Drought in the NW Climate Hub Region

In Southcentral Alaska drought conditions have degraded with extreme drought (D3-red) conditions north of Willow to northern Kenai Peninsula, severe drought (D2-orange) conditions throughout much of the Gulf Coast, moderate drought conditions (D1-tan) on Kodiak Island and surrounding areas, and abnormally dry conditions (D0-yellow) on the Aleutian Islands and much of the remaining area.

Much of the North Slope and Interior Alaska have received copious amounts of rain in the last month. Recent rains have alleviated most drought conditions near Yukon flats with abnormally dry conditions (D0-yellow) remaining in a small region.

Since last month, conditions have improved for the eastern panhandle of Idaho with abnormally dry (D0-yellow) to moderate drought (D1-tan) conditions persisting in the northern panhandle. For most of Oregon and Washington drought conditions have persisted with minor improvements in south-central Washington and north-central Oregon.

Weekly drought maps are published every Thursday, click on the U.S. Drought Monitor the link below to view the latest map. Many sources of information inform drought maps including reports from the public. Click each icon below to get information about the National Integrated Drought Information System (NIDIS), to submit precipitation 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

August 27, 2019
(Released Thursday, Aug. 29, 2019)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

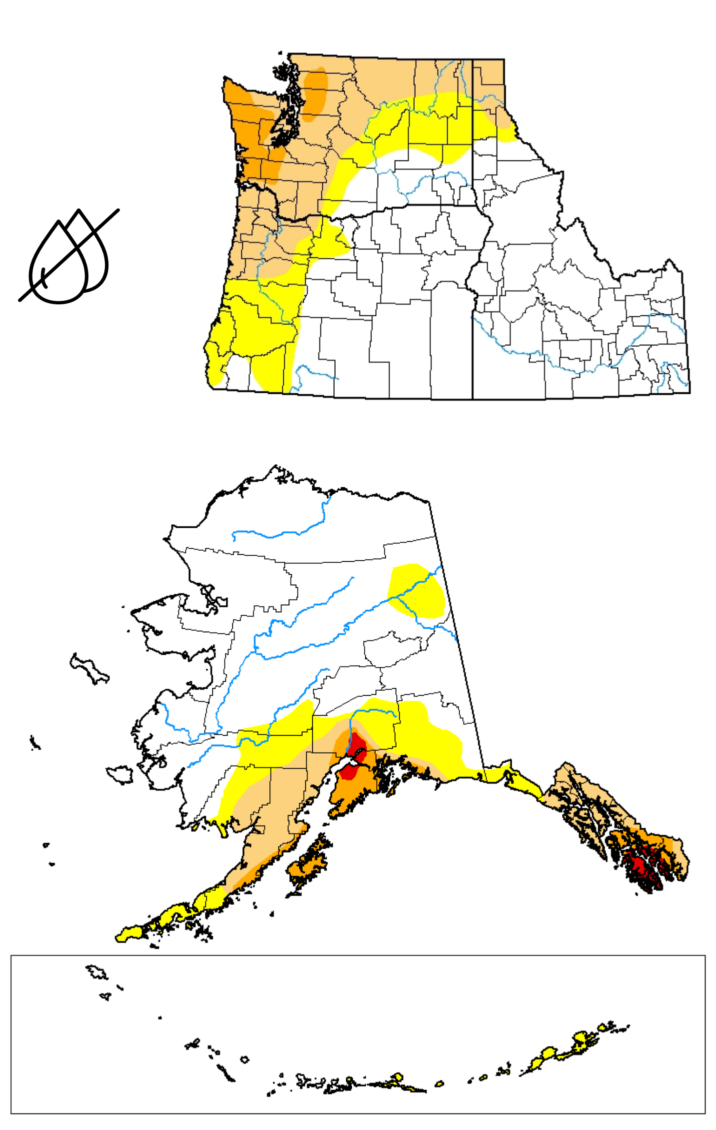
	None	D0	D1	D2	D3	D4
Current	65.63	15.45	13.07	4.80	1.05	0.00
Last Week 08-20-2019	65.63	20.12	9.94	3.39	0.92	0.00
3 Months Ago 05-28-2019	88.19	5.82	4.83	0.54	0.61	0.00
Start of Calendar Year 01-01-2019	71.65	11.73	5.73	8.16	2.73	0.00
Start of Water Year 09-25-2018	67.14	12.24	6.76	10.17	3.69	0.00
One Year Ago 08-28-2018	67.14	13.49	9.56	9.09	0.72	0.00

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

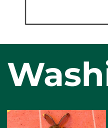
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Jessica Blunden
NCEI/NOAA

droughtmonitor.unl.edu



Washington reports first Hokkaido gyspy moth in U.S.



