February 2022 Newsletter

Feature Article

Prescribed Fire in the Northwest

This Northwest Climate Hub article explores the pros and cons of prescribed fire, or planned low-intensity fire conducted by professionals. Prescribed fire can lower the risk of catastrophic wildfires by reducing fuels, while providing forage for wildlife, and protecting communities from large wildfires. Prescribed fire seeks to mimic the small, regular-interval fires historically experienced in many Northwest ecosystems, and can even help to minimize some invasive species, insect outbreaks, and plant diseases.

Partnerships for Climate-Smart Commodities

The USDA has announced $1 billion in funding for pilot projects that create market opportunities for U.S. agricultural and forest products produced using climate-smart practices. These projects will encourage producers and landowners to:

1. Implement climate-smart production practices, activities, and systems on working lands,
2. Measure/quantify, monitor, and verify the carbon and greenhouse gas benefits associated with those practices, and
3. Develop markets and promote the resulting climate-smart commodities.

Proposals must provide plans on how projects will focus on the reduction and sequestration of carbon from commodities produced on farms, ranches, or in forests.

There are two funding pools:

- **8 April, 2022, for proposals from $5 million to $100 million.** These large-scale pilot projects will emphasize the greenhouse gas benefits of climate-smart commodity production and should directly benefit a representative cross section of producers.
- **27 May, 2022, for proposals from $250,000 to $4,999,999** These projects should be innovative and place an emphasis on enrollment of small and/or underserved producers, and/or focus on minority-serving institutions that develop ways to monitor, verify and quantify carbon and greenhouse gas benefits.

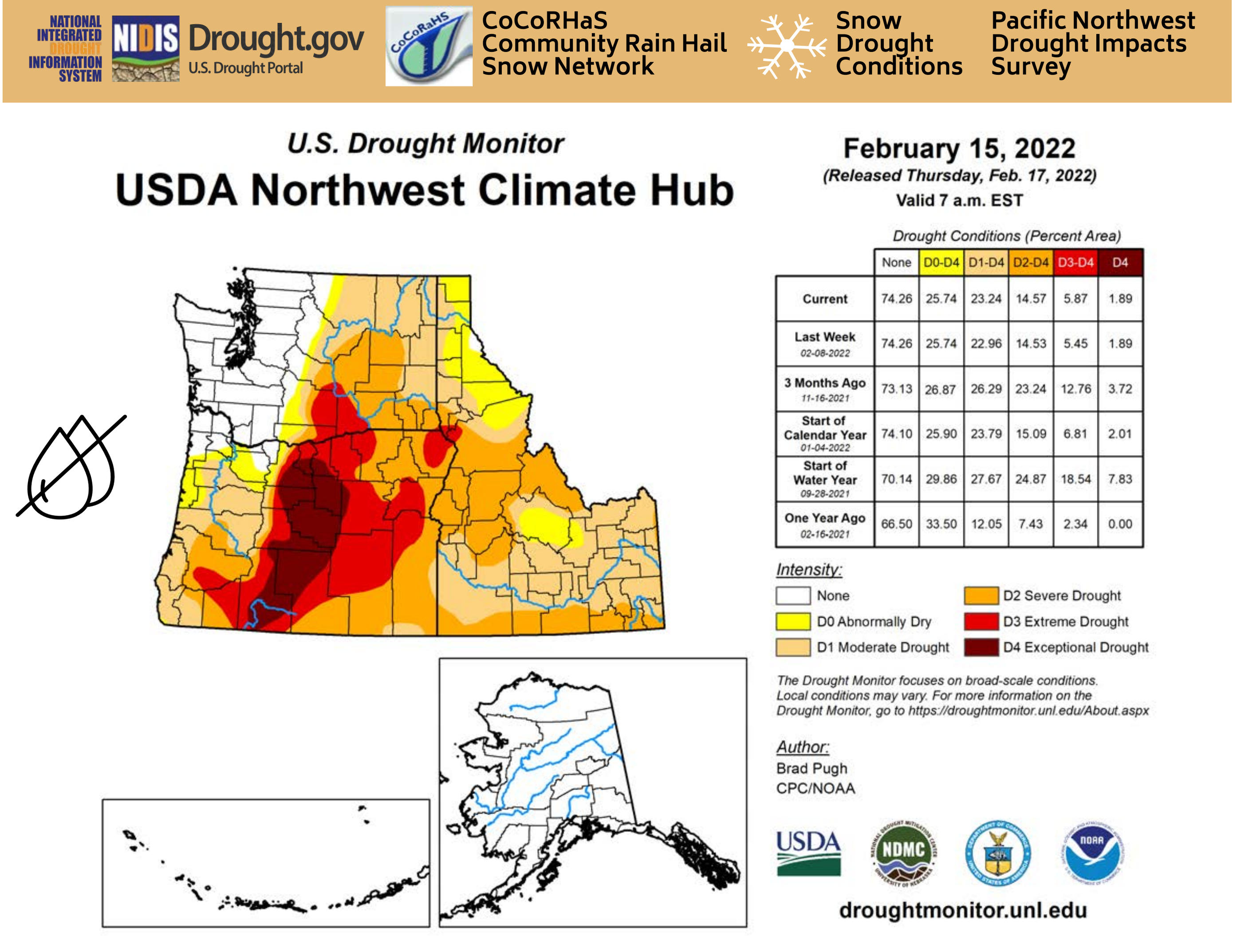
A list of frequently asked questions **Factsheet about the program**

