



Lake Management Team News

Inside this issue:

<i>Lake Management Team News</i>	1
<i>Summer Events</i>	2
<i>Best Management Practices for Lake</i>	2
<i>Water Quality: How is Grand Lake Doing?</i>	3
<i>What is Carlson's Trophic State Index (TSI)</i>	3
<i>Your Lake Management Team</i>	4

2005 is an exciting year for the Grand Lake Area Association. Your lake management team has made a commitment to get back to the basics of our mission statement:

“THE GRAND LAKE AREA ASSOCIATION MEMBERS WILL WORK TOGETHER TO PROTECT AND ENHANCE THE QUALITY OF THE FISHERIES, THE WILDLIFE, THE AQUATIC ENVIRONMENT AND THE SURROUNDING WATERSHED OF GRAND LAKE FOR PRESENT AND FUTURE GENERATIONS”

During the past few months, your lake association management team has worked hard to develop collaborative relationships with the City of Rockville, the DNR, the Sauk River Watershed District, and the Soil and Water Conservation District. This collaboration is needed for a variety of reasons:

1. Address the concerns about runoff that enters Grand Lake from Ploof and Johannes Creeks.
2. Address concerns about housing developments that are being proposed near Grand Lake.
3. Address concerns about the management of curleyleaf pondweed, considered second to Eurasian milfoil in terms of it's invasive characteristics.

From this collaboration, the following actions have been taken:

1. A application has been submitted for a challenge grant to assist the Grand Lake Area Association in performing:
 - A. Comprehensive watershed mapping.
 - B. Identification of priority watersheds.

If approved, this \$75,000 challenge grant will benefit both Grand and Sauk Lake in our efforts to reduce runoff and unwanted nutrients (like phosphorous, sediments, cornstalks, etc.) that pollute our lake.

2. We begin our 3rd season of treating curleyleaf pondweed. Lake Management, Inc. from Marine St. Croix will begin the treatment of shoreline and offshore curleyleaf during the week of May 16th. Representatives from Lake Management, Inc. will attend our Grand Lake Area Association meeting on May 28th to present information and answer your questions.
3. Rockville City leaders are hearing our input and concerns about land developments in Rockville and on properties near Grand Lake. We are pleased to report that our leaders are educated about “Smart



“..curleyleaf pondweed, considered second to Eurasian milfoil in terms of it's invasive characteristics.”

Growth” development principles and have knowledge about “conservation developments or “open space developments” These developments help preserve the rural feel of a development area by dedicating 40% or more of the land to open space. These “open space” developments also allow for the creation of large buffer zones that can be placed between the development and Grand Lake. While we can't prevent development from occurring, we can work with our city leaders to make sure that land is developed in a way that preserves and enhances our water.

July 4th Flag ceremony and fireworks . . . Dr. Stephen Sommers Great Grand Lake Swim . . . Rockfest . . . Action steps to keep our water clean . . . Friends . . . A Great Summer!
—Scott Palmer

Summer Events

(see page 2 for more information):

- Grand Lake Area Lake Association meeting, May 28 at **John Clark School**
- July 4th at the Lake
- Rockfest, July 8-10th
- Dr. Steven Sommers Great Grand Lake Swim, July 23rd
- Grand Lake Area Lake Association meeting, September 3rd

Summer Events



4th of July fun at Grand Lake!

Raffle Ticket Sales

Raffle tickets will be available at the meeting on the 28th.

Please volunteer at one of the many great events happening at the lake or in Rockville this summer!

Grand Lake Area Lake Association Meeting

Please join us for coffee and donuts at the spring meeting on May 28th at 9:00 in the John Clark School Media Center, Rockville.

The agenda is packed with information and opportunities to ask questions regarding the challenge grant, the management of curleyleaf pondweed, development near Grand Lake and summer events. Guest experts, Mike O’Connell (Lake Management Inc) and Terri Jensen (master gardener) will be on hand to discuss weed management and rain gardens.

Annual 4th of July Celebration at Grand Lake

The 4th begins with a flag raising ceremony at 10:00 am, flotilla parade at 7:00 pm, and finishes with a bang with fireworks over the lake at dusk.

Volunteers are Needed for Rockfest ‘05

This years “Rockfest” will be July 8th—10th. It will have a

granite theme and will include many fun events, including food and games, a kiddie tractor pull, pageant, a parade that will begin at 6:30 p. m., and a street dance.

Anyone interested in helping with the festival should contact Kathleen Stanger at 685-4031 or 309-0316.

On Saturday, July 9th at John Clark School, Grand Lake Area Association will have a food stand with hot beef sandwiches, chips and beverages to raise funds for association projects. Ten volunteers are needed from 11:00 to 6:00. Please call Kim Klein at 251-2869 or 250-1222 (cell #) if you can assist.

The Second Dr. Stephen Sommers Great Grand Lake Swim

The Sommers’ family is thrilled to announce the second Great Grand Lake Swim on Saturday, July 23rd in honor of the late Dr. Stephen Sommers. Like last year’s event, over 50 participants will swim the full

length of Grand Lake ending on the shore at the Sommers’ lake home for food, music and other festivities. All proceeds go directly to Dr. Steve’s favorite charity, The March of Dimes.

