

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.



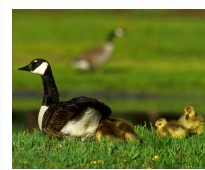
Minnesota Invasive Species Conference A Success

2



Road Salt and Minnesota Water

3



Customer Satisfaction Survey

4

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Introducing the Master Naturalist Program



Master Naturalist volunteers learn about ecology, management, and outreach opportunities.

Have you heard about the Minnesota Master Naturalist program? It is a joint effort of the University of Minnesota Extension and the Minnesota Department of Natural Resources, designed to promote awareness, understanding, and stewardship of Minnesota's natural environment by developing a corps of well-informed citizens dedicated to conservation education and service within their communities. Similar in many ways to the Master Gardener program, folks can become Master Naturalists by taking the 40-hour hands-on training, offered in three ecosystems: Big Woods, Big Rivers; Prairies and Potholes; and Northwoods, Great Lakes. Participants study natural history, environmental interpretation, and conservation stewardship. They also receive detailed course manuals and certificates of accomplishment.

Any adult who is curious and enjoys learning about the natural world, sharing that knowledge with others, and supporting conservation can become a Master Naturalist. Minnesota Master Naturalists are a motivated group of fun and interesting people. Through the program, participants will support conservation efforts throughout Minnesota, join a statewide network of trained volunteers in environmental education and conservation stewardship, and increase Minnesotans' understanding and appreciation of the natural world.

Interested in signing up or learning more? Visit www.minnesotamasternaturalist.org or contact Amy Rager at rager001@umn.edu or 888-241-4532. ■

Calendar



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

17th Annual Living Green Conf.
February 7, 2009; Lake Superior College, Duluth, MN
Contact: connie1@eagle-ecosource.org

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

Rain Gardens
April 4, 2009; LeCenter, MN
Contact: Barb Liukkonen, liukk001@umn.edu

Garden Expo 2009
April 4, 2009; Lakewood Evangelical Free Church, Baxter, MN
Contact: Jackie Froemming, froem022@umn.edu

Minnesota Invasive Species Conference A Success!

Doug Jensen, Minnesota Sea Grant, 218-726-8712, djensen1@umn.edu

The Minnesota Invasive Species Conference 2008 was held in Duluth on October 26-29. For the first time, it brought together terrestrial and aquatic invasive species issues in a statewide conference forum in Minnesota. The conference's purpose was to improve local management and minimize the impacts of terrestrial and aquatic invasive species in Minnesota by acting locally to protect our legendary lands and waters.

The plenary session included speakers from policy, tribal, and local interests. A ballast water symposium featured presentations by state, port authority, and shipping association officials as well as up-to-date information concerning a variety of ballast water issues delivered by U.S. and Canadian ballast water experts. An oak wilt symposium was also a conference highlight.

Over 120 presentations by experts covered new and innovative research, management, outreach, and technological developments related to ecology and impacts, prevention, and containment, early detection and rapid response, control and management, and eradication and restoration. Content covered 67 invasive species, including 44 terrestrials and 23 aquatics. Many of these species are already here and causing economic and environmental impacts. Others may arrive in the near future – they are on our “watch” list. Although billed as a statewide conference, over 435 people attended, including people from eight other states and Ontario.

Ten pre-conference workshops highlighted local efforts to control and manage invasive species. Topics ranged from earthworms and gypsy moths to aquatic topics such as lake vegetation management. There were also educational exhibits, a poster session, and a trade and educational expo, which showcased business products and services.



Workshop participants learn about Asian carp.

Photo credit: Doug Jensen

Another highlight was the Restore the Balance Youth Program poster and essay contest, hosted by the Great Lakes Aquarium. Awards were presented to three very deserving youths from the Duluth/Cloquet area for their excellent posters. The first Carol Mortensen Invasive Species Management Award 2008 was presented to Dr. David Ragsdale, University of Minnesota. Bonnie Harper-Lore, Federal Highway Administration, was presented the Lifetime Achievement Award. Congratulations to all of these award winners!

