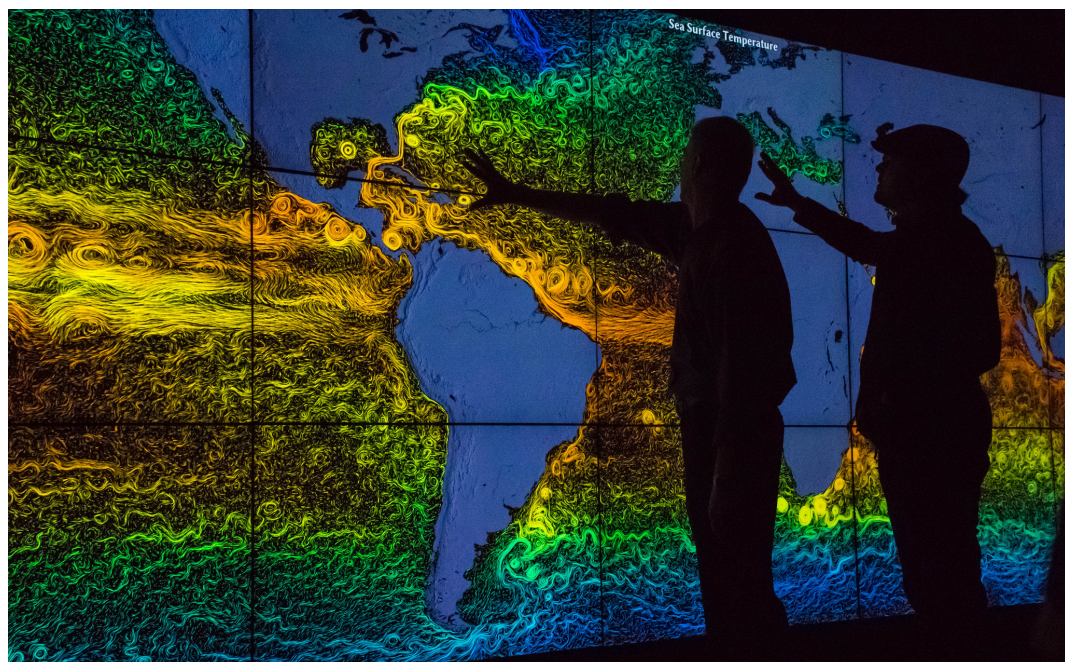




Northwest Climate Hub
U.S. DEPARTMENT OF AGRICULTURE

September 2023 Newsletter

Featured Article



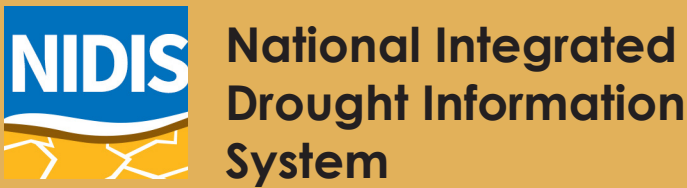
Basics of Global Climate Models

Have you ever wondered what a GCM is? What about an RCP? Maybe you know what the acronym stands for, but don't understand what it actually means. This article aims to answer questions you have about climate models. It discusses how models are created, what information is used to make projections, what models can tell us, how accurate climate models are, what the future of modeling looks like, and more.

