



Highlight—

Introducing the Northern Institute of Applied
Carbon Science

North Central Research Station



The issue—What role can forests play in absorbing CO₂?

U.S. forests currently sequester large amounts of carbon from the atmosphere, a role that was poorly understood just a decade ago. Maintaining and increasing carbon sequestration in forests is a low-cost way to temporarily avoid reducing carbon dioxide (CO₂) emissions, allow energy producers time to develop and implement more expensive technology, and keep energy costs low for consumers.

We have gained a basic understanding of the role forests play in the global carbon cycle and have identified some broad categories of activities for mitigating climate change through forest management. While our basic scientific understanding of what role forests play in the global carbon cycle is far from complete, we know enough to begin the more practical tasks of enhancing forest carbon sequestration and designing strategies to sustain forest ecosystem services.

Here's What We Are Doing

In 2002, we established the Northern Institute of Applied Carbon Science (NIACS) in Houghton, Michigan, as a regional center of excellence for improving our understanding of the role forests could play in managing atmospheric carbon.

Our scientists, other Forest Service and university scientists, and the forest industry are working together to understand how carbon is stored in forest vegetation, roots, and soil, and to develop and apply technology for sustainable forest management of northern forests.



Excavation of red pine roots as part of a study of forest carbon inventory.

NIACS Partners

- USDA Forest Service North Central Research Station
- USDA Forest Service Northeastern Research Station
- USDA Forest Service Northern Global Change Program
- Michigan Tech
- Consortium for Research on Carbon Sequestration in Managed Forests, NCASI
- MeadWestvaco



As a result of this research partnership, we expect to:

- Develop sustainable management practices for Northern Forests that also enhance atmospheric carbon storage,
- Work with the forest industry in applying research findings on the ground to manage carbon stocks and flows in operational forest settings.

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