

**LAKE SUPERIOR
FUN FACTS:**

- Water temperature average is 40 °F
- March 2014, lake ice-over reached a % that has not been seen since the 1970s.
- Reported ice forming on November 15 this year—earliest in over 40 years!

**ANNUAL TREE
& SHRUB SALE:**

Order forms are ready!

Cozy in and ponder spring planting—the 2015 Tree & Shrub Order Form is available along with plant photos and descriptions. Order early for the best selection of stock. Call the office or check the website to get started.

Orders due: April 17

**CITIZEN WATER
MONITORING:**

Join the many local citizens who track the health of nearby lakes and streams.

Monitors are needed primarily in the summer months and at various locations in the County. For the upcoming season, we will have inland lakes and rivers to monitor. Opportunities vary from season to season, if you have interest in assisting with projects, contact our office for more information.

MORE INFO:

**Cook Soil & Water
Conservation District
Cook Co. Courthouse
411 W. 2nd Street
Grand Marais, MN
55604
218-387-3647
www.cookswcd.org**

WATERSHED MONITORING

Watershed Restoration and Protection Strategies

WINTER 2014/2015

LSNW: Lake Superior North Watershed RRHW: Rainy River Headwaters Watershed

How is a watershed monitored?

A watershed can be looked at as similar to the human body. It is made up of many different parts, creating a system where all the parts depend on each other. You work hard to understand your body and keep it healthy. If you get sick, you determine the cause and fix it. The same goes for a watershed and all its system parts. To assist in assessing the watershed, monitoring takes place in many forms.



Climate monitors are scattered throughout the county. They are provided a rain and snow gauge and record daily precipitation amounts. In the winter, they measure the snow amounts, tracking snow fall and snow melt. Each month the record sheets are submitted to the state climatologist. The information is then used for weather forecasting and maintained for historical record. It can be located online at the University of Minnesota Climatology website. Surface water monitors are also scattered throughout the county. They have been monitoring both lakes and streams for decades. Monitoring takes place monthly often from May to August. Some lakes are monitored through the ice. The lakes are monitored mostly by volunteers or Lake Associations. Monitoring parameters include secchi disk reading for transparency, chlorophyll-a, phosphorus,



temperature profile, dissolved oxygen profile, conductivity profile, and pH profile. The information provides a window into the water quality of the lake. If a lake is monitored for several years in a row, it can be studied to see if there are any trends occurring with water quality. Streams are monitored for the same parameters mentioned above except there is not a profile taken. Near shore monitoring took place in four locations on Lake Superior along the coastal zone. The project will provide a baseline to assimilate if there is an influence from stormwater runoff near shore along the coast of Lake Superior in the Grand Marais-city limits. Cook SWCD will continue to collaborate in this data collection.

Lake Associations...water health and more.

Interview with Caribou Lake Association member, Larry Mullen

There are over 17 lake and homeowner associations in Cook County. Associations formed for different reasons but seem to have the same drive - to protect and restore the environment they are connected to and often call home. Some associations are made up of just a few households, while others have over 20 households as members. To better understand the role of an association, Larry Mullen, a member from the Caribou Lake Association, was interviewed by Cook SWCD.

Hi Larry, share a little about how you came to the area—what drew you here?

Ever since I was a kid, I have been coming up to the area. My uncle has property on Caribou Lake that he built in the 1960's. We would come and stay with him. My wife and I then bought land in the 1990's on Caribou Lake and built a cabin where we try to stay at least 4-6 months a year. I was drawn to the area because of everything the North Shore has to offer, inland lake features, (continued on back)

(interview continued) Lake Superior, the BWCA. There is so much in one area.

Tell us about the Caribou Lake Association.

Caribou Lake Association was formed in 1975 in response to development pressures on the lake that was just beginning. A group of concerned homeowners came together to address the issue of development and the pressures put on the lake in regards to water quality. The association has two official meetings a year, the Saturday of Labor Day and Memorial Day. Many of the 80 household members are seasonal so the meetings are a way to connect them better to the area.

What are the benefits of having a lake association?

As a group, the association has a bigger voice. Both individual and groups are important but the larger group is often louder. Currently as an association, we monitor the land use variances in the area and then we have an opportunity to comment. In the early 2000's, there was land going to be developed that could impact the lake and resources around the lake. The association urged the county to do a local area environmental review, also known as Alternative Urban Area-Wide Review (AUAR). As a group, they had a stronger voice and was able to get the AUAR established.

Another benefit is that the association is able to get information out to everyone instead of being one individual with the information. The association provides more opportunity to talk regularly to folks in the local and state government agencies and then get the information out to members.

Highlight some of the associations annual activities.

