THE LAKER

NORTH LAKE PROTECTION ASSOCIATION **JULY 2013**

NLPA MISSION: *To protect the ecological, recreational and esthetic well-being of North Lake.*

NLPA ANNUAL MEETING
INVERNESS COUNTRY CLUB
AUGUST 6, 2013 7:00 pm

AGENDA:

1. Review 2012 Minutes
2. Treasurer's Report
3. Old Business
   a. Update on SAD
   b. Status of Weed Control Program
   c. IRS Non-Profit Status
4. New Business
   a. Lily Pad Treatment
   b. Other
5. Election of Officers

NLPA ANNUAL DUES

Please support your NLPA by sending your $10 dues. We have continuing expenses for studies, mailings, state and federal fees, and other items. Please make checks out to NLPA and send to Dick Frendt in enclosed envelope.

KEEP IT BLUE BY BEING GREEN!

Leaves, nitrogen and phosphorus are all enemies of a healthy lake. Do your part to protect North Lake by avoiding runoff of fertilizers from your property and keeping debris out of the water. Leaves and grass clippings should be kept out of the lake where possible. Buffer plantings along the shore help protect our lake.

NEW FIVE-YEAR SPECIAL ASSESSMENT DISTRICT PLAN APPROVED

2013 – 2017 Time Frame

A new five-year plan for the North Lake Special Assessment District (SAD) was approved by the Washtenaw County Board in 2012. This is a follow-up to the initial program which began in 2008.

From 2008 through 2011, the program expended an average of $34,646 per year. In 2012, $54,883 was expended. The higher amount was due to the extensive weed problems encountered last year, and the up-front costs associated with establishing the new five-year plan. We anticipate higher costs during the new five-year plan than was experienced in the previous plan, but we believe there will be sufficient funds to cover the increase.

Washtenaw County issues contracts for a Consultant Firm (currently Aquest, Corp.) to provide recommendations for treatment of weeds and lilies, and for a Weed Control Contractor (currently Professional Lake Management) to do the applications. These contracts are implemented on a county wide basis. Washtenaw County currently manages SADs on three lakes: Whitmore Lake, Joslin Lake, and North Lake.

The PLM contract and the Aquest contract expire at the end of 2013. The new contracts may have cost increases that will increase the SAD expenses over the five-year plan. The funds available for the next five years averages about $53,000 per year.

FIREWORKS BY DAVE!

Dave Steinbach has thrilled North Lakers for several years with a show that seems to get better each year. An interview with Dave follows:

How did the North Lake Fireworks show get started?

In 1992 we started having a 4th of July party and would shoot bottle rockets and roman candles off the dock at Sheridan Springer's place. Every year it got a little bigger and in '96 I started shooting from the middle of the lake with Marty Ehman. In 1998 we applied for our first permits from the BATF and DNR with help from Joan Gordineer, a county sheriff who lived next to Marty.

How has technology changed the show?

In the early years we hand lit the fireworks, using three barges. We fired each barge and then reloaded tubes while firing the other barges. Now we use four barges and fire the show by remote signal. Each barge has a control box with up to 20 firing circuits. A signal is sent by remote control to the barge and it starts a sequence of eight to ten mortars, which are linked together by a one to

(Con't. pg 2, right col.)

NORTH LAKE FACTS
Lake Area…….. 246 acres
Watershed Area* …. 952 acres
Area 5' or less deep ……. 37%
Area from 5' to 10'…….15%
Area from 10' to 20'.....29%
Area from 20' to 30'…....12%
Area over 30' deep ……. 7%
Maximum Depth …….. 58 ft.
Mean Depth …….....10.8 ft.
Volume in Acre Feet ….. 2,661
Volume in Gal's….. 867million

*Including Lake Area

Did you know that the water temperature at the deepest part of North Lake reaches 50 degrees Fahrenheit in the summer and is about 40 degrees in the winter? That's because water is most dense at 40 degrees (4 degrees Celsius) and it sinks to the bottom. H_2O at 32 degrees (ice) floats on the top.

Fish need dissolved oxygen to "breathe" and in the summer it's only in the upper part of the lake (to a depth of 17' to 20'), so no fish are below that depth. In the winter, the cold surface water sinks and brings dissolved oxygen with it, so fish can go to the lower levels. In the spring, usually in March on North Lake, when the water temperature reaches about 50 degrees, the lake "turns over" again and the process starts over.

