

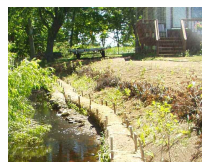
From Shore to Shore

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.



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March - April 2009

Issue # 90

www.shorelandmanagement.com

Our New From Shore to Shore Newsletter Look

From Shore to Shore has a new look! Although we are still working to refine it, we have made a lot of changes in the past few months. If you receive the newsletter in the mail, you will see that the front and back pages are in color, while the inside pages are still printed in black and white. If you access the newsletter online, however, you will see that all pages are available in color. You can access the current issue, back issues, and even search the archives online at www.shorelandmanagement.org/shore_shore/.

Your input is appreciated! If you have comments about the new design, please send

them to Barb Anderson at bj@umn.edu or call her at 218-998-5787. As always, you are welcome to reprint and distribute From Shore to Shore articles in your own newsletters. We just ask that you give credit back to the author and From Shore to Shore.

Also, if you still receive the newsletter as a paper copy through the mail, please consider switching to the electronic version. Currently about 2/3 of our 800 subscribers receive an e-mail notification when a new issue is available online. This helps us save money and natural resources by mailing out fewer hard copies of the newsletter. ■

Lake Home and Cabin Show in Minneapolis

Natural Resources and Environment educators and volunteers will be participating in the 2009 Lake Home and Cabin Show, Friday April 3 – Sunday April 5 at the Minneapolis Convention Center (www.lakehomeandcabinshow.com/minn/). Shoreland Education and Septic Systems experts will be available to answer your questions as you check out our hands-on exhibits and displays. This year, we will have a kiosk set up where you can purchase our books, DVDs, and other products.

As in other years, the Lake Home and Cabin Show will be a great place to get the latest information from the University of Minnesota Extension.



Photo Credit: Mary Blickenderfer

Calendar



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

Lake Home and Cabin Show
April 3-5, 2009; Minneapolis
Convention Center
For more information, visit:
www.lakehomeandcabinshow.com/minn/

Shoreline Restoration 101
April 13, 2009; 5-8 pm;
Fairmont, MN
Contact: CER at 507-235-3141

The Value of Healthy Lakes: what
realtors should know about
lakeshore property
April 16, 2009; 8:30 – 12:30 pm;
Hackensack, MN
Contact: Greater Lakes
Association of Realtors,
www.greatlakesrealtors.com;
218-828-4567

Shoreline Installation
April 23, 2009; 5 – 8 pm;
Fairmont, MN
Contact: CER at 507-235-3141

Rain Garden Basics
May 2, 2009; 9 am – 4 pm;
Fairmont, MN
Contact: CER at 507-235-3141

Ice Shove

The word shove taken from the old Middle English word "shouven" is most often used as a verb, meaning to push away or force away. In this context however it is a noun, referring to the slabs of ice pushed upon a shoreline as a result of thermal expansion of lake, sea, or river ice cover, or as a result of strong winds. These sometimes large flat slabs of ice, called pans, may pile up along the shore into odd shaped mounds and towers.

Ice shoves become more evident along the shorelines of larger lakes in Minnesota during late winter and early spring as the temperatures warm up and winds tend to increase in strength.

University of Minnesota climatologist Mark Seeley describes a "Word of the Week"

Links to the Past ...

It's Rough to Have Ridges – Living with Ice Ridges on Your Shoreline; www.shorelandmanagement.org/downloads/mar_apr06.pdf

What do Ice Ridges and Curlyleaf Pondweed Have in Common?; www.shorelandmanagement.org/downloads/mar_apr07.pdf

Ice event photos from the U.S. Army Corps of Engineers; www.mvpc-wc.usace.army.mil/ice/photos/index.html

Do you have a topic you would like us to include here, or as a full article? Let us know! Call or email Barb Anderson at bja@umn.edu; 218-998-5787.

Ice Melt!

The following article about lake ice formation and melting was written by Dr. Edward Swain, MPCA, and originally published in the Star Tribune. It is reprinted here with their permission.

