

Mitchell Lake Association

www.mitchelllake.org

January 2009

Special points of interest:

- DNR Grant to Mitchell Lake Residents for restoration projects
- Weed harvesting to continue in 2009.
- 2009 Watershed District Goals
- The small changes you can make to impact water quality.
- Current watershed district projects involve invasive species.

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Message from the President

I hope this January finds everyone well in this new year. Our second annual meeting, held September 16th, 2008, seems like just yesterday. We had a very good turnout where we reviewed our accomplishments and 2009 objectives. 2008 was a landmark year for Mitchell Lake with the Watershed District spending upwards of \$150,000 on Mitchell Lake alone, the Timberlake association was awarded a \$32,000 shoreline restoration grant, we hosted our 2nd annual spring cleanup and we planted 12 larger sized trees along the south side of Hi-way 5. The MLA board was also changed from 12 to 9 members. I would like to thank Tom Juhnke, Brian Erickson, Tom Rabiola, Jay Beaton and Tim Benson for their two years of service on the first ever MLA Board. I would also like to welcome our newest board members: Jule Coughlin and Bob Becker.

In 2008 the Watershed District harvested 272 tons of weeds, did extensive bottom sediment core and water sampling needed to develop the best water quality plan and initiated an experiment using two Solar Bees in an attempt to reduce the undesirable blue-green algae. While the Solar Bees were found to be largely ineffective and will not be continued, the rest of the programs are part of the necessary actions required as part of the process for improving the

water quality in Mitchell Lake.

In 2009 the Watershed District plans to spend in excess of \$100,000 for Mitchell Lake with a continued assault on the invasive weeds with extensive harvesting. The District will also complete its analysis of the level and composition of existing phosphorous that resides in the bottom sediment and begin the implementation of a plan to contain or trap this phosphorous. Continued water quality efforts will occur upstream of Mitchell Lake in Round Lake with the improvement of the holding pond infrastructure as well as phosphorous containment. The water quality of Round Lake directly impacts the water quality of Mitchell Lake as its excess water feeds into Mitchell Lake via a connecting pipe located in the "North Bay".

At this point in time, I would like to once again extend a thank you to all current paid members for your support of the Mitchell Lake Association. Having a high membership percentage continues to be of great importance as decisions are made on projects that outnumber available funds. Also, we continue to welcome your individual contributions and suggestions. Please consider your own lakeshore as a potential for restoration, or install a "rain barrel" to trap and filter excess water run off. Visit our web site for other ideas on how individu-



Mitchell Lake was home for a pair of osprey and their 3 chicks in 2008. Water quality is key to maintaining healthy wildlife

als can participate in the effort to clean up our lake. As we have already proved, individual contributions do make an impact.

Jim Nehl
MLA President

Timberlake Association Restoration Project

Submitted by Cheri Nehl

The Timberlake Association Restoration Project was the first shoreland restoration project approved and completed in 2008. This was a great cooperative effort between Timberlake Association and Mitchell Lake Association members with help and guidance from Fortin Consulting. Last June, 18 volunteers spread 23 yards of mulch in less than 2 hours. One week later, 29 volunteers planted 2000+ plants (comprised of 30 different varieties) and installed fencing in just over 4 hours. Wow! What an accomplishment! Connie Fortin from Fortin Consulting said this was one of the best volunteer efforts that she had experienced. Thanks to all of the great volunteers that helped make our first Mitchell Lake Shoreland Restoration Project a success! A special thanks goes to Rick Schoeneck and Dan Saxton for their leadership efforts on this project. Come check it out once the snow melts. We hope that this project will serve as both an educational and inspirational example of shoreland restoration for other lake property owners.



Biologs are an effective tool in the fight against shoreline erosion and protect the new plantings until they are established.



Volunteers erected temporary fences to protect the young plants.

Mitchell Lake Weed Harvesting

Riley Purgatory Bluff Creek Watershed District (RPBCWD) through its engineering firm CH2MHill contracted with Midwest Weed Harvesting (MWH) in July 2008 to harvest 544,000 lbs. (272 tons) of aquatic plants from Mitchell Lake. The purpose of that harvest was to reduce the amount of phosphorous which aqua plants release, eventually settling into the lake basin. Phosphorous is one of the enemies to the clean water effort. CH2MHill subsequently took multiple sediment samples and monitored algae blooms during the summer months to establish a baseline for further work. In addition to the value that harvesting has on improving water quality, it also helped to make boat navigation easier and an overall more enjoyable lake experience. This all took place under the watchful eye, and with the support, from the Minnesota DNR and the City of Eden Prairie.

