From Shore to Shore

A publication of the University of Minnesota Shoreland Education Team

July - Aug 2010 | Issue #98 | www.shorelandmanagement.org

The Ins and Outs of Lake Improvement Districts

By Molly Zins, Minnesota Waters, 218-851-2980, mollyz@minnesotawaters.org

A Lake Improvement District (or LID) is a local unit of government that allows landowners greater involvement in lake management activities. Established by a parent government (most often a county board), an LID has no taxing powers of its own and is limited to only those authorities granted by the parent government. An LID is comprised of all property owners within the defined district. The legislature assigned the MnDNR to administer the program, guidelines and criteria for the establishment of LIDs.

Under ideal circumstances, all of Minnesota's lakes would have adequate funding to protect, improve or restore them as needed. However, in response to our state's present budget reality, many communities have taken up the charge to voluntarily form an LID to protect or improve the lake for the public good. LID critics often cite the increase in resident taxes as an unfair burden to manage a public resource. Yet the LIDs managing and improving their local lake have very limited, and at times no other options, for public funding or support.

As of August 2009, there were 32 active LIDs in Minnesota and all LIDs formed since 2004 were established for the primary purpose of managing invasive aquatic plants. Many LIDs form through presenting the county board with a petition requesting the formation of an LID, which includes signatures by a majority of the property owners in the district. Within 30 days after being notified of the petition, the county board must hold a public hearing on whether the requested lake improvement district should be established. And within 30 days after holding the public hearing, the county board shall, by order, establish or deny the establishment of the petitioned LID.

Since an LID does not have any taxing authority of its own, it passes its budget recommendations through the county board for approval and collection. To finance LID projects, a county may: assess costs to benefited properties; impose service charges; issue general obligation bonds; levy an ad valorem tax solely on property within the district or enact any combination of the above. For more information on LIDs, visit: www.dnr.state.mn.us/waters/watermgmt_section/shoreland/index.html. ■

Arrowhead Library System
Legacy Arts & Cultural Heritage

Celebrate Arts and Culture with Landscaping Residential, Shoreland Buffers and Rain Gardens.

Mon, July 19, 10:00 am, Silver Bay Public Library
Mon, July 19, 1:30 pm, Two Harbors Public Library
Mon, July 19, 5:00 pm, Duluth Public Library
Tues, July 20, 10:00 am, Cloquet Public Library
Tues, July 20, 2:00 pm, Hoyt Lakes Public Library
Tues, July 20, 5:30 pm, Ely Public Library
Mon, Aug. 16, 10:30 am, International Falls Library
Mon, Aug. 16, 5:00 pm, Baudette Public Library
Tues, August 17, 9:00 am, Grand Rapids Area Library
Tues, August 17, 12:00 noon, Hibbing Public Library
Tues, August 17, 3:00 pm, Marble Public Library
Tues, August 17, 7:00 pm, Buhl Public Library
Wed, August 18, 9:00 am, Eveleth Public Library
Wed, August 18, 11:30 am, Virginia Public Library
Wed, August 18, 3:00 pm, Babbitt Public Library
Wed, August 18, 7:00 pm, Gilbert Public Library

For the most current listing of Shoreland Education workshops, visit www.extension.umn.edu/shoreland.

Shoreland Buffer Expo
Date: August 7, 8:30 am - 2:00 pm
Location: Deep Portage Conservation Reserve, Hackensack, MN
Contact: Jack Fitzgerald jjfitz@tds.net

Native Plants/Deer Resistant Plants
Date: August 11, 9 am - 4:00 pm
Location: Baptist Church, Duluth, MN
Contact: Minnesota Sea Grant at 218-726-6182 or seagr@umn.edu

Inside...

Stream Temperature -- Duluth Critters Can't Take the Heat

By Cindy Hagley, Minnesota Sea Grant, 218-726-8713, chagley@umn.edu

On a sunny, summer day in Duluth, Minnesota, there are usually kids hanging out at one or another of the 16 trout streams within the City limits. They are most likely catching brook trout, a native of the clear, cold streams along Lake Superior's shores. What these bucolic scenes don't reveal is that Duluth's streams are heating up—read on.

Temperature is one of the most important factors determining what can live in a stream. Warm streams support fish species such as sunfish, bluegill, bass, and bullheads, while cold streams support trout species, including native brook trout.

Brook trout need very cool water, preferring temperatures between about 52° and 61° F (11–16° C). They can't survive if water temperatures remain above 75° F (24° C) for a long period of time.

Stream temperatures can be increased unnaturally by many factors, including climate warming, removal of shade-producing streamside vegetation, additions of sunlight-absorbing suspended sediments from erosion, and runoff of water from sun-warmed pavement, roofs, and other impervious surfaces. On a typical 80° F summer day, pavement temperatures can be well above 100° F, and as this water drains into nearby streams, the streams warm up as well.

