USDA Northwest Climate Hub
U.S. DEPARTMENT OF AGRICULTURE

November 2019
Newsletter

Click on any icon or text for more information

Drought in the NW Climate Hub Region

Oregon, Washington and Idaho are considered drought-free as of 19 November. Submit any observations of dry or drought conditions to the Pacific Northwest Drought Impacts Survey, linked below.

In southern southeast Alaska conditions have improved to moderate drought (D1-tan). Baranof Island to Skagway and westward remain abnormally dry (D0-yellow). Similarly, conditions remain abnormally dry (D0-yellow) in southcentral Alaska and for Kodiak Island. Continued rain and snowfall in the Anchorage area over the last month reduced drought conditions to abnormally dry (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.

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

November 19, 2019
(Released Thursday, Nov. 21, 2019)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	6.96	0.96	0.00	0.00	0.00
Last Week 11-12-2019	50.19	9.91	2.78	0.00	0.00	0.00
3 Months Ago 08-20-2019	85.63	34.37	14.24	4.32	0.92	0.00
Start of Calendar Year 12-31-2018	71.65	28.35	16.62	10.69	2.73	0.00
Start of Water Year 09-03-2019	88.75	11.25	3.91	1.40	0.01	0.00
One Year Ago 11-20-2018	79.69	28.31	18.40	12.59	4.00	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

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Building Infrastructure Resilience for Rural Water Utilities

Water shortages, inundation from floodwaters, and infrastructure failures are some of the challenges facing water utilities, particularly those serving rural communities. Building resilience is an important step in protecting water supplies from droughts and severe storms that can lead to shortage, cause flooding and stress infrastructure. The EPA's Create Resilient Water Utilities initiative provides tools for rural water utilities to begin to assess risk and manage for resilience. Click on the links below to explore a step-by-step risk assessment tool that addresses extreme weather and climate vulnerabilities, and to launch the customizable resilience strategy guide tailored to meet site-specific needs and goals.

Click here to view the risk assessment tool!

Click here to view the resilience strategy guide

USDA Climate Hub Liaison Detail for 2020

USDA NRCS Employees: Seeking applicants for USDA Climate Hub Liaison detail for 2020. NRCS supports the 10 USDA regional Climate Hubs each year by providing three employees as "Agency Project Liaisons." The selected employees are on detail for the calendar year, remain at their current duty station, and under NRCS supervision and funding, but work full time directly with a specific climate hub on a focused project that provides benefits to both NRCS and the USDA Climate Hub. This detail is open to all employees regardless of grade, but applicants should be capable of creating their own workload, functioning independently, and managing their time. ***Action requested by 6 DECEMBER, 2019*** **(Deadline extended)**

Funding opportunities

Citizen Science-Forest Service units and partners can apply for up to $30,000 for collaborative citizen science projects. **Applications due 3 December 2019 (11:59pm EST).** Click here for criteria and application details, including a recorded informative webinar.

2020 Joint Fire Science Program has funding opportunities **open through 5 December 2019 (5pm MST).** The Joint Fire Science Program (JFSP) is a partnership of six federal wildland fire management and research agencies that have a shared need to address problems associated with managing wildland fuels, fires, and fire-impacted ecosystems. Opportunities include:

Graduate Research Innovation Grant

Regional Fire Science Exchange Announcement

Performance of Fuel Breaks and Fuel Break Systems

USDA NRCS Regional Conservation Partnership Program (RCPP) seeks applications to partner in efforts to invest in innovative solutions to on-farm, watershed, and regional natural resource conservation challenges. This program now has $300,000 annually to divide between state or multi-state level applicants, and eligible producers and landowners in Critical Conservation Areas. Click here for more information. **Applications due 5 December 2019.**

RCPP Resource Concern Areas for the Columbia River Basin

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.**

Advanced Biosecurity Tools for Controlling Invasive, Alien Terrestrial Species in Support of Enhanced Strategic Mobility

Research to Improve Installation Infrastructure Resiliency Processes, Systems, and Tools

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**

Wood Innovation Grants Program Overview and Question & Answer Session. 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.

Bureau of Reclamation WaterSMART Drought Response Program 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.**

Environmental Systems Science Research. The focus is on improving 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**.

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

Using Soil Health Practices to Improve Water Quality 10 December 11am PST. This USDA NRCS Conservation webinar is designed for land managers, agronomists, technical service providers, and others interested in how conservation agriculture practices can contribute to water quality issues and how soil health management systems can help alleviate water quality concerns.

