

From Shore to Shore

A publication of the University of Minnesota
Shoreland Education Team



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Kids learn about rain barrels!

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Educational events focused on the benefits of harvesting rain interest adults...and can inspire kids! In June, members of the **Lakes Area Clean Waters Council** (LACWC) talked to a group of young people about the benefits of harvesting rainwater. They explained key words such as impervious surfaces, stormwater and pollutants. The kids discovered how harvesting rainwater could improve the clarity and the overall health of lakes and rivers in their neighborhoods.

The presenters also demonstrated how some rain barrels are put together, and how to properly use and maintain them (the cost of each "homemade" rain barrel was \$16). Before leaving, the kids learned that they could personalize their barrels...an activity that they really enjoyed (and we have the photos to prove it)!!

Kids participating in this event were members of **Fun 'N' Friends**, part of ISD 181 Brainerd Community Education Youth Connection Program, lead by Lisa Stawarski. Lisa contacted the Crow Wing County Extension Office asking about a possible rain barrel presentation for "her kids" after listening to a presentation about rain barrels during the Earth Day celebrations at the Northland Arboretum in Brainerd in April.



Kids from the Brainerd Fun 'N' Friends group personalize a rain barrel with help from three members of the Lakes Area Clean Waters Council (from left to right: Scott Lucas (MPCA), Jim Chamberlin (SWCD) and Jackie Froemming (U of M Extension)). Photo credit: Amy Churchill.

Note – people in the Brainerd Lakes area can purchase ready-to-use, 60-gallon rain barrels at the Northland Arboretum in Brainerd. The cost of each terra cotta-colored barrel is \$89 (tax included). Limited supply. ■

Calendar



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

Rain Gardens

Sept. 14; St. Cloud, MN
Sponsored by Stearns County
Master Gardeners
Information/Registration Contact:
Carl Hoffman, hoffm072@umn.edu

Rain Gardens

Sept. 24; Central Lakes College Ag
Center, MN
Sponsored by the Living Legacy
Gardens
Information/Registration Contact:
Shirley Judd, sjudd@clcmn.edu

Looking Back...

It's that time of year again – time for seasonal cabin owners to think about closing up the cabin to prepare for winter. For some helpful information, look back to our article "Preparing Seasonal Septic Systems and Cabins for Winter." The article originally ran in the November/December 2007 issue of From Shore to Shore. It can be accessed online at www.shorelandmanagement.org/downloads/nov_dec07.pdf.

Get the Lead out of Fishing

Reprinted (Get the Lead out for the Fishing Opener) with permission from the Minnesota Pollution Control Agency.



Examples of lead tackle inadvertently picked up and ingested by loons; Photo credit: Minnesota Pollution Control Agency

As you sort through your tackle box dreaming of the big one you're going to catch this year, remember to make it a safe year for wildlife. Search your equipment for lead sinkers and jigs, and replace them with lead-free fishing tackle. The Minnesota Pollution Control Agency (MPCA) says that lead is a toxic metal that poisons birds and other wildlife, including Minnesota favorites such as loons and eagles.

When lead sinkers are lost through broken fishing lines or other means, birds can inadvertently eat them. Water birds such as loons often swallow lead sinkers when they scoop up pebbles from the bottom of a lake or river to help grind their food. Eating just one lead sinker can poison a loon. Eagles can ingest lead by eating fish that have themselves swallowed lead sinkers.

While it is hard to get an accurate count

of water birds and birds of prey that die from eating lead fishing tackle, research indicates that fishing-related lead poisoning can be easily avoided by using nontoxic alternative sinkers and jigs.

In loon breeding areas — the Great Lakes, northeastern United States and eastern Canada — studies show that lead poisoning accounts for about 25 percent of dead loons found by researchers. In some areas, up to 50 percent of loon mortality is caused by lead.

This year, the MPCA and the Minnesota Department of Natural Resources (DNR) partnered with the nonprofit angling group, Recycled Fish (<http://recycledfish.org>), to offer a special, "Sustaining Anglers, Fish & Ecosystems," (S.A.F.E.) Angling Kit that contains lead-alternative sinkers and biodegradable lures, as well as hooks and other supplies.

"No group is better positioned to be stewards of our natural resources than anglers," said Teeg Stouffer, Executive Director of Recycled Fish.

