



Northeastern States Research Cooperative 2015 Request for Proposals

Pre-proposals are due Friday, October 17, 2014

The USDA Forest Service Northern Research Station, the Rubenstein School of Environment and Natural Resources at the University of Vermont, the Department of Natural Resources and the Environment at the University of New Hampshire, the Center for Research on Sustainable Forests at the University of Maine, and the State University of New York College of Environmental Science and Forestry are pleased to announce the 2015 Request for Proposals from the Northeastern States Research Cooperative (NSRC). The primary goal of the NSRC is to fund research, support outreach, and catalyze actions that will balance protection and utilization of the Northern Forest.

Scope: This RFP solicits pre-proposals from applicants in Maine, New Hampshire, New York, and Vermont that will address any of the four themes that are defined more fully below. Pre-proposals will be accepted from a variety of sources, including public and private research institutions, non-profit organizations, businesses, and industry interests, and must contain a strong central research focus. Pre-proposals that involve multiple investigators, institutions, agencies, and/or states are strongly encouraged.

Who may apply: Participation in this RFP is open to scientists, resource managers, policy-makers, and other individuals pursuing research relevant to forest lands in the northern tier of New York, Vermont, New Hampshire, and Maine. The Principal Investigator (PI) *must* be from an institution or organization in one of the four states. (Note: PIs from throughout the USDA Forest Service's Northern Research Station are eligible to compete for these funds, but field research must be conducted in, or data used must be from, the Northern Forest as defined on page 2).

Note: PIs who are delinquent with terms of current or previous NSRC awards, such as reports, are not eligible to apply for NSRC funds until award terms have been met.

Research Areas / Themes: The 2015 NSRC program will support four broad areas of research that are relevant to the Northern Forest region. **Theme One** focuses on integration of social, economic, and ecological issues. **Theme Two** focuses on sustaining ecosystem health. **Theme Three** focuses on forest productivity and products. **Theme Four** focuses on biodiversity and protected area management. See pages 3-6 for more detailed information.

Pre-proposals may be submitted to any theme, but the same pre-proposal (or pre-proposals with multiple components of the same overall project) may not be submitted to more than one theme. PIs are discouraged from submitting more than one pre-proposal to any single theme. PIs should contact theme directors if they are unsure which theme is most appropriate for their proposals.

Project Duration and Outputs: Priority will be given to projects that produce well-defined outputs in a 1-3 year timeframe.

Funds Available: The Northeastern States Research Cooperative expects to have more than \$1 million available for 2015 award funding. Funding will be based on scientific merit and the greatest beneficial impact on the Northern Forest, with no specific allocations to themes.

Pre-proposals may be submitted for projects with budget requests ranging from small seed grants to a maximum total award of \$150,000. Over the past 11 years, the average grant across all four Themes has been ~\$70,000.

Federal law stipulates that priority be given to proposals that include 50% or more of match funding. The match can be direct funding or in-kind support. While priority will be given to pre- and full proposals that identify matching funds, the NSRC Directors encourage and will consider all proposals that are relevant to the NSRC mission and that can benefit the Northern Forest communities whether they are able to meet this matching criterion or not.

General information: Preference may be shown to young investigators or to investigators who have not been previously funded by the NSRC. Projects involving collaborative research among institutions are especially encouraged. Support for graduate and undergraduate research assistantships is desirable.

See additional details on page 7 and specific requirements on page 9 and 10.

Award Timeline:

October 17, 2014: pre-proposals due no later than 4:30pm

December 5, 2014: notification of acceptance or denial of pre-proposals

January 19, 2015: full proposals due (by invitation only)

March 6, 2015: notification of project award decisions

Background / Mission of NSRC: The 26 million-acre Northern Forest, which is home to 1.3 million residents, stretches from eastern Maine through New Hampshire and Vermont and into northern New York State. Extensive changes in the patterns of land use and ownership in this region during the 1980s prompted the formation of the Northern Forest Lands Council (NFLC) in 1990. The NSRC grant competition is a research program based on recommendations of that council's 1994 report, *Finding Common Ground: Conserving the Northern Forest*, which led to Public Law 105-185 and the formal creation of the research cooperative. A key theme in the NFLC report, which is also reflected in the mission of the NSRC, is the importance of the Northern Forest to society and the need for research activities to have relevance and benefit to “*the people who live within its boundaries, work with its resources, use its products, visit it and care about it.*” The NSRC interprets this mission broadly. Research on the Northern Forest is a central focus, but pre-proposals relevant to the economy, ecology, forest products, and biodiversity of areas near the boundaries of the Northern Forests (the northern tier of New York, Vermont, New Hampshire, and Maine) are acceptable. The NSRC is committed to practical applications of supported research. We disseminate general project and contact information for funded projects via the web and through other outreach mechanisms. Additional details about the NSRC and the four themes, including information about past and ongoing NSRC awards, can be found on the website: <http://www.nsrcforest.org>.

