

From Shore to Shore

*“For Minnesota citizens promoting
the health of our rivers and lakes”*

Newsletter 53
Nov-Dec 2003

on the web at www.shorelandmanagement.org/citizen/index.html

Calendar of Events

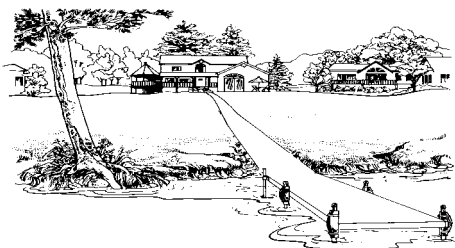
For more details, including a schedule listing these and other shoreland workshop dates and locations, registration forms and fees, and online registration options, visit:
www.extension.umn.edu/water/shore

Curly-leaf Pondweed Workshops

January 24, 2004 — Big Lake

January 31, 2004 — Nisswa

February 21, 2004 — Metro



Shoreland Revegetation Series

February 7 & March 6, 2004 —
Chanhassen

February 28 and March 27, 2004 —
Elk River

March 11 & 25, 2004—
Fergus Falls

March 19 & April 16, 2004 —
Thief River Falls

Planting dates TBA for the above series.

Shoreland Volunteer Training

March 13, 2004 — Mora

April 23, 2004 — Brainerd

New workshops in 2004!

Three new shoreland education workshops will be offered by the University of Minnesota Extension Service in 2004: ***Wetland Plant Identification, Maintenance of Shoreland Revegetation Projects, and Curly-leaf Pondweed Management***. They are being developed in response to requests by shoreland workshop participants in past years (We really do read your workshop evaluations and take them seriously!) and lake association leaders. These workshops will be added to the Shoreland Volunteer, Shoreland Revegetation, and Aquatic Plant Identification workshops already offered across the state.

The ***Curly-leaf Pondweed Management*** workshop is co-sponsored by the Initiative Foundation and Minnesota Lakes Association. It will cover strategies for preventing introduction of curly-leaf pondweed, for its early detection, and for management of it in lakes already infested. Participants will learn to identify the plant and how resource professionals can assist them in developing and implementing management strategies that emphasize restoring the natural functions of the lake.

The ***Wetland Plant Identification*** workshop will include a three-hour classroom session that introduces participants to the importance of wetland plants, basic terminology, and use of plant keys. This will be followed by a day in the field, collecting wetland plants, using a key to identify them, and learning how to press and preserve them for future reference.

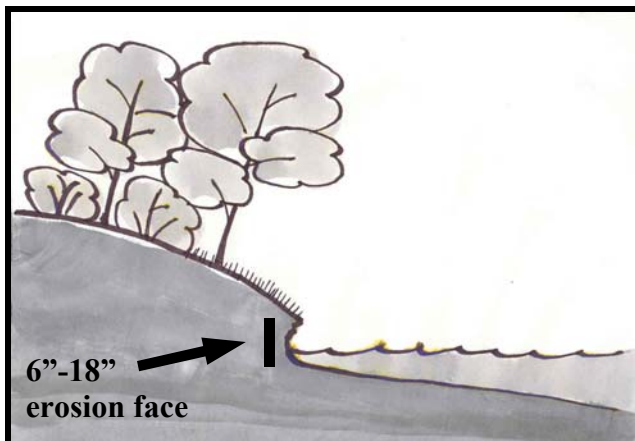
Participants of the ***Maintenance of Shoreland Restoration Projects*** workshop will visit a variety of previously planted shoreland restoration projects in the area. Project leaders will discuss how site preparation, plant selection, and maintenance techniques were used to meet project goals.

The complete schedule of these shoreland education workshops and registration information is posted at:
www.extension.umn.edu/water/shore

Shoreland First Aid: live stakes, willow wattles, and coconut fiber logs

These terms may be new to many Minnesotans, but they are likely to become common vocabulary among property owners and professionals discussing options for controlling erosion along shorelines – thanks to a new brochure, *Shoreland Erosion Control for Property Owners*, that describes appropriate use and detailed installation of these materials.

