

Featured Article



Climate Change Vulnerabilities Inform Watershed Restoration in Washington

In the Snoqualmie Ranger District of the Mt. Baker-Snoqualmie National Forest, Forest staff and partners are preparing the Forest, its watersheds, and its road system for climate change. To understand how climate change will affect the Forest, resource staff used a vulnerability assessment paired with other analyses. This Adaptation in Action article describes how they used this assessment to prioritize management activities in the Forest.

Fifth National Climate Assessment Released



"Stream of Consciousness" by Spencer Frazer

On November 14, the Fifth National Climate Assessment (NCA5) was released. This interagency report is updated approximately every four years and analyzes the impacts of global climate change in the United States. Jessica Halofsky and Dave Peterson of the Northwest Climate Hub were contributing authors on the Forests chapter.

NCA5 provides updates to topics relevant to the Northwest Climate Hub, including:



Forests



Tribes and Indigenous Peoples



Agriculture, Food Systems, and Rural Communities



Impacts in the Northwest Region (Idaho, Oregon, and Washington)

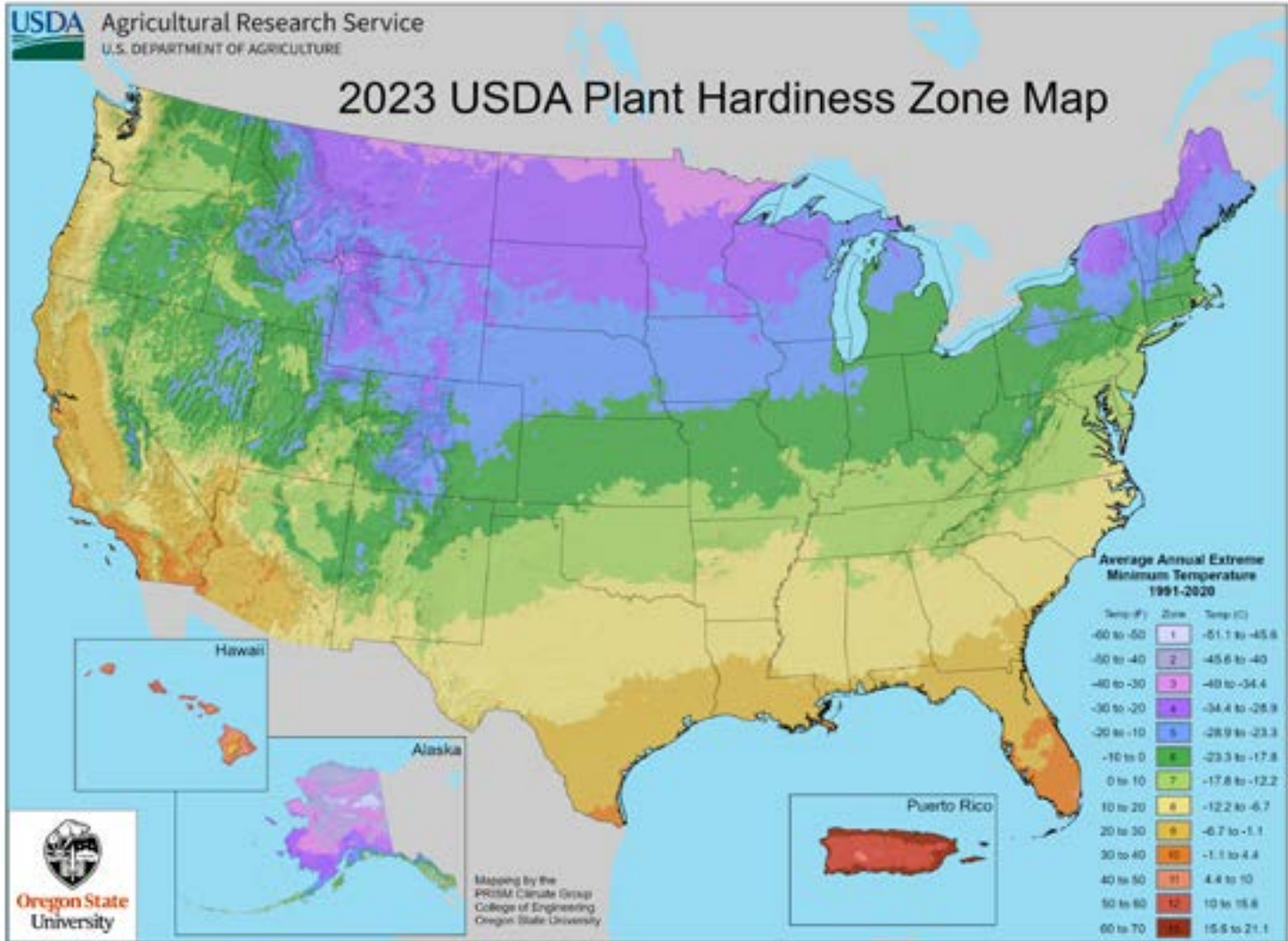


Impacts in Alaska

Upcoming webinars will provide details about chapters in the assessment. Find a list of upcoming webinars [here](#).

Updated Plant Hardiness Zones

