

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE SPECIFICATION GUIDE SHEET-A
PRESCRIBED FORESTRY

(ACRE)

CODE 409

This prescribed forestry specification guide sheet-a encompasses all the purposes from the 409 standard:

1. Maintain or improve forest health.
2. Protect soil quality and condition
3. Maintain or enhance water quality and quantity
4. Maintain or improve forest productivity
5. Maintain or improve plant diversity.
6. Improve aesthetic and recreational values
7. Improve wildlife habitat
8. Achieve or maintain a desired understory plant community for forest products, grazing, and browsing.

The work shall consist of preparing a written document, herein termed “prescribed forestry plan”, that provides all of the information required by the standard, and this specification guide sheet-a. At a minimum, the prescribed forestry plan shall contain information described in the 409 standard, general specifications and at least one of the detailed specifications given for each purpose, and outlined in the

DOCUMENTATION section of this specification guide sheet-a.

The Prescribed Forestry (409) Practice Statement of Work-a and Job Sheet-a may also be used as checklists for the required documentation. NRCS staff will use the documentation section in the specification guide to complete the specifics on the job sheet and statement of work that will be given to the landowner and/ or Licensed Professional Forester (LPF).

The total forest land or wildlife habitat land being planned will herein be termed “management unit” or “unit”. Individual Plant Species/Habitat Management Units/Forest Stands will be termed “subunit”.

General Specifications

Inventory Data Required for the Management Unit and Subunits

Unit age and history: Include current plant age structure and the approximate date of subunit establishment (if even-aged), or of establishment of the primary age class (if multi-aged) and a general description of subunit development processes or events. (May be based on field observations, increment boring, and/ or historical

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| <p>Conservation practice specifications are reviewed periodically, and updated if needed. To obtain the current specifications, contact the Natural Resources Conservation Service. Please contact Sally Butler, Forster, at 207-990-9557 or email sally.butler@me.usda.gov</p> |
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information using such tools as aerial photos).

Subunit volume: An estimate of volume by primary species. Accuracy of volume estimates will be appropriate to the purpose or purposes of the practice.

Subunit Stocking: A quantitative estimate of site occupancy by primary plant species/habitat including identification of species, an estimate of basal area, mean overstory and understory tree diameter, number of live and dead trees per acre, mean overstory and understory tree height, percent canopy cover or crown spread, percent ground cover/herbaceous plants, downed woody material per acre, or other descriptors as approved by NRCS. Accuracy of stocking estimates will be appropriate to the purpose or purposes of the practice.

Descriptions must be provided for all forest/habitat types (subunits) within the Management Unit. All descriptions must be based on adequate fieldwork to provide accurate and useful information, except for those few listed below in Inventory Fieldwork Required.

Inventory fieldwork Required

A field inventory based on fixed area plots or variable radius points is required, to include all primary plant species or habitats except:

- Where the purpose for the plan does not require a detailed inventory or
- Where no management is planned on a subunit for at least 10 years or there is:
 - o legal restriction, or

- o terrain that is inoperable with conventional equipment. Lack of existing access does not exempt subunits from this requirement.

Sample size: The field inventory for the management unit must meet **one** of the following standards for sampling intensity. Sampling must occur in all subunits where the inventory is required:

In uniform subunits, typical sampling percentages range from 20 percent on small areas of from 20-40 acres to 5 percent on areas larger than 80 acres. In areas where trees are of irregular distribution, the percentage of area sampled may need to be increased to give adequate results. For small to medium-size acreage (less than 5000 acres):

- 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 subunit basal area inventoried 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 subunit of similar type and structure to produce a single statistical estimate/error; **or**
- Estimated total management unit basal area for all inventoried subunits 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.

For large acreage, NRCS will approve the sampling method. Refer to Inventory Sampling Design in the Society of American Forester's Forestry Handbook.

For all the 409 purposes, develop treatment solutions to address the problems and issues, while meeting the landowner objectives. Include a specific schedule for treatments/practices as outlined in the DOCUMENTATION section, #7.

Detailed Specifications

Forest Health

Determine the type and extent of health problems, including pests, diseases, and fire hazards. This may include invasive species problems. This purpose requires an accurate inventory if it is the primary or only purpose for the practice, so that there is documentation showing the need for treatment.

