

# Pest Management

## Invasive Plant Control—Shrub Honeysuckles

### **Conservation Practice Specification Guide** **MA-595**



**Morrow's honeysuckle (*Lonicera morrowii*)**



**Tatarian honeysuckle (*Lonicera tatarica*)**

### **General Specifications**

A conservation plan shall be prepared in accordance with the criteria and general specifications of the Pest Management (595) conservation practice standard. The conservation plan also will describe the requirements for applying the practice to achieve its intended purpose(s).

Specifications for applying this practice shall be prepared for each site and recorded and filed using approved jobsheets.

### **General Criteria**

- An *invasive* species is one that displays rapid growth and spread, establishes over large areas, and persists. Invasiveness is characterized by robust vegetative growth, high reproductive rate, abundant seed production, high seed germination rate, and longevity. Some native plants exhibit invasive tendencies in certain situations.
  - Early detection and eradication of invasive plants, before they become well established, is an important component of any invasive plant control plan.
  - Follow the attached pest management component of the overall conservation plan.
- Methods of pest management must comply with Federal, State, and local regulations. This includes reading and following pesticide labels.
  - All necessary pesticide applicator licenses/permits shall be obtained.
  - Control methods will be designed to protect and encourage the growth of desirable native plant species.
  - The control methods used will be used in a manner that does not degrade aquatic resources. Where pesticides are planned, a risk analysis (Win-PST) and appropriate mitigation will be completed.
  - The control method(s) used will be designed to protect the soil from erosion and to avoid the degradation of soil quality.
  - Disposal of noxious or invasive plant species from the site treated will be by appropriate methods (e.g., burned, piled, contained) to lessen the potential for the plants or their propagules (seed, shoots, stems, etc.) to repopulate the site or spread to new areas.
  - Be prepared to control seedlings that may establish following removal of larger plants and near brush piles.

## Considerations

Consider choosing methods of control that cause no or limited soil disturbance. Disturbed soil may lead to increased germination of invasive plant seeds.

## Shrub honeysuckles

The exotic shrub honeysuckles are increasingly common throughout much of the eastern and Midwestern United States and south-central Canada where they have contributed to reduced species richness and cover of native herb communities and to reduced tree regeneration in early to mid-successional forests. Although disturbance of some kind usually precedes invasion, the exotic shrub honeysuckles are adapted to a wide variety of habitats. Reproduction is almost entirely by seed. Seed production and short-term seed viability are consistently high, and seeds are readily dispersed by birds and, perhaps, small mammals.

Exotic shrub honeysuckles are upright, multi-stemmed, oppositely branched, deciduous shrubs. The exotic honeysuckles have hollow center branches when mature (native honeysuckles do not). The opposite leaves are entire (un-toothed margins) and paired. Axillary flowers (where leaf is attached to stem) are showy with white, pink, and sometimes aging to yellow corollas. The fruits of honeysuckles are usually red but can be yellow, orange or clear and fleshy. The fruits are never blue, black or white. In flower, exotic shrub honeysuckles can be distinguished from all native shrub honeysuckles except swamp fly-honeysuckle (*L. oblongifolia*) by their hirsute (hairy) styles.

The exotic shrub honeysuckles also generally leaf-out earlier and retain their leaves longer than the native shrub honeysuckles. This trait, shared by many invasive shrubs, gives them a competitive advantage over native plants but also allows landowners to easily locate the invasive shrubs and determine their extent on a property.

## Similar Natives

The Massachusetts Division of Fisheries and Wildlife's Natural Heritage & Endangered Species Program lists four native species of

honeysuckle: *Lonicera canadensis*, *L. dioica*, *L. hirsuta*, and *L. villosa*.

## Control

The potential for large-scale restoration of unmanaged natural areas infested with honeysuckle is probably low. Restoration potential for managed natural areas infested with honeysuckle is probably moderate. If attacked during the early stages of colonization, the potential for successful management is high.

Manual, mechanical, environmental/cultural, and chemical methods are all useful to varying degrees in controlling honeysuckles. Removing or killing plants will provide increased light at the site which may lead to a surge of seedlings in the following year. Prepare to monitor and control these outbreaks.

## Biological Control

There are no known biological controls of honeysuckle.

## Mechanical Control

Mechanical controls include grubbing or pulling seedlings and mature shrubs, and repeated clipping of shrubs. Effective mechanical management requires a commitment to cut or pull plants at least twice a year for a period of three to five years. Cuttings should be done in the growing season (spring and fall). Grubbing or pulling by hand (using a Weed Wrench or a similar tool) is appropriate for small populations or where herbicides cannot be used.

Any portions of the root system not removed can re-sprout. Because disturbed, open soil can support rapid re-invasion, managers must monitor their efforts at least once per year and repeat control measures as needed. Limit soil disturbance whenever possible. Winter clipping should be avoided as it encourages vigorous re-sprouting.

## Prescribed Burning

Repeated annual prescribed burns during the growing season will top-kill shrubs and inhibit new shoot production. Be aware that many Massachusetts communities limit burning to the early spring months (end of dormancy). The effectiveness of dormant season burns is also

less than that of burns carried out in the middle of the growing season.

