

Granite Lake Monitoring Report

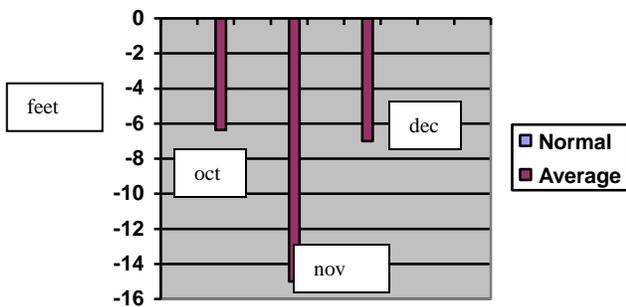
Fall 2010

October – December

Fall Review

As summer ends, the tree leaves have taken on the colors of fall and slowly they start a dissent to the ground. October sees the dropping of most leaves from their shaky anchor to the tree limbs. October also brought a windstorm that took down many tree branches and entire trees. The forest didn't look the same after the wind with fallen dead trees lying in every direction. The water clarity started to improve during October and November until just before the lake iced over on November 27th. Several people took advantage of the warm days this fall and they fished well into November. The swans found the lake a good source of food during October and November and they made their presence on lake known each day by their bugling. The loons hung around late this fall by continuing to float on the lake water well into November. Some one mentioned that they observed a loon a day before the lake completely iced over. Guess, if the loon stays that late, it just needs to fly faster. The water level remained above normal, except for several days during the summer. There were lots of bald eagles on the lake just before ice over, especially along the northeast corner. Five eagles were observed in the air at one time. The first fish house appeared on the lake just several days after the lake iced over. The ice at the time was 3.5-4.0 inches in thickness. In November, Granite Lake Watershed Association was selected for Star Lake status. That should help to maintain real estate values, but it also raises the bar for Association performance.

Transparency

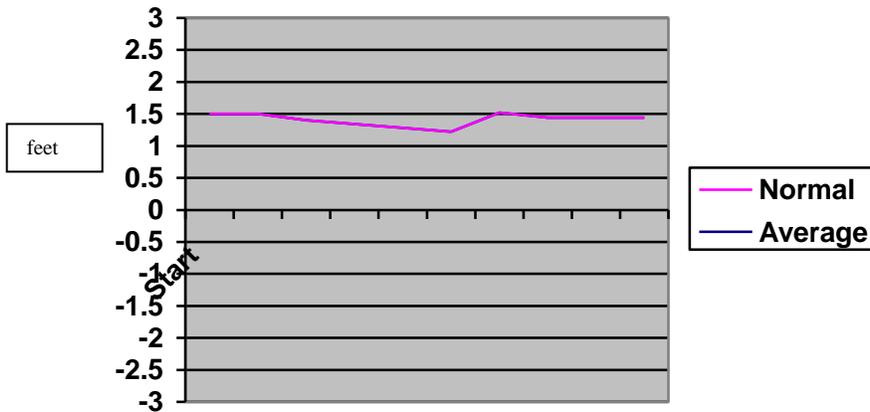


The graphic is very typical for Granite Lake, but the difference this year is that the transparency was much better throughout the summer.

The transparency depicted in the graph is monthly averages taken from October thru December. As the graph shows, the average monthly transparency remained greater than 4 feet throughout the entire

year. This past year has been the best water quality that this lake has seen 1999. Floating chunks of algae were visibly absent from the lake surface this year. Very little blue-green algae was present along the lakeshore during August and that is a very good sign for improve water quality.

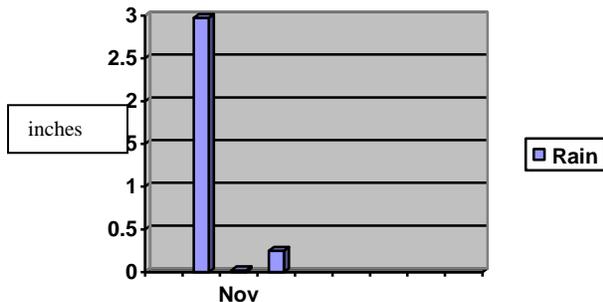
Lake Level



The graph displays the gage scale readings for each month from October through December. The amount of rain received during October and November was sufficient to maintain the lake water level above the historical surveyed level. The lake level gage was removed on November 16th to

protect it from damage by the winter's ice. At ice on, the lake water was 6 inches above the normal level. This higher lake water level may cause some damage to the lakeshore by ice creeping further upland. Right now, there is a lot of water on top of the ice from heavy snow cover. Holes that are drilled through the ice by people fishing are acting like fire hydrants. The slick ice will make for a good game of broom hockey or ice bowling.

