



NATURAL RESOURCES CONSERVATION SERVICE CONSERVATION PRACTICE STANDARD

HERBACEOUS WEED CONTROL

CODE 315 (AC.)

DEFINITION

The removal or control of herbaceous weeds including invasive, noxious, and prohibited plants.

PURPOSE

This practice may be applied as part of a conservation management system to support one or more of the following purposes:

- Enhance accessibility, quantity, and quality of forage and/or browse.
- Restore or release native or create desired plant communities and wildlife habitats consistent with the ecological site.
- Protect soils and control erosion.
- Reduce fine-fuels fire hazard and improve air quality.

CONDITIONS WHERE PRACTICE APPLIES

This practice may be applied on all lands except active cropland where removal, reduction, or manipulation of herbaceous vegetation is desired.

For weed control on cropland, see Wisconsin NRCS Conservation Practice Standard (WI NRCS CPS) 595, Integrated Pest Management.

This practice does not apply to removal of herbaceous vegetation by prescribed burning or land clearing to facilitate a land use change.

CRITERIA

General Criteria Applicable to All Purposes

Prior to developing herbaceous weed control alternatives, the site shall be evaluated for the presence of threatened and endangered species. Herbaceous weed control alternatives shall avoid impacts to identified threatened and endangered species.

Herbaceous weed control will be applied in a manner to achieve the desired control of the target species and protection of desired species. This will be accomplished by mechanical, chemical, burning, or biological methods either alone or in combination. When burning is used as a method, WI NRCS CPS 338, Prescribed Burning, shall apply.

NRCS will not develop biological or chemical treatment recommendations except for biological control utilizing grazing animals. WI NRCS CPS 528, Prescribed Grazing shall be used to ensure desired results are achieved and maintained.

NRCS may provide clients with current acceptable biological and/or chemical control references to achieve desired management objectives.

When herbicides are used, environmental hazards and site-specific application criteria listed on pesticide labels and contained in UW Extension and other pest management references shall be followed.

When herbicides are used, the product(s) shall be evaluated utilizing the Windows Pesticide Screening Tool (WIN-PST). Mitigation practices shall be implemented to address WIN-PST risk ratings of Intermediate or higher. See Wisconsin NRCS Conservation Planning Technical Note 2 for detailed instructions on the use of WIN-PST. Mitigation practices shall be implemented to address any identified environmental risks.

Herbaceous weed control will include post treatment measures as needed to achieve resource management objectives.

Livestock and people access will be controlled based on management methods applied and restrictions as listed on the chemical labels.

Manage and/or dispose of treated weed species in a manner that will prevent the spread of herbaceous weeds to new sites.

Additional Criteria to Enhance Accessibility, Quantity, and Quality of Forage and/or Browse

Herbaceous weed control will be applied in a manner to minimize negative impact to forage and/or other non-targeted plants. Timing and sequence of control shall be planned in coordination with specifications developed for WI NRCS CPS 528, Prescribed Grazing, and/or 511, Forage Harvest Management.

Additional Criteria to Restore or Release Native or Create Desired Plant Communities and Wildlife Habitats Consistent with the Ecological Site

Apply herbaceous weed control in a manner to protect the health and vigor of native or desired plant species.

Use applicable Ecological Site Description (ESD) State and Landscape Transition models or other NRCS approved references to develop specifications that are ecologically sound and defensible. Treatments must be congruent with dynamics of the ecological site(s) and the plant community shall have the capability to support the desired planned plant community. If an ESD is not available, base specifications on the best approximation of the desired plant community composition, structure, and function.

Treatments will be conducted during periods of the year when weed species are most vulnerable in order to promote successful restoration of the native or desired plant communities and maintain or enhance important wildlife habitat requirements.

Treatments shall be avoided when the activity can spread weed seed or significantly impact non-target plants and animals.

Treatments will be conducted during periods of the year that accommodate reproduction and other life-cycle requirements of resident wildlife, pollinator species, and threatened and endangered species.

Apply treatments using appropriate timing and methods that will maintain or enhance plant community composition and structure to meet the requirements of the targeted wildlife species.

Additional Criteria to Protect Soils and Control Erosion

Apply herbaceous weed control methods that will minimize soil disturbance and soil erosion.

