
Aquatic Plants in Dane County Waters

“WHY ARE THERE SO MANY WEEDS IN THE LAKES?”

We’ve all seen them, either from shore or our boat and it seems like there’s more every year. What can be done about the weeds? Are there really more? This informational brochure answers these questions and takes a look at lake plants, both good and bad, and how they are managed in Dane County.

Large lake plants (called macrophytes) are an essential part of healthy lake and stream ecosystems. They are home to many aquatic animals and are cover for young fishes avoiding predators. These large plants also stabilize bottom sediments and reduce shoreline erosion.

Some rooted aquatic plants are weedy, especially exotic (non-native) plants, such as Eurasian water milfoil that first arrived in the 1960s. Excessive growth of Eurasian water milfoil makes it the most abundant rooted plant in the Dane County lakes. Strictly speaking, a “weed” is merely a plant out of place; it is growing in the wrong spot. It is able to flourish in fertile lakes with nutrient-laden sediment like the lakes in Dane County. During summer, the lakes are often green from microscopic algae suspended in the water. Milfoil does well even under conditions of poor water clarity caused by

blooms of the algae because the plant stems grow to the surface where the leaves often float in thick mats or canopies. Milfoil can shade out many of our native rooted aquatic plants that grow deeper in the water column.

This canopy-forming growth characteristic is what makes Eurasian water milfoil such a nuisance to us. In particular, dense growth of the exotic plant interferes with boating and swimming, and the plants may produce an unpleasant odor when they die during summer. Eurasian water milfoil is usually the plant that lakeshore property owners, boaters and swimmers complain about, and with good reason. This weed degrades the enjoyment and the ecology of the lakes.

As with many problem exotic species, we are unable to eliminate Eurasian water milfoil from Dane County lakes. The plant continues to flourish in our lakes because the bottom sediments are a repository of excessive loads of nutrients from urban and rural runoff over the last 150 years. The goal for the most effective management is to mechanically harvest the plants where they are at nuisance levels and take the cuttings for composting in gardens.



Native aquatic plants provide habitat.



Invasive plants can become a nuisance.

Improved watershed and stormwater management practices, if implemented adequately, help reduce nutrient runoff into the lakes and will reduce the microscopic algae that makes the water green. Nutrient reductions in the runoff have less influence on the plants

because they get their nutrients primarily from the roots in the bottom soils. As the water clears, rooted plants will have more light and grow better and to deeper depths, which, while uncertain, may favor native plants over milfoil.

DANE COUNTY HARVESTING PROGRAM

Nuisance Plant Harvesting Operations

The Lakes Division of the Dane County Department of Public Works is responsible for the county's aquatic plant management program, with oversight provided by the Dane County Lakes and Watershed Commission, the Dane County Public Works Committee and elected county officials.

The Wisconsin Department of Natural Resources requires Dane County to submit lake aquatic plant harvesting plans for approval from the DNR under NR 109 Wis. Admin. Code (effective 5/1/02). The county's aquatic plant management strategy integrates harvesting, shoreline cleanup, nutrient reduction, and education. Harvesting is the backbone of aquatic plant management because it efficiently manages plants in large areas, removes some nutrients from the lakes, reduces the amount of chemical herbicides used in Dane County lakes and does not affect areas beyond those harvested.

Adhering to DNR requirements and operating within the county's limited budget, the county's policy is to cut and harvest Eurasian water milfoil and other invasives to help provide for reasonable use of the lakes for boating, fishing and swimming, while preserving the health and balance of the lake ecosystem.



A weed cutter in action.

The challenge is to remove excessive plant growth from the lakes in a way that balances multiple interests focusing on effective control. Implementing a focused integrated management plan improves the chance of sustaining positive changes in the native plant community while reducing the quantity of exotic aquatic weeds.

Harvested plant materials are taken to shore (in areas subject to DNR-approved aquatic plant harvesting plans) and hauled by truck to remote compost sites. Annual reports concerning the amount of tons harvested each year are kept to monitor trends.

The 2003 Dane County budget includes \$107,700 (from the solid waste fund) for harvesting, which is an increase of \$32,300 from the previous year. Dane County currently has a total of 7 harvesters and assorted other harvesting equipment. The county hires limited term employees each season to perform the harvesting. The supervised crews harvest aquatic plants from mid-May until mid-August. Crews are trained to focus on areas with exotic plants and to avoid areas with more native aquatic plants.