NON-PROFIT STATUS

Sheryl Ulin, Secretary/Treasurer of the NLPA, undertook the task of obtaining Non-Profit status for the NLPA. She spent many hours and used her considerable talents to walk the process through to a successful completion, within very short time constraints.

Due to changes in IRS requirements, nearly all non-profit entities must report income annually. We had been incorporated as a non-profit organization in Michigan for

(con't. pg 3, left col.)

two second fuse between each tube. It is a matter of judgment to determine when to start each sequence, but we try to time it so that we have some exploding at 100 to 150 feet with another sequence overlapping it at the 250 to 300 foot range, which gives a nice layered look. We also use low level fireworks like the ones that wave back and forth. These come in a box with anywhere from 16 to 600 shots and require a single signal to start. Most years it is estimated that we average up to 10,000 "shot" in a single show.

How much time and effort does it take each year to pull it off?

I start the permit process with the DNR, the Fire Department, and the Township in March. Our ATF permit requires renewal every three years, and we have annual records inspection. The actual putting together of the show takes many, many hours the day of the show. One of the things we do is test the remote control by placing the control boxes on each barge in test position and observing indicator lights on the control boxes. Last year in Arizona, a test was attempted but they neglected to place the boxes in "test". $100,000 of fireworks went up in 18 seconds!

Have the contributions kept up with the cost? How much does it cost?

We get contributions from about 50% of the land owners around the lake. We spend what we get so if the contributions go up the show is bigger and the fireworks we buy are better. We usually get about $10 thousand most years.

Do you have a favorite?

The big Willows in green and purple that droop down to the water are my favorite. Marty always liked anything that was loud.

What are the legal requirements of the show?

In addition to the ATF, DNR, Dexter Fire and Township permits, we are required to have a $1 Million insurance policy covering us and the Township.

Is the "barge on fire" now a North lake tradition?

Two of our barges each year are filled with "cake" type fireworks which have many more shots in smaller sizes. They have cardboard tubes in cardboard boxes and this is what usually catches on fire. Really large shows use all reloadable tubes made of HDPE or fiberglass spun tubes and do not have fire issues. Wind increases the size and speed of these fires but until the lake goes dry we will have plenty of water to put them out.

Is there anything you would like to tell the folks on North Lake about the show?

Thanks to those who support the show. If anyone is licensed, or would like to get licensed, I would love some help as Marty has now moved away and I am for the most part trying to do this solo.

A huge thanks to Dave for making North Lake an even better place to live!

YODELING ON NORTH LAKE?

Loons were heard in April on the lake as they made their way North. The four distinct calls of loons are the hoot, a short call to let others know where they are; the tremolo, (sometimes called the loon laugh) meaning the loon is excited or alarmed; the yodel, a male only territorial call; and the wail, a high, haunting call to talk to others. Loons travel to the Gulf in winter, flying up to 500 miles in one day at 55 MPH! They dive up to 250 feet deep. Loons' legs are positioned far back on their bodies making them excellent divers but on land they scoot

(con't. pg.3, right col.)

many years but now had to register with the IRS

Sheryl Ulin, NLPA Secretary / Treasurer, submitted an application to the IRS in May, 2012, for Non-Profit status. Nearly a year later an IRS response was received dated Feb. 1, 2013 requiring a response in only three weeks to their position that we may not qualify as a non-profit because the homeowners may receive a substantial benefit from the organization. This began a series of communications, submittals, NLPA vote to revise the Articles of Communication, and payment of fees that culminated with the IRS granting non-profit status in a letter dated Mar. 28, 2013 (received on April 20).

Sheryl jumped through hoops to submit the IRS required revisions to the NLPA Articles of Incorporation to the State of Michigan. The State required a membership vote in order to change the Articles to include the required IRS language. Notice of a special meeting to be held on March 11, 2013, was sent to NLPA members with an option of absentee voting by e-mail. The combined vote was 70 in favor and one opposed.

The cost to the NLPA was $400 to the IRS, $10 to the State of Michigan and more than $300 in mailing and hall rental costs. We are fortunate that Dawn M. Reeves, CPA, donated her professional services to assist with completion of the IRS application.

LILY PADS RESTRICTING YOUR BOAT ACCESS TO THE LAKE?