Co-chaired by the University of Minnesota Sea Grant Program and the Minnesota Chapter of the Soil and Water Conservation Society, the conference was hosted by the Minnesota Invasive Species Advisory Council (MISAC). According to 92 conference-goers, the Minnesota Invasive Species Conference 2008 was a success:

- 91% ranked their experience at the conference as “very good”
- 96% thought the conference

achieved its goals

- 96% said they gained an understanding of invasive species issues
- 93% of conference and 98% of workshop respondents plan to implement knowledge (dozens provided specific examples)
- 94% of conference and 98% of workshop respondents think that outcomes will improve local management and minimize the impacts of terrestrial and aquatic invasive species in Minnesota and beyond
- 100% of expo respondents would consider exhibiting at the next conference

Comments received during the 2008 conference will guide the content of the next MNISC conference.

Visit www.mda.state.mn.us/misac/ for announcements about future conferences. Also, visit www.minnesotaswcs.org/Invasives.htm for more information about the 2008 conference, including presentations from one of the workshops. ■

Road Salt and Minnesota Water – An Unpalatable Combination

Connie Fortin, Fortin Consulting, 763-478-3606, connie@fortinconsulting.com

Minnesota's 12,000+ lakes are taking a turn for the salty as we continue to rely on chloride based deicers to maintain our winter roads and walks. Sodium chloride, road salt, is our most common deicer. In the metro area last year, approximately 350,000 tons were applied to our roads¹. This creates a problem when the salt moves through the watershed and into a water body. Chloride concentrations above 230 mg/l cause impairments in aquatic systems. This is equivalent to about 1 teaspoon of salt in 5 gallons of water.



What can we do? Encourage training for your maintenance contractors and your city and county plow drivers. Two new exciting training and voluntary certification programs are available: Winter Maintenance of Roads, and Winter Maintenance of Parking Lots and Sidewalks. Both programs show how to reduce your costs and environmental impacts and how to increase the efficiency of your winter operations. You can find out more about the trainings, print free training manuals, check the training schedule, or find out who is already certified online at www.pca.state.mn.us/programs/roadsalt.html.

Does training work? Yes! The University of Minnesota reported that in the two years since training began, they have reduced their road salt by 41%, their magnesium chloride by 51% and their



The stripes seen on the road are from an anti-icing process. A liquid application of deicer prior to a storm prevents bonding of ice to pavement. Much less salt is needed when anti-icing is used.

sand by 99%. In the first year alone, after training they saved over \$50,000².

Homeowners can also reduce the amounts of deicers they use. Do not use chemicals to melt snow; use a shovel or



In salt application, more is not better. Once the proper amount is applied for the pavement and temperature conditions, applying more is wasteful. Training is available to learn proper techniques.

plow instead. Know that sodium chloride will not work at pavement temperatures below 15 degrees. For colder temperatures, use a better melter such as magnesium or calcium chloride. If salt is needed, use very small amounts. If you have carefully removed the snow first, one to three cups of salt per 1,000 sq feet should take care of the small amount of ice. ■

Psst! Deicing Tip-offs

The Mississippi Watershed Management Organization is piloting a 45-minute class for homeowners who would like to know more about how to maintain ice-free driveways and sidewalks but also protect the lakes and rivers. Contact Jenny Winkelman at 651-287-0948 for more information.

The Lake Superior Streams Web site has good information on salt and impacts on northern streams: www.lakesuperiorstreams.org/understanding/impact_salt.html.

The Freshwater Society and Fortin Consulting are hosting the 8th Annual Road Salt Symposium on Feb 3, 2009. Join this great discussion about the environmental impacts of winter maintenance and innovations in transportation to reduce impacts (www.freshwater.org).

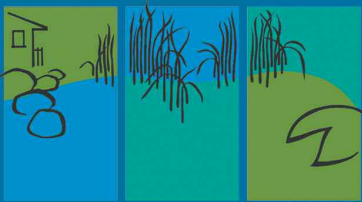
Get informed and encourage winter maintenance training. Contact Fortin Consulting at 763-478-3606 or connie@fortinconsulting.com.

¹ Research by Eric Novotny, Andrew Sander, Omid Mohseni and Heinz Stefan at SAFL, University of Minnesota, and sponsored by LRRB/MNDOT. "Study of Environmental Effects of De-icing Salt on Water Quality in the Twin Cities Metropolitan Area, Minnesota." This report will soon be available at www.lrrb.org/PDF/200842.pdf.

