

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD
HERBACEOUS WEED CONTROL

(Ac.)

CODE 315

DEFINITION

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

PURPOSE

- Enhance accessibility, quantity, and quality of forage and/or browse.
- Restore or release native plant communities, 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

On all lands except active cropland where removal reduction, or manipulation of herbaceous vegetation is desired.

This practice does not apply to removal of herbaceous vegetation by prescribed fire (use Virginia Practice Standard Prescribed Burning (Code 338) or removal of herbaceous vegetation to facilitate a land use change (use Virginia Practice Standard Land Clearing (Code 460)).

CRITERIA

General Criteria Applicable to All Purposes

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, the Virginia

Practice Standard Prescribed Burning (Code 338) will also be applied.

NRCS will not develop biological or chemical treatment recommendations except for biological control utilizing grazing animals.

When biological control with grazing animals is recommended, Virginia Practice Standard Prescribed Grazing (Code 528) is *used to* ensure desired results are achieved and maintained.

NRCS may provide clients with acceptable biological and/or chemical control references.

NRCS may provide clients with current acceptable references to achieve desired management objectives.

When herbicides are used, environmental hazards mitigation and site-specific application criteria listed on pesticide labels and contained in extension service and other approved pest management references must be followed.

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

Livestock and human 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 (i.e. burning, hot composting or weed destruction by tillage).

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 Virginia Practice Standard *Prescribed Grazing (Code 528)* or *Forage Harvest Management (Code 512)*.

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 that protects the health and vigor of native or desired plant species.

Treatments will be conducted during periods of the year when weed species are most vulnerable and will promote restoration of the native or desired plant communities.

Apply herbaceous weed control in a manner that maintains or enhances important wildlife habitat requirements.

Treatments will be conducted during periods of the year that accommodate reproduction and other life-cycle requirements of target wildlife, migratory song birds and pollinator species.

Apply treatments that maintain or enhance plant community composition and structure to meet the requirements of target wildlife species.

Additional Criteria to Protect Soils and Control Erosion

Apply herbaceous weed control in ways that minimize soil disturbance and soil erosion.

Ensure that the weedy vegetation removed is replaced with native grasses, shrubs, trees, and/or other desirable vegetation as quickly as practical. If existing populations of desired species in the treated area are not sufficient, replant with species that are most effective in holding soil (e.g. grasses), and/or covering the soil surface. Utilize appropriate “nurse” crops to protect and rebuild soil while desired perennial vegetation is getting established.

Additional treatments, as needed, will 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 minimizes the potential for unintended impacts to air resources, e.g., smoke, chemical drift etc.

CONSIDERATIONS

Consider the appropriate time period for treatment. Some herbaceous weed control activities can be effective when applied within a single year; others may require multiple years of treatment(s) to achieve desired objectives.

Consider impacts to wildlife species in general. Treatments that create a mosaic pattern of distinct and interspersed habitats may be the most desirable.

Consider impacts to wildlife food supplies, space, and cover availability when planning the method and amount of herbaceous weed control.

State issued licenses may be required when using chemical pesticide treatments.

For air quality purposes, consider using chemical methods of herbaceous weed control that minimize chemical drift and excessive chemical usage and consider mechanical methods of herbaceous weed control that minimize the entrainment of particulate matter.

To protect air, water, soil, and wildlife resources, consider biological control methods where these might be sufficiently effective. Multispecies grazing systems that integrate goats and other small ruminants, hogs, and/or poultry with cattle or horses can effectively eliminate some pasture weeds. Specific biocontrol insects are available against certain invasive exotic herbaceous weeds, including spotted knapweed, purple loosestrife, and some thistles including Canada thistle.

Adjacent land uses must be considered before chemicals are used.

Additional Criteria for Pervasive Plant Species

Additional treatments are planned and will be applied to achieve effective control of pervasive plant species through reapplication. The only pervasive species that this purpose applies to in Virginia are listed in the respective job sheet.

PLANS AND SPECIFICATIONS

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

1. Goals and objectives statement.
2. Plan map and soil map for the site.
3. Pre-treatment cover or density of the target plant(s) and the planned post-treatment cover or density and desired efficacy.
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, including setbacks.
5. A monitoring plan that identifies what shall be measured (including timing and frequency) and the desired changes in the plant community (compare with objectives) that are intended.

For Mechanical Treatment Methods. Plans and specifications will include items 1 through 5 above, plus the following:

- Type of equipment to use for management
- Dates of treatment for effective management
- Operating instructions (if applicable)
- Techniques and procedures to be followed

For Chemical Treatment Methods. Plans and specifications will include items 1 through 5 above, plus the following:

- Acceptable chemical treatment references for containment and management of target species
- Document techniques to be used, planned dates and rates of application
- Evaluation and interpretation of herbicide risks associated with the selected treatment(s) using WIN-PST or other approved tools
- 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

For Biological Treatment Methods. Plans and specifications will include items 1 through 5 above, plus the following:

- Acceptable biological treatment references for the selected biological agent used to contain and manage the target species
- Document release date, kind, and number of agents
- Timing, frequency, duration and intensity of grazing or browsing
- Desired degree of grazing or browsing use 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)

Use the Herbaceous Weed Control job sheet to plan and certify this practice.

OPERATION AND MAINTENANCE

Herbaceous weed control 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. Length of evaluation periods will depend on the herbaceous weed 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.

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, from 6:30 a.m. to 4:30 p.m. Pacific Time.

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

- 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 Recordkeeping Program and state-specific requirements.

Maintenance. Following initial application, some regrowth, resprouting, or reoccurrence 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 IPM technology (if available); response to grazing management and complex weed population changes; and avoid the development of weed resistance to herbicide chemicals by varying treatments used.

REFERENCES

- American Sheep Industry, A. Peischel and D.D. Henry, Jr., 2006. Targeted Grazing: a Natural Approach to Vegetation Management and Landscape Enhancement.
- Ensminger, M.E. 1992. The stockman's handbook. (7th Ed.) The Interstate Printers and Publishers, Inc. Danville, IL.
- Reed, C.F. 1970. Selected weeds of the United States. Agriculture Handbook No. 366, U.S. Government Printing Office, Washington, D.C.

USDA is an equal opportunity provider and employer