Soil Quality and Condition

Determine the type and extent of soil quality and condition problems, especially on roads, trails and landings. At a minimum, this purpose will require an inventory of the roads, trails and landings system on the management unit and their condition.

Water Quality and Quantity

Determine the type and extent of water quality and quantity problems, especially on ephemeral streams. At a minimum, this purpose will require an inventory of riparian areas and any buffers on the management unit and their condition.

Provide suggestions for best management practices to reduce or eliminate problems.

Forest Productivity

Determine the type and extent of productivity problems, especially as they relate to carbon sequestration and bio-energy issues. This purpose will require a detailed management unit and subunits inventory for accurately estimating growth and yield, especially to document the changes in volume and stocking needed for carbon reporting. Follow "Inventory Fieldwork Required" section.

Plant Diversity

When specific biodiversity concerns are the primary focus of the prescribed forestry plan, strategies and prescriptions will be developed to answer those concerns. A detailed inventory of all the plant species will be required in order to accurately manage for plant diversity.

When specific diversity concerns are not the primary focus of the prescribed forestry plan consider the following:

Delineate forest management unit by native plant communities.

Maintain functional, representative patches of all naturally occurring plant community types distributed throughout the management unit. This includes maintaining a mix of both even-aged and uneven-aged stands in various age classes. This shall provide a variety of successional stages.

Maintain connectivity of like communities and avoid creating subunits with long, straight, sharply defined boundary lines.

Maintain overstory inclusions, such as hardwoods in a softwood stand or softwoods in a hardwood stand, whenever possible.

Avoid whole-tree removal. When possible, delimb trees where felled or return slash to woods. Leave downed woody material on site after harvest operations when possible.

Retain a variety of vertical structures and crown closures over the landscape.

Base forest prescription on the natural disturbance regime for that community type and avoid converting to other community types.

Provide and implement prescribed forestry plan recommendations to enhance biodiversity at the management unit/subunit and landscape levels. For example, establish and manage wider riparian protection zones than required by law or needed to alleviate water quality concerns. Riparian habitat integrity and function will improve, as will habitat connectivity with adjacent forestland.

Aesthetics and Recreation

Determine the type and extent of aesthetic and recreational value problems.

Consider the location and timing of management activities in relation to recreational activities and viewsapes.

Wildlife Habitat

When specific wildlife species are the primary focus of the prescribed forestry plan, strategies and prescriptions will be developed to provide for targeted species biological and ecological needs. A detailed inventory of the habitat components for the targeted species and their condition will be required in order to accurately manage for that specific targeted species.

When specific wildlife species are not the primary focus of the prescribed forestry plan, consider targeting management for “umbrella” or “indicator” species.

Umbrella species (e.g., American marten, Canada lynx, American woodcock) are those species to which management is directed and benefits will extend to a wide range of co-existing species in the same habitat, which may be lesser known and difficult to manage for otherwise.

Indicator species are those whose status provides information on the overall condition of an ecosystem and are sensitive to changes in habitat conditions (e.g., salmonids, Canada lynx).

Use stream crossing methods and materials that reduce beaver-related damage and provide for passage of aquatic organisms and terrestrial wildlife. For example, install over-sized open-arch culverts or use removable, portable bridges.

It is strongly recommended that a prescribed forestry plan for wildlife habitat should be reviewed by the NRCS biologist or other professional wildlife habitat specialist for completeness.

Understory Forest Products

Determine the type and extent of the problems in achieving or maintaining a desired understory plant community for forest products. At a minimum, this purpose requires an inventory of the existing understory community and desirable forest products to be maintained and their condition.

DOCUMENTATION

This guide sheet-a includes specific documentation requirements.