The kits are available at Joe's Sporting Goods in St. Paul and on the Red Rock Wilderness Web site at www.redrockstore.com.

Tips to help anglers safeguard wildlife and themselves:

- Use fishing weights made from non-hazardous materials such as steel, tin and bismuth.
- Dispose of old lead sinkers and jigs at your local hazardous waste collection site.
- Wash your hands after handling lead fishing tackle or cleaning your tackle box.
- Ask your favorite retailer to stock non-lead fishing tackle.

In many states, lead-free tackle isn't just a good idea — it's the law. Restrictions and bans of lead fishing sinkers and jigs are becoming more common, both in the U.S. and in other countries.

For more information, visit the MPCA Web site at www.pca.state.mn.us/sinkers/. You can also refer back to the related article "Get the Lead Out!" that ran in the July/August 2008 issue of *From Shore to Shore*. It can be accessed online at www.shorelandmanagement.org/downloads/july_aug_2008.pdf. ■



Tin split shot like this is one lead-free alternative available. Photo credit: Minnesota Pollution Control Agency

Whitefish Area Property Owners Association Shoreland Contest Work Begun

Martha Davidge, Whitefish Area Property Owners Association; davidges@tds.net

Two pontoons piled with supplies and workers landed at the base of a high, steep hillside on Upper Whitefish Lake during July to begin work on a project that is already a first place prize winner. Dave O'Brien and his family won \$5,000 worth of work and materials to use on the base of the lakeshore property that O'Brien's great-grandparents purchased around the early 1900s. Waves from wind and boats had pounded "the toe" of the steep sandy shoreline for years causing erosion problems.

The contest was sponsored by the Initiative Foundation and Whitefish Area Property Owners Association (WAPOA), with help from the Minnesota DNR, University of Minnesota Extension (Extension), Crow Wing Soil and Water Conservation District (SWCD), and others. Rather than a contest recognizing an already-completed shoreland restoration, this contest was designed to provide labor and materials to get going on a new project. The contest idea came out of brainstorming sessions held by The Initiative Foundation last fall, when the public was asked about top concerns for the lakes.

"Advising experts" were WAPOA's Dave Fischer, Eleanor Burkett from Extension, Heather Baird of the DNR, and Beth Hippert from SWCD. These people also served as judges for the contest, along with Phil Hunsicker of 1,000 Friends of Minnesota.

O'Brien said the contest gave his fami-



Working on a steep sandy slope is no easy job, as seen in this photo taken by WAPOA volunteer Sarah Egan

ly an extra incentive with professional advice, help and materials. Four siblings co-own the property and winning the 2009 shoreland restoration prize allowed them to begin the first 180 feet of their shoreland restoration project.

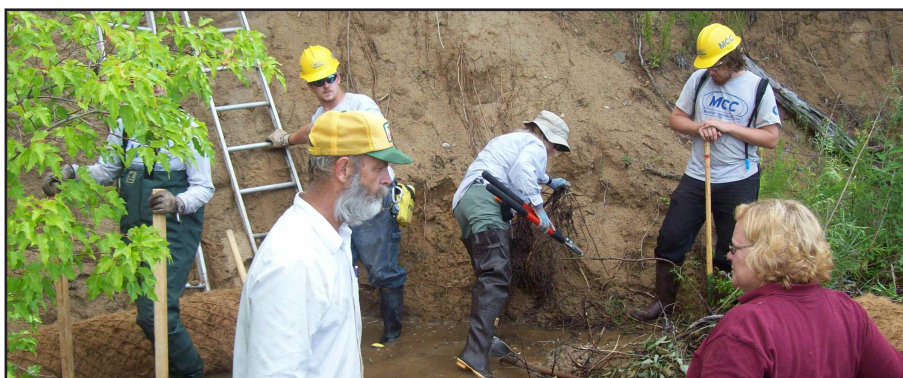
O'Brien himself put in many hours developing an overall plan, meeting with the experts, and doing the sweat-equity work such as harvesting and bundling piles of saplings for willow wattles to be used in the project. In order to learn firsthand about how to

tackle his own shoreline challenges, O'Brien spent three days working on a similar project on the publicly owned Rollie Johnson Big Island, also located on Upper Whitefish Lake.

