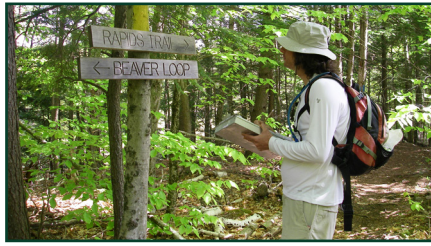




A Research Program for the Northern Forest



TO LEARN MORE:

www.nsrcforest.org

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HOW TO APPLY FOR FUNDING:

A Request for Proposals (RFP) is announced in January each year, with pre-proposals due in February. Investigators are asked to submit pre-proposals to the appropriate Theme Manager. Approved pre-proposals advance to the next competitive round of full proposals due in April. Details and the RFP can be found on the NSRC website.

The Northeastern States Research Cooperative (NSRC) is a competitive grant program, supporting cross-disciplinary, collaborative research in the Northern Forest – a 26-million acre working landscape that is home to over a million residents and stretches from eastern Maine through New Hampshire and Vermont and into northern New York. The program addresses the importance of the Northern Forest to society and the need for research activities to benefit the people who live within its boundaries, work with its resources, use its products, visit it, and care about it. Funds support a range of projects that fit into four research themes. (See reverse side.)

RESEARCH THEMES:

Theme One Sustaining productive forest communities: Balancing ecological, social, and economic considerations.

Theme One supports research focused on sustainable solutions to the integrated social, economic, and ecological challenges of communities, businesses, and working landscapes in the Northern Forest. Topics include sustainable forest management, community and economic development, ecological economics and ecosystem services, nature-based tourism, and watershed planning.

Theme Two Sustaining ecosystem health in northern forests.

Theme Two supports research that will improve understanding of the health and productivity of forest and associated aquatic ecosystems in the Northern Forest. Topics include hydrological, biogeochemical, biomass production, and carbon cycling processes in forested ecosystems and surface waters as affected by pollutant vectors and forest management for biomass or carbon.

Theme Three Forest productivity and forest products.

Theme Three supports research that will quantify, improve, and sustain productivity of the products-based economy of the Northern Forest. Topics include underlying biological processes, management practices, and methods of prediction that will influence future wood supplies and forest conditions.

Theme Four Biodiversity and protected area management.

Theme Four supports research focused on protecting and enhancing the ecological and economic integrity of the Northern Forest. Topics include forest biodiversity, conservation, ecological services to society, and protected area management.

To learn more about each theme, view the most recent RFP on the NSRC website <http://www.nsrcforest.org>.

Examples of Funded Research Projects



Town Forest Health Check: A Forest Steward's Guide to Forest Health Assessment

David Brynn, University of Vermont, Theme One

The *Town Forest Health Check*, a hands-on guide, provides a simple tool to help forest stewards assess the health of community forests. The guide presents “citizen science” in step-by-step instructions for assessing 12 benchmarks that describe the overall health of the forest and recommends specific management opportunities for improving forest health.

Carbon Benefits of Switching from Oil to Wood Fuel across the Northern Forest

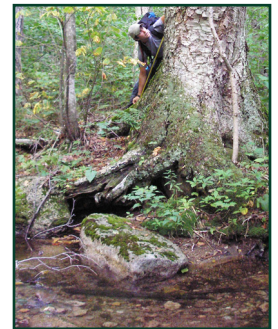
Andrew Friedland, Dartmouth College, New Hampshire, Theme Two

In the Northern Forest, woody biomass may have the greatest promise as an alternative to fossil fuel. Investigators are conducting an analysis to estimate the optimal quantity of sustainable tree harvest that will achieve an offset of oil used in the region and still maintain net carbon removal from the atmosphere.

Estimating Wood Volume in Northern Forest Streams

Clifford Kraft, Cornell University, New York, Theme Two

Large wood in forest streams helps maintain aquatic habitat. Scientists surveyed 28 forested streams across the northeastern United States. They developed computer models that estimate current and future wood that would be expected to occur in a forested stream. Researchers and natural resource managers can then evaluate the amount of in-stream wood required to meet restoration goals.



Comparing Growth Response of Red Spruce and Balsam Fir Seedlings

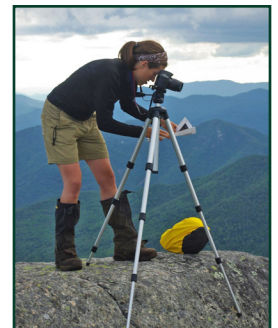
Michael Day, University of Maine, Theme Three

In a comparison study, spruce seedlings accumulated many times as much biomass as fir in the first two years of growth, while fir invested a greater proportion of its biomass in root production and photo-protective mechanisms. Researchers conclude that when resources, particularly water, become limiting or when light environments become excessive during forest disturbances, the conservative seedling strategy of fir would likely be superior.

Using Photopoints to Monitor Changes in Adirondack Alpine Zone Vegetation

Julia Goren, Adirondack Mountain Club, New York, Theme Four

Researchers in the Adirondack High Peaks Summit Steward Program are using photopoint monitoring to document changes in fragile alpine vegetation. Photos taken in the exact same location over many years show a significantly faster recovery of vegetation on peaks with a steward present to educate hikers about fragile alpine ecosystems.



Soil-Site Influences on Northern White-Cedar Stem Quality and Growth

Ivan Fernandez, University of Maine, Theme Three

Forest products industries are concerned about reduced regeneration, growth rate, quality, and overall sustainability of northern white-cedar. To better understand factors governing cedar growth and health, scientists analyzed soil chemistry at 10 sites and found that better cedar growth rates and health appear to be associated with higher soil calcium content and lower soil acidity.

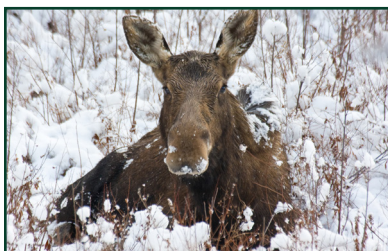


Photo by Larry Master

Using Genetics to Evaluate Re-Colonization by Moose Populations in the Northeast

Heidi Kretser, Wildlife Conservation Society, New York, Theme Four

To assist in management and conservation efforts for moose threatened by habitat loss, researchers study genetics of tissue samples from moose in northeastern states and provinces to learn how state and provincial moose populations are related. DNA from moose scat collected with detection dogs helps to estimate moose population densities.

Gathering Traditional Ecological Knowledge for Sustainable Management of Non-Timber Forest Products

Marla Emery, USDA Forest Service Northern Research Station, and Clare Ginger, University of Vermont, Theme One

To provide recommendations for sustainable management of culturally and economically important non-timber forest products, researchers interviewed local gatherers from a variety of cultural backgrounds, concentrating in Maine's St. John River watershed. Gatherers offered traditional ecological knowledge about species collected and methods for sustainable harvest.