

**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD**

**HERBACEOUS WEED CONTROL**

(Acre)

**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 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 Prescribed Burning - 338) or removal of herbaceous vegetation to facilitate a land use change (use Land Clearing - 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 through utilization of Integrated Pest Management (IPM) principles. This will be accomplished by mechanical, chemical, burning or biological methods either alone or in combination. When burning is used as a method, the Prescribed Burning standard (338) will also be applied.

NRCS will not develop biological or chemical treatment recommendations except for biological control utilizing grazing animals. Prescribed Grazing (528) is used to ensure desired results are achieved and maintained.

NRCS may provide clients with acceptable biological and/or chemical control references to achieve desired management objectives. Refer to UF-IFAS management recommendations for the species being treated ([http://edis.ifas.ufl.edu/topic\\_weeds](http://edis.ifas.ufl.edu/topic_weeds)) when selecting the appropriate method, timing, and management to achieve the desired results.

Biological controls, if used, need to conform to release standards. All necessary local, state, or other permits must be secured prior to release of the control vector.

When herbicides are used, environmental hazards and site-specific application criteria listed on pesticide labels must be followed. Adverse effects to threatened and endangered species must be avoided; follow the USFWS-NRCS consultation matrix guidance and apply Integrated Pest Management, Code 595, with adherence to WIN-PST requirements when applying herbicides.

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

Areas where treatments have been implemented may require active methods to reestablish desirable plant species. Refer to Florida NRCS Conservation Practice Standards Range Planting, Code 550, Pasture and Hay Planting, Code 512, Critical Area Planting, Code 342, Tree/Shrub Site Preparation, Code 490, Tree/Shrub Establishment, Code 612 and Tree/Shrub Establishment, Code 612 Guidance Documents A and B for additional information on vegetative plantings and site preparation.

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 Prescribed Grazing (528) or Forage Harvest Management (512).

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

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 Transition models, 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.

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 maintain or enhance important wildlife habitat requirements.

Treatments will be conducted during periods of the year that accommodate reproduction and other life-cycle requirements of target wildlife 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 to minimize soil disturbance and soil erosion.

Additional treatment 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 minimize the potential for unintended impacts to air resources, e.g., smoke, chemical drift etc.

### **CONSIDERATIONS**

Consider using a combination of treatments to achieve the best results. A combination mechanical, biological, chemical and/or prescribed burning often results in the greatest amount of control.

Consider impacts to soil erosion, sedimentation, and water quality following treatment. Consider soil erosion potential and difficulty of vegetation establishment when choosing a method of control that causes soil disturbance. Consider pesticide runoff into water bodies and the potential effect on aquatic species.

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 may be the most desirable. Consider the impacts of treatment methods on threatened and endangered species and potential loss of habitats.

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

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.

Adjacent land uses must be considered before chemicals are used.

During the planning process, consider the following:

1. Discuss future land use opportunities in relation to invasive plant management, including expected effect on forage production, livestock management, wildlife habitat, potential recreation use, and other uses.
2. Discuss reasons why invasive species have increased, the technical requirements of the selected control method, possible hazards, and costs of the practice.
3. Assist cooperators to understand the environmental impacts of invasive plant management, including the negative impacts occurring on and/or offsite.

If a specific IPM program is not available, the following IPM principles should be considered:

- Prevention, such as using certified weed-free seeds, transplants, and feed including forage and hay, seeds and transplants; cleaning mowers, tillage and harvesting equipment between fields; and apply nutrient , irrigation-scheduling, and grazing management to avoid the introduction and spread of weed populations.
- Avoidance, such as using weed-resistant varieties, trap crops, etc.
- Monitoring, such as pest scouting, soil testing, weather forecasting, GPS mapping, etc., to help target suppression strategies and avoid weed invasion.
- Suppression, such as cultural, mechanical, biological, and chemical controls, to reduce weed populations or their impacts. Chemical controls should be used appropriately in order to minimize environmental risk and weed resistance.

Maintain adequate plant nutrients, soil moisture, and other soil amendments including favorable pH and soil conditions, as appropriate to reduce plant stress, improve plant vigor, and increase the desired plant community's overall ability to compete with weeds.

On irrigated land, design irrigation water management to minimize weed management environmental risk.

## **PLANS AND SPECIFICATIONS**

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

1. Goals and objectives statement.
2. Invasive, noxious and/or prohibited plants to be treated
3. Plan map and soil map for the site. Including current and planned landuse, and primary habitat type present
4. Pre-treatment cover or density of the target plant(s) and the planned post-treatment cover or density and desired efficacy.
5. Overlay maps, drawings, and/or narratives detailing or identifying areas to be treated, pattern of treatment (if applicable), and areas that will not be disturbed.
6. Re-vegetation methods, including all necessary site preparation, planting and maintenance activities for the treated areas and a list of species to be planted
7. Method of disposing of treated invasive plant materials as applicable avoiding the transport of seed, rooting material or rhizomes and the plant parts that could aid in reestablishment.
8. A monitoring plan that identifies what is to be measured (including timing and frequency) and the changes in the plant community (compare with objectives) that will be implemented.

9. Outline follow-up control measures necessary to prevent a recurrence of the problem.

**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.
- Operator 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 (e.g. IFAS bulletins, etc)
- 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 (if applicable)
- Desired degree of grazing or browsing use for effective management of target species (if applicable)
- Maximum allowable degree of grazing or browsing 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, 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 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.

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

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; response to grazing management and complex weed population changes; and avoid the development of weed resistance to herbicide chemicals.

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