Runners-up in this year's contest were Sarah Dagg, Kathe Lemmerman, and Harry and Sandy Levendowski of Rush Lake. They were encouraged to enter again next year, as their plans drew considerable merit from the judges. Planners and sponsors of the 2009 contest hope this will be an annual event so more work can be done on other properties. Each shoreline poses different challenges. Some face runoff from neighboring properties. While some are steep and dry, others are low and wet. Each requires a different plan using different methods and plant choices.

Contest planners Ed Egan and Geoff Davidge of WAPOA would also like to see people enter who are interested in converting current "lawn to lake" shorelines into sites that provide a natural filtration buffer of native plants.

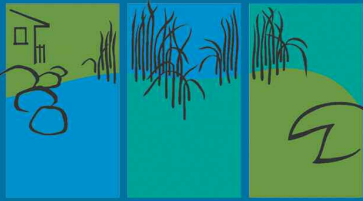
The ultimate goal of the contest is to help improve the water quality of the Whitefish Chain. ■



Contest winner Dave O'Brien and U of M Extension shoreline expert Eleanor Burkett (foreground) stand in the water assisting Minnesota Conservation Corps Workers stabilizing the base of part of O'Brien's Point on Upper Whitefish Lake. Photo credit: Martha Davidge

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From Shore to Shore

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Citizens on the Trail

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"Native mussels are the most imperiled faunal group in North America. About 70% of native mussel populations are either extinct, endangered, threatened or of special concern." Teresa Newton – U.S. Geological Survey

Organizations and groups are realizing the importance of studying the biological life in and around a body of water. Many focus on the benthic macroinvertebrates or bugs that are relatively easy and inexpensive to collect. Because many bug life cycles are short (sometimes one season in length), we can detect population fluctuations in a short period of time. The presence or absence of tolerant and intolerant types can indicate the condition of the stream. For example, the order *Plecoptera*, or stoneflies, are very sensitive to pollution so their absence in a stream can signal a problem.

Mussels, like bugs, are also strong indicators for the health of a water body. They have been called the "canaries in a coal mine". However, compared to bugs, they are long-lived and relatively sedentary resulting in a different biological picture. Mussels also perform other important functions in rivers. As filter feeders, they help to clean the water. They transform nutrients into a form that is usable by other species. Large concentrations of mussels may stabilize river sediments, and their presence in a river generally indicates good water and sediment quality. Mussel assemblages that are more diverse (i.e., have more different species) are generally considered more indicative of favorable conditions within the lake or stream.

The Menahga Conservation Club adopted the Shell River in Wadena County and wrote a Shell River Management Plan. They thought that the mussel populations in the river could be declining so, in the plan, they prioritized learning about mussels and studying the known mussel beds. Their objective was to conduct annual mussel surveys and inventories.

The first survey site was located near a historic button-making factory, an area that had provided thousands of mussel shells to make buttons. Natural resource professionals and Minnesota Waters were recruited to help with survey protocol and species identification. Few live mussels were found, possibly because a state campsite is nearby and the resultant foot traffic may have neg-



Volunteers and professionals working together to locate mussels. Photo credit: Karen Terry.

atively affected the mussel beds. An upstream site supported a much healthier mussel population.

The next year volunteers had better results in the river between Upper and Lower Twin Lakes. The mussel beds yielded higher numbers of individuals and better species diversity. During the third year of monitoring, the confluence of the Crow Wing and the Shell rivers yielded high population counts for two species. On the fourth year, the survey team went back to the Shell City campsite (the old button factory) with better awareness that robust mussel beds were upstream. Due to cool weather, this year's survey, year five, was rescheduled for August.

The DNR identified eight species that surveyors would likely find within the watershed. During the third survey year, citizens found and verified a ninth species. (A new species identified in northern Minnesota lakes was thought to have been found, but it was inadvertently returned to the river, thus preventing DNA testing for verification). The creek heelsplitter, listed as a probable species in the Shell River watershed still has not been found alive; only one intact shell is on record.

As an outstanding example of citizen science making a positive contribution to the pool of knowledge about this watershed, the group will document changes reflected in the mussel communities. Their plan is to return to one of the three sites every year to monitor and evaluate changes and to do their part to ensure that the watershed's mussel species are alive and well. ■