### Chemical Control

Most managers report that treatment with herbicides is necessary for large shrub honeysuckle populations. Formulations of glyphosate (brand names Roundup, and for use near waterbodies, Rodeo) and formulations of triclopyr (brand names Garlon, Pathfinder, and others), have been used as foliar sprays or cut stump sprays and paints with varying degrees of success.

Glyphosate is a nonselective herbicide which kills both grasses and broad-leaved plants while triclopyr is a selective herbicide that kills broad-leaved plants but does little or no harm to grasses.

**Cut Stump Treatments:** For 'cut stump' treatments, horizontally cut the stem near the ground. Do not cut the stem at ground level. Leaving some stem will allow another cut and application if there is sprouting. Apply a 25% solution of glyphosate or triclopyr<sup>3</sup> and water to the stump being sure to cover the outer, top 20% of the cut stem<sup>1,2</sup>. Herbicide must be applied immediately following the cutting. Add dye or food coloring to the mixture to track treated stumps. This treatment is best applied late in the growing season when the plant is transporting nutrients to its root system (August-October).

**Foliar Treatment:** For foliar treatments a 2% solutions of glyphosate or triclopyr and water can be used<sup>1</sup>. Both glyphosate and triclopyr should be applied to the foliage late in the growing season. Do not cut down treated plants for at least a full growing season.

**Basal Bark Method:** This method is effective throughout the year as long as snow cover does not prevent spraying to the ground level. Apply a mixture of 25% triclopyr and 75% horticultural oil to the basal parts of the shrub to a height of 12-15 inches from the ground<sup>1,2</sup>. Be sure to treat entire circumference of the stem in a band at least 12 inches wide. Thorough wetting is necessary for good control; spray until run-off is noticeable at the ground line. Do not apply to bark that's wet from heavy dews and rain.

<sup>1/</sup> The Nature Conservancy Element Stewardship Abstracts – Bush Honeysuckles

<sup>2/</sup> Tennessee Exotic Plant Management Manual

### Important Note

Mention of specific pesticide products in this document does not constitute an endorsement. These products are mentioned specifically in control literature used to create this document.

### Disposal

Small, pulled shrubs should be hung in trees to prevent re-rooting. Larger, pulled shrubs may be piled or piled and burned, roots up, to prevent re-establishment. Cut stems may be piled or piled and burned. If chipping, do not remove material from the site as honeysuckle will spread by seeds.

### Safety

Develop a safety plan for individuals exposed to chemicals including telephone numbers and addresses for emergency treatment centers and the telephone number for the nearest poison control center.

- For human exposure questions, contact the regional poison control center:  
**Regional Center for Poison Control & Prevention  
Serving Massachusetts & Rhode Island  
Children's Hospital Boston  
300 Longwood Ave, IC Smith Building  
Boston, MA 02115  
1-800-222-1222**  
Or see the national website for the **American Association of Poison Control Centers** at <http://www.aapcc.org/>
- For advice and assistance with emergency spills that involve agrichemicals, contact:  
**Mass Department of Environmental Protection  
24-Hour Emergency Response  
1-888-304-1133**
- National 24-hour assistance for emergency spills, contact:  
**CHEMTREC  
1-800-262-8200  
<http://www.chemtrec.org/Chemtrec/>**
- For non-emergency information, contact the **National Pesticide Information Center (NPIC)**  
**1-800-858-7378  
<http://www.npic.orst.edu/>**

## References

- Massachusetts Department of Agricultural Resources  
Pesticide Bureau—Rights of Way Management.  
<http://www.mass.gov/agr/pesticides/rightofway/index.htm>
- Mehrhoff, L. J., J. A. Silander, Jr., S. A. Leicht, E. S. Moshier and N. M. Tabak. 2003.  
IPANE: Invasive Plant Atlas of New England.  
Department of Ecology & Evolutionary Biology,  
University of Connecticut, Storrs, CT, USA. URL:  
<http://www.ipane.org>
- Patterson, William A., III. 2003. "Using Fire to Control Invasive Plants: What's New, What Works in the Northeast? Overview and Synthesis." *In* 2003 Workshop Proceedings: Using Fire to Control Invasive Plants: What's New, What Works in the Northeast.  
<http://extension.unh.edu/pubs/ForPubs/WPUFC103.pdf#search=%22prescribed%20burning%20to%20control%20invasive%20plants%22>
- Sorrie, Bruce A. and P. Somers. 1999. The Vascular Plants of Massachusetts: A County Checklist. MA Div. Fisheries and Wildlife. Natural Heritage and Endangered Species Program.
- Tennessee Exotic Pest Plant Council. Tennessee Exotic Pest Plant Management Manual. 1997.  
[http://www.tneppc.org/Manual/Bush\\_Honeysuckles.htm](http://www.tneppc.org/Manual/Bush_Honeysuckles.htm)
- The Nature Conservancy - Element Stewardship Abstract (and references therein)  
[http://tncweeds.ucdavis.edu/esadocs/documnts/oni\\_sp.pdf](http://tncweeds.ucdavis.edu/esadocs/documnts/oni_sp.pdf)
- Weeds Gone Wild: Alien Plant Invaders of Natural Areas. Alien Plant Working Group of the Plant Conservation Alliance (National Park Service)  
<http://www.nps.gov/plants/alien/index.htm>