Additional treatment, such as mulching, cover crop, or vegetative establishment appropriate to the site, shall be applied to protect soils and prevent erosion.

Additional Criteria to Reduce Fine-Fuels Fire Hazard and Improve Air Quality

Treat weed species in a manner that creates a native or desired plant community which reduces the potential for accumulating excessive fuel loads and increased wildfire hazards.

Apply treatment methods in a manner that minimize the potential for unintended impacts to air resources such as smoke and chemical drift.

CONSIDERATIONS

Consider using WI NRCS CPS 595, Integrated Pest Management, scouting concepts, weed treatment thresholds and evaluation guidance to support use of herbaceous weed control.

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

Consider the appropriate time period and duration for treatment. Some herbaceous weed control activities may require multiple years of treatment to achieve desired objective.

Consider impacts to wildlife food supplies, space, and cover availability when planning the method and amount of herbaceous weed control. Mosaic patterns may be most desirable.

For air quality purposes, consider using chemical treatment methods of herbaceous weed control that minimize chemical drift and chemical usage.

Consider mechanical methods of herbaceous weed control that minimize the release of particulate matter into the air.

Consider adjacent land uses before chemicals are used.

Chemical pesticide treatments may require state licenses.

PLANS AND SPECIFICATIONS

Prepare plans and specifications for each field or treatment unit according to the criteria included in this standard. At a minimum, the herbaceous weed control practice plan shall include the following:

1. Goals and objectives statement.
2. Plan map and soil map for the site.

3. Pre-treatment cover or location and density of the target plant(s) and the planned post-treatment cover or density and desired outcome described as an ecological state or narrative.
4. Maps, drawings, and/or narratives detailing or identifying areas to be treated, pattern of treatment (if applicable), and areas that will not be disturbed.
5. A monitoring plan that identifies what shall be measured (including timing and frequency) and the changes in the plant community (compare with objectives) that will be achieved.

Mechanical Treatment Methods

Plans and specifications will include items 1 through 5 above, and the following documentation:

- Type of equipment to use for management including pre and post treatment protocols for cleaning of equipment.
- Dates of treatment for effective management.
- Equipment operating instructions provided by the manufacturer (if applicable).
- Treatment techniques and procedures to be followed.

Chemical Treatment Methods

Plans and specifications will include items 1 through 5, above, and the following documentation:

- A copy of the acceptable chemical treatment references for containment and management of target species.
- Planned application dates, rates, formulation and techniques.
- Evaluation and interpretation of herbicide risks associated with the selected treatment(s) using WIN-PST, product label information and mitigation practices and techniques are implemented.
- Any special mitigation, timing considerations or other factors (such as soil texture and organic matter content) that must be considered to ensure the safest, most effective application of the herbicide.
- Reference to product label instructions and restrictions.

Biological Treatment Methods

Plans and specifications will include items 1 through 5, above, and the following documentation:

- A copy of the acceptable biological treatment references for the selected biological agent used to contain and manage the target species.
- Release date, kind, source, and number of agents.
- Timing, frequency, duration and intensity of grazing, browsing, or treatments with biocides/pests.
- Desired degree of grazing or browsing used for effective management of target species.
- Maximum allowable degree of use on desirable non-target species.
- Special mitigation, precautions, or requirements associated with the selected treatment(s).

OPERATION AND MAINTENANCE

Operation

Herbaceous weed control practices shall be applied using approved materials and procedures.

Operations will comply with all local, state, tribal, and federal laws and ordinances.

Success of the practice shall be determined by evaluating regrowth or re-occurrence of target species after sufficient time has passed to monitor the situation and gather reliable data. Length of evaluation periods will depend on the herbaceous weeds species being monitored, proximity of propagules (seeds, plant materials and roots) to the site, transport mode of seeds (wind or animals) and methods and materials used.

All methods of pest management activities must comply with federal and state regulations.

Compliance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA); and Worker Protection Standard (WPS) is required.

All methods of pesticide use must comply with the current product label and Wisconsin laws such as Administrative Code Chapters ATCP 29, Pesticide Use and Control; ATCP 30, Pesticide Product Restrictions; and ATCP 31, Groundwater Protection Program, administered by the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP).

