Natural Resources Conservation Service

CONSERVATION PRACTICE STANDARD

HERBACEOUS WEED TREATMENT

CODE 315

(ac)

DEFINITION

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

PURPOSE

This practice is used to accomplish one or more of the following purposes:

- Enhance accessibility, quantity, and/or quality of forage and/or browse
- Restore or release native or desired plant communities for wildlife habitat
- Protect soils and control erosion
- Reduce fine fuel loads and wildfire hazard
- Control pervasive plant species to a desired level of treatment

CONDITIONS WHERE PRACTICE APPLIES

This 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 for a land use change . Refer to NRCS Conservation Practice Standards (CPSs) Land Clearing (Code 460) .

CRITERIA

General Criteria Applicable to All Purposes

Apply herbaceous weed treatment to achieve the desired control of the target species and protection or enhancement of desired species. Desired species contribute positively to land use objectives and site potential. Use mechanical, chemical, or biological methods either alone or in combination.

Control pervasive and undesirable herbaceous vegetation to the desired level of treatment that contributes to the desired state of an ecological site.

NRCS will not develop insect biological control recommendations or chemical treatment recommendations.

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

NRCS can provide recommendations for biological control to manage herbaceous weeds utilizing grazing animals. Use NRCS CPS Prescribed Grazing (Code 528) to ensure desired results are achieved and maintained.

Nonchemical weed management techniques such as mowing, manually removing, or spot-flaming infestations can be effective.

When using herbicides, follow all environmental hazards and site-specific application criteria listed on herbicide labels and contained in extension service and other approved pest management references. Access the most recent herbicide labels at the Greenbook Web site (http://www.greenbook.net).

Include post-treatment measures to achieve resource management objectives.

Control livestock and human access based on management methods applied and restrictions listed on the herbicide labels.

Manage and/or dispose of treated weed species that prevents the spread of herbaceous weeds to new sites.

When the herbaceous weed treatment of undesirable species results in the need to reestablish desired herbaceous species, follow details in the appropriate vegetation establishment practices such as NRCS CPSs Pasture and Hay Planting (Code 512), Cover Crop (Code 340), Conservation Cover (Code 327), Range Planting (Code 550), Critical Area Planting (Code 342), Tree /Shrub Establishment (Code 612), or Wildlife Habitat Planting (Code 420).

Incorporate weed prevention strategies that include—

- Minimizing soil disturbance.
- Minimizing movement of equipment through weed infested areas.
- Inspecting and cleaning equipment to prevent spread of undesired vegetation.

Apply treatments during periods of the year when weed species are most vulnerable and when restoration of the native or desired plant communities have the best chance of recovery.

Adjacent land uses must be considered before chemicals are used. Also consider the residual effects of chemical use. Follow label and State guidelines on setbacks and other precautions from sensitive areas and surface water bodies or karst topography.

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

Apply herbaceous weed treatments that minimize negative impacts to forages and/or other nontargeted plants. Plan timing and sequence of treatment in coordination with specifications developed for NRCS CPS Prescribed Grazing (Code 528) .

Additional Criteria to Restore or Release Native or Desired Plant Communities for Wildlife Habitat

Apply herbaceous weed treatments that protect the health and vigor of native or desired plant species to preserve and enhance habitat for pollinator insects and wildlife. Time treatments to periods of the year that accommodate reproduction and other life cycle requirements of target wildlife and pollinator species. Select treatments that maintain or enhance plant community composition and structure to meet the requirements of target wildlife and pollinator species.

Use applicable ecological site description (ESD) state and transition models, or other suitable information, to develop specifications that are ecologically sound and defensible. Treatments must be congruent with dynamics of the ecological site(s) and keyed to states and plant community phases that have the potential and capability to support the desired plant community. If an ESD is not available, base specifications on the best approximation of the desired plant community composition, structure, and function.

Use native vegetation to preserve and enhance pollinator insects as well as wildlife.

Additional Criteria to Protect Soils and Control Erosion

Herbaceous weed species shade out desired plants exposing more soil for potential erosion. Use caution when applying herbaceous weed treatments to minimize soil disturbance and soil erosion.