The Hokkaido gypsy moth was found in a trap on 25 July in Snohomish County, close to Puget Sound. Hokkaido gypsy moth is similar to the Asian gypsy moth in its flying capabilities and wide-ranging food preferences. Relatively few gypsy moths have been caught in Washington this summer. Read more about efforts to control gypsy moths in the Capital Press.

Webinars

Management Responses to Mountain Pine Beetle Infestations on National Forestland, 4 September 11 am MDT. Scientists will share findings on differences and similarities between how different case studies in CO, SD, MT, & WA responded to mountain pine beetle impacts and what policies, authorities, and approaches managers used to address beetle issues in their national forests.

SE AK **Did Southeast Alaska drought conditions improve or worsen during the summer of 2019 and what will autumn/winter bring? 6 September 11 am AKDT.** A recap of drought conditions in southeast Alaska, along with a climate outlook for the region and an update from the May drought workshop.

Climate tools for specialty crop growers in the Northwest 23 September 11 am PDT. Join the USDA Northwest Climate Hub to learn about two tools available in the Northwest Climate Toolbox that can assist growers of specialty crops, specifically: almonds, apples, blueberries, cherries, with future location and management decisions.

AK **National Weather Service Alaska Climate Outlook Briefings**: a monthly webinar series on Fridays at 12 pm AKDT 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.

27 September -click to register
18 October -click to register
22 November -click to register
20 December -click to register

PNW **Pacific Northwest Drought Early Warning System, Drought and Climate Outlook** is a bi-monthly webinar series on Mondays 11 PDT. Webinars include four brief presentations: a climate recap and current conditions, a seasonal outlook, and two special topic speakers.

Recording of the 26 August webinar includes tool demonstrations of the US Water Watcher which compares different water metrics and the Future Crop Suitability Tool showing future tree fruit irrigation needs. Click on this text to watch the recording.

28 October -click to register
16 December -click to register

Conferences

2019 Alaska Section AWRA Annual Conference: Water Resources in a Changing Landscape 17-19 September Juneau Alaska. This annual conference is an opportunity for collaboration among physical, biological, and social scientists, engineers, and other professionals concerned with water resource research, planning, development, management, and education.

Southeast Environmental Conference 23-27 September in Craig Alaska at the Craig Tribal Hall is hosted by the Tlingit and Haida Indian Tribes of Alaska in partnership with the Craig Tribal Association. This conference brings together Southeast tribes, natural resource professionals, and other interest groups to learn about and address common environmental priorities. The conference will provide participants this year with information and training on transboundary mining, climate change, harmful algal blooms, tribal conservation districts, oil spill/response, brownfield sites, and more. Registration is $50 and for more information contact: Lindsey Pierce, Environmental Technician 907.463.7188 **lpierce@ccthita-nsn.gov** or Maranda Hamme, Environmental Coordinator 907.826.5125 **epacoord@craigtribe.org**

10th Annual Northwest Climate Conference 8-10 October 2019 Portland, Oregon. This conference provides a unique opportunity to learn from and connect with a diverse community of experts fostering a more climate resilient Northwest. The event brings together practitioners, scientists, tribal communities, and decision-makers to share knowledge, ideas, and best practices related to climate change science, impacts, and adaptation in the Pacific Northwest. Topics include drought, wildfire, extreme events, coastal flooding, human and ecosystem health, and resiliency planning.

