

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

## Liukkonen to Retire

On May 31, after 23 years with the University of Minnesota Extension, Barb Liukkonen will retire from the Shoreland Education team. During her career with Extension, Barb has worked on a range of water issues from shoreland, stormwater, and volunteer monitoring to aquatic invasive species and safe drinking water for people and dairy cows. Barb says, "I've been lucky enough to work with partners in nearly every county in the state and have really enjoyed the opportunity to travel around Minnesota and visit many of our beautiful lakes and streams."

Barb started off working with Minnesota Sea Grant as a "cluster" agent in Lake and Cook counties along the North Shore, then moved to Crookston to help implement local water plans with 22 counties in the Red River Valley. Returning to Duluth, she served as the acting Sea Grant Program Leader for a year and then took a joint position with the

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Minnesota Board of Water and Soil Resources and Extension working with local government units in the northern half of Minnesota. During those years she helped convene the



Arrowhead Water Quality Team (AWQT), which developed an outstanding series of shoreland fact sheets and videos and began the Shoreland Volunteer Program. Our current Extension Shoreland Education program grew out of the early work of the AWQT. For the last several years, Barb has held a joint appointment with Sea Grant and Extension, working on water issues across the state.

After retiring from her Extension Educator position, Barb will continue to work on grants related to water resources, but will have more time to garden, read, and travel and begin work on a new home along the Stewart River up in Lake County. While the Shoreland Education team will greatly miss Barb's contributions, they wish her all the best in retirement. ■

## Calendar



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

### Shoreland Buffers

May 2; 9 am – 3 pm; Rice MN  
Contact: Benton SWCD, 320-968-5300, [tiffany.determan@mn.nacd.net](mailto:tiffany.determan@mn.nacd.net)

### Minnesota Lakes and Rivers Conference

May 7 - 9; Rochester, MN  
Contact: [info@minnesotawaters.org](mailto:info@minnesotawaters.org)

### Shoreland Improvement Contest Session I

May 13; 5 – 7 pm;  
Ideal Township Hall  
Contact: Ed Egan, [egans4@aol.com](mailto:egans4@aol.com)

### Erosion Control for Your Shoreline

May 14; 5 – 9 pm; Fairmont, MN  
Contact: CER at 507-235-3141

### Shoreland Planting

May 16; Elk's Camp; Pelican Lake, MN  
Contact: Jodi Eberhardt, [jodi.eberhardt@gmail.com](mailto:jodi.eberhardt@gmail.com)

## Now Available! *Better Living Videos Online*

The *Better Living on Our Lakes and Rivers* video series is valuable for any lake or river shoreline property owner. The videos in the series are useful to individual viewers and are well suited for group viewing and discussion, such as at lake association gatherings. The video series includes:

- Culverts: Not Just Something to Pass Over
- Keeping Our Shores: Shoreland Best Management Practices
- The Living Shore: Best Management Practices for Shoreland Vegetation
- Rivers: Ribbons of Life
- Standing Firm Against Erosion: Best Management Practices for Shoreland Stabilization
- Septic Systems Revealed: A Guide to Operation, Care, and Maintenance
- Shoreland Restoration: A Growing Solution
- Stop Exotics, Clean Your Boat
- Water Conservation: Managing Our Precious Liquid Asset

These videos are available to view free of charge at [www.extension.umn.edu/Shoreland/videos](http://www.extension.umn.edu/Shoreland/videos). The length of the videos ranges from 11 to 24 minutes, and they can best be viewed using a cable, DSL or broadband Internet connection.

## Maintaining Your Rain Garden

Eleanor Burkett, U of Minn Extension, 218-828-2326, burke044@umn.edu

Rain gardens continue to be a growing interest for urban and shoreland dwellers and can be an important part of your lake or watershed management plan. Once a rain garden is established, maintenance can be minimal, although some weeding is required. Here are some simple recommendations that will help ensure a fully functioning rain garden.

### During the initial planting year:

- Weed throughout the growing season; remove the entire plant. Weed seeds may have been introduced during site preparation and if soil or compost were added. Remove weed species so they do not compete with the plants you want in your garden.
- Watering may be necessary during dry periods to help the young plants establish strong root systems, which will help them survive winter. Deep root systems increase infiltration so it is recommended to water about one inch once a week rather than small amounts more frequently.
- Fertilizing is not recommended and not needed when native plant species are used.

