# Brush Management

***Wisconsin Job Sheet 618***

**Natural Resources Conservation Service (NRCS) Wisconsin**

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|---|---|
| **Landowner/Producer:** | **Farm #:** |
| **Program:** | **Tract #:** |
| **Contract No.:** | **Field(s):** |
| **Designed By:** | **Plan Date:** |
| **Project Location:** Section ___ T ____ R____<br><br>**County:** | **Planned Date(s) for Implementation:** |

## INTRODUCTION

Brush Management is the removal, reduction, or manipulation of non-herbaceous plants. It is most commonly used on pasture, forestland, wildlife land, or as part of the operation and maintenance (O&M) of conservation practices where removal or reduction of non-herbaceous vegetation is desired.

**LANDOWNER OBJECTIVES** (check all that apply)

- ☐ Restore natural plant community.
- ☐ Establish desired vegetation to control erosion, reduce sediment, improve water quality, and enhance stream flow.
- ☐ Reduce competition caused by unwanted plants.
- ☐ Manage noxious woody plants.
- ☐ Create a desired plant community.
- ☐ Improve forage for livestock.
- ☐ Maintain or enhance wildlife habitat.

Additional Narrative:

## LOCATION MAP

Attach an aerial photo or diagram showing each treatment site location, field property boundaries, and any sensitive areas which require protection.

## CULTURAL RESOURCES AND THREATENED AND ENDANGERED SPECIES

The planner shall evaluate the site for the presence of cultural resources and threatened and endangered species and, as necessary, develop strategies to avoid adverse impacts.

## MANAGEMENT METHODS

Before starting a brush control treatment, it is important to identify the plants targeted for control and any non-target plants that you want to maintain and enhance. It is important to understand the life cycles of both types of plants and to time the treatment of the targeted plants when they are most vulnerable. When possible, try to avoid treatments when non-target plants could be impacted.

The references section of this job sheet contains references that can be used to identify invasive plants and provides treatment recommendations.

Chemical

When using chemical control, spot treatment methods should be used whenever feasible to apply herbicides. Success depends on applying the right herbicide at the correct rate when weather conditions are favorable and when the species to be controlled is weakest. Some examples of chemical treatments are stump treatment, foliar application, and basal bark treatment. ***Herbicides must be handled and applied in accordance with the product label and any federal, state, or local regulations.***

Manual and Mechanical

Manually or mechanically removing brush species can be successful if done repeatedly over the growing season and over multiple years. Brushy species tend to re-sprout, and follow-up treatments will be necessary. Some examples of manual/mechanical methods are hand pulling, cutting, and girdling. Properly dispose of invasive species materials after treatment to prevent reseeding or spread to new areas.

Prescribed Fire

Prescribed fire can be an effective tool for brush management by suppressing undesirable species and removing thatch layers. Success will greatly depend on the species present, time of the year applied, and the temperature of the fire. In general, fire applied in late spring or fall will be most effective at controlling brush. ***All NRCS cost share programs (WHIP, EQIP, etc.) require a burn plan to be submitted to the local NRCS office for approval prior to burning.*** Job Sheet 338, Prescribed Burn Plan, can be accessed online at http://www.wi.nrcs.usda.gov/technical/jobsheets3.asp. Prescribed burning may not be effective alone and may need to be combined with other control methods.

Grazing

Grazing with goats, cattle, and other livestock can be an effective tool to manage invading brush species in conjunction with other treatments. Because grazing will only impact above ground vegetation, it may take multiple treatments to fully manage unwanted species. Stocking rates, residency period, and the grazing species should be discussed with a certified grazing planner or specialist and a grazing plan should be developed.

**CONSIDERATIONS**

- Consider the impacts of brush management control method(s) on threatened and endangered species.
- Consider the off-site impacts of control methods (i.e., smoke from controlled burning, herbicide runoff/drift) prior to implementation.
- Consider the impacts on grazing management caused by the timing and sequence of brush management for each pasture and the entire operating unit.
- Timing and sequence of brush management in an area managed for wildlife should occur outside of primary nesting season if such activities will disturb nesting birds.
- Consider soil erosion potential and difficulty of vegetation establishment when choosing a method of control that causes soil disturbance.