Figure 1 shows how often the temperature of Kingsbury Creek in the Duluth Zoo reaches unhealthy levels during the summer. For two weeks, from July 27, 2008 to August 11, 2008, the temperature exceeded the optimal range for brook trout, and on several days it exceeded their upper limit. We don't know how this really affects the fish. Perhaps they find cooler pools to get past those warm spells. Regardless, it's a source of chronic stress on top of all the other "insults" that occur in urban streams.

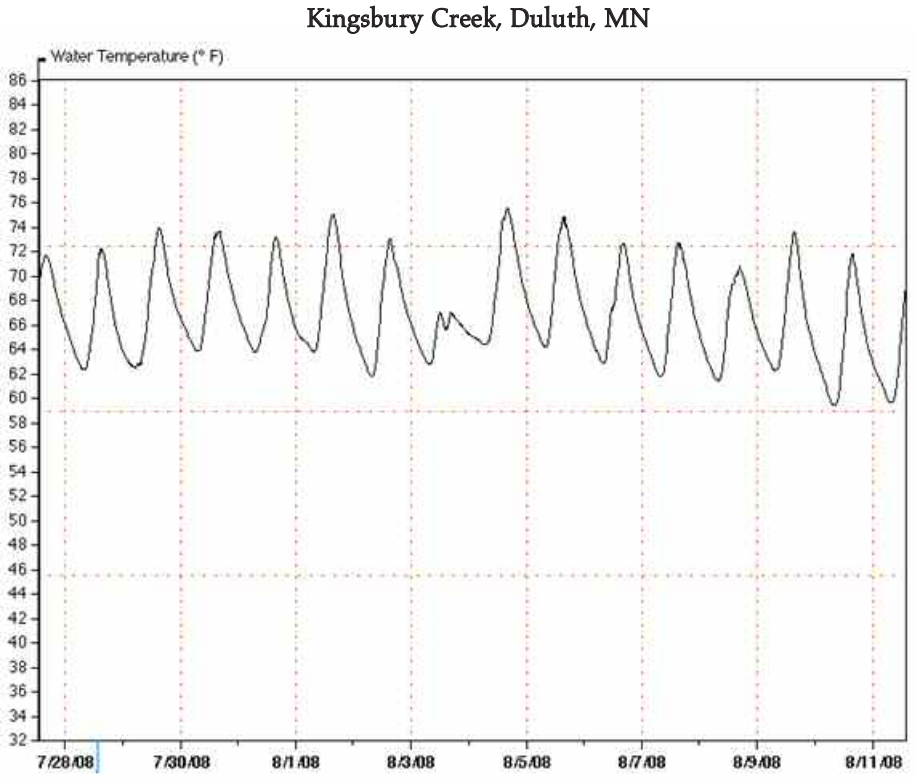
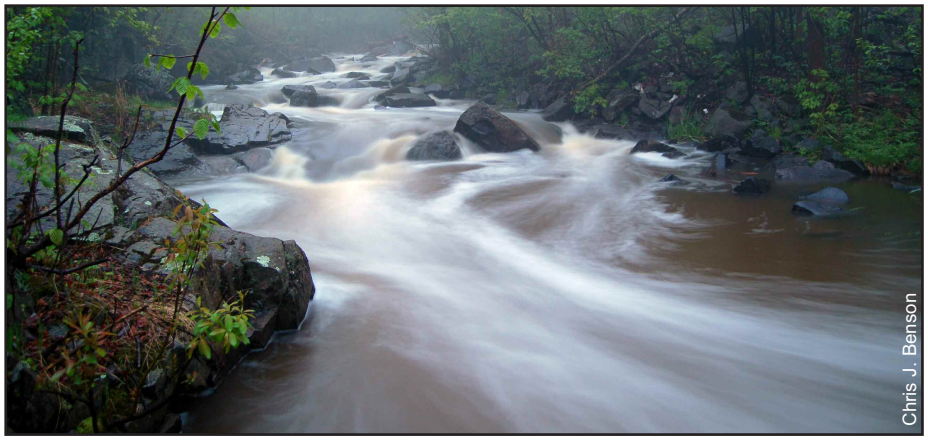


Figure 1.

What you can do:

- If you live on a creek, keep or plant trees and shrubs along the stream to provide shade.
- Prevent water running off your driveway, sidewalk, or rooftop from going directly into the gutter or into the street. Collect rainwater from your roof in rain barrels, plant a rain garden, and direct your downspouts onto pervious areas, such as your lawn or a wooded area, rather than onto your driveway. You want it to soak into the ground.
- Keep it clean: Don't sweep dirt (or anything else) into the gutter or catch basins on your street. Everything we put in the gutter ends up in a creek, and eventually into Lake Superior or a water body near you!