### Spring:

- Clear sediment and debris from the areas where water flows into the rain-garden. This may or may not be an issue depending on the source of the runoff. A rain garden located near a driveway or road may have sand, gravel or other materials that should be removed.
- If down spouts are your source of water, make sure the vegetation has not been scoured out by the force of water from snowmelt. If scouring occurred, replace the vegetation or lay a rock bed down in the area instead.
- Remove excessive plant material. It is best if you do this in the spring as the plant material helps to protect the plants from overwinter damage and seed heads may provide food for winter birds.
- Replace plants that did not survive the winter.
- Clean up trash— most will accumulate at the inlets.



*Sediment and debris, such as the sand and dead vegetation in this photo, should be removed before they enter the rain garden.*

- If you have shrubs or trees in your rain garden prune out the dead material every year. You may also trim shrubs if necessary, although it is not required. It is generally best to prune shrubs before they leaf out.
- Add mulch to bare spots.

### Early Summer:

- Check for weeds and remove if necessary. You should not have to weed more than once a year but there may be a few plants that you will want to eliminate before they go to seed.

### Winter:

- Do not use the rain garden areas to pile excess snow from driveways or roads as this may also contain a lot of sediment and may fill or plug up the rain garden.

### Note on weeding:

Keep a list of the plants you planted. It will help you distinguish weeds from desirable species. Remember that early in spring new growth does not always resemble what the mature plant will look like. To help identify common garden weeds go to: [www.extension.umn.edu/gardeninfo/weedid/index.html](http://www.extension.umn.edu/gardeninfo/weedid/index.html). ■

# Surface Water Assessments

Lynn Carter, Mille Lacs SWCD, 320-983-2160, [lynn.carter2@mn.nacdn.net](mailto:lynn.carter2@mn.nacdn.net)

The Mille Lacs Soil and Water Conservation District, in partnership with Isanti County, has received a Surface Water Assessment Grant (SWAG) through the Minnesota Pollution Control Agency (PCA) to assess the water quality of the Rum River.



*Volunteers are trained in stream monitoring methods and equipment use.*

The Rum River connects Mille Lacs Lake to the Mississippi River. After flowing through the communities of Onamia, Milaca, Princeton, Cambridge and Isanti, the Rum merges with the Mississippi in Anoka. The Rum has been designated a Wild and Scenic River and is assumed to have good water quality. The SWAG monitoring project will provide data that support the good water quality assumption, or that lead to managing water quality problems.

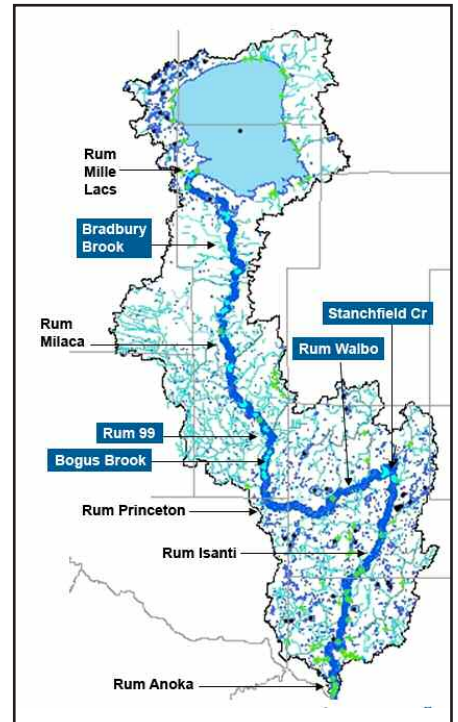
The PCA has been monitoring a few sites on the Rum; the SWAG study

will fill in the gaps, resulting in a more comprehensive picture of the river's health. Sixteen physical and chemical water quality parameters will be collected over two years at five sites. Two sites are in Isanti County and three are in Mille Lacs County. Data from this project will be submitted to the PCA STORET Web site and will be available to various agencies and organizations as well as to the public. Parameters being tested include: alkalinity, chloride, chlorophyll-a, color, E-coli, nitrogen indicators (ammonia nitrogen, nitrate, nitrite, nitrogen TKN), phosphorus, sulfate and total suspended solids. Testing is being done by taking samples for laboratory analysis and by collecting on-site readings of temperature, pH, dissolved oxygen, and specific conductivity. Transparency tube readings will also be recorded.

