

# Green Lake Breeze

P.O. Box 362 • Spicer, MN 56288

[www.greenlakespicer.com](http://www.greenlakespicer.com)

MAY 2008

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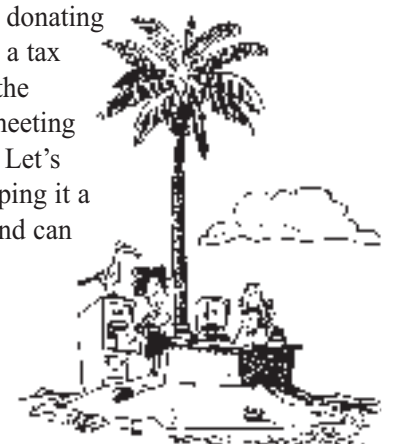
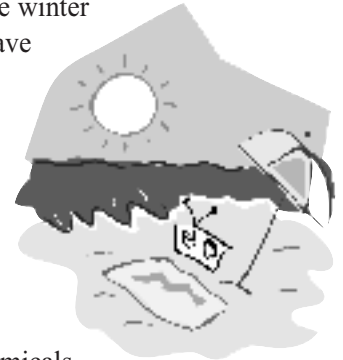
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Dear Green Lake Property Owners,

It doesn't seem possible, but another summer season of fun on Green Lake is just around the corner. I hope all of you have had a wonderful winter, whether you have been a snowbird wintering in the warmer areas of the country or spending the time at your home in MN. The winter months seemed to be longer than usual and we have seen a number of large ice ridges on the lake. As of this writing, we still have ice on the lake.

As we look forward to the summer months, the projects before us are very important to all lake residents. The first one will be the concern for the growth and spread of Eurasian Milfoil. The permit for the chemical application this spring is in the process of being approved by the DNR, and we are hoping to apply the needed chemicals in late May or early June, an earlier application than 2007. In addition to the use of chemicals, we are also investigating using divers in selected areas of the lake to see if this method of controlling Milfoil is a workable alternative.

Other areas of concern the board of directors will be looking at is the stocking of walleyes by the DNR and the DNR acquiring more land in Spicer for the parking of boat trailers. This is a concern of the GLPOA as it increases parking areas at a large expenditure, near \$1 million, for a limited amount of spaces. The concern of the GLPOA is that the DNR will not fund prevention and control of Milfoil, but will pay to increase more parking for outside boaters on the lake, thus increasing the possible spread of the weed. The board of directors has taken steps to insure that the walleye fishing in the lake will continue to be of major importance. The board established a fund for restocking and other improvements in proper fish management. On your dues statement, that was mailed on the first of May, you will notice a line to directly donate to this fund and have it tax deductible, a 501-C contribution, when you pay your dues. Because of these concerns, we need your help to keep Green Lake one of the premier lakes in the state, the nation. You can do your part by first paying your dues, only \$50.00, the first increase in years; donating to projects through the 501-C, thus receiving a tax deduction; volunteering for committees that the board establishes; and attending the annual meeting on June 20th at the Green Lake Bible Camp. Let's work together in improving Green Lake, keeping it a great, clean lake, one all of us are proud of and can enjoy for many years to come.



A handwritten signature in black ink, appearing to read "Ralph Jansen". The signature is fluid and cursive.

Ralph Jansen, President

# LAKE AVENUE SOUTH IMPROVEMENTS

The City of Spicer, in cooperation with Kandiyohi County, is planning the reconstruction of Lake Avenue South from the Saulsbury Beach parking lot to the Charlie Arnie Road this coming summer.

The project is being done to replace aging city sewer and water lines and to improve the deteriorating road. Lake Avenue South is also designated as County State Aid Highway 10, so Kandiyohi County will be sharing in reconstruction costs.