Drought Update

After the driest January since 2014, high-elevation snowpack in Idaho, Oregon and Washington is beginning to decline from the above-normal values at the start of the year. Recent dry weather increased water-year-to-date precipitation shortfalls and lowered streamflow values. Precipitation along the border of Idaho and Montana improved conditions enough for a small reduction in abnormal dryness (D0-yellow). Western Oregon saw expansions of moderate (D1-tan), severe (D2-orange), and extreme (D3-red) drought. Much of Oregon, Idaho and eastern Washington are experiencing drought conditions.

Alaska remains free of drought and abnormal dryness.

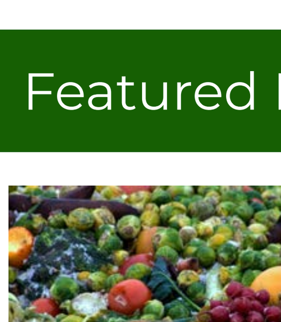
National Integrated Drought Information System | Drought.gov U.S. Drought Portal | CoCoRaHS Community Rain Hail Snow Network | Snow Drought Conditions | Pacific Northwest Drought Impacts Survey



Drought Conditions (Percent Area)

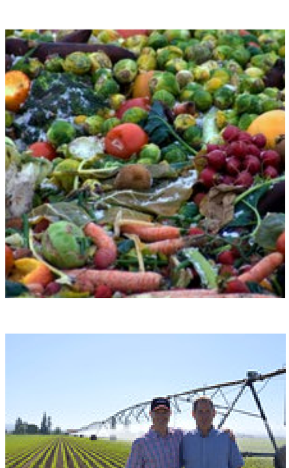
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	74.26	25.74	23.24	14.57	5.87	1.89
Last Week 02-08-2022	74.26	25.74	22.96	14.53	5.45	1.89
3 Months Ago 11-16-2021	73.13	26.87	26.29	23.24	12.76	3.72
Start of Calendar Year 01-04-2022	74.10	25.90	23.79	15.09	6.81	2.01
Start of Water Year 09-28-2021	70.14	29.86	27.67	24.87	18.54	7.83
One Year Ago 02-16-2021	66.50	33.50	12.05	7.43	2.34	0.00

Featured Information

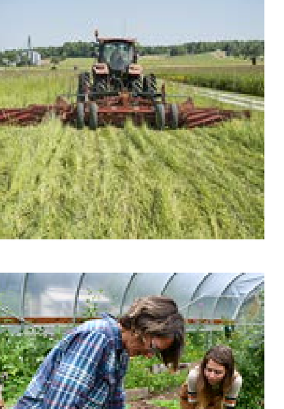


Sustainability of Agricultural Biomass
A Northwest Climate Hub article describes how food waste and poplar trees could supplement our energy resources in the U.S. and help to mitigate climate change.