MLA anticipates that the weed harvesting effort will continue in 2009. It is expected that the harvest will be coordinated again with a "public" effort, managed by RPBCWD and contracted between CH2MHill and MWH. There will also be an opportunity for an optional "private" effort contracted individually between lakeshore owners and MWH. Initially, lakeshore owners can harvest up to 2500 sq. ft. annually in and around their property without a DNR permit in 2009. Details and cost estimates are being gathered and coordinated by MLA and will be sent to property owners by MWH in March 2009.

Contact MLA with any questions.

Dave Eckstein
MLA Board



"272 tons of aquatic plants were removed from Mitchell Lake in July of 2008."

Mitchell Lake Shoreland Restoration Grant

Submitted by Cheri Nehl

In 2008, Mitchell Lake Association was awarded a \$32,000 DNR Shoreland Restoration Grant covering 7 (or more) Mitchell Lake shoreland restoration projects. Four projects have been approved so far. **Project applications that meet grant guidelines will be approved on a first come first serve basis. Don't miss out on this great opportunity for financial assistance in restoring your shoreline!**

The "Mitchell Lake Grant Application" form can be found on the City of EP Website <http://www.edenprairie.org/vCurrent/live/article.asp?r=1954>

Who is Eligible?

Mitchell Lake lakeshore private property owners and associations

What is Eligible?

Restoration projects that reestablish native vegetation along shorelines

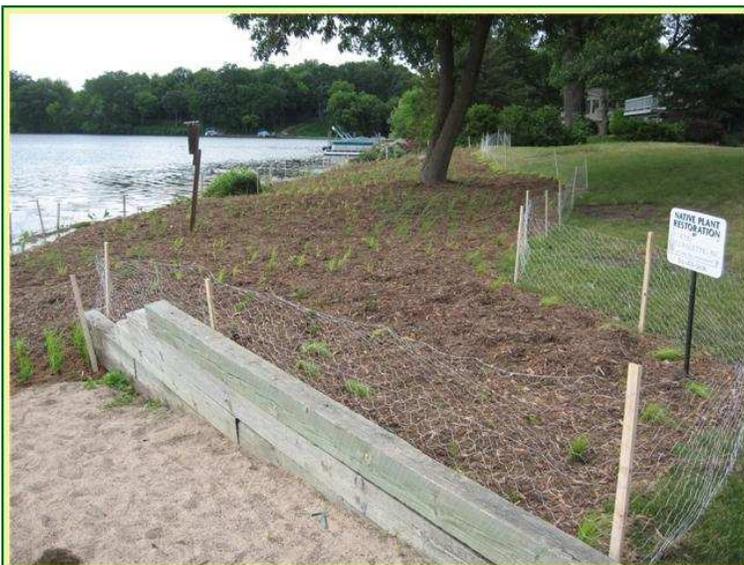
Grant Award Conditions:

- The grant will cover up to 75% of the project cost (not to exceed \$3,000 per project)
- The landowner must cover the remaining 25% of the costs, which can include in-kind labor or materials.
- A minimum of 75% of the lake frontage must be restored with a native plant buffer zone. The buffer must be a minimum of at least 25 feet deep and 25 feet wide.
- Plants must be native species to Minnesota. Check out www.bluethumb.org for plant selection lists that include appropriate plants.
- Project applications must be submitted to and approved by the City of Eden Prairie.
- Project applications meeting grant requirements will be approved based on a "first-come first-serve basis".
- Landowners of approved project applications will enter into an agreement with the City of Eden Prairie. The City of Eden Prairie will issue the awarded funds to cover the landowners up front project costs. (The City of Eden Prairie will then be reimbursed by the DNR from the Mitchell Lake Shoreland Restoration Grant funds.)
- Project must be maintained for a minimum of 4 years.
- Project must be completed before June 30th, 2010.

Resources:

Blue Thumb: Planting for Clean Water www.bluethumb.org

Minnesota DNR: <http://www.dnr.state.mn.us/lakescaping/index.html>



“Project applications that meet grant guidelines will be approved on a first come first serve basis... up to \$3000 per project.”

Native plants are best adapted to the local climate and once established; seldom need watering, mulching, protection from frost or continuous mowing.

Native grasses protect soil between wildflowers while root systems spread and grow deep for excellent erosion control. This combination reduces water runoff compared to monoculture ground covers such as blue-grass or purple crown vetch.

We Need Your Continued Support

Submitted by Dallas Burns, MLA Treasurer



MLA sponsored their second annual lakeshore cleanup in April, 2008.

In only two years, The Mitchell Lake Association (MLA) has become an influential and effective voice advocating efforts to improve the water quality of our lake.

