



United States Department of Agriculture  
Natural Resources Conservation Service

NE-WQL28 2015 Ranking Period 1

## **Water Quality Enhancement Activity – WQL28 – Biological suppression and other non-chemical techniques to manage brush, herbaceous weeds and invasive species**

### **State Criteria (same as NATIONAL CRITERIA)**

#### **Additional State Criteria and Clarification:**

1. Use of herbicides is prohibited with this enhancement.
2. Non-sprouting brush, such as eastern red cedar, may be controlled by mechanical removal alone. Sprouting species will need additional non-chemical techniques for control.
3. One of the most commonly used biological control measures is grazing. The effectiveness is dependent upon the species of brush or herbaceous vegetation present, age of the brush or growth stage of herbaceous plant, species of animal, and management objectives of the landowner. Generally, sheep and goats are most effective at stressing or reducing the presence of woody brush and weedy herbaceous plants. Care must be taken to ensure that the grazing animals do not increase the erosion risk from the site or negatively impact water resources. Refer to the [Brush Management Design Procedures \(314DP\)](#) or [Range and Pasture Tech Note #18](#) “Procedures Using Targeted Grazing for Invasive Plant Management” for additional information. Many species of herbaceous weeds are also controlled well by targeted grazing. The effectiveness is dependent on the weed species and the species of grazing animal.
4. Some brush species are controlled with prescribed burning. The effectiveness is dependent upon the species of brush, the presence of fine fuels, the age of the brush and management objectives of the landowner. Prescribed burning should be implemented during the appropriate time frame to control the target brush species. Producer is responsible for development of Prescribed Burn Plan and for obtaining a Burn Permit. Burning will be outside of the primary nesting season (April 1 – August 1). Refer to the [Nebraska Range and Pasture Technical Note 24](#) -“Fire effects on selected shrubs, forbs and grasses” and [Prescribed Burning Design Procedures \(338DP\)](#).
5. Use and introduction of beneficial insects and micro-organisms to target undesirable vegetation must be in accordance with University of Nebraska-Lincoln, Extension guidelines and techniques, as well as USDA, Animal and Plant Protection Service-Plant Protection and Quarantine (PPQ) guidelines and regulations, and Nebraska Department of Agriculture guidelines and regulations.
  - i. The producer must obtain the required Permit 526 from the USDA, Animal and Plant Health Inspection Service-Plant Protection and Quarantine (PPQ) before biocontrol organisms are transported or shipped interstate:  
[http://www.aphis.usda.gov/plant\\_health/permits/organism/index.shtml](http://www.aphis.usda.gov/plant_health/permits/organism/index.shtml)
  - ii. For UNL-Extension guidelines please contact Dr. Robert Wright, Extension Entomologist in Lincoln, at (402) 472-2128 or email [rwright2@unl.edu](mailto:rwright2@unl.edu)
  - iii. For Nebraska Department of Agriculture guidelines and regulations please contact Mitch Coffin, at the Noxious Weed Program in Lincoln, at (402) 471-2394 or email [mitch.coffin@nebraska.gov](mailto:mitch.coffin@nebraska.gov)
  - iv. See page 3 for additional references.



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**Documentation Requirements (SEE NATIONAL ENHANCEMENT ACTIVITY JOBSHEET)**

**Additional State Documentation Required:**

1. Complete the following table documenting the pastures where the practice was applied.
2. Complete a Brush Management Plan Brush Management Plan ([NE-CPA-19](#)) that indicates the brush species to be controlled, the existing brush canopy or density and extent, method of control, and, if applicable, the number, kind and size of the grazing/browsing animals to be used in the treatment.
3. If targeted grazing is used complete the Nebraska Prescribed Grazing Jobsheet found in the Nebraska Prescribed Grazing Design Tool showing the timing, sequence, and duration of brush management in the pasture(s) treated.
4. If prescribed burning is used, complete a [Nebraska Prescribed Burn Jobsheet](#) and obtain required burn permits.
5. Provide a map showing the location of treated areas.
6. Provide a photograph of the treated areas showing the treatment applied.

**DOCUMENTATION REQUIREMENTS**

Complete the Table below:

To be completed by NRCS and Producer during planning					To be completed by Producer during certification	
1	2	3	4	5	6	7
Tract	Pasture	Acres Planned	Species to be Controlled	Description of Control Method	Acres Treated	Dates Applied



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**I certify that biological, mechanical, and/or physical suppression technique to manage brush in the pasture(s) listed above meets specifications and have attached the following documentation:**

1. A full description of all biological and/or physical suppression techniques utilized, and projected effectiveness of the technique
2. A completed Brush Management Plan ([NE-CPA-19](#)) when woody species are controlled.
3. A completed Nebraska Prescribed Grazing Jobsheet and Grazing Schedule which can be found in the [Nebraska Prescribed Grazing Design Tool](#) when targeted grazing is utilized for control.
4. A completed [Nebraska Prescribed Burn Jobsheet](#) and copy of the burn permit when prescribed burning is utilized.
5. A map showing the location of the acres treated.
6. Photographs of the treated areas before and after treatment.