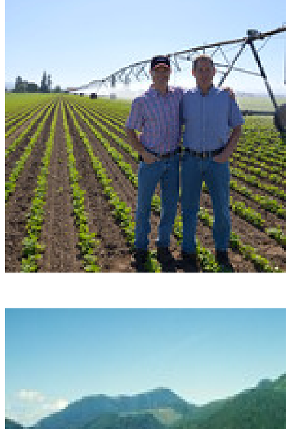
Cover Crops and Climate Change Mitigation
Cover crops can mitigate the effects of climate change on agricultural land, and come with many soil, water, and economic benefits.



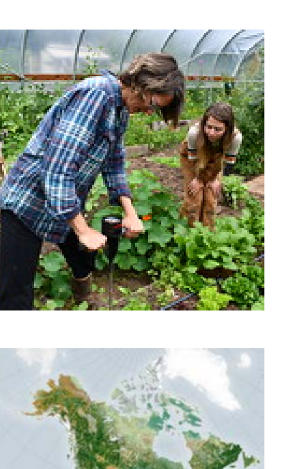
Climate Analogs for Specialty Crops
These analogs make it possible for growers who are concerned about changing climatic conditions to consult growers who are experiencing those conditions now and using mitigation strategies.



USDA Inaugural Federal Advisory Committee on Urban Agriculture
Urban agriculture could gain importance as climate change impacts agricultural lands. The committee will provide input on policy development and identify barriers in the industry.

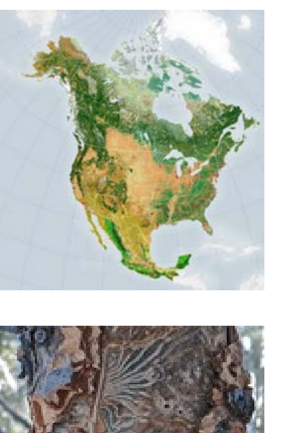


Treemap
Treemap is a tree-level forest model that can be used to analyze wildfire risk to carbon, inventory wildlife habitat, and monitor fuel treatment effects. It was created by the U.S. Forest Service.



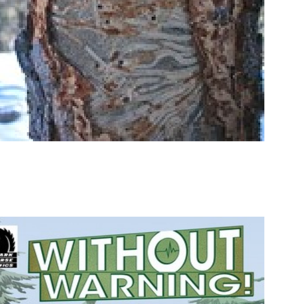
Updated NOAA State Climate Summaries
The 2022 state-specific climate summaries provide historical and projected climate trends, as well as information on sea-level rise and coastal flooding.

Imagining Climate Resilience in the Pacific Northwest
Artist Claire Sianna Seaman and University of Washington's Climate Impacts Group have collaborated to create a vision for a climate-resilient future in the Northwest.

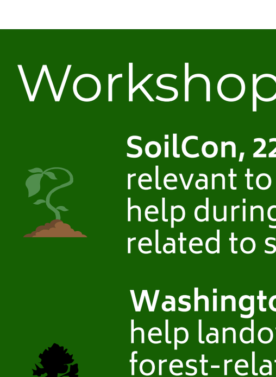


Bark Beetle in Western Forests
This article discusses the current state of knowledge and knowledge gaps in the complex interactions between fuel treatments, bark beetle-induced tree mortality, and wildfire behavior and severity.