Drought Update

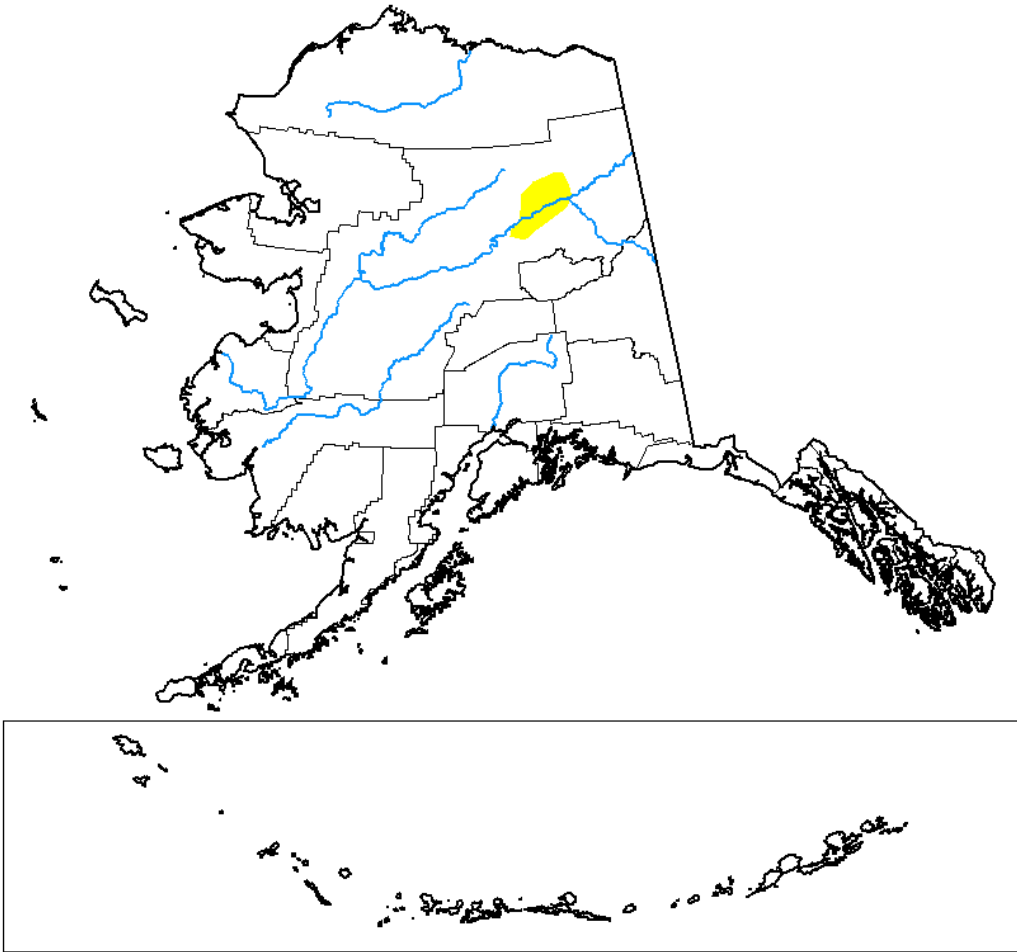
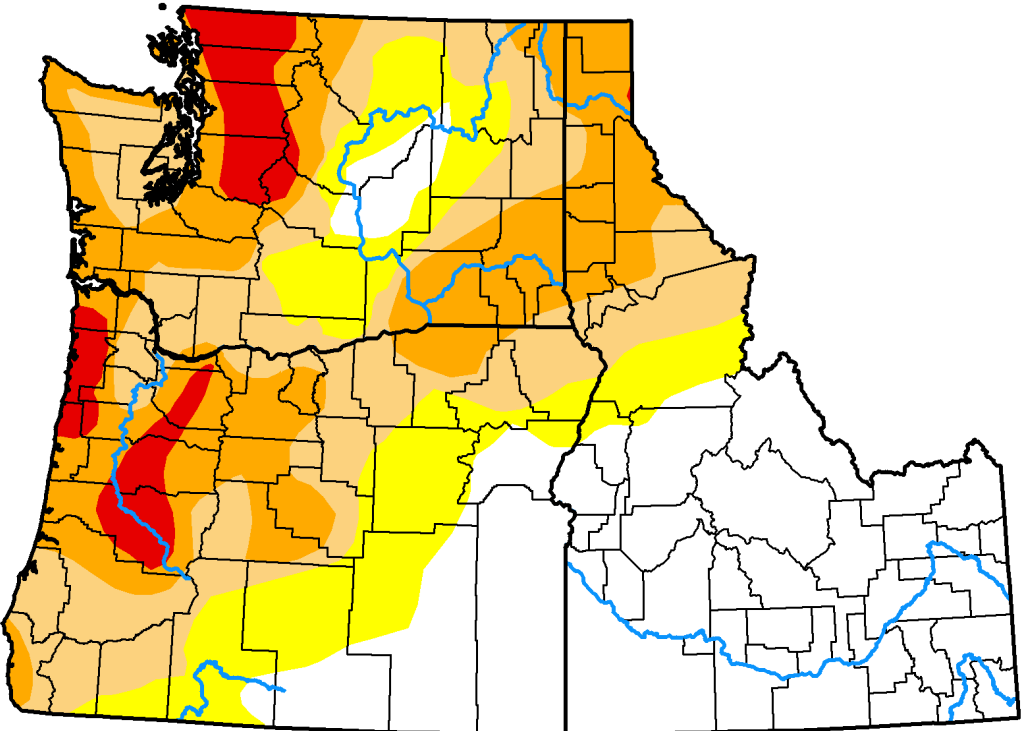
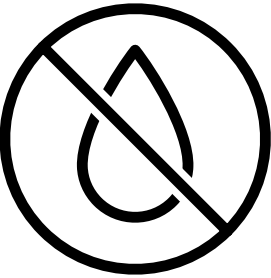
Abnormal dryness and drought are occurring over large parts of Washington, Oregon, and the Idaho Panhandle. Drought conditions have expanded in much of the western part of the region. In both Oregon and Washington, drought has intensified in the western and northwestern regions of both states from moderate drought (D1 – tan) to severe drought (D2 – orange) and severe drought to extreme drought (D3 – red). In central Idaho, areas with abnormally dry conditions have been reduced, with drought only present in the Pandhandle. Southeastern Oregon remains drought free.

