and moderate drought has been alleviated due to recent storms. Abnormal dryness (D0-yellow) persists on Kodiak Island and the Kenai Peninsula, and extends westward to the McCarthy area. Recent storms brought significant rainfall to parts of Oregon and Washington, leading to some

improvements in drought conditions. In Oregon, areas in extreme drought (D3- red) have improved, however severe (D2- orange) and moderate (D1-tan) drought conditions west of the Cascades persist. In southcentral Washingtn, areas of extreme (D3-red) and severe (D2- orange) drought have improved slightly. Similarly, large areas of moderate drought (D1-tan) across southern Washington improved to abnormally dry (D0-yellow). The Idaho panhandle saw improvement since last month, with abnormally dry conditions (D0-

yellow) remaining only in the western portion. Drought status throughout the remainder of the state remains mostly unchanged, with a "bullseye" of extreme (D3-red), severe (D2- orange), and

moderate drought (D1-tan) persisting in the middle of the state. 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. CoCoRHaS NATIONAL Integrated Drought Conditions & Impacts Reporter **U.S. Drought** Drought.gov Community Rain Hail **Monitor**





U.S. Drought Portal

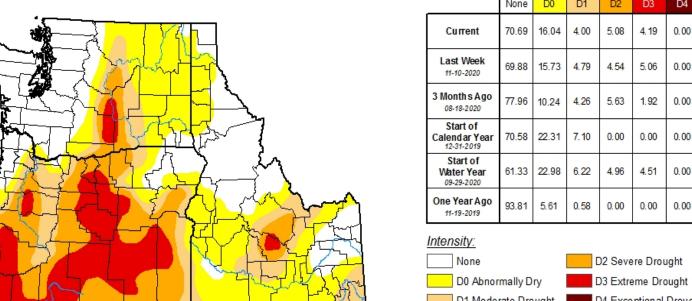


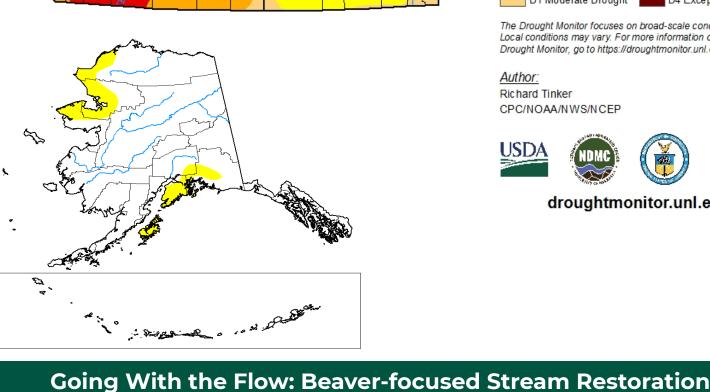
Snow Network U.S. Drought Monitor

November 17, 2020 (Released Thursday, Nov. 19, 2020)

USDA Northwest Climate Hub

Drought Conditions (Percent Area) None Current 70.69 16.04 4.00 5.08 4.19





on Western Rangelands

private landowners, and other partners.

0.00 0.00 0.00 0.00 0.00 D2 Severe Drought D3 Extreme Drought D4 Exceptional Drought D1 Moderate 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

Valid 7 a.m. EST

USDA

CPC/NOAA/NWS/NCEP



Author: Richard Tinker









Find more information about stream erosion challenges and restoration options here. **Information**

A new story map from the Northwest Climate Hub addresses the complexities of beaver-related

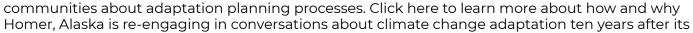
stakeholders early and continuously to better meet their needs. Check out two of the latest research initiatives underway that are both related to climate change. West-Side Fire Research Initiative **Carbon Dynamics Research Initiative** Historic Drought in a Rainforest, Southeast Alaska (2017-2019). Check out this map journal that

lays out the impacts of recent historic drought in Southeast Alaska. The evolution and unique

A Town with a Plan: Community, Climate, and Conversations. Much can be learned across

Outcome-based Management for Western Rangelands: Using Experience & Need to Help

The Pacific Northwest Research Station Research Framework Update. The Pacific Northwest Research Station is changing its approach to the planning and application of research. The new Research Framework focuses on collaboration and long-term planning that engages partners and



characteristics of drought are covered.

initial formal mitigation planning processes.

difficult to manage as climate conditions change.