² Jim Weber – U of MN Facilities Management Landcare

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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

Customer Satisfaction Survey – Canada Geese Weigh In

Munsell McPhillips, Intuition and Logic, Inc., munsell@ilincworld.com

The following is a tongue-in-cheek look at suburban lakes and shorelines from a goose's perspective. We have all heard (and perhaps made) complaints about the abundance of geese occupying our lakeshores and their persistent refusal to return to their wild homes. However, when we consider the conditions favored by geese, it's no surprise that they have chosen to stay.

1. Please describe your preferred lake shape and depth profile.

We prefer round or oval shaped lakes with gradually sloping shorelines. The gradually sloping shoreline gives us plenty room to graze on submerged vegetation. We like large areas of the lake to be within dabbling distance for grazing. Fiord-shaped areas or small sloughs do not work for us because they interfere with our take-offs and landings and do not provide a clear line of sight all around us. Please avoid any structures on the lake bottoms that might provide cover for undesirables like snapping turtles that eat our goslings. Particularly avoid fallen trees; these are nothing but trouble and harbor all sorts of fish and other animals that we don't eat.

2. What shoreline vegetation do you like best?

This may surprise you but we have become quite fond of turf grass. Although our natural diet is heavy on spike grass seeds, cord grass rhizomes and rush shoots, we have developed a taste for tender fescue and bluegrass, including the little bugs that live there. Please keep the grass mowed to our beak length (about 3 inches or less), we hate tough grass. Fertilize often! The excess nutrients keep plenty of underwater vegetation thriving, although the water does get a bit murky. Please do not use lots of native grasses and broad-leaves near the water. Any growth over about 3 inches is too tall. Taller growth provides cover for egg and gosling predators such as raccoons and foxes. Our sentry geese like to have a clear view of the entire lakeshore. Gosling safety is our primary concern.

3. What other shoreline features are important to you?

We like those smooth rock linings at the edge of the lakes and ponds. Try to keep them smooth and rounded, not that big, rough rip rap. The rocks harbor lots of little insects, our primary protein source during the all-important breeding season. Smooth rock linings also provide easy access in and out of the lake particularly for our young ones.

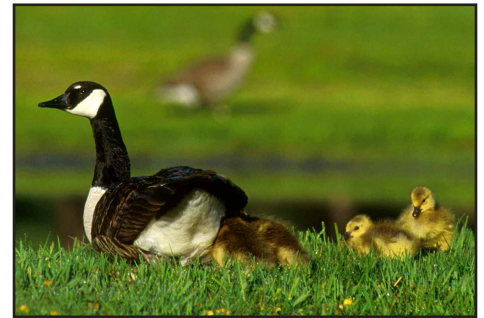


Photo Credit: USFWS

4. What is your position on trees?

We stay away from trees generally; we're just not adapted for aerial roosting. We would prefer if you would keep the approaches to the lakes clear of trees in all directions but at the very least along our usual flight paths. Moreover, the more open the lakeshore, the easier it is for our fellow geese to see us when they fly over....the more the merrier, as long as food is abundant.

5. What features of commercial development do you find most appealing?

Commercial buildings provide awesome nesting opportunities. All that reflective glass keeps the rocky beds near the building foundations warm. We particularly like it when the humans keep the nearby areas free of shrubbery (again it's the predator thing). Some developments even have multilevel flat areas – planter boxes I believe. These are ideal for upscale nesters. Perhaps most of all, we like lots of asphalt paving so we can enjoy lovely solar heated roads and walkways. We also like the predictability of human behavior. Dusk and dawn are the busiest times for sentry geese, and thankfully humans tend to leave us alone during these stressful times. We can deal with humans at noon when they come down to the lake to feed. We've trained many of them to respond to our warning hisses.

6. On a scale from 1 to 10 (worst to best), how would you rate developed lakeshores as livable?

Overall we give these settings an 8. We prefer them to more natural settings for many of the reasons that we stated. The humans, less than ideal neighbors, are at least tolerable. They proved initially unpredictable, but once we studied them in their native habitat and kept them on their heels with our warning hisses, we have learned to co-exist. ■