



NEW ENGLAND
FORESTRY
FOUNDATION

THE STANDARDS AND METRICS OF EXEMPLARY FORESTRY

Defining Exemplary Forest Managementⁱ for NEFF Lands in the Acadian Forest

These guidelines are intended to be implemented in the context of the landscapes where NEFF's lands occur. Thus, for example, one kind of habitat may be missing in a particular landscape and quite a different habitat in another landscape. Likewise, maintaining connectivity between habitats across the landscape is also important and will influence implementation on any given parcel. In addition to implementing these standards, NEFF intends to maintain dual third party certification of its lands. With these understandings, exemplary forestry includes:

1. Implementing "Best Management Practices" to protect soils, riparian and aquatic habitat, special habitats, wildlife trees, etc.
2. Implementing advanced silviculture by practicing forestry that results in:
 - a. Continuously improving forest stands over time in terms of both quality and quantity.
 - b. Conditions which are well suited to the umbrella wildlife species known to be representative of the habitat needs of more than 75% of native species.ⁱⁱ

Umbrella Wildlife Species	% of Property	Forest Stand Condition Described
American Marten ⁱⁱⁱ	16%	Blocks of at least 640 acres which are at least 80% stocked at over 80 ft ² of basal area (approximately 16 cords/acre)
Canada Lynx ^c	27%	Even aged blocks \geq 15 acres in size which are regenerated to spruce and fir on a revolving schedule. ^{iv}

- c. A diverse size class distribution of 5-15% of stands in seedlings, 30-40% in saplings and poles, 40-50% sawtimber (DeGraaf, et al. 2005) (including 10% of the total area in large diameter multi-storied stands—note 9% of NEFF's existing lands are in reserves).
 - d. Growing species^v well suited to each site.^{vi}
 - e. Stocking that fully occupies the sites: an average at least "B" line stocking for stands not currently being regenerated.^{vii} NEFF lands currently average about 30 cords/acre.
 - f. Growing and harvesting quality timber—an average of 0.5 cords/acre/year,^{viii} and targeting high quality products.
3. **Addressing climate change** as the knowledge base becomes available, increasing the resilience to, adaptation for, and mitigation of, climate change,^{ix} including but not limited to using forests and forest products to sequester more carbon and more broadly reduce greenhouse gas emissions.
4. **Diversifying management approaches.** To the extent that site conditions and the landscape context allow, NEFF intends to manage significant portions of its properties using even and uneven aged management approaches and employing a "triad" approach to management.^x
5. **Building public support for forest management.** Public support for forest management depends in part on how forests look. In this regard, NEFF intends to manage its lands to maximize aesthetic benefits particularly in key areas (e.g., attractive roadsides, trails and shorelines) and minimize adverse effects (e.g., careless looking harvests) (USDA Forest Service 1995).

ⁱ For actively managed properties or portions thereof, this is specifically not intended to obviate the need for strategically located ecological reserves and withhold portions of otherwise actively managed parcels from harvesting, e.g., steep slopes, wetlands, heritage patches, etc.

ⁱⁱ The US Fish & Wildlife Service, as well as state wildlife management agencies, can provide recommendations on the best species to select. These species too may change over time.

ⁱⁱⁱ Management suggestions from Dr. Dan Harrison.

^{iv} Harvest blocks being regenerated are intended to include legacy trees and patches (see Bennett 2010, Tubbs, et al. 1987).

^v Decisions of what tree species are “best suited” to each site can be guided by the recommendations contained in soil surveys prepared by the Natural Resources Conservation Service with site conditions verified by a qualified forester or soil scientist. The species specified may change as a result of climate change.

^{vi} This requires matching the silvicultural system to the site and may require controlling invasive species and/or excessive browsing (see Leak 2014, Leak, et al. 2014, Bennett 2010, Rawinski 2014).

^{vii} For example, in 8-10” diameter stands of mixed wood this would be approximately 20 cords/acre (see Leak et al. 2014).

^{viii} This will not be possible on some properties when they are acquired, e.g., if they have been depleted, also over time the value of the timber should be enhanced (more and better quality sawlogs).

^{ix} USFS guidance on how to increase forest resilience and facilitate adaptation will be followed.

^x Achieving the several objectives outlined here is likely to require managing using the “triad” approach. That is, setting aside a modest portion of the property for passive or light handed management, while dedicating another modest portion for intensive management to produce the desired volume of wood, and yet the majority to ecological forestry (forest management that mimics patterns of natural disturbances) with a specific objective of addressing the challenges presented by climate change. For more on this topic see Seymour, et al. (1992).