Improved water quality of the stormwater runoff from the road to Green Lake is an important component of the project. Two water quality treatment ponds are planned on the Mn/DNR property where Alvig

Slough outlets to Green Lake. Storm sewer drainage is being revamped to bring as much flow as possible to the ponds. Other water quality improvement measures are also part of the plan. Additional water quality improvement projects, which are outside the scope of the road project, are being discussed with the Middlefork Crow River Watershed District.

The city plans to authorize bids and get the project underway in July. The project will be built in phases to minimize access problems during construction. The majority of the work will be completed by this fall. However, the final layer of bituminous surfacing will not be placed until next year.

*Gary Danielson, PE*

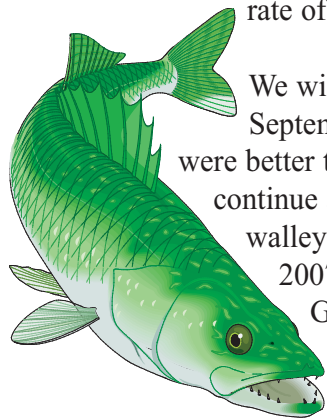


## FROM THE DNR

Over the past winter, DNR Fisheries met with the Green Lake Fishery Project group and representatives from GLPOA regarding our walleye stocking and management of Green Lake. Walleye recruitment and abundance were reviewed and discussed. We have agreed on a stocking strategy for the next three years. Walleye fry will continue to be stocked during egg-take years at a rate of 10% with OTC (an antibiotic) marked fry. Starting in fall 2008, Spicer Area Fisheries will stock walleye fingerlings annually at 1.5 pounds per littoral acre (3,081 pounds) if fall electrofishing for young-of-year walleye is below 30 per hour. The number of fingerlings stocked will be a minimum of 46,215 fish with a preferred rate of 15-30 fish per pound.

We will continue to monitor recruitment of young walleye through fall night electrofishing in September or early October. Recruitment in fall 2006 and 2007, 9.0 and 6.0 per hour respectively, were better than for the period 2001 to 2005 (0-4.7 per hour), but still below the desired level. We will continue annual netting assessments, typically in early August. The walleye gillnet catch was 12.0 walleye per gillnet in the August 2007 netting on Green Lake. Green Lake walleye abundance in 2007 was above the historical average for Green Lake and above the average for lakes similar to Green Lake. The goal range for walleye in Green Lake is 9.5 to 13.5 walleye/gillnet.

Fisheries will keep stakeholders advised of netting and electrofishing results each fall. The stocking plan will be reviewed during the winter of 2010-11.



*Bruce Gilbertson, Area Fisheries Supervisor*

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# GREEN LAKE FISHERY PROJECT

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Report - Green Lake Fishery Project

Committee - Gene Kubesh, Treasurer; Michael Hodapp, Steve Martinka, Ann Latham, Duane Hanson, Bill Latham

GLPOA Fishery - Tom Broman, Roger Stehn

Professional Consultant - Dick Steinberg, Fisheries Biologist and Author

The purpose of Green Lake Fishery Project (GLFP) is: "Restoration of the historic balance of Green Lake, including the Green Lake walleye fishery." To that end, members have worked with Dick Steinberg since January, 2007, when his extensive research of MnDNR lake statistics and records - back to 1950s - resulted in the "Independent Review of the Green Lake Fishery and Related Biology." The Review was presented and made available late February, 2007.

The goal of 'restoration of the balance' implies perceived changes to the lake's ecology which became evident in the past 10 years. The definition of ecology — "inter-relationships of organisms one to another and to the environment," in this case the ecology of fish species, plants, algae, forage such as crayfish and shiner minnows in the freshwater environment of Green Lake — and how dominance of one or more species can effect changes in other organisms sharing the environment.

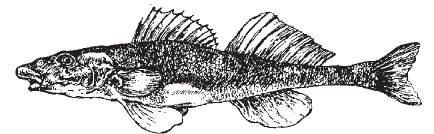
Since 1996 the major documented changes in Green Lake are: the demise of the once primary species, walleye; the population explosion of smallmouth and largemouth bass and sunfish; and the reduction in numbers of forage species - yellow perch, shiner minnows, tullibee and native crayfish.

