

NATURAL RESOURCES CONSERVATION SERVICE
BRUSH MANAGEMENT (ACRE)
CODE 314
MONTANA CONSERVATION PRACTICE SPECIFICATION

DEFINITION AND PURPOSE: This specification provides guidance for the planning and implementation of brush management.

PLANNING: All brush management practices in Montana have the potential to impact wildlife habitat. All brush management plans should be made in consultation with Montana Fish, Wildlife, and Parks, and other appropriate partner agencies.

Brush management may be applied to the following species:

1. Native Species

| | |
|-----------------------------|---|
| Ponderosa pine | <i>Pinus ponderosa</i> |
| Rocky Mountain juniper | <i>Juniperus scopulorum</i> |
| Fringed sagewort | <i>Artemisia frigida</i> |
| Big sagebrush | <i>Artemisia tridentata</i> |
| Silver sagebrush | <i>Artemisia cana</i> |
| Western or common snowberry | <i>Symphoricarpos occidentalis or albus</i> |
| Plains pricklypear | <i>Opuntia polyacantha</i> |
| Broom snakeweed | <i>Gutierrezia sarothrae</i> |
| Rabbitbrush spp. | <i>Chrysothamnus</i> spp. |

2. Introduced Species

| | |
|---------------|-------------------------------|
| Russian olive | <i>Elaeagnus angustifolia</i> |
| Tamarisk | <i>Tamarix</i> spp. |

Species not contained in the above list may be treated after consultation and approval of the state resource conservationist.

I. TREATMENT METHODS:

A. Chemical Treatment

Specifications for the kind of chemical, methods, and time of application will be in accordance with the herbicide label and the latest edition of *Montana, Utah, Wyoming Weed Management Handbook*, Cooperative Extension Services, Montana State University. Amount of chemical will not exceed the label but may be less than the label if published in the above reference.

Dates of chemical application must coincide with the proper growth stage(s) of the target species.

Diesel carriers will not be used with chemical treatments due to adverse effects on wildlife species.

Aerial Application—Flight must be low enough to obtain proper distribution and coverage and be made when wind velocities are low enough to prevent drift into sensitive areas. Where water is used as a carrier, commercial wetting agents shall be used according to manufacturer's recommendations.

Specification MT314-2

Caution cooperators using chemical herbicides as follows: If pesticides are handled or applied improperly, or if unused portions are not disposed of safely, they may be injurious to humans, domestic animals, desirable plants, and fish or other wildlife; and they may contaminate water supplies. Drift from aerial spraying can contaminate nearby crops and other vegetation. Follow the directions and heed all precautions on the container label.

Reference Field Office Technical Guide (FOTG), Section IV–Practice Standards and Specifications, 595–Pest Management.

B. Mechanical Treatment

Equipment will consist of mowers, choppers, beaters, bulldozers, blades, rails, chains, or other suitable equipment, as appropriate to the site and target species. The optimum season or date(s) for the treatment selected will be outlined in the specification. Erosion protection needed during and post treatment will be addressed.

C. Biological Treatment

Grazing with alternative kinds of livestock, particularly browsers such as sheep or goats during critical growing stages of target plants can be effective control for certain species. The hoof action associated with winter-feeding of livestock can also effectively reduce some brush species. Host specific insects may be beneficial to reduce some brush species. Specifications for biological treatment will be developed based on the individual problems of the area, and available research data.

D. Prescribed Burning Treatment

Treatments will be conducted in accordance with FOTG, Section IV–Practice Standards and Specifications, 338–Prescribed Burning, and all federal, state, tribal, and local laws and regulations.

II. SPECIES SPECIFIC TREATMENT RECOMMENDATIONS:

A. Native Species

Ponderosa Pine: The preferred method of controlling pine encroachment is prescribed burning. Burning prior to the time trees reach a height of six feet will provide excellent control, ensure adequate fine fuels, and reduce hazards associated with prescribed fire in a least cost manner.

Mechanical methods such as cutting individual trees or dozing are effective but more labor and cost intensive. Chemical methods are also available but primarily are cost prohibitive.

The thinning of Ponderosa pine to commercial timber production, where applicable, may provide additional income while maintaining the desirable understory vegetation. See FOTG, Section IV–Practice Standards and Specifications, 666–Forest Stand Improvement.

