

Riley Purgatory Bluff Creek
Watershed District
Ten Year Plan Update

Mitchell Lake Association
Annual Meeting
September 23, 2010

Board of Managers

At our January meeting, the managers organized as follows:

Perry Forster - Chair

Mike Casanova - Vice Chair

Ken Wencil - Secretary

Jill Crafton - Treasurer

Philip Kirkegaard - Manager



Citizen's Advisory Committee

- Citizen's Advisory Committee
 - Approximately 13 advisers who share their feelings and ideas with us regarding district matters
 - Mitchell Lake residents serving on the committee are Jim Nehl, Bob Shurson, Frank Spahn and John Tyler

The Watershed

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The Bluff Creek Watershed

QuickTime™ and a
decompressor
are needed to see this picture.

The Riley Creek Watershed

QuickTime™ and a
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The Purgatory Creek Watershed

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Management Principles

- Top to Bottom: Problems in each creek watershed should be addressed from top to bottom.
- Issues not addressed by others, for example lake internal nutrient loading.
- Fiscal Stability – trying to get the best value for the district
- Petition projects – respond to municipal petitions (Minnetonka)
- Adaptive Management – have to change when you see what you planned to do is not working.
- Pilot to full
- Resource Conservation – protect the healthy resources
- Public Communication and Stakeholder Participation

Third Generation Plan

- Our vision is to achieve sustainable uses appropriate for each body of water in the district
- Achieving this will result in the following:
 - Waters dominated by diverse native fish and plant populations
 - Lakes with water clarity of 2 meters or more
 - Delisting of half of all impaired lakes or stream reaches
 - An engaged and educated public and scientific community participating in adaptive management activities
 - Regulatory recommendations necessary for municipal, county and state authorities to sustain the achieved conditions