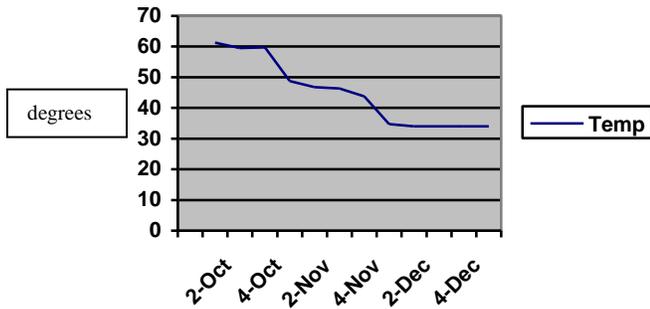
Precipitation



The period of October until the first two weeks of November provided ample amounts of rain, after that, the snow season took over and it hasn't stop snowing. October was the big rain producer with approximately 3 inches during the month. The first snowfall occurred on November 14th and it amounted to 1.5 inches. The rain gauge was taken off the hook and place in the garage the week prior to the first snow. By the end of December, there

was approximately 14 inches of snow in the forested areas and the turkeys were starting to find it difficult to dig down for food. It could turn out to be a real snowy winter. After the lake iced over, the lake received very little moisture in the form of water, it was all snow on the ice. Then came the monsoon rains that flooded the entire lake and turned it into one giant skating rink. The snowmobile crowd had great snow until the rain. One can possibly expect snowmelt runoff into the lake next spring and some flooding. That holding pond on the eastside of the lake will get a real test in the spring.

Water Temperature



During the first two weeks of October the water temperature tried to hang on to 60 degrees, but the colder air temperatures forced the water temperatures to decline sharply during the last half of the month. There was a steady decline of water temperature during November with a steeper drop the last two weeks of the month. The water temperature reached 34.7 degrees just before the lake iced over on the 27th. Once the lake is ice covered

the water temperature varies little and stays 34 degrees just below the ice. The water temperature will increase to about 42 to 46 at 20 feet down. This heat is mostly generated from the lake bottom. Even in the winter, chemical reactions are taking place in the lake bottom.

Minnesota Star Lakes & Rivers Program

A Star Lake has been born right here in the Annandale area. Granite Lake has been selected by the board committee members of the Star Lake Program, and been designated a Star Lake. This program became law in 2008 as an initiative introduced by State Senator Mary Olson of Bemidji. As stated by Senator Olson, “The Star Lake Program will recognize and assist lake associations that voluntarily implement water-friendly lake management practices beyond what is currently required by law.”

The legislation established a Star Lake Board that is comprised of lakeshore owners and representatives from several state agencies. The Board is tasked with soliciting applications from lake associations, reviewing the applications against required criteria, and voting on Star Lake status. In order for a lake association to receive Star Lake status, it must meet the following criteria:

- “Developing and updating a star lake or river management plan that aims to improve the health of lake, identify opportunities for public-private partnerships, promote shoreland best management practices, and educate association members;
- Maintaining a membership of at least half of the private shoreland owners;
- Participating in a water quality monitoring program that meets Pollution Control Agency standards; and
- Holding annual meetings to review the Star Lake plan and notify appropriate state agencies and local government units in the development and monitoring of the star lake or river management plan.”

The Star Lake Board also works with private and public entities to allocate resources and provide technical help to Star Lake associations in order to achieve the benchmarks stated

in their lake management plans. The legislative bill also contains provisions to financially assist Star Lakes by providing a priority to those lakes when applying for grant monies.

Star Lake associations receive letters from the Star Lake Board designating their respective lakes as Star Lakes. In addition, they receive signs that indicate Star Lake status, and \$500 checks to be used by the associations as they wish.

For Granite Lake, this journey started back in 1999 when the association was again activated after being dormant for many years. A monitoring program was put in place, followed by a lake management plan, and after that a monitoring plan was completed. To meet the goals set out in the management plan, several water improvement projects were completed that required working with private and public agencies for technical assistance and financial support. The Association in its efforts to improve water quality in Granite Lake has gone far beyond the criteria required by the Star Lake Program.

Associations can only reach Star Lake status by having a dedicated membership, outstanding leadership in its president and hard working board members. The Granite Lake Association has received outstanding support from landowners/farmers in the watershed. The Association has listed as one of its top priorities to work closely with private organizations and government agencies. When all of these things above are in place, good things happen. Granite Lake has all of these! The Association must have a good lake management plan in place, and attempt to implement every aspect contained in the plan. A good monitoring program must be in place that provides consistent, high quality water health data to the state agencies, and monitoring activities that extend over decades.

To give someone more perspective on the likelihood of obtaining Star Lake designation, one has to consider that the state has approximately 10,000 lakes. Only about 1000 of these lakes have organized lake associations, and of those lakes there are less than 100 having that sort of management plan in place that might qualify their lake with a Star Lake designation.

