

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

BRUSH MANAGEMENT

(Acre)

CODE 314

DEFINITION

Removal, reduction, or manipulation of non-herbaceous plants

PURPOSES

This practice may be applied to accomplish one or more of the following purposes:

- Restore natural plant community balance
- Create the desired plant community
- Reduce competition for space, moisture, and sunlight between desired and unwanted plants
- Manage noxious woody plants
- Restore desired vegetative cover to protect soils, control erosion, reduce sediment, improve water quality, and enhance stream flow
- Maintain or enhance wildlife habitat including that associated with threatened and endangered species
- Improve forage accessibility, quality, and quantity for livestock
- Protect life and property from wildfire hazards
- Improve visibility and access for handling livestock

CONDITIONS WHERE THIS PRACTICE APPLIES

On rangeland, native or naturalized pasture, and pasture and haylands where removal or reduction of excessive woody (non-herbaceous) plants is desired

Where adjustments in grazing management, prescribed burning, and other conservation practices will not restore the kind of plant cover needed to attain conservation objectives within a reasonable time frame

Where brush management will improve areas for wildlife, recreation, or natural beauty

Where control of woody species is necessary to conserve moisture

Where a reduction of brush is necessary for the safety of life and property in areas of high wildfire hazard

CRITERIA

General Criteria Applicable for All Purposes Stated Above

When active erosion and accelerated sediment yield are resource concerns caused by excessive woody plant canopy cover and competition with herbaceous species, brush management is an essential practice.

Brush management will be designed to achieve a desired woody plant density, distribution, canopy cover, or height. Mechanical, chemical, biological, prescribed burning, or a combination of these methods, will be used to accomplish the desired control. No single treatment of a target species is usually adequate to address a brush problem. A systemic approach should be used which may involve several treatments applied over several years.

The use of brush management methods having the least potential hazards to humans, livestock, wildlife, and environment will be recommended.

Brush management will be planned in a manner that will not adversely affect threatened or endangered species or their habitats.

Areas of critically important wildlife habitat will be identified and landowners will be encouraged to implement the following measures, or treat at a time when adverse impacts will be minimized:

- Exclude the sensitive habitat areas from the brush management practice
- Perform selective brush management in these sensitive habitat areas that create conditions that would favor the threatened or endangered species
- Fence the sensitive habitat areas to protect them from livestock grazing where biological control is used

Mechanical operations and prescribed burning will be timed to prevent exposure of bare soil for prolonged periods to reduce erosion and potential sedimentation to waterways.

Mechanically disturbed areas must be revegetated if 25 percent or more of the existing grass cover is destroyed by mechanical disturbances or if reseeding from existing seed sources will not provide adequate cover to protect the site. Refer to Conservation Practice Standard 550, Range Planting.

Compliance with applicable federal, state, and local laws and regulations, including permits, permissions, or notifications is required.

Where livestock are present Conservation Practice Standard 528, Prescribed Grazing, shall be applied to ensure desired response from treatments and to ensure sufficient fuel loads will be available for an effective fire if prescribed burning is used.

Brush management will not be applied to only a part of a pasture unless the entire pasture can be managed according to the needs of the treated area.

Additional Criteria for Improving Wildlife Habitat

Brush management will be planned and applied to meet the habitat requirements of the wildlife species of concern, as identified in the plan. Refer to Wildlife Habitat Appraisal Guides for the species of concern.

The type of cover and size of the areas to be retained depends on the type of wildlife being benefited. Areas of critically important wildlife habitat will be pointed out and landowners will be encouraged to exclude them from treatments, or treatment will be designed to minimize adverse impacts.

Where the primary land use is wildlife, brush should be managed so as to provide travel lanes, escape cover, loafing areas, and browse plants as needed to meet the requirements for the species of concern.

On areas of uniform slopes, leave strips or clumps of brush to provide food and cover.

Leave fruit and mast trees to produce food in brush areas.

In mixed brush, less desirable species may be controlled to promote the development of the more important plant species, which contribute to wildlife food and cover.

Applications of certain herbicides may negatively impact desirable forbs and woody species that are essential to wildlife habitat. Special precautions may be necessary when herbicides are used.

When important to fisheries, sufficient woody cover will be retained in riparian areas to provide for shading, bank stability, and detritus.

