Rush Report

For the residents of Rush Lake and the Rush Lake Watershed

Rush Lake Improvement Association, Inc. **www.rlia.org** **Summer 2013**

RUSH LAKE STATISTICS: The size of Rush Lake is in the top ten percent of MN lakes. Both lakes total 2,823 acres. The total watershed of the lakes is 14,169 acres.
WEST RUSH LAKE: Lake area = 1,464 ac., Max. depth = 42 ft, Length of shoreline = 15.8 mi. (does not include 3.1 mi around the islands), Greatest length = 3.85 mi., Littoral area = 862 ac.
EAST RUSH LAKE: Lake area = 1,359 ac., Max depth = 24 ft., Length of shoreline = 10.6 mi., Greatest length = 3.4 mi., Littoral area = 1033 acres. Littoral zone per DNR = area of the lake less than 15 ft. deep

Use of Iron Concentrate to Sequester Phosphorus in Rush Lake

by David Cartwright, RLIA President

Rush Lake and Rush Creek are "impaired"

Both Rush Creek and Rush Lake were listed on the Federal Clean Water Act's 303(d) list of "impaired waters" in 2008 based on data collected from those waters between 1997 and 2002. The impairment classification for Rush Creek is due to a *"low Index of Biological Integrity (IBI)"* [which is a measure of a stream's biological health] and, for Rush Lake, the impairment classification is a result of *"elevated levels of Phosphorous & Chlorophyll-a"*.

A few hundred MN lakes are added each year to the list of MN "impaired waters" and many lakes in Chisago County fall in this "impaired" category. In the case of Rush Lake, the primary lake contaminant is accumulated Phosphorus from many decades of farming close to the lake.

The MN state agencies responsible for lake and stream water quality are the MPCA and the local SWC Districts and, to a lesser extent, the DNR. Chisago County Environmental Services is as concerned as the RLIA about the relatively poor water quality in many lakes in Chisago County.

As was reported in previous Rush Reports, the first step to remedy any water body that is on the federal "impaired waters" list is to complete a Total Maximum Daily Load (TMDL) study *[within 15 years of the date it was first identified as an impaired body]* of all the pollutants that enter from the watershed.

In the case of Rush Lake, studies that were done in 2000 to 2002, and repeated by RLIA volunteers in 2009 and 2010, suggest that about 90% of the Phosphorus loading from the watershed has been eliminated and the dominant Phosphorus contamination is from "internal loading" *(i.e. that which is already in the lake sediment)*.

A TMDL Study of Rush Lake and Rush Creek is the Next Step

Chisago County has completed a proposal for the TMDL study for Rush Lake and Rush Creek and submitted that proposal to the MPCA. We believe that a TMDL study for Rush Lake and Rush Creek has high priority within the MPCA and might be initiated in 2013. TMDL studies include:

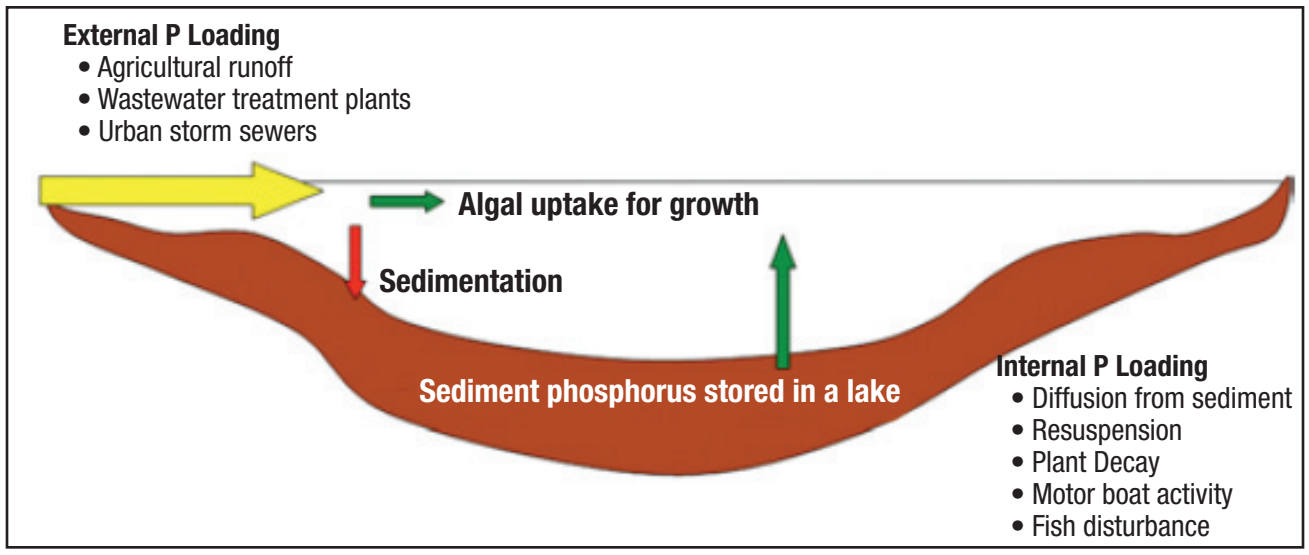
(1) Study of Impaired Waters of Rush Lake and Rush Creek and, if appropriate, prepare a Load Reduction Work Plan [i.e. reduce the volume of pollutants];