Granite Lake is proud to be a recipient of this award!

Loons, Eagles, Turkeys & Swans

The last young loon left the lake just two days before the lake iced over on November 27th. By the time that young loon left, it looked more like an adult for the colors were very bright.

Adult eagles in the area had a good hatch for on November 26th there were 4 immature and one adult eagles on the lake at the same time. One adult eagle was observed several times during December.

A large flock of 23 wild turkeys were hanging around the harvested soybean field on the north end of the lake during most of November and December. Four of those turkeys have real nice beards, measuring perhaps 6-8 inches in length. One of the turkeys has a different color variation with it being a silvery gray. It definitely stands out from the rest of the flock. As the snow depth increased, several turkeys have made regular visits to the birdfeeders. Feed at the feeders has changed to more corn.

The resident swan family survived the summer at Libby Lake going into fall looking in good condition. As a family of seven swans, they departed Libby Lake on October 12th. There was lots of noise early, as cygnets received encouragement to take wing. At approximately 10:00 a.m. there was a whoop, whoop, whoop of wings overhead as the family flew south for their next stop on Granite Lake. The family was next sighted at the wildlife refuge south of Annandale along County Rd 5. Then a couple weeks later the family started to appear daily at Granite Lake. Their presence on Granite, attracted additional swans, soon the number of swans reached 24. All the swans stayed until one day before complete ice over occurred. Two returned a day later only to sit on very hard water. By now, they've moved to their winter quarters, mostly likely at Monticello and the Mississippi River.

Crow River Organization of Water (CROW)

From E-Currents:

“CROW was awarded a New CWP grant. CROW will receive \$495, 912 in grant dollars and \$1,200,000 in loan dollars to upgrade noncompliant ISTS systems.

This project focuses on preventing and reducing sediment related turbidity problems through protecting water quality and quantity. This project will be aiming at promoting positive land use changes, along with promoting a sense of watershed stewardship and awareness throughout the Crow River Watershed. Project goals for the grant include installing the following BMPs: Shoreline stabilizations, rain gardens, wetland restorations, filterstrips, grass waterways, sediment basins, shoreline naturalizations, incentive payments for buffers and CRP sign up and upgrading septic systems.

The CWP grant is currently in the contract phase and will officially start in the spring of 2011. Contract CROW staff for additional information.”

What the Granite Lake Watershed Association should be doing?

- Contacting the CROW Staff and get information on the projects and grant monies available.
- Select the project initiatives that fit Granite Lake's Management Plan. Remembering that the Lake is now designated as a Star Lake it needs to do projects.
- Obtain copy of proposal requirements, format and submission timelines.
- Submit Proposals for: *Shoreline stabilizations, rain gardens, filterstrips, sediment basens, shoreline naturalizations, incentive payments for buffer strips, upgrading septic systems and setup a monitoring program for the outlet to the Crow River.*

319 – Rural Water Project (This was initial grant monies)



“The 319 project will be wrapping up in 2012. There is still plenty of cost share money available for landowners to install a variety of BMP projects in the western/middle Crow River Area. Projects will be reviewed on a first come first serve bases. Construction time is limited!”

Refer to table below for remaining money and project goals.

BMPs	Goal	Approved	Completed	Amended Grant Money	Approved	Spent	Remaining
<i>Lake shore stabilization</i>	4		2	\$35,000		\$5,863.22	\$29,136.78
<i>Streambank stabilization</i>	2	2	1	\$95,150	\$21,500	\$9,336.02	\$64,313.98
<i>Manure Testing</i>	24			\$400			\$400
<i>Feedlot Upgrage</i>	1			\$22,500			\$22,500
<i>Windbreaks</i>	900ft			\$400			\$400
<i>Outlet Structures</i>	1			\$2,500			\$2,500
Totals	8	2	3	\$155,950.00	\$21,500.00	\$15,199.24	\$119,250.76

What The Granite Lake Watershed Association Needs To Do:

- Contacting the CROW Staff and get information on the projects and grant monies available.
- Select the project initiatives that fit Granite Lake’s Management Plan. Remembering that the Lake is now designated as a Star Lake it needs to do projects.
- Obtain copy of proposal requirements, format and submission and completion timelines
- Submit Proposals for: *Shoreline stabilization and windbreaks*

Under shoreline stabilization putting in filter and buffer strips between lawns and lake, and lining the eroded banks with rock, and planting small bushes and trees to make it more natural. Under windbreaks fill in the tree plot on the northwest corner of lake to complete an efficient living snow fence.

PROPOSAL AND COMPLETION TIME IS LIMITED - NEEDS TO BE DONE SOON!