

Landowner/Producer:		Farm #:
Field(s):	Acres:	Tract #:
Soil Map Unit(s):		County:
Planner:		Date:

DEFINITION

The management or removal of woody (non-herbaceous or succulent) plants including those that are invasive, exotic, and noxious.

Woody plant species often found to be undesirable include, but are not limited to: bush honeysuckle, Japanese honeysuckle, locusts, tree-of-heaven, autumn olive, multiflora rose, eastern red cedar, and several buckthorn species.

PURPOSE

Treatment activities will encourage the control of woody plant species in non-cropland areas. Early detection and treatment are necessary to eradicate or control the establishment and spread of undesirable woody plant species in non-cropland areas. If left unchecked, these plants can threaten plant diversity, pasture and forest productivity, forest regeneration, and wildlife habitat. This practice can be utilized for natural community restoration and wildlife habitat improvements. This practice is not intended to be used for conversion of woodland or forest to grassland.

MANAGEMENT

Control can be difficult once a population becomes established. Multiple treatments may be necessary to achieve eradication and are often dependent on species and extent of infestation. Appropriate herbicide applications often provide the most effective long-term control.

Other effective methods include mechanical (cutting or specialized machinery), manual (pulling by hand), biological, and prescribed burning. The best results are often achieved by using a combination of methods, such as (cutting + herbicide application) or (cutting + herbicide application + prescribed burning).



Bush Honeysuckle

Photo By: MDC Staff

SPECIFICATIONS

Treatment of woody species is often described as a component of resource inventories, grazing plans, wildlife management plans, or forest management plans. In instances where inventories or plans do not exist or do not sufficiently describe the extent of infestation, utilize the "OPTIONAL WORKSHEET FOR DETERMINING % CANOPY COVER OF TARGET SPECIES" to determine the extent and level of treatment.

OPERATION AND MAINTENANCE

- Scout infested areas annually to detect re-growth or re-introduction of undesirable species into the site.
- Apply follow-up treatments to re-growth of targeted species within the treatment area.
- Success of the practice shall be determined by evaluating post-treatment re-growth of target species after sufficient time has passed.
- Length of evaluation periods will depend on the woody species being monitored.

PLANS AND SPECIFICATIONS – WOODY SPECIES IN NON-CROPLAND

SECTION II

GENERAL RECOMMENDATIONS AND GUIDANCE: (Provide detailed, site-specific information as needed)

Disposal: If needed, plan how treated material will be disposed before beginning any treatment methods. With cutting applications, stems and branches without berries can be left on site with little to no chance for re-establishment. If berries are present destroy branches by burning. With pulling methods, ensure all roots are exposed and not in contact with the soil surface to prevent re-rooting. Other solutions include burning or removing the material for appropriate off-site disposal. If seed heads are present, bagging and removal for offsite disposal is an effective method.

If O&M includes prescribed burning, consider methods to reduce fuel loads such as piling debris for burning when there is snow cover on the ground or shortly after a rain event. For natural community restoration, do not use heavy equipment to push and pile the treated material.

Recommendations for disposal of treated material:

Herbicides: If herbicides are used, follow label rates, directions, and manufacturer recommendations. Use the current version of Win-PST to determine Soil/Pesticide Interaction Hazard Ratings. Each Hazard Rating category will have an associated minimum Mitigation Index Score Level that must be attained. Use Appendix Table 1 in the current Missouri Integrated Pest Management (IPM) conservation practice standard (Code 595) to determine if planned conservation practices provide an adequate level of mitigation. Use Appendix Table 2 to select additional IPM techniques if planned conservation practices are not adequate. Be sure to apply herbicide when the target plant is most susceptible to the chemical and the chosen treatment method. When choosing herbicides, review leaching, runoff potential, setback requirements, persistence, and toxicity ratings of chemical formulations. Use the safest available herbicide. Adhere to all application setbacks directed by chemical label for use in proximity to water bodies and other environmentally sensitive areas. Mention of trade names for plant control chemicals is not an endorsement for a particular product.