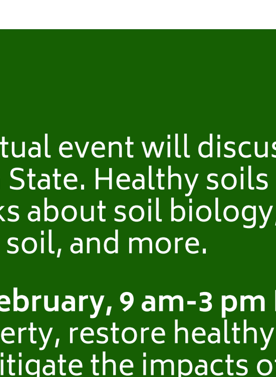
Invasive Species
Invasive species are a cause of biodiversity loss and extinction. Climate change facilitates their expansion into new habitats. An interagency open-access book compiles science and management strategies for invasive species across the country.



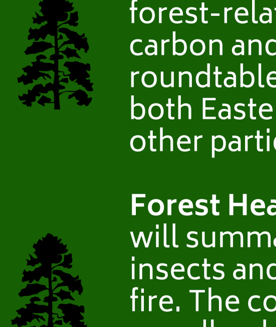
Without Warning! Wildfire
This wildfire preparedness comic book by Dark Horse Comics was released from Oregon's Office of Emergency Management. This comic enhances community preparedness for natural disasters likely to increase in frequency with climate change.



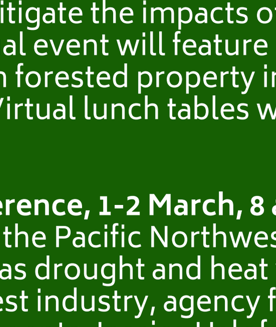
Fire and Ice
Learn about the link between dwindling Arctic sea ice and worsening wildfires in the West in this Pacific Northwest National Laboratory article.



Approaches to Increasing Prescribed Fire in Oregon
Some effective strategies for increasing prescribed fire use in Oregon are discussed in this Agricultural Climate Network article.



Conversion of Forest to Non-Forest Vegetation Following Wildfire This Science You Can Use Bulletin discusses how bigger, more frequent, and more severe fires can make it difficult for forests to recover.



Alaskan Wildfire & Climate Change
A Scientific American article explains how wildfire could be intensifying climate change in Alaska, while resulting in devastating effects on communities and permafrost.

Workshops & Conferences

SoilCon, 22-23 February, 8 am-12 pm PST. This virtual event will discuss all aspects of soil health relevant to the agricultural systems of Washington State. Healthy soils store more water, which will help during times of drought. Sessions include talks about soil biology, soil nutrients, economics related to soil, information about crop response to soil, and more.

Washington Forest Owners' Winter School, 26 February, 9 am-3 pm PST. The Winter School will help landowners address challenges on their property, restore healthy forest conditions, and achieve forest-related goals. Healthy forests can help to mitigate the impacts of climate change by storing carbon and providing habitat for animals. The virtual event will feature 30 seminars, expert panels, and roundtable discussions specifically for people with forested property in Washington. There will be both Eastern and Western Washington sessions. Virtual lunch tables will allow you to interact with other participants during the lunch hour.

Forest Health in Oregon: State of the State Conference, 1-2 March, 8 am-12 pm PST. This conference will summarize forest health issues in Oregon and the Pacific Northwest. The focus is on major forest insects and pathogens, weather phenomena such as drought and heat waves, tree decline issues, and fire. The conference seeks to inform foresters, forest industry, agency forest managers, small woodland owners, and extension volunteers and agents. Jessica Halofsky, the director of the Northwest Climate Hub, will be the keynote speaker.

Drought Prediction: A Focus on Streamflow - End User Listening Session, 3 March, 10 am-11 am PST. This listening session, hosted by the U.S. Geological Survey and NOAA's National Integrated Drought Information System , will include a short introduction to streamflow drought prediction products for the United States, followed by guided discussions with participants on research priorities for product development or improvement at the national and/or regional scale.

Accelerating Solutions for a Resilient Coast Conference, 22-23 March. Coastal Quest is hosting this national event to help participants build understanding of how regions, states, and tribes are bringing together diverse stakeholders to accelerate solutions that create and leverage results for the coast, helping communities, ecosystems, and economies be more resilient to climate change.