Last year we treated Lily Pad problems at requested docks. The State DEQ permit for weed treatment includes provisions for clearing a 20' wide access through the Lily Pads from docks to the open water of the lake. This is done only on a case by case basis. *If you want an access cleared to your dock, you must send a written request along with a photo of your dock with home/access in the*

(con't. pg.4, left col.)

along on their breast, hunching along. Loons live 25 to 30 years but will only successfully raise 3 or 4 chicks to adulthood.

CURLY LEAF PONDWEED – A *GROWING* PROBLEM

In later parts of this newsletter, you will find discussions of this invasive plant in North Lake. This is just a little background information.

Curly leaf pondweed is a Eurasian plant first found in this country over 150 years ago. It varies in color from olive green to reddish brown. Most of the plant is submerged with only the "flower" above the surface. It tolerates very cold water and so it gets a head-start on other plants in the spring and crowds them out. By mid July it dies off after its 'turions' have fallen to the bottom to spawn new growth. New plants start to grow in the late fall and stay alive during the winter under the ice ready to flourish in the spring. The summer die-off releases nitrogen and phosphorus which they have absorbed and can potentially cause thick mats of filamentous algae to form, a very unpleasant condition.

Pondweed in Wisconsin Lake

Curly Leaf Pondweed

MICHIGAN MUTE SWAN ISSUES

The Michigan DNR approved a "Mute Swan Management and Control Program Policy and Procedures" on January 23, 2012. It is part of a broad, multi-state initiative to control the non-native Mute Swan population and to reintroduce Trumpeter Swans in the U.S.

In 2000, the estimated population of Mute Swans in our state was 5,700 and in 2010 it was estimated to be 15,500, nearly triple in ten years. The DNR's short term goal is to reduce the population on public land to zero by 2016, and to reduce the *growth* in population on private land to zero by 2016. The long term goal is to maintain a spring population of less than 2,000 by 2030.

On private land, the DNR plan contains two alternatives where Mute Swans may be taken or nests destroyed: 1) If 70% of a Lake Association's members petition the DNR for their removal, and 2) If conflicts occur between Mute Swans and humans or between Mute Swans and any native species.

No unauthorized person may take or destroy Mute Swans or their nest/eggs.

The Mute Swans on North Lake have certainly had an impact on the Canada Geese problem we experienced in years past. The DNR had to trap and "deport" large numbers of geese at one time. Now we see few Canada Geese on the lake. Both esthetic and health conditions have improved as a result.

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background for identification purposes. We want to treat your dock area, not your neighbor's.

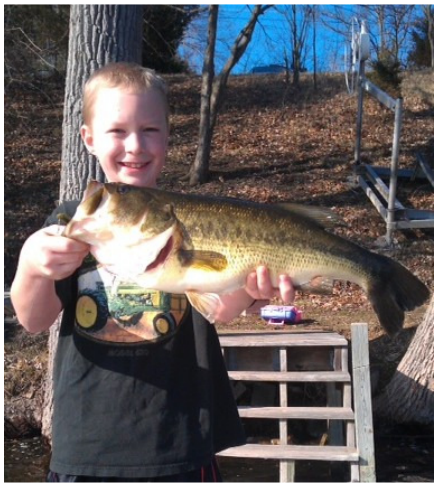
If you had your dock area treated in 2012, do not send a request this year. We will continue to treat your dock area assuming problems persist and the treatment is determined to be effective.

Send your Lily Pad request, by August 8, to:

Richard Frendt, President NLPA
7837 Stonehenge Valley Dr.
Gregory, MI 48137

THE WHOPPER!

Speaking of fish, did you hear about the Scout who caught a whopper Large Mouth Bass last year in North Lake? Parker Stahl did it, Scout's honor! His folks, Dave and Laura Stahl, reside on Stonehenge Rd. and own lake frontage at North Gilbert Drive.



Parker and the BIG one!

CAMP HELP

If you have spare towels, kid's clothes, or toiletries used by kids, please think about out neighbors at Burt Shurley Camp. These kids can use most anything you could donate.

Just stop by the camp, they will be glad to see you!

