USDA Northwest Climate Hub
U.S. DEPARTMENT OF AGRICULTURE

December 2019 Newsletter

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Drought in the NW Climate Hub Region

Despite recent precipitation in the region (2-4 inches along the coast and in the Cascades), abnormally dry conditions (D0-yellow) across Oregon persist from last month. Conditions have degraded to moderate drought (D1-tan) throughout the Willamette Valley, the Cascades, and in portions of Grant, Baker, Morrow, Umatilla, and Union counties in the northeast.

A similar trend occurred in Washington where the widespread abnormally dry conditions (D0-yellow) have expanded to the central and eastern portions of the state. Conditions have worsened to moderate drought (D1-tan) across the Olympic Peninsula and eastward to the southern Puget region, throughout the Cascades, and near the Blue Mountains in the southeast. The northeast corner of the state remains drought-free.

In Idaho, abnormally dry conditions (D0-yellow) expanded in the middle of the state (primarily Idaho County), with some recession in the southwest corner (southern Owyhee County and the majority of Twin Falls and Cassia counties) that is now considered drought-free. Conditions have worsened to moderate drought (D1-tan) in parts of Boise, Valley, and Ada counties and some adjacent areas in the southwest. Moderate drought conditions (D1-tan) have also developed in the eastern portion of the Idaho Panhandle.

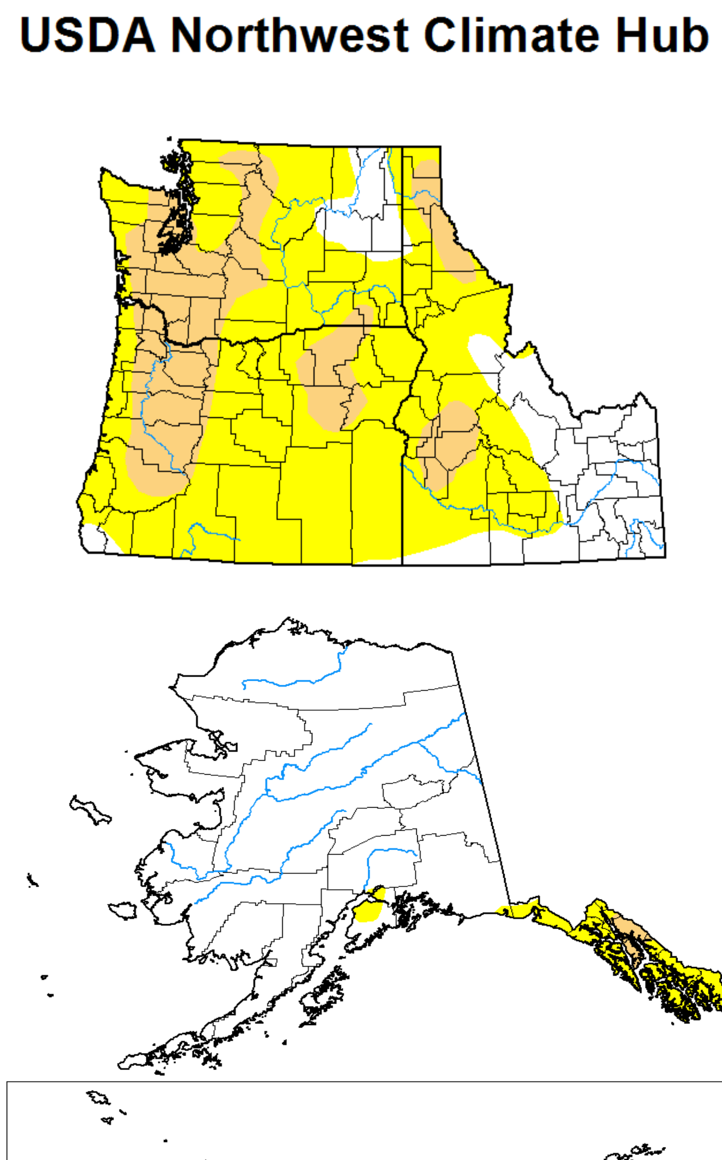
In southcentral Alaska, a recent deluge of precipitation (6-12 inches) alleviated the abnormally dry conditions (D0-yellow) across the eastern Kenia Peninsula, while the D0 (yellow) designation remains along the west side. Conditions north of Anchorage and eastward have improved and are considered drought-free. In southern southeast Alaska, Baranof Island to Skagway and westward continue to be abnormally dry (D0-yellow). Moderate drought (D1-tan) persists for Admiralty Island northward to Juneau, while areas southward have improved to abnormally dry status (D0-yellow).