Biochar Research and Commercialization Conference, 29-30 March, 9 am-1:30 pm PST. Biochar provides a unique opportunity to store more carbon in soil. This conference will focus on the structure, players, and funding needed to fill biochar knowledge gaps and meet research needs and will engage with industry partners to discuss policy and investments to develop a pyrolysis-based biochar and biofuel industry. The Foundation for Food & Agriculture Research, the National Center for Appropriate Technology, and American Farmland Trust are co-hosting this event.

USGS and NOAA National Listening Session: Groundwater drought prediction, 5 May, 10 am-12:30 pm PST. With climate change, agriculture is expected to rely more heavily on groundwater in times of drought. This listening session will include a short introduction to groundwater drought prediction products, followed by guided discussions with participants on research priorities for product development or improvement at the national and/or regional scale.

Webinars

Invasion, Fire, and the Future of Northwest Wildlands, 22 February, 1-2 pm PST. The 2014-15 wildfires in the Blue Mountains spread in an unusual fashion owing in part to Ventenata dubia. Studies show that this invasive annual grass could transform ecosystems and influence fire across the ecoregion. This Northwest Fire Science Consortium webinar will share new research and management implications.

Soil Moisture 101, 22 February, 11 am-12 pm PST. The first national soil moisture webinar from the National Integrated Drought Information System and the National Weather Service will cover soil moisture 101: what soil moisture means and how it is measured. The webinar will discuss data and products, satellite-based remote sensing of soil moisture, and model-output data and products.

Release and Recruit: Recovering the Resiliency of Native Streamside (Riparian) Forests, 23 Feb, 6 pm-7:30 pm PST. The Rogue River Watershed Council has developed a streamside rehabilitation strategy that is cost-effective and promotes the resiliency of native plants by controlling noxious weeds. Learn more about the strategy and how you can implement it at this webinar.

Pacific Northwest DEWS Drought & Climate Outlook, 28 February, 11am-12pm PT. This webinar provides the latest information on current and developing drought conditions, as well as climatic events such as La Niña. This month's special topic speakers will focus on research and implementation of beaver-inspired restoration.

SCIENCEx Water Webinars, 21-25 March, 11 am-12 pm PST. These management-focused webinars will explore forests and water supply, water quality, aquatic life, restoring hydrologic systems, and the shifting water balance. US Forest Service Research & Development is hosting this week-long event.

The Future of Forest Products in a Changing Climate: Bioenergy from Forests Tuesdays, 8:30-9:10 am until April 19. Each week, a new speaker presents science on the pros and cons of forest bioenergy. Each topic addresses a new aspect of bioenergy in the U.S., including forestry, energy, conservation, and climate science, and economic, environmental, and societal impacts of increasing bioenergy use.

Climate Change Effects on U.S. Agriculture and Forests: This recorded webinar explores climate change impacts on U.S. agriculture and forests, and the increased frequency and magnitude of extreme weather events and associated disturbances. It explains that ecosystem services and agricultural productivity can be maintained in most locations through timely implementation of risk assessments and climate-smart management.

The Starker Lecture Series "Women of Forestry: Inspiring Leadership"

A lecture series that focuses on women who have taken crucial roles to create change in forestry and forest products as well as in their communities. Lectures start on 26 January and occur monthly through April, culminating in an in-person capstone workshop in May.

Pyro-cultural Forestry: Connecting People and Nature Through Fire, 9 March, 3:30-5:30 pm PST. Amanda Rau offers an indigenous perspective on the cultural use of fire and prescribed fire as a social and ecosystem restoration tool.

The Road Less Traveled: How Women in Forestry Can Save the World, 20 April, 3:30-5:30 pm PST. Edie Sohn Hall will weave personal stories and lessons that demonstrate the importance of women having courage, confidence, collaboration, and compassion to harness the power of trees and create a world with a global population living well within the limits of the planet.

Capstone Workshop, 10 May, 8 am-5 pm at Oregon State University. This day-long capstone workshop will explore all aspects of forestry, with a focus on women's leadership and the future of women in forestry and wood products industry.

