

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

BRUSH MANAGEMENT

(Acre)
CODE 314



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DEFINITION

Removal, reduction, or manipulation of non-herbaceous plants.

PURPOSE

- Restore natural plant community balance.
- Create the desired plant community. *i.e.* *Plant community desired for domestic animals and/or wildlife species of concern.*
- Restore desired vegetative cover to protect soils, control erosion, reduce sediment, improve water quality, and enhance stream flow.
- Manage noxious and/or invasive woody plants.
- Maintain or enhance wildlife habitat including that associated with threatened and endangered species and/or species of concern.
- Improve forage accessibility, quality, and quantity for livestock.
- Protect life and property from wildfire hazards.

CONDITIONS WHERE THIS PRACTICE APPLIES

On rangeland, grazed forests, native or naturalized pasture, pasture, and hay lands where removal or reduction of excessive woody (non-herbaceous) plants is desired.

Brush Management **will be applied** only to sites:

1. With soils having the potential to produce the desired plant community.
2. When brush invasion/infestation exceeds the treatment threshold (Refer to the "Brush Management Specifications Guide.")
3. That will receive appropriate grazing management and/or other maintenance measures needed to ensure success of the treatment.
4. Where treatment will not adversely affect habitat for threatened or endangered species.

Brush management **will not be applied** to sites:

1. Where removal of woody plants will result in sustained accelerated erosion.
2. Where benefits are not commensurate with the cost and objectives of the landowner.
3. Where removal of woody plants will adversely affect the long-term productivity or optimal uses of the land.
4. Where control of grazing/browsing animals is inadequate to prevent degradation of the plant community and other resources following treatment.
5. In wetlands, removal of woody stems and stumps may constitute a violation of the Food Security Act. However, for activities such as removal of exotic species, an exemption may apply (e.g., Minimal Effect Exemption). Refer to Section I of the FOTG (Laws-Food Security Act) and the National Food Security Act Manual (NFSAM) for guidance.

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.

6. Where there will be a long-term negative impact to environmental, cultural, or landscape resources.

CRITERIA

General Criteria Applicable to All Purposes

Comply with all local, state, and Federal laws and regulations when applying this.

During planning, design, and implementation of this conservation practice evaluate and avoid or minimize to the extent practicable impact to cultural resources, wetlands, and Federal and State protected species in accordance with established National and Florida NRCS policy, General Manual (GM) Title 420-Part 401; Title 450-Part 401, Title 190-Parts 410.22 and 410.26), National Planning Procedures Handbook (NPPH) FL Supplements to Parts 600.1 and 600.6, National Cultural Resources Procedures Handbook (NCRPH), National Food Security Act Manual (NFSAM), and the National Environmental Compliance Handbook (NECH).

Obtain all necessary permits and letters of exemption prior to implementation of this practice.

During the planning process conservation planners need to:

1. Discuss future land use opportunities in relation to brush management, including expected effect on forage production, livestock management, wildlife habitat, potential recreation use, and other uses.
2. Discuss the reasons why the brush species have increased, the technical requirements of the selected control method, possible hazards, and costs of the practice.
3. Assist in the development of a grazing management plan that will allow the treated area to recover following treatment and create the desired plant community.
4. Assist cooperators to understand the environmental impacts of brush management, including any positive or negative impacts occurring on and/or offsite.

Design brush management treatments that will achieve the desired amount and structure of woody vegetation within the desired plant community. The desired amount of woody

vegetation may be expressed as plant density, canopy cover, or height by species.

Apply Brush Management treatments in a manner to achieve the desired control of the target woody species and its effect on desired plant species.

Select methods, timing, and management of treatment that will achieve the desired purpose for the woody species to be controlled. Refer to the Brush Management Specification Guide when selecting the appropriate method, timing, and management to achieve the desired result.

Design treatment methods that will assist the cooperator meet the recorded land-use objectives prior to implementation of this practice.

Plan treatments so they are applied in a manner that will not result in sustained (long-term) accelerated soil erosion or sustained (long-term) negative impacts to other environmental or cultural resources.

Where treatments are applied to areas grazed by livestock, apply Florida NRCS Conservation Practice Prescribed Grazing (Code 528) and Access Control (Code 472) to ensure the desired response from the brush management treatments is achieved.

Plan the timing of brush management treatments they are applied in accordance with anticipated growing conditions needed to obtain the desired changes in the plant community. This includes planning brush management treatments at times when woody species are most vulnerable to the treatment selected.

Additional Criteria for Improving Wildlife Habitat

Plan Brush Management so that it is applied in a manner to meet the habitat requirements of the wildlife of concern.

Plan Brush Management so that it will not adversely affect threatened or endangered species or their habitats.

Design and implement site-specific treatments in accordance with Florida NRCS Conservation Practice Standards Upland Wildlife Habitat Management (Code 645) and Wetland Wildlife Habitat Management (Code 644).

Additional Criteria to Improve Forage Accessibility, Quality and Quantity for Livestock

Implement a prescribed grazing to ensure desired response from treatment. Plan the prescribed grazing system so that it is applied in accordance with FL NRCS Conservation Practice Standard Prescribed Grazing, (Code 528) and other facilitating practices as needed.

A defer of all livestock grazing as needed following treatment to allow desirable plants an opportunity to recover.

The length of the deferment period should be appropriate for the method of treatment applied. Table 1 provides guidance on the minimum length of the deferment period.

Deferment periods may be extended as necessary to ensure adequate recovery of desirable plants based on growing conditions.

Begin the deferment period immediately following treatment.