(2) Study both bodies of water simultaneously (Rush Lake & Rush Creek) because Rush Creek drains Rush Lake directly into the St. Croix river; and

(3) Employ a cooperative approach in which the MPCA will assist Chisago County in its data collection and analysis programs, and the County will pursue administration of the TMDL Implementation Plans.

"Internal" versus "External" Loading of Phosphorus

An important component in TMDL studies is to determine how much Phosphorus is being added to a lake from "external" sources [i.e. the watershed] compared to how much already exists in the lake sediment [i.e. "internal" loading] as is shown schematically in the following figure (from Jerry Spetzman).



For Rush Lake, we believe that only about 10% of the annual Phosphorus "loading" is from "external" sources (i.e. the watershed) and that the dominant source of Phosphorus in Rush Lake is from "internal" loading *(i.e. that is already in the lake sediment)*.

Two independent surveys have been conducted that enable the RLIA to draw this conclusion. The first survey was a relatively thorough study that was part of a Clean Water Partnership Project which was concluded in 2002.

The second study [performed by Casey Thiel (North Branch SWCD) and a team of volunteers from the RLIA] sampled 13 streams (from April through October; 2009 & 2010) to determine the: *temperature; transparency; suspended solids; Phosphorus; ammonia nitrogen; and Kjeldahl Nitrogen.* Although those data did not measure the (seasonal) stream flow rates during rain, a rough estimate can be made to arrive at the 10% number quoted above.

A complete TMDL study should provide an accurate estimate for the "external" loading.

The map on page 2 shows the 10 streams for the Rush Lake watershed, and the 3 streams for the Rush Creek watershed, that were monitored in 2009 and 2010 for the six (6) quantities identified above.

Rush Report
Rush Lake Improvement Association, Inc.
P.O. Box 677
Rush City, MN 55069

Presort Standard
U.S. Postage Paid
Mailed From
Zip Code 55069
Permit # 25

HIDE & SEEK CONTEST

We've hidden a smaller illustration of this fish hook somewhere in this issue. Find it and you could win $25! Two winners will be drawn from the entries received with the correct answer. Mail a post card or note telling us the location of the hidden fish hook before September 14, 2013. Include your printed name, address and phone number. Mail your entry to: Hide & Seek, RLIA, PO Box 677, Rush City, MN 55069. The random drawing will take place at the September 21, 2013 RLIA Membership Meeting (see page 11 for info). Need not be present to win. Must be 18 years or older to enter.

See **Use of Iron** *Continued on Page 2*

In this issue...

OUR MISSION:

We are an association of members interested in improving and preserving the quality of the lake and preventing the spread of harmful aquatic plants, fish and chemicals in an effort to provide a healthy lake environment for the community and all its users.

The Rush Report is the newsletter of the Rush Lake Improvement Association, Inc. Contact us at:

RLIA
PO BOX 677
RUSH CITY, MN 55069
www.rlia.org

Use of Iron *Continued from Page 1*

How is Phosphorus Sequestered ?

The current MPCA-approved method for sequestering Phosphorus in lake sediment involves the use of ALUM (aluminum sulfate). The aluminum positive ion bonds to the phosphate negative ion and this compound precipitates into the sediment.

