

Specifications for Landowner Forest Stewardship Plan in New Hampshire cost shared through federal assistance programs

The Landowner Forest Stewardship Plan is designed to provide forest landowners with sufficient detailed analysis and information to make sensible long-term resource management decisions. This includes analysis of the entire array of forest related resources as applicable to the property. Priority given to each of these and the subsequent level of analysis will vary considerably by landowner objectives. The goal is to promote good stewardship of the full array of forest resources by developing a useful, easily read document that adheres to landowner objectives, and provides management recommendations which are specific to the property and that relate to field data. Landowners who have forest stewardship plans may be eligible for additional cost share funding, but the plan must refer to the practice need, specifications, and performance period.

1. The plan must be written by a licensed forester or professional natural resource manager in a closely related field as approved by the State Forester. Plans will be reviewed by the UNH Cooperative Extension County Forester before final approval and commitment of cost share funds. It is suggested that draft copies of plans be made available to the appropriate UNH Cooperative Extension County Forester and landowner for review prior to reporting completion of the practice.
2. Documentation and ranking of landowner's objectives for the property is required and must form the basis of resource management prescriptions. The "Landowner Goals and Objectives" form is suggested for this use.
3. The plan shall address the following:
 - forest health (including insect, disease, invasives species)
 - soil
 - water
 - timber resource management
 - aesthetic quality
 - riparian and wetlands
 - wildlife and fish habitat
 - forest protection (including wildfire and catastrophic risk reduction and rehabilitation where appropriate)
 - forest recreation
 - rare, threatened and endangered plant and animal species and exemplary natural communities
 - historic, cultural and archeological sites.Other considerations the plan may address:
 - estate planning including land protection
 - finances including timber, income, and property taxes
 - landscape considerations especially as related to wildlife and water resources

4. Map Requirements - composite or separate maps to include the following:
 - a. Property - perimeter sketch or survey map with known boundary information (stone walls, monuments, etc.), significant land features, access points, roads, landings, trails, surface water.
 - b. Forest Type - indicate location and extent of tree species and species groups, size classes, etc.
 - c. Wildlife Habitat - location and extent of significant and critical wildlife habitats and land features such as deer yards, heron rookeries, wetlands (such as marshes, floodplains, bogs and ponds); rare, threatened or endangered species, critical habitat such as beech stands showing heavy bear use, etc.
 - d. Recreation, Aesthetics, Water, Cultural and Other Resources - location of existing and potential sites for recreational opportunities, vantage points, trails, historic sites, natural heritage elements and other pertinent features of the property as applicable.
 - e. Soils - based on the latest USDA-NRCS Soil Survey information.
 - f. Locus Map- Show the location of the property on a USGS topo, a NH Gazetteer, or some equivalent map. Forester drawn locus maps are acceptable.
5. Written Report: Discuss the landowner objectives, size of ownership, property location, and pertinent historical information and the status and related recommendations for forest protection regarding insects, diseases, invasive species, and wildfire and catastrophic risk reduction and rehabilitation. Wherever possible, address landowner objectives and establish priorities based on these. Write stand descriptions and management prescriptions to reflect the objectives and priorities.
6. Stand Descriptions: Detailed timber inventory and other field data collection is recommended, but not required. Based on landowner objectives, determine the level of inventory and data collection necessary. Timber and wildlife related components may include the following:
 - a. Timber Related - for each stand or similar stands give species composition, density, quality, accessibility, age class; make note of understory vegetation, and insect and disease problems.
 - b. Wildlife Related - describe current wildlife habitat value for each stand or similar stands and existing habitat features within each compartment, e.g., snags, canopy closure, vegetative diversity; describe non-forested areas by primary vegetative cover and land uses for upland (herbaceous and shrub occupied openings, active hayfields, etc.) and wetland (marsh, bog, swamp, etc).
7. Management Prescriptions: Specify the likely results and consequences of suggested management prescriptions. Prioritize and detail these according to the landowner objectives including suggestions for timing. Prescriptions include the following:
 - a. Timber: for each stand or similar stands give specific silvicultural recommendations; provide options for harvesting and/or timber stand improvement to accomplish these goals.
 - b. Wildlife Related: include management and/or protection of critical and significant habitat (buffer zones, adjusted cutting schedule for deer yards, etc.); account for protection or encouragement of existing habitat features.