Southeast Alaska Young Growth Forestry Symposium 21-23 October in Ketchikan, Alaska. This is the third in a series of four planned symposiums associated with the transition to young growth forest management on the Tongass National Forest and surrounding lands. SAVE THE DATE. Additional information to follow or contact **paul@spruceroot.org or dportner@merid.org**

Intermountain Native Plant Summit IX 5-6 November Boise, ID at the Boise State Student Union. The summit is sponsored by the Boise State University Department of Biological Sciences and the USDA-Agricultural Research Service. At the summit there will be presentations on native plant restoration, genetics and adaptation on native plants, producing native seed for restoration and more. Registration is free. To get more information or register email **thomas.jones@usda.gov**

Funding opportunities

Native American Agricultural Fund requests proposals with outcome based projects achieving some of the following goals: improve success for Native farmers and ranchers; knowledge on key issues relevant to their success; access to credit, food systems in Indian Country; delivery of services; **food sovereignty** within Native communities; access to new or existing markets that will improve agricultural economies and general economies; number of Native professionals involved in the agricultural sciences & serving Native agriculture; and number of Native youth prepared for careers in agriculture & food areas & to successfully transition to the next generation. **Webinar** about the request for proposals are recorded and available **3 September 12-2 pm PDT**. **Applications due 20 September 2019 11:59 pm CDT.**

Link to 3 September 12-2 pm PT webinar

USDA National Institute of Food and Agriculture (NIFA) has a request for applications for fiscal year 2019 for the Agriculture and Food Research Initiative (AFRI) Competitive Grants Program. Applications are due **26 September 2019 5 pm EDT**.

Priority areas include:
1. Plant health and production and plant products;
2. Animal health and production and animal products;
3. Food safety, nutrition, and health;
4. Bioenergy, natural resources, and environment;
5. Agriculture systems and technology; and
6. Agriculture economics and rural communities.

USDA Forest Service - Landscape Scale Restoration request for applications to encourage collaborative, science-based restoration of priority forest landscapes and further priorities identified in the State's Forest Action Plans. Eligible applicants include: city, township, county, special district or state governments, independent school districts, Native American tribal governments and organizations, public housing authorities/Indian housing authorities, nonprofits, public & state controlled institutions of higher education, and private institutions of higher education. **Applications due 11 October 2019.**

USDA Specialty Crop Research Initiative (SCRI) request for applications to support research and extension that address key challenges of national, regional, and multi-state importance in sustaining all components of food and agriculture, including conventional and organic food production systems. Here we highlight two of five focus areas: 1) *Research in plant breeding, genetics, genomics, and other methods to improve crop characteristics* and 2) *Efforts to identify & address threats from pests & diseases, including threats to specialty crop pollinators*. **Applications due 15 October 2019.**

NOAA Climate Program Office (CPO) supports competitive research through three major program areas: Earth System Science and Modeling (ESSM); Climate and Societal Interactions (CSI); and Communication, Education and Engagement (CEE). Through this announcement, **CPO is seeking applications for 10 individual competitions in FY20. Check each individual competition for more information. Applications due 28 October 2019.**

Competition 1: AC4 - Urban atmosphere in a changing climate: chemistry, carbon & composition
Competition 2: CVP - Climate and Changing Ocean Conditions - Process Research and Modeling to Support the Needs of NOAA Fisheries
Competition 3: MAPP - Characterizing and Anticipating U.S. Droughts' Complex Interactions
Competition 4: MAPP - Modeling Climate Impacts on the Predictability of Fisheries and Other Living Marine Resources
Competition 5: MAPP - Constraining Models' Climate Sensitivity
Competition 6: COM - Developing terrestrial-, marine-, and ice-atmospheric boundary layer datasets through collaborations between observations & modeling communities
Competition 7: Multi-program - Explaining Climate Extreme Events: Developing a Rapid Assessment Capability and Understanding the Causes and Mechanisms of Extreme Events
Competition 8: COCA Fisheries and Climate Program: Understanding Climate Impacts on Fish Stocks and Fisheries to Inform Sustainable Fisheries Management
Competition 9: NIDIS: Coping with Drought****
Competition 10: CEE: Evolving the Climate Resilience Ecosystem of Adaptation Service Providers

Climate Hub Highlight

Seeing is not always believing: Crop loss and climate change perceptions among farm advisors. A recent publication in Environmental Research Letters (open-access) is a collaboration among the Northwest, Southwest, Northeast and Southeast Climate Hub fellows along with a university partner. This article describes that farm advisors perception of climate change were not affected after witnessing crop loss due to extreme weather events not previously witnessed.