This is documented in the DNR creel count comparisons as follows: Walleye: 1996-45,627 caught; 2007-6,934 caught. Smallmouth: 1996-3236 caught; 2007-20,477 caught. Largemouth bass: 1996, 882 caught; 2007-14,196 caught. Native crayfish (favorite food of bass) in gill nets 1997- 360; 1999-732; 2002 through 2006-total of 3 caught. Other related ecological imbalance occurring over this 12 year period is evident in further data compiled by DNR Fisheries.

Consequently, acting on the recommendations of Steinberg, which are based on and reinforced by DNR data and committee members' observations, GLFP and GLPOA determined that one tool available for a beginning to restore part of the ecology of Green Lake, its fishery, is a consistent walleye stocking program to be negotiated with DNR Fisheries.

This past year, GLFP, GLPOA and Steinberg worked with DNR to achieve make-up stocking and an acceptable, consistent walleye fingerling stocking program which is described by Bruce Gilbertson in this issue of the Breeze.

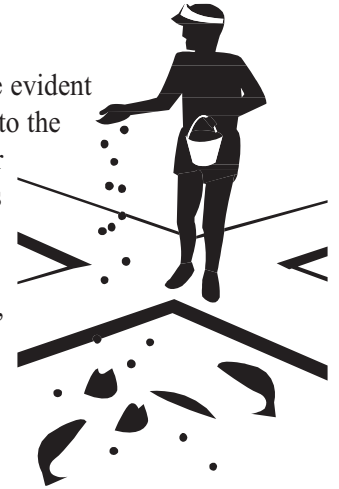
The bottom line to Green Lake Property Owners is that the balance of what is "IN" the water - e.g. fish species, vegetation, algae, mollusks, crayfish and their inter-relationship is of utmost importance to the ecological health of Green Lake.



Green Lake Fishery Project has accomplished the first step this year, the walleye stocking program, but our work is not complete. We need to continue the consulting services of Dick Steinberg and continue the important task of educating stakeholders to understand the implications of Fisheries' work and programs. GLFP volunteers expend considerable time and effort, however the necessity of a professional consultant is funded by contributions.

Many property owners and stakeholders provided contributions to get us this far. Green Lake Property Owners Board has approved a process whereby contributions to GLPOA can be specified to the Green Lake Fishery Project making your contribution tax deductible through the 501-C3.

For more information about the work and goals of GLFP and to receive the Annual Report contact Ann Latham, 796-5264 or e-mail [blatham@tds.net](mailto:blatham@tds.net).



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# WATER MONITORING

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## Lake Monitoring

The 2007 Green Lake water monitoring program under the direction of the Middle Fork Crow River Watershed District (MFCRWD) yielded valuable information in the continuing effort to follow trends in the health of our lake. As in previous years, two sites in Green Lake were sampled, 9 times at each site. The 2007 results for the two lake sites (named GL1 and GL2) averaged .018 mg/L for total phosphorus (TP). The previous goal set for Green Lake by the local DNR was to keep the TP values below .018 mg/L.

Additional monitoring sites were added for the first time in 2007. The outlet at Lake Calhoun was monitored 12 times, and two lake inlets were monitored intermittently after rain events.

Alarming high levels of total suspended solids (TSS) and high levels of TP were found at the south shore inlet next to Park Lane Resort. This site was monitored three times after rains. The TP results on these occasions were 0.835 mg/L, 0.386 mg/L, and 0.560 mg/L. These findings emphasize the necessity to do everything possible to control the storm water runoff when Lake Avenue South is upgraded. The results from this and the other sites are discussed further in the article below.



Plans for the 2008 monitoring program are underway. The MFCRWD and the Crow River Organization of Water (CROW) held a lake monitoring course in April to train water monitor volunteers. This course was attended by 47 people, 11 of whom live within the MEG watershed district. The monitoring plans for this summer include monitoring the same locations that were monitored in the summer of 2007.