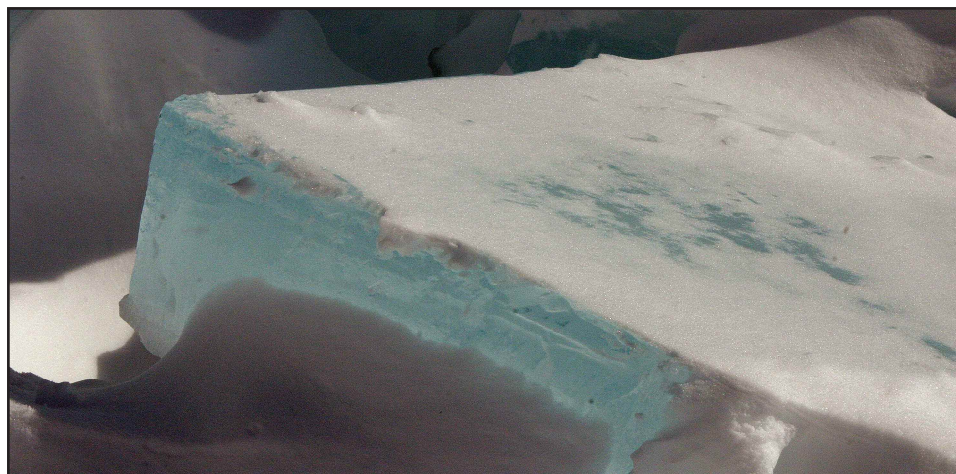


Photo Credit: Jerry Bielicki

In the late fall, the lake loses heat to the atmosphere, and then on a day or night when the wind is not blowing, ice forms. The ice gets thicker as long as the lake can continue to lose heat.

In most Januaries and Februaries, snow both reflects sunlight and insulates the lake. With a thick snow layer, the lake neither gains nor loses heat. The bottom sediment is actually heating the lake water slightly over the winter, from stored summer heat.

Around March, as the air warms and the sun gets more intense, the snow melts, allowing light to penetrate the ice. Because the ice acts like the glass in a greenhouse, the water beneath it begins to warm, and the ice begins to melt from the bottom.

When the ice thickness erodes to between 4 and 12 inches, it transforms into long vertical crystals called "candles." These conduct light even better, so the ice starts to look black, because it is not reflecting much sunlight.

Warming continues because the light energy is being transferred to the water below the ice. Melt water fills in between the crystals, which begin breaking apart. The surface appears grayish as the ice

reflects a bit more light than before.

The wind comes up, and breaks the surface apart. The candles will often be blown to one side of the lake, making a tinkling sound as they knock against one another, and piling up on the shore. In hours, a sparkling blue lake, once again! ■

