

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.

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.

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

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

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

CONDITIONS WHERE PRACTICE APPLIES

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

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.

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).

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

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 Prescribed Burning standard (338) will also be applied. NRCS will not develop biological or chemical treatment recommendations except for biological control utilizing grazing animals.

The Plant Conservation Alliance's Alien Plant Working Group has developed the following Fact Sheets which are distributed through the National Park Service:

Garlic Mustard

<http://www.nps.gov/plants/alien/fact/pdf/alpe1.pdf>

Musk Thistle

<http://www.nps.gov/plants/alien/fact/pdf/canu1.pdf>

Spotted Knapweed

http://www.nps.gov/plants/alien/fact/pdf/ces_t1.pdf

Canada thistle

<http://www.nps.gov/plants/alien/fact/pdf/ciar1.pdf>

Japanese Knotweed

<http://www.nps.gov/plants/alien/fact/pdf/faja1.pdf>

Purple Loosestrife

<http://www.nps.gov/plants/alien/fact/pdf/lysa1.pdf>

Japanese Stiltgrass

<http://www.nps.gov/plants/alien/fact/pdf/mivi1.pdf>

Mile-a-minute

<http://www.nps.gov/plants/alien/fact/pdf/pepe1.pdf>

Kudzu

<http://www.nps.gov/plants/alien/fact/pdf/pumo1.pdf>

Tall Fescue

<http://www.nps.gov/plants/alien/fact/pdf/scph1.pdf>

The above fact sheets contain information regarding: native range, plant description, ecological threat distribution in the United States, habitat, background, biology and spread, management options, contacts, suggested alternative plants and other links. Hard copies are also available in Section II of the FOTG under F. Noxious and Invasive Species Information.

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

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.

It should be noted that invasive species may provide nectar and pollen resources that are attractive to pollinators. If pollinators are currently using these plants as the primary food sources, attempt to remove these species and replace as quickly as possible to allow more native sources to replace the food sources.

For control of noxious or invasive weeds in wetland settings work closely with the West Virginia Division of Natural Resources and

the State Biologist to coordinate activities and avoid negative environmental impacts.

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 Integrated Pest Management (595) in support 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 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 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.

Adjacent land uses must be considered before chemicals are used.

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. 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.
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.
6. ***Any required applicable permits and conditional requirements to include the CPA-052 or similar environmental evaluation documentation***

For Mechanical Treatment Methods. Plans and specifications will include items 1 through 6 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 6, 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 6, 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)

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.

REFERENCES

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- Plant Conservation Alliance's Alien Plant Working Group (PCA-APWG) 4598 MacArthur Blvd., NW, Washington, DC 20007***
- <http://www.nps.gov/plants/alien/fact.htm>
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- Information in bold italics was added to the national standard by WV.***

APPENDIX

(315) HERBACEOUS WEED CONTROL

WV NOXIOUS WEED LIST

As a result of Executive Order 13112 NRCS is required to prevent the introduction and/or spread of invasive species. An invasive species is an alien species whose presence does or is likely to cause economic or environmental harm or harm to human health. Alien species means species not native to a particular ecosystem. NRCS shall not authorize, fund or carryout actions which it believes shall cause or promote the introduction or spread of invasive species in the United States or elsewhere. Compliance with the Noxious Weed Act of WV means "no person shall move, transport, deliver, ship or offer for shipment into or within this state any noxious weed without first obtaining a permit from the Department of Agriculture and such permit shall be issued only after it has been determined that the noxious weed is generally present throughout the state or is for scientific purposes subject to prescribed safeguards."

Planners should consider if an action or activity will occur in an area where there are significant stands* of listed invasive species, where they are known to occur, or where there is a significant risk of invasion* of new populations of listed species or if the activity involves transportation, delivery or shipment of a plant species listed below.

