Spread of Eurasian watermilfoil and problems caused by the plant

What is Eurasian watermilfoil and where is it native?
Eurasian watermilfoil is an exotic submersed aquatic plant that is native to Europe and Asia. It was discovered in the eastern US sometime before 1950. In Minnesota, it was first recorded in Lake Minnetonka in 1987.

How does Eurasian watermilfoil spread?
Milfoil is believed to spread from one body of water to another primarily by the unintentional transfer of plant fragments, primarily on trailered boats.

What can be done to prevent the spread of Eurasian watermilfoil?
The most important action that you can take to limit the spread of milfoil and other aquatic exotic plants is to remove all vegetation from your watercraft before you move it from one body of water to another.

If you think that you have found a new infestation of Eurasian watermilfoil, please contact the DNR (651-296-2835 in the Twin Cities or toll free 1-888-646-6367 in greater Minnesota). It is very helpful to send a sample of the suspected milfoil plants to the DNR for identification. Put suspected milfoil in a zip-loc bag and mail it to:

Eurasian Watermilfoil Program
Minnesota Department of Natural Resources
Division of Ecological Services, Box 25
500 Lafayette Rd, St. Paul MN 55155-4025

Why is Eurasian watermilfoil a problem?
Milfoil can interfere with recreational and other uses of lakes and rivers by producing dense mats at the water's surface. These mats are similar to, but can be more extensive than, those produced by native vegetation. Matted milfoil can displace native aquatic plants and alter environmental conditions, which in turn may harm fish and wildlife.

Where is Eurasian watermilfoil a problem?
In Minnesota, milfoil has caused problems in lakes by producing extensive mats where water depths are less than 15 feet, water clarity is high (mid-summer Secchi disk readings of six feet or more), and the fertility of the bottom ranges from moderate to high.

Harmful Exotic Species in Minnesota:

Eurasian Watermilfoil
(Myriophyllum spicatum)

Milfoil has not caused extensive problems in every body of water where it is established. Milfoil generally does not produce mats at the surface in water more than 15 feet deep. In lakes with low water clarity (mid-summer Secchi disk readings less than six feet), milfoil has not produced mats in water more than six feet deep, if at all. In areas of lakes where the fertility of the bottom is low, for example in sandy areas, the growth of milfoil and aquatic plants in general tends to be low.

When is Eurasian watermilfoil a problem?
Milfoil may cause problems in a lake one year, but not the next. This appears to be mainly due to the weather, which can cause variations from year to year in environmental conditions in lakes, especially clarity, temperature, and depth of water. These in turn can cause large variations in the abundance of aquatic plants, including milfoil.

What can be done about problems caused by Eurasian watermilfoil?
Problems caused by milfoil can be managed by treatment with herbicides or mechanical removal of plants (see fact sheet entitled "How to control Eurasian watermilfoil"). On lakes where matted milfoil causes unavoidable problems in public-use areas, the Minnesota Department of Natural Resources (MnDNR) offers limited funding for control by lake associations or local units of government. Funding is available only to organizations on lakes that have public water access.

To obtain technical assistance in control of milfoil, please contact Eurasian Watermilfoil Program, Division of Ecological Services at 651-297-8021 or 888-646-6367.

Prepared by the Eurasian Watermilfoil Program, Division of Ecological Services, Minnesota Department of Natural Resources
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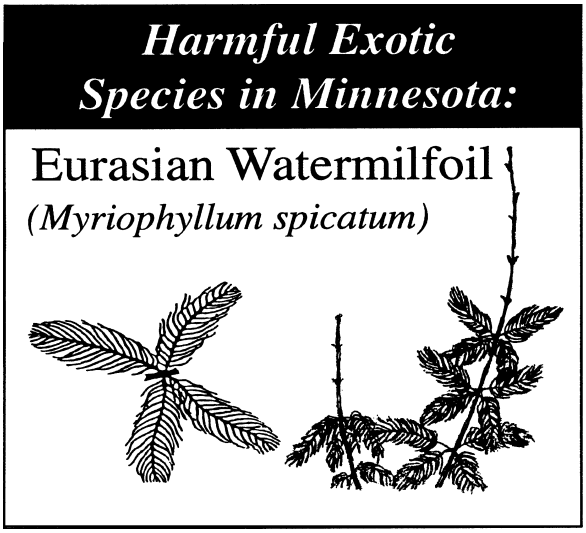
How to control Eurasian watermilfoil