All incidents of accidental release of pesticides that may cause adverse environmental effects shall be reported to the Wisconsin Spill Hotline at 1-800-943-0003.

The operator will develop a safety plan for individuals exposed to chemicals, including telephone numbers and addresses of emergency treatment centers and the telephone number for the nearest poison control center. The National Pesticide Information Center (NPIC) telephone number in Corvallis, Oregon, may also be given for non-emergency information: 1-800-858-7384, Monday to Friday, 8:30 a.m. to 6:30 p.m. Central Time.

The National Chemical Transportation Emergency Center (CHEMTRAC) telephone number is 1-800-424-9300.

When applying herbicide products:

- Follow label requirements for mixing/loading setbacks from wells, intermittent streams and rivers, natural or impounded ponds and lakes, and reservoirs.
- Post signs, according to label directions and/or federal, state, tribal, and local laws, around fields that have been treated. Follow restricted entry intervals.
- Dispose of herbicide and herbicide containers in accordance with label directions and adhere to federal, state, tribal, and local regulations.
- Read and follow label directions and maintain appropriate Material Safety Data Sheets (MSDS). MSDS and herbicide labels may be accessed on the Internet at: <http://www.greenbook.net/>.
- Calibrate application equipment according to recommendations before each seasonal use and with each major chemical and site change.
- Replace worn nozzle tips, cracked hoses, and faulty gauges on spray equipment.
- Maintain records of plant management for at least two years. Herbicide application records shall be in accordance with USDA Agricultural Marketing Service's Pesticide Record-keeping Program and state-specific requirements.

Maintenance

Following initial application, some regrowth, re-sprouting, or re-occurrence of herbaceous weeds may be expected. Spot treatment of individual plants or areas needing re-treatment should be completed as needed when weed vegetation is most vulnerable to desired treatment procedures.

Review and update the plan periodically in order to incorporate new Integrated Pest Management technology; respond to grazing management and complex weed population changes; and avoid the development of weed resistance to herbicide chemicals.

FEDERAL, TRIBAL, STATE, AND LOCAL LAWS

Users of this standard should be aware of potentially applicable federal, tribal, state and local laws, rules, regulations or permit requirements governing herbaceous weed control. This standard does not contain the text of federal, tribal, state, or local laws.

REFERENCES

Cornell University Department of Animal Science. Plants Poisonous to Livestock and Other Animals. Available at: <http://www.ansci.cornell.edu/plants>.

Evers, R.A., and R.P. Link. 1972. Poison Plants of the Midwest and Their Effects on Livestock. Special Publication 24, University of Illinois – College of Agriculture, Urbana, IL.

Hamilton, G.W., and J.R. Mitchell. 2001. Poisonous Plants in Pastures. University of New Hampshire Cooperative Extension Service, Durham, NH. Available at http://extension.unh.edu/resources/representation/Resource000623_Rep645.pdf.

DeWolf, G. and M. Hondalus. 1988. Common Massachusetts plants poisonous to horses. University of Massachusetts Cooperative Extension Service, Amherst, MA.

USDA, NRCS Wisconsin Field Office Technical Guide (FOTG), Section IV, Practice Standards and Specifications.

USDA, NRCS Wisconsin Job Sheet 315 Herbaceous Weed Control

USDA, NRCS Wisconsin Conservation Planning Technical Note 2, Companion Document to NRCS FOTG Standard 595, Pest Management.

University of Wisconsin Extension Publication A3690, Protecting Wisconsin's Resources through Integrated Weed Management.

University of Wisconsin Weed Science Research, <http://ipcm.wisc.edu/Publications/WeedSciencepublications/tabid/116/Default.aspx>.

Wisconsin Administrative Code, Department of Agriculture, Trade and Consumer Protection, Chapter ATCP 29, Pesticide Use and Control.

Wisconsin Administrative Code, Department of Agriculture, Trade and Consumer Protection, Chapter ATCP 30, Pesticide Product Restrictions.

Wisconsin Administrative Code, Department of Agriculture, Trade and Consumer Protection, Chapter ATCP 31, Groundwater Protection Program.

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