Our influence flows directly from our ability to represent a large *paid membership* of Mitchell Lake families. We use all of the proceeds from our membership fees on improvement projects that fit within our limited funding capabilities. For example, last year we sponsored and provided refreshments at lake shore restoration and clean up events and spent \$3,240 to plant twelve medium-sized Maple, Hackberry, Linden and Spruce trees at the north end of the lake. These trees will ultimately help screen our lake from the sights and sounds of Highway 5.

A far more important aspect of our membership fees is that they demonstrate that the support of our members is both *real and tangible*. Your \$35 fees are a terrific investment! Prior to 2008, Mitchell Lake received almost no significant funding from the various governmental bodies

that support water quality improvements. In 2008 alone, the Riley-Purgatory-Bluff-Creek Watershed District invested \$149,000 in Mitchell Lake water quality studies and weed harvesting. That works out to over \$1,250 for each of our current 119 paid members. The ultimate payoff from our efforts, of course, will be the enhanced recreational value of our lake, and a corresponding increase in our property values.

With your support, the MLA will continue to work closely and cooperatively with the Watershed District, the DNR, and the City of Eden Prairie in the years ahead. There truly is "strength in numbers" so please talk to your Mitchell Lake neighbors and encourage them to join you in supporting our organization.

RPBC Watershed District 2009 Goals

Submitted by Mark B. Enochs, P.E., Vice President, Geographic Operations Manager
CH2M HILL

The Riley Purgatory Bluff Creek Watershed District will continue its efforts to improve the water quality in Mitchell Lake in 2009. The District will implement the projects through CH2M HILL, the District Engineer. The anticipated efforts include:

- Weed harvesting to be conducted in the late spring. Curly leaf pond weed is the primary target for removal. The anticipated benefit is reducing phosphorus in the water column as well as opening the waters for navigation.
- Pilot project in the deep, northwest lobe of Lake Mitchell to control internal phosphorus loading.
- Community oxygen demand evaluation. The management of oxygen at the sediment/water interface is under consideration as a remediation measure to control internal phosphorus loading.
- Paleolimnological¹ analyses of sediment core samples will be conducted to determine Lake trophic² state. These reference trophic states will provide a eutrophication³ timeline of the lake that will inform target water quality goals for a restoration/rehabilitation plan.
- Intensive monitoring of Mitchell Lake to provide additional data for lake rehabilitation/restoration planning.



A Great Blue Heron, one of several on Mitchell Lake.

EDITORS NOTES

1. The practice of taking from lake sediment one or more core samples; from the physical and chemical properties of the sediment and from the biological and biochemical remains included, we can infer the conditions of the lake at the time the sediment was formed. If sediment accumulation was relatively regular, and if we can date the sediment, it will be possible to understand the history of the lake.
2. In ecology, trophic dynamics is the system of trophic levels (Greek *trophē*, food), which describe the position that an organism occupies in a food chain - what it eats, and what eats it.
3. Eutrophication is a process whereby water bodies, such as lakes, estuaries, or slow-moving streams receive excess nutrients that stimulate excessive plant growth (algae, periphyton attached algae, and nuisance plants weeds).

Before an area is developed, a natural groundwater filtering process takes place. Rainwater flows into low places, where native plants soak up and transpire a small portion of the water. The rest percolates into the ground. In a natural environment such as this, streams and creeks are fed by cool groundwater at a fairly constant rate. This water is buffered by groundwater storage capacity, ion exchange with substrates, and microbial processes within soil. Unfortunately, in most urban environments, the water system no longer works this way. Rain gardens can mimic some of this natural system.

Wikipedia, Rain Garden

“The water that cascades off of our roofs can be controlled by capturing it in rain barrels from the downspouts.”



Rain barrels can range in size from 30 gallons to 214 gallons with prices ranging from \$120 to \$1750.

We All Can Help Our Lakes, Creeks and Rivers

A Watershed Citizen Advisor's Perspective.

The last decade has seen major deterioration in the water quality of Mitchell Lake as well as severe erosion of Riley, Purgatory and Bluff Creek banks. The problems go beyond even our own Riley-Purgatory-Bluff Creek Watershed District but extend to the Lower Minnesota Watershed District that includes the Minnesota River. Major erosion of the MN River bank has washed out a major section of River View Road in Eden Prairie over the last decade. The City of Eden Prairie and Lower Minnesota Watershed District together with the Department of Natural Resources and the MN Pollution Control Agency are evaluating a nearly \$500,000 effort to restore that section of river bank and re-build the road. Lake water quality issues range from carp infestation to weed infestation to very high levels of phosphorous causing algae blooms and lake impairment. Nearly \$1,000,000 is planned to restore Mitchell Lake over the next 10 years by the Riley-Purgatory-Bluff Creek Watershed Management Board. These taxes are collected and provided to the watershed through our property tax payments.

