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Forest Stewardship Position Paper of the Natural Heritage Committee

How will the decisions we are making today affect our people and the forests and wildlife of the future?

I. Introduction

- A. This position paper is a dynamic document written by the Highlands Coalition's Natural Heritage Committee to set some guidelines for discussion of acceptable forest stewardship practices on publicly owned or funded land and on nonprofit owned parcels. It is our intention to refine and revise the paper as new data and information become available. By following these guidelines, positions on stewardship activities can be vetted and discussed so that conflicts can be effectively resolved.
- B. The guidelines discussed in this paper are intended to promote the highest practicable standards for forest stewardship on public/nonprofit lands. Private land management will not be regarded in this document, but conservation-minded landowners should be encouraged to meet these standards. However, it is fully recognized by the group that since the majority of land in the state is privately owned that many concerns listed herein (deer, invasive vegetation, etc.) may still impact publicly owned or funded land and nonprofit owned parcels under stewardship.
- C. The goal is to sustain forest health and protect all locally indigenous species in the face of human caused stressors and natural disturbances, while considering multiple uses and the concerns of stakeholders.
- D. Members of the Natural Heritage Committee include ecologists, foresters, wildlife biologists, sportspeople, environmental advocates, and other interested stakeholders. It is well recognized that ten different people can visit a parcel of land and come up with twelve different recommendations to meet the landowner's goals; however, the consensus of those ten is likely a good start. A review of such recommendations by the Natural Heritage Committee will include scientific review and discussion of other stewardship projects. Included in the review will be input from people who may have specific knowledge of conservation issues, including species of conservation concern (conservative species; endangered, threatened or special concern species; and rare species, as defined below) which may reside on or near a particular parcel of land. The Committee will aim to reach consensus. Where disagreement exists, it will make recommendations on how to gather information and measure results, in order to inform future decisions. In time this process will build understanding of different stewardship methods.

II. Background

- A.** New Jersey continues to do an excellent job of preserving land from development. As of 2012, 1.35 million acres in the state and approximately 290,000 acres of forest have been preserved in the Highlands.
- B.** Now that large tracts of land are protected by numerous state entities, counties, municipalities and non-profit groups, attention has turned toward stewardship of preserved land.
- C.** Preserved land is valuable and some portions are ecologically sensitive, while large tracts of preserved land are losing the battle for sustainability. These forests may have little vertical structure, age-class diversity, and low or declining species diversity, and may provide sub-optimal habitat for native wildlife and plants. Active stewardship may be required to protect and restore preserved lands and to prevent them from being negatively altered by invasive species, deer, and other stressors resulting directly or indirectly from human activities.
- D.** This paper proposes an open process, where groups will strive for consensus on issues relating to projects.
- E.** Stakeholders are invited to present planning projects for review by a subset of the Natural Heritage Committee. Findings from this subcommittee would likely be presented at a full committee meeting to build consensus within the group and provide support for well-planned stewardship initiatives.

III. Need

- A.** Preserved land stewardship will become an important focus of the future for government and non-profit organizations.
- B.** By reaching consensus on stewardship activities, the Natural Heritage Committee may provide information on stewardship issues and serve as a mediator.
- C.** Forest Stewardship practices on public and non-profit land can provide valuable demonstrations of beneficial management, and can improve public understanding of actively managed land for long-term landscape scale sustainability.

IV. Recommended review criteria

- A.** The public should be engaged early and throughout the planning effort using collaborative processes, and afforded opportunities to participate in planning, monitoring, comment and review on the proposals and review of the results of monitoring.
- B.** The land manager should complete an assessment of relevant existing information including dominant ecological processes, disturbance regimes and stressors, such as

natural succession, wild fire, invasive species, excessive herbivory, and climate change as well as threatened, endangered species and rare species of potential conservation concern that are present in the plan area.

