

Brush Management

Virginia Conservation Practice Job Sheet

314



Definition

Removal, reduction or manipulation of woody (non-herbaceous) plants, including invasive and noxious plants.

Criteria

Plan brush management to achieve the desired plant community based on species composition, structure, density, and canopy cover or height.

Manage brush for the desired control of the target woody species and decrease competition to enhance the desired plant community.

Accomplish brush control by mechanical, chemical, biological or a combination of these methods.

Comply with the chemical's label directions and NRCS policy on chemical use, and the Virginia Pest Management Guide when planning and applying Brush Management with a chemical control method.

Select a brush control method that minimizes soil loss and rapidly re-vegetates the site if the soil erosion potential is high.

Brush management practices or operations shall comply with all federal, state, and local laws and ordinances.

Plan and apply brush management in a manner to meet the habitat requirements of the wildlife of concern.

Plan brush management in a manner that it will not adversely affect threatened or endangered species or their habitats.

Control undesirable woody plants in a manner that creates the desired plant community which reduces wildfire hazard conditions.

NOTE: This summary does not address all requirements and considerations in the VA Brush Management Conservation Practice Standard (VA-314). Consult the Conservation Practice Standard for further details.

General Information			
Client: _____	County: _____		
Field Office: _____	Contract #: _____		
Farm #: _____	Tract #: _____		
Field # and acreage: _____			
Producer's Purpose (check all that apply)			
<input type="checkbox"/> Create the desired plant community. <input type="checkbox"/> Restore desired vegetative cover to protect soils, control erosion, reduce sediment, improve water quality and enhance stream flow. <input type="checkbox"/> Maintain, modify or enhance fish and wildlife habitat including that associated with threatened and endangered species. <input type="checkbox"/> Improve forage accessibility, quality and quantity for livestock and wildlife			
Practice Specifications			
Brush Management Goal (include targeted brush species, estimated distribution and density of targeted plants, planned control method, timing for effective treatment, and post treatment cover or desired efficacy) : _____ _____ _____			
Map or drawing (attached) and narrative (above) identifies the areas to be treated and the areas that will not be disturbed. <input type="checkbox"/> Yes <input type="checkbox"/> No			
Erosion control methods (if applicable): _____ _____			
Complete the following table as applicable for control of undesirable woody species			
	Field # _____	Field # _____	Field # _____
Woody Species (to be controlled)			
Acres to be treated			
Primary or Dominant Soil Type			
Landuse (setting)			
Initial Application Date			
Initial Mechanical Control Treatment			
Initial Biologic Control Treatment (specify livestock type)			
Initial Chemical Control Treatment ²			
Follow-up Application Date			
Follow-up Treatment ^{1 or 2}			
¹ Mechanical Control Method – Identify the type of equipment as hand-pulling, weed wrenches, loppers, mulcher, shears/loppers or other. If not needed indicate as N/A. ² Initial Chemical Method – Describe as <i>backpack sprayer, spray boom, aerial, spot application/spray, foliar spray</i> or other (describe in the additional procedures section)			

Herbicide (Chemical) Treatment of Brush

See FOTG for a complete list of invasive and noxious plants in Virginia. The list of plants below is recognized as hard to control species and authorized for consecutive multi-year treatments for up to three years.

Scientific Name	Common Name
<i>Ailanthus altissima</i>	Tree-of-heaven
<i>Alliaria petiolata</i>	Garlic Mustard
<i>Celastrus orbiculatus</i>	Oriental Bittersweet
<i>Centaurea stoebe ssp. micranthos</i>	Spotted Knapweed
<i>Cirsium arvense</i>	Canada Thistle
<i>Elaeagnus umbellata</i>	Autumn Olive
<i>Lespedeza cuneata</i>	Sericea Lespedeza
<i>Ligustrum sinense</i>	Chinese Privet
<i>Lonicera japonica</i>	Japanese Honeysuckle
<i>Lonicera maackii</i>	Amur Honeysuckle
<i>Lonicera morrowii</i>	Morrow's Honeysuckle
<i>Lythrum salicaria</i>	Purple Loosestrife
<i>Microstegium vimineum</i>	Japanese Stiltgrass
<i>Murdannia keisak</i>	Marsh dewflower
<i>Persicaria perfoliata</i>	Mile-a-minute
<i>Phragmites australis ssp. australis</i>	Common Reed
<i>Pueraria montana var. lobata</i>	Kudzu
<i>Reynoutria japonica</i>	Japanese knotweed
<i>Rosa multiflora</i>	Multiflora Rose
<i>Sorghum halepense</i>	Johnson Grass
<i>Agrostis capillaris</i>	Colonial bent-grass
<i>Albizia julibrissin</i>	Mimosa
<i>Arthraxon hispidus var. hispidus</i>	Joint Head Grass
<i>Miscanthus sinensis</i>	Chinese Silvergrass
<i>Paulownia tomentosa</i>	Royal Paulowina
<i>Festuca arundinacea</i>	Tall Fescue

If herbicide application is selected, what is the recommended chemical, application method, and rate (from VA Cooperative Extension): _____

All pesticides must be mixed and applied according to label instructions or applied by a licensed applicator.