However, another option is to use Iron Concentrate to sequester Phosphorus because Iron is a common element in MN lake sediments so one is not adding a non-naturally occurring substance (aluminum & sulfate) to the lake.

A MPCA study of metal concentrations in lake sediments in nine lakes in Minnesota found that the sediments contained between 1.85 – 7.42 % iron (g iron/g sediment dry weight). The DNR's Division of Minerals has also collected data on iron concentration in lake sediment and found iron concentrations that were comparable to the MPCA results. The fact that Iron is naturally occurring in MN lakes makes Iron attractive for adding small additional amounts of active Iron that could sequester Phosphorus.

Research Has Been Done World Wide On the Use of Iron Concentrate

It is important to note here that Iron *(in various chemical forms)* has been used for many years to sequester Phosphorus and is currently an active research topic in many developed countries around the world for the explicit purpose of sequestering Phosphorus. For example, Iron has been added to the St. Paul drinking-water lake Vadnais since 1986 *(the last 27 years)* to insure that the drinking water supply does not contain too much Phosphorus.

In the deposition experiments the RLIA performed in 2011 & 2012, we followed the pioneering research results done in Denmark by H.S. Jensen et al. who determined that the "optimum" Iron Concentrate dose is about 3,000 lbs/acre for sequestering Phosphorus *[H.S. Jensen et al. Hydrobiologia* ***235\236,*** *731-743 (1992)]*.

Purity of the Iron Concentrate Used by the RLIA

It is important to stress here that at 5,000 lbs/acre *(if uniformly spread)* the layer of Iron Concentrate would be ***substantially*** less than 1/32 of an inch in thickness.

It is also important to note that Iron Concentrate is not simply taconite ore but rather relatively pure Iron that has been extracted from taconite ore. The Iron is removed from the taconite ore by electromagnetic separation and is 91% pure iron if the iron oxide structure is taken into account. 5-6% of the remaining weight is silica (SiO2) and the rest is in trace compounds such as CaO. From a "screen analysis", 92% of the particles are less than 45 microns in diameter and this Iron Concentrate is one-step-removed from forming the pellets that would go directly into a steel foundry.

The 18 tons of Iron Concentrate that were used for sites 3, 4, 5, and 6 were chemically analyzed for atomic impurities and the results are summarized in the following table. The only element that exceeded the SQT1 threshold, but was still well below the SQT2 maximum, was Chromium. Most importantly, the most toxic elements *(Arsenic, Lead, Mercury)* were all well below the SQT1 thresholds.

	EPA6020 (ppm)		*<ave.> Iron analysis*
Element	***SQT1***	***SQT2***	***of 4 samples (ppm)***
Arsenic	9.8	33	6.43
Cadmium	0.99	5.2	0.062
Chromium	43	110	71
Copper	32	150	2.99
Lead	36	130	0.82
Mercury	0.18	1.1	<0.034
Nickel	23	49	1.71
Zinc	120	460	29.1

History of the Use of Iron Concentrate by the RLIA

The figure on page 8 "Rush Lake Iron Amendment Sites 2009-2012" illustrates the six locations of the Iron Concentrate depositions that were performed in 2009, 2011, and 2012. This figure *(courtesy of Steve McComas, Blue Water Science)* provides an excellent summary of the locations, dates, and amount of Iron Concentrate for the depositions.