Inventories and evaluations will be made to determine the location and amount of woody vegetation to be retained for wildlife and those selected areas indicated on the plan map.

Additional Criteria for Reducing Wildfire Hazards

Control undesirable volatile woody plants in a manner that creates the desired plant community and prevents hazardous wildfire conditions.

Refer to guidelines in the electronic Field Office Technical Guide (eFOTG), Section IV, Conservation Practice Standard and Construction Specifications 394, Firebreak, for design criteria.

CONSIDERATIONS

General Considerations Applicable for All the Purposes Stated Above

Timing and sequence of brush management in a field or operating unit should be planned to ensure the needed grazing management can be accomplished.

Consider soil erosion potential and difficulty of vegetation establishment when choosing a method of control that causes soil disturbance.

Brush management objectives and procedures may be different for different kinds of land and for different uses of the land.

- If primary use of rangeland is for cattle and sheep, the objectives may be to manipulate numbers, species, and distribution of brush to approximate that of natural or climax conditions for the site.
- If the primary use is for goats and some types of wildlife species, the objective may be to maintain more brush than is natural to the site and to manage the brush in a pattern on the land that favors both livestock and wildlife.

Mechanical, chemical, biological, and prescribed burning treatment methods may be used singly or in combination, depending on such factors as:

- Kind of land and/or site
- Topography
- Species of woody plants (sprouting or non-sprouting)
- Size, abundance, and distribution of woody plants
- Potential hazards of treatment

- Wildlife habitat needs
- Impacts to recreation and aesthetics
- Objectives of the land manager
- Costs in relation to expected benefits
- Extent of existing erosion or erosion potential

Considerations Applicable for Improving Wildlife Habitat

Brush on land where wildlife is a primary or important use should be manipulated to provide optimum habitat and to facilitate management for the wildlife species identified.

Tree-lined drainage ways and riparian areas can provide thermal cover, travel lanes, and other habitat components. However, if the woody cover is excessive for the site, or is not native to the site, the adverse impact to hydrology may offset the wildlife benefit.

When brush is being managed to improve rangeland, consider leaving selected areas of desirable brush species that provide food and cover for wildlife. The type of cover and size of the areas to be retained depends on the type of wildlife being benefited, client desires, and the need for soil erosion protection.

PLANS AND SPECIFICATIONS

Plans and specifications will be prepared for each pasture, field, or management unit where brush management will be applied based on the goals and objectives of the land manager. Plans and specifications for applying brush management shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve all of its intended purposes.

As a minimum, a conservation plan that includes brush management will contain:

- Narratives of landowner's goals and objectives
- Easily understood maps, drawings, or overlays indicating areas to be treated and those to be left untreated
- An estimate of percent canopy cover and/or stem densities per acre and/or transect line locations indicating percent canopy cover of target species

- An evaluation method and date to determine the success of treatment application on the target species
- A follow-up or maintenance plan (timing and methods) developed prior to applying the primary brush control treatment

A brush management plan shall be designed and certified on Form KS-ECS-314.

METHOD OF MANAGEMENT

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:

- Acceptable dates of treatment application per method
- Techniques or procedures to be followed

For chemical treatment methods, plans and specifications will include identification of fields or areas that are susceptible to surface or ground water contamination. Also included should be:

- Herbicide name
- Rate of application or spray volumes
- Acceptable dates of application
- Mixing instructions
- 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 herbicide label instructions, requirements, and responsibilities

For biological treatment, no biological agents are approved at this time.

For prescribed burning, refer to guidelines in the eFOTG, Section IV, Conservation Practice Standard 338, Prescribed Burning. If erosion protection is identified, provide as needed during the improvement period.

OPERATION AND MAINTENANCE

Operation: Brush management practices shall be applied using approved materials and procedures. Operations will comply with all local, state, and federal laws and ordinances.

Success of the practice shall be determined by evaluating regrowth or reoccurrence of target species after sufficient time has passed to monitor the situation and gather reliable data. 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.

Prescribed burning can be used effectively to remove debris remaining from mechanical or chemical control practices as well as suppress or control many species of brush. Where safe and feasible, prescribed burning may be periodically used to maintain desired vegetation. Refer to Conservation Practice Standard 338, Prescribed Burning.

Where livestock are present, the manager will implement Conservation Practice Standard 528, Prescribed Grazing, to ensure longevity of the practice.