- C. Plans should provide for ecological sustainability including standards or guidelines to maintain or restore the ecological integrity of watersheds as well as terrestrial and aquatic systems.
- D. Stewardship projects should be evaluated with a landscape scale context in mind. Plans should create opportunities for landscape-scale restoration, wildfire and prescribed burning, soil and soil productivity including guidelines to reduce erosion and sedimentation, air and water quality and other concerns raised by stakeholders.
- E. Plans should include a program for long-term monitoring to provide feedback for adaptive management at both the landscape and project scales, and include baseline as well as evaluation two years after initiating an activity in order to inform the management of the site. Future monitoring on a five-year interval is recommended after the biennial review. The monitoring program should be coordinated and integrated with relevant broader-scale monitoring strategies to ensure that the project-scale monitoring is complementary and efficient and appropriate in scale. We recognize the costliness of monitoring and propose to streamline the monitoring using the expertise and assistance of agencies, local stakeholders, scientists, consultants and those practicing stewardship on the ground. The objective is to craft an efficient monitoring program that optimizes shared opportunities. The monitoring data should be posted on a cumulative, open and public database.
- F. Plans should consider the ecological conditions necessary to maintain the diversity of the plant and animal communities and should include guidelines and standards to maintain or restore the diversity of ecosystems and habitat types throughout the plan area, as well as contribute to the recovery of federally and state-listed threatened and endangered species and maintain a viable population of species of conservation concern.
- G. Water management is a vital aspect of stewardship. Plans should include standards or guidelines to maintain or restore the ecological integrity of riparian areas, wetlands and vernal pools in the plan area, including structure, function, composition and connectivity. Plans should establish widths for riparian management zones around all lakes, perennial and intermittent streams, and open water wetlands, including vernal pools. Plans should not include any management practices that cause detrimental changes in water temperature or chemical composition, blockages of water courses, or deposits of sediment that seriously adversely affect water conditions or fish habitat within the riparian management zones or the site-specific delineated riparian areas, wetlands, or vernal pools.

V. Solutions

- A. Collection of data before and after an activity will provide a measurable matrix to evaluate the success or failure of a project. This Committee may recommend appropriate targeted tools for collection of baseline data and ongoing monitoring based on project

scale. Both success and failure should be used as input for scientific ecological study and to inform adaptive management.

- B. The Committee accepts that some demonstration projects may not succeed and we will learn from these projects. Pilot projects should be conducted in areas of lower ecological quality, avoided in natural heritage priority areas, and in other areas of ecological integrity, as measured for example, by floristic qualities. Higher risk projects should be planned with special care.
- C. Educating the public on these complex issues is necessary. An educational component (such as site visits, monitoring data, web-based presentations, or blogs) should be encouraged to be a part of as many of these stewardship/restoration projects as possible.
- D. Deer herbivory can significantly affect forest health in many areas within the Highlands. There are a number of options that should be explored to reduce these impacts. Options should include focusing on improvements to both hunting access and hunting efficacy, ultimately resulting in a deer density that is compatible with forest health. Fencing may be required where control is ineffective and impacts are serious or rare species are present.
- E. Future Green Acres funding should be tied to deer management programs on preserved land.
- F. Prescribed fire should be utilized more frequently in forest restoration/stewardship projects, including use of growing season burns.
- G. Agencies and non-profit organizations should be identifying sources of funding to support stewardship of public trust lands, just as they have been working for decades to acquire conservation lands.
- H. If revenues are generated from stewardship activities implemented through an approved Forest Stewardship Plan, then said revenues or a portion thereof, need to be routed back into forest stewardship/restoration projects. Revenue generated by harvesting stewardship by-products should be utilized for, among other things, implementing best management practices, monitoring and educational components for forest projects, in an effort to achieve a more sustainable model for long-term stewardship, biodiversity and restoration goals.
- I. Forest Stewardship should meet the standards of planning, public participation, monitoring and performance evaluation that is required by the 2012 National Forest Service rules or the 2012 Forest Stewardship Council standards and procedures as well as satisfy any existing regulatory standards, including those of the Highlands Council.

Appendix

Definitions

1. Best management practices

Activities that follow established protocols, policies or procedures that have consistently shown results superior to those achieved with other methods. The committee recognizes that the current BMPs for New Jersey do not adequately address all concerns raised in this paper and need to be modified, updated and expanded in order to address adequately natural areas restoration. The committee will review and comment on BMPs for use in the Highlands. BMPs must remain flexible over time to accommodate change within social, economic, and environmental contexts.