In Alaska, moderate drought status has been removed. There is a small section of abnormal dryness (D0 - yellow) in the eastern part of the state.



U.S. Drought Monitor USDA Northwest Climate Hub

September 19, 2023
(Released Thursday, Sep. 21, 2023)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	80.15	19.85	14.48	7.81	1.55	0.00
Last Week 09-12-2023	75.61	24.39	14.71	6.13	0.41	0.00
3 Months Ago 06-20-2023	80.53	19.47	8.93	0.82	0.00	0.00
Start of Calendar Year 01-03-2023	75.01	24.99	15.00	7.57	3.06	0.16
Start of Water Year 09-27-2022	70.29	29.71	18.36	7.80	3.90	0.16
One Year Ago 09-20-2022	72.54	27.46	17.47	7.75	3.90	0.16

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>

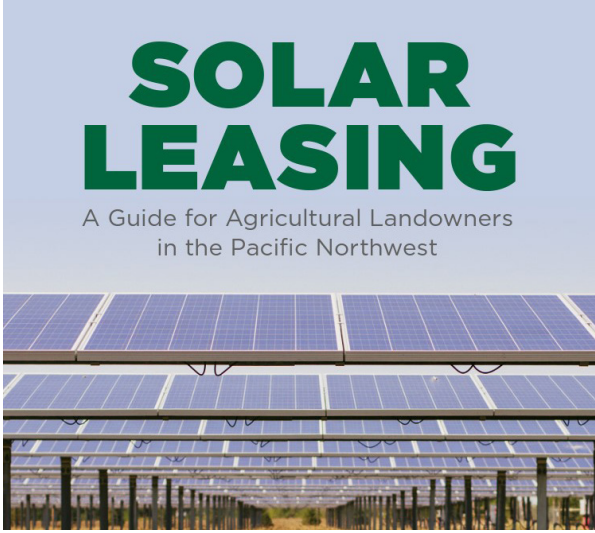
Author:
Richard Heim
NCEI/NOAA



droughtmonitor.unl.edu



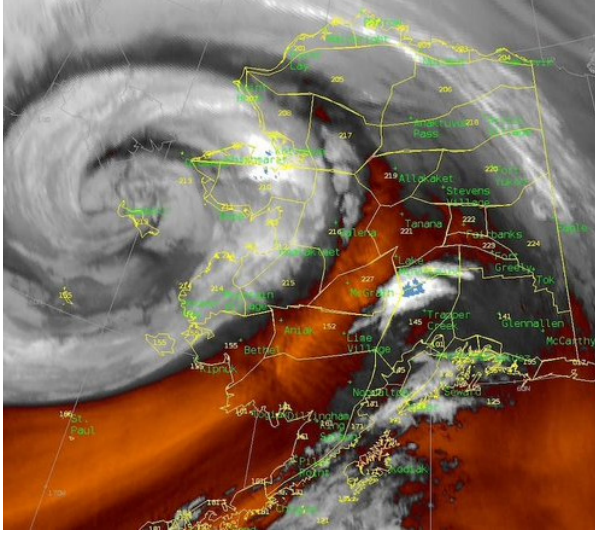
Agrivoltaics in the Northwest
This Hub article explores how agrivoltaics, or the pairing of solar power generation with agriculture, could improve climate resilience in the Northwest.



Solar Leasing: A Guide for Agricultural Landownerse in the Pacific Northwest