Determine from the list below (generated from Win-PST) if the pesticide used has a high or medium risk assessment for leaching and or runoff to surface or groundwater.

Trade Name(s)	Chemical Name	Risk
2,4-D Amine, Select	2,4-D	Medium
2,4-DB	2,4-DB	Medium
Arsenal, Chopper	Imazapyr	High
Balan	Benfluralin	High
Banvel, Clarity, Dicamba	Dicamba	High
Banvel + 2,4-D	2,4-D + Dicamba	High

Buctril	Bromoxynil octanoate	Medium
Crossbow	2,4-D + Butoxyethyl triclopyr	High
Eptam	EPTC	Medium
Garlon 4	Butoxyethyl triclopyr	High
Gramoxone	Paraquat dichloride	High
Grazon	Picloram	High
Grazon P+D	2,4-D + Picloram	High
Journey	Glyphosate + Imazapic	High
Kerb	Propyzamide	High
MCPA	MCPA	High
Plateau	Imazapic	High
Poast, Poast Plus	Sethoxydim	Medium
Prowl	Bromacil	High
Pursuit	Imazethapyr	High
Raptor	Imazamox	High
Redeem	Clopyralid + Triethylamine triclopyr	High
Roundup, Accord	Glyphosate	High
Sencor	Metribuzin	High
Surmount	Fluroxypyr + Picloram	High
Velpar	Hexazinone	High

For herbicides with a "medium" rating, select at least one of the listed mitigation strategies.

For herbicides with a "high" rating, select at least 2 of the listed mitigation strategies.

- A. 35 foot buffer is maintained along all watercourses where product is used
- B. 30% or greater crop residue is maintained where products are used
- C. Crop rotation used to reduce pesticide use
- D. Less than 75% of maximum rate is applied (if effective for control)
- E. Products are used for spot treatment or used no more than once every 3 years

Tract/Fields	Pesticide	A	B	C	D	E

Biological Treatment of Brush

Goats may be used in a controlled browsing scenario for the biological treatment and control of brush.

Beginning threshold: The canopy of targeted brush species exceeds 25% measured at or below five feet average height throughout the targeted treatment area.

Method/Implementation: The area to be browsed should be fenced into at least 5 paddocks if at all possible. Initiate browsing as soon as the brush is fully leafed and defoliate until the targeted species have at least 80% leaf removal below five feet in height throughout the treatment area. Move goats to the next paddock and repeat. When the initial paddock leafs out again, regardless of where the goats are in the rotation, bring them back to the initial paddock to defoliate the brush again. Continue this method to manage brush until all paddocks have brush suppressed or killed to at least the threshold described above. Killing brush may take 2 to 3 years of repeated browsing.

Ending threshold: All brush species have at least 80% leaf removal and some twigs possibly eaten below five feet in height throughout the treatment area at the end of July. Research has shown that defoliation after July has little effect, so plan to have initial defoliation complete before August.

Protection for Goats: Most goat herds need protection from predators and a good fence and guard animal can be a good idea.

Goat Grazing Preferences:

Preferred species: Multiflora rose, blackberry, greenbriar, honeysuckle, locust, sumac, willow, mulberry, wild grape, autumn olive, gooseberry, chicory, red clover, ragweed, lambs quarter, sericea lespedeza, crown vetch, poison ivy/oak, spotted knapweed, pigweed, oak, walnut, agrimony, leafy spurge.

Intermediate preference: cedar, buck brush, hickory, ironweed, spiny amaranth, curly dock, pokeweed, buttercup, white clover, thistle, bur dock, ox-eye daisy, queen anne's lace, garlic mustard.

Undesirable or potentially poisonous: horse nettle (poisonous), perilla mint, woolly croton, buffalo burr, wild cherry (okay if fresh, poisonous if wilted), Switchgrass (may cause photosensitivity), alsike clover (may cause liver damage).

Fencing: Refer to the VA NRCS Material and Construction Specifications Table 1 for goat boundary fencing options. Interior or paddock fences to control goats range from 4 strands of electrified polywire to an electrified net fencing. Voltage between 4,000 and 7,000 is recommended for goats.

Monitoring Plan

Based on the established brush management plan, define an appropriate monitoring plan including the timing and frequency that treatment areas should be evaluated to document control compared to the original objectives.

Operation and Maintenance Plan

- Apply Brush Management practices using approved materials and procedures.
- Operations must always comply with all local, state, and federal laws and ordinances.
- Always dispose of herbicides and herbicide containers in accordance with the label directions and comply with all federal, state and local regulations.

SAFETY INFORMATION	
National Pesticide Information Center (NPIC) (Non-Emergency)	1-800-858-7384
Chemical Transportation Emergency Center (CHEMTRAC)	1-800-424-9300

Read and follow label directions and maintain appropriate Material Safety Data Sheets (MSDS). MSDS and pesticide labels may be accessed on the Internet at: <http://www.greenbook.net/> or <http://www.cdms.net>.