**I understand that it is my responsibility to obtain all necessary permits and to comply with all laws, regulations and ordinances pertaining to the application of these activities.**

**Certified by:** \_\_\_\_\_ **Date:** \_\_\_\_\_



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**Additional References:**

For additional information on biological suppression techniques refer to the following documents.

There are a series of UNL Extension publications which cover Nebraska noxious weeds, and discuss biological control options for each.

EC171 Noxious Weeds of Nebraska: Canada Thistle	<a href="http://www.ianrpubs.unl.edu/sendIt/ec171.pdf">http://www.ianrpubs.unl.edu/sendIt/ec171.pdf</a>
EC166 Noxious Weeds of Nebraska: Common Reed (Phragmites)	<a href="http://www.ianrpubs.unl.edu/sendIt/ec166.pdf">http://www.ianrpubs.unl.edu/sendIt/ec166.pdf</a>
EC174 Noxious Weeds of Nebraska: Leafy Spurge	<a href="http://www.ianrpubs.unl.edu/sendIt/ec174.pdf">http://www.ianrpubs.unl.edu/sendIt/ec174.pdf</a>
EC176 Noxious Weeds of Nebraska: Musk Thistle	<a href="http://www.ianrpubs.unl.edu/sendIt/ec176.pdf">http://www.ianrpubs.unl.edu/sendIt/ec176.pdf</a>
EC172 Noxious Weeds of Nebraska: Plumeless Thistle	<a href="http://www.ianrpubs.unl.edu/sendIt/ec172.pdf">http://www.ianrpubs.unl.edu/sendIt/ec172.pdf</a>
EC164 Noxious Weeds of Nebraska: Salt Cedar	<a href="http://www.ianrpubs.unl.edu/sendIt/ec164.pdf">http://www.ianrpubs.unl.edu/sendIt/ec164.pdf</a>
EC173 Noxious Weeds of Nebraska: Spotted & Diffuse Knapweed	<a href="http://www.ianrpubs.unl.edu/sendIt/ec173.pdf">http://www.ianrpubs.unl.edu/sendIt/ec173.pdf</a>

Additional information about invasive plants may be found:

Nebraska Invasive Plant Guide	<a href="http://neinvasives.com/resources/field-guides/">http://neinvasives.com/resources/field-guides/</a>
Canada Thistle	<a href="http://www.invasivespeciesinfo.gov/plants/canthistle.shtml">http://www.invasivespeciesinfo.gov/plants/canthistle.shtml</a>
Common Reed (Phragmites)	<a href="http://www.invasivespeciesinfo.gov/aquatics/commonreed.shtml">http://www.invasivespeciesinfo.gov/aquatics/commonreed.shtml</a>
Diffuse Knapweed	<a href="http://www.invasivespeciesinfo.gov/plants/diffknapweed.shtml">http://www.invasivespeciesinfo.gov/plants/diffknapweed.shtml</a>
Japanese Knotweed	<a href="http://www.invasivespeciesinfo.gov/plants/knotweed.shtml">http://www.invasivespeciesinfo.gov/plants/knotweed.shtml</a>
Purple Loosestrife	<a href="http://www.invasivespeciesinfo.gov/aquatics/loosestrife.shtml">http://www.invasivespeciesinfo.gov/aquatics/loosestrife.shtml</a>
Leafy Spurge	<a href="http://www.invasivespeciesinfo.gov/plants/leafyspurge.shtml">http://www.invasivespeciesinfo.gov/plants/leafyspurge.shtml</a>
Salt Cedar	<a href="http://www.invasivespeciesinfo.gov/plants/saltcedar.shtml">http://www.invasivespeciesinfo.gov/plants/saltcedar.shtml</a>
Spotted Knapweed	<a href="http://www.invasivespeciesinfo.gov/plants/spotknapweed.shtml">http://www.invasivespeciesinfo.gov/plants/spotknapweed.shtml</a>

Following is a section from the noxious weeds rules and regulations. Biological control can be acceptable but must be approved by the local county weed control authority. **002.02D** *Biological methods. To be deemed acceptable, the use of livestock, predators, pathogens, and parasites as a method of controlling noxious weeds shall be as effective as the use of herbicides, as set forth in 002.02C and shall be approved by the control authority.*

Additional information may be obtained from the local Nebraska Weed Control Authorities. Local contact information may be found on the Nebraska Weed Control Association Website:

<http://www.neweed.org/Control.aspx>.

**Additional Contact:**

Mitch Coffin, Program Manager  
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