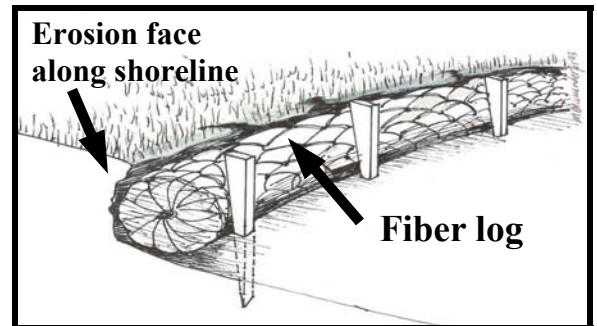
Erosion is common along many of our lakes, rivers, and streams. Although erosion is a natural part of river and stream development as water-courses track across a flood plain, the increased incidence and severity of shoreline erosion along waterways and around lakes is often related to human land and water use. Described in this brochure are simple and relatively low- or no-cost bioengineering materials that property owners can install themselves along shorelines experiencing mild to moderate erosion (for severe erosion problems, owners should consult with their local Soil and Water Conservation District).



Shores with **slight to moderate erosion** can benefit from one or more of the methods described in this fact sheet.

“Bioengineering” refers the use of living plants materials and/or non-living plant products to create a protective “soft” armor against erosive forces. When installed properly, live stakes,

willow wattles and/or coconut fiber logs perform several functions at the waters edge. They protect erosion faces from direct wave and ice action and create a more gradual slope over which waves and ice can flow. They also form a protective layer of vegetation that helps hold soil in place and provides wildlife habitat.



“Shoreland first aid” is an important first step in dealing with immediate erosion problems. However, to be most effective, potential causes of erosion should be identified and addressed with additional preventative measures. A few common causes of erosion at should be considered are: Was the natural wave break of aquatic plants removed? Were the deep-rooted wetland plants replaced with shallow-rooted turf or damaged by increased foot or vehicle traffic? Has run-off increased due to impervious surfaces or been channelized via paths, ditches, pipes? Has wave action from boat traffic increased? Is there an unnatural change in water level? Are muskrats burrowing into the shore? If these conditions exist along your shoreland property, additional aquatic and wetland plants may need to be installed, traffic and run-off may need to be redirected, or “no wake zones” may need to be established.

The brochure, *Shoreland Erosion Control for Property Owners*, can be viewed and downloaded as a PDF file from: shorelandmanagement.org/downloads/erosion_control.pdf

WATER QUALITY AND SHORELAND DEVELOPMENT – HOW DO THEY AFFECT LAKESHORE PROPERTY VALUES?

People are attracted to northern Minnesota lakes and rivers having good water quality and relatively pristine environments. But just how much are buyers of lakeshore property willing to pay for water quality and a natural environment? How much will property prices change with a change in water quality? What market trends do we see in lakeshore property within the Upper Mississippi River watershed?

The Mississippi Headwaters Board and Bemidji State University joined forces to answer these questions for lakes in the Upper Mississippi River Watershed—the first in-depth study of this kind in Minnesota.

According to this study of 1205 properties on thirty seven lakes in the Mississippi River headwaters area, “property prices paid are higher on lakes having higher water quality. In other words, buyers of lakeshore properties prefer and will pay more for properties on lakes with better water quality. Therefore, sustaining and/or improving lake water quality will protect and/or improve lakeshore property values.”

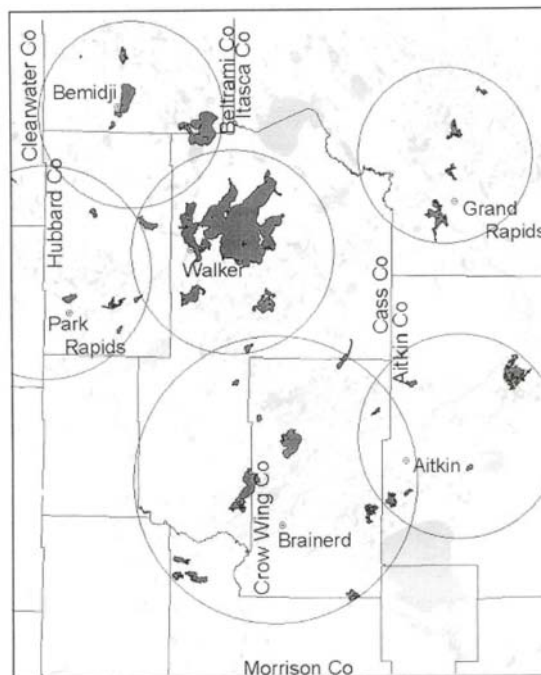
Should the water clarity of a lake increase one meter, one would expect a property price

increase of between \$1.08 (Balsam Lake) and \$423.58 (Leech Lake) per frontage foot! “On the other hand, if water quality is degraded, lower property values will result, which in turn

will increase the demand and development pressures on remaining lakes with the better water quality and ultimately lowering their water quality as well.”

