

Protocol for Ecological Reserve Designation on Forest Society Lands

Background

Responsible and sustainable forest management has remained at the center of the Forest Society's land management ethic since its inception. In addition to its commitment to high standards of timber management, the Forest Society has also demonstrated a long-standing commitment to the identification, designation, and stewardship of Ecological Reserves on its reservations. Many reservations have been formally or informally managed as Eco-Reserves, either as a result of deed or donor restriction, or by internal staff determination. In 2001, the Board of Trustees ratified a more formal set of procedures for screening and designating official Forest Society "Natural Areas." This document represents a revision of those procedures and their associated terminology based on feedback from the Land Management Committee meeting of September 21, 2005.

Goals

Eco-Reserves are an important component of Forest Society's stewardship program. The goal of designating reservations or parts of reservations as Eco-Reserves is to give full recognition and attention to the unique features of those areas. In Eco-Reserves the primary goal and management strategy is to sustain biodiversity and ecological processes; other uses are secondary. Eco-Reserves are identified and designated to meet the following management goals:

1. To protect, manage, or restore (if necessary) natural features in perpetuity, as defined by the Eco-Reserve criteria below
2. To restore and maintain ecological processes in their own natural cycles
3. To provide benchmarks for informing how forest management alters species patterns and successional pathways
4. To provide benchmarks for monitoring the effects of global environmental change, such as atmospheric deposition (acid rain), global climate change, and invasive species
5. To serve as source areas for plants and animals to recolonize disturbed areas
6. To provide visitors to Forest Society Reservations with an experience that reflects natural conditions of the New Hampshire landscape

Eco-Reserve designation on Forest Society properties would be determined based on the following criteria and process:

Eco-Reserve Criteria¹

One or more of the following criteria are sufficient to warrant Eco-Reserve designation:

1. **Rare Plants and Animals** as defined by the NH Fish and Game Department and the NH Natural Heritage Bureau. This includes federal and state listed threatened and endangered species and species of special concern

¹ Modified from Living Legacy Project (2003)

2. **Exemplary Natural Communities** as defined by the NH Natural Heritage Bureau. This includes all rare natural communities (G1-G3 and S1-S3 ranking) and high quality occurrences of common communities²
3. **Critical Wildlife Habitats** as defined by the New Hampshire Wildlife Action Plan³
4. **Uncommon Geologic or Physical Features.** This includes areas of
 - high land form or topographic diversity
 - high elevation (over 2000 feet)
 - uncommon bedrock (calc-silicate, carbonate-bearing, mafic, low-grade pelitic)
 - uncommon surficial deposits (eskers, alluvial outwash plain)
 - other uncommon features (ring dike, gorges)
5. **Exemplary Aquatic Communities include:**
 - high quality examples of lakes, ponds, streams, and rivers
 - large, unfragmented wetland complexes
6. **Ecological Linkages** are areas that provide connectivity to another Eco-Reserve on Forest Society land or on adjacent lands
7. **Deed or Donor Restricted Areas** are areas where forest management restrictions are specified in the deed or by the donor.

One or more of these criteria may be sufficient to warrant Eco-Reserve designation.

Classification⁴

The Forest Society continues to hold itself to the highest standards of sustainable timber management on all of its reservations. The ecological health of the forest remains a central consideration in any forest management activity. In Eco-Reserves, this consideration is brought to the forefront. However, because Eco-Reserve status does not necessarily preclude management activity, each Eco-Reserve will be classified into one of two classes based on the potential need for restoration and ecosystem-based management:

In **Class 1 Eco-Reserves (Strict Nature Reserve)**, vegetative management activities are strictly prohibited except in emergency situations (forest fires that threaten nearby habitation, etc.). In these instances, the health and resilience of the ecosystem is presumed adequate enough to warrant no need for restoration management, and the land is left to develop into “Old Growth” on its own. These Eco-Reserves remain available primarily for goals 3-6 (research and recreation, listed above).

In **Class 2 Eco-Reserves (Habitat/Species Management Areas)**, active intervention and vegetation management is allowed only in order to insure the maintenance of habitats, meet the requirements of specific species, and/or maintain or enhance other priority ecological values. In

² See Sperduto, D.D. and William F. Nichols. 2004. Natural Communities of New Hampshire. NH Natural Heritage Bureau, Concord, NH. Pub. UNH Cooperative Extension, Durham, NH. (also online at http://nh.gov/dred/divisions/forestandlands/bureaus/naturalheritage/documents/NaturalCommunitiesWeb_000.pdf)

³ Described and explained at http://www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/critical_habitats_species.htm
For a complete draft of the Wildlife Action plan, go online at http://www.wildlife.state.nh.us/Wildlife/wildlife_plan.htm

⁴ Based on Category I and Category IV IUCN Protected Area Management Categories. See <http://www.iucn.org/themes/wcpa/pubs/pdfs/iucncategories.pdf>

this case, the ecosystem is in need of some form of active restoration or maintenance (e.g. prescribed fire, invasive species mitigation) in order to return to its natural state. These Eco-Reserves are addressed by goals 1-2 above (natural features and ecological processes).

Process

1. As properties are inventoried and management plans are written, staff will discuss areas for Eco-Reserve designation on a property specific basis. At regular intervals (1 to 2 times a year as needed), staff will present a list of properties with potential for Eco-Reserves designation to the Land Management Committee.
2. From this proposed list, the Land Management Committee will present recommendations to Forest Society Board of Trustees for acceptance.
3. Eco-Reserve status is preserved in perpetuity excepting reversal or alteration (i.e. changing Eco-Reserve status from Class 1 to Class 2) which, when recommended by the Land Management Committee, requires a simple majority vote by the Board of Trustees.