# Building Knowledge for Northern Forest Communities

Northeastern States Research Cooperative

University of New Hampshire

The University of Vermont

Hubbard Brook Research Foundation

The University of Maine

ESF State University of New York College of Environmental Science and Forestry

**The Northeastern States Research Cooperative (NSRC)** is a competitive grant program supporting cross-disciplinary, collaborative research in the Northern Forest—a 30-million-acre working landscape that is home to more than two million residents and stretches from eastern Maine through New Hampshire and Vermont into northern New York. NSRC addresses the importance of the Northern Forest to the four states and the need to work collaboratively with the people who live within its boundaries, work with its resources, use its products, visit it, and care about it.

**From 2001 to 2016**, NSRC was a critically important source of funding for applied forest research and outreach efforts throughout the Northern Forest. **In 2020**, Congress reinstated funding to support the ecosystem and economics of the Northern Forest through NSRC.

With its partners, NSRC puts science to work across the Northern Forest in support of a vibrant and thriving economy and culture that are rooted in forest health.

**www.nsrcforest.org**

**Congressional Authorization:** *Forest and Rangeland Renewable Resources Research Act* (Public Law 105-185)

**Federal Funding Source:** USDA Forest Service

**FY 2020 Funding:** $2 million

**FY 2021 Funding:** $3 million

*Future funding for the NSRC is anticipated*

## NSRC 2020-2023

**NSRC serves Northern Forest communities** through research that informs forest management and maximizes ecosystem health and economic impact.

**An External Advisory Committee** composed entirely of Northern Forest stakeholders, identified on-the-ground research priorities in the Northern Forest region that formed the basis for the 2020 request for proposals. The Committee consists of 17 representatives of communities, businesses, industries, and agencies in the four collaborator states.

**Tribal consultants** described priority research areas of Tribal Nations and communities of Indigenous Peoples in the Northern Forest and helped develop a complementary **Indigenous Forest Knowledge Fund (IFKF)** to: (1) acknowledge and address structural inequities in opportunities for Indigenous youth to participate in forest research and (2) invest in the cultural and intellectual sovereignty of Tribal forest traditions alongside other forms of applied forest research.

# Research Competition 2020

## Focus Areas

- State of the forest
- Measuring and quantifying impacts
- Developing tools for response

## Priority Issues

- Invasive pests and diseases
- Climate change and energy: mitigation, adaptation, and carbon accounting
- Land use, sustainable forestry, and forest fragmentation
- Forest products industry and innovative technologies
- Rural community and economic development
- Recreation and tourism
- Environmental justice, equity, and inclusion
- Biodiversity and connectivity

## Proposals

- $10.7 million dollars requested in 83 pre-proposals
- $6.3 million dollars requested in 50 full proposals
- All 50 proposals were first assessed by a team of external technical reviewers
- The 20 top proposals from the technical reviews were vetted by an external stakeholder review panel, which prioritized research based on potential to engage stakeholders and have meaningful impacts in the region

## Awards

- Over $1.6 million dollars awarded to 13 research projects including two Indigenous Forest Knowledge Fund projects, as described below

# Awarded Research Projects

**Assisted Migration: A Viable Silvicultural Technique for Facilitating Adaptation of Northern Forest Tree Species to a Warmer and Drier Future World?** Principal Investigator (PI) Heidi Asbjornsen, University of New Hampshire

**Escaping to the Northern Forest: Migration, Housing, and Community Implications in the Time of COVID.** PI Jessica A. Carson, University of New Hampshire

**Evaluating the Efficacy of Audubon's Bird-friendly Maple: Can Managing Sugarbushes for Birds Provide Additional Benefits to Biodiversity, Ecosystem Services, and Forest Resilience?** PI Steven D. Faccio, Vermont Center for Ecostudies

**Influence of Multiple Impacts on User Experience and Decision Making in the Northeastern Forest.** PI Elizabeth S. Vidon, SUNY College of Environmental Science and Forestry

**Integrating Genetic and Ecological Data Using a New Circuit Theory Approach to Measure and Map Wildlife Connectivity across the Northeast.** PI James D. Murdoch, University of Vermont

**A New Silvicultural Guide for Northern Conifers in the Northeast.** PI Laura Kenefic, U.S. Forest Service Northern Research Station, University of Maine

**Pheromone-based Monitoring and Control Program for Browntail Moth in the Northeast.** PI Angela Mech, University of Maine

**Predicting Density and Occurrence of Keystone and Umbrella Species Using Drone-based LiDAR.** PI Alexej Sirén, University of New Hampshire and University of Vermont

**Quantifying the Genetic Impacts of Forest Management Strategies on Sugar Maple in the Northern Forest.** PI Danilo D. Fernando, SUNY College of Environmental Science and Forestry

**The State of the Northeastern Forest Carbon Cycle: High-Resolution Carbon Accounting for the Regional Forest Sector.** PI Daniel J. Hayes, University of Maine

**Vermont Town Forest Census for Covid, Carbon and Capacity-Building.** PI Cecilia M. Danks, University of Vermont

### Indigenous Forest Knowledge Fund (IFKF):

**Haudenosaunee Forest Principles.** PI Robin Kimmerer, SUNY College of Environmental Science and Forestry

**NEBI (Water): Connecting N'dakinna (Land), Bilowagizegad (Climate), and Alnobak (People).** PI Adam S. Wymore, University of New Hampshire

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