



Solutions for America's National Forests: Natural Carbon Sequestration

America's forests are a critical part of our daily lives, providing clean drinking water, supporting jobs and the economy, naturally capturing carbon from the atmosphere, and supporting our outdoor heritage. Our forests, though, are facing new challenges that we need to address. We have a responsibility to ensure our forests continue to provide these benefits for our children and grandchildren.

At a time when our leaders are working to find ways to address our changing climate, America's forests need to be a central part of the solution. Restoring our forests offers a common-sense avenue to naturally remove carbon from the air while also supporting wildlife and clean drinking water and protecting these iconic landscapes for future generations. If policymakers act now, they can act on climate and protect existing carbon stores, while also supporting wildlife and biodiversity and safeguarding our outdoor-recreation economy and Main Street businesses.

Quick Facts

- Approximately 125 gigatonnes of carbon are exchanged annually between terrestrial ecosystems and the atmosphere. Forests account for 80 percent of this exchange.
- U.S. forests and forest products serve as carbon "sinks," capturing and storing nearly 16 percent of U.S. emissions from burning fossil fuels.
- The National Forest System removes 113 million metric tons of carbon dioxide from the atmosphere annually, which represents 13 percent of the total net sequestration of all forests in the United States.* That's the equivalent of taking over 24 million cars off the road for a year.
- National forests harbor a carbon stock of nearly 14 billion metric tons of carbon.

*Source material lists removal in Tg of carbon, rather than the CO2 equivalent



CASE STUDY: Carbon Storage in Southwestern Forests

In March 2019, The Nature Conservancy's Arizona chapter studied the potential for carbon sequestration and storage within the footprint of the state's Four Forest Restoration Initiative. The study examined the impact of different levels of forest thinning, which can be a vital ecosystem health management strategy, on carbon sequestration. It found that thinning 60,000 acres of the one-million-acre project annually had the potential to increase the carbon sequestration of these forests by 11-20 percent, or the electricity consumed annually by 100,000 homes out to 2100.

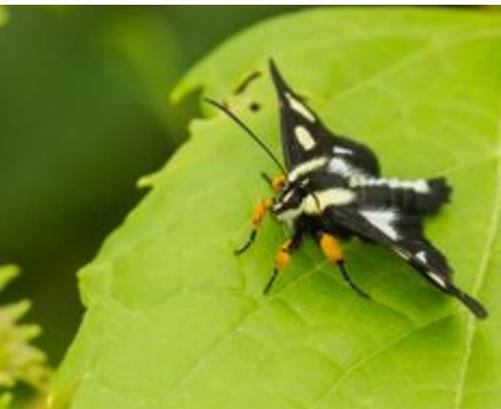


Forest restoration and thinning on Kaibab National Forest. Photo: Roses Lockwood

Recommendations

Congress and the U.S. Forest Service need to implement large-scale projects that have verifiable net-carbon benefits above and beyond what national forests are already doing. In order to do so, policymakers should:

- Identify new sources of funding to support climate-informed restoration on national forests across the federal funding system.
- Amend national forest restoration authorities to include climate as a purpose and ensure the Forest Service is implementing climate priorities.
- Direct the Forest Service to use authorities that emphasize ecological restoration for changing climate conditions and optimizing carbon storage, including through large landscape scale restoration.
- Direct Forest Service to work with partners (other agencies, international experts and officials, academia, NGOs, etc.) in developing a carbon storage goal for national forests to limit warming to 1.5 degrees Celsius over pre-industrial levels, or to achieve net zero emissions by mid-century.
- Identify and adopt international or national standards that advance opportunities for optimizing carbon on national forests.
- Review existing reforestation and restoration programs to ensure they conform with climate adaptation and mitigation best practices, and align with the recommended national carbon goal.



Eight-spotted forester moth.
Photo: Michael Harvey



Moose, Roosevelt National Forest, Colorado.
Photo: Sam Parks



Scarlet tanager, Pennsylvania.
Photo: Stokes Clarke