



KEEPING A PULSE ON FORESTS AND THE CLIMATE

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It has been a busy year for forests and climate in the news. Record-breaking temperatures brought attention to climate-related issues, and people are asking, what role can forests play? How should forests be managed? How can the forest products industry adapt to a changing climate and also help achieve climate goals? Is there a role for carbon markets? What are the risks associated with wildfire?

For nearly two years, with funding from the USDA Northeast Climate Hub, I have been producing *The Pulse*, a weekly email newsletter focused on forests and climate change in the northeastern United States. As the year winds down, it seems timely to share some highlights and trends. Weather and climate, conservation, forest management, the forest products industry, carbon, and wildfire have all been recurring themes.

Record-Breaking Heat and Drought

Weather trends this year included record-breaking heat, and climate headlines focused on the transition from El Niño last year to La Niña this year. In January, February, and March, warm winter temperatures meant a lack of frozen conditions and inconsistent snowpacks, especially at lower elevations.

May 2024 was the twelfth month in a row to break global average temperature records, coming in at 1.52 degrees Celsius above preindustrial levels. Locally, record temperatures were also recorded in June and July, when a widespread heat wave settled across much of the northeastern US.

In the fall, meteorologists noted that the combination of record-warm ocean temperatures and sea level rise are leading to more intense and damaging hurricanes this year, as evidenced by Hurricane Helene, which brought significant flooding to the southeast.

In the Northeast, fall precipitation was well below average with drought conditions across much of the region. New Jersey Forest Fire Service Chief Bill Donnelly noted that October was the driest in his memory after a career spanning 30 years. Looking forward, predictions from the National Oceanic and Atmospheric Administration suggest that the slowly developing La Niña climate pattern will bring another warm winter to the Northeast, but the forecast for precipitation is mixed.



More Land Protected

Conservation made lots of headlines this year as organizations, agencies, and individuals in the region worked to keep forests as forests. More than 45,000 acres were protected from conversion to other land uses, with more projects still in the planning stages.

Notable stories include the protection of 14,600 acres in the Follensby Pond & Raquette River region of the Adirondacks, one of the largest conservation projects by acreage reported on this year, providing crucial habitat for cold-water fish species and supporting climate resilience by protecting freshwater ecosystems.

Vermont added 62 acres to Camel's Hump State Forest and 120 acres to Willoughby State Forest, including Wheeler Mountain, a popular destination for hiking and rock climbing. Both projects provide important habitat connectivity, helping to link the northern Green Mountains and Canada to the southern Green Mountains and the Berkshires.

The State of New York added 505 acres to the Grape Hollow State Forest along the Appalachian Trail corridor in Dutchess County, providing a new public conservation area and protecting a significant ecological corridor.

Debate About Forest Management

This year, Massachusetts released a Climate-Oriented Forest Management plan, focusing on forests as climate solutions. The plan includes a goal to protect 10% of forested land across all ownership types in the state. It also ended a year-long pause on logging on state forests, but left industry professionals with "unanswered questions" about the future of forest management, according to the Massachusetts Forest Alliance. At the same time, environmentalists seeking a ban on timber harvesting felt the plan fell short of what is needed to meet climate goals.

A new plan for the 18,772-acre Worcester Range in central Vermont also stirred debate about how public lands should be managed. The plan sets aside more than half of the tract as off-limits to logging. Some Vermonters would like a larger portion of the parcel protected as wilderness, while forest products professionals feel the plan is restrictive. Meanwhile, state officials claim the plan strikes a balance between multiple uses including not only timber harvesting and conservation, but also

recreation, wildlife habitat, research, and more.

Other stories illustrated a range of management activities on federal, state, and private lands as managers work to achieve a variety of goals. For example, *The Pulse* shared news about habitat restoration on the Allegheny National Forest in Pennsylvania, wildfire risk reduction at Carolina Management Area in Rhode Island, and assistance to private forest landowners in Connecticut.



