Little Rock Lake TMDL Project

Stakeholder Newsletter

Winter 2010

LITTLE ROCK LAKE TMDL PROJECT TIMELINE

The Little Rock Lake Total Maximum Daily Load (TMDL) Project officially began in 2008 with the Minnesota Pollution Control Agency (MPCA) putting the lake on the MPCA Impaired Waters List. Little Rock Lake is impaired for excess nutrients.

June 2008 Benton Soil and Water Conservation District (SWCD) hosted a technical committee kickoff meeting collecting samples from the lake.

Since 2008, Benton SWCD and partners (see back) have been collecting new and historical data, as well as keeping the public informed and involved in the process.

Bill Walker has been busy taking ALL the data collected and using it to construct the modeling for Little Rock Lake. The modeling results will tell us what reductions will be required to meet Minnesota's Water Quality Standard for Shallow Lakes in North Central Hardwood Forest Ecoregion.

The modeling results will be made public at the January 5th Water Quality Public meeting.

Inside this issue:

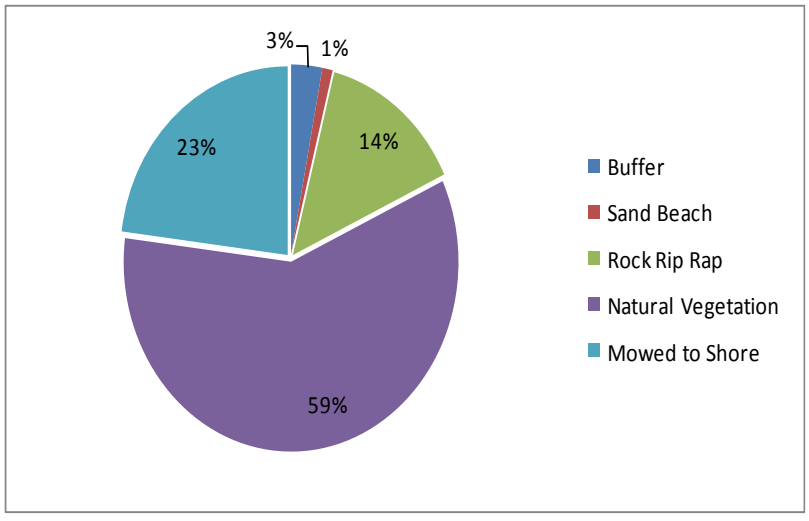
SAVE THE DATE!

January 5, 2011

Little Rock Lake Water Quality Project Public Meeting

See back for more details!

LITTLE ROCK LAKE SHORELINE SURVEY



In October 2010, Benton SWCD and partners from Little Rock Lake Association conducted a survey of Little Rock Lake's Shoreline. Using Trimble GPS technology Little Rock Lake's shoreline was classified into 5 different categories.

The categories are based on the following criteria:

Buffer (3%) vegetation extended approximately 15 feet from the shoreline.

Sand Beach (1%) Sand to the Shoreline.

Rock Rip Rap (14%) Rock along the shoreline (Important to note that majority of time it was mowed directly up to the rock rip rap).

Natural Vegetation (59%) mix of native plants, grasses, wildflowers, shrubs and trees.

Mowed to Shore (23%) Manicured lawn directly to shoreline or less than 15 feet of natural vegetation.

There is room for vast shoreline improvement. Natural Vegetation can be made more diverse with invasive specie control and more native buffers installed can lower the number of mowed to shore and rock rip rap areas.

Funding for this publication made possible through the Minnesota Pollution Control Agency

LITTLE ROCK LAKE NATIVE VEGETATION BUFFER PROGRAM

Traditional lawns, while not particularly harmful, have few of the benefits compared to that of a more natural shoreline. Natural shorelines are wildlife highways! Traditional lawns are shallow rooted, which provide little wildlife habitat, need frequent maintenance and are often over-fertilized. These factors can lead to problems on your lake such as:

*Shoreline erosion and lake sedimentation

*Algal blooms and excessive aquatic plant growth

Jim Hovda's Lakeshore Buffer-Before

*Loss of wildlife habitat but an increase in nuisance animals (example Canada Geese)

*Loss of leisure time

Benton SWCD has a program designed to overcome these problems.

The Native Buffer Program is a voluntary program that encourages the creation of high quality shoreland and streambank buffers that protect water quality within the Little Rock Lake Watershed. A shoreland buffer is a naturally vegetated plot of land, located between the water's edge (lake, stream or wetland) and the land uphill. A shoreland buffer can be composed of a mix of native aquatic plants, grasses, wildflowers and/or shrubs and trees. Shoreland buffers provide benefits to people, the environment, wildlife, and aquatic life. Restored vegetation at the lake's edge restores the function of the ecosystem which originally protected the lake before it was altered by humans. Some of the benefits of a buffer include: filtering of pollutants such as sediment and phosphorous out of runoff from uphill land uses, prevent shoreline erosion by holding soil in place (native plants have deep root systems), provide habitat for wildlife, deter geese from congregating on the lakeshore, and they allow for more leisure time to relax and enjoy the nature of life at the lakeshore.

If interested in the Buffer Program please contact the Benton SWCD staff at 320 968 5300 extension 3.

Jim Hovda's Lakeshore Buffer—After

LITTLE ROCK LAKE ASSOCIATION MISSION

The intent of this Corporation is to protect, maintain and improve the ground and surface water resources within the Little Rock watershed and adjacent Mississippi River area by encouraging appropriate water use and shore land management practices.

Little Rock Lake Association has been working toward accomplishing their mission statement goals. In 2010, four Little Rock Lake Association Members installed Native buffers, totaling 375 linear feet. Two others have signed contracts, waiting to install in 2011.