The results of the 2007 summer monitoring have been analyzed by Chad Anderson and Vanessa Glieden Henjum of the MFCRWD. Their report follows.

*Jill Nelson*

## Green Lake Monitoring

More than one way of assessing water quality exists: people who have lived on a lake for a long time may use their historical knowledge; others may use recent fishing expeditions as an indicator, and others may use their observations of changes in aquatic vegetation. In all these instances, people are using either their memory or their expectations as their point of reference. In the scientific community, a different point of reference is used to compare water quality: the use of ecoregions. This concept was developed with the understanding that it is not realistic to expect a lake in West Central Minnesota to exhibit the same water quality as a lake in the Boundary Waters. Ecoregions are based on land use, soil type, topography and potential natural vegetation; an understanding of these characteristics provides a point of reference and allows for a more realistic expectation of water quality.



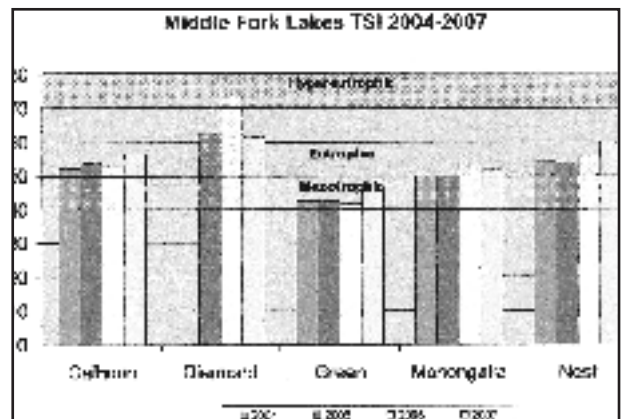
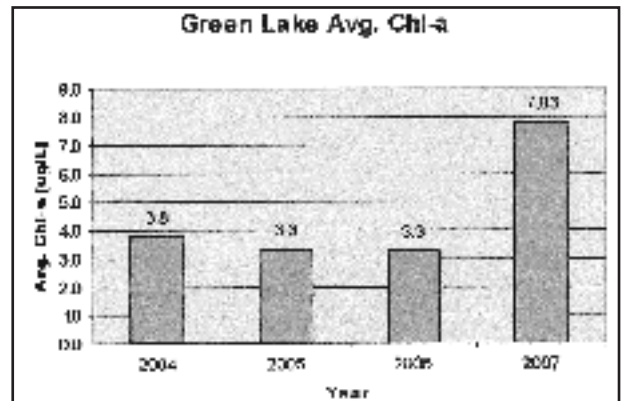
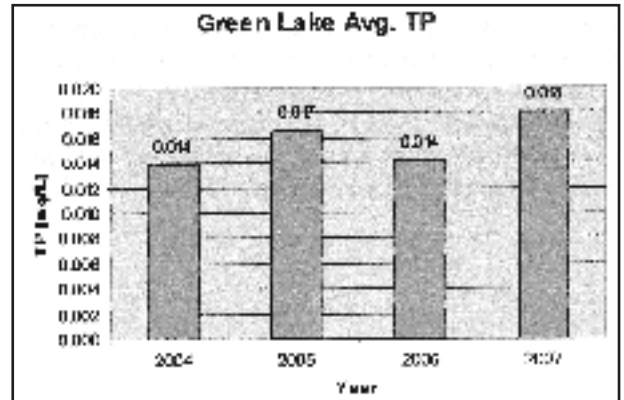
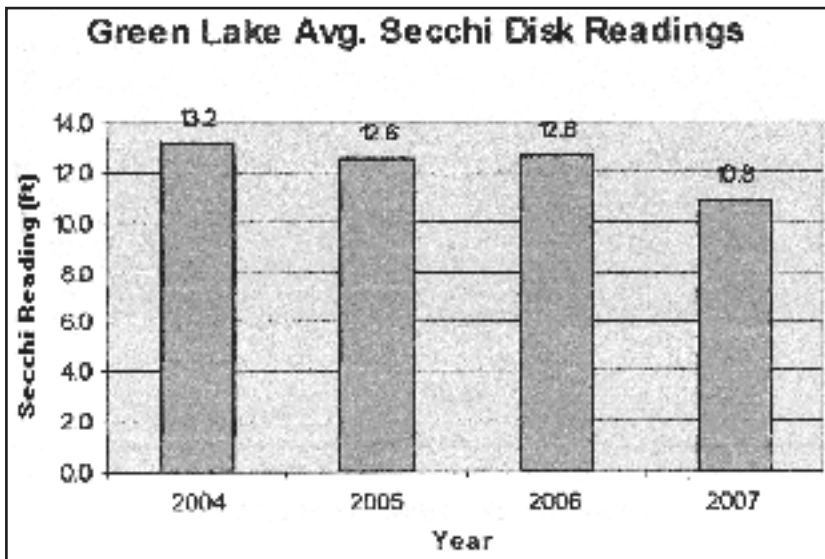
The Middle Fork Crow River Watershed lies within the North Central Hardwood Forest (NCHF) ecoregion. As such, when trying to understand the water quality of Green Lake, using the ecoregional averages is important. One tool that is used for comparison of lake water quality data is the