This USDA National Institute of Food and Agriculture-funded guide walks landowners through the process of solar leasing in the Northwest.



Climate Change and Wild Foods in Alaska
This Hub article explores how climate change is altering the abundance and location of a variety of wild foods in Alaska, impacting the state's food security.



Climate Change and Coastal Storms in Western Alaska
As ocean temperatures rise and sea ice declines, intense storms are likely to have a more significant impact on western Alaska's coastal communities.



Wildfire and Invasive Plants in Alaska's Boreal Forest
This presentation highlights the current status of in non-native plant invasions in burned areas of Alaska's boreal forest region and ongoing research efforts studying long-term trends.



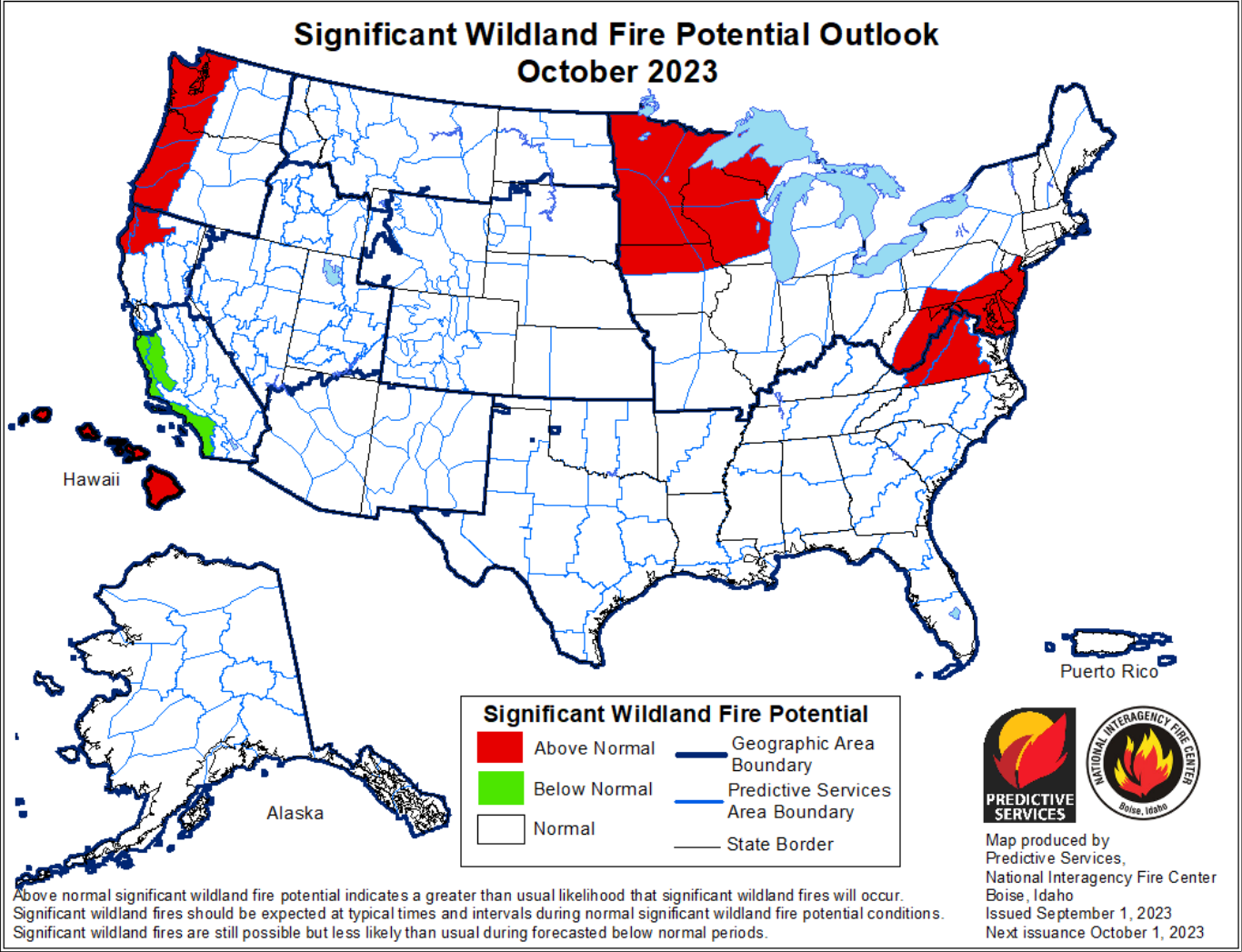
Conserving Water and Energy in the Deschutes Basin
This YouTube video from the Natural Resource Conservation Service shows how farmers are conserving water and energy through improved irrigation techniques, increasing regional climate resilience.