Manage for Fire. Climate change is an important contributor to the increasing fire activity on rangelands. Check out this blog post about how Idaho ranchers and the Bureau of Land Management have worked toward adding flexibility to grazing permits through the development of an outcome-based grazing management program that aims to both maximize benefits to

Small Scale Droughts Limit Sagebrush Recovery After Wildfires. Research supported by Climate Adaptation Science Centers investigated the role of small-scale ecological droughts on

ranchers, and reduce fire fuels on the landscape when and where it's appropriate.

post-fire sagebrush recovery in the Great Basin. Results indicated that daily soil-water availability measurements in March, during the germination window, was a strong predictor of sagebrush regrowth, while monthly drought measurements were not. The implications indicate that water scarcity over short time periods can dramatically decrease plant seeding survival after fire. University of Idaho Extension Fort Hall Develops and Provides Russian Olive Management **Program.** Russian olives are one of the most significant invasive trees in the West and a growing problem in southern Idaho. The trees reduce water tables and native species as well as provide

low- quality forage and poor wildlife habitat. Russian olive spreads prolifically and may be more

Comprehensive Science Synthesis. A synthesis of science and management information about forest and rangeland soils of the United States. The book explores directions that positively affect

Fact Sheet: Different Treatment Options for Russian Olive by UI Extension

the future of forest and rangeland soil health, outlines soil processes and identifies needed

Forest and Rangeland Soils of the United States Under Changing Conditions: A

Utilities of the Future, Today: How Public Utilities are Pioneering Climate-Smart

Infrastructure. This episode of the Climate Ready podcast discusses how public utilities are coping with the combined challenge of growing demand and a changing climate by capitalizing on "green infrastructure." The focus on natural resources and conservation can be applied to rural

research. The effects of climate change, severe wildfires, invasive species, pests and diseases, pollution, and land use change are considered. It also addresses ideas for capitalizing and sharing existing information to facilitate mitigation and adaptation processes. Crowded and Thirsty: Fire Exclusion Leads to Greater Drought Sensitivity in Mixed-Conifer Forests. The latest issue of Science Findings summarizes recent research on the relationship

between fire suppression and drought sensitivity. Researchers tested how individual trees in a mixed-conifer forest in the Deschutes National Forest responded to the exclusion of wildfire and concluded that thinning and prescribed fire are key to drought resilience in these forests as the

climate changes.

Podcast Highlight

Research Station.

cooling benefits of smoke to streams.

and urban areas across the Northwest. **Webinars & Trainings** FIRE x FAUNA Wildfire and Prescribed Fire Effects on Wildlife, 19 & 20 November. This webinar series highlights the latest science on fire and wildlife. Sessions are intended for land managers, but anyone interested is welcome. 19 November 11 am-12 pm PST, Mammals, Birds x Fire in Western Forests. The second of

three talks for this session will address effects of fire on small mammal communities of the Pacific Northwest from Todd Wilson, a Wildlife Biologist with the Forest Service PNW

20 November 11 am -12 pm PST, Where There's Smoke There's Fire. The first two talks of this session address cannabis cultivation and issues related to fire, while the last discusses the

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.

VAWS: National Weather Service Alaska Sea Ice Program Operations, 24 November 11 am-12

National Weather Service Alaska Climate Outlook Briefings, Fridays at 12 pm AKST. This monthly webinar series 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.

landscape silvicultural perspective that allows managers flexibility and strategic options for restoring white pines without sacrificing other management objectives. Experts from the Forest Service Rocky Mountain Research Station and northern Idaho will present and lead lengthy Q & A.