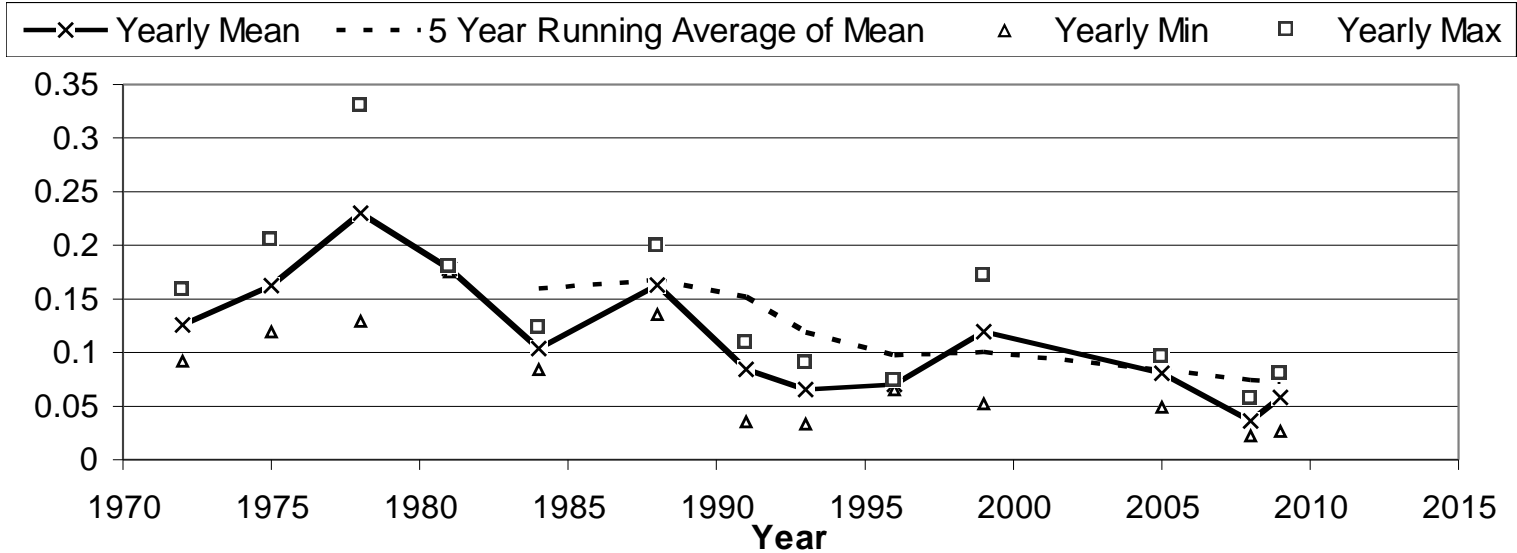
2009 - Early 2010 Summary

- Over the winter dredged two ponds adjacent to Round Lake to improve its water quality
- Lotus Lake Outlet Analysis and Volume Control project. Developed a model to understand why Lotus bounces as it does after rain events
- Continued the Fish Barrier and Control project in conjunction with the University of Minnesota
- Weed surveys were conducted on Lotus Lake and we have confirmed a link between reduced oxygen and the release of phosphorous from the lake bottom
- Samples were collected from Lakes Lotus, Ann, Susan, Mitchell and Riley to measure cyanobacteria in the water.

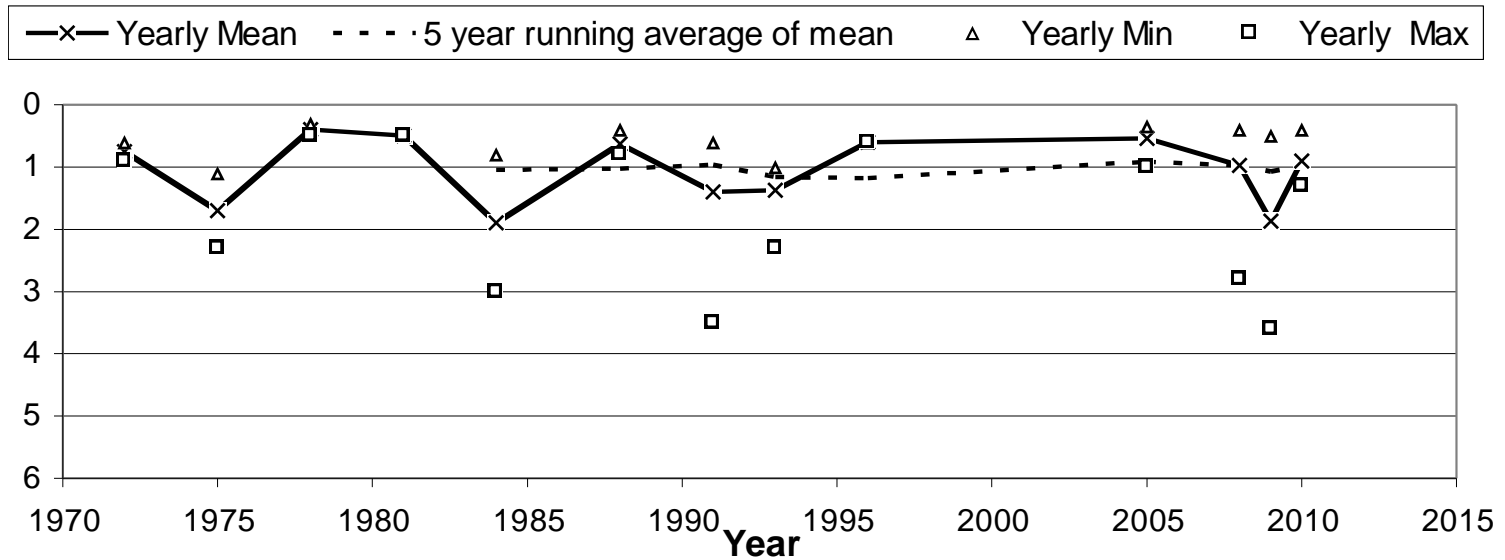
2009 - Early 2010 Summary (Cont.)