As a Citizen Advisor to the Watershed Management Board, Jim Nehl and I are receiving a first class education in the water quality issues throughout the 13 lakes and three creeks under their management. The municipalities of Eden Prairie, Chanhassen, Minnetonka and Shorewood and the Department of Natural Resources and MN Pollution Control Agency are all part of this effort – all financed by our tax dollars. Round Lake has seen good improvement, but severe problems exist in Starring Lake, Red

Rock Lake, Lake Susan, Lake Riley, Lotus Lake and Mitchell Lake.

One of the largest drivers of the lake and creek shorelines is the much greater than capacity water flow into the lakes and streams. Natural ground soil that absorbs rainfall has been replaced with roads, driveways, roof tops, patios, pathways, etc. that we all enjoy. These hard-scapes create additional runoff which frequently brings with it lawn fertilizer, automobile exhaust, oil, soap, salt, sand and other contaminants. The drastically increased volume is causing our creeks and river banks to wash out and the water quality to deteriorate. Much of these effects are most challenging and not repairable, in my view, without citizen involvement in their prevention.

What We Can All Do to

Help: We all have some control over the rain water runoff from our properties. The water that cascades off of our roofs can be controlled by capturing it in rain barrels from the downspouts. Faucets at the bottom can be connected to garden hoses and used to water lawns, shrubs and trees. Rain barrels are not expensive and not difficult to install. My wife, Kathy, and I are planning on doing this summer. Rain gardens can also be constructed on our properties to prevent water runoff into the streets and lakes - thereby reducing inflow into the lakes creeks and rivers. The city of Eden Prairie and the Department of Natural Resources have grants available to assist with both shoreline restoration and rain garden installation including connections to consultants that will plan and build them, so we have plans in-

process to build them. Shoreline restoration both beautifies the shoreline but controls naturally contaminants into the lake. Cheri Nehl and Leslie Stovring have assisted Mitchell Lake Association in obtaining a \$32,000 DNR shoreline restoration grant, and the City of Eden Prairie also has funds available to help as well. Please inquire if you have an interest in pursuing this.

Washing our cars, boats, lawn mowers and other equipment in the street or our driveways also negatively affects our lake and stream water quality because of the contaminants produced by soap, oil, gas, etc.; please consider doing these chores on your lawn where nature will filter out the impurities from the runoff.

Another small step in improving water quality is to minimize the amount of lawn clippings and leaves that wash away into the storm sewers. As vegetation deteriorates it produces phosphate which in turn contributes to aquatic plant growth; in other words, weeds!

Each one of us can have a positive effect on the quality of water in the lakes and the control of erosion along the creeks and rivers. Being aware and working together, doing what we can do, will have a greater impact than all of the efforts of our government institutions combined.

Thank you for your membership and your interest!

John Tyler
MLA Board Member

MITCHELL LAKE
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WE'RE ON THE WEB!
www.mitchelllake.org

MLA

From the President of the RPBC Watershed District

Did You Know...

Your Riley Purgatory Bluff Creek Watershed District is truly a unique organization. It was founded in the late 60's as a citizen led organization to protect and improve our lakes and streams. Its Board Members are appointed for staggering three year terms by the Counties in which the Watershed exists. The Watershed District is unique in that the appointed Managers can authorize a limited levy against property taxes to pay for its work. The Managers believe you are important, essential leaders and partners in their efforts. Our Board is composed of five members, four appointed from Hennepin County and one appointed from Carver County. One of the Hennepin County appointees, Howard Peterson, is a charter member of the original Watershed Board.

During the past decade the Watershed spent over four million dollars on projects in Purgatory, Bluff, and Riley Creeks. Those projects have helped to control and manage flood waters to protect people and property. To complement this work, the Managers oversaw a permitting program to try and mitigate the effects of urbanization.

With the increase in municipal government the Managers have

turned their focus toward problems which cannot be solved with rules and regulations namely, the long overdue restoration of our lakes and dealing with invasive species problems. To that end we have committed significant resources to the study, removal, and management of invasive plants and fish (carp). Your Watershed has taken a lead role and is a major funder of such studies and projects along with other government agencies. These projects have been and are regularly being reported in the local and metropolitan newspapers.

Because we feel the restoration of our water resource means going beyond what is required to what is desired, it is critically important that you maintain an active role in communicating your ideas. Support your association members who are on our Citizen Advisory Committee and if possible attend our meetings on a regular basis. If you feel we have done a good job focusing on your needs let others know; if not let us know.

I look forward to your continued input.

Mike Casanova, President
Riley Purgatory Bluff Creek
Watershed District
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Carp pile up during the count at Lake Susan in Chanhasen.

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"It is critically important that you maintain an active role..."