Information

Wildland Fire Potential: For September, above normal wildland fire potential exists for much of western Oregon and central to eastern Washington, whereas normal potential exists for Idaho and Alaska (based on 1 August prediction map).

Science you can use in 5 min: Getting Climate-Smart With Seeds: How a New Software Tool Helps Prepare Landscapes for Expected Future Conditions. Publication from the Rocky Mountain Research Service to share research and the Climate-Smart Restoration Tool to help guide ecosystem restoration efforts under current and projected climate conditions.

Back-to-Back Low Snow Years Will Become More Common, a recent study from the University of Idaho indicates that consecutive low snow years may become six times more common across the Western United States over the latter half of this century.

Experts: Heat and drought, not spruce beetles or leaf miners, turned Alaska forests into kindling, a recent media coverage of the fires in Southcentral Alaska reached out to scientists to understand the cause of current fires in the area.

Learn About Forest Carbon Markets Through New Online Curriculum, an AgClimate Network article that discusses carbon markets and why forest land owners might consider them. Also, the article highlights an online course on the topic with the next two courses occurring on November 15 - February 15 and March 15 - June 15.

Karuk Climate Adaptation Plan released by the Karuk Tribe Department of Natural Resources. The plan relies on Traditional Ecological Knowledge and the best available science. The Karuk Climate Adaptation Plan has a central focus on the restoration in Indigenous use of fire and it outlines a means to re-establish historic fire regimes on the landscape through prescribed burns at appropriate times of year.

Video: Revitalizing Our Relationship With Fire   Video: Fire Belongs Here

Summaries from the Healthy Soils, Healthy Region Workshop. Find documents that recap regional soil health priorities from facilitated sessions at the workshop and a general workshop summary, videos of in-field assessments shown at the workshop, and soil health sampling videos.

What You Need to Know About Fruit Acclimation to Heat Stress. An AgClimate Network article about ongoing research at Washington State University's Tree Fruit Research and Extension Center.

International and national Information

Land is a Critical Resource. As noted in a highlight of the United Nations Intergovernmental Panel on Climate Change (IPCC) report, *Climate Change and Land*. Click this text to read a post from the IPCC that highlights findings from the recent report.

Ongoing research looks to reduce emissions from cattle. An article from the BBC describes a few ongoing research projects looking at different ways to affect gastrointestinal microbes with the goal to reduce greenhouse emissions from cattle.

Second State of the Carbon Cycle Report (SOCCR2) Highlights from Chapter 5 Agriculture: SOCCR2 reports that dairy production is more efficient than beef. This trend may translate to lower emissions from the livestock sector. Click the text for more information on SOCCR2.

Environmental Quality: USDA Economic Research Service examined the relationship between agriculture and environmental quality by analyzing the use and efficacy of conservation practices; environmental impacts of production practices and management decisions; and the role of Federal programs and policies. Read the overview here and find links on left of page for more in-depth information for Policy Instruments for Protecting Environmental Quality and Cost-Effectiveness and Policy Design.

Conservation Spending Seeks To Improve Environmental Performance in Agriculture. USDA Economic Research Service examined conservation programs and found that some farming practices can degrade natural resources and the environment; other practices can preserve and enhance our natural heritage and provide substantial benefits through careful management of agricultural land. USDA's conservation programs help agricultural producers improve their environmental performance with respect to soil quality, water quality, air quality, wildlife habitat, and greenhouse gas emissions.

Request for Feedback from American Indian, Alaska Native, and Native Hawaiian Community Leaders on the Effects of Climate Change on Native Communities, The Committee of Indian Affairs requests feedback on the effects of climate change on Native communities to foster a dialogue on potential solutions and responses to this urgent threat. Comments are due **13 September 2019** email Community_Leaders_Feedback@indian.senate.gov.

NORTHWEST CLIMATE HUB

Signup to receive the USDA Northwest Climate Hub monthly newsletter by clicking on this box and providing your contact information and areas of interest on the form.