Amplifying Actionable Science Through Intentional, Integrated and Creative Communications, fall 2019 webinar series by the Northwest Climate Science Center.

3 December 11am PT | What Can Successful Communication Look Like in Actionable Science? Examples from the Climate Adaptation Science Centers (CASCs) with presenters from across the CASCs

US Biochar Initiative, Combined Heat and Biochar (CHAB) Webinar 11 December 2:00-3:30pm PST This expert-led webinar will cover the process of making biochar from biomass, while harnessing the thermal energy produced in heating/cooling systems. Attendees will learn about available technologies, applications, and the economics of combined systems. Register here.

Pacific Northwest Drought & Climate Outlook 16 December 2019 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.

National Weather Service Alaska Climate Webinars 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

Conferences, Workshops & Trainings

Climate change adaptation strategies for Pacific Northwest forests. The Northwest Natural Resources Group is hosting a series of training workshops on created for land managers and professional foresters. Topics covered focus on the impacts of climate change to forests and adaptive management approaches for Western Oregon and Washington.

5 December Salem, OR -click here to register

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

Idaho Rangeland Livestock Symposium 6 January Marsing, Idaho & 7 January Twin Falls, Idaho. The one-day program and networking event highlights industry-relevant topics for producers and rangeland managers. **Registration is free**.

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 registration and program details.

Information

What Does Flash Drought Look Like in Your Region? The study provides a regional look at flash drought and finds that the Northwest most commonly experiences flash drought in May and June. Find out more about regional differences associated with flash drought development.

Native knowledge and Western science merge to address climate impacts and the preservation of traditional ways of life. The conclusion of the 5th Annual Tribal Summit and the sunset of the Native Waters on Arid Lands project have facilitated exchanges between scientists and academics to generate ideas and solutions to climate change problems on reservations.

Native Waters on Arid Lands project website.

Podcast: to learn more about Native Waters on Arid Lands projects.

Seeing Red Across the North Pacific Ocean, a NOAA ENSO Blog answers questions about current and past marine heatwaves or "blobs" is addressed in short question and answer format with pictures.

Talk of Alaska, an Alaska public radio show that is a statewide call-in forum for discussing the issues impacting life on the Last Frontier. Recordings of two recent and relevant shows :

Climate change may alter agriculture and gardening opportunities in Alaska.

Concerns over water conservation continue post-drought, spurring ongoing conversations about adapting to dry conditions in the rainforest of Southeast Alaska.

Climate change causes avalanche risk in Juneau, Alaska, a news article in Alaska Native news. Juneau has the highest urban avalanche potential of any city in the country and rapid changes to the climate and snowpack in Alaska means that it is increasingly important to understand avalanche risk.

Private Land Owners Fight Wildland Grass Fires with Rangeland Fire Protection Associations, a news article in the Wallowa County Chieftain.

A new fire program for forest and range management planning in Oregon, includes outreach and education offered by Oregon State University Extension Service.

Sustainable Small Acreage Farming in Idaho: Finding and Evaluating Land, publication by University of Idaho Extension that provides an overview of important considerations for people looking for land to establish a successful small farm or ranch. These include farm planning, natural resources, topography, climate, pests and problems, physical assets, nearby activity, site history, legal and regulatory considerations, and marketing farm products.

Innovations in Biochar, farmers in southwest Oregon are turning biomass in to healthier soils. Check out this USDA NRCS Conservation Innovation Grant success story.

Innovations in Biochar StoryMap with photos and details

The Modern Apple Orchard: What Does It Entail? High density orchard systems among apple growers are becoming more common to increase operational efficiencies and maximize production. This Agriculture Climate Network article discusses specific practices, costs and benefits.

What Specialty Crops Might Thrive in the Northwest in the Future? Warmer temperatures and changes to water availability and timing will drive changes in agricultural productivity and suitability. This Agriculture Climate Network article details a tool to help specialty crop producers plan for the future by modeling crop suitability, development timing, and irrigation water needs under predicted future conditions.

Exploring Agriculture's Role in Addressing Climate Change, key policy issues on the role of agriculture in climate change mitigation and adaptation presented by the National Sustainable Agriculture Coalition.

Climate change is expected to increase the cost of the Federal Crop Insurance Program. A report from the USDA Economic Research Service indicates that the primary drivers of costs hikes are expected increases in yield variability and frequency of crop losses.

The Basics of Addressing Resource Concerns with Conservation Practices within Integrated Management Systems on Cropland, a USDA NRCS technical Note for farmers and other soil health managers.

NORTHWEST CLIMATE HUB

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