NSRC works with stakeholders, such as other scientists, resource managers, community members, policy-makers, not-for-profit organizations, businesses, and educators to help guide research priorities.

Note that the *Links* tab on the NSRC website (<http://www.nsrcforest.org/links>) includes several stakeholders and resources, including the State Forest Plans from the four Northern Forest states that provide important information about research needs in the region.

THEME ONE
Sustaining Productive Forest Communities:
Balancing Ecological, Social, and Economic Considerations

The NSRC seeks pre-proposals that support research and outreach focused on sustainable and *integrated* solutions to the social, economic, and ecological challenges of the communities, businesses, and working landscapes in the Northern Forest.

Pre-proposal submissions to Theme One may include, *but are not limited to*, one or more of the following broad research topics:

- **Sustainable Forest Management**
Research to define, demonstrate, and/or evaluate sustainable approaches to Northern Forest management, including the social, economic, and ecological challenges facing the Northern Forest. Example projects include studies of land use change and parcelization, regional forest management alternatives, carbon sequestration, regional incentives for land stewardship, conservation easements, effective regional communication, effective logging practices, and other long-term forest management issues.
- **Community and Economic Development**
Research to support effective rural community and economic development in the Northern Forest. Example projects include study and assessment of social, economic, and ecological changes in Northern Forest communities, analysis of conflict resolution strategies, studies of challenges unique to Northern Forest businesses, assessment of Northern Forest resource markets for both wood and non-wood products, and development and viability of a carbon trading market for the Northern Forest.
- **Ecological Economics and Ecosystem Services**
Research to quantify and understand the value and importance of ecosystem services and resources in the Northern Forest. Example projects include assessments of the region's wood resources, recreation and tourism resources, energy potential, social capital, carbon sequestration, greenhouse gas mitigation, and overall ecosystem services.
- **Nature-based Tourism**
Research to better understand the benefits and challenges associated with past, current, and planned recreation and tourism in the Northern Forest. Example projects include studies of Northern Forest culture, values, and tradition and their roles in recreation and tourism, studies of transportation challenges unique to the region, and studies of how best to encourage local entrepreneurship and Northern Forest “image” branding.
- **Watershed Planning**
Research designed to enhance scientific information needed for long-term planning and decision making aimed at sustaining productive forests, clean water, and strong, economically viable communities within and between Northern Forest watersheds. Example projects include studies to utilize and/or value forest lands to protect water resources, assessments of past planning activities, and demonstrations of innovative new approaches to planning.

THEME TWO

Sustaining Ecosystem Health in the Northern Forest

The NSRC seeks research pre-proposals that will improve understanding and management of forests and associated aquatic ecosystems in the Northern Forest. Land use change, climate change, and regional atmospheric pollutants are among the many threats facing the ecosystem health of the Northern Forest. Pollutants produced throughout central North America are part of the atmospheric deposition received by the Northern Forest, with significant impacts on forest health. Climate change poses uncertain, but potentially large impacts on the ecology and hydrology of the Northern Forest. Land use changes, such as intensive harvesting for biomass energy or conversion of private forest lands to homeowner building lots, have a very high potential for degrading water quality, ecosystem health, and the value of the forest for multiple stakeholders. Sustaining forest integrity into the future and supporting sustainable development in the region both rely on sound, quantitative estimates of the multiple factors that influence ecosystem health of the Northern Forest.

Theme Two solicits pre-proposals that address **hydrological, biogeochemical, and carbon cycling processes** in forested ecosystems.

Pre-proposal submissions to Theme Two may include, *but are not limited to*, one or more of the following research topics that:

- Address threats to **forest health, forest productivity, and soil and water resources** from regionally important pollutants such as acids, nitrogen, mercury, and ozone; more intensive utilization of forest lands for energy production; conversion of forests to other land uses; climate change; or other regional phenomena.
- Develop **quantitative methods for estimating and predicting changes in carbon storage** over time in ways relevant to the use of Northern Forest lands for energy production, emerging carbon credit markets, and carbon management policies.