**OPERATION AND MAINTENANCE**

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

2. When using herbicides, keep records of all applications including plants/areas treated, amounts and types of herbicides used, and dates of application. This information will be important in evaluating the project's success, improving methodology, and identifying mistakes. If using a restricted-use herbicide, DATCP requires a record of application to be kept for two years (three years for products containing atrazine).

3. Keep in mind that brush management can decrease the short term recreational and aesthetic values of your property. Increased sunlight to the ground can result in more weeds and/or brushy species in the coming years until young trees and/or more desirable herbaceous vegetation become established and outcompete undesirable species.

4. Following the initial application, some regrowth, resprouting, or reoccurrence of brush should be expected. Spot treatment of individual plants or areas may be needed depending on species, timing, and methods of control.

**REFERENCES**

Wisconsin's Manual of Control Recommendations for Ecologically Invasive Plants: http://dnr.wi.gov/invasives/publications/manual/manual_toc.htm.

The Invasive Plant Association of Wisconsin (IPAW): http://www.ipaw.org.

**PLAN DEVELOPED BY:**

_____ _____

Signature Date

**LANDOWNER APPROVAL:**

_____ _____

Signature Date

Revision/Review Dates: _____ _____

**SITE ASSESSMENT/INVENTORY** (attach supporting maps as needed)

| **Field/Site #:** | **Acres:** |
|---|---|

| **T&E Species present?** ☐Y ☐N | **If yes, describe or attach any additional guidance:** |
|---|---|

| **Cultural Resources present?** ☐Y ☐N | **If yes, describe or attach any additional guidance:** |
|---|---|

| **Predominant Soil Map Units (SMU)** | | | | | | | **Describe Limitations** (equipment access, pesticide leaching, erosion, etc.): |
|---|---|---|---|---|---|---|---|
| **Soil Limitations** | **Y** | **N** | **Y** | **N** | **Y** | **N** | **Y** | **N** | |
| Slope | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Shallow to Bedrock/ Rapidly Permeable Soils | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Flooding/Ponding/ High Water Table | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |

| **Sensitive Areas Present?** (streams, wetlands, abandoned wells, etc.) ☐Y ☐N | **If yes, locate on site map, describe here:** |
|---|---|

**Desirable species present?** ☐Y ☐N **If yes, locate on site map and describe here:**

**Vegetation Composition** (group species and similar treatment actions)

| **Undesirable Specie(s):** | | | | |
|---|---|---|---|---|
| **Size** (stem diameter, height) | | | | |
| **Density** (stem count, % canopy) | | | | |
| **If stand to be treated is not uniform, identify specific treatment units on the site map.** | | | | |

**Comments:**

**TREATMENT SPECIFICATIONS**

| | | |
|---|---|---|
| **Target plants to control:** | | |
| **Mechanical Treatment Methods and Plans** | | |
| **Type(s) of equipment to be used:** | | |
| **Planned treatment dates(s)/period:** | | |
| **Instructions and precautions:** | | |
| **Treatment techniques or procedures to be followed:** | | |
| **Chemical Treatment Methods and Plans** – Apply product(s) per label instructions and rates | | |
| **Planned Herbicide(s):** | | |
| **WINPST Hazard Ratings:** | Groundwater: | Surface Water: |
| **Application method/technique and reference to applicable label instructions:** | | |
| **Application rate or spray volumes and mixing instructions (if applicable):** | | |
| **Acceptable dates of application:** | | |
| **Document any special application techniques, timing considerations, or other factors that must be utilized for safe and effective applications:** | | |
| **Biological Treatment Methods and Plans** | | |
| **Biological agent or grazing 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:** | | |
| **Maximum allowable degree of use on desirable non-target species:** | | |
| **Treatment precautions or requirements when insect or other organisms are used as control agents:** | | |
| **Prescribed Burning*** | | |
| **Recommended Timing of Prescribed Burn** | | |
| **Additional Treatment(s) and Recommended Sequence of Treatment(s)** | | |

**All prescribed burning shall be implemented according to a burn plan that meets the requirements outlined in Wisconsin NRCS FOTG Practice Standard 338, Prescribed Burning.*