The USDA Agricultural Research Service has updated the Plant Hardiness Zone Map for 2023. This map is the standard by which gardeners and growers can determine which perennial plants are most likely to thrive at a given location.





# Drought Update

Although drought persists throughout the region, atmospheric rivers over parts of the Northwest reduced some drought conditions. These events brought several inches of new rain and snow accumulation, which added to other recent precipitation in the region. With this influx of precipitation, modest 1-category improvements were made across the Northwest. In western Oregon, an area of extreme drought (D3 – red) was reduced to severe drought (D2 – orange), and in western Washington, an area of moderate drought (D1 – tan) was reduced to abnormally dry conditions (D0 – yellow). In northern Idaho, some areas received four inches of precipitation, reducing some drought conditions. The abnormally dry (D0-yellow) section in Alaska has improved, and the state is now drought free.



National Integrated  
Drought Information  
System



CoCoRaHS Community Rain  
Hail Snow Network



Condition Monitoring  
Observer Reports

## U.S. Drought Monitor USDA Northwest Climate Hub

November 14, 2023  
(Released Thursday, Nov. 16, 2023)  
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	83.39	16.61	11.28	4.06	0.80	0.00
Last Week 11-07-2023	82.21	17.79	11.74	5.06	0.80	0.00
3 Months Ago 08-15-2023	72.78	27.22	13.86	4.64	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 09-26-2023	80.15	19.85	14.48	7.82	1.55	0.00
One Year Ago 11-15-2022	71.35	28.65	19.18	7.79	3.16	0.16

Intensity:

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

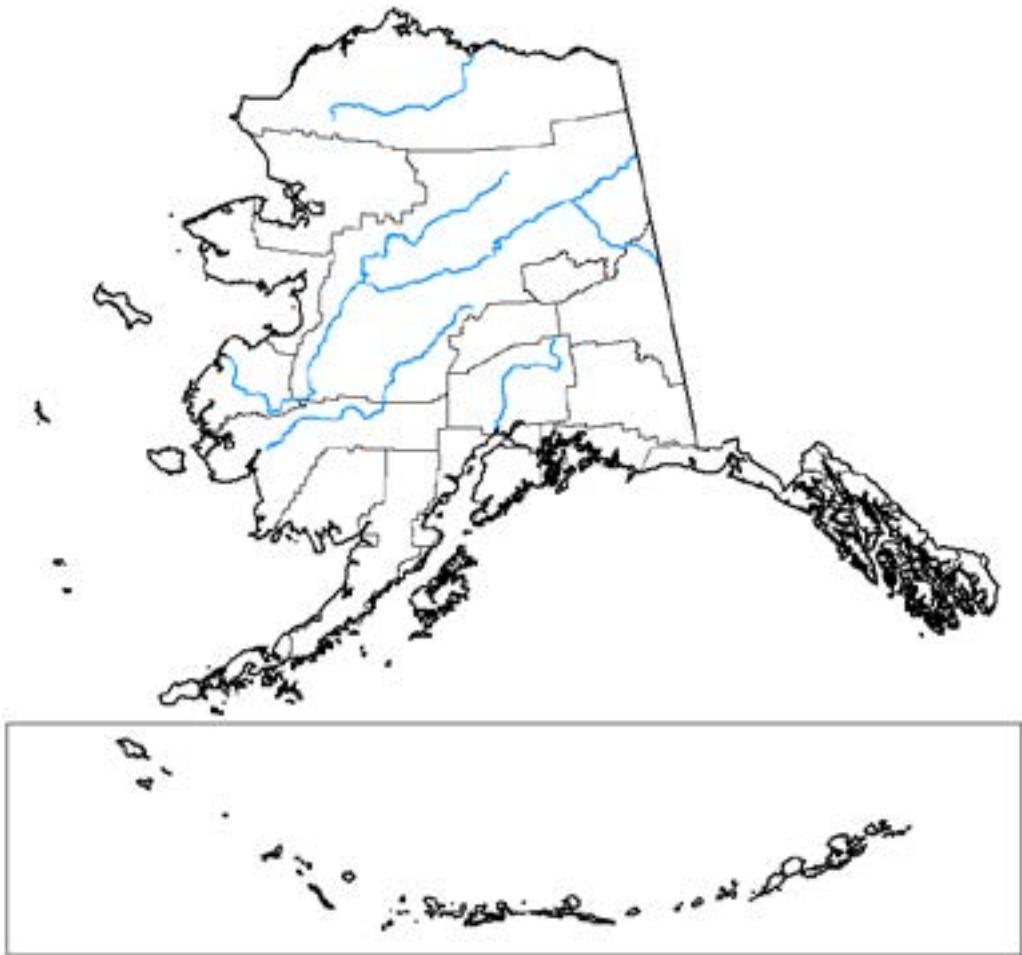
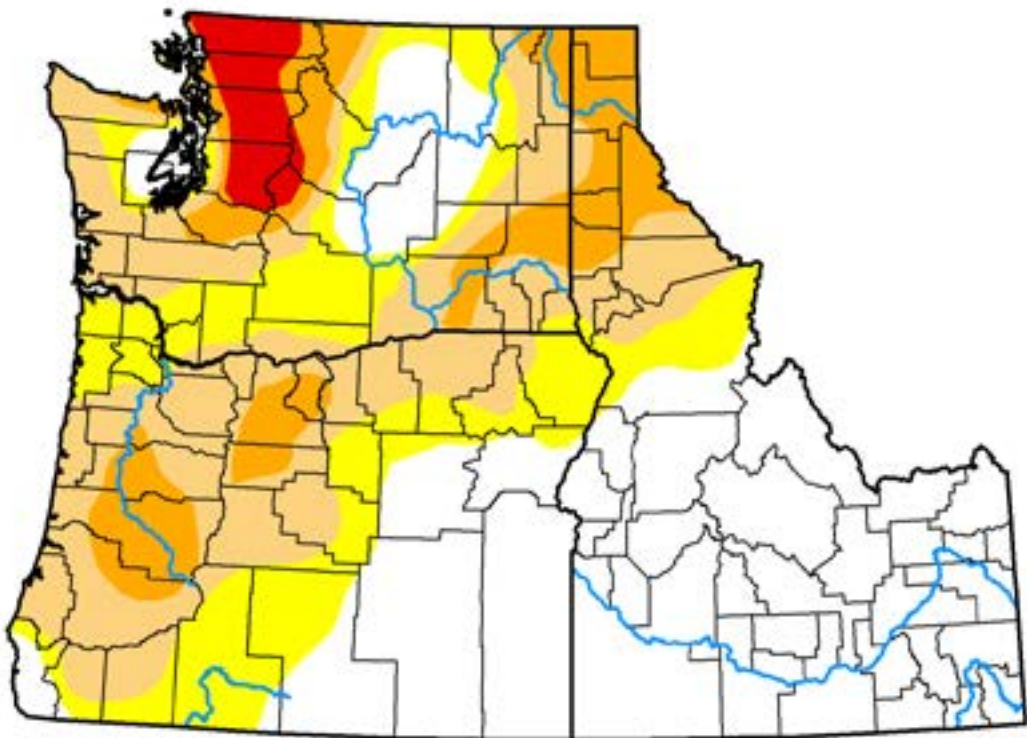
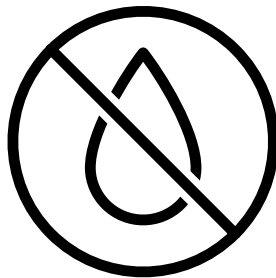
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

