



# From Shore to Shore

For Minnesota citizens promoting the health of our rivers & lakes

November-December 2007

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Mary Blickenderfer, University of Minnesota Extension, answers shoreland buffer questions from a visitor at the 2007 Minnesota Green Expo.

For the most current listing of Shoreland Education workshops, visit [www.extension.umn.edu/shoreland](http://www.extension.umn.edu/shoreland).

## → Shoreland Landscaping Workshop

Dec. 14-15, 2007 – Menahga, MN

Contact: Karen Terry, University of Minnesota Extension, 218-998-3927, [kterry@umn.edu](mailto:kterry@umn.edu)

## → Minnesota Green Expo

January 9-11, 2007 – Minneapolis Convention Center – Minneapolis, MN

[www.minnesotagreenexpo.com](http://www.minnesotagreenexpo.com)

## 2008 Minnesota Green Expo

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In the heart of last January's brown winter, a record-setting number of people (over 8,000) involved with horticulture, turf management, and aqua-scaping/landscaping escaped into "aisles of green" at the Minnesota Green Expo in Minneapolis. Of course, plants don't grow by sunlight alone. That's why the University of Minnesota Sea Grant Program, Extension, Water Resources Center, Minnesota DNR, U.S. Fish and Wildlife Service, and Irrigation Association promoted **Wise Water Ways!** educational booths dedicated to conserving and protecting our lakes and rivers. Professionals from over 1,200 garden center, nursery, turf, and landscape design businesses picked up nearly 20,000 free **Wise Water Ways!** products.

**Wise Water Ways!** will once again be one of nearly 1,000 booths at the upcoming 2008 Minnesota Green Expo. If you are installing a water garden, buying or selling aquatic plants or animals, restoring shoreland, or providing irrigation, landscape architect or design services, then this "way" is for you! At the booths, information on **Habitattitude™**, a national education campaign aimed at preventing the release of unwanted aquarium fish and plants into the environment, and many other tips for good water stewardship will be available. For the shoreland property owner, information about aquatic invasive species, aqua-scaping/landscaping, buffers, and water quality of our lakes is available as well. Experts are on hand to answer questions and provide free handouts and education materials.

The 2008 Minnesota Green Expo promises to be larger than last. Dozens of forums and lectures will be provided throughout the event. Consider spending a day with your neighbors, friends, colleagues and customers. See you at the Expo!

WHERE: Minneapolis Convention Center

WHEN: January 9-11, 2008

FOR MORE INFO: visit: [www.minnesotagreenexpo.com](http://www.minnesotagreenexpo.com)



# Low Impact Development

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If developments are coming your way, hopefully they will be the “Low Impact” kind. The concept of Low Impact Development (LID) refers to a series of alternative techniques to achieve more environmentally sustainable developments. Conventionally, the development of most sites – commercial as well as residential – has involved the addition of large amounts of impervious surfaces and the loss of natural vegetation. In fact, the development of most sites currently involves the removal of more natural vegetation than what really needs to be removed to get the construction job done.

In order to reduce the negative effects of traditional land development on the environment, “non-traditional” practices were implemented in the 1970s and 1980s. Nowadays, due to increased awareness of the cumulative adverse effects on the environment caused by traditional land development, more and more communities are promoting – and sometimes even requiring – the adoption of LID techniques and practices.

To identify which of these alternative techniques could be used at a particular site, a pre-development evaluation of the site should first be completed. Not all LID techniques will work at every site. In other words, the LID techniques that could be implemented are determined by the particular characteristics (area, topography, sun exposure, etc.) of each site.



*Solar panels at Fairview Office Park.*

Let’s take the case of Fairview Office Park in Baxter, Minnesota. This 4.5 acre site, developed by a family-owned local business in 2006, is the first LID in the Brainerd Lakes Area. Before any construction was initiated, landowners invited personnel from local environmental agencies to evaluate the site and to indicate what would and would not work in terms of LID techniques. Follow-



*A commercial-size rain barrel, with a capacity of 130 gallons, at Fairview Office Park.*

ing those suggestions, the landowners decided to implement as many of the recommended innovative approaches as possible.

When one of the landowners was asked why they chose to use LID techniques at the Fairview Office Park, the reply was, “We have found that we can provide our office park occupants a comfortable working environment with trails and gardens while positively impacting the environment for no more cost than a traditional environment. Why wouldn’t we do it?” This reply, coming from a business-oriented person, is in itself an “innovative approach.”

Some of the LID techniques implemented at Fairview Office Park are:

- Installation of rain gardens, rain barrels and permeable asphalt to reduce the amount of runoff leaving the site.
- Installation of solar panels for on-site renewable energy generation.
- Use of a better building design and placement to reduce the removal of mature trees.
- Use of non-traditional lawn alternatives (i.e., no-mow grass) for a more water-efficient landscape.

LID practices can be used on virtually any site being developed. It is worth the research and planning before you build -- LIDs can save money and are environmentally beneficial. ■

# Preparing Seasonal Septic Systems and Cabins for Winter

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Closing a septic system for the winter is a vital task for seasonal homeowners that prolongs the life of the system and keeps it operating at peak performance. Precautions taken in the fall can help prevent a frozen system.

## Winterizing the Pipes

- Do not add automotive antifreeze, salts or any other additives to your plumbing. (RV antifreeze is OK in toilet tanks and plumbing traps, however.)

If you leave the water on for the winter, be very

- sure that there are no leaks or drips. This constant, low flow of water can cause septic system freezing.