Biological Control: Sheep and/or goats can be used as an ecologically sound and economically viable alternative for biological brush control, especially if combined with other treatment methods. Site specific grazing plans will need to be developed that lists target species to control, owner's objectives, number and type of grazing animal to be used as well as timing, duration and frequency of each grazing event. Refer to Agronomy Technical Note MO-32 and Prescribed Grazing with Goats Information Sheet (IS-MO528gg).

Attach a map or aerial photo that shows:

- Unit Boundaries (Field or Stand)
- Location & Description of Sensitive Resources (If Applicable)
- Treatment Area (If Different than Unit)
- Location & Description of Setbacks (If Applicable)
- Planned Treatment Year (If Applicable)

SECTION III

DESCRIPTION OF EACH UNIT (field or stand) THAT REQUIRES CONTROL

Unit Number	Unit Acres	Undesirable target plant specie(s) to be controlled	Average % Canopy Cover	Current land use and dominant desirable species

SECTION IV

SCHEDULE OF TREATMENTS (If available, utilize information from Section III to complete schedule)

Unit #	Average %Canopy Cover <u>1/</u>	Treatment (Year) (Number)		Target Specie(s) to be controlled	Treatment Method(s) (Cutting, Chemical, Prescribed Burning, Pulling, etc.) <u>2/</u>	Timing of Treatment(s) or Plant Growth Stage for Best Effective Control
<i>Example Unit 1</i>	<i>50%</i>	<i>2012</i>	<i>1</i>	<i>Bush Honeysuckle and Autumn Olive</i>	<i>Cut stump and chemical treatment during dormant season</i>	<i>December 1 – February 15</i>
<i>Example Unit 1</i>	<i>30% regrowth</i>	<i>2012</i>	<i>2</i>	<i>Same</i>	<i>Foliar chemical treatment on regrowth</i>	<i>Following leaf out for both species. Honeysuckle is effectively treated with foliar spray after other plants have gone dormant (October or November)</i>

- 1/ Average % Canopy Cover (for the Unit) of target specie(s) will be used to determine level of the infestation within the treatment unit boundary. Estimate the average % cover over the entire treatment unit. The *Optional Worksheet for Determining % Canopy Cover of Target Species* may be used for an inventory procedure. Treatment will be needed over the entire area of infestation regardless of percent cover of the target species in different areas of the unit.
- 2/ Include specific application method(s), equipment type, herbicide type and rate, and timing of application(s). Provide reference documentation if methods, herbicide rate, and timing are provided through an alternative fact sheet, management plan, information sheet, study result, or other credible alternate source which is specific for control of the target species.

Additional Specifications and Post Treatment Goals:

SECTION V

ADDITIONAL RESOURCES AND REFERENCES

- NRCS Conservation Practice Standards
 - Prescribed Burning (338)
 - Forage Harvest Management (511)
 - Prescribed Grazing (528)
 - Integrated Pest Management (595)
 - Restoration of Rare and Declining Habitats (643)
 - Woody Cover Control Prairie/Glade/Savanna/Open Woodland Job Sheet (JS-BIOL-23)
 - Upland Wildlife Habitat Management (645)
 - Forest Stand Improvement (666)
- NRCS Agronomy Technical Note MO-32: *Biological Weed and Brush Control with Sheep and Goats*
- NRCS Conservation Practice Information Sheet: *Prescribed Grazing with Goats (IS-MO528gg)*
- Refer to applicable Ecological Site Description (ESD) State and Transition models to develop specifications that are ecologically sound and defensible. See Section II of the Missouri NRCS eFOTG at: www.mo.nrcs.usda.gov
- Missouri Department of Conservation Website – Invasive Plants page: www.mdc.mo.gov/your-property/problem-plants-and-animals/invasive-plants
- Missouri Department of Agriculture's Invasive Species website: <http://mda.mo.gov/plants/ipm/noxiousweedlist.php>