Miller Creek, Duluth, MN

To learn more:

Visit www.lakesuperiorstreams.org for more information or to see more stream temperature data.

Sources:
www.lakesuperiorstreams.org, EPA 1986, Newbury et al. 1993, Raleigh 1982, Raleigh et al. 1984a, Raleigh et al. 1984b http://www.water.ncsu.edu/watershedss/dss/estuary/trout/temperature.html and http://wlapwww.gov.bc.ca/wat/wq/BCguidelines/temptech/temperaturetech-05.htm

Your Opinion Matters

By Barb Liukkonen, Water Resources Center, 612-625-9256, liukk001@umn.edu

Remember the Clean Water, Land, and Legacy Amendment on which 1.6 million Minnesotans voted YES! in November 2008? We are about halfway through development of a Framework to guide future investment of Clean Water Legacy funds. In the November 2009 issue of From Shore to Shore (http://shorelandmanagement.org/downloads/nov_dec_2009.pdf), we provided background on how the University of Minnesota Water Resources Center is leading an integrated, comprehensive effort to develop a Minnesota Water Sustainability Framework (MWSF) for the next 25 years.

We invited everyone to take the survey, '**Minnesotans and Their Water**,' and many of you have done so - THANKS! The survey will remain online through August, so you can still take it and encourage others to participate, too. Why not include the link in your newsletters or websites? Our goal is to receive 10,000 completed surveys; so far we have about 4500, so please help us promote it. We're determined to hear the voices of Minnesotans who know, use, and love our lakes and rivers. Find the survey at **wrc.umn.edu**.

To help ensure we get those perspectives and opinions, we also have a 17-member Citizen and Stakeholder Advisory Committee (CSAC) with a broad range of viewpoints and interests. The CSAC includes representatives from environmental groups (Minnesota Waters, Freshwater Society, Clean Water Action), recreational interests (Anglers for Habitat, Trout Unlimited), agriculture (Agri-Growth Council, small farmer), local units of government (Assn of MN Counties, League of Cities, SWCDs, Watershed Districts, and townships), business (MN Chamber of Commerce), as well as tourism (resort owner), shoreland owners, and tribal partners. The CSAC is co-chaired by Barb Liukkonen, University of Minnesota, and Marian Bender, Executive Director, Minnesota Waters.

Over 400 people attended the nine Listening Sessions held across Minnesota in January and February, to share their perspectives on how priorities should be established and funds invested. We heard about what was important to people at the local level and how they feel about statewide programs and current policies. All those comments have been compiled and synthesized and will be incorporated into the Framework.

During the past seven months, and continuing, eight Technical Teams have assessed needs, gaps, and issues around priority areas: Policy, Education, Valuation and Ecological Services, and human water uses for Agriculture; Energy and Industry; Recreation, Spiritual, and Cultural; and Domestic (drinking, wastewater, runoff) purposes. Each team produced a report, which should be on the website (wrc.umn.edu) by the end of July, along with research papers on how much water is currently used in Minnesota for various purposes. **http://wrc.umn.edu/watersustainabilityframework/documents/index.htm**

Beginning in early June, a Synthesis Team began meeting and will continue their work through September when a draft of recommendations should be available for review. The Synthesis Team has the difficult job of integrating all the technical reports, responses from the survey and listening sessions, together with comments from interested parties. The Synthesis Team also includes a broad representation of 'big thinkers' who can see the range of interests, needs, and pressures on Minnesota's waters. In the fall there will be opportunities to review the recommendation. Watch for more about those opportunities in the Extension Shoreland Education News as dates are identified.

You can see the members of all the Technical teams, CSAC, Headwaters Council, and Synthesis Team on the Framework website at **wrc.umn.edu**. If you want to follow the progress of the committees and development of the Framework you can sign up online to receive a monthly email update (just one a month, honest!).

Remember the final Framework is due to the Legislature by January 2011, but it's not too late to make sure your voice is heard. You can take the survey and add your comments to them, and/or send a letter with your comments to the MWSF Synthesis Team, 173 McNeal Hall, 1985 Buford Ave, St. Paul, MN 55108. Please review the Technical Team reports and the draft recommendations when they are completed. ■

Clean Water, Wildlife, Cultural Heritage and Natural Areas Legacy Amendment

This was the language approved by 1.6 million Minnesota voters on Nov. 8, 2008:

"Shall the Minnesota Constitution be amended to dedicate funding to protect our drinking water sources; to protect, enhance, and restore our wetlands, prairies, forests, and fish, game, and wildlife habitat; to preserve our arts and cultural heritage; to support our parks and trails; and to protect, enhance, and restore our lakes, rivers, streams, and groundwater by increasing the sales and use tax rate beginning July 1, 2009 by three-eighths of one percent on taxable sales until the year 2034?"