- c. Recreation/Aesthetics: incorporate specific recommendations such as trail and access road construction, creation or protection of views and vantage points, addressing the impacts of recreation on other resource values.
8. For ownerships significantly impacted by natural disasters an assessment of the disaster must be included.
9. For ownerships with permanent land protection (e.g. conservation easements), include a description of the easement and restrictions and implications for forest and wildlife management activities.
10. Copies of final, approved plans are to be provided to the landowner and the UNH Cooperative Extension County Forester.
11. To meet the specifications of the Environmental Quality Incentives Program (EQIP), plans must follow these specifications and also must include a timber inventory as follows.

Inventory Specifications for Forest Stewardship Plans Financed through the Environmental Quality Incentive Program (EQIP)

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These specifications are intended to outline the minimum requirements for the inventory portion of the forest stewardship plan financed through the EQIP program. Plan preparers are encouraged to exceed these minimum standards when indicated by landowner objectives. Forest stewardship plans financed through the EQIP program must meet these inventory standards **and** the standards “Specifications for Landowner Forest Stewardship Plan”, dated January 2006. These standards apply to all EQIP plans when the EQIP contract was issued after March 1, 2006.

Data Required

Stand age and history: Include current age structure and the approximate date of stand establishment (if even-aged), or of establishment of the primary age class (if multi-aged) and a general description of stand development processes or events. (May be based on field observations, increment boring, and/ or historical information using such tools as aerial photos).

Stand volume: An estimate of stand volume by primary species and general product type (sawtimber, cordwood, pulpwood).

Stand Stocking: A quantitative estimate of site occupancy by primary species including an estimate of basal area, mean stand diameter, number of trees per acre and/ or other descriptors.

Stand/ tree quality: A description of current and potential timber quality based on species composition, acceptable growing stock, and general product type.

Stand descriptions must be provided for all areas of productive and nonproductive forestland. All stand descriptions must be based on adequate fieldwork to provide accurate and useful information.

Required fieldwork

A field inventory based on fixed area plots or variable radius points is required, to include all productive stands except:

- Seedling and sapling stands with less than 6 cords per acre volume (by ocular estimate);
- Other stands where no harvest is planned/likely due to:
 - o legal restriction, or
 - o terrain that is inoperable with conventional equipment. Lack of existing access does not exempt stands from this requirement.

Sample size: A field inventory must include a minimum of 10 points on any parcel. The field inventory for the property must meet **one** of the following standards for sampling intensity.

Sampling must occur in all stands where the inventory is required:

- Fixed area plots: a minimum 3% sample by area (distributed randomly or systematically);
or
- Variable radius plots: an average minimum intensity of 1 sample point (10 BAF) per 3 acres, or 1 sample point (20 BAF) per 1.5 acres (distributed randomly or systematically);
or
- Estimated total stand basal area, for each inventoried stand, is within a sampling error of 30% with a probability (confidence interval) of 68% or greater. For statistical purposes individual stands of 10 acres or less may be grouped with another stand of similar type and structure to produce a single statistical estimate/error; **or**
- Estimated total woodlot basal area for all inventoried stands is within a sampling error of less than 15% with a probability (confidence interval) of 90% or greater. For statistical purposes (e.g. stratified sampling) individual stands of 10 acres or less may be grouped with another stand of similar type and structure to produce a statistical estimate/error.

Written Inventory Report

Include a brief narrative outlining the fieldwork done to prepare the plan, especially to develop stand descriptions and prescriptions and other information. Include the number and type of field plots/points, and related methods used.