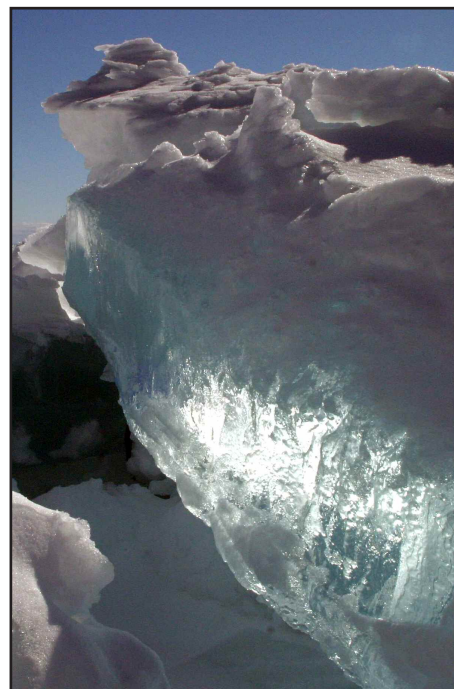


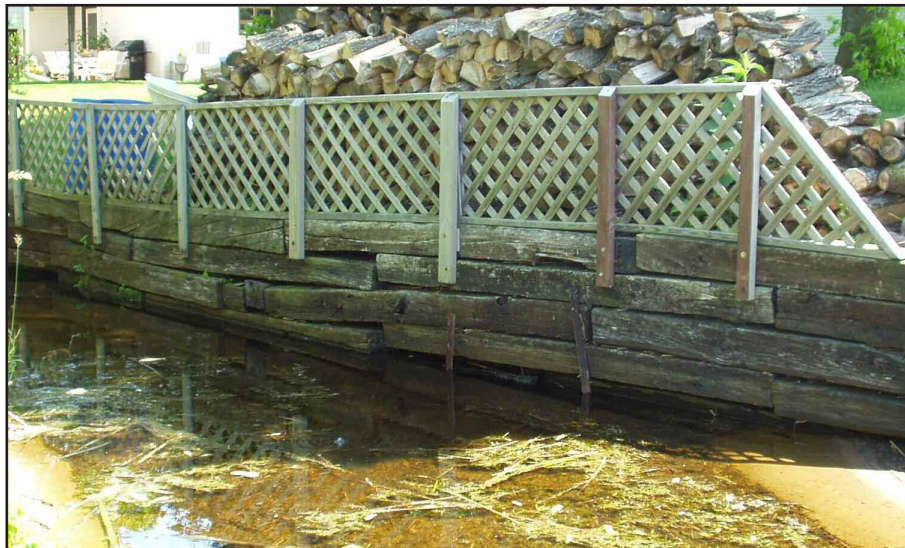
Photo Credit: Jerry Bielicki

Mille Lacs County Protects Shorelines

Lynn Carter, Mille Lacs SWCD, 320-983-2160, Lynn.Carter2@mn.nacdn.net

In 2008, the Mille Lacs Soil and Water Conservation District (SWCD) tackled two successful shoreline restorations: one at Riverview Park on the Rum River in Milaca and one on a private landowner's property on Mille Lacs Lake. Both provided excellent opportunities for community involvement and educational workshops.

The City of Milaca, the Mille Lacs SWCD, and Natural Resource Conservation Service (NRCS) teamed up to restore a 100-foot section of Rum River shoreline at a city park where a lack of vegetation had left it open to erosion by the swift moving water. The restoration involved re-shaping the bank to a more natural slope, hard-armor-ing the bank against the water coming around the bend, and planting native shrubs into the rip-rap to create fish habitat. Native grasses and forbs were planted into a 25-foot upland



Mille Lacs Lake project: Before

buffer that will help hold the soil in place and filter runoff from the surrounding parking and road areas. Because this is a public park, the buffer was planted with a large number of native wildflowers, and a walking path has been established through the space. Twenty-seven hundred native plants were installed by volunteers during three different educational workshops that involved Master Gardeners and high school students from the Princeton Environmental Club and the Milaca Future Farmers of America (FFA). The Milaca FFA managed to plant 50 shrubs into the rip rap in a half hour and the Princeton kids volunteered at 9am on a Saturday morning! The project was funded by the City of Milaca, the NRCS WHIP program, and BWSR State Cost-Share funds from the Mille Lacs SWCD.

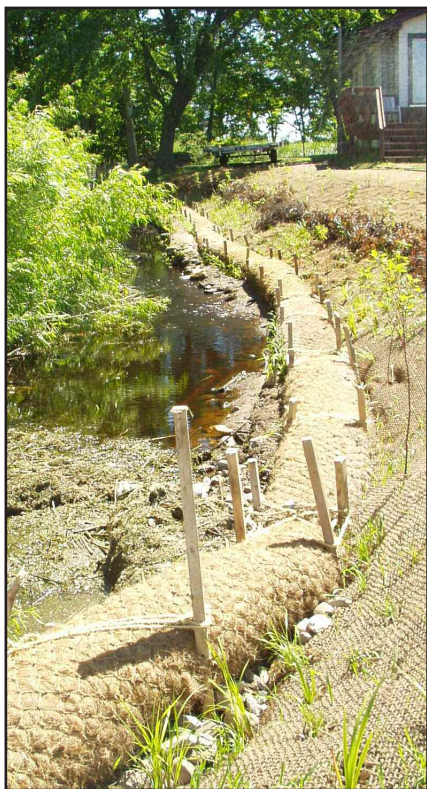
The shoreland restoration on Mille Lacs Lake was designed to replace a failing railroad tie retaining wall that ran the length of a channel that runs into the lake. The railroad tie wall was removed and the bank was reshaped to a more natural 1:1 slope. The concrete base that the retaining wall rested on was left to act as a toe for bio-logs and

