

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

PRESCRIBED FORESTRY

(Ac.)

CODE 409

DEFINITION

Manage existing forested areas for forest health, wood and/or fiber, water, recreation, aesthetics, wildlife habitat and plant biodiversity.

PURPOSE

- Maintain or improve forest health
- Protect soil quality and condition
- Maintain or enhance water quality and quantity
- Maintain or improve forest productivity
- Maintain or improve plant diversity
- Improve aesthetic and recreational values
- Improve wildlife habitat
- Achieve or maintain a desired understory plant community for forest products.
- Store carbon
- Produce energy biomass

CONDITIONS WHERE PRACTICE APPLIES

- On all forested land and on land capable and suited to growing trees.

CRITERIA

General Criteria Applicable to All Purposes

Activities to achieve the intended purpose(s) shall be based on a written forest management plan (also called a forest plan or forest stewardship plan) approved by a professional forester that addresses the owner's objectives as well as perpetuating a sustainable forest ecosystem based on ecological parameters such as forest types, soil types, past harvest

history, natural community types and successional trends.

A forest management plan that has elements of a more comprehensive conservation plan shall recognize other requirements of the conservation plan and be compatible with those other requirements.

The forest management plan will follow federal, state and local laws and regulations.

The forest management plan must have a property description, aerial photographs, soils map and soils information.

The forest management plan must have a detailed description of the existing forest condition and a description of the desired forest condition.

The forest management plan shall be developed for a minimum management period of 10 years and include a detailed management activities schedule and timeline for at least a five year period.

The forest management plan shall include a description of and rationale for selection of silvicultural systems including ecological and economic considerations.

Planned activities shall be examined collectively. Coordinate and time activities to optimize the stated purposes of conservation practices. Activities are not limited to conservation practices.

Planned activities shall lead to a distribution of age classes appropriate to forest conditions and landowner objectives.

Additional Criteria to Protect Soil Quality and Condition

Follow "Iowa Forestry Best Management Practices."

Control or prevent erosion. Soil loss will not exceed allowable average annual soil loss (T) as defined by current, approved erosion prediction technology.

Minimize impacts on landscape when placing roads, harvest trails and landings.

Seed disturbed areas for erosion and sediment control as needed.

Maintain adequate cover to control soil erosion and prevent gully formation. If gullies exist in forestland because of agricultural or engineering practices on adjacent area, explore options to minimize future active gully erosion.

Minimize soil compaction during all activities occurring in the forest.

Additional Criteria to Maintain Water Quality and Quantity

Maintain the quality and quantity of water flowing from and through forest lands.

Ensure road location, design, construction maintenance, and vegetation reestablishment to reduce water pollution.

Use and maintain filter strips or buffers to remove or reduce the transportation of sediment, nutrients or organic matter into streams, lakes or other sensitive areas.

Develop written guidelines for stream crossings. Avoid altering stream courses and drainage patterns.

Follow "Iowa Forestry Best Management Practices."

Additional Criteria to Maintain Forest Productivity

Sustainable harvest levels shall be based on one or more of the following:

- Documented growth and regeneration data
- Site index models
- Site productivity or culmination of mean annual increment (CMAI) growth
- Desired future condition
- Cyclical and natural disturbances.

Develop written guidelines on protecting the residual forest, including regeneration, during and following harvest operations.

Identify tree and shrub species to be retained.

Follow established guidelines for spacing, density, size class, number and amounts of trees and understory species to be retained.

Ensure spacing of residual trees is appropriate to their size and species.

Identify pest problems, including insects, diseases, mammals and invasive/noxious plants, and develop management guidelines.

Additional Criteria to Maintain Plant Diversity

Assess current conditions including ecological processes such as disturbance regimes, unique natural communities such as old-growth, rare and imperiled plant species including those that are state or federally listed, and water and soil resources.

Develop written guidelines addressing the management of these special plant species and their communities.

Vary the criteria according to state, federal or local requirements.

Additional Criteria for Natural Regeneration

Natural regeneration: The use of a natural seed source may be used under any of the following conditions:

- Areas that experience flooding that make plantings unlikely to succeed.
- Depression areas too wet to machine or hand plant.
- Sites likely to be invaded by soft-mast species that would likely out-compete planted hard mast species.
- Sites that are within 200 feet of existing mature woodlands and adjacent to desirable seed sources on two sides.
- Sites that are unlikely to experience heavy deer browse.

Additional Criteria for Planting in Existing Woodlands

- Plant suitable species depending on the shade or canopy cover.
- Control herbaceous and shrubby competition.

- Assess conditions and protect planted seedlings if necessary.
- Planting density should be 50 – 200 seedlings per acre.

Additional Criteria to Improve Aesthetic and Recreational Values

Develop written guidelines to improve ecotourism and recreation, including hunting, fishing, hiking, photography, and wildlife watching.

Select and manage plant materials adapted to the soil and climatic conditions and that fulfill a specific aesthetic or recreational need.

Additional Criteria to Improve Wildlife Habitat

Identify habitat needs for desired wildlife species and develop specific forestry management guidelines to address those habitat needs.

Identify and develop specific management guidelines for habitat protection areas.

Coordinate forest and wildlife management objectives and activities.

Additional Criteria to Maintain a Desired Understory Plant Community for Forest Products

Develop written guidelines for inventorying plants, monitoring plant populations and protecting the forest ecology while allowing the sustainable harvest of non-timber products.

Assess the impacts of timber production and harvest on the non-timber products.

Space trees properly to produce desired forage production, increase desirable woody plants for browsing, and provide conditions favorable for understory forest products.

When underplanting, trees should be planted sufficiently in advance of overstory removal to ensure full establishment.

Prescribed burning may be used to enhance natural regeneration and for site preparation, to control invasive species, to maintain or enhance understory diversity. (See Prescribed Burning Standard 338.)

CONSIDERATIONS

Consider adjacent and cumulative land use effects.

Consider social effects of decisions.

PLANS AND SPECIFICATIONS

Plans and specifications shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose(s).

The following components shall be included in the forest management plan:

- Statement of landowner's goals and objectives.
- Description of ecological and silvicultural systems and rationale for selection of silvicultural system.
- Description of property to be managed will include quarter section, section, township, range and county.
- Maps of forest and soil types and where silvicultural treatments are required.
- Description of the existing forest condition and the desired forest condition.
- Location of roads, property boundaries, protected areas.
- Planned management activities, including regeneration/harvest strategies and guidelines for addressing soil, water, air, plant, animal and human resource problems and concerns. They may or may not be conservation practices.

OPERATION AND MAINTENANCE

Maintain a yearly summary of forest management activities including harvest information.

Conduct periodic inspections during and after treatment activities to ensure that the purposes are achieved and resource damage is minimized, e.g., post harvest inspection, assessment of insects, disease and other pests, storm damage, and damage by trespass. The results of the inspections shall determine the need for additional treatment under this practice.

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Review timetables, schedules and coordination actions periodically and modify as needed.

REFERENCES

Iowa Forestry Best Management Practices:
<http://www.iowadnr.com/forestry/bmps.html>