Prescribed Forestry practice documentation or “prescribed forestry plan” will always include the following information unless otherwise stated or a variance is approved:

1. General Property Information including: Landowner and Plan Preparer name and address, property location including town and county, and number of years covered by this information.
2. Landowner goals and objectives, including long range silvicultural and wildlife habitat goals and other specific objectives that relate to the practice purpose(s).
3. Summary of Land Use/Forest Cover Types/Wildlife Habitat (subunits) and their acreages (for non-forest land follow NRCS land use designations).
4. General Conditions of the Property including forest/habitat management history, types and amount of topography/hydrology and soils, and types, amounts and condition of access. Also include references to other management plans that pertain to this property, including, but not limited to, wildlife habitat, NRCS conservation, MFS WoodsWise Forest Stewardship, Tree Growth, Tree Farm, and Third Party Certification.
5. Resource Inventory and analysis including: field inventory method(s) used, individual unit (i.e. plant community/wildlife habitat descriptions include type, size, configuration, condition, temporal distribution of required habitat elements, and juxtaposition of different units), and type and amounts, if any, of soil, water, air, plant, animal and human problems or other negative impacts to the unit. Also inventory species and extent of plants and animals of special concern, types and amount of historic properties that may be affected, unique plant communities, and other natural features (include recreation and aesthetic values when this is an objective) on the property. Tables, charts and maps may be used

where appropriate and shall be included in the prescribed forestry plan document.

Field inventory method and accuracy shall comply with the above section titled "Inventory Fieldwork Required".

Inventory data required for the Prescribed Forestry Plan shall comply with the above section titled "Inventory Data Required for the Management Unit and Subunit", and when required, shall provide dominant overstory, understory and ground layer live and dead species descriptions with at least scientific name and estimated basal area, percent cover, or stems/units per acre amount depending on the vegetation type and purpose for the practice. If an inventory is not needed, indicate the reason.

6. Maps delineating property boundaries, property location, topography, soils, land use/forest type/wildlife habitat maps, timber production areas, road/trail system, riparian buffers/zones, water resources, known special concern and protected species and habitat area occurrences, significant historic properties needing treatment, and other maps, tables, and charts as needed. Always include appropriate legends and interpretation sheets with maps. Provide maps with, at a minimum, enough detail and accuracy to be able to locate items in the field. An example of some items to include are: map scale, lat/long (at a minimum, but may be other approved GIS formats such as UTM 19N NAD83) of known property boundary corners, lat/long of known road locations, and lat/long of any other important natural and man-made features, like riparian buffers, and occurrences of protected species/habitats.

7. Prescription alternatives and specifications summarized for the management unit and by individual subunit, including subunit management

specifications with type of silviculture/habitat management system to be used, location, practice amounts, intensity, frequency, estimated costs, and agreed to time schedule for implementation. The specific time schedule for implementation will include the activity or practice name such as pre-commercial forest stand improvement, tree and shrub pruning, tree and shrub establishment, road/trail/landing construction and repair, riparian forest buffer establishment, and pest management and subunit location, acreage, month and year for the length of the prescribed forestry plan.

8. For all the 409 practice purposes, the Prescribed Forestry Plan shall always include specifications for the protection of other natural resources including but not limited to water, soil, air, wildlife, non-target plants and habitats, and historic properties.

9. An Operation and Maintenance Plan that provides a template for evaluating the forest/habitat conditions yearly, at the minimum, and may revise the Prescribed Forestry Plan in accordance with both the findings of the evaluation, the specific management guidelines, and the prescribed forestry standard and specification guide sheet-a.

10. Summary of legal obligations, property tax status and required environmental compliance, such as permits, if needed.

11. Include full references to other plans and literature cited.

12. Certification statement by the Plan Preparer that the plan meets all the practice standards and specifications for its intended purpose(s), and complies with applicable laws and regulations.

REFERENCES CITED

- USDA-NRCS. 2006. Maine Practice Standard, Prescribed Forestry, Code 409.
 USDA-NRCS. 2000. NRCS National Forestry Handbook.
 Wenger, K. 1984. Forestry Handbook, 2nd Edition. Society of American Foresters
 Maine Forest Service. 2004. WoodsWISE Manual of Policies, Procedures and Specifications. Maine Department of Conservation.
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 University of Maine Cooperative Extension. 1999. Biodiversity in the Forests of Maine, Guidelines for Land Management. UMCE Bulletin #7147.
 Northeast Regional Agricultural Engineering Service. 1993. A Guide to Logging Aesthetics: Practical Tips for Loggers, Foresters, and Landowners. NRAES-60.