erosion control fabric. Native shrubs, sedges, grasses, and flowers were planted into the new shoreline and a 10- to 25-foot buffer was planted just upland from the restoration area.

This project was installed on private property and was funded by a Local Water Management Challenge Grant from BWSR and a DNR Conservation Partners Grant through the Mille Lacs Lake Watershed Management Group.

The homeowner was very excited about the project and hosted an educational workshop for area kids as well as the SWCD Area III Annual Meeting tour group. The kids got to plant native grass and flower plugs into the buffer and demonstrate how long native grass roots are by lying down on the grass with their arms and legs spread out.

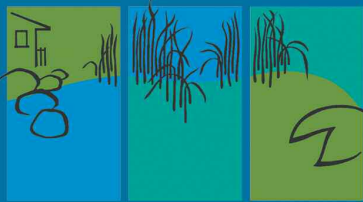
These successful shoreline restorations brought water quality issues to the attention of the entire community by installing water quality improvements in public spaces and by inviting the public in to participate in privately owned project areas. ■



Mille Lacs Lake project: After

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From Shore to Shore

www.shorelandmanagement.org

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

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EXTENSION

Protect Minnesota's Forests & Urban Trees!

From SaveOurAsh.net



Emerald Ash Borer on penny

Minnesota's 872 million ash trees need your help.

Our forests face a growing threat from emerald ash borer (EAB), an invasive insect originally introduced from China to Detroit, Michigan. It attacks and kills all ash (*Fraxinus* spp.) trees native to North America. EAB is the most serious forest pest in the eastern United States. As of January 2009, it has been found in ten states. Minnesota and Maine have the two largest ash tree populations in the U.S.; Minnesota's wetland hardwood forests are more than 50% ash. This invasive species is poised to dramatically change Minnesota's forests.

EAB larvae attack and kill ash trees by tunneling into the bark and destroying the tree's circulatory system. The insect has damaged or killed millions of ash trees in affected states. Minnesota is a prime target because we have so many susceptible ash trees. No matter how hard government officials work to control EAB, the actions of even one camper could undermine all our efforts. That's because this weak-flying insect spreads mainly by hitching a ride inside firewood transported by people.

What can you do to help?

Don't transport firewood. Buy it where you burn it, and burn all of it where you buy it. A new state law requires all firewood on state land be purchased near the site from an approved vendor (for more details check the DNR website or call at 1-888-MINND-NR for details).

Don't buy firewood from outside Minnesota. Anytime you buy firewood, ask about the source of the wood. If it came from outside Minnesota, don't buy it.

Keep an eye on your ash trees. If you notice problems with your ash trees, call your city

forester or extension educator for help figuring out the problem.

Signs that EAB might be affecting your ash trees: First reconfirm you have an ash tree. Is your ash tree's health declining? Signs of decline can include stump sprouting and dead leaves and branches. Many, many things can cause trees to decline but if there is decline then further investigation might be warranted. Specific signs for EAB are a very small "D" shaped exit hole in the bark, "S" shaped tunnels under the bark (requires parts of the bark to be removed from the tree to see), and of course actually seeing the beetle or larvae.

To report suspected Emerald Ash Borer infestations contact:

Pest Alert Hotline: 651-201-6684 (metro) or 1-888-545-6684 (Greater Minn) or visit www.mda.state.mn.us/plants/pestmanagement/eab.htm. ■



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