In the Aitkin area greater prices are paid for shoreland properties that are more ecologically healthy – a preference that “will promote and establish sustainable investments by owners of Minnesota’s riparian properties.” However, in the Brainerd, Walker and Bemidji areas, “buyers of lakeshore properties prefer and pay more for the more

developed and urbanized properties. This tendency seems to reveal that buyers prefer a condition that has and can contribute to degrading lake water quality – a contradiction of their preference for locating on lakes with higher water quality. The value of providing information to lakeshore property buyers and owners (in these areas) to understand this contradiction – revise riparian thinking and ultimately land management – is clearly evidenced here if water quality is to be protected.”



Reference information:

The final report (Krysel, C. et al. 2003. *Lakeshore Property Values and Water Quality: evidence from property sales in the Mississippi Headwaters Region*) from which the map and information for this article were adapted can be viewed and downloaded from the following website:

<http://info.bemidjistate.edu/news/currentnews/lakestudy>

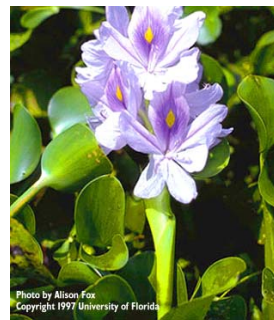
Plant topic of the issue: What's the big deal about exotic plants?

This is the first in a series of articles about “exotic” plants – that is, plants that evolved over the past thousands (perhaps, millions) of years *outside* of a given geographical or ecological region. Plants considered exotic in Minnesota may include those originating in other parts of the US, Europe, Asia, or other countries. Exotic plants may be intentionally brought to Minnesota by the horticulture, aquarium, or other industries. Or they may have arrived here unintentionally as “hitchhikers.” Regardless of how they were transported to Minnesota, exotic plants leave behind insects and diseases that naturally controlled their population. Unchecked by natural controls in their new environment, these plants may become invasive – or not. In reality, most exotic plants do not become invasive (e.g., tulips, marigolds), but those that do share one or more of the following characteristics: 1) tolerance to a wide range of environmental conditions; 2) reproduction early, often, in large numbers, and multiple ways; 3) rapid growth; and 4) resistance to control efforts.

Invasions of exotic plants can be disastrous – displacing native plants, which are important sources of food and shelter for wildlife and fisheries. Invasive aquatic plants can change water chemistry and flow, impede navigation, and hinder recreation. Unfortunately, once they enter into an ecosystem it is often impossible to eradicate them.

Invasive exotic plants are recognized and regulated at the federal, state, and county levels - making it confusing for residents and nurseries to know just what plants they may grow, where they may be grown, and where they may be distributed. Plants on the *Federal Noxious Weed List* (e.g., kudzu) may not legally be sold, purchased, exchanged, or received into or through the US. Within Minnesota, the Department of Natural Resources and Department of Agriculture are responsible for regulating aquatic and terrestrial plants, respectively.

Aquatic plants on the *Minnesota Prohibited Exotic Species List* (e.g., purple loosestrife, Eurasian water milfoil) may not be possessed, imported, purchased, sold, propagated, transported or introduced within our state boundaries. In addition, plants that pose a moderate threat to natural waters and wetlands in our state are on the list of *Minnesota Regulated Exotic Species*. These *regulated* plants (e.g., yellow iris and water hyacinth) are legal to buy and possess, but it is illegal to place them in public waters or ponds that



Water hyacinth



Yellow iris

connect to public waters. Minnesota Department of Agriculture regulates the sales, importation, transportation, and/or occurrence noxious (exotic and native) terrestrial plants and seeds. They have several categories of state plant restrictions: *Prohibited Noxious Weed*, *Prohibited Weed Seed*, *Restricted Noxious Weed*, *Restricted Weed Seed*; as well as a *County Noxious Weed* category.

Whether transported unintentionally by wind, animals, water, vehicles or humans or are sold through catalog and Internet sales, these species are finding their way into and around our state. Future articles will discuss these plants in more detail – how they are spread, how to identify them, what you can do to minimize the risk of introduction and impact of these plants on our natural environment, and who to contact for further information.



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