

Photo credit: Antonia Hedrick, BLM

Drought in the NW Climate Hub Region

Since late September, dry conditions have improved throughout the northwest region. In Alaska, abnormally dry conditions (D0-yellow) remain across much of the Seward Peninsula and to the north, while previously impacted areas of the North Slope have returned to normal. Similarly, conditions have improved on Kodiak Island, which is experiencing abnormally dry conditions (D0-yellow). Abnormally dry conditions persist on the Kenai Peninsula and eastward beyond the Chugach National Forest area.

In Oregon, drought conditions have improved slightly with some recession of extreme (D3-red), severe (D2-orange) and moderate (D1-tan) drought in the southwest, central and eastern parts of the state. Dry conditions have completely receded in the northern coast of Oregon.



The northern Idaho panhandle saw some improvement from moderate drought conditions (D1-tan) to abnormally dry conditions (D0-yellow). Significant improvements also occurred across the southern portion of the state where drought conditions mostly receded but abnormal dryness (D0-yellow) persists in the southcentral region. The extreme drought (D3-red) and abnormally dry conditions (D0-yellow) align with severe (D2-Orange) and moderate (D1-tan) drought and abnormally dry conditions (D0-yellow) persist.

Much of western Washington is now experiencing normal conditions. In central Washington, areas of extreme (D3-red), moderate (D1-tan) and severe (D2-orange) drought have receded slightly, due to recent precipitation. Significant portions of northeast Washington have improved from moderate drought (D1-tan) to abnormally dry conditions (D0-yellow).

Drought maps are published every Thursday. Get information about the National Integrated Drought Information System (NIDIS), submit data via the Community Collaborative Rain, Hail and Snow (CoCoRHAS) network, or report drought impacts and observations by clicking icons below.



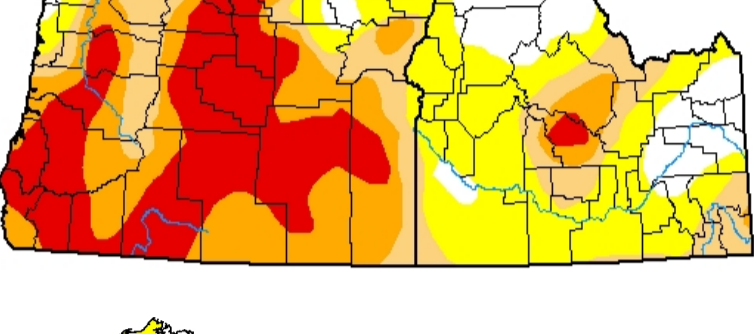
U.S. Drought Monitor

October 20, 2020
(Released Thursday, Oct. 22, 2020)
Valid 8 a.m. EDT

USDA Northwest Climate Hub

Drought Conditions (Percent Area)

	None	D0	D1	D2	D3	D4
Current	66.11	18.72	5.42	4.72	5.03	0.00
Last Week 10-13-2020	65.97	17.70	6.32	5.07	4.95	0.00
3 Months Ago 07-21-2020	79.72	8.50	4.52	5.81	1.46	0.00
Start of Calendar Year 12-31-2019	70.58	22.31	7.10	0.00	0.00	0.00
Start of Water Year 09-29-2020	61.33	22.98	6.22	4.96	4.51	0.00
One Year Ago 10-22-2019	92.03	4.61	1.96	1.40	0.00	0.00



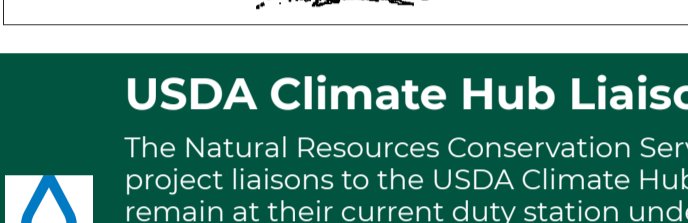
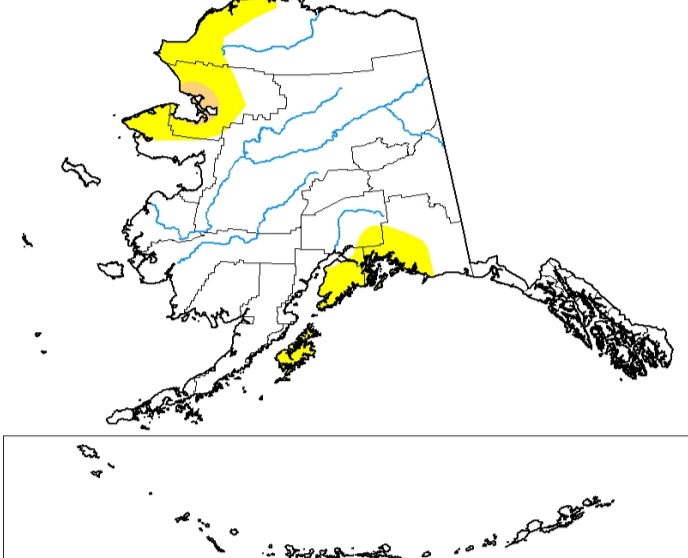
Intensity:
None, D0 Abnormally Dry, D1 Moderate Drought, D2 Severe Drought, D3 Extreme Drought, D4 Exceptional Drought