Drought maps are published every Thursday. Click on the U.S. Drought Monitor link below to view the latest map. Many sources of information inform drought maps. Click on each icon below to get information about the National Integrated Drought Information System (NIDIS), to submit data via the CoCoRHaS network, or to report drought impacts.

National Integrated Drought Information System | NIDIS Drought.gov U.S. Drought Portal | CoCoRHaS Community Rain Hail Snow Network | Pacific Northwest Drought Impacts Survey | U.S. Drought Monitor

U.S. Drought Monitor

USDA Northwest Climate Hub



December 17, 2019
(Released Thursday, Dec. 19, 2019)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	70.78	29.22	7.20	0.00	0.00	0.00
Last Week 12-10-2019	70.92	29.08	0.58	0.00	0.00	0.00
3 Months Ago 09-17-2019	75.69	24.31	11.86	4.12	1.05	0.00
Start of Calendar Year 01-01-2019	71.65	28.35	16.62	10.89	2.73	0.00
Start of Water Year 10-01-2019	88.75	11.25	3.91	1.40	0.61	0.00
One Year Ago 12-18-2018	71.16	28.84	18.40	12.59	4.25	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

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droughtmonitor.unl.edu

Advances in Citizen Science Condition Monitoring

To improve our understanding of how locations respond differently to drought, the Community Collaborative Rain, Hail, and Snow Project (CoCoRaHS) has updated guidelines and tools for condition monitoring. These updates include region-specific reporting guidelines, an interactive map with report details, and a web page for condition monitoring summary reports to enable tracking change over time. Animated informational videos are also available. Click here to find each feature.

A Planner's Guide to Drought and Cascading Impacts

A guide to help communities, managers, and leadership better understand drought and related hazards, and to navigate planning around local needs and conditions. Example challenges and solutions from across the country are provided, along with extensive lists of risk assessment tools and funding sources to help carryout planning processes.

Funding opportunities

The Community Forest and Open Space Conservation Program requests applications to establish community forests through fee simple acquisition of private forest lands. The purpose of the program is to establish community forests. Local governments, qualified nonprofit organizations, and Indian tribes are eligible to apply. **Applications due 6 January 2020.**

Department of Defense's Strategic Environmental Research and Development Program (SERDP) announced two Resource Conservation and Resiliency Core solicitations for FY 2021. **Pre-proposals due 7 January 2020 by 11am PST.**

- <u>Advanced Biosecurity Tools for Controlling Invasive, Alien Terrestrial Species in Support of Enhanced Strategic Mobility</u>
- <u>Research to Improve Installation Infrastructure Resiliency Processes, Systems, and Tools</u>

Accelerate R2 Network Challenge will fund a strategic network of organizations on a national scale working to address disaster Response and Resiliency (R2) challenges with innovative technologies. Applicants should address: 1) response innovation – innovation in the communications, technology, and equipment first responders use when responding to disasters and events; or 2) Resiliency innovation – finding new ways to build, protect, and connect networks and infrastructure to help communities recover and build readiness and resilience in the face of future disasters. **Letter of intent due 8 January 2020. Full applications due 11 March 2020.**

2020 Wood Innovations Program. This opportunity is intended for National Forest and other forest land managers with the purpose of improving the growth of wood energy and wood products markets. Funding priorities include: reducing forest fuel hazards, reducing management costs, and promoting the economic and environmental health of communities. **Applications due 15 January 2020**.

<u>Wood Innovation Grants Program Overview and Question & Answer Session.</u> Priority areas and the types of projects that might be funded are described along with tips for proposals, including examples and critical components are included.

Organic and Sustainable Farming Fund is available to farmers in Washington seeking financial assistance up to $20,000 to improve the environmental sustainability, economic viability, or social impacts of their farm. The goals of this state grant program are to enhance sustainable soil management and crop diversification methods, habitat preservation, climate change mitigation and environmentally safe waste management practices. **Applications are due 17 January, 2020.** Click here to apply.

WaterSMART Drought Response Program, the Bureau of Reclamation provides assistance to water managers to develop and update comprehensive drought plans and implement long-term resiliency plans. Program areas include: emergency response, contingency planning, and resiliency projects. **Applications due 5 February 2020 at 4pm MST.**

Conservation Collaboration Grants are available through the USDA Natural Resources Conservation Service. The purpose is to assist historically underserved and other farmers and ranchers to build capacity and restore or maintain natural resources to improve water, soil, habitat, agriculture, and/or local food projects. **Applications due 7 February 2020.** Click here for details.