Trophic State Index (TSI). The TSI is calculated using total phosphorus (TP) values, chlorophyll-a (Chl-a) values and Secchi disk (water clarity) readings. The data for Green Lake show that TSI values were higher in 2007; TP and Chl-a values were higher and Secchi disk readings were lower than any of the previous three years (see graphs below). It should be pointed out that while this data appears to indicate a trend toward worsening water quality, it is difficult to draw this conclusion with any certainty based on the limited number of years of data. Green Lake is still well within the range of average TP, Chl-a and Secchi disk readings for lakes in the NHCF ecoregion (see table). In the case of TP and Secchi disk readings, readings are better than the average range.



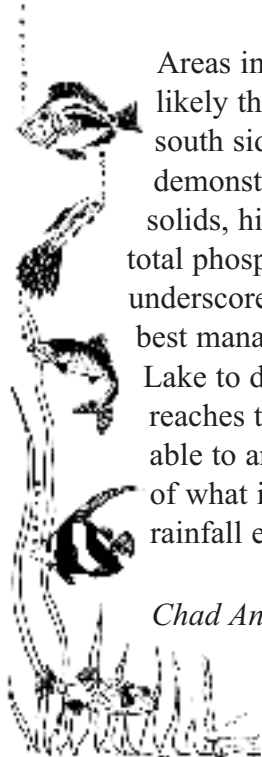
**Green Lake Water Quality Comparison with Ecoregion averages**

Parameter	2004	2005	2006	2007	NCHF Range
Total Phosphorus (mg/L)	0.014	0.017	0.014	0.018	.023-0.50
Chlorophyll-a (ug/L)	3.8	3.3	3.3	7.83	5-22
Secchi Disk (ft)	13.2	12.6	12.6	10.8	4.9-10.5



Areas in need of the most urgent attention are likely the inlets to Green Lake. The inlet on the south side of the lake by Park Lane Resort demonstrated extremely high levels of suspended solids, high nitrogen levels and, on average, high total phosphorus levels after rain events. This underscores the need for the implementation of best management practices (BMPs) around Green Lake to disconnect impervious areas before water reaches the lake. While no further data is available to analyze on inlets, this is likely indicative of what is being introduced into the lake during rainfall events of any intensity.