Agriculture and Science vs. Climate Change
This article by USDA Agricultural Research Service discusses some recent advancements in helping wheat become more drought tolerant.



Emerald Ash Borer Look-alike Guide
This visual guide from the Washington Invasive Species Council helps users differentiate invasive Emerald Ash Borer from its look-alikes.



National Significant Wildland Fire Potential Outlook

The significant wildland fire potential outlook is improving in the region. Alaska, Idaho, and eastern Oregon and Washington are expected to have normal wildfire potential. Both Alaska and Idaho have normal wildfire potential outlook for the month of October. Coastal parts of Oregon and Washington are expected to maintain significant wildland fire potential for the month of October.

Workshops and Conferences



Workshop for Building Drought Resilience in a Changing Climate with Upper Columbia and Missouri Basin Tribes, 26-28 September, Polson, Montana.

Co-hosted by NOAA's National Integrated Drought Information System (NIDIS) and the Confederated Salish and Kootenai Tribes, this interactive workshop will bring together tribal resource managers, leaders, and citizens, tribal college and university members, non-governmental organizations, and partners from government agencies, academia, and the private sector to discuss issues related to managing and identifying solutions for drought in a changing climate on tribal lands.



12th Northwest Climate Conference, 2-4 October, virtual.

Boise State University is hosting the 12th Northwest Climate Conference, which seeks to provide a networking and learning opportunity for practitioners, scientists, tribal members, and community organizers interested in climate change impacts and adaptation in the Northwest. The conference is committed to supporting equitable climate adaptation outcomes and building equity and diversity in climate science, policy, and adaptation practice.



Northwest Bioenergy Summit, 11-12 October, Kennewick, WA. The Summit will bring together diverse public and private interests for a comprehensive overview of the opportunities and challenges facing bioenergy development in the Northwest. From new funding sources and cutting-edge research to project and market development, the Summit will explore how bioenergy is uniquely positioned to address the complex interplay between energy generation, waste management, transportation, soil health, rural economic development, and more.



Society of American Foresters 2023 National Convention – Forestry: It's in Our DNA, 25-29 October, Sacramento, California. Forestry is multi-faceted, with many backgrounds, disciplines, and experiences shaping the profession's past, present, and future. This convention will bring together novel science and on-the-ground management techniques, while focusing on how to better communicate passion for forestry to the public and build a community that can tackle impacts from a changing climate.