Forest Products Industry Challenges

Warmer winter temperatures in early 2024 restricted the time period available for low-impact winter logging, due to the lack of frozen ground conditions. In Vermont, Sam Lincoln with Lincoln Farm Timber Harvesting noted, “we’re seeing a shrinking window of opportunity to harvest timber,” and Jack Bell with Long View Forest said his business is down by 60%.

Wet summers have also had negative impacts including devastating floods in both 2023 and 2024. Dana Doran with Professional Logging Contractors of the Northeast estimated that loggers have lost tens of millions of dollars due to wet and warm conditions over the past two years.

Two Vermont mills shut down this year, at least in part due to the warm, wet conditions that have restricted opportunities for local logging. Other mills in the region are working to adapt to changing climate conditions, including Robbins Lumber in Searsmont, Maine, which was one of six Maine businesses receiving grant funding for climate-friendly forestry from the New England Forest Foundation. The company is hoping to elevate the use of wood as a climate-friendly alternative to other building materials.

Carbon Offset Programs Raise Concerns

We are continuing to keep an eye on carbon offset programs, which allow a person or a business to “offset” their carbon emissions by paying for activities like forest protection or tree planting that will result in carbon uptake or storage. There is ongoing debate about whether this basic concept is sound, as well as questions about the implementation of these programs. This year, research from Dartmouth College and Harvard Forest found that carbon offset programs fail to fully consider the threat that hurricanes pose to forest carbon. A study from the University of Tennessee found that offset programs in central Appalachia could be profitable for landowners and investors but brought few benefits to local residents.

In northern New Hampshire, debate continues over management of the Connecticut Lakes Headwaters Working Forest. This 146,000-acre parcel was purchased in 2022 by Aurora Sustainable lands, a private company focused on selling carbon credits. Although the land is privately owned, the state holds an easement on the property which requires the production of timber and other forest products, as well as recreational access, wildlife habitat protection, and other uses. The new owners have proposed a significant reduction in timber harvest-

ing, which has raised concerns about a loss in local timber tax revenues, and impacts to the local forest products industry. This example illustrates the complexity of managing forests for carbon credits, and the potential for unforeseen local impacts.

Other carbon stories that we are keeping our eye on include the Family Forest Carbon Program that helps owners of smaller parcels enter carbon markets. SUNY researchers are working on a forest carbon accounting system using satellite

imagery. And, a team of researchers led by University of Maryland Professor, Ning Zeng, are focused on the “wood vault” approach to carbon storage, with the potential to store millions of tons of carbon dioxide each year by simply burying wood underground.

Wildfires Burn Across the Region

2024 was an active fire year for the region, with the spring fire season exacerbated by a warm winter, and the fall season by warm temperatures and a dry October. More than 20,000 acres were burned by wildfire, including the 4,000-acre Tea Time Hill wildfire in New Jersey’s Wharton State Forest, started by fireworks on July 4. In West Virginia, over 13,000 acres burned in the three-month spring fire season alone, with more fires adding to this total in the fall.

States across the region worked to reduce fire risks and increase preparedness. *The Pulse* reported on prescribed burning by state agencies in nine states, as well as Forest Service plans to burn 200-600 acres in Vermont this year. Many states worked to add staff and equipment to address fire issues. In Maine, rangers used aerial drones equipped with infrared and thermal technology to help identify fires sparked by lightning strikes.

Staying Informed on Forests and Climate Change

Looking back on a year of intense weather patterns, evolving conservation practices, and increased awareness of forests’ role in climate adaptation, it’s clear that the challenges and opportunities for our forests are vast and interconnected. The stories highlighted above point to the need for balanced, informed approaches to forest management that consider both ecological health and economic resilience.

There are many additional important topics covered every week in *The Pulse*. As climate change impacts intensify, staying informed on how forests can help mitigate these effects is increasingly important. *The Pulse* keeps you updated on the latest advancements in forest management and climate solutions, empowering you to make informed decisions that contribute to a more resilient, climate-ready future.

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