- Landowners should maintain records of brush control for at least two years. Herbicide application records must be in accordance with USDA Agricultural Marketing Service’s Pesticide Recordkeeping Program and state-specific requirements.
- Determine the success of the practice by evaluating regrowth or reoccurrence of target species after sufficient time has passed to monitor the situation and gather reliable data. Evaluation periods will depend on the methods and materials used.
- Following initial application, some regrowth, resprouting, or reoccurrence of brush should be expected. Spot treatment of individual plants or areas needing retreatment should be done as needed while woody vegetation is small and most vulnerable to desired treatment procedures.

Also refer to:

USDA Agricultural Marketing Service, Science and laboratories, Pesticide Recordkeeping Program (PRP) available at: <http://www.ams.usda.gov/>

National Pesticide Information Center - NPIC is a cooperative agreement between Oregon State University and the U.S. Environmental Protection Agency available at: <http://npic.orst.edu/index.html>

The Greenbook Group – Chemical Data Delivery Solutions available at: <http://www.greenbook.net/>

Additional O&M Instruction:

Planner Certification

This Brush Management practice planned in this job sheet fulfills minimum requirements of Virginia NRCS Conservation Practice Standard 314.

Signature Title Date

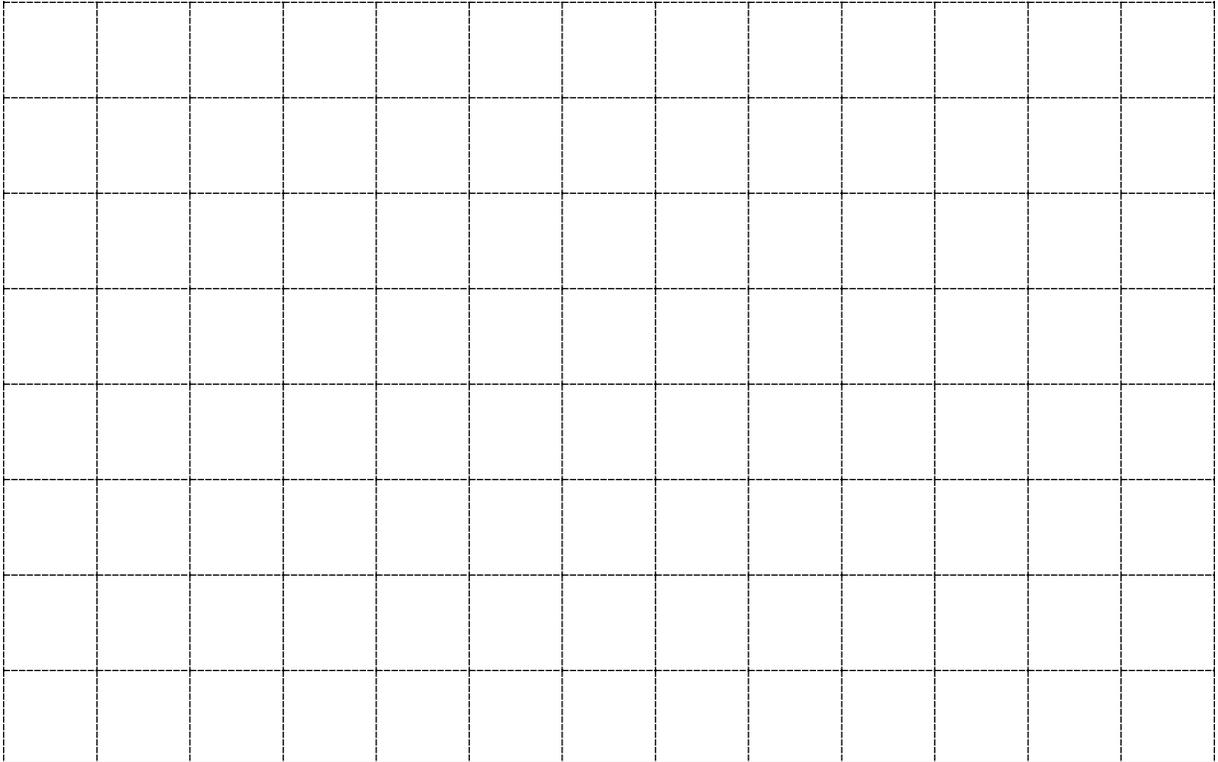
Certification of Practice Completion

This Brush Management practice planned in this job sheet has been completed and maintained according to Virginia NRCS specifications (indicate in Practice Specifications any changes to the planned activities and acreage).

Signature Title Date

If needed, an aerial view or a side view of the practice can be shown below. Other relevant information, complementary practices and measures, and additional specifications may be included.

Scale 1"= ____ ft. (NA indicates sketch not to scale: grid size=1/2 " by 1/2")



Additional Specifications and Notes:

Blank area for additional specifications and notes.

“USDA is an equal opportunity provider and employer.”