Volunteers are an essential part of the Rum River SWAG. Volunteers will support monitoring data by making observations on the condition of the Rum River and by contributing to all aspects of water quality monitoring. Many different talents will be utilized.

A local landowner, the Mille Lacs SWCD and teacher Amy Asmussen's Princeton High School Environmental Club will be teaming up in 2009 to monitor river conditions on a particular piece of shore land. The students will head out in April, July and October to walk and canoe and record their observations. They will note native plants, invasive species, wildlife, trash, erosion, macro-invertebrates, water clarity and other qualities. They will photograph and write about their observations, providing a snapshot of things that may be influencing the river's water quality.

A Rum River Festival is being planned for 2010 to present monitoring results and to involve the public in various



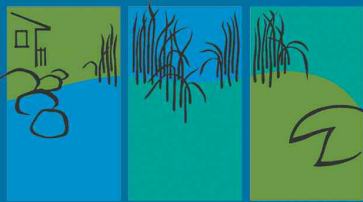
*Map of the Rum River Watershed, showing larger cities and the five monitoring sites.*

programs that monitor and care for the river. Other outreach efforts include teaching stream monitor workshops, showing educational displays, and developing informational brochures.

This project has been a joint venture between many agencies and individual volunteers. The Onanogozie Resource Conservation and Development Council has been instrumental in bringing together all the partners required to accomplish the goals of the grant. Local agencies, water quality groups and community volunteers are using the Rum River Surface Water Assessment Grant to monitor and maintain the health of this important river ecosystem. ■

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## Forest Tent Caterpillars

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Forest tent caterpillars, commonly called Armyworms, are familiar insects in the north and central areas of Minnesota during certain years. They are easily identified by their blue and black bodies, the distinctive white footprint shaped spots on their back as well as hairs that stick out along the sides of their body. These caterpillars are about two inches long when fully grown. Despite their name, they do not make conspicuous webs in trees. Watch for the larvae from May to June when they feed on deciduous trees, including aspen, birch, maple, crabapple, apple, ash, oak, and elm.

The population numbers of these insects are cyclical. Armyworms can occur in tremendously large numbers for periods lasting 5 to 8 years before the population collapses to a barely noticeable presence for 8 to 13 years. Forest tent caterpillar numbers peaked in 2002 and then crashed, so currently they are seen in only a few places.

Despite their currently low numbers, there are a few pockets of noticeable infestations in Minnesota, especially in the west-central part of state. In 2008, the Minnesota DNR reported sizable populations in the following counties: Douglas, Pope, Grant, western Stearns, southern Todd, northern Kandiyohi, Morrison, Mille Lacs, Wadena, Hubbard, and Kanabec.



*An example of damage that forest tent caterpillars do. Photo Credit: Jeff Hahn*

These caterpillars are considered to be a forest pest, but forest tent caterpillars can also be a pest on trees in home yards and around cabins. When populations are high, trees can be severely defoliated. Healthy, vigorously growing trees can tolerate even complete defoliation in several consecutive years without serious injury. However, during an outbreak (four consecutive years or more of severe defoliation), moderate or



*Forest tent caterpillar. Photo Credit: Jeff Hahn*

severe defoliation can reduce growth, cause branch dieback, or possibly even kill trees. Young or unhealthy trees are less tolerant of severe defoliation in a single season.

Managing forest tent caterpillars in woodlots and other large areas of trees is generally not suggested. However, you may want to protect a small number of trees, especially if they are close to your home or cabin. If you had problems last year or anticipate caterpillars this year, check your trees for egg masses if you can. The number of egg masses indicates the relative risk the tree faces from defoliation.

If it is necessary to protect your trees, watch them closely for emerging caterpillars, starting in May. It's easier to manage caterpillars when they're small but it's also harder to see them. Insecticides for treating forest tent caterpillars come in multiple varieties. Environmentally friendly products effective against caterpillars are Btk biological insecticide (*Bacillus thuringiensis* var. *kurstaki*), insecticidal soap, spinosad, and azadirachtin. These insecticides are more effective against young larvae. If you are dealing with large trees, you will need to hire a professional applicator to get thorough coverage in the canopy. ■