Pre-proposals may take one or more of several approaches to addressing these needs, including synthesis of existing data, collection of new data, or increasing the level of communication among researchers, resource managers, policy-makers, regional businesses and residents, and other stakeholder groups. Priority will be given to projects that produce clearly defined outcomes, have a direct relationship to the health, productivity, and management of forest and aquatic ecosystems in the Northern Forest, and reflect the needs and interests of stakeholder groups in the region. Proposed outcomes should advance our understanding of ecological processes and relationships affecting the structure and function of forest and aquatic ecosystems and demonstrate the value of this new understanding in addressing the issues of ecosystem health or carbon and energy management in the Northern Forest Region.

THEME THREE

Forest Productivity and Forest Products

The NSRC seeks research pre-proposals that will quantify, improve, and sustain productivity of the Northern Forest as a working forest landscape. Forest productivity for purposes of this RFP includes all aspects of forest production that are most important to the future of the wood products-based economy of the Northern Forest. Aspects of primary interest include underlying biological processes, management practices, methods of prediction, and sociopolitical factors that influence future wood supplies and forest conditions.

Theme Three supports research that addresses **forest productivity and forest products**. Research pre-proposals to be considered for funding under Theme Three may include, *but are not limited to*, one or more of the following topics:

- **Biological Processes:** Increased understanding about the underlying biological processes driving current and future net primary productivity of Northern Forest ecosystems, including:
 - Ecophysiological responses of commercial tree species to silvicultural practices
 - Enhanced methods for assessing forest and stand productivity
 - Influence of harvesting practices on genetic variation of commercial tree species
 - Influence of management practices on long-term site productivity
- **Management:** Increased understanding about the influence of management practices on productivity of Northern Forest stands, including:
 - Influence of current partial harvesting practices on future regeneration and growth
 - Low-cost silvicultural systems to improve species composition of natural regeneration
 - Intensive and extensive silvicultural systems for production of commercial tree species
 - Influence of silvicultural practices on wood formation and quality
 - Practices to support production of biofuels and other bioproducts
- **Prediction:** Improved prediction of how changing management and environmental conditions will influence future wood supplies and forest conditions, including:
 - Improving regional growth & yield simulators, such as the Forest Vegetation Simulator and other widely used models
 - Improving forest inventory and monitoring systems and their use in improving prediction of current and future forest conditions at regional, state, and local scales
 - Influence of thinning and other partial cutting methods on future growth & yield of stands and forest-level wood supplies
 - Decision-support systems for large-scale pest outbreaks
 - Influence of forest practices on stand and forest-level carbon dynamics
 - Forest growth and species response to climate change
- **Sociopolitical:** Increased understanding about political, regulatory, economic, labor, technology, public communications, and other issues that influence productivity realized by forest landowners and managers in the Northern Forest, including:
 - Political or regulatory issues affecting forest products and markets
 - Mill or logging capacity and technology issues affecting forest productivity and markets
 - Economic/market issues affecting financial returns from forest products and forestland ownership
 - Syntheses of state/regional data about forest conditions/trends that affect forest productivity and are important for policy-makers, stakeholders, and the public to understand

THEME FOUR

Biodiversity and Protected Area Management

The NSRC seeks research pre-proposals that focus on biodiversity and protected area management in the Northern Forest. The Northern Forest provides jobs, clean water, and recreational opportunities and protects biological diversity for millions of our citizens. Sustaining this region requires vision and the ability to synthesize new knowledge about the forest, the citizens who live near and in it, and the economic and policy choices that shape our future. Important changes in forestland ownership and the economy require timely consideration of strategies to secure the continuing conservation of these lands and communities. Public investment in forestry research and outreach ensures the conservation and protection of these values. Protecting and enhancing the economic and ecological integrity of the Northern Forest is a critical issue for the region.

Theme Four supports research focused on **biodiversity and protected area management** in the Northern Forest.

Pre-proposal submissions to Theme Four may include, *but are not limited to*, one or more of the following broad research topics in Northern Forest areas:

- **Biodiversity**
 - Forest biodiversity conservation topics related to interactions between plant and animal species, populations, communities, and ecosystems such as species loss, human development pressures, or invasive plants, animals, insects, and diseases that have the potential to affect large areas of forest and change their ecological functions and biodiversity
 - Natural variability in species, communities, and ecosystems in the Northern Forest
 - Maintaining biodiversity and ecological integrity while providing wood products and other ecological services, as well as providing for human values and needs within managed forest areas

- **Protected Area Management**
 - The need for protection of sensitive areas, unique habitats, wilderness areas, and ecological reserves within forested landscapes to provide biodiversity and connectivity at various scales within a landscape or region
 - Ecological services and human values and needs provided by protected areas and reserves
 - Recreation opportunities and experiences provided by protected areas and reserves for residents and visitors

Northeastern States Research Cooperative 2015 PRE-PROPOSAL AND PROPOSAL INFORMATION

GENERAL GUIDELINES

Pre-proposals are due no later than 4:30pm, October 17, 2014.