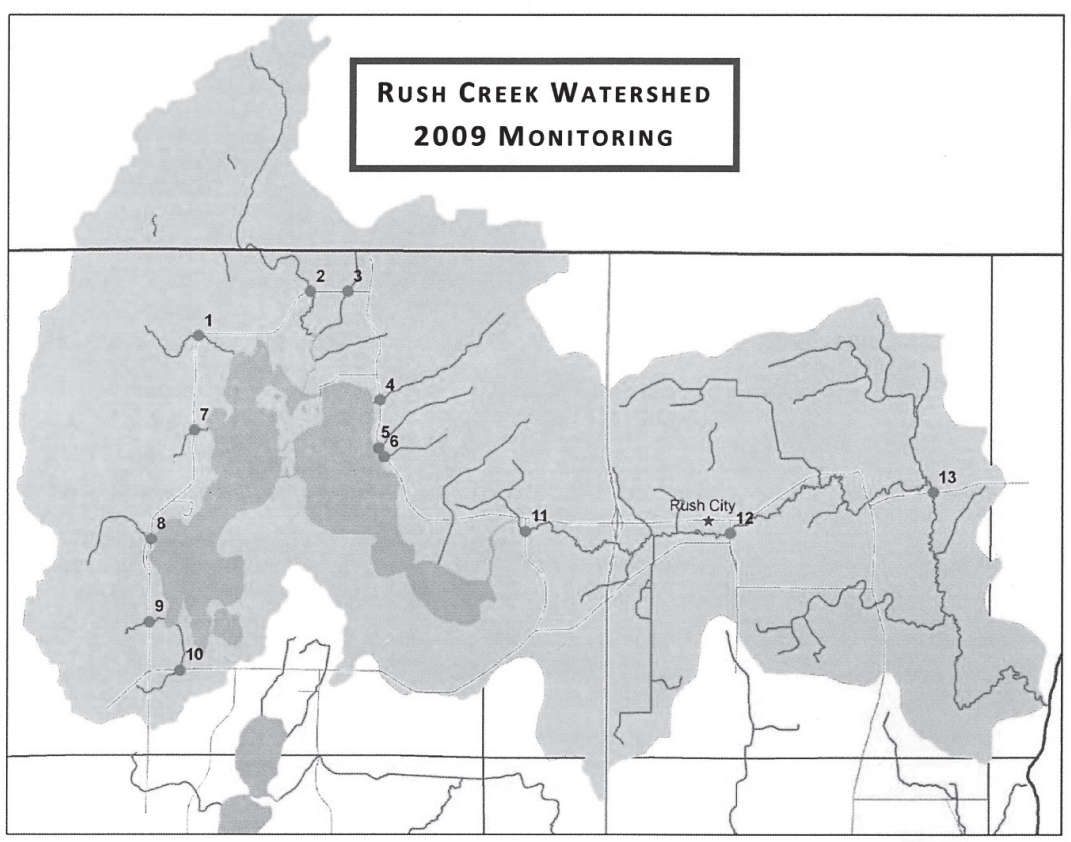
We will not describe our 2009 use of Iron Concentrate because those 3 acres (2 acres on East & 1 acre on West) were our first use of Iron Concentrate and we were still learning how the material should be deposited. However, the 3 acres done on Feb 26, 2011 and the 9 acres done in 2012 are described below in detail.

What was particularly important about the deposition through the ice on February 26, 2011 was that the RLIA, following a recommendation by McComas, implemented an Iron "dose dependence" by applying 1,000 lbs/acre; 3,000 lbs/acre; and 5,000 lbs/acre on the 3 acres at site #3. Jensen et al *(1992; referenced above)* had determined that 3,000 lbs/acre was about the optimum amount of iron so the RLIA decided to also try 1,000 lbs/acre and 5,000 lbs/acre to determine the effectiveness relative to 3,000 lbs/acre. These may be the first Iron dose-dependence experiments done in MN.

"Open water" Deposition of Iron Concentrate

In March of 2011, the MPCA asked if we would be willing to attempt "open water" deposition for the remaining 9 acres because they thought *(correctly so)* that a more uniform deposition would be produced than going through the ice. *[Although difficult to find an accurate history, discussions with the DNR suggest that "open water" has been done once or twice before in MN and in the 1990's.]*

See **Use of Iron** *Continued on Page 8*



The Twin Barns: A Rush Lake Landmark

by Marvel Anderson and Sue Means, RLIA Directors and Shorewood residents

Some of you may have seen the Twin Barns while driving down County Road #1 along East Rush Lake. These "twin barns" have become a landmark for visitors and residents in the area. We thought that the history of the barns would be of interest to those who have wondered what the story is behind these beautiful pieces of Rush Lake history.

In 1867 a German immigrant named Casper Scheele arrived in Clinton, Iowa, with two of his brothers. A year later they traveled to the Rush Lake area looking for farmland. Two of the brothers stayed and the other brother went back to Iowa.

Casper bought 300 acres along the shores of East Rush Lake. The homestead that Casper established in the 1860s is a farm site ½ mile east of East Rush Lake on County #1. When Casper's sons Henry, Paul and Robert were old enough to take over the farming, Robert preferred to live on the family homestead and a descendant of Robert's lives there today. Casper's other two sons chose to live along the lake shore. Henry built an 8 bedroom home on the shore and Paul's home was built next door. In 1927 they built the twin barns for their dairy cattle. That shoreline of East Rush Lake where the cattle grazed is now the Shorewood Development.