- There were a number of activities on Mitchell Lake
 - There was weed harvesting in June and July. Hopefully the curly leaf pondweed was harvested early enough that further proliferation can be prevented
 - In 2009, approximately 1,000,000 pounds were harvested
 - In 2010, approximately 927,000 (463 tons) were harvested
 - 791,000 pounds in June
 - 136,000 pounds in July
 - The Solar Bee experiment did not achieve the desired results and was discontinued
 - We embarked on oxygen management in the lake and confirmed that it is viable way to manage phosphorous in shallow lakes

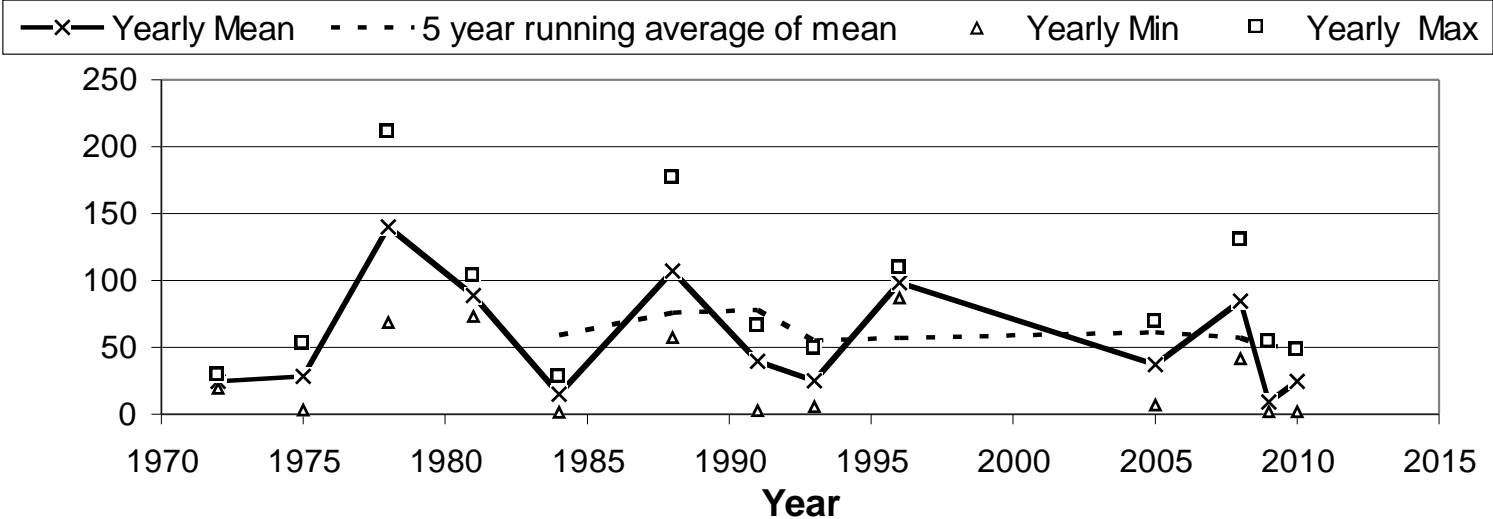
Mitchell Lake - Total Phosphorous



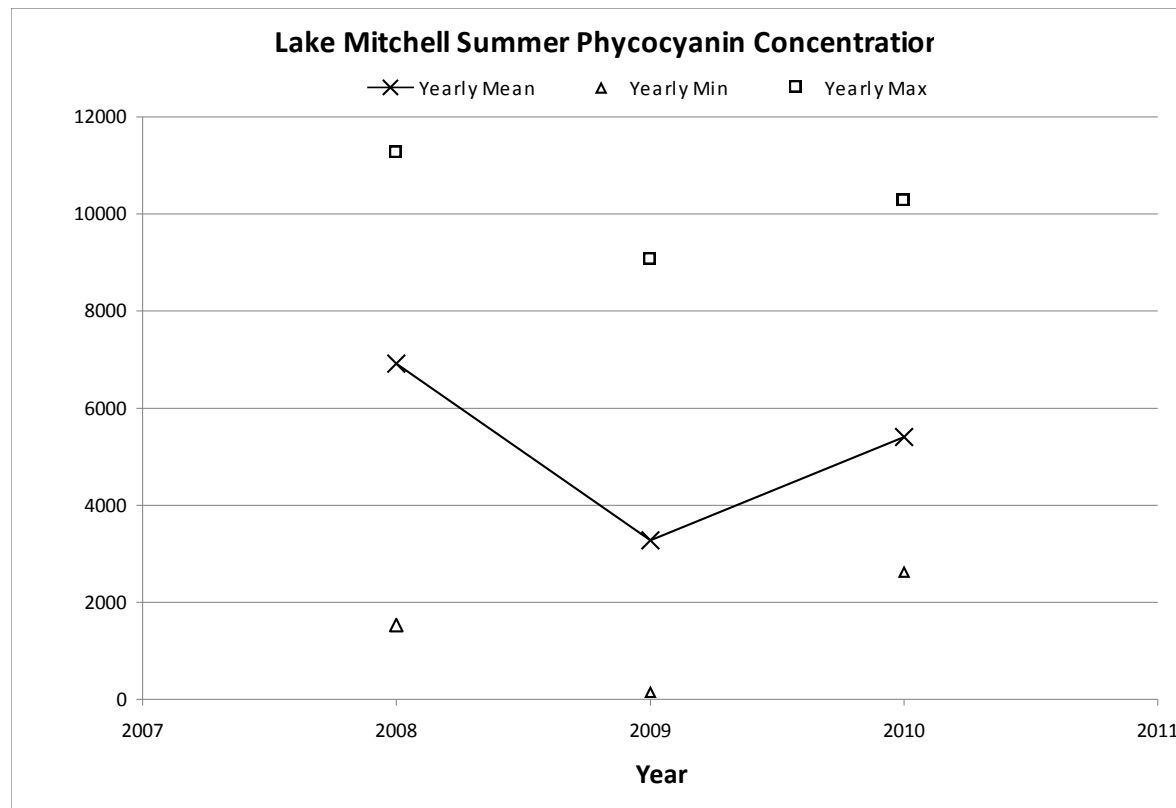
Mitchell Lake - Secchi Disk Readings



Mitchell Lake - Chlorophyll Readings



Mitchell Lake - Phycocyanin Concentrations



Some General Plans for 2011

- The University of Minnesota Fish and Plant Management project will be continuing
- The carp will be removed from Lake Lucy and an aeration project will be started to reduce the phosphorous release
- There will be an aeration project on Rice Marsh Lake
- Extensive sampling will be conducted on Lake Riley to generate information that will lead to better management of the curly leaf pondweed and Eurasian milfoil.
- Weed harvesting will begin on Red Rock Lake. This is a joint project with Eden Prairie.

Mitchell Lake Plans for 2011

- Weed harvesting will continue in 2011
- Paleolimnological core sample results are expected in March 2011. These results will help us in making future plans for lake improvements.
- Want to reduce phosphorous release via oxygenation, aeration, sediment oxidation or a combination of these methods.
- We're hopeful that the clean up of Round Lake will reduce the external phosphorous loading in Mitchell Lake.

What Can Private Citizens Do To Help?

- Create a more natural shoreline
 - Native plants along the shore acts as a buffer zone intercepting nutrients and reducing runoff, erosion and sedimentation
 - Plants growing in and near the water are critical for wildlife, fish habitat and a healthy lakeshore
 - Installing a buffer zone can restore the critical health of the lake that may have been eliminated previously by sod, hard structures or mowing.

What Can Private Citizens Do To Help?

- Keep the water runoff on the land
- Aerate your lawn
- When you mow your lawn make it 2 1/2 to 3 inches in length
- Don't put grass clippings in the roadway
- Consider building rainwater gardens (detention ponds) on your property
- Don't use coal tar substances on your driveway

Questions?

- Website
 - www.rileywd.org