Apply additional treatments to protect soils and prevent erosion.

Additional Criteria to Reduce Fine Fuel Loads and Wildfire Hazard

Treat weed species to create a native or desired plant community that reduces the potential for accumulating excessive fuel loads and wildfire hazards.

Apply treatment methods that minimize the potential for unintended impacts to air resources (e.g., dust, chemical drift, etc.) that could also damage or kill plants, thereby contributing to wildfire hazard.

Additional Criteria to Control Pervasive Plant Species to a Desired Level of Treatment

When specific pervasive plant species cannot be controlled with one treatment, plan and apply additional treatments to achieve effective control through reapplication which may be more than once per growing season or multiple years.

CONSIDERATIONS

Consider using NRCS CPS Pest Management Conservation System (Code 595) in support of herbaceous weed treatment.

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

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

Consider impacts to wildlife species. In general, weed treatments that create a mosaic pattern may be the most desirable. Leaving native grasses, forbs, and woody vegetation encourages a higher variety of wildlife and pollinators. When using selective herbicides, leaving other desired plant species also benefits wildlife and pollinators.

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

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

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

Design and execute a plan using adaptive management to apply knowledge gained from earlier treatment applications.

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 treatment management practice plan shall include—

- Goals and objectives statement.
- Plan map and soil map for the site.
- Pretreatment cover or density of the target plants and the planned post-treatment cover or density.
- Maps, drawings, and/or narratives detailing or identifying areas to be treated, pattern of treatment (if

applicable), and areas that will not be disturbed.

- A monitoring plan that identifies what shall be measured (including timing and frequency) and the changes in the plant community (compare with objectives) that occur.
- Apropriate revegetation conservation practice standard(s) needed following treatment (if applicable).
- For mechanical treatment methods, the first five bulleted items above, plus—
  - 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, the first five bulleted items above, plus—
  - Acceptable chemical treatment references for containment and management of target species.
  - Documented techniques to be used, planned dates, and rates of application.
  - Evaluation and interpretation narrative of herbicide risks associated with the selected treatment(s) using Windows Pesticide Screening Tool (WIN-PST) or other approved tools.
  - Consideration of any special mitigation, timing, or other factors (such as soil texture, distance to water, and organic matter content) to ensure the safest, most effective application of the herbicide.
  - Reference product label instructions.
- For biological treatments methods, the first five bulleted items above, plus—
  - Acceptable biological treatment references for the selected biological control livestock used to contain and manage the target species.
  - Documentation of release date, kind, and number of livestock.
  - 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 nontarget species.
  - Special mitigation, precautions, or requirements associated with the selected treatment(s).

OPERATION AND MAINTENANCE

Operation

Herbaceous weed treatment methods shall be applied using approved materials and procedures. Operations will comply with all local, State, Tribal, and Federal laws and ordinances. The landowner is responsible for obtaining any permits prior to practice implementation. Observe State and Federal restricted-use pesticides and certified pesticide applicator's license requirements.

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, OR, may also be given for nonemergency information: 1-800-858-7384, Monday to Friday, 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 safety data sheets. Safety data sheets and herbicide labels can be accessed at the Greenbook Web site (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 2 years. Herbicide application records shall be in accordance with USDA Agricultural Marketing Service's Pesticide Recordkeeping Program and State-specific requirements.

Maintenance

Success of the practice shall be determined by evaluating regrowth or reoccurrence of target and desired species after sufficient time has passed to monitor the vegetation and gather reliable data. Length of evaluation periods 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.

Following initial application, regrowth, resprouting, or reoccurrence of herbaceous weeds can be expected. Complete spot treatments of individual plants or areas needing retreatment when weed vegetation is most vulnerable to desired treatment procedures.

Review and update the herbaceous weed treatment plan periodically to—

- Incorporate new integrated pest management technology,
- Respond to grazing management and complex weed population changes, and
- Follow cooperative extension service guidance to avoid the development of weed resistance to herbicide chemicals.

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