A curious situation occurred on Wild Goose Lake this spring when a pair of Mute Swans and a pair of Canada Geese built nests about 25 feet apart. The male swan was observed threatening the goose on her nest, flailing its wings about five feet from the goose nest. The goose held its ground, protecting its clutch of eggs. They coexisted peacefully and then one day the nest was empty and a pair of geese had several goslings with them. A few days later the cygnets hatched and were seen with the pair of adult swans. Since then, the geese have disappeared and the pair of swans have lost all their young.

The DNR Mute Swan management program is endorsed by the National Audubon Society, the Michigan Audubon Society, Ducks Unlimited, and the American Bird Conservancy.

FISHY INFORMATION

Bluegills, Largemouth Bass, and Yellow Perch were stocked in North Lake from the late 1930s to the mid 1940s. Northern Pike were stocked in 1960 and Redear Sunfish were stocked in 1991, 1992 and in 1993. The DNR did a general survey of the lake in 1988 to determine the status of the fishery.

In 1992, North Lake was surveyed again. Bluegill, crappie and largemouth bass all showed increases in average length. Bluegill averaged 6.7 inches and 98% of those caught in traps or gill nets were over six inches in length.

In 2008, 2009 and 2010, the DNR surveyed the largemouth bass population. Out of 493 bass caught, eight were 18 inches or more (one was 20"). The estimated adult bass population (over 9") was 1761. About 10% of the population exceeded the minimum size limit of 14 inches. The study found there was a relative high mortality rate in fish over 14 inches despite yearly growth rates that matched other lakes in the area. The study concluded this was probably a result of moderate to heavy fishing pressure on the lake. It also estimated there were 1200 to 1500 "keeper size" (over 14") in the lake in 2010.

The study documents are posted on the ewashtenaw.org website under Lake Management Projects.

AQUEST 2012 LAKE REPORT

Doug Pullman, PHD, of Aquest, prepares an Annual Report for North Lake. The following is from the 2012 Annual Report Executive Summary. The total report is on the ewashtenaw.org website under Lake Management Projects.

North Lake is very plant productive and is considered to be moderately weedy. Considerable effort must be expended to protect recreational values and to support essential ecosystem functions that are threatened by the proliferation of aggressive and invasive aquatic plant species.

The species richness is similar to other southeastern Michigan lakes. Off shore support a greater number of plant species, but the near shore areas of the lake support a more morphologically diverse plant community. This trait is considered to be positive, but emphasizes the need to manage the near shore plant growth effectively to protect the considerable benefits that are derived from this diverse near shore flora. The biodiversity of North lake plant community is also above average. It is believed that prudent management will result in a modest increase in the biodiversity of the North Lake large plant flora. This can only be accomplished through prudent and targeted management of those species that crowd out other more desirable species.

Starry stonewort is only one of the weedy species that dominates the North Lake submersed flora. At some point, the biomass may reach a level where it collapses and this will leave the large areas of the lake devoid of all plant life. It is impossible to predict when this may happen or if it will happen lake wide or in selected areas. This phenomenon seems to be a common characteristic in lakes similar to North Lake. It is a dominate force in determining the nature and quality of the submersed plant flora.

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Quagga Mussels – A New Menace

Quagga mussels are a cousin of zebra mussels and were first discover in the Great Lakes (Lake Erie) in 1986. They differ from zebra mussels in that they can tolerate very cold waters and they don't need to attach themselves to a hard substrate. Zebra mussels spread to all the shallow parts of the Great Lakes where seawalls, water intake pipes and other structures provided a place to attach themselves.

Quagga mussels have overtaken the zebra mussels, driving them to near extinction in most areas of the Great Lakes. Scientists have found them in every part of the Great Lakes. One Lake Michigan survey of the lake bottom found 38,000 quagga mussels per square meter! They filter out the lowest parts of the food chain threatening fish populations. They are such effective filters, a secchi disk reading of 105 feet was recently taken in Lake Michigan. (A secchi disk is a black and white disk just under 8 inches in diameter that is lowered into the water and the greatest depth it can be seen with the naked eye is recorded).

So far, fish populations do not appear to be suffering from this invasion, and there's lots of speculation about why, but no one knows for sure. There is also speculation that they are eating themselves out of house and home. Who knows what lies ahead?

Ebrid (hybrid Eurasian watermilfoil) was subdominant to many other species in the lake in 2012. This is a testimony to the effectiveness of the milfoil management program. There is no known way to eradicate this species so annual effort must be expended to control this plant.