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: Curtis Riganti, National Drought Mitigation Center



droughtmonitor.unl.edu



USDA Climate Hub Liaison Detail for NRCS Employees

The Natural Resources Conservation Service (NRCS) is soliciting applications from its employees as project liaisons to the USDA Climate Hubs. Selected employees are on detail for the calendar year, remain at their current duty station under NRCS supervision and funding, and work full time directly with a specific Climate Hub on a focused project that provides benefits to both NRCS and the Climate Hub. Interested NRCS employees should submit application information to Mike Wilson at mikewilson2@usda.gov on or before **1 November**.

Webinars & Trainings

2020 Annual Resilient Nation Partnership Network Forum 28 October 10 am PT. This year's forum focuses on adopting equitable practices across the field of resilience and recognizing the effort as a collective responsibility. The final talk of the month-long series will discuss "Building a Foundation for Action" and includes a panel of speakers.

Click here for recorded talks on the basics of equity and how to prioritize it.

Science You Can Use Webinar Series: Improved Maps of Disturbance and Recovery Across the United States (28 October) & Know Your Smoke (18 November). Find out more about these land management-focused webinars and others in the 2020 fall series from the Forest Service Rocky Mountain Research Station.

Small Farm School 2020, Tuesdays & Thursdays September-November. Small Farm School is virtual this year and open to beginning and experienced farmers and small-acreage landowners. Topics will be introduced as webinars and include poultry, land care, marketing, flowers, and more.

Pacific Northwest Drought & Climate Outlook, 26 October 11 am PT. The Pacific Northwest Drought Early Warning System hosts a series of region-specific drought and climate outlook webinars to provide timely information on current drought status and impacts, a preview of current and developing climatic events, and special topics including a review of Northwest case studies on rangelands resilience.

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

Empowering Tribal Culture, Ecology and Food Systems, Wednesdays 30 September -28 October 11 am PT. This webinar series is held weekly and aims to support Indigenous communities' efforts to restore their land, reduce food insecurity, and increase economic opportunity through the production of native plants. The series will offer strategies Tribes can utilize to develop or improve food sovereignty initiatives and native plant propagation. Registration is free.

National Weather Service Alaska Climate Outlook Briefings. This monthly webinar series on Fridays at 12 pm AKT by the Alaska Climate Assessment and Policy Center reviews recent climate and looks ahead at future climate projections. The next webinar is on 20 November.

GRID Alternatives: Tribal Solar Energy Training for Tribal Practitioners. A paid, two-week solar energy training for tribal energy practitioners and individual tribal citizens is being offered by The Grid Alternatives' Tribal Program Office. The opportunity includes travel and lodging stipends. Training dates have not been identified due to the COVID-19 pandemic, and virtual training may be provided if necessary.

Organic Farming Research Foundation Free Beginning Farmer Training Program (recorded). This free training program is for beginning farmers, existing organic farmers, and farmers in transition to organic production of specialty crops. While it was developed for California specialty crop farmers, the content is relevant to all organic farmers across the U.S. The self-guided training program allows participants to self-pace the readings and resources, visual and written content, and demonstration videos.

Assessing Post-Fire Survivability of Trees and Potential for Salvage Harvesting (recorded). This webinar discusses a visual method for assessing tree survival after wildfire, including assessing damage to tree crown, bole/trunk injuries, and heat damage at the tree base. This information can help inform landowner decisions about timber salvage and tree value in the near term. Details about salvage operations are addressed, including economics, rules and regulations, and how to access a forest consultant.

Podcast Highlights

Fighting Fire with Fire from How to Save a Planet. This episode addresses the development of recent, extreme fires in the West, causes, and ideas about how to tackle them in the future.

Timber Wars, a podcast series from Oregon Public Broadcasting. This seven-part series covers the history of the controversy over the management of old-growth forests, addresses the change in perceptions of forest harvest, and poses questions about what the future of management might look like.