Funding Opportunities

February

Agricultural Land Easements. The USDA Natural Resources Conservation Service has an agricultural land easements program to protect agricultural land, native grasslands, and create habitat for wildlife. Increasing wildlife habitat today aids in protection from future habitat loss that may occur due to climate change. Applications are also being accepted for Wetland Land Easements to protect, restore, and enhance wetlands. The program deadline has passed for Idaho and Alaska, but applications will be accepted for 2023 funding. **Apply by 25 February in Washington for 2022.**

Federally Recognized Tribes Extension Program (FRTEP). The program aims to establish an Extension presence and support Extension outreach on Federally Recognized Indian Reservations and Tribal jurisdictions of Federally Recognized Tribes. It is a continuation of the land grants mission of inclusion, providing education and research-based knowledge to those who might not otherwise receive it. **Applications due 25 February 2022.**

Inclusive Energy Innovation Prize. This Department of Energy prize seeks to build a community of individuals, groups, and organizations with new ideas for incubation, acceleration, and other community-based innovation services that will help enable a more just and equitable transition to a clean-energy economy. Up to ten organizations will share a total prize pool of $2.5 million. **Apply by 25 February.**

March

Agricultural Risk Coverage and Price Loss Coverage (ARC/PLC). This program is a part of the 2018 Farm Bill to help farmers provide future protections against market fluctuations. These protections may be important for regions that experience lower yields than the national average due to drought. **Deadline to enroll is 15 March 2022**

Earth Science Applications in Equity & Environmental Justice. The NASA Earth Science Division is accepting proposals that aim to advance equity and environmental justice domestically. Proposals should include three elements: landscape analyses, community-based feasibility projects, and data integration projects that combine Earth science information and socioeconomic datasets. A pre-proposal teleconference is planned on 17 February. **Apply by 18 March.**

Renewable Resources Extension Act-National Focus Fund Projects (RREA-NFF). USDA National Institute of Food and Agriculture's RREA-NFF provides funds for pilot projects that address emerging forest and rangeland resource issues, have national or regional relevancy, or develop new and innovative projects that can be replicated at other institutions. **Apply by 21 March.**

Rural Energy for America Program Renewable Energy Systems and Energy Efficiency Improvement Guaranteed Loans and Grants. This program provides guaranteed loan financing and grant funding to agricultural producers and rural small businesses for renewable energy systems and energy efficiency improvements. Increasing energy efficiency and developing more renewable energy systems is cost effective and reduces the consumption of fuels that generate greenhouse gasses, which contribute to climate change. Applications can be for grants of $20,000 or less or a loan/grant combination of $20,000 or less. **Apply by 31 March.**

April

USDA-National Institute of Food and Agriculture (NIFA) Small Business Innovation Research Program (SBIR). This program supports small businesses in the creation of innovative, disruptive technologies and enables the application of research advancements from conception to market. Projects must have previously completed a successful USDA SBIR Phase I project before applying for a Phase II grant. Projects dealing with agriculturally related manufacturing and alternative and renewable energy technologies are encouraged to apply. **Apply by 6 April.**

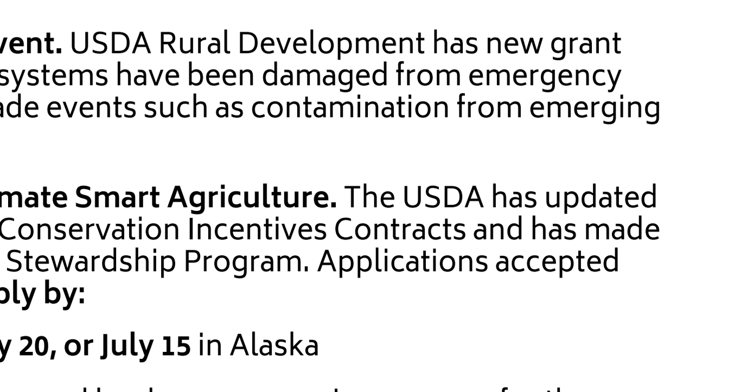
Regional Conservation Partnership Program (RCPP) USDA Natural Resources Conservation service has $225 million available nationally for projects that address natural resource issues on agricultural land. This year's funding includes updates that encourage projects to address climate change, benefit historically underserved farmers, and support urban agriculture. **Proposals due 13 April.**