Oregon and Washington Water Year 2023 Recap & 2024 Outlook Meeting, 1-2 November, 9am-12:15pm PDT, Virtual. This meeting will share and gather information regarding climate impacts of the 2023 water year. This meeting will also offer the opportunity to learn from others about mitigation actions that were taken through group discussion. Forecast experts will provide expectations for 2024, including discussion of what El Niño means for the region.



Sixth National Cohesive Wildland Fire Management Strategy Workshop, 6-10 November, Santa Fe, New Mexico. This event will utilize the collective voice and brain trust of workshop attendees to identify solutions and actions for current barriers to fire management, as well as for the critical emphasis areas and challenges outlined in the Cohesive Strategy Addendum. The workshop aims to address issues that are keeping managers from implementing the Cohesive Strategy at scale.



Tribal Climate and Health Summit, 8-9 November, Pala Casino and Spa Resort, California.

This 2-day training features interactive instruction and peer-to-peer learning activities that will build knowledge about developing, implementing, and evaluating adaptation strategies that safeguard Tribal health and are rooted in traditional knowledge and values. Organizers, guest speakers, and attendees will share successful practices that are increasing Tribal resilience to a variety of climate exposures throughout the US.



Alaska Food and Farm Festival, 10-12 November, virtual and Anchorage, Alaska.

The goals for the festival are to (1) increase awareness of Alaska food issues among the general population; (2) provide training, resources, and networking opportunities to increase involvement in local food issues by community members and decision-makers; and 3) increase connections and build community between the public, Alaska food businesses, NGOs, governmental entities, tribal entities, and others to support local economic development and innovative solutions.



September Alaska Climate Outlook Briefing, 22 September, 12 pm AKDT.

This National Weather Service webinar will review recent and current climate conditions around Alaska, discuss some forecasting tools, and finish with the Climate Prediction Center's forecast for October 2023 and the early winter season. Join online to learn what has happened and what is in store for Alaska's seasonal climate.



Northern Climate Reports: Ecological Futures in Stories, Charts, and Data, 26 September, 11 am AKDT.

A changing climate is altering northern landscapes, and there is a need for communities to be able to understand what may occur in the future. This webinar will unveil the interactive Northern Climate Reports tool created by University of Alaska-Fairbanks' Scenarios Network for Alaska and Arctic Planning team. A review of how the tool uses climate data to construct a variety of possible futures for a warming North will be included.



First Friday All Climate Change Talks (FFACCTs), 6 October and the first Friday of every month, 11 am PDT.

FFACCTs is a monthly webinar series organized by the USDA Climate Hubs and Forest Service Research and Development that features presentations from USDA scientists and practitioners. Webinars explore connections between climate, agriculture, nature, and people, and discuss their struggles, hazards, solutions, and achievements.



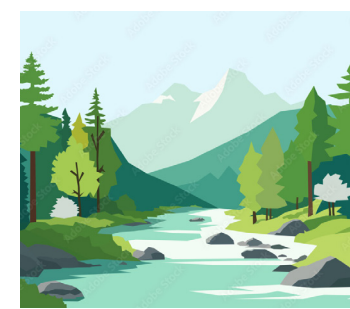
Pacific Northwest Drought Early Warning System October Webinar, 23 October, 11 am PDT.

This webinar will provide timely information on current and developing drought conditions in the region, and climatic events like El Niño. Speakers will also discuss the impacts of these conditions on issues such as wildfires, floods, disruption to water supply and ecosystems, as well as impacts to affected industries like agriculture, tourism, and public health.



Outcomes of Spatial Targeting in Sagebrush Country via the Sage Grouse Initiative, 16 November, 9am PDT.

This webinar will discuss the strategic implementation of science-based Farm Bill conservation through the Sage Grouse Initiative. Findings may be used to inform on-the-ground efforts to further conservation of sage grouse and other species in the sagebrush biome, as well as other data-driven wildlife conservation efforts nationwide.