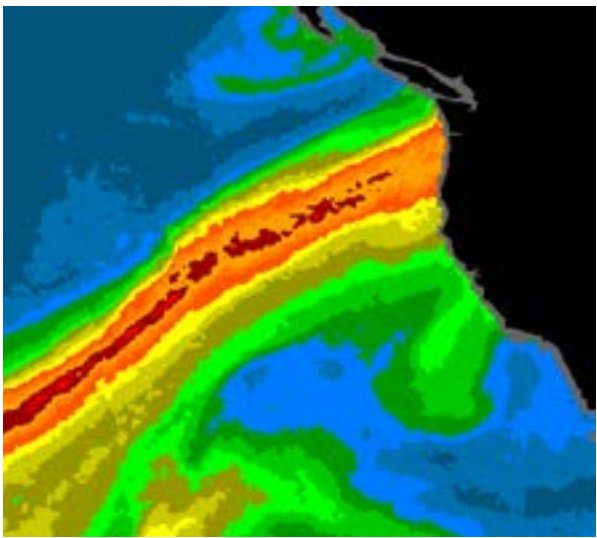
Brad Rippey  
U.S. Department of Agriculture



[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)







**Atmospheric Rivers in the Northwest**

Recent heavy rain in the Northwest has been a result of atmospheric rivers. This Hub article describes atmospheric rivers and how they could be affected by climate change.



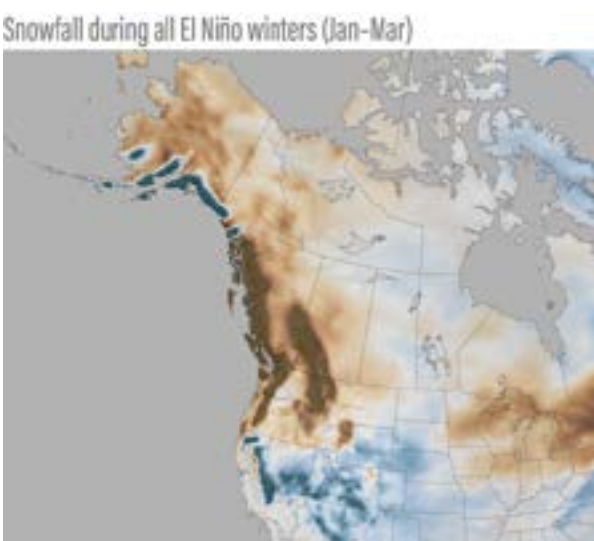
**Rising Seas and the Coastal Squeeze Deep Dive**

Every year, the Northwest Climate Adaptation Science Center does a deep dive on one topic. Products from this year's topic, *Rising Seas and the Coastal Squeeze: Managing Inland Migration of Coastal Habitats in Response to Sea Level Rise*, are now available.



**El Niño in the Northwest: What Can We Expect?**

This Hub article defines what the El Niño weather pattern is, describes how it typically affects the Northwest, and explores how El Niño could interact with climate change.



**S(no)w Pain, S(no)w Gain: How does El Niño affect snowfall over North America?**

This article from the National Oceanic and Atmospheric Administration (NOAA) discusses how El Niño typically affects snowfall across the U.S.



**Keep the Stubble during No-Till November**

NRCS is encouraging farmers to take this month to practice no-till. Whether farmers have never heard about no-till, are curious about it, or have already adopted it, November is a month to learn more about the practice and its soil health benefits.



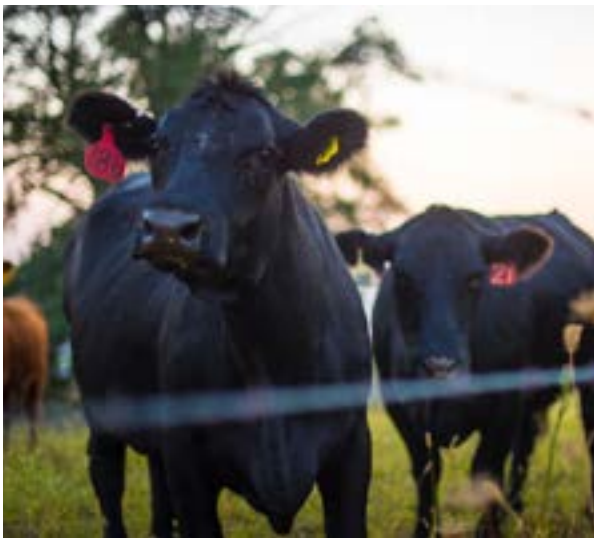
**Northwest No-Till Farming for Climate Resilience**