Energy Transitions Initiative Partnership Project (ETIPP). This U.S. Department of Energy's (DOE) Energy project works alongside remote, island, and islanded communities seeking to transform their energy systems and increase energy resilience through strategic energy planning and the implementation of solutions that address their specific challenges. Selected communities receive technical assistance from the ETIPP network, working collaboratively with the DOE, national laboratories, and regional partner organizations on strategic energy planning and analysis to investigate solutions that address their specific energy challenges and goals. **Apply by 15 April.**

Rural Innovation Stronger Economy (RISE). USDA Rural Development's RISE program seeks to increase equity in rural America by offering grants of up to $2 million to local governments, investors, industry, institutions of higher education, and other public and private entities that create projects in distressed communities. Communities that have traditionally had high concentrations of employment in fossil-fueled energy production and are transitioning away from this are encouraged to apply. **Apply by 19 April.**

Rural Energy Pilot Program (REPP). USDA Rural Development has opened grant applications for rural communities to further develop renewable energy through REPP. Funds can be used to support community energy planning, community efficiency and weatherization, and installing and equipping community-scale renewable energy. **Apply by 19 April.**

Drivers and Environmental Impacts of Energy Transitions in Underserved Communities. The Environmental Protection Agency (EPA) is seeking applications proposing community-engaged research that will address the drivers and environmental impacts of energy transitions in underserved communities. **Apply by 28 April.**



Ongoing

Funding for Watershed Improvement: New funding from the Infrastructure Investment & Jobs Act is available through the USDA Natural Resources Conservation Service to help communities improve land, water, and disaster resources.

Funding for Water Systems Due to an Emergency Event. USDA Rural Development has new grant funding available for rural communities whose water systems have been damaged from emergency events such as drought and floods, as well as man-made events such as contamination from emerging contaminants.

Conservation Program Opportunities to Support Climate Smart Agriculture. The USDA has updated the Environmental Quality Incentives Program (EQIP) Conservation Incentives Contracts and has made it easier for producers to re-enroll in the Conservation Stewardship Program. Applications accepted year-round. **To be considered for funding in 2022, apply by:**

29 April in Idaho **March 18, May 20, or July 15** in Alaska

Conservation Reserve Program. Agricultural producers and landowners can sign up soon for the Conservation Reserve Program (CRP), a cornerstone conservation program offered by the USDA Natural Resources Conservation Service. The General CRP signup will run from **Jan 31 to March 11**, and the Grassland CRP signup will run from **April 4 to May 13**.

Find your local office here.

Opportunities

Postdoctoral Fellow in Climate Agriculture Metric and Model Downscaling The USDA California Climate Hub and the Department of Land, Air and Water Resources at University of California-Davis have an opening for a Postdoctoral Fellow in downscaled climate dataset development and curation for hydrologic and cropping modeling, agronomic metrics, and agricultural vulnerability analysis with a focus on agricultural water resources. **Applications due 4 March.**

Northwest Climate Adaptation Science Center 2022-23 Research Fellowship Program The Northwest Climate Adaptation Science Center invites proposals for its Research Fellowship Program from graduate students and postdoctoral scholars at several universities throughout Idaho, Oregon, Washington, and Montana. The fellowship supports research related to climate adaptation for Northwest natural and cultural resource management and provides training in the principles and practices of developing decision-relevant science. **Applications due 15 March.**

Environmental Justice Video Challenge for Students Undergraduate or graduate students must create two videos detailing the use of data and publicly available tools to identify and address an environmental justice issue in a specific community. **Videos must be submitted by 1 April.**

Signup to receive our newsletter by clicking on this box and providing your contact information on the form.

To unsubscribe email holly.prendeville@usda.gov