Reference

For additional information about planning the inventory see: **Pre-Cruise Planning** by Mark Ducey in “2001 Workshop Proceedings: Forest Measurements for Natural Resource Professionals” published as a Natural Resource Network Publication by UNH Cooperative Extension and available at: <http://extension.unh.edu/Pubs/ForPubs/measure.pdf>

Landowner Goals and Objectives

Your Forest Stewardship Plan considers the natural resources on your property and your goals and objectives. Fill this out before or during a meeting with your forester.

Rank the values you place on your forest either high (H), medium (M), low (L), not interested (NI), not applicable (NA), or don't know (DK).

- _____ Maintaining habitat for a variety of plants and animals
- _____ Maintaining habitat for specific wildlife (specify) _____
- _____ Protecting rare and endangered plant and animal species or unique natural communities
- _____ Managing the forest for periodic income from:
logs, fuelwood, pulpwood _____ maple sugaring _____ Christmas trees _____ trees and shrubs for landscaping _____ recreation _____ other _____
- _____ Providing recreation for your family:
cross-country skiing _____ snowmobiling _____ hunting _____ hiking/walking _____ nature viewing _____ mountain biking _____ off-road vehicles _____ birding _____ other _____
- _____ Providing recreation for others: (specify types allowed) _____
- _____ Limiting the use by others (specify) _____
- _____ Protecting water quality
- _____ Preventing soil erosion
- _____ Protecting wetlands
- _____ Maintaining a healthy forest
- _____ Peace & solitude
- _____ Scenery (views, special trees, rock formation, special areas, etc.)
- _____ Cutting fuelwood for personal use
- _____ Protecting historic sites (stonewalls, old foundations, etc.)
- _____ Working in the forest. Describe the time, experience and equipment you have to work in your forest: _____
- _____
- _____ Becoming/staying a certified Tree Farm
- _____ Enrolling/maintaining current use property tax assessment
- _____ Developing an estate plan
- _____ Protecting property from development
- _____ Considering a conservation easement or other permanent land protection
- _____ Developing or maintaining access roads

Other values: _____

Comments on the most important values that you place on your land.

Comments on your goals and objectives for the property.

What would you like your land to be and look like in twenty years?

What activities have you conducted on your land to achieve your goals?

What factors have limited you from achieving your goals?

What assistance do you need to help you reach your goals?

Specifications for Landowner Forest Stewardship Plan- Damage Assessments for Natural Disaster

Qualifying landowners can have natural disaster assessments completed by a licensed forester or other recognized experts in related natural resource fields. Assessments are a component of the Stewardship Plan practice and require that landowners either have an active qualifying stewardship plan for their property or be in the process of having one completed. Assessments must have as a minimum sufficient documentation and provide recommendations for landowners to make informed management decisions. They must include property maps, approved damage assessment forms or procedures established for a given natural disaster. Assessments must also outline actions and cost share program applications that will be used to restore damaged forests. A report of no action needed due to the disaster is valid. Assessors are urged to consider the potential beneficial impacts that no action may have on wildlife habitat.

Introduction

These instructions detail the minimum requirements needed to qualify as a natural disaster assessment.

A qualified forest stewardship plan must be in place before a natural disaster assessment will be approved. Assessments of the entire property are not required, but are encouraged. If a forest stewardship plan isn't in place, a forest stewardship plan can be developed that includes damage assessment information. Forest stewardship plans must cover the entire existing tree cover within a contiguous tract (land without existing tree cover may be included).

In order for the assessment to qualify the property for additional cost share practices, the practices must be needed to mitigate the effects of the disaster and help the property recover. List cost share programs that may be used to accomplish needs addressed in the assessments. Use the map to identify where the practices will be used. If possible, provide cost estimates, options, and any other information.

Instructions

Visual estimates of the damage are acceptable, however, forest health experts have found that walking land without a system results in high estimates of damage. Foresters are encouraged to use standard inventory procedures to estimate damage.