Even if the heat is left on, it is a good idea to drain water supply lines. Shut off the water where it enters

- the house and drain all lines. Drain the pump and then run a couple of seconds to be sure all water is out of the lines. Drain the system by opening all the faucets, leave faucets open. Completely drain the pressure tank. Flush toilets and add RV antifreeze to the tanks at the recommended dilution ratio. Check flexible hoses in sinks and bathtubs to be sure they are drained completely. Remove and drain inlet hoses for the dishwasher and clothes washer. Clear the water valve by starting the machine for a few seconds, then drain the tub. Remove the drain hoses, drain completely. Disconnect the electrical supply to the pump, water heater, softener, washer and dishwasher. Drain the water heater and water softener with a hose after power is disconnected. RV antifreeze can be added to traps in sinks, bathtub and shower drains, washtubs, floor drains and sump pumps. In the spring, re-connect all hoses and flush the lines out before using again.

## Furnace

If you have a high efficiency furnace that is left on for the winter, be sure there is no water drip into your system. Freezing can result. Re-route the drip water to a floor drain, bucket or other source that does not enter the septic system at all, or enters in larger amounts. This water does not harm the septic system, but entering in very small amounts causes a

trickle of water, which can freeze more easily. If you are shutting off the furnace, drain all water from forced hot water and steam systems unless the system contains antifreeze. If that is the case, call a plumber for assistance. If leaving the furnace on, it is a wise idea to conserve energy by installing a low-heat thermostat that will maintain the cabin at 40 degrees.

## Cleaning/Pumping the Septic Tank

Consider pumping the tank if you are closing the cabin for the winter, or if it will only be used a few times during the winter. If you live in an area with a high water table, you should only pump out the tank if the tank was designed for high water table conditions. If a tank is left full but the system is not used for the winter months, the sewage will get very cold, and can even freeze. If the cabin is opened before temperatures in the soil start to rise, the effluent leaving the tank will be cold. By starting with an empty tank, you can then start fresh with warm effluent, which is desirable in the soil treatment area.

## Vegetative Cover

Stop cutting the grass over the soil treatment area in mid-September. The extra grass length will help capture snow and provide insulation. This can help prevent freezing.

## Protect the Soil Treatment Area

Keep all foot and vehicle traffic off the tank, pipes, and soil treatment area (drainfield or mound). The only exception is the lawn mower. Do not plow snow off the area or store plowed snow over the drainfield.

## Sources:

"Closing Your Home for the Winter," Littlefield and Merrill, B3359, University of Wisconsin Extension Service,  
<http://learningstore.uwex.edu/pdf/B3359.PDF>.

For more information, visit <http://septic.umn.edu>.

# What Was That? A Weasel!

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Have you ever caught a glimpse of a small and slender, dark colored critter moving at lightning speed -- but in a rocking horse motion rather than a straight line -- along the shoreline? If so, chances are good that it was a weasel, or a closely related mink. There are three species of weasel in Minnesota: the least weasel (*Mustela nivalis*), short-tailed weasel (*M. ermine*), and long-tailed weasel (*M. frenata*). They are members of the family *Mustelidae*, which in addition to the mink, includes otters, badgers, wolverines, ferrets, martens, and fishers.

Weasels are carnivores, and due to their high metabolic rates, they have voracious appetites. They eat small mammals like mice, voles, shrews, rabbits, gophers, and chipmunks. Because of their long, sinuous bodies and slender skulls, they are able to pursue prey into their burrows. They hunt primarily during the night -- by sense of smell -- but occasionally hunt during the day as well. They kill their prey by biting the back of the neck. Most of their hunting is on land, but they are also adept swimmers and climbers. Weasels' food intake is equivalent to about 40% of their own body weight each day. When prey is abundant, weasels will kill more than needed and store it for later. They are fast, fearless, and ferocious hunters; least weasels can run up to 6 m.p.h., and all three species will attack prey much larger than themselves when they are hungry.

Least weasels are the world's smallest living carnivores, rarely more than 9 inches long. Like the other weasels, least weasels in Minnesota turn white in the winter, providing excellent camouflage against the snow. The same species in southern states does not change to white for the winter. Short-tailed weasels are typically from 7-13 inches long and long-tailed weasels are from 11-16 inches: in both cases, the females are distinctly smaller than the males. Weasels are found in all types of habitats, but seem to have an affinity for those close to water. On lakeshores and riverbanks, buffers and other natural areas provide good habitat for all three species.

In our northern climate, weasels only have one litter of young per year, and typically 4-5 young per litter. Short-tailed and long-tailed weasels both exhibit delayed im-

plantation, which means that their eggs do not implant into the uterus immediately after being fertilized. The delay can last 6-7 months, and development does not begin until the eggs attach. Weasels are solitary, coming together in pairs only to mate. Females rear the young alone. A typical home range for a least weasel is around 2 acres, and for short-tailed weasels it can be as large as 40 acres. Males usually have much larger home ranges than females.

Although they are formidable predators, they can also become prey. Animals that prey on weasels include foxes, hawks, coyotes, owls, snakes, and domestic cats.

More information: The Slinky, Stinky Weasel Family (*Minnesota Conservation Volunteer*, May-June 2003); [http://www.dnr.state.mn.us/young\\_naturalists/weasels/index.html](http://www.dnr.state.mn.us/young_naturalists/weasels/index.html). ■



*A short-tailed weasel.*

*Credit: USFWS*

[wrc.coafes.umn.edu](http://wrc.coafes.umn.edu)

[www.seagrants.umn.edu](http://www.seagrants.umn.edu)

[www.extension.umn.edu](http://www.extension.umn.edu)

[www.shorelandmanagement.org](http://www.shorelandmanagement.org)



*From Shore to Shore* is made possible by Minnesota Sea Grant, in cooperation with the University of Minnesota Water Resources Center and University of Minnesota Extension.

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