Information

US Global Change Research Program Fifth National Climate Assessment (NCA5): Call for Author Nominations and Technical Inputs. Nominations are sought for authors with relevant climate change expertise and backgrounds in the natural or social sciences. Technical feedback is also desired for relevant scientific and/or technical publications, as well as regional and topical information or new topics since the previous assessment. The call for nominations must be submitted by 14 November 2020.

The Social Science Coordinating Committee is hosting an informational webinar for social scientists interested in contributing to NCA5 on 27 October from 12:30-1:30 PM PT. The webinar will focus on increasing the integration of social sciences throughout NCA5 and highlight opportunities for researchers and individuals to get involved. Register here.

Stanford Researchers Identify 'Landfalling Droughts' that Originate Over Ocean. Identifying drier than normal conditions that develop offshore may help predict drought before it impacts people and ecosystems on land. Check out an article from Stanford News that details new insights into improved drought forecasting of "landfalling drought."

Alarmed by Scope of Wildfires, Officials Turn to Native Americans for Help. There is a growing number of partnerships between public land managers and Tribes to improve forest sustainability and fire management practices in the Northwest. The influence extends to policymakers in Washington, Oregon, and California who recently supported significant new funding for prescribed fire in the region. Read more in this New York Times news article.

Newly Formed Research Group Declares Oregon Glacier Dead. Oregon Public Broadcasting reports that Clark Glacier on South Sister mountain in Central Oregon no longer qualifies as a glacier, according to founders of Oregon Glaciers Institute (OGI). The founders of OGI, Aron Hartz and Anders Carlson are working to address a critical information gap regarding glacial health monitoring in Oregon. While climate change is rapidly increasing glacier deterioration, no local, state or federal entities are responsible for tracking this change for the state.

Going with the Flow: New Insights into the Hydraulics of High-Energy Fluids. Forest Service hydrologist Gordon Grant developed a hydraulic concept now widely referred to as "critical flow theory" that allows managers to understand mountain streamflow and how it might change. This information significantly improves adaptation planning potential for municipalities and watershed managers by informing estimations of river flow and flood flow potential of remote streams that lack measurement information.

Future Climate Scatterplot, A New Climate Toolbox Tool: Allows users to generate a scatter plot and compare early, mid- or late-century future scenarios for two variables. Users can select from a list of variables such as temperature, length of growing season, snow water equivalent, "extreme" fire danger days and more. Information can be generated for any location in the contiguous United States and variables can be compared at seasonal or annual timescales.

Alaska Emergency and Disaster Homeowner's Handbook. Alaska Sea Grant developed a homeowner's handbook that addresses what, how and how to prepare for a number of climate change-related disasters in Alaska. Information focuses on best practices to prepare for wildfire, flooding, windstorms, snowstorms, and more.

Video Highlight: After the Ice is a short, three-part documentary about Indigenous hunters in Alaska highlighting their traditional hunting practices to cope with changing ice conditions resulting from climate change. Warming temperatures in the Arctic have led to dangerously thin ice that only appears for three months, forcing hunters to change traditional practices and find new prey.

Soil Health and Organic Farming Reports. The Organic Farming Research Foundation offers free access to several farmer-focused reports that enhance operational resilience, including improving on-farm water management, building organic matter, and plant breeding and variety selection.

Forest and Rangeland Soils of the United States under Changing Conditions: A Comprehensive Science Synthesis. A new open-access book compiles the latest soil research in forest and rangeland science. The book is a collaborative effort to synthesize the state of knowledge of forest and grassland soils and discuss the effects of natural and human-caused disturbances. This resource provides managers with region-specific land management techniques to improve soil health.

Virtual Adaptive Ag Water Symposium: Water, Agriculture, Wildfire Adaptation, 6 November

This free virtual event hosted by the Dry Farming Institute will run from 9 am - 2 pm PST. Sessions will focus on water harvesting, water law, and drought and wildfire risk with climate change. The aim of the event is to increase knowledge about how to grow more food with less water, enhance on-farm water retention and infiltration, improve understanding of the future of water law in Oregon, and increase knowledge about how to protect farms and crops from fire.

Conferences & Workshops

Oregon-Washington Water Year Meeting, 28 & 29 October. This online meeting will recap precipitation and water conditions from 1 October 2019 to 30 September 2020, as well as provide an outlook for the 2021 water year. Participants can share information on flooding and drought impacts and actions taken to minimize during peer-to-peer learning sessions. Participants from wide range of sectors: utilities, agriculture, and forestry will attend.

2020 Society of American Foresters Virtual National Convention, 29-31 October. This year's convention covers a variety of topics, including adaptation, climate change and carbon, agroforestry, watershed management, conservation, and biochar applications. Find more information and a link to register here.