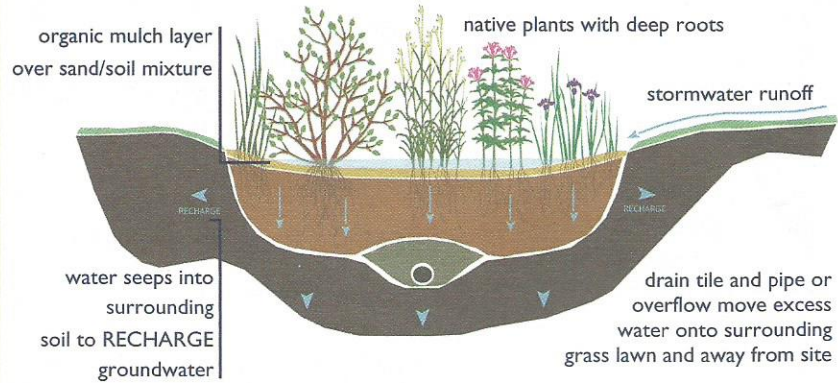
1. Lake Monitoring occurs annually at five sites, four times a year. The monitoring is the main goal of the organization. The data has been collected since 1975, with current sampling done by member volunteers and the early collections done by MPCA and DNR.
2. Worked with Cook County to complete septic system inspections around the lake. Caribou Lake is currently at 100% compliance!
3. Active member of the Cook County Coalition of Lake Associations (CCCoLA).
4. A loon platform program where volunteers place two loon platforms out annually.
5. Monitoring of the slash pit nearby. The association has worked closely with the USFS to put slash in the gravel pit adjacent to Caribou Lake. The association monitors the pit to make sure it is not being abused.
6. A committee actively keeps on top of legislature in regards to the School Trust Land.

If you could provide individuals with tips for living around the lake to help maintain good water quality, what would it be?

1. Shoreland protection and planting - most people do a good job. Keep looking at it for continued improvement.
2. Be cognizant of what household chemicals and cleansers you're using, they go through the septic systems and can eventually end up in the lake.
3. Be cognizant of erosion like driveway runoff, especially if they are near the lake.
4. Be mindful of FireWise recommendations—clearing trees and driveways wide enough for emergency trucks to access.

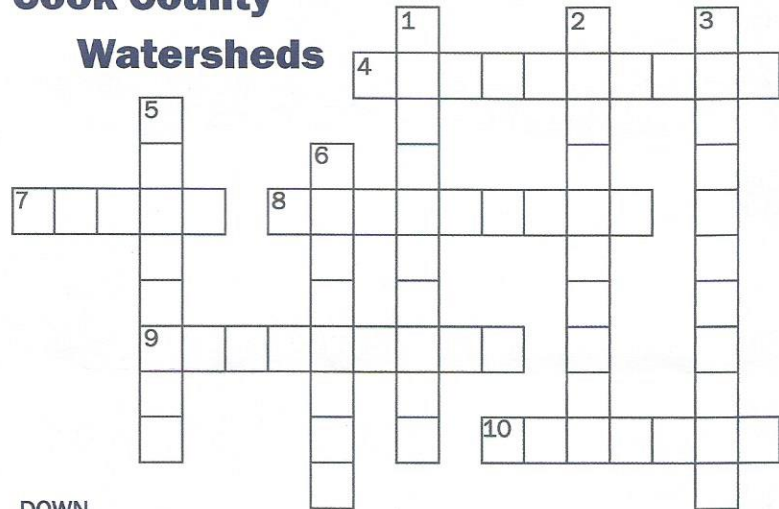
Thank you Larry for sharing your experience! The full interview with Larry Mullen is available on our website.

Rain gardens in the LSNW... collecting and cleaning the water



Rain gardens are being installed in the Lake Superior North Watershed as part of a *Community Partners Clean Water Legacy* grant. The purpose of a rain garden is to improve water quality in nearby bodies of water. Rain gardens capture rainfall runoff from roads, roofs, and driveways and treat it using natural-looking landscape features. This avoids direct discharge of polluted runoff into Lake Superior which creates erosion, water pollution, and flooding. Rain gardens reduce rain runoff by allowing stormwater to soak into the ground and rainfall filtration improves water quality.

Cook County Watersheds



DOWN

- 1 Divide between the two major basins in Cook County
- 2 Implement best management practices to maintain high water quality
- 3 Assess & design projects/plans to achieve high water quality
- 5 10% of the world's fresh surface water
- 6 Multiple agencies working together

ACROSS

- 4 Headwaters watershed
- 7 MPCA watershed approach
- 8 Area of land where all water drains off
- 9 _____ watershed monitoring (IWM)
- 10 Volunteers collect lake & river data



Minnesota Pollution Control Agency



COOK COUNTY Soil & Water CONSERVATION DISTRICT