Environmental Systems Science Research, this funding opportunity from the Department of Energy aims to improve the capabilities of local, regional, and larger scale models for: 1) Terrestrial Ecology and 2) Subsurface and Watershed Hydro-biogeochemistry. **Pre-applications due 5 December 2019 5pm EST. Final applications due 20 February 2020 11:59pm EST**.

Value Added Producer Grants are available to agricultural producers pursuing value-added activities related to processing and marketing new products. The goals of this program are to generate new products, create and expand marketing opportunities and increase producer income. Priority will be given to beginning and socially-disadvantaged farmers or ranchers, and small or medium-sized family operations. **Applications due 10 March 2020**. Click here for details.

Agriculture Innovation Center Grant Program makes grants to Agriculture Innovation Centers that then provide technical and business development assistance to agricultural producers seeking to engage in making or producing value-added agricultural products. **Applications due 20 March 2020.**

Webinars

AK **National Weather Service Alaska Climate Outlook Briefings**: a monthly webinar series on Fridays at 12pm AKT by the Alaska Climate Assessments and Policy Center that reviews recent climate and looks ahead at future climate predictions. Click each date below to register for the monthly webinar.

20 December -click to register

Northwest River Forecast Center Water Supply Briefing 7 January. These monthly water supply briefings are held from January through late spring on the first Thursday of each month. Click here for details.

Pacific Northwest Drought & Climate Outlook 24 February 2020 11am PST Pacific Northwest Drought Early Warning System (PNW-DEWS) hosts a series of regular drought and climate outlook webinars designed to provide region-specific, timely information on current drought status and impacts, special topics, and a preview of current and developing climatic events

Conservation incentives for small forest landowners in Southwest Washington. This recorded webinar from the Cascades to Coast Landscape Collaborative details the Southwest Washington Small Forest Lands Conservation Partnership Program.

Climate Adaptation: USDA Programs and Resources That Can Help

The Northwest Climate Hub has created a helpful guide for rural communities, tribes, tribal citizens, tribal organizations, ranchers, and farmers to find USDA programs and resources that can help build resilience and aid recovery from climate change impacts. Find details from our article with the Agriculture Climate Network.

Information

Nation-wide, open access data on the occurrence and locations of aquatic species is available from the Aquatic e-DNAtlas Project. The database, a project of the US Forest Service Rocky Mountain Research Station, may facilitate improved management by establishing baseline information, tracking changes, identifying and protecting species, and studying resilience.

Effects of drought on forests and rangelands in the United States: translating science into management responses. This U.S. Forest Service General Technical Report puts particular focus on science-based drought resilience management options with a deeper dive into regional specificity to better reflect biophysical context. The report builds on and updates the science of drought impacts to forests and rangelands, and it incorporates early feedback from manager reviewers. Click here to read the report.

Adaptation to ecological drought in the Northwest – a report from the NW Climate Adaptation Science Center synthesizes research and manager input on ecological drought and adaptation to aid planning processes. A standout feature is a report brief that classifies implementation feasibility for each of the adaptation measures addressed.

Click here for the full report.
Click here for the report brief.

Highlights from a drought and outdoor recreation seminar for the Rocky Mountain region provides broad, useful information about the interrelationships between drought, tourism, and recreation with a focus on economic impacts, adaptation strategies, barriers to adaptation, and information needs. Click here for details.

A Double Whammy: Climate Change and Stand-Replacing Fires, a Science You Can Use in 5 Minutes article details efforts by researchers at the USFS Rocky Mountain Research Station to assess lands with potential for overlapping vulnerabilities to stand-replacing wildfire and conversion of forests to grassland or shrubland. The results indicate the possibility of significant forest conversion and could help managers address highly vulnerable areas.

Satellite vegetation data seeks to aid rangeland management. With support from the NW Climate Hub, researchers at the University of Idaho are working to translate NASA's Landsat imagery into farm-scale tools that promote sustainable grazing practices. The two-pronged tool, called RangeSAT, will soon offer users private, pasture-level maps and graphs reflecting vegetation and climatological conditions on their land. Click here for more information.

AK **The 2019 Alaska Forest Health Highlights are available as a story map**, featuring interactive maps and photos discussing current pest, disease, and invasive species challenges impacting the forests.