The three-eighths of one percent sales tax has been collected since last July and some of the funds have been dispersed for natural resource and cultural projects. To track progress on the Clean Water, Land and Legacy Amendment Funds, visit: **www.cdf.leg.mn**

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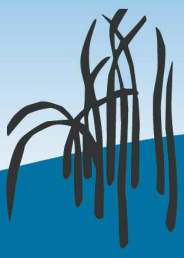

From Shore to Shore

www.shorelandmanagement.org

A publication of the Shoreland Education Team, dedicated to educating Minnesota citizens about shoreland management to improve water quality, habitat, and aesthetics of our lakes and rivers.

From Shore to Shore is available in hard copy and electronic formats. Archived issues are available online at www.shorelandmanagement.org

To subscribe or unsubscribe, please contact Barb Anderson at bja@umn.edu or 218-998-5787.

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Sea Grant Minnesota

University of Minnesota Extension

Identification of Flowering Rush (*Butomus umbellatus*)

Flowering rush is native to Europe and Asia. It was introduced to North America as an ornamental plant, but has escaped cultivation to invade areas with shallow water. This was first observed in 1897 in the St. Lawrence River.

Identification

When flowering, its large - up to 10 inches (25 cm.) across, umbrella-shaped cluster of 20 to 50 whitish-pink flowers (each with 3 petals and 3 petal-like sepals) extending above the leaves allows immediate identification. When not flowering, its emergent form is very similar to bur-reed (Sparganium spp.) and three-square bulrush (Schoenoplectus pungens), but can be distinguished from these and other emergent aquatic plant species using the following three attributes:

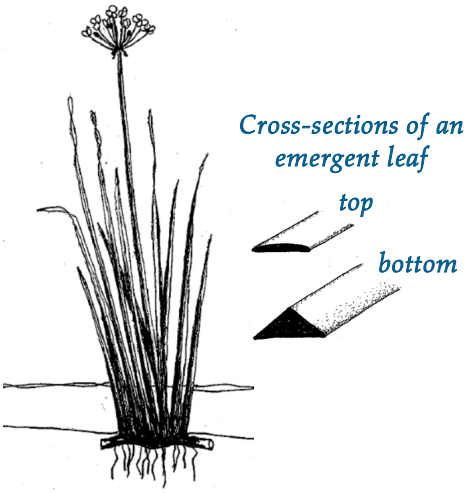
1) Narrow, rigid, erect, sword-like leaves up to 6 ft (1.8 m.) long originate from the base of the plant and extend above the water
2) From their base and for most of their length, leaves are triangular in cross-section, becoming flat near the tip and spirally twisted
3) The leaves widen at their base and attach singly and adjacent to each other along the underground stem (bur-reed leaves attach to the stem in a fan-shaped cluster; three-square bulrush leaves attach singly and distant to each other to the stem; see diagrams).

Habitat

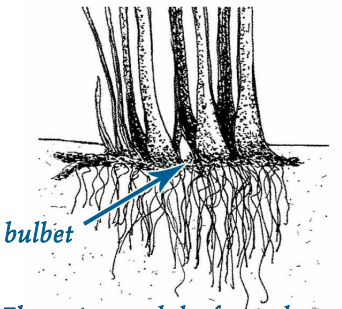
Flowering rush readily invades areas that are not occupied by other plants. It occurs in emergent and submergent forms. Water depth appears to control both its form and abundance. The erect, emergent form (extending, in part, above the water surface) is found in shallow water, along muddy shores, in ditches, marshes, lakes or streams. In deeper water the plant will not flower and its lax leaves may be fully submergent or with leaf ends floating along the water surface.

Life cycle

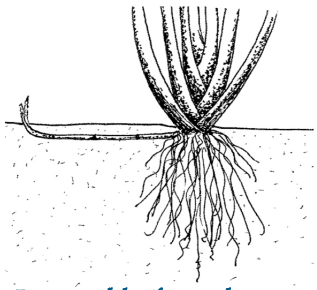
In North America it reproduces primarily via small bulblets that form on the underground stem (rhizome). Emergent plants bloom in mid-summer. However, only one population from Forest Lake, MN is known to produce viable seeds.
Flowing rush spreads locally via rhizomes, bulblets and seeds (when viable). Both seeds and dislodged bulblets can disperse via water currents throughout a water body. ■



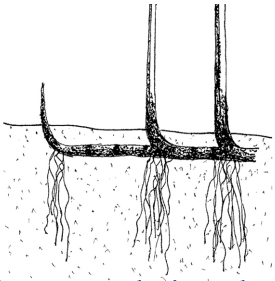
Leaves and flower of emergent form



Flowering rush leaf attachment to underground stem



Bur-reed leaf attachment to underground stem



Three-square leaf attachment to underground stem