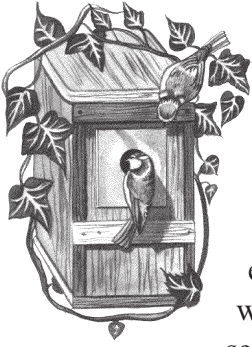
*Chad Anderson and Vanessa Glieden Henjum*



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# NATURE NOTES

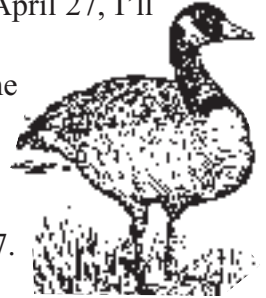
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If this were eight days ago, I would begin, “And a Merry Christmas to you, too.” Those 6-7” of heavy, wet snow weren’t even for the birds. The robins were hopping over the drifts and scrabbling for something to nourish their plump little bodies. The bird feeders were worked double-time by the chickadees, nut hatches, goldfinches, downy and hairy woodpeckers, and the juncos and cardinals kept busy ground-feeding the fallen sunflower seeds. The pileated woodpeckers hacked away at the suet for twenty minutes at a time.

House finches and mourning doves took turns with the others at the bird bath, sipping water to their heart’s content—not bathing. A marsh hawk sat in my maple tree and I think that’s what has flown through the yard a few times. Flickers and red-breasted woodpeckers were confused by the “return” of winter. (Today, April 27, I’ll say Merry Christmas again.)

Overhead, fly the Canada geese who returned in March when the only open water was by the outlet near the bridge. Great blue herons and egrets have made their appearance. On April 20th, four mergansers swam along the ribbon of open water near shore, the result of a small, plowed path for some trucks hauling rip-rap to a place south of here.



To back up for those who’ve been gone all winter, Green Lake froze over December 2, 2007. When anyone asks me how the winter was, I just answer, “Cold, snowy, windy, and l-o-n-g.” A few mornings when several inches of snow cloaked every branch and twig of every tree were beautiful — much to be admired ... until one had to try shoveling the heavy, wetter than usual, snow. With the winds, it would pack in like concrete. Snowmobilers and skiers must have been delighted. By the second week of January, as usual, the sun was noticeably higher and warmer.

Squirrels and rabbits kept us company, and one day in February, two deer bounded across the lake. In March, eagles were soaring above the treetops; crows were cawing up a storm. I saw my first robin March 26, but others had seen some earlier. Red-winged blackbirds and gulls made themselves known by their distinctive calls. A cock pheasant narrowly missed hitting the corner of my windshield. A wild turkey hen ran down Indian Beach Road ahead of me the other day. I wonder if it was the same one that crossed the neighbor’s driveway on Thanksgiving Day. A large expanse of open water is by the outlet, but as of the weekend of April 12, at least 16” of ice was reported on the lake. It had reached a depth of 30-36” according to some ice fishermen. The ice is finally becoming porous and black. Will it be out by May? At noon on the 27th, it still covered the lake from the former Park Lane Resort to the outlet - in a huge parabola into the open water. From one point, one cannot even see open water.

Most of the huge drifts, some 6-8’ high, between houses on the east shore have melted. By the time you’re reading this, they should be gone.

If the old wives’ tales are true, our first frost next fall should be October 21st, six months after our first thunderstorm this spring. Does anyone keep track of that sort of information? I suppose we could note it on the calendar and see what happens.

Meanwhile, spring bulbs have sprouted and rhubarb has erupted through its leafy cover. Dare we say that spring has arrived?!? The call and sight of a loon in the open water along the north shore is a hopeful sign I



May the Green Lake breezes bring warmth and gentleness to us all.

*Gloria Benson*

# GREEN LAKE SEWER AND WATER NEWS

The Green Lake Sanitary Sewer and Water District (GLSSWD) is happy to announce that it has been awarded a Certificate of Commendation for 2007 from the MPCA for Outstanding Operational Performance of its wastewater treatment facility. This award is given to treatment facilities that demonstrate, at the very least, full compliance with a multitude of MPCA requirements.