Wildland Urban Interface 2020 Virtual Conference, 4-5 November. The event will cover topics including community wildfire hazard exposure, post-fire risks, changing complexities in the urban wildland interface, and more. Conference participants include those responsible for protecting local forests or educating landowners about the importance of land management.

Virtual 2020 Idaho Fall Virtual Water Supply Meeting, 5-6 November. This year's meeting will be held over two half-day sessions (8:45am to 12:00pm MDT each day) and provide a recap of the 2020 water supply and a climate and water supply outlook for the coming water year.

Virtual ASA-CSSA-SSSA International Annual Meeting, 8-11 November. This year's conference, titled Translating Visionary Science to Practice will feature talks on soil science, soil biology, food security and more. 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. An official agenda is forthcoming and submissions for abstracts for oral, poster and field findings presentations are due by 30 October.

Idaho Nonpoint Source Workshop, 9-11 February. This online meeting will feature presentations on nonpoint source pollution, PFAS (Perfluorooctanoic acid) in ground water and fish bioassessment. There is currently a call for presentations and abstracts that are due 30 October.

Northwest Climate Conference, 6-8 April save the date. 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.

Funding Opportunities

Western SARE Sustainable Agriculture Grant Programs. Grants are available to farmers & ranchers to improve sustainable production practices as well as for professionals & producers to integrate research and education around environmental, economic, and social aspects of sustainable agriculture. **Applications due in November.**

Department of Energy: Energy Infrastructure Deployment of Tribal Lands 2020. The Office of Indian Energy Policy and Programs is soliciting applications from Tribal Nations, as well as Alaska Native Regional Corporations and Village Corporations, Intertribal Organizations, and Tribal Energy Development Organizations to install or upgrade energy production, storage, and delivery systems. **The application due date has been extended to 10 December at 5 pm EDT.**

NW CASQ Funding Opportunity for Tribal Climate Adaptation Research Projects. The Northwest Climate Adaptation Science Center (NW CASQ) is seeking statements of interest for tribal climate adaptation research projects focusing on management of aquatic resources; at-risk species and habitats; invasive species and diseases; and forest ecosystems and human dimensions of climate adaptation within Idaho, Oregon, Washington or Northern California. Federally recognized Tribes and Tribal organizations or partners of these entities may submit statements of interest, which are **due 17 December.**

The Community Forest and Open Space Conservation Program provides an opportunity for local governments, nonprofits, and federally recognized Indian tribes to establish permanent tenure of community forests that will provide public recreation, environmental and economic benefits, and forest-based educational programs. Applicants are encouraged to work with their Forest Service Region and must also send an email to SM.FS.CFP@usda.gov to confirm submission. **Applications due 11 January 2021.**

Federal Emergency Management Agency (FEMA) Building Resilient Infrastructure and Communities (BRIC) program. This grant program is for states, local communities, tribes and territories for the pre-disaster mitigation activities. This pre-disaster hazard mitigation program replaces the existing pre-disaster mitigation program and will provide \$500 million for mitigation planning and projects nationwide. **Applications are due 29 January.**

2021 Wood Innovations Grant Program and 2021 Community Wood Energy and Wood Innovation Program. The Forest Service and its partners are creating new opportunities for innovative wood products which contribute to diversified rural economies and support sustainable forest management. An informational pre-application webinar on grant opportunities on Tuesday, **10 November** at 2 pm EST to provide information and answer questions. Applications are due 20 January and 3 February, respectively.

Agriculture and Food Research Initiative - Foundational and Applied Science Program. Grant funds are available in six priority areas which include plant or animal health, production, and products; food safety, nutrition, and health; bioenergy, natural resources, and environment; agriculture 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.**

Farm Storage Facility Loan Program is a low-interest financing option for producers who want to build or upgrade facilities (barns, tanks, cold storage, etc.) to store commodities, including grains, fruits and vegetables, and aquaculture. Upgrading and improving facilities can improve infrastructure resilience and business opportunity.

Water & Waste Disposal Loan & Grant Program. This program provides funding for clean and reliable drinking water systems, sewage disposal, solid waste disposal, and storm water drainage to households and businesses in rural areas, including Tribal lands and communities of 10,000 or less. This opportunity may be particularly helpful to Alaska communities experiencing infrastructure damage from permafrost thaw. **Applications are accepted year-round.**

Rural Energy for America Program (REAP) provides guaranteed loan financing and grant funding to agricultural producers and rural small businesses for renewable energy systems or to make energy efficiency improvements. Applications are open and are accepted year-round at your state USDA Rural Development Energy office.



To receive the USDA Northwest Climate Hub monthly newsletter via email, sign up by clicking on this box and providing your contact information and areas of interest on the form.

To unsubscribe email holly.prendeville@usda.gov