The Association also sponsored a carp presentation conducted by Dr. Peter Sorensen, Professor of Fisheries, Wildlife, and Conservation Biology. Little Rock Lake Association is using the information in Dr Sorensen's presentation to help guide them in controlling Little Rock Lakes Carp populations.

Visit their website: *www.littlerocklake.org* for meeting agendas, minutes and more.

LITTLE ROCK WATERSHED STAKEHOLDER COMMITTEE

The Little Rock Watershed Stakeholder Committee was formed in 2010. Benton Soil and Water Conservation District (SWCD) gathered nominations from townships within the Little Rock Watershed, along with representation from Little Rock Lake Association, Trouts Unlimited, East Central Irrigation Association, New Heights Dairy, and Benton and Morrison County Commissioners. The 15 elected members either work or live within the Little Rock Watershed. The purpose of the Committee is to develop and implement management actions in the Little Rock Watershed related to the Little Rock Lake and Little Rock Creek Total Maximum Daily Load (TMDL) projects. The Committee has met twice this year and is set to meet again in December.

WASTEWATER TREATMENT STRIPS

Morrison Soil and Water Conservation District (SWCD) has recently installed two new Wastewater Treatment Strips for Gerald Bauer and Treve Sauer in the Little Rock Watershed. A Wastewater Treatment Strip is a Natural Resources Conservation Service Conservation Practice, defined as a treatment component of an agricultural waste management system consisting of a strip or area of herbaceous vegetation. According to NRCS code the purpose of this practice is to improve water quality by reducing loading of nutrients, organics, pathogens, and other contaminants associated with animal manure, and other wastes, and wastewater by treating agricultural wastewater and runoff from livestock holdings areas. Morrison SWCD has also recently completed an additional Ag Waste Treatment project for Robert Meehl in the Little Rock Watershed.

Gerald Bauer—Large scale diary operation. Dairy cows are housed in a free stall barn and dry cows and feeder steers are on open lots. The open lots are now contained with concrete curbs and earthen diversions. The runoff is now transferred via intakes to a vegetated treatment area with dimensions of 45 feet by 213 feet.

Treve Sauer—Moderate size dairy operation. Earthen basin is now abandoned and removed, above ground slurrystore tank installed to store manure from the dairy barn. Outdoor lots are now curbed and diverted and run-off is transferred to a vegetated waste water treatment strip with dimensions of 70 by 213 feet.

Robert Meehl—Moderate size dairy operation. An earthen storage basin installed to collect manure and milkhouse waste from the dairy barn. Outside lots are now diverted to collect and send run-off to the storage basin. Some of the lots are abandoned. Clean water was diverted from flowing into the open lots as well.

Morrison SWCD has skilled staff and conservational programs available to help you with your conservational needs.

Phone: 320 616 2479

Fax: 320 616 5401

Website: www.morrisonswcd.org

OTHER WATERSHED FRIENDLY PROGRAMS

Roof Gutter **Grass Waterway**

Benton SWCD and Natural Resources Conservation Service (NRCS) partner to protect and enhance Benton County's soil, water and other natural resources; to nurture a conservation ethic by educating county residents on conservation and environmental issues.

Program Highlights:

Environmental Quality Incentive Program (EQIP): Agricultural producers looking to solve nutrient resource problems on their farms should contact their local Natural Resources Conservation Service Office soon to apply for assistance.

State Cost Share Program: There is currently money available for approved conservation practices such as: Grass Waterways, Feedlot Runoff Control, Sediment Retention, Erosion or Water Control, Wetland Restorations, Sealing Abandoned Wells and many more. Please contact your Benton SWCD office for more details.

Benton SWCD and NRCS have well trained technical staff and a wide range of programs available to help you with your conservational needs.

Filter Strip

BENTON SOIL and WATER CONSERVATION DISTRICT

USDA NRCS Natural Resources Conservation Service

NATURAL RESOURCES CONSERVATION SERVICE

Contact Information:

Phone: 320 968 5300 extension 3

Fax: 320 968 5304

Website: www.soilandwater.og

Tillage Residue

Little Rock Lake TMDL Project

Benton SWCD
14 2nd Avenue West

Phone: 320-968-5300 ext. 3
Fax: 320-968-5304

www.soilandwater.org

Recipient Name

Address Line 1

Address Line 2

City, State, Zip

Technical Team Partners
Benton County and SWCD
Board of Water & Soil Resources
Minnesota Pollution Control Agency
Minnesota DNR Fisheries & Waters
Minnesota Department of Agriculture
Minnesota Department of Health
Morrison County and SWCD
Natural Resources Conservation Service
US Fish and Wildlife Service
William Walker
Paul Garrison
William James

PROJECT HIGHLIGHTS

TIMELINE

June 2008 - June 2011

PURPOSE

Identify source of excessive phosphorus in Little Rock Lake

RESULT

Develop a plan for restoring Little Rock Lake to a level which will meet water quality standards

PROJECT LEAD

Benton SWCD

LITTLE ROCK LAKE WATER QUALITY PROJECT PUBLIC MEETING

Wednesday, January 5th, 2011

1:30 PM—3:30 PM

OR

6:00 PM—8:00 PM

You Are Invited!

Sauk Rapids-Rice Middle School
Community Art Center
901 1st Street South
Sauk Rapids, MN 56379

- Join us for presentations on water quality study **results** and future **goals**.
- All opinions are vital!!! Speak up during the open discussion session regarding Little Rock Lake's restoration plan.
- An open house will be held after the presentations. Displays, publications, education materials, and refreshments will be available.