



A New Silvicultural Guide for Northern Conifers in the Northeast

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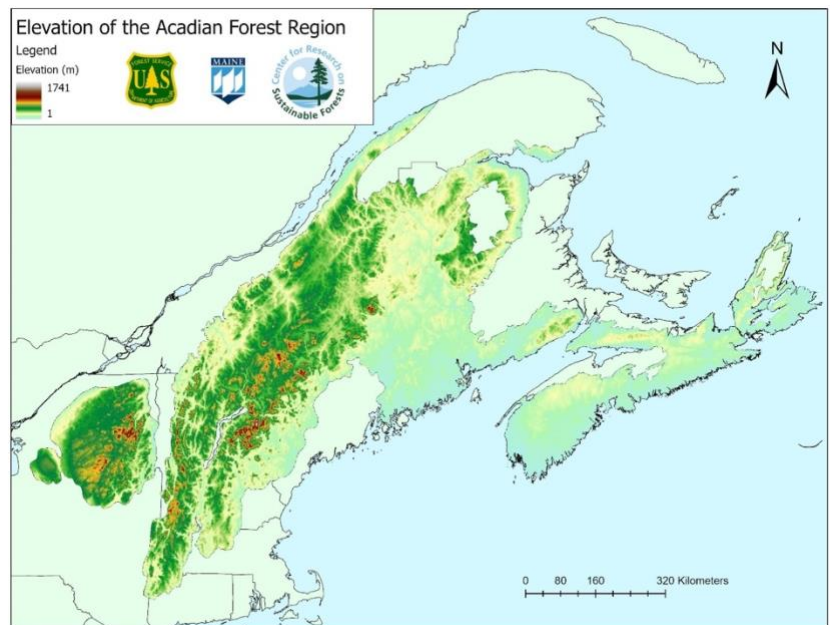
Project Abstract

The silvicultural guide for the northern conifer forest type covering 6 million acres of New England is close to 50 years old and has little relevance to the conditions and challenges facing forest managers today. NSRC researchers will remedy that problem by synthesizing and interpreting an additional half-century of forest research to develop scientifically robust and ecologically sound silvicultural recommendations within the context of contemporary forest management needs. Researchers will ensure applicability and inclusion of diverse perspectives through a process of co-production in which an advisory panel of stakeholders from state and federal agencies, Tribal entities, landowners, forestry practitioners, and others provide guidance on content and delivery.

Outputs include a new silvicultural guide for northern conifers based on the best available science and published by the USDA Forest Service, a professionally produced companion video, and a field workshop for practitioners. Outcomes will include more effective near-term management with improved long-term sustainability of northern conifers and the communities they support in the Northern Forest region.

Progress in 2022

In March 2022, the project team convened an advisory panel of practitioners to review the draft table of contents and identify information gaps. Later that same month, the revised table of contents was presented in a technical session at the New England Society of American Foresters annual winter meeting, with breakout sessions to solicit feedback from attendees and identify needs and strategies for the guide. Following this, sections of the guide were allocated to the project team members and contributing authors. Sections on silvics, wildlife habitat considerations, operations, and quantitative tools have been drafted and reviewed by the project team. Additionally, new range maps, density management diagrams, and stocking guides for spruce – fir dominated stands have been generated. Project team members made a two-day site visit to Umbagog National Wildlife Refuge with the US Fish and Wildlife Service in July to refine management strategies for wildlife habitat; this has been used to write a case study in the guide.



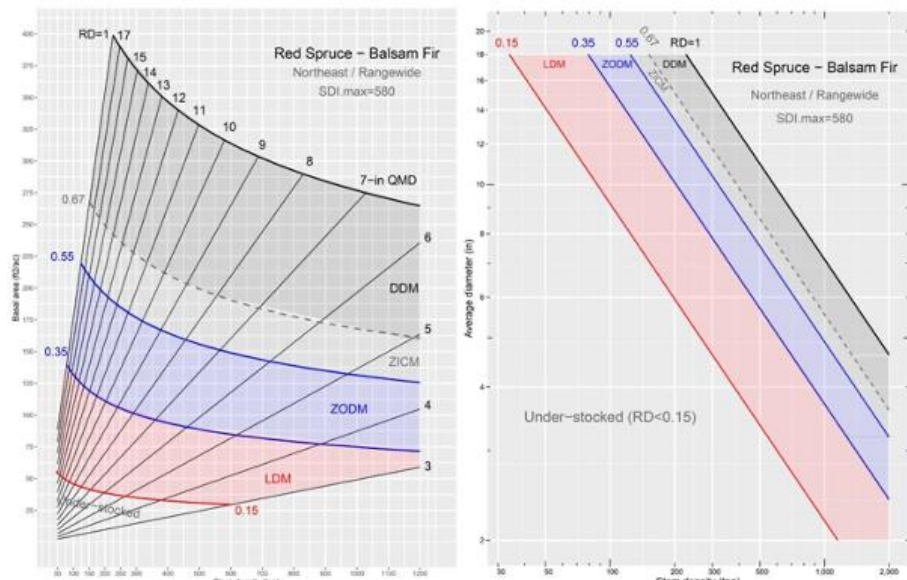
Topographic map showing the extent of the northern conifer forest type.



NSRC Progress Report 2022

Plans for 2023

Data synthesis, writing, and creation of figures will continue into 2023, with a target draft completion date in spring 2023. The contents of the companion video will be drafted, and a videographer will be solicited. After obtaining feedback from the advisory panel on the draft guide and video contents, revisions and finalization of these products are planned for later in the year. The team will also plan and host a field workshop for practitioners.



Drafts of the new stocking guide and density management diagram by Ray et al. (in review).

Collaboration

Funding and support are provided by the U.S. Forest Service, Northern Research Station; Northeastern States Research Cooperative; and Cooperative Forestry Research Unit (CFRU). The project lead is a U.S. Forest Service scientist, and remaining project team members are University of Maine personnel. The guide is being co-produced with input from an advisory panel to ensure the contents are relevant to the current needs of practitioners. Those participating in the advisory panel represent CFRU members and others from federal and state agencies, including the National Forest System, U.S. Fish and Wildlife Service, Penobscot Nation Department of Natural Resources, Maine Bureau of Public Lands, Maine Department of Inland Fisheries and Wildlife, New Hampshire Division of Forests and Lands, Vermont Department of Forest, Parks, and Recreation, non-profit organizations such as the Appalachian Mountain Club and The Nature Conservancy, and commercial entities throughout the northern conifer region. Overall, this work will provide an up-to-date silvicultural guide for northern conifers drawing on research from the Penobscot Experimental Forest and elsewhere, offering relevant guidance on how to successfully manage northern conifer forests at this time, and into the future.

Products

Kenefic, L.; Seymour, R.; Rogers, N.; Ziegra, C.; Kanoti, K. 2022. A Working Session on the New Silvicultural Guide for Spruce-Fir. New England Society of American Foresters Annual Meeting, March 23, 2022, South Portland, ME. Oral presentation.

Ray, D.; Weiskittel, A.; Fraver, S.; Berril, J.-P.; Kenefic, L.; Rogers, N.; Seymour, R. (in review). Relative density as a unifying principle linking density management diagrams and stocking guides. *Journal of Forestry*.

Seymour, R. 2022. Silviculture at the Umbagog National Wildlife Refuge. *Maine Woodlands*. 47(9): 6-7.