No-till has more benefits than improved soil health and potential increased productivity. This Northwest Hub article highlights some of the potential ways in which no-till can increase climate resilience on farms.



**An Integrative Phenology and Climatic Suitability Model for Emerald Ash Borer**

This webpage by the Northwest Regional Invasive Species and Climate Change Network provides resources to help with managing existing populations of emerald ash borer.



**Carbon and Cow\$ Podcast**

Washington State University and University of Idaho are launching a podcast about carbon markets and livestock agriculture! The podcast will explore how the dairy and livestock industries are navigating new opportunities and making strides to reduce their carbon footprint and produce renewable fuels.

# Workshops and Conferences



## **November Meeting of Federal Advisory Committee for Urban Agriculture and Innovative Production, 29 November, 10am – 12pm PST, online.**

The Urban Agriculture and Innovative Production Advisory Committee (UAIPAC) is one of several ways that USDA is supporting urban agriculture, including issues of equity, climate resilience, and nutrition access. This meeting allows the public to provide advice and recommendations on ways USDA can support urban agriculture and innovative production.



## **Pacific Northwest Landscape Conservation Forum, 13–14 December, online.**

This forum will provide a platform for sharing knowledge, discussing landscape-scale conservation priorities and strategies, addressing common challenges, and fostering partnerships to enhance regional conservation efforts. Join to advance landscape-scale conservation in Washington, Oregon, and British Columbia.



## **Change on the Range: Society for Range Management Annual Meeting, 28 January –1 February, Sparks, Nevada.**

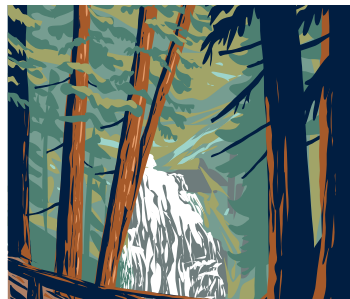
The annual meeting will include technical tours, sessions, and meeting events that focus on rangelands-related topics, including rangeland restoration, climate change adaptation, and wildland fire resilience.



## **Alaska Forum on the Environment, 5–9 February, Anchorage, Alaska and online.**

This is Alaska's largest statewide gathering of environmental professionals and will offer sessions on climate change, energy, environmental regulations, cleanup and remediation, fish and wildlife, solid waste, and more. This year, both in person and virtual attendance is available for attendees and exhibitors.





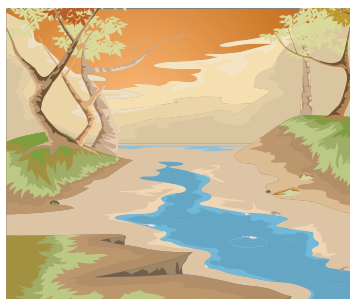
## **Climate Change and Puget Sound Forests, 16 November, 6pm PST.**

Are you concerned about the health of your trees in a changing climate? Join Washington State University extension for a free webinar to learn about what to expect for Puget Sound forests in a changing climate, practical strategies for increasing forest resilience, and where to go for help and additional information.



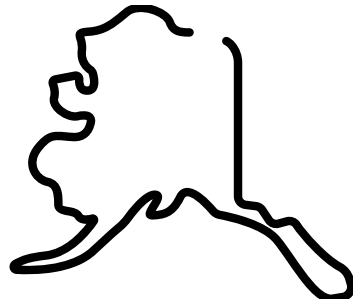
## **The 2023 Wildfire Season in the North: A Tale of Two Extremes, 21 November, 11am AKST.**

In 2023, Canada experienced the worst wildfire season on record. Farther west in Alaska, 2023 saw a near absence of wildfire until late July, only to be followed by a late-season surge. This Alaska Center for Climate Assessment and Policy presentation will review and contrast the Alaskan and Canadian fire seasons and discuss what lessons we can learn from the tale of two extremes.