A summary of recent research on the topic can be found here.

pm AKST. This webinar will look at the evolution of the unique Alaska Sea Ice program, from how it started, to what it currently does and hopes to do in the future. Forest Gaps and Western White Pine Regeneration, 2 December 9-10 am PST. The webinar will discuss forest openings and seedling growth in western white pine restoration, including a

3 December 6-7:30pm PST, From Cliffs to Coasts: Stories of Building Climate Resilience 27 January 5 pm PST, Building Climate Resilience During COVID-19 Recovery 30 March 5 pm PST, The Next 25 Years: Building a Climate-Resilient Future

Helping Farmers Help the Land Through Climate Smart Farming, 10 December 10-11 am PST. Participants in this webinar from the Natural Resources Conservation Service will learn about how

Current Topics in Forest Health 2020, 11 & 18 December 9 am-12 pm PST. University of Idaho Extension is hosting a two-part webinar series that covers issues relevant to Inland Northwest forest health. Topics include larch top kill, western white pine blister rust, vole and gopher

Pacific Northwest Drought & Climate Outlook, 14 Dec 11 am PST. 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

the climate has changed in their area and what that means for farmers and ranchers. The presentation will focus on four key ways producers can adapt to changes through vulnerability

assessment, soil health, biodiversity, and greenhouse gas emission reductions.

management, and much more. Register here.

recent innovations. Find the recorded sessions here.

Climate Impacts Group 25-Year Anniversary Lecture Series on Building Climate Resilience

developing climatic events, and special topics. Did you miss the Octber DEWS webinar? Check out a recording here. OSU Extension Post-Fire Webinar Series (recorded). Find several sessions that provide essential

mortality, reforestation considerations, and tax issues. Find the recorded sessions here.

information for those affected by wildfire. Webinars cover hazard awareness, how to assess tree

Monthly Biochar Webinar Series (recorded). This monthly series from the US Forest Service covers multiple bio-char related topics, including forest-to-farm application, economics, and

given at both days of the meeting that cover new tools and address drought, infrastructure, an outlook for 2021, and much more. **Conferences & Meetings** Society for Range Management 2021 Virtual Annual Meeting, 15-18 February. The theme of the

rangelands across the globe. An official agenda is forthcoming and submissions for abstracts for

Idaho Water Quality Workshop, 9-11 February. This online meeting will feature presentations

Northwest Climate Conference, 6-8 April. 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

Department of Energy: Energy Infrastructure Deployment of Tribal Lands 2020. The Office of

2020 meeting is "new frontiers" and will highlight new ideas and endeavors occurring on

oral, poster and field findings presentations has been extended to 4 December.

on nonpoint source pollution, PFAS (Perfluorooctanoic acid) in groundwater, and fish

OR/WA Water Year 2020 Recap & 2021 Outlook Meeting (recorded). Find links to presentations

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 EST.

submission. Applications due 11 January 2021.

Funding Opportunities

resiliency planning. Abstracts are due by 27 November.

bioassessment.

14 January 2021.

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

Organic Agriculture Research and Extension Initiative (OREI). This program funds projects that will enhance the ability of farmers, ranchers, and processors who have already adopted organic standards to grow and market high-quality organic agricultural products. Priority concerns include biological, physical, and social sciences, including economics. Projects should emphasize practical, research-based information, education, and outreach for whole farm planning. Applications due

Forest Service Region and must also send an email to SM.FS.CFP@usda.gov to confirm

NW CASC Funding Opportunity for Tribal Climate Adaptation Research Projects. The Northwest Climate Adaptation Science Center (NW CASC) 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

Federal Emergency Management Agency (FEMA) Building Resilient Infrastructure and Communities (BRIC) program. This grant program is for states, local communities, Tribes and territories for pre-disaster mitigation activities. This pre-disaster hazard mitigation program **FEMA** 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 Grant 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. 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. To receive the USDA Northwest Climate Hub monthly newsletter via email, signup by clicking on this box and providing your contact information and areas of interest on

the form. To unsubscribe email holly.prendeville@usda.gov