* A "significant stand" is defined in this document as a stand of identified noxious or invasive weed(s) (listed below), where the presence of this species is detrimental to or interfering with, the intended plant community and may prevent the client from meeting an objective. "A significant risk of invasion" is defined as a stand of listed noxious or invasive weed(s) regardless of size, where in the opinion of the planner, if left unchecked is likely to cause adverse or detrimental effects on the intended plant community and result in the client not meeting an objective.

Common Name	Scientific Name	US Nativity	Classification
marijuana *	<i>Cannabis sativa L.</i>	Introduced	WV Noxious Weed
plumeless thistle	<i>Carduus acanthoides L.</i>	Introduced	WV Noxious Weed
curled thistle	<i>Carduus crispus L.</i>	Introduced	WV Noxious Weed
musk thistle	<i>Carduus nutans L.</i>	Introduced	WV Noxious Weed
opium poppy*	<i>Papaver somniferum L.</i>	Introduced	WV Noxious Weed
kudzu	<i>Pueraria montana (Lour.) var. lobata (Willd.)</i>	Introduced	WV Noxious Weed
	<i>P. thunbergiana (Sieb. & Zucc.) Benth.</i>		
Johnsongrass	<i>Sorghum halepense (L.) Pers.</i>	Introduced	WV Noxious Weed
giant hogweed	<i>Heracleum mantegazzianum</i>	Introduced	WV Noxious Weed
purple loosestrife	<i>Lythrum salicaria</i>	Introduced	WV Noxious Weed
mile-a-minute	<i>Polygonum perfoliatum L.</i>	Introduced	WV Noxious Weed
Japanese knotweed	<i>Polygonum cuspidatum Sieb. & Zucc.</i>	Introduced	WV Noxious Weed
Japanese stiltgrass	<i>Microstegium vimineum</i>	Introduced	WV Noxious Weed
poison hemlock	<i>Conium maculatum</i>	Introduced	WV Noxious Weed
Federal Noxious Weed	All plants listed under this Act are considered WV Noxious Weeds		

*These plants have additional laws associated with them. Possession or intentional propagation of these plants may be punishable under State and Federal drug laws and statutes.

WV NRCS ADVISORY LIST

The following plant species have been identified by various state agencies (WVDNR & WVDA) as exhibiting invasive characteristics and should be considered during planning. This advisory list is published by USDA NRCS West Virginia to inform clients of potential risks associated with some species known to exhibit invasive behavior in certain habitats. NRCS West Virginia may recommend their control/eradication when they impair or threaten to impair the intended management of a habitat or intended landuse. This list is neither regulatory nor all-inclusive and many other species could be considered invasive. Care should be exercised when implementing practices to avoid the spread of these species and clients should be made aware of their presence during planning.

PLANT SPECIES		
Common Name	Scientific Name	Classification
common reed	<i>Phragmites australis (Cav.) Trin. ex Steud</i>	Potentially Invasive
garlic mustard	<i>Alliaria petiolata</i>	Potentially Invasive
water milfoil	<i>Myriophyllum spicatum L.</i>	Potentially Invasive
yellow iris	<i>Iris pseudacorus</i>	Potentially Invasive

APHIS

[Federal Noxious Weed List](#) - *The APHIS Federal noxious weed program is designed to prevent the introduction into the United States of non-indigenous invasive plants and to prevent the spread of newly introduced invasive plants within the United States. APHIS noxious weed activities include exclusion, permitting, eradication of incipient infestations, survey, data management, public education, and (in cooperation with other agencies and state agencies) integrated management of introduced weeds, including biological control.*

The Weed Program Mission Statement: APHIS will use modern technologies to prevent the introduction of parasitic-plant pests and noxious weeds (federally listed or candidates) into the United States. APHIS will exclude, detect and eradicate newly introduced weeds that pose the highest risk to US agriculture or the environment. APHIS may cooperate with other agencies to achieve environmentally sound and desirable forms of integrated management against introduced invasive plants