Casper Scheele had chosen a location of natural beauty and good farmland and it was known widely. He did welcome fishermen to his lakeshore and a supply of row boats were kept for visitors to use. "For an enjoyable outing there is no place like Casper's", was stated in the Rush City Post. In the 20s and 30s the Scheele brothers continued to welcome visitors to the lakeshore and they were successful in appealing to the tourists coming from Minneapolis and St. Paul for both fishing in the summer and hunting in the fall. They had flat bottom boats that they rented out for fishing. At that time there were hardly any cabins on the lake and so the pan fishing was great! There was no limit!

People would ride the train to Rush City and the Scheeles would shuttle them from the depot to the house, and then they could fish all day. You would expect to hear stories of catching a big fish and so the 226# sturgeon caught in 1947 was quite a draw for tourists wanting to "catch the big one".

Visitors had the option of renting one of the cabins the brothers had built or one of the 8 bedrooms in Henry's home. Henry also prepared meals for the visitors and these became popular with the Rush City residents as well and soon they were making reservations for dining at the lakeshore. This continued until the beginning of World War II when supplies were hard to obtain, especially for serving large numbers of people.

The site where Henry and Paul established homes has passed through many owners over the years. The owner in the mid-70s started the resort business again. It was then bought by Everett Peterson in 1982 and his sons Ron and Doug now own and run the resort. The twin barns are kept in the wonderful shape that they deserve so they can continue to proudly stand where all can see this local landmark.

Photos by Sue Means, June 2013

Performance Dock & Lift

FLOE Docks and
Boat Lift Systems

See our displays on West Rush Lake

www.performancedockandlift.com

Email: sales@performancedockandlift.com

(612) 325-9871

RUSH POINT STORE

EST. 1879

Open Year Round
24 Hour Pay at the Pump

★ LIVE BAIT & FISHING TACKLE ★

★ OFF SALE LIQUOR, WINE & BEER ★

★ LP TANK REFILLS ★

ALSO PROVIDING:

• Groceries • Baking Supplies • Ice
• Ice Cream Treats • Gifts
• Greeting Cards

We would like to thank RLIA and our community for patronizing our store.

763-689-1088

Fishing reports at
www.rushpointstore.com

Licensed – Bonded – Insured
MN Lic. #BC322987

NICHOLAS CONSTRUCTION INC.

Commercial & Residential Building (new & remodel)
Septic Systems Lic. #3259

Pat Mattson
Contractor

Office/Fax: 763-689-2463
Cell: 612-490-8342

Creel surveys completed on Rush Lake in 2012-13

by Deb Sewell, Assistant Area Fisheries Supervisor, DNR Hinckley Area Fisheries

Fisheries managers have many tools and methods to determine the status of a lake's fish population. Gill nets, trap nets, and electrofishing are used regularly to see what kind and how many fish are present. But how many of these fish are being harvested by anglers? What species of fish are anglers most likely to fish for? What sizes of fish are being caught? The Minnesota DNR uses a specialized method called a creel survey to find out the answers to these and other questions.

Creel surveys are most commonly done on large lakes like Mille Lacs, where week by week monitoring of the fishery is essential to make sure harvest quotas are not exceeded. Ideally we would like to have this information on lakes of every size. But creel surveys are expensive, often requiring the hiring of a full time temporary employee, plus the costs of using a truck and boat. So creel surveys are done less frequently on lakes such as those in the Hinckley management area, and are used to evaluate fishing regulations and stocking practices.

A creel survey consists of two parts: counts and interviews. Counts involve counting of all fishing boats, shore anglers, and recreational users. In the winter, fish houses and open ice anglers are counted. Two counts were done on each survey day at East and West Rush Lake, according to a randomized schedule. Interviews were done by boat while anglers were fishing, and at the public access as people were loading their boats. In the winter the creel clerk traveled the lake by snowmobile, interviewing anglers on the ice. Anglers were asked about how long they had been fishing and what species they were fishing for. Additional questions included whether anglers knew about the northern pike protected slot length limit. Kept fish were counted and, when practical, measured. Anglers were asked to recall numbers and approximate sizes of released fish.