The swim is a significant undertaking and is truly a community effort. Naturally the Sommers’ family would like to see everyone in the water, but there are plenty of other ways to pitch in as well. They include:

- Pontoon boat drivers to support the lifeguards and security teams
- Jet skiers to follow swimmers across the lake
- Lifeguards
- Swimmers!

If you are interested in contributing time or money to the event, please contact Lauri Robinson at The March of Dimes office at 320-252-1156 or Michael Sommers at mjsommers@aol.com. Of course for further details, please visit the event website at www.grandlakeswim.com. See you all at, or in the lake, July 23rd!

Best Management Practices for Lake Protection And Enjoyment



Help protect our lake by following good lake management practices.

1. Practice good lawn maintenance
 - Limit fertilizing and use zero phosphorus fertilizer. Do not fertilize within 50 feet of the lake.
 - Keep grass clipping, leaves and pet waste out of the
2. Maintain or establish a shoreland buffer zone of at least 30 feet of natural vegetation.
3. Be a safe boater.
4. Practice catch-and-release fishing.
5. Prevent the spread of exotics, such as Eurasian

lake. Bag your grass clippings near the lake.

watermilfoil, curleyleaf pondweed, and zebra mussels. If you find mats of curleyleaf pondweed on your shoreline, rake it up and get it out of the lake to prevent it from spreading. Do not kick it off your shoreline and hope the wind takes it elsewhere.

6. Work with local officials.

Water Quality: How is Grand Lake doing?

Residents of the Grand Lake area are proud people who value the quality of our natural resources. Land owners have been helpful in creating buffer zones that reduce runoff. The State of Minnesota recently passed legislation that bans lawn fertilizers that contain phosphorous for existing lawns. Grand Lake residents are now hooking up to a city sewer. But what really is the quality of the water at Grand Lake?

Currently, Grand Lake is considered to be a “Eutrophic” lake. In lake aging,

“eutrophic” pertains to an old-age lake and indicates high supply of nutrients supporting high biologic productivity. While it might sound good that Grand Lake “supports high biologic productivity” (and we are talking about plant productivity and not human reproductivity), what this really means is that we have conditions that produce lots of weed growth and algae scum. It might also seem like many weeds are good for our fish, but eutrophic lakes also have conditions that deplete the supply of oxygen needed to support our fisher-

ies. In sum, we don’t want to be eutrophic and need to take steps to improve our water quality.

The Grand Lake Area Association believes that data is important as we look at our water quality. Please refer to the following tables to help in your interpretation of the Grand Lake Water Quality Assessment. Note that we are comparing our lake with some of the cleanest lakes in Stearns County. Our goal is to be classified as an “Oligotrophic” lake with an abundance of clear water and plentiful oxygen.



What is Carlson’s Trophic State Index (TSI)?

Carlson’s Trophic State Index (TSI) is currently used by the Minnesota Pollution Control Agency in characterizing a lake’s “trophic state” (overall health). The term “trophic status” refers to the level of productivity in a lake as measured by phosphorous content, algae abundance, and depth of light penetration. Use the following guide to interpret the quality of water in Grand Lake.

Carlson’s Trophic State Index

- TSI <30** Classical Oligotrophy: Clear water, oxygen throughout the year in the hypolimnion.
- TSI 30-40** Deeper lakes still exhibit classical oligotrophy, but some shallower lakes will become anoxic in the hypolimnion during the summer.
- TSI 40-50** Water moderately clear, but increasing probability of anoxia in hypolimnion during summer.
- TSI 50-60** Lower boundary of classical eutrophy: Decreased transparency, anoxic hypolimnia during the summer, macrophyte problems evident, warm-water fisheries only.
- TSI 60-70** Dominance of blue-green algae, algal scums probable, extensive macrophyte problems.
- TSI 70-80** Heavy algal blooms possible throughout the summer, dense macrophyte beds, but extent limited by light penetration.
- TSI >80** Algal scums, summer fish kills, few macrophytes, dominance of rough fish.

Our goal is to be classified as an “Oligotrophic” lake with an abundance of clear water and plentiful oxygen.

Comparison Lakes in Stearns County: Carlson Trophic Status*				
	Grand Lake	Big Watab Lake	Pleasant Lake	Big Fish Lake
Total Phosphorous	54 (33 ppb)	39 (11 ppb)	40 (12 ppb)	46 (18 ppb)
Chlorophyll-a	58 (16 ppb)	40 (3 ppb)	53 (10 ppb)	48 (6 ppb)
Secchi Disk	47 (2.5 m)	36 (5.1 m)	50 (2 m)	38 (4.6 m)
Overall Trophic Status	Eutrophic	Oligotrophic	Oligotrophic	Mesotrophic

*From Minnesota Pollution Control Agency (updated September 22, 2004)

Grand Lake Area Association

Lake Management Team

Scott Palmer, President

Jim Hall, Treasurer

Jeff Hagen, Past President

Sue Palmer, Newsletter Editor

Susan Dean, Board Member

Georjean Fabel, Board Member

Josh LaVine, Board Member

Paul Ludwig, Board Member

Pat Sell, Board Member

Scott's Phone: 253-8191

Scott's E-mail: waterscot@aol.com



**Remember to attend the Lake Association
meeting on May 28th at John Clark School!**

A lake is the landscape's most beautiful and expressive feature.

It is the earth's eye.

Looking into which the beholder

Measures the depth of his own nature.

Henry David Thoreau

