



# Minnesota Ecological Science Job Approval Authority Factsheet

## Brush Management (314)

**DEFINITION:**

The management or removal of woody (non-herbaceous or succulent) plants including those that are invasive and noxious.



Job Classes	Control Factors
	Treatment type
Job Class I	Mechanical
Job Class II	Mechanical/Chemical
Job Class III	All Types

**CONTROL FACTORS:** Based on the type of treatment methods. Treatment methods include mechanical, chemical, burning, or biological.

**Minnesota Controlling Factor Definitions:**

- Job Class I is mechanical treatment.
- Job Class II is mechanical and chemical treatment methods.
- Job Class III is mechanical, chemical, burning, and biological treatment methods.

**National KNOWLEDGE, SKILLS, AND ABILITIES (KSA):**

1. Knowledge of plant identification.
2. Knowledge of woody plant management, and its ecological effects.
3. Knowledge of Integrated Pest Management.
4. Knowledge of target plant regeneration.
5. Knowledge of requirements for plant species to be released and managed.
6. Knowledge of soil characteristic and limitations to avoid damage.
7. Basic knowledge for recognizing potentially special sites and Threatened and Endangered (T&E) species, sufficient to initiate contact with an appropriate specialist.
8. Knowledge of state invasive species laws.

**Minnesota Guidance:** Typically, award the same job class for all three practice phases.

**MINNESOTA KNOWLEDGE, SKILLS, AND ABILITIES (KSA) needed:**

All Phases: Inventory and Evaluation (I&E) Planning, Design and Development of the Conservation Practice Requirements, and Installation, Oversight, and Certification

**Job Class I (Mechanical)**

- Read & understand the conservation practice standard, implementation requirements, and statement of work (SOW).

## MINNESOTA KNOWLEDGE, SKILLS, AND ABILITIES (KSA) needed (continued):

- Understand the land uses it can be applied to including range, forest, and pasture.
- Knowledge of sensitive features and landscape position within the project area.
- Knowledge of equipment and tools used for mechanical treatment of woody vegetation in relationship to the native vegetation, landscape position, and sensitive features within your ecological area. (*i.e. hand cutting, chainsaw, skid loader shears/saws/pullers, excavator, bulldozer, etc.*)
- Knowledge of the invasive plants of Minnesota: [Minnesota Noxious Weed List | Minnesota Department of Agriculture \(state.mn.us\)](#)

### Job Class II (Mechanical and Chemical)

- All requirements from Job Class I.
- Knowledge of chemical control methods for brush management.
- Able to read a pesticide label and determine environmental hazards and site-specific application criteria.
- Ability to use WIN-PST.
- Knowledge of mitigation techniques for pesticides used near sensitive areas (*i.e. water bodies, pollinator habitat, prairie remnants, etc.*). Techniques include wind direction, low drift nozzles, setbacks, perennial buffers, etc.

### Job Class III (Mechanical, Chemical, Burning and Biological)

- All requirements from Job Class I and II.
- Knowledge of various biological treatments for plant species control and the potential adverse effects of each treatment. Examples:
  - Using livestock grazing as biological control, such as goat grazing in woodlots or prairie remnants infested with buckthorn or honeysuckle.
- Understanding of and ability to plan for CPS Prescribed Grazing (528).
- Understanding of and ability to plan for CPS Prescribed Burning (338).
- Understanding and ability to plan for CPS Fire Break (394) and CPS Fuel Break (383).

**COMMON ASSOCIATED PRACTICES:** Brush Management (314) is commonly applied with practices such as Prescribed Burn (338), Pest Management (595), Tree and Shrub Establishment (612), Prescribed Grazing (528), and Forest Stand Improvement (666)

### ADDITIONAL MATERIALS:

- MN Agronomy Tech Note 5: “Pest Management in the Conservation Planning Process;” and Supplement 1: “Minnesota WIN-PST Hazard Rating Quick Reference Guide for Commonly Used Forestry Herbicides.”
- MN Agronomy Tech Note 9: “Preventing or Mitigating Potential Negative Impacts of Pesticides on Pollinators.”
- MN Practice 528 Biological Brush Management Implementation Guide [528 MN OTH PG Biological Brush Management 2016 \(usda.gov\)](#)
- MN Agronomy Tech Note 16: Invasive Plant Species Pest Management.
- MN Biology Tech Note 4: “Minnesota Wildlife Habitat Evaluation System.”
- MN Biology Tech Note 13: “Planning and Conducting Prescribed Burns in Minnesota.”
- MN Biology Job Sheet 7: “The Benefits of Prescribed Burning on Private Land.”
- NWCG PMS 424: Prescribed Fire Complexity Rating System Guide [PMS 424 | NWCG](#)
- MN DNR Prescribed Burn Handbook: [MN DNR Prescribed Burn Handbook \(state.mn.us\)](#)
- Multispecies Grazing, ATTRA Fact Sheet: [Multispecies Grazing: A Primer on Diversity – ATTRA – Sustainable Agriculture \(ncat.org\)](#)