Hybrid weedy pondweeds dominated the lake flora in 2012. Fortunately they respond positively to control. PLM should be commended for their excellent work. It may be necessary to obtain special permits from Michigan Department of Environmental Quality (DEQ) if these plants continue to grow to nuisance levels in the SW parts of the lake.

Water lilies have become an increasing nuisance on the lake. It is disturbing that the dominate water lily is water shield. This particular water lily is remarkably resistant to management. This plant is expected to return at nuisance levels in 2013 and it should be expected that considerable effort will be required to suppress the plants where they interfere with property access to the open water.

Wild celery can be a very serious nuisance in the late summer in many lakes in Michigan. This plant will often "uproot" and float into shore where it creates a significant smell nuisance, It is nearly impossible to manage this plant in an effective manner. Studies are underway that are hoped to reveal better ways to suppress this potentially nuisance species. Until these methods are proven, North Lake will continue to see nuisance conditions created by the floating wild celery mats that are expected to form in late July and throughout August.

Paul Lammers and Dave Pruess Lake Report

Dave and Paul are long time NLPA volunteers who provide valuable input to the County and to Doug Pullman in locating and plotting weed problems. They have been doing this for the past decade and are a valuable asset to North Lake. This report provides an independent assessment of the lake. A big thanks for their efforts!

The mission of the North Lake Protection Association (NLPA) has been to protect the ecological, recreational and esthetic well-being of North Lake. The primary goal of NLPA's efforts has been to suppress invasive weedy species that interfere with recreation and plant biodiversity but protect the fishery habitat.

As discussed in past issues of "The Laker," we initially treated North Lake for Eurasian Milfoil. This has now hybridized to a slightly different milfoil which requires greater attention and is more difficult to control. Over time, other invasive weeds have been observed and/or treated in the lake. These include: Curly Leaf Pondweed, Starry Stonewort, Chara, Wild Celery, Algae, Lily Pads, Water Shield and probably others. Since weed control has been a priority of NLPA, following is discussion regarding North Lake's weed problems, treatment, and implications. Weeds growing in North Lake must be continually evaluated and controlled to prevent our lake from becoming a large weed bed so residents can use the lake effectively.

Eurasian Milfoil: As in every spring, this weed again flourished in patches throughout the lake. The first chemical treatment, applied in June, 2013, was very effective if you compared the before and after effects. In fact, Dr. Pullman felt this first treatment was an outstanding success he did not experience this year with his other lake weed treatment projects where retreatment was necessary in many cases. Our professional management team believes this milfoil has mutated making it more difficult to control. For the last couple of years, the eastern end of the lake seemed to be the new growth area but this weed was not as prevalent there this year. Hopefully, this will continue in future years. The entire north shoreline continues to have spotty patches of milfoil. The western end of the lake had always been a major milfoil growth area and, this year it continued to be bad from the sandy swimming area to the northern and western shore. We do hope the June treatment will be sufficient for 2013. Unfortunately, even after an effective spring treatment, this weed seems to come back later in the summer or fall in many locations.

Curly Leaf Pondweed: We have the weedy and large pondweed variants in North Lake that have been and still are a problem. This is the long stemmed leafy weed that is so prevalent in our lake, especially in the mid-depth areas. This season, we seem to have much more pondweed growth. There is a DEQ restriction to treat this weed only in water depths less than five feet and within 300 feet from shore which curtails treatment where it

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LAKE LEVEL

On May 12, 2012, the lake was at equilibrium with the overflow weir (the water was level with the top of the weir). From then to September 30, the lake receded 14 inches. Twenty-five inches were lost to evaporation, but it rained a total of eleven inches. Normal rainfall for that period is 14 inches. In July and August the lake lost ¼" per day.

In 2013, equilibrium with the weir was last reached on June 30, more than 1½ months later than in 2012. From May 15 to July 15, we had received 7.1 inches of rain; 3.2 inches more than the same period of 2012. The lake level on July 15 of 2013 was over 4 inches higher than the same date in 2012.

This is good news for North Lake boaters. Hopefully, Mother Nature will continue to rain at more normal levels than last year.