The open water creel survey began on April 1, 2012 and continued through late October. The ice fishing creel survey began on December 26. Due to the late ice out date in 2013, anglers were fishing on ice as late as April 7, when the survey ended. Two clerks interviewed a total of 2,015 angling parties on East and West Rush lakes.

Fishing pressure, estimated in angler hours (equal to one angler fishing for one hour), was similar to what was seen in previous creel surveys in 1996 and 1999 on both lakes. Compared with other Chisago County lakes, East and West Rush receive moderate fishing pressure. Lakes closer to the Twin Cities metro area, such as the Chisago chain, can have up to double the fishing pressure of Rush Lake. Still, roughly half the anglers that fished Rush Lake came from the metro area. Most other anglers lived less than 25 miles from the lake.

Crappies and sunfish were the species most commonly sought by anglers, especially in the winter. West Rush was more popular for crappies and walleye in the winter, while more anglers fished sunfish and northern pike in the winter on East Rush. The numbers of anglers fishing for largemouth bass and muskie, while small, have grown from previous creel surveys.

A few highlights from the survey:

High numbers of sunfish were caught and harvested, with lengths up to 9 inches kept. Both East and West Rush Lake have a history of producing good numbers of quality size bluegills. Anglers harvested 5 times as many crappies on West Rush as on East Rush, with winter harvest higher than summer on both lakes. The mean length of harvested crappies was just over 9 inches, with some up to 13 inches. Yellow perch provided another opportunity for anglers all year round. Although the majority of perch were too small to keep, lengths ranged up to 12 inches.

Numbers of walleye harvested were down from previous creel surveys on West Rush, but on East Rush numbers were similar to previous surveys. This may be due to the fact that the number of anglers fishing for walleye have dropped on West Rush but have stayed the same on East Rush. Large numbers of smaller walleye were released on both lakes, indicating that recent changes to the walleye stocking plan on Rush Lake may be resulting in more walleye for future years.

The 24-36 inch protected slot for northern pike on Rush Lake has led to a decrease in northern pike harvest from previous creel surveys, although many anglers indicated that they were practicing catch and release regardless of the regulation. East Rush appears to have a higher population of northern pike than West Rush, and total catch rates for anglers targeting northern pike on East Rush were among the highest ever seen in creel surveys on similar lakes.

Largemouth bass catches were up from previous creel surveys on both lakes, especially West Rush. With largemouth bass up to 22 inches reported released, Rush Lake is developing into a quality bass fishery. Most anglers released largemouth bass.

One 52 inch muskie was harvested on East Rush Lake; this was the only muskie seen by the creel clerk although other muskie anglers reported releases. Comparisons with other creel results from muskie lakes suggest that catch rates for this species were relatively low.

Selected results of the 2012-2013 creel survey on East and West Rush Lake

		East Rush		West Rush	
		Open water	Ice fishing	Open water	Ice fishing
Fishing	Angler hours, total	24234	29230	48571	37158
Pressure	Angler hours/ acre	16.37	19.75	30.78	23.55
Black crappie	Percent targeting	25	35	36	62
	Number harvested	616	2155	4957	9203
	Number caught	2816	5348	14066	27732
	Percent released	78.2	59.7	64.8	66.8
	Average length kept	9.3	9.4	9.0	9.0
Bluegill	Percent targeting	33	44	34	18
	Number harvested	9054	13098	13269	1000
	Number caught	27976	37255	48832	5375
	Percent released	67.6	64.8	72.8	81.4
	Average length kept	7.6	7.6	7.4	7.3
Largemouth bass	Percent targeting	14	0.3	10	0
	Number harvested	70	18	227	0
	Number caught	3667	78	5942	10
	Percent released	98.1	76.9	96.2	100
	Average length kept	13.3	15.9	14.7	--
Muskellunge	Percent targeting	14	0	13	0
	Number caught	108	0	62	15
Northern pike	Percent targeting	19	23	12	9
	Number harvested	121	455	26	63
	Number caught	3094	1784	1777	353
	Percent released	96.1	74.5	98.5	82.2
	Average length:				
	Kept	22.9	22.4	20.0	24.1
	Released	25.5	27.1	26.0	29.5
Walleye	Percent targeting	16	9	20	9
	Number harvested	179	154	433	51
	Number caught	1086	1684	1547	1734
	Percent released	83.5	90.9	72.0	97.1
	Average length kept	16.7	13.9	15.7	12.7
Yellow perch	Percent targeting	1	5	5	13
	Number harvested	1785	2202	4152	3964
	Number caught	5040	5306	13967	15049
	Percent released	64.6	58.5	70.3	73.7
	Average length kept	8.7	8.6	8.7	8.5