Goals

1. Enhance water-based recreational activities:

- fishing,
- boating, and
- shoreline recreational activities, including walking, biking and swimming.

2. During high water periods, keep water moving in the lower Yahara River.

The growth of aquatic plants in the river can greatly reduce the water flow in the channel.

The more the plants grow, the slower the water flows and the slower Lakes Mendota, Monona and Waubesa can drain. In high water conditions, maintaining high-outlet flow rates is critical for lake level management and flood control. At certain times of high water or when flood conditions exist or are likely, harvesting in the Yahara River between Lakes Waubesa and Kegonsa takes priority over aquatic plant harvesting in the lakes. This effort is to prevent upstream flooding and to increase water flow rates as an aid to controlling water levels in the entire Yahara River system.

3. Cut channels through plants to improve boating access and improve fish habitat.

Deciding when and where to cut channels from shoreline piers to open water areas of the lake depends both on the timing of plant growth and the recreational access approved by the DNR in the lake aquatic plant harvesting plans.

The goal is not to completely eliminate Eurasian water milfoil—which would be an impossible task—but rather to improve access to docks and boating channels and to create more edges for fish habitat in the plant beds. To increase access to piers, cuts should be made perpendicular to shore. Large beds should not be cut completely but intersected by a series of channels, which is important to sustain fish habitat and the habitat of their prey. Plant cutting is much like mowing your grass in that cutting needs to be repeated during the growing season.

4. Protect native plants by minimizing removal.

The goal is not to remove beneficial native aquatic plants that in most cases do not form nuisance

Low water levels and plants

If water levels are too low, plants can grow to the surface more rapidly and extend to greater distances offshore. Low water levels can aggravate the plant problem. Levels should be maintained below flood levels, but not at levels so low that result in greater plant growth.



Eurasian water milfoil has skinny stems with lots of little leaves that look like feathers. Stem fragments as small as an inch can reroot, which is primarily how it spreads.

growth. Areas of native plants are avoided by the harvesting crews, but it is impossible to avoid cutting native plants that are mixed in with exotics. Over the years, Dane County lakes have seen a reduction in both the number of species and overall growth of native rooted plants, but fortunately they appear to be slowly coming back.

5. Control without herbicides.

Dane County does not use chemicals to control aquatic plant growth. Poisoning plants results in releasing nutrients back into the lake, while cutting removes them. However, waterfront landowners can contract with a private company for herbicide control of plants adjacent to their properties. Any herbicide application to plants in the water is only done under permit and supervision by DNR. For more information, go to www.dnr.state.wi.us/org/water/fhp/lakes/aquaplan.htm.

WHAT EVERYONE CAN DO TO HELP

What can property owners do to help manage aquatic plants?

- To manage excessive plant growth on your shoreline:
 - % Use a water rake to pull Eurasian water milfoil or other exotic plants in to shore and compost them away from shore.
 - % Don't leave plants in a heap on the shore; they will smell and nutrients can run back into the lake.
 - % It is better to spread them out to let them dry; the plant piles quickly shrink and become easy to use as mulch and compost.
- Use only native plants in backyard water gardens. Exotics have a habit of ending up in our natural waters.
 - % Many nursery catalogues sell exotic water lilies; they may also have other exotics attached.
 - % Buy plants locally; there are many wonderful native species.
- Leave a tall thick vegetated shoreline buffer, including tall native grasses and leaf litter, to provide habitat for overwintering native weevils that attack Eurasian water milfoil.
- Reduce sedimentation and filling of the lake from stormwater by reducing soil erosion and reducing transport of tree leaves and other fine debris from our yards and streets.

What can boaters do to help?

- Help stop the spread of exotics:
 - % Clean off boats and trailers when leaving a lake or river. It's not only a good idea—it's the law.
 - % Cleaning off the plants has an additional benefit because zebra mussels are often carried on plants from lake to lake.

Where can I learn more?

Go to the Lakes and Watershed web site (www.co.dane.wi.us/commissions/lakes) for information on county and state watershed protection efforts to reduce phosphorus, recommendations for yard care practices to reduce runoff carrying nutrients into lakes, information on other exotic and invasive species (including the Commission's *Report on Zebra Mussels*) and links to other organizations and resources to help you.

You should also look at the Public Works web site at www.co.dane.wi.us/pubworks/lakes.

For more information, contact: Joe Yaeger in the Public Works Department (246-3897) or Sue Jones, Lakes and Watershed Commission staff (266-0118).

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DANE COUNTY LAKES & WATERSHED COMMISSION



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