Pest Management – Invasive Plant Control
Multiflora Rose – *Rosa Multiflora*

Conservation Practice Job Sheet *NH-595*

Multiflora Rose (*Rosa Multiflora*)

Multiflora Rose, Flower

Multiflora Rose
Multiflora rose was introduced to the East Coast of the U.S. from Japan in 1866 as rootstock for ornamental roses. Early in the 1930's several conservation agencies promoted the use of multiflora rose for several reasons including; erosion control, "living fences" to confine livestock, wildlife cover, food for song birds even crash barriers on the highway. Multiflora rose has a wide tolerance for various soil, moisture, and light conditions. It can grow in dense woods, prairies, along stream banks and roadsides and in open fields and pastures.

Its tenacious and unstoppable growth habit was eventually recognized as a problem on pastures and unplowed lands, where it disrupted cattle grazing. Multiflora rose is extremely prolific and can form impenetrable thickets that exclude native plant species. This exotic rose readily invades open woodlands, forest edges, successional fields, savannas and prairies that have been subjected to land disturbance. For these reasons, multiflora rose is classified as a noxious weed.

Multiflora rose reproduces by seed and by forming new plants that root from the tips of arching canes that contact the ground. Fruits are readily sought after by birds which are the primary dispersers of its seed. It has been estimated that an average multiflora rose plant may produce a million seeds per year, which may remain viable in the soil for up to twenty years. Germination of multiflora rose seeds is enhanced by passing through the digestive tract of birds.

Description
Multiflora rose is a thorny, perennial shrub with arching stems (canes), and leaves divided into five to eleven sharply toothed leaflets. The base of each leaf stalk bears a pair of fringed bracts. Beginning in May or June, clusters of showy, fragrant, white to pink flowers appear, each about an inch across.
Small bright red fruits, or rose hips, develop during the summer, becoming leathery, and remain on the plant through the winter.

Similar Natives
Rosa setigera is a similar native that is on the edge of its range in New Hampshire. Multiflora rose though similar, exhibits a more trailing or arching habit, with

mostly white flowers in a pyramid inflorescence, a glaborous style and smaller fruit.

Control
Mechanical and chemical methods are currently the most widely used methods for managing multiflora rose. In high quality natural communities, cutting of individual plants is preferred to site mowing to minimize habitat disturbance. Various herbicides have been used successfully in controlling multiflora rose but, because of the long-lived stores of seed in the soil, follow-up treatments are likely to be necessary. Application of systemic herbicides (e.g., glyphosate) to freshly cut stumps or to regrowth may be the most effective methods, especially if conducted late in the growing season. Plant growth regulators have been used to control the spread of multiflora rose by preventing fruit set.

Biological Control
Biological control is not yet available for management of multiflora rose. However, researchers are investigating several options, including a viral pathogen (rose-rosette disease), which is spread by a tiny native mite, and a seed infesting wasp, the European rose chalcid. Rose-rosette disease, native to the western U.S., has been spreading eastwardly at a slow pace and is thought to hold the potential for eliminating multiflora rose in areas where it grows in dense patches. An important drawback to both the rose rosette fungus and the European rose chalcid is their potential impact to other rose species and cultivars.

Mechanical Control
Pulling or removing individual plants by hand is effective when plants are small. Special care should be taken to ensure that all roots are removed to prevent resprouting. If plants develop from severed roots these should be removed as well.

Cutting is appropriate for small initial populations and for environmentally sensitive areas where herbicides cannot be used. Repeated cutting will control the spread, but will not eradicate it. Stems should be cut at least once per growing season as close to ground level as possible.

For disturbed areas containing large populations of multiflora rose, mowing can provide partial control, by restricting top growth and spread. Research indicates that mowing three to six times a year can be effective. The objective of a mowing program is to clear the existing vegetation and reduce the reproductive capacity of the below ground portions of the plant. Mowing can also be effective in protecting a field or pasture from encroaching infestations. Repeatedly mowing the perimeter of a site to block this type of expansion can be somewhat effective in preventing the spread of multiflora rose. In many cases where this weed is present, mechanical methods will not be an option, and chemical control options should be considered.

Prescribed Burning
Prescribed burning has not been tried for multiflora rose. However it has been tested in southeastern Texas as a management practice for McCartney rose (*Rosa bracteata*), another exotic pasture species. Topkill of the burned plant was greater than 90%, regrowth was initiated within two weeks and follow-up treatments were necessary. Burning was more effective when combined with herbicide application. It is believed that multiflora rose would respond to prescribed burning in a similar way.

Chemical Control
Various herbicides have been tested and found effective for control of multiflora rose. It is important to note that multiflora rose has the typical regenerative powers of the rose family, and control programs must be monitored and followed up if necessary by repeated herbicide application or used in conjunction with other control methods such as mowing or burning.

Multiflora rose is susceptible to both glyphosate and triclopyr. Triclopyr can be applied starting in spring before or during flowering. Glyphosate is most effective when applied after flowering (early summer) until early fall. Cut-stump treatments with both herbicides also provide control, but cutting stumps in established thickets is very difficult because of the numerous thorny branches.

Foliar Treatment: Glyphosate is effective against multiflora rose in a 1-2% V/V solution[1]. Studies reported that a spring glyphosate treatment on *R. multiflora* showed increasing control over the growing season to complete control by the following spring. Treatments in the fall showed no results until the following spring, when effective control was realized. Near complete control of multiflora rose was achieved by the end of the second growing season after a late June application of either 1.5 or 3.0 lb/100 gal glyphosate[2], and grasses growing underneath the roses

were unaffected indicating that the spray on the rose overstory did not penetrate to the ground. When used with a surfactant the rate of application of glyphosate could be reduced to a 0.5% V/V solution for effective control[3]. Fosamine controls only woody species and is non-volatile, and may be suitable in situations where there is concern to protect herbaceous species.

[1]- Lynn, L.B., R.A. Rogers, and J.C. Graham. 1979. "Response of woody species to glyphosate in northeastern states." Proc. Northeastern Weed Sci. Soc.

[2]- Ahrens, J.F. 1979. "Chemical control of multiflora rose." Proceedings NE Weed Science Society.

[3]- Fawcett, R.S. 1980. "Today's weed-multiflora rose." Weeds Today.

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
There are a few general rules of thumb that will ensure proper disposal. Be sure the plant is dead before placing in a mulch or compost pile. Either dry it out in the sun, or bag it in a heavy duty black plastic bag. If you have flowers and/or seeds on the plant, put the flowers and seed heads into the bag head first so that there is minimal risk in dispersing seed.

Information and Recommendations compiled from:

- Ahrens, J.F. 1979. "Chemical control of multiflora rose." Proceedings NE Weed Science Society.
- Alien Plant Invaders of Natural Areas (NPS)
- Invasive Plant Atlas of New England (IPANE)
- "Invasive Plant Management Guide." Stewardship Subcommittee of the Connecticut Invasive Plant Working Group. http://www.hort.uconn.edu/cipwg/art_pubs/GUIDE/guideframe.htm
- Fawcett, R.S. 1980. "Today's weed-multiflora rose." Weeds Today.
- Lynn, L.B., R.A. Rogers, and J.C. Graham. 1979. "Response of woody species to glyphosate in northeastern states." Proc. Northeastern Weed Sci. Soc.
- The Nature Conservancy - Element Stewardship Abstract (and references therein)