Table 1: Deferment Periods

Treatment	Length of Deferment Period
Mechanical on rangeland or forestland	90 consecutive days during the period of June 1 through October 1, unless <u>only spot treatment was applied.</u>
Mechanical (Roller Chopping/Aeration) on pasture or hayland	30 consecutive days during the period of May 1 through October 1, unless <u>only spot treatment was applied.</u>
Mechanical (Mowing) on pasture or hayland	14 consecutive days during the period of May 1 through October 1, unless <u>only spot treatment was applied.</u>
Chemical on rangeland or forestland	Follow Label requirements and Instructions.
Chemical on pasture or hayland	Follow Label requirements and Instructions.
Biological	Deferment depends on treatment applied. Refer to Planning and Implementation Guidance document for additional guidance.

Additional Criteria for Reducing Wildfire Hazards

Control undesirable woody plants in a manner that creates the desired plant community which reduces wildfire hazard conditions.

CONSIDERATIONS

Consider impacts to soil erosion, sedimentation, and water quality following treatment.

Consider the difficulty of vegetation recovery when choosing a method of control that causes soil disturbance.

As a general rule, mechanical treatments conducted during periods of drought will increase stress and mortality of non-target vegetation. This may require the deferment from grazing to be extended a full year or more.

Brush management objectives and procedures should be clearly defined for each kind of land to be treated and land use.

It is usually desirable to exclude all brush on pasture and hayland except for odd areas and mottes (clumps) left for shade, wildlife, or aesthetic value.

Where wildlife habitat is the primary or secondary land use, woody vegetation should be manipulated to provide optimum wildlife habitat and to facilitate wildlife management goals and objectives.

Selected areas of brush need not be treated if soil erosion is negligible and these areas are needed for livestock protection and shade, as food and cover for wildlife, or for aesthetic values.

Only apply brush management treatments to sites and land uses that will:

1. Achieve the desired woody species control objectives, and
2. Will respond with a cost effective establishment of the desired plant community.

Consider using a combination of treatments to achieve the best results. A combination mechanical, biological, chemical, and/or prescribed burning often results in the greatest amount of control.

Selection of the appropriate treatment needed to attain the desired result is dependant upon factors such as:

1. Kind of land (site), or land use;
2. Topography;
3. Species of woody plants - whether they are root-sprouters or non-sprouters;
4. Size, abundance, and distribution of woody plants;
5. Hazards of treatment, if any;
6. Objectives of the cooperators; and
7. Costs in relation to expected benefits.

Use of biological control agents may slow the spread of brush infestations. However, the use of goats and/or other browsing animals may have a significant negative impact on wildlife food and cover.

PLANS AND SPECIFICATIONS

Prepare plans and specifications for the treatment option selected by the decision maker for each pasture, field, or management unit where Brush Management will be applied.

Base plans and specifications on the practice standard and may include narratives, maps, drawings, job sheets, or similar documents. At a minimum, these documents will contain the following data:

- Brush canopy and/or species count,
- Transect line locations,
- Percent canopy, and/or
- Species numbers per acre of the target plant(s).

As needed, maps or drawings showing areas to be treated and areas to be left undisturbed should be prepared.

For mechanical treatment methods, plans and specifications will include types of equipment and any modifications necessary to enable the equipment to adequately complete the job. Also included should be:

- Dates of treatment,
- Operating instructions, and
- Techniques or procedures to be followed.

For chemical treatment methods, plans and specifications will include:

- Herbicide name (Chemical name not trade name);
- Rate of application or spray volumes;
- Acceptable dates of application
- Mixing instructions (if applicable);
- Any special application techniques, timing considerations or other factors that must be considered to ensure the safest, most effective application of the herbicide;
- Reference to label instructions; and
- Documentation of the use of environmental risk analysis tools (such as WIN-PST Soil Pesticide Interaction Loss Potential and Hazard Rating Report) in formulating alternatives with the client.

For biological treatment methods, plans and specifications will include:

- Kind of biological agent or browsing animal to be used,
- Timing, duration and intensity of grazing or browsing,
- Desired degree of grazing or browsing use for effective control of target species, and
- Special precautions or requirements when using insects or plants as control agents.

OPERATION AND MAINTENANCE

Operation: Apply Brush Management practices using approved materials and procedures. Operations will comply with all local, state, and federal laws and ordinances.

Determine success of the by evaluating regrowth or reoccurrence of target species after sufficient time has passed to effectively monitor. Evaluation periods will depend on the methods and materials used.

Maintenance: Following initial application, some regrowth, resprouting, or reoccurrence of brush should be expected. Spot treatment of individual plants or areas needing retreatment should be done as needed.

REFERENCES

National Cultural Resources Procedures Handbook (NCRPH)

National Environmental Compliance Handbook (NECH)

National Food Security Act Manual (NFSAM)

NRCS General Manual (GM)

Title 190, Part 410.22-Endangered and Threatened Species of Plants and animals and State Species Concern

Title 190, Part 410.26-Protection of Wetlands

Title 420, Part 401-Cultural Resources

Title 450, Part 401-Technical Guides

National Planning Procedures Handbook (NPPH)

FL Supplements to Parts 600.1 and 600.6

National Range and Pasture Handbook (NRPH)

Florida NRCS Conservation Practice Standards

Access Control, Code 472

Firebreak, Code 394

Fuel Break, Code 383

Pest Management, Code 595

Prescribed Burning, Code 338

Prescribed Grazing, Code 528

Upland Wildlife Habitat Management,
Code 645

Wetland Wildlife Habitat Management,
Code 644

Weed Management in Pastures and Rangeland-
2009, UF-IFAS, SS-AGR-08

<http://edis.ifas.ufl.edu/WG006>

Herbicide Application Techniques for Woody Plant
Control, UF-IFAS, SS-AGR-260

<http://edis.ifas.ufl.edu/AG245>

Weed Management in Fence Rows-2009, UF-
IFAS, SS-AGR-110

<http://edis.ifas.ufl.edu/wg210>