NLPA BOARD

President Dick Frendt
Vice Pres. Charlie Taylor
Sec/Treas. Sheryl Ulin
Landing Representatives:
Gilbert Drives
No Active Representative
Glen Oakes
Dan Kruse
Hadley/Eisenbieser
Kent Thiel
Noah's Landing
Jim McInnis
North Lake Farms
Rod Payne
North Lake Road
Steve & Anne Koch
Park Lawn
Eric Batzdorfer/Paul Seelbach
Sauer Drive
Joel Blum
Stonehenge Valley
Carol Heydaulff
Watt Road
Paul Lammers
Webb's Landing
Dave Pruess

Anyone interested in representing both North and South Gilbert Drives may call Dick Frendt for information about what is involved. It is really quite a small commitment of time.

Contact Information:

Richard Frendt, President NLPA
Ph: 734.475.3480
Email: rjfrendt@aol.com

Is most prevalent in our lake. An exception to this rule is a recreational feature such as the ski course where it may be treated. This weed will be evaluated during all lake inspections. Dr. Pullman writes, "Experience has taught me that if they are a problem this year, they may not be much of a problem in the future. It takes a special combination of meteorological events to create the conditions necessary to support this level of native pondweed growth. They have also grown to their greatest extent for the year and are not expected to create any additional nuisance."

Chara/Starry Stonewort: At this time, the "brillo pad" looking algae is growing in thick clumps that seem to hover on the bottom and, without treatment, has been a grave problem in certain areas of the lake, especially the west and south ends. The starry stonewort is a very thick variant which has grown increasingly closer to the surface in shallow areas which will clog our propellers. As long as it stays low, it is a "good" weed as it will crowd out milfoil and other more invasive weeds. The Chara variant seems to grow up from the bottom to the surface and will be joined by the starry stonewort when conditions are right. This weed will be treated when it becomes a greater problem and can be treated rather inexpensively.

Lily pads/water shield: These large leaf (lily pad) that produces flowers and the small leaf (water shield) are now growing in larger numbers on the surface of North Lake. These weed beds have at least doubled within the last five years; thus, becoming more of a concern and nuisance even though they are necessary for fish habitat. Most of the lily pad areas cannot be treated by herbicides because of DEQ restrictions (special permit is an option) but lakefront residents can clear a 20 foot wide path to access the lake or for boat and swimming access. This weed will be one of the more expensive processes to deal with. Dr. Pullman states that lily pads are capable of growth on sediments that may not support other rooted aquatic plants. He further states that they are subject to wide annual fluctuations in area cover because they can host a wide range of herbivores and plant diseases. Unfortunately, we have not experienced these fluctuations for they just seem to cover more and more of our shallow sedimentary areas.

Algae: This is the green cloud of the fibrates' variety that, last year, was treated before the 4th of July. Algae was not detected this year during this period. We will continue to monitor for outbreaks and treat as needed.

Wild Celery: This long leafed weed has become more much prevalent and it is very difficult and costly to treat. This is the weed that is now increasingly floating (i.e. the uprooted waste) on the surface in many areas of our lake. Unfortunately, these uprooted floating wild celery plants have the ability to replant themselves in other areas of the lake. According to Doug Pullman, we need to carefully observe its growth for it could potentially have a devastating effect in our lake since it is so difficult to control because, presently, there are few treatment options. As mentioned earlier, starry stonewort/Chara growth could assist with preventing this weed to be a major problem here.

From the above, it should be evident that the actual weed treatment of North Lake is an ever changing issue that must be addressed by a wide spectrum professional management approach. With the increasing number and quantity of weeds in our lake along with these weed's mutation abilities, knowledgeable and professional advisement is essential, especially considering the restrictions placed upon us by the DEQ. By having a professional advisor (as we now have with Aquest Corporation as part of our SAD) present for all official lake inspections and consulting on the lake conditions, we should have success with our charge of keeping North Lake useable for all residents.

The next steps for the North Lake weed control this summer include an inspection in late July for Chara/Starry Stonewort rapid growth. Treatment will occur directly. In mid-August, depending on growth conditions, a last inspection will be conducted looking for all invasive weed growth for the end of summer and what should be controlled prior to winter.

We printed the photos in color this year by using our home printer. We charged only 75% of what Staples quoted to do the job in only black and white.

A huge thanks again this year to the people who submit articles and to my better half, Mary Lou, who helps edit and print the Laker. Hope you all have a great North Lake summer and hope we see you at the Annual Meeting August 6!