Project scope: Pre-proposals may be submitted for projects up to 3 years in duration with budget requests ranging from small seed grants to a maximum total award of \$150,000. Projects involving collaborative research among institutions are especially encouraged. See page 10 regarding matching funds as stipulated by federal law. Support for graduate and undergraduate research assistantships is desirable. Priority will be given to projects that produce well-defined outputs in a 1-3 year timeframe. Preference may be shown to young investigators or to investigators who have not been previously funded by the NSRC.

Themes: Pre-proposals may be submitted to any theme, but the same pre-proposal (or substantively similar pre-proposals) may not be submitted to more than one theme. PIs are discouraged from submitting more than one pre-proposal to any single theme. Theme Directors will not advance more than one pre-proposal submitted by the same PI to the full proposal round.

Although a PI is allowed to submit different proposals to different themes, it is very unlikely that NSRC would fund more than one project for the same PI in a single award year.

Indirect costs: USDA Forest Service provides funding for the Northeastern States Research Cooperative and therefore indirect charges may not be charged on project budgets submitted by PIs from Land Grant institutions or State Cooperative institutions. In accordance with USDA guidelines, indirect charges for non-Land Grant institutions and non-State Cooperative institutions will be limited to 20% of total direct costs.

Review process: Pre-proposal and proposal submissions will be reviewed through an anonymous peer-review process within each theme. Each theme will determine which pre-proposals advance to the full proposal round based on the review panel recommendations and the greatest research needs for that particular theme. Full proposals will also be reviewed by an anonymous peer-review process within each theme. Awards will be selected collectively by the Theme Directors and the Program Manager based on their assessments of the highest needs for the NSRC and on the review panel recommendations.

Project Awards: Each project will be funded through a single award to the PI's institution. The lead PI's institution may issue sub-awards or sub-contracts to members of the identified research project team.

**Northeastern States Research Cooperative
2015 PRE-PROPOSAL AND PROPOSAL INFORMATION**

SUBMISSION INSTRUCTIONS

**Pre-proposals are due no later than 4:30pm, October 17, 2014.
Late proposals will not be accepted.**

Pre-proposals should be sent to the appropriate NSRC Theme Manager (see list below).

Special Note: Theme Three conducts all communications electronically. For Themes One and Four, PIs must submit six hard copies AND an electronic version (Microsoft Word or PDF via email). For Theme Two, PIs must submit one hard copy AND an electronic version (Microsoft Word or PDF via email). All copies (*both* paper and electronic) must be received by the appropriate NSRC Theme Manager by the stated deadline.

Note: The “Lead Principal Investigator” will be the sole contact for NSRC managers throughout the competition. It is the Lead PI’s responsibility to forward NSRC related updates to Co-PIs and others identified in the project.

THEME ONE Kate Baldwin University of Vermont Rubenstein School of Environment and Natural Resources 81 Carrigan Drive, 303-I Aiken Center Burlington, VT 05405 Phone: 802-656-1362 E-mail: kate.baldwin@uvm.edu	THEME TWO Michelle Daley University of New Hampshire Dept. of Natural Resources and the Environment 56 College Road, 114 James Hall Durham, NH 03824 Phone: 603-862-2341 E-mail: michelle.daley@unh.edu
THEME THREE Meg Fergusson University of Maine Center for Research on Sustainable Forests 5755 Nutting Hall Orono, ME 04469 Phone: 207-581-3794 E-mail: margaret.fergusson@maine.edu	THEME FOUR Dr. David Newman SUNY-ESF Dept. of Forest & Natural Resources Management One Forestry Drive Syracuse, NY 13210 Phone: 315-470-6534 E-mail: dnewman@esf.edu

Note: Principal Investigators who are delinquent with terms of current or previous NSRC awards, such as reports, are not eligible to apply for NSRC funds until award terms have been met.