Rocky Mountain Juniper: The preferred method of controlling juniper encroachment is prescribed burning. Burning prior to the time trees reach a height of five feet will provide excellent control, and ensure adequate fine fuels to carry a fire, which is a problem in older stands of juniper.

Mechanical methods such as cutting individual trees, dozing, chaining, and cabling are effective but labor and/or cost intensive. Chemical methods are also available but are generally less cost effective than prescribed burning.

USE CAUTION WHEN PLANNING FOR THE FOLLOWING SPECIES: High density, canopy cover, or production of the following species is often indicative of improper grazing management sometime in the past. Control treatments should only be applied if prescribed grazing is planned to assure the success of treatment, and the desired plant community following treatment. Native brush species provide valuable food and cover for wildlife, and the potential impacts to wildlife species of concern must be addressed in the plan before applying treatment.

Fringed sagewort: Chemical control is preferred due to this species' ability to sprout from roots and plant bases following burning or mechanical treatment. Utilizing alternative grazing animals such as sheep and goats can be effective in controlling this species.

Big sagebrush: Prescribed burning is the preferred least cost control method. Grazing deferment for one to two years prior to burning may be needed to ensure adequate fine fuels.

Chemical control is effective if burning is not possible. Correct timing of treatments is important to assure best control, and to lessen impacts to non-target species.

Utilizing alternative grazing animals such as sheep and goats can be effective in controlling this species.

Mechanical methods such as chaining or cabling are not as effective, are higher cost, and cause soil disturbance.

When planning for sagebrush dependant wildlife species, additional planning guidance can be found in the *Montana Sage Grouse Conservation Plan (Draft), 2002.*

Silver sagebrush: Chemical control is preferred due to this species' ability to sprout from roots and plant bases following burning or mechanical treatment. Utilizing alternative grazing animals such as sheep and goats can be effective in controlling this species.

Plains pricklypear: Chemical control methods generally produce the best control. Dense stands can be reduced by blading in the dormant season just below the soil surface into windrows. Windrows must be turned the following year to prevent bladed pads from re-establishing. Expect no more than 75-80% reduction after 5 years.

Broom snakeweed: This species is cyclical in its occurrence, so feasibility of treatment must be carefully considered. Prescribed burning is the most effective and least cost treatment. Chemical control is effective if burning is not possible.

Rabbitbrush spp.: Chemical control is preferred due to this species' ability to sprout from roots and plant bases following burning or mechanical treatment.

Western or common snowberry: Utilizing alternative grazing animals such as sheep and goats can be effective in controlling this species. Intensive prescribed grazing with cattle directly within colonies of this species will provide adequate control. Hoof action associated with winter-feeding can also be effective.

Chemical methods are effective as this species has the ability to sprout from roots and plant bases.

B. Introduced Species:

Russian olive: Chemical control methods generally produce the best control. Mechanical methods such as cutting individual trees, dozing, and cabling are effective but labor and cost intensive. Stumps of individually sawn trees should be chemically treated to prevent sprouting. Control is most effective where trees are less than five feet in height. Plants may sprout after burning.

Submergence in water where feasible for 28 months will reduce light to moderate stands. Inundate plants for one entire growing season, and over half the next two growing seasons.

Specification MT314-4

Tamarix: This species is an aggressive sprouter. Effective control of medium to heavy stands can be accomplished by chemical treatments or a combination of root plowing, burning and chemicals. Root plow 12 to 18 inches below soil surface. Pile and burn vegetation to prevent re-sprouting. Follow-up with chemical treatments on regrowth.

Submergence in water where feasible for 28 months will reduce light to moderate stands. Inundate plants for one entire growing season, and over half the next two growing seasons.

III. MANAGEMENT FOLLOWING TREATMENT:

If chemical methods of treatment are used all label restrictions concerning grazing, haying, or other uses will be applied.

Grazing deferment periods following this practice will be for two years—one year during treatment, and one year following treatment, during the growing season (May 1 to October 1).

Drought following treatment, low vigor of desirable grasses, invasion of the treated area by undesirable plants, and/or other abnormal conditions may make it desirable to extend the deferment beyond the above requirements. If any of these conditions exist, the NRCS conservationist will encourage the cooperators to extend the deferment periods.

The manner in which the forage species will be grazed following the deferment period will be in accordance with specifications for FOTG, Section IV—Practice Standards and Specifications, 528A—Prescribed Grazing.