The Lake Florida sewer connection project was completed last fall and we now have 188 additional hook ups tied to the GLSSWD system. The system is functioning well and providing safe wastewater treatment for Lake Florida residents. As part of the project, the GLSSWD and Kandiyohi Power Coop (KPC) partnered and developed an innovative billing method for the Lake Florida customers by having their accounts monitored and billed by KPC utilizing new metering technology.

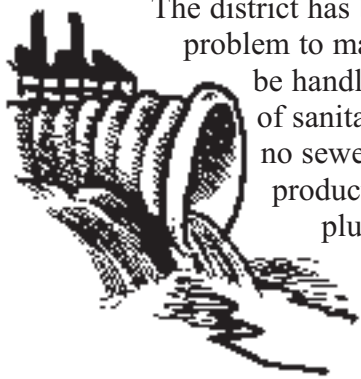


The proposed sewer connection project relating to Nest, George & Henderson Lakes is moving ahead positively. Numerous informational meetings were held last fall with lake residents and the recommendation from the majority of the people was to continue on with the process. During the winter, design work was completed and bids were let this spring for the required construction. Quam Construction from Willmar submitted the low bid, well below the engineers estimate, and will receive the contract to do the work following the final public hearings and official approval from the Kandiyohi County Board. The district is looking at the possibility of about 270 additional sewer connection hook-ups to the system regarding this project. The installed system will be what is known as a low-pressure system similar to what was installed at Lake Florida with a grinder/pump station located at each property connection point. Project completion is scheduled for June 19, 2009.

For those lake residents that winterized their dwelling, if the water meter was removed to protect it from freezing and needs to be reinstalled, be sure to install it with the arrow on the base going in the direction of the water flow. This sounds easier than it is. The unit, or what we call the horn, where the meter mounts to, is deceptive as how the water actually flows through it. My advice is to take a black marker, and when you know the meter is installed correctly, mark the ends so installation the next time is simplified.



The district has been experiencing a lift station pump plugging problem and we have traced the problem to materials being flushed down the sewer that really are solid waste products and need to be handled as such. What seems to be becoming popular and what I am referring to is the variety of sanitary wipes on the market today. If you read the fine print on the package, most will say no sewer disposal. Even if proper disposal is not identified, please do not flush these types of products down the drain. Since they do not breakdown, these products do a nice job of plugging pumps and infrastructure and eventually will plug your home sewer system.



Again for your info, if you are on the district water system, the district water hardness is 15 grains of hardness. So if you have a water softener, you can set the unit accordingly so as to achieve optimum softener performance.

The GLSSWD number for any after hours water or sewer emergency is still 320-796-5565. This number can be called 24 hours a day, seven days a week. Otherwise just call the district office at 320-796-4523 during regular business hours for assistance.

Have a great summer!

*Ron Hagemeier*  
GLSSWD Director





# Spring Has Sprung

... and new life is all around us ... fresh new growth of trees and plants, new roads and landscapes and wonderful new homes ... all within Kandiyohi County and our beautiful lakes and waterways. But along with spring clean-up, we are seeing people using road ditches as their personal dump sites! Why?

Let us start “a-new” and with personal pride ... keep our beautification project all around Kandiyohi County. Let us “begin a-new” with yard refuse being taken care of properly and keep beautiful Kandiyohi County lakes and waterways beautiful!

Grass clippings have large amounts of phosphate within them. When you mow your lawn, we would like to suggest to you that the first four rounds of mowing turn the grass clippings into your lawn. This will benefit your lawn by the phosphate, within the clippings, and it will not find its way into our water system.

When grass clippings are blown on the street level rain water will wash them into the storm sewer which will find its way to our lakes and waters of Kandiyohi County. One pound of phosphate “may” produce up to 400 pounds of algae/weeds within our lakes and rivers.

Be a good naturalist, a great ecologist by blowing your lawn clippings on to your lawn. It protects our water plus it fertilizes your lawn! We all win!

Respectfully,  
*Terry Frazee*  
*Executive Secretary Green Lake Property Owners Association*



*Return Service Requested*

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*Green Lake Property Owners Association*  
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