For less intense evaluations, thoroughly walk the property. If it is unclear how to rate the damaged areas, do some point sampling and rate the crown damage of the "in" trees and/or randomly "run a transect line" looking at ten dominant and codominant trees and rating their crown damage.

The intensity of the field inventory should be determined by landowner objectives.

Stratify the property according to forest type and general damage categories using aerial photos, forest type maps, elevation, or personal or landowner knowledge. Refine the stratification in the field. Include these ratings in maps and stand descriptions and prescriptions:

Relative Average Rating of Damage Categories			
% of trees with damage		Average of % of crown damage	
	<50	50-75	>75
0	NONE	NONE	NONE
<50	LOW	MEDIUM	MEDIUM
>50	LOW	MEDIUM-HIGH	HIGH

Landowner Objectives:

Include general management objectives and those that relate to the natural disaster. (Refer to the “Landowner Goals and Objectives” form”).

Property Map:

Attach a property map showing the approximate location of the damage with a relative average rating- light, medium, or heavy. Provide acreage estimates. Show existing and potential access.

Locus Map:

Show the approximate location of the property on a USGS topo, a NH Gazateer, or some equivalent map. Forester drawn locus maps are acceptable.

Access:

Provide a statement about the road and trail access condition, indicating actions needed and cost share programs that will help restore access. Show approximate location on the map. “No action needed” is an acceptable recommendation.

Safety:

Provide a statement about safety hazards resulting from the natural disaster with special notice made to areas, roads, or trails that might be frequented by the landowner and/or the public. Indicate actions needed and cost share programs that will mitigate safety hazards. If possible, show the approximate location on the map. “No action needed” is an acceptable recommendation.

The following hazard ratings are suggested:

- None No hanging limbs.
- Low 10-25% of the trees have hanging limbs.
- Moderate 25-50% of the trees have hanging limbs.
- High 50-75% of the trees have hanging limbs.
- Extreme More than 75% of the trees have hanging limbs.

Timber:

Use the rating system described above. Show the approximate damage and stand locations on the map. Consider the understory and advanced regeneration and the likely regeneration outcome with the treatment prescribed. Indicate most appropriate harvest system, logging chance, and equipment recommended. Include analysis of the casualty loss as needed by the landowner. Indicate actions needed and cost share programs that will mitigate damage to the timber resource. "No action needed" is an acceptable recommendation.

Wildlife:

Provide a statement about the positive and negative impacts to wildlife. During the field cruise look for the following attributes: large woody debris, standing live or dead snags, and increased crown openings. (Refer to "Good Forestry in the Granite State: Recommended Voluntary Best Management Practices" for suggested levels of these characteristics and for management recommendations). Indicate actions needed and cost share programs that will restore, maintain, or enhance wildlife habitat. "No action needed" is an acceptable recommendation.

Water Resources:

Provide a statement about the positive and negative impacts to streams, wetlands, and other bodies of water. Map the approximate location of these water resources. Indicate actions needed and cost share programs that will be used to remove woody debris in streams to the extent necessary to restore the function of erosion control structures. "No action needed" is an acceptable recommendation.

Fire Hazard:

Provide a general assessment of the fire hazard considering the amount of fuel and the continuity of the fuel cover on the ground; the potential for damage; and the frequency of use by people. When evaluating the fuel, compare it to acceptable levels in a traditional logging job. When considering the potential for damage, look at how close slash is to an occupied dwelling. Indicate actions needed and cost share programs that will mitigate fire hazard. "No action needed" is an acceptable recommendation.

Aesthetic and Cultural Resources:

Address aesthetic and cultural resources indicating actions needed and cost share programs that will mitigate the effects. Show approximate location on the map. "No action needed" is an acceptable recommendation.

Threatened and Endangered Species:

Address the effect that the disaster had on threatened and endangered species on the property. Indicate actions needed and cost share programs that will mitigate the effect. "No action needed" is an acceptable recommendation. Contact the NH Natural Heritage if additional information is needed.