2. Conservative species

Conservative species are restricted to high quality natural areas in addition to being designated as Rare, Threatened or Endangered. Plants are ranked according to their coefficient of conservatism. Plants with a higher degree of conservatism are more dependent on an intact ecosystem for survival and more likely to be impacted by human activities.

3. Demonstration project/pilot project

A project specifically designed to test reasonable hypotheses expected to produce improvements to forest health. These projects must include pre-determined plans (including descriptions of baseline conditions and provisions for follow-up monitoring) that describe proposed activities and expected outcomes.

4. Ecologically sensitive

Areas/species that are more likely to be ecologically impaired by human activities than less sensitive areas/species. For example, a conservative forest herb species (e.g., trillium) versus a common forest tree species (e.g., red oak). Ecologically sensitive areas may include NJ Natural Heritage Priority Sites or other areas with high concentrations of “Conservative species, Endangered, Threatened or Special Concern Species, or Rare Species.” Language can be taken from Natural Heritage Priority Sites newest guidelines. These sensitive areas, along with any other state lands, are subject to the NJ DEP Land Management Review process before a project is allowed to proceed.

5. Endangered, Threatened or Special Concern Species

Species listed by the NJ Department of Environmental Protection as threatened, endangered or special concern. See “Rare Species” below.

6. Forest health

The extent to which the condition of a forest exhibits intact vegetative structure, composition, and function within tree canopy, sapling/sub-canopy, shrub, herbaceous layers, and forest gaps, all dominated by native plants and associated faunal elements for its particular seral stage.

7. Forest Restoration

The process of assisting the recovery of resilience and adaptive capacity of forest ecosystems that have been degraded, damaged, or destroyed. Restoration, including re-establishing forest cover in deforested areas (Afforestation) focuses on establishing the composition, structure, pattern, and ecological processes necessary to make terrestrial and aquatic ecosystems sustainable, resilient, and healthy under current and future conditions.

8. Forest stewardship

Human activities that improve “Forest Health” by mitigating negative human impacts; such impacts may include invasive species, herbivory by white-tailed deer, long-term damage to soils from past agricultural activities, etc. Stewardship may also encompass the maintaining of "Forest Health" by protecting intact, healthy forests from unnecessary, and likely detrimental, human intervention. In other words, proper stewardship could mean no management needed.

9. Higher risk project

Projects that occur in Natural Heritage Priority Areas, Natural Areas and any additional sites of ecological importance as determined by the Natural Heritage Program staff of the Department of Environmental Protection, Division of Parks and Forestry, except if the Natural Heritage Program staff determines that the site would benefit from forest management and/or stewardship practices.

10. Invasive species

A species that is non-native (or alien) to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.

11. Landscape scale:

Geographic area that includes at least one individual site and its surrounding land use context; generally referring to a project utilizing an ecosystem-level approach

12. Monitoring

Repeated field measurements that quantify elements of “Forest Health,” before and after implementation of stewardship activities.

13. Native species

Species that is indigenous to New Jersey.

14. Prescribed fire

Fire applied in a knowledgeable manner to forest fuel on a specific land area to accomplish predetermined, well-defined stewardship objectives.

15. Rare species

Species listed by the NJ Department of Environmental Protection as having a state status of S1, S2, or S3. This includes all “Endangered, Threatened or Special Concern Species” (See above) as well as species without a formal state status (i.e., many plants and invertebrates with ranks of S2 or S3).

16. Stakeholder

Any interested member of the general public or organization

17. Sustainability

With respect to forest land, having the ability to: (1) maintain its ecological processes, biodiversity, resource productivity, regeneration capacity, and vitality; and promote forest health, preclude the spread of invasive non-native species, maintain forest integrity and contiguity, preserve New Jersey’s native biodiversity, and protect “Endangered, Threatened and Special Concern Species”, “Rare Species”, and “Conservative Species” and the habitat that sustains them; and (2) realize the potential to fulfill now and for future generations, relevant ecological, environmental, economic, and social functions, including but not limited to protection and improvement of air quality and of water supply and water quality, stabilization of soils, prevention and suppression of uncontrolled wildfires, service of markets for forest products, provision of recreational opportunities, and improvement of quality of life.