Northeastern States Research Cooperative
2015 PRE-PROPOSAL AND PROPOSAL INFORMATION
Pre-Proposal Requirements (also see next page)

Format: Pre-proposal submissions should be on 8.5” x 11” paper and both hard and electronic copies should be formatted with 1” margins and 12-point font with no more than 6 lines per inch (standard line spacing for 12-point font). Double sided printing is allowed. Proposals that do not conform to the format and required information guidelines will be rejected without consideration prior to the pre-proposal review panels, as appropriate. Required information includes:

Cover Page:

- Heading “2015 Pre-proposal”
- NSRC Theme being addressed
- Project Title
- Lead Principal Investigator (include name, institution, address, phone(s), and e-mail)
- Co-PIs, Cooperators, and Other Participating Institutions (with contact information)
- Total Amount Requested and the Amounts Requested per Project Year
- List ALL current and past NSRC projects managed by PI or Co-PI (specify role), whether relevant to this proposal or not. This should be a complete list without link/reference to the NSRC website. Extra pages will be allowed for this information to be included.

Project Narrative (two pages):

- Logical Project Justification and Relevance. This includes the requirement to place the proposed work in the context of any relevant, previous, NSRC-funded projects, whether awarded to the PI or not.
- Focused Project Goal and Supporting Objectives. Normally there should be only one goal, which will identifiably benefit Northern Forest communities in some way. The objectives, if achieved, should clearly lead to the achievement of the goal.
- Clear Research Approach and Methodology. If models are proposed, provide a brief description of the model.
- Explicit Expected Products, Outputs, and Outcomes. At least one substantial and tangible product or output should be identified. It is understood that outcomes are harder to achieve, but the potential for any outcome should be identified and explained where possible.

Project Budget (two pages): A budget table with annual line items including salary by type, student support, travel, equipment, supplies, etc. and a budget justification that addresses *each* component of the budget are required. List and describe match funding if match funding is included. The specific roles, responsibilities and or contributions of *every* person or entity identified in the proposal must be explained whether they receive funds or not. Persons or entities who/that would receive NSRC funds must be explained and justified in sufficient detail to judge whether the requested funds are warranted. This should be done in the Budget Justification section. PIs with more than one multiple-year NSRC project should explain proposed summer or other salary in relationship to current NSRC funds.

Pre-Proposal Requirements (continued)

Match funding: Federal law stipulates that priority be given to proposals that include 50% or more of match funding. The match can be direct funding or in-kind support. While priority will be given to pre- and full proposals that identify matching funds, the NSRC Directors encourage and will consider all proposals that are relevant to the NSRC mission and that can benefit the Northern Forest communities whether they are able to meet this matching criterion or not.

Supporting Documentation: Additional appendices of figures/tables are *not* allowed. A one-page Curriculum Vitae (CV) is required for **every** person (or group, e.g. consulting firm) specifically identified in the proposal to receive funds for the project. The expertise, involvement, and responsibility of collaborators and/or specifically-identified groups acknowledged to participate in the project must be explained if they are not included in the budget.

References and Citations: One page maximum.

Northeastern States Research Cooperative 2015 FULL PROPOSAL INFORMATION

2015 FULL PROPOSALS WILL BE DUE JANUARY 19, 2015.

Detailed guidelines will be provided with requests for full proposals, in response to successful pre-proposal submissions. In general, full proposals will include further detail about the rationale, objectives, methodologies, and deliverables of the proposed research, allowing peer-reviewers to assess the scientific, social, and economic need and merit of the project. Only one full proposal per theme will be allowed for each individual lead-PI. Funding recommendations will be made by a peer-review panel coordinated within each Theme and under the direction of the Theme Manager and Theme Director.

In addition to RFP guidelines (such as priority given to projects that include 50% or more of match funding, produce well-defined outputs in a 1-3 year timeframe and a preference that may be shown to young investigators or to investigators who are not currently funded by the NSRC), reviewer recommendations are based on a ranking of standardized scores for requested information, reviewer comments, project cost, and available funds. Although a Principal Investigator is allowed to submit different proposals to different themes, it is very unlikely that NSRC would fund more than one project for the same Principal Investigator in a single award year.

Final decisions for awards will be made by the Theme Directors and the Northern Research Station Program Manager after the peer-review recommendations have been evaluated across all four Themes. The goal of NSRC is to fund research that will have the greatest beneficial impact on the Northern Forest, regardless of theme.

Full proposals will be due by 4:30pm, January 19, 2015.

Final decisions regarding project awards will be made by March 6, 2015.