal of this meeting is to share and gather information regarding climate impacts of the 2021 water year, with a focus on the exceptional drought that was so widespread across the region. This meeting will also offer the opportunity to learn from others about mitigation actions that were taken. Both days will include time for discussion and peer-to-peer learning, in addition to hearing from the forecast experts.