AK **Filling data gaps in Alaska's remote interior forests.** The Science Findings report details new techniques to integrate ground-based and remotely sensed data for the US Forest Service Forest Inventory and Analysis-helping managers better monitor diverse challenges and changes across hard to reach landscapes.

AK **Subsistence practices in the Yukon-Kuskokwim Delta of Alaska are vulnerable to climate change**. USGS researchers worked with the Cup'ik village of Chevak and the Yup'ik village of Kotlik to better understand how the pace of climate change (e.g., changing tides, flooding, wildlife patterns) and cultural shifts together are challenging these extremely resilient and innovative communities.

Building resilience for Pacific cod fisheries. An article from Alaska Native News investigates the impacts of ocean heatwaves or "blobs" on Pacific cod populations. Researchers are examining temperature effects on juveniles to determine and predict stock strength and resilience of the highly valued fish.

AK **Melting ice threatens food safety and security in Alaska's Far North.** Ice cellars used to store and cure large quantities of traditional foods throughout the year are failing due to rising temperatures. While alternative freezing techniques are underway, WZIM News reports they have yet to provide desired outcomes.

The 2020 Western Oregon State Forest Management Plan draft is now available from the Oregon Department of Forestry. A diversity of management plans for forests across 14 counties are detailed within the context of long-range management planning goals.

Bend, Oregon's smoke-focused plan is the first of its kind for the state. A news article detailing the state-approved, soon to be released Community Response Plan that focuses on smoke from prescribed burning. The plan includes new web and text communication strategies that help officials inform the public about the timing, location, and reasons for prescribed burns, as well as ways to mitigate health impacts from smoke.

Habitat fragmentation clashes with climate change in the Northwest. Research efforts at the University of Washington seek broad and international cooperation to facilitate habitat connectivity and wildlife adaptation. Click here for details.

Conferences, Workshops & Trainings

AK **Seaweed farm start-up training in Kodiak, Sitka, and Ketchikan Alaska.** The program provides tools and training for Alaskans to start seaweed farms, including online and in-person instruction and mentorship. Commercial fishermen, Alaska Natives, and fishing community members are encouraged to apply. Training is <u>free</u>. **Applications due 20 December 2019.** Click here for more information.

Online courses offered in rangeland ecology, grazing management, monitoring methods, and restoration planning. The four-week courses are offered by the Native American Rangelands Partnership . **Registration is free and courses begin 6 January 2020**.

Idaho Range Livestock Symposium 6 January Marsing, 7 January Twin Falls, 8 January Pocatello, 9 January Rexburg. The one-day traveling program and networking event highlights industry-relevant topics for producers and rangeland managers. **Registration is free.**

Idaho Rangeland Conservation Partnership Conference 13-14 January Boise, Idaho. The conference will feature panel discussions with agencies and land users with a focus on access and outcome-based land management. Click here to register.

Cascadia Grains Conference 17-18th January Olympia, Washington. The conference aims to promote new business, inform policy, build networks, and strengthen the local food economy by providing a platform to share the latest science, techniques, and developments among farmers, bakers, brewers, distillers, brokers, investors, policy-makers and others. Click here for event and registration details.

AK **Alaska Forum on the Environment 10-14 February 2020 in Anchorage, Alaska.** This unique event brings together State, local, Federal, military, private, and Native leaders and professionals to discuss Alaska-specific issues pertaining to climate change, energy, Tribal and rural issues, pollution prevention, and many more. Click here for event and registration details.

Idaho Water Quality Workshop 11-13 February 2020 Boise, Idaho. This year's featured topics include: Idaho water quality, results, trends and discussions; remote sensing; and groundwater modeling. All water quality topics are welcome. **Registration is free**.

Society for Range Management Annual Meeting 16-20 February 2020 in Denver, Colorado. This year's theme is "transformation and translation." Session topics include rangeland restoration, resilience and sustainability; there will be technical tours, mentoring opportunities, and networking opportunities. Click here for event and registration details.

2020 Rural Energy Conference 25 February 2020 Chicago, Illinois. The conference focuses on advancing rural prosperity through energy efficiency, specifically highlighting clean energy opportunities that promote economic growth and energy affordability. Sessions will address energy resilience and disaster recovery, as well as 2018 USDA and Farm Bill programs to assist shifts to renewable energy sources in rural contexts. Click here to register.

NORTHWEST CLIMATE HUB

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