Past experience in Minnesota and elsewhere has shown that eradication or elimination of Eurasian watermilfoil, hereafter called milfoil, from lakes is not a realistic goal. Nevertheless, problems caused by milfoil can be managed by controlling the plant.

Mechanical control of milfoil

Mechanical control means to cut or pull milfoil; this may be done by hand or with equipment such as rakes or cutting blades. An owner of lakeshore property may cut or pull submerged aquatic plants, including milfoil, in an area of 2,500 square feet or less, as long as the area will extend along no more than 50 feet of shoreline or one-half of your frontage, whichever is less, without obtaining a permit from the Minnesota Department of Natural Resources (DNR). This area may include a channel 15 feet wide to open water. All plants that are mechanically controlled must be removed from the lake. Any other control of milfoil or other aquatic plants requires a permit from the DNR.

Another method of mechanical control in small areas is the use of an Automated Untended Aquatic Plant Control Devices (AUAPCD), such as the Crary WeedRoller. Use of these devices requires a permit from the DNR.

In large areas, mechanical control usually involves the use of floating, motorized harvesting machines that cut plants and remove them from the water for subsequent disposal on land. Mechanical control with motorized harvesters or AUAPCD should only be done in lakes where the exotic has spread throughout the lake because these methods can create fragments that increase spread of milfoil within a lake.

Use of herbicides to control milfoil

There are a small number of herbicides that are approved for control of milfoil and other aquatic plants in Minnesota lakes. Any application of herbicide to public waters in Minnesota requires a permit from the Division of Fisheries, DNR.

Systemic herbicides and milfoil

Systemic herbicides are taken up by plants and can move within the plant, e.g., from leaves to roots. There are two systemic herbicides used for control of milfoil in Minnesota: 2,4-D and triclopyr. Both herbicides can kill leaves, stems, and roots, which can result in control that lasts a whole season or possibly longer. Triclopyr and 2,4-D are most effective when applied to actively growing milfoil, which usually means treatments in spring and early summer before July. Triclopyr and 2,4-D provide selective control because they reduce milfoil and a few native species, but do not harm most native submersed aquatic plants.

Contact herbicides and milfoil

Contact herbicides damage or kill only parts of plants with which they come into contact; they are not taken up by plants or moved within the plant. There are two contact herbicides used in Minnesota: endothall and diquat. Control of plants with contact herbicides may be short-lived because roots are not killed, so the plants grow back. Repeated treatments within a season may be necessary. It is not necessary that milfoil be actively growing in order to be controlled with contact herbicides, so they are effective whenever they are applied. Contact herbicides are generally considered to be non-selective, though some selectivity may be achieved by making treatments when certain species are not growing, for example, during early spring.

Limits on the amount of control of milfoil

The DNR limits the amount of control of milfoil to protect lakes, not to protect milfoil. Unlimited control of milfoil can cause excessive loss of associated native plants, problematic reductions in habitat for fish and wildlife, and decreases in water quality. Also, removal of native vegetation can create an opportunity for invasion by milfoil.

Permits and technical assistance

To apply for permits or to obtain technical assistance in control of aquatic plants, please contact the nearest Area Office of the Division of Fisheries or call the DNR at 888-646-6367.

To obtain technical assistance in control of milfoil, please contact Eurasian Watermilfoil Program, Division of Ecological Services at 651-297-8021 or 888-646-6367.

Mention of a particular product in this fact sheet does not constitute endorsement by the MnDNR.

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