



Northeastern States Research Cooperative

A Research Program for the Northern Forest



northernforestcanoetrail.org Rob Center



Larry Master



Manomet Center for Conservation Sciences



Oxbow Wreaths Michelle Baumflek



Sally McCay

TO LEARN MORE:
www.nsrcforest.org

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Research Theme 1: Sustaining Productive Forest Communities

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Research Theme 4: Biodiversity and Protected Area Management

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How to Apply for Funding

An annual Request for Proposals (RFP) calls for submission of pre-proposals to the appropriate Theme. Approved pre-proposals advance to the next competitive round of full proposals. The RFP, containing dates and details, can be found on the NSRC website:

www.nsrcforest.org

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 NSRC 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. Between 2001 and 2013, the NSRC awarded over 280 grants, totaling over \$20 million, to researchers throughout the region.

Samples of NSRC Research Projects

Sustainable Tapping Guidelines for Modern Maple Syrup Production

Abby van den Berg, University of Vermont



Investigators measured growth of maple trees tapped with high-yield sap collection practices. Average growth rates were well over the minimum required for tapping to be sustainable using traditional tapping guidelines. Findings indicate that current industry guidelines are appropriate for use with high-yield practices in large, healthy maples on good quality sites.

Growth, Lumber Yields, and Financial Maturity of Isolated Eastern White Pine Crop Trees

Robert Seymour, University of Maine

Researchers determined that retaining isolated white pine trees at final harvest of other conifers in the Acadian forest of Maine enhances growth response and can be financially lucrative, especially if landowners reserve younger pines under 12-inches in diameter with vigorous crowns. Early branch pruning is also a viable practice for reserved pines.



Detecting Atmospheric Nitrogen Inputs to Stream and Soil Waters in the Northeastern United States

Stephen Sebestyen, USDA Forest Service

To inform the public and policymakers about the status of nitrogen inputs to the Northern Forest region, scientists measured substantial amounts of atmospheric nitrate in some forest streams during snowmelt. Inputs of atmospheric nitrate to forests are more widespread than previously known and amounts vary greatly over short distances.

“Acceptable” Levels of Town Development May Decrease Occurrence of Black Bear and Bobcat



One of a set of 3-dimensional images of a fictional landscape with varying amounts of forest, agriculture, and development shown to survey participants.

Therese Donovan, University of Vermont
Researchers surveyed 1,505 Vermonters in 251 towns to determine their “acceptability” of alternative landscapes with different town population sizes and levels of development. Responses helped researchers determine that at “acceptable” levels of development, average occupancy rates for black bear decline by 16% and for bobcat by 3%. This study helps to bring wildlife to the table in local town planning efforts.

Ecological Impacts of Residential Roads on Adirondack Songbirds



Larry Master

Michale Glennon, Wildlife Conservation Society

Researchers demonstrated that bird communities may be impacted as far as 200 meters from both roads and houses in the Adirondack Park. Roads provide foraging and feeding opportunities but provide less opportunity for nesting compared to areas near houses. Keeping residential roads narrow and speed levels low will help reduce strong negative impacts on songbird communities in the Adirondacks and in other areas of the Northern Forest region.

Biological Sustainability of Whole-Tree Harvesting for Bio-Fuel Production

Ted Howard, University of New Hampshire

Increasingly, whole-tree harvesting is used to supply wood chips to biomass energy plants. To understand more about the sustainability of whole-tree harvest, investigators are comparing the productivity of whole-tree harvested stands with that of conventionally harvested stands from which less biomass and nutrients are removed.

Changing Climate, Changing Forest

Lindsey Rustad, USDA Forest Service

Scientists report that the Northern Forest region’s climate has changed over the past century, and computer models suggest continued change in future decades. This change portends significant decline in suitable habitat for spruce-fir forests and expansion in suitable habitat for oak forests. With accumulating evidence of the effects of climate change, forest stewardship and conservation plans should include climate mitigation and adaptation options.



Photo Analysis Tracks Changes in Alpine Vegetation

Julia Goran, Adirondack Mountain Club

Researchers in the Adirondack High Peaks Summit Steward Program analyzed photos taken on Adirondack mountain tops from the 1960s to 2009. They found trends of maintaining or increasing vegetation and lichen on peaks with a steward present and decreasing vegetation on peaks without a steward, suggesting an educational presence helps to deter trampling.



The Northeastern States Research Cooperative (NSRC) is a partnership of the Northern Forest states of New Hampshire, New York, Maine, and Vermont, in coordination with and with funding support by the USDA Forest Service, an equal opportunity provider. 2014.