## **Pacific Northwest Drought Early Warning System December Webinar, 18 December, 11am PST.**

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.



## **November Alaska Climate Outlook Briefing, 17 November, 12pm AKST.**

This National Weather Service webinar will review recent and current climate conditions around Alaska, discuss some forecasting tools, and end with the Climate Prediction Center's forecast for December and the winter season.



## **Climate-Smart Forestry on Private Lands, 27 November, 9am PST.**

In the final session of the Yale School of Environment Series on Climate Smart Forestry, the New England Forestry Foundation will provide a view on how to implement, test, and scale climate-smart forestry on private lands. The series is hosted by The Forest School at the Yale School of the Environment, and the USDA Northeast and Southeast Climate Hubs.



## **Synergistic Effects of Multiple Stressors on Forest Resistance, Resilience, and Response, 21 November, 10am PST.**

Dr. Cristina Eisenberg with Oregon State University will focus on the impacts of multiple stressors on forest systems and adaptive strategies for managing these forests. Collaborative work with Tribes and Traditional Ecological Knowledge will also be discussed. This webinar is part of the Ecological Forestry in the Context of Climate Change Webinar Series.



## **First Friday All Climate Change Talks (FFACCTs), 1 December and the first Friday of every month, 11am PST.**

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.





December



**Agricultural Conservation Easement Program.** This program helps landowners, land trusts, and other entities protect, restore, and enhance wetlands or protect working farms and ranches through conservation easements. As the climate changes, these easements may become places of refuge for plants and animals affected by changing conditions. **Applications due 15 December for Oregon and Washington; 29 December for Alaska.**

Information for Alaska      Information for Oregon  
Information for Idaho      Information for Washington



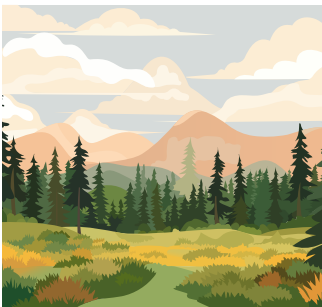
**Wood Innovations Program.** This program stimulates, expands, and supports U.S. wood products markets and wood energy markets to support the long-term management of National Forest System and other forest lands. These grants can help address critical issues like climate change and sustain local economies. Several grants are available through this program.

**Wood Products Infrastructure Assistance (WPIA) Grants.** This grant focuses on supporting facilities that purchase and process byproducts of ecosystem restoration projects. **Applications due 1 December.**

**Wood Innovations Grants.** This grant focuses on reducing hazardous fuel and managing for sustainable forest through mass timber, renewable wood energy, and technological development. **Applications due 15 December.**

**Community Wood Grants.** This grant provides funding to install thermally led community wood-energy systems or to build innovative wood-product manufacturing facilities. **Applications due 15 December.**

January



**Matching Awards Program: Connecting Forests to People.** This National Forest Foundation program pairs federal funds provided through a cooperative agreement with the U.S. Forest Service with non-federal dollars raised by award recipients, multiplying the resources available to benefit the National Forest System. The program focuses primarily on in-person community engagement and completion of appropriate stewardship activities with goals of creating lasting change that will allow all communities, especially underserved communities, opportunities to benefit from activities on National Forest System lands or adjacent public lands. **Applications due 16 January.**

Ongoing



**Funding opportunities through USDA's Rural Development.** Rural Development has many programs that help create sustainable and prosperous rural communities throughout the U.S. They have several funding opportunities listed in their most recent newsletter aimed at increasing climate resilience in rural areas.



**NRCS Alaska Environmental Quality Incentive Program (EQIP).** This program provides agricultural producers with financial assistance and conservation planning services to help private landowners implement improvements on their land using what NRCS calls "conservation practices." Using these practices can lead to cleaner water and air, healthier soil and better wildlife habitat, all while improving agricultural operations. This program allows producers to voluntarily implement conservation practices with co-investment from NRCS. **Applications funded on a rolling basis but must be submitted by 19 April 2024 to be considered for Fiscal Year 2024.**