Understanding Climate-Smart Forestry in Practice, Mondays from October to November, 9 am PDT.

In this webinar series, practitioners and researchers share how they put climate-smart forestry into practice. Other topics will include forest management to enhance carbon storage capabilities and/or increase climate resilience. The series is hosted by The Forest School at the Yale School of the Environment, the USDA Northeast Climate Hub, and the USDA Southeast Climate Hub.

Opportunities



Science Communicator-International Arctic Research Center.

The Alaska Climate Adaptation Science Center is seeking a science communicator whose primary responsibility will be finding and telling compelling, accurate, high-quality stories about climate change science and adaptation for multiple communication channels. This position will also serve as the point of contact for the news media, and contribute to graphic design, project management, and strategic planning. This position will be based in Anchorage, Fairbanks, or Juneau, Alaska.

Apply by 24 September.



USFS Fellowship for Carbon Management on Working Lands.

This ORISE fellow will engage with USDA Northwest Climate Hub staff to develop information on carbon management in forests, rangelands, and farms. The fellow will collaborate with USDA Climate Hub staff to develop resources to guide carbon management planning and practices on National Forest System and other public and private lands in the Northwest.

Apply by 27 October.

Funding

September



Joint Fire Science Program (JFSP) Graduate Research Innovation award.
This award will be granted to a current master’s or doctoral student enrolled at colleges or universities within the US in the field of wildland fire and related sciences. Proposals must be directly related to the mission and goals of JFSP and must directly address management or policy related questions in the following topic areas: fuels management and fire behavior; changing fire environment; emissions and air quality; fire effects and post-fire recovery; relative impacts of prescribed fire versus wildfire; or human dimensions of fire.
Application due 28 September.



Powering Affordable Clean Energy (PACE) Program.
The PACE program is part of the Inflation Reduction Act. With \$1 billion in funding, PACE helps make clean, affordable, and reliable energy accessible to the people of rural America. This program will forgive up to 60 percent of loans for renewable energy projects that use wind, solar, hydropower, geothermal, or biomass, as well as for renewable energy storage projects.
Letters of interest due by 29 September.



Partners for Fish and Wildlife Program.
This voluntary, incentive-based program provides direct technical and financial assistance to private landowners to restore and conserve fish and wildlife habitat for the benefit of federal trust resources. Project work plans are developed strategically, in coordination with partners, and with substantial involvement from U.S. Fish and Wildlife Service field staff. Project selection will seek to align or support the Secretary's priorities. Program strategic plans inform the types of projects funded under this opportunity.
Applications due by 30 September.

October



Tribal Climate Resilience Program.
The Department of the Interior is providing \$120 million in funding to help tribal communities plan for the most severe climate-related environmental threats to their homelands. Tribal communities can use this funding to proactively plan to adapt to these threats and safely relocate critical community infrastructure.
Applications due 13 October.



Extreme Weather & What to Do About It.
As climate change increases instances of extreme weather, the CO2 Foundation focuses on helping leaders in all communities understand effective climate responses through grant programs. The foundation is soliciting applications for projects that 1) educate the public about the connections between extreme weather and climate change, risks their communities face, and resilience strategies; 2) develop approaches to enhance organizational and political stability in the face of climate-exacerbated disasters; or 3) facilitate effective responses to increasingly frequent and intense extreme weather events.
Letters of inquiry due 15 October.



Conservation Innovation Grant (CIG) On-Farm Trials.
CIG grants are intended to stimulate the adoption and evaluation of innovative conservation approaches in partnership with agricultural producers. Applications will be accepted for projects addressing at least one of the following priorities: irrigation management technologies; feed management and enteric methane reduction; grazing lands; nutrient management; and soil health demonstration trials.
Applications due 30 October.

Ongoing



Clean Energy Investment and Production Tax Credit.
The Investment Tax Credit and the Production Tax Credit work together to lower the costs of installing and operating new clean- energy power sources. These tax credits are intended to encourage more investments in clean- energy systems over the next few years. Tax credits can be claimed until January 2025, after which tax credits will be focused only on zero carbon sources of power, and the size of the credits will decrease.



