Eurasian Watermilfoil Control Options

Madsen (2000) provides a good overview of control strategies for aquatic plants; Crowell (2000) provides a good overview of Minnesota's control strategies; Krischik et al. (1997; available on web) provide some general guidelines for plant managment by Minnesota homowners.

Mechanical:

Lake shore owners may chose mechanical control to maintain access or beaches. McComas (1993) provides an excellent description of various manual and mechanical control techniques that can be used by lakeshore residents. Remember that simply cutting plants is analogous to cutting your lawn. Depending on growing conditions, several cuts may be needed each season (Crowell et al. 1994). More disruptive approaches such as dredging or rotavation eliminate can eliminate all plants, reducing habitat for fish and food for waterfowl and potentially destabilizing sediments, resulting in murky water. Contact your local authorities before taking action.

Large mechanical harvesters can be effective at reducing vegetation. The degree of selectivity is dependent on the plant community and skill of the operator - all plants beneath the harvester are cut and some fish and other vertebrates will be incedentally removed (Booms 1999). These harvesters are effective at providing access paths and clearing areas around beaches or docks. Commercial harvesters are expensive: capital outlays can range from $30,000-100,000. Annual costs per hectare can range from $350 to $4000 for regular control (Cooke et al. 1993) and contractors may charge from $300 to $600 per acre per cut. Harvesting of large areas can be expensive, but is often the easiest solution; however, it is generally repeated each year and sometimes more often (e.g., Crowell et al. 1994). Research on deep cutting (e.g., Unmuth et al. 1998), pulling, and other longer lasting techniques is being conducted, but long term effectiveness is yet inconclusive. Often logistics of transport and milfoil disposal present greater challenges than the actual harvesting. The Lake Minnetonka Conservation District has extensive experience with a harvesting program and information on harvesting is available at their web site.

Harvesting sites and links:

- Lake Minnetonka Convservation District
- LMCD Harvesting information
- State of Washington Aquatic plant control
- State of Washington Mechanical Harvesting

Chemical:

Chemical controls of Eurasian watermilfoil can be effective, however, long term eradication of larger infestations is unlikely (Crowell 1999) and chemical controls can be expensive ($250-$1000 per acre) and may need to be repeated every one to four years. Generally, the aim is for selective control, to reduce Eurasian watermilfoil, but retain a native plant community. Thus, systemic herbicides, which are taken up by the plant and will kill the entire plant, are preferable to contact herbicides which will knock down the plant, but do not affect the roots and prevent regrowth. The most commonly used herbicide for milfoil control in Minnesota is 2-4-D (often Aqua-Kleen; Crowell 1999), which is selective for dicots. Control is most effective with spring or fall applications and some damage to other dicots (e.g., coontail, water lilies) can be expected. Fluridone (Sonar) is used is some states and under the right circumstances can be selective. Because it is recommended that whole water bodies be treated and selectivity is not

predictable, this chemical is not routinely used in Minnesota. Trichlopyr (Garlon) is a selective herbicide similar to 2-4-D, that shows good potential, however, it is still under safety evaluation and is not available for general use.

More detailed information of the use of chemicals and some state specific regulations can be found at:

- Krischik, V.A., R. M. Newman, and J. F. Kyhl. . 1997. Managing aquatic plants in Minnesota lakes. Minnesota Extension Service, University of Minnesota, Extension Circular FO-6955-C, St. Paul, MN.
- State of Washington Aquatic Herbicides
- Aquatic Weed Control in Missouri
- Florida (FAIRS) Aquatic Weed Herbicidal Management
- Crowell, W.J. 1999. Minnesota DNR tests the use of 2,4-D in managing Eurasian watermilfoil. Aquatic Nuisance Species Digest 3(4): 42-43; 46. In pdf

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