Agriculture and Food Research Initiative (AFRI) Foundational and Applied Science Program.
This National Institute of Food and Agriculture (NIFA) program aims to invest in agricultural production research, education, and extension projects for more sustainable, productive, and economically viable plant and animal production systems.

General information for AFRI grants program. 2023 priority areas include plant health and production and plant products; animal health and production and animal products; food safety, nutrition, and health; bioenergy, natural resources, and environment; agriculture systems and technology; and agricultural economics and rural communities. Applications that address climate change, food and nutrition security, expanding markets for producers, indigenous traditional ecological knowledge, and equity for underserved producers are welcome. Applications due based on Program Priority Areas, between August and November 2023.



Rural Energy for America Program Renewable Energy Systems & Energy Efficiency Improvement Guaranteed Loans & Grants.
This program provides guaranteed loan financing and grant funding to agricultural producers and rural small businesses for renewable energy systems or to make energy-efficiency improvements. Agricultural producers may also apply for new energy-efficient equipment and new system loans for agricultural production and processing. Applications reviewed every three months between 30 June 2023 and 30 September 2024.

October continued

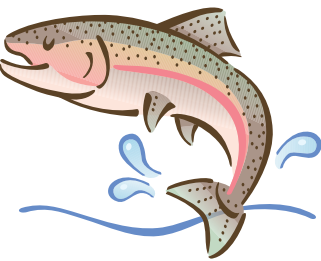


Conservation Innovation Grant Classic Program.
The classic CIG grants are intended to stimulate the development and adoption of innovative conservation approaches and technologies in conjunction with agricultural production. Applications are being accepted for projects addressing the following priorities: forestry; habitat conservation and restoration for wildlife and invertebrates; managing agricultural lands to improve local water quality; energy conservation; economics; and strengthening conservation through Indigenous knowledge.
Applications due 30 October.

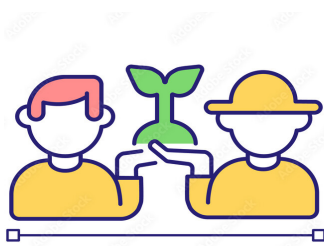


Cost Share for Organic Certification.
Under the Organic Certification Cost Share Program, the USDA will cover 75% of the cost associated with organic certification (up to \$750) for funds spent between October 1, 2022, and September 30, 2023. Transitioning to organic farming may be one way for farmers to combat the climate crisis. Organic farming can help with carbon storage and improve soil health.
Applications due 31 October.

November



Restoring Fish Passage through Barrier Removal Grants.
This funding will support U.S. federally recognized tribes, Alaska Native Corporations, and tribal organizations. In collaboration with National Oceanic and Atmospheric Administration, selected partners will use these funds to build tribal organizational capacity and implement projects that reopen migratory pathways and restore access to healthy habitat for tribally important species. Projects may also provide community and economic benefits, such as enhancing climate resilience by removing or improving aging infrastructure.
Proposals due 8 November.



Sabbatical Research and Education Call for Proposals.
This Western Sustainable Agriculture Research and Education (SARE) sabbatical grants provide an opportunity for faculty around the world to partner with farmers, ranchers, agricultural professionals, and researchers of the Western U.S. region for conducting research, education, and Extension activities. Projects focused on unexplored topics in underserved communities and understudied geographic locations are of special interest. \$75,000 limit/one year in scope.
Proposals due 21 November.



NOAA Climate Ready Workforce for Coastal and Great Lakes States. The National Oceanic and Atmospheric Administration (NOAA) seeks to establish programs that can place people into jobs that advance climate resilience and assist employers in developing a workforce that is climate literate, informed by climate resilience, and skilled at addressing challenges. This opportunity is open to state, tribal, territorial and local governments, institutions of higher education, and non-profit organizations.
Letters of Intent due 30 November.



Credit: Gary L. Quay