Shorewood's Afternoon Visitors

by Sue Mean, RLIA Director and Shorewood resident
Photos taken by Brooke Wilsey, 12-year-old daughter of Grant & Brenda Wilsey, Shorewood

Brenda Wilsey left for a short time to meet a friend for coffee on June 10th. At about 12:00, her daughter Brooke called all excited saying there were bears! Brooke grabbed the camera and captured the visitors checking out the neighborhood in the Shorewood channel on East Rush.

Two black bear cubs, thought to be about 2 years old, showed up looking for a bite to eat. They helped themselves to the bird feeder, to garbage in the other neighbor's garage and maybe some of Chika's, (the Husky in the picture) food.

The cubs did not bother Chika and she seemed to think it was ok to share her yard with them. After their tour and snacks in the neighbor's yard, the two cubs climbed the tree and settled in. Another neighbor came over to check out the bears and saw what he thought may have been the mother also in the tree. A late night drink from the channel spotted by a neighbor and a visit to a bird feeder heard during late night were the only other activities noted. They have not been spotted since.

When the Chisago County Sheriff's office was called, they gave this advice when having bear sighting or visitors. The bears are there most of the time for food from feeders and garbage. They will usually mind their own business and leave after a while. Leave them alone and they most likely will do the same with you. The advice also given was to supervise your pets and children when they are outside. If the bears are causing too much of a nuisance or danger, please call the County Sheriff and they will notify the DNR and one or both departments will come. They said there have been many sightings reported this spring of black bears.

You never know what will happen in your neighborhood when you leave to go to coffee!!!!

Living with Bears: Homes & Cabins

Should a bear wander through your yard, he may be just passing through or he may smell some potential food source. If he is not rewarded with food, he will move on. When natural foods such as nuts, meat berries, insects and tender vegetation are scarce, bears search actively for anything to eat. This is when bears most often come in contact with people.

Bears are attracted to homes and cabins by garbage, bird feeders, pet food, charcoal grills, fruit trees and gardens. Once a bear finds food around your home he will likely return regularly. NEVER FEED BEARS, they will associate people with food and may become a problem. The best way to avoid bear problems is to not attract them in the first place.

To minimize bear problems on your property:

- Reduce garbage odors. Rinse food cans and wrappers before disposal.
- Keep meat scraps in your freezer until garbage pickup day.
- Wash garbage cans regularly and use lime to cut odors.
- Keep garbage cans in a bear-proof container or in a garage until the morning of pickup.
- Remove bird feeders in the spring. If you persist in feeding during the summer, remove seed, suet, and hummingbird feeders at night, or hang out of reach of bears (at least 10 feet in the air) on wire suspended between 2 trees.
- Keep pet food inside, keep barbecue grills and picnic tables clean.

If a bear comes into your yard:

- Don't panic! Don't shoot! Don't approach it!
- Pick up small children so they do not run, scream or panic. Restrain dogs.
- Avoid direct eye contact. Speak in a calm and soothing voice.
- Most bears fear people and will leave when they see you. If a bear woofs, snaps its jaws, slaps the ground or brush, or bluff charges, you are too close! If the bear stands up he is not preparing to attack but is trying to get a better look or sniff.
- Do not run. Back away slowly with arms overhead thus giving the appearance of being bigger.
- Go inside the house and wait for the bear to leave; observe the bear from your window!

If a bear refuses to leave:

- Make loud noises or throw something to scare him away.
- Always allow the bear an escape route.

If the bear is treed:

- If he is treed, he is probably afraid. Leave him alone! Remove all threats and give him time to feel secure enough to come down and get away, which may not occur until the cover of night.
- Have people leave the area and remove your dog from the area.

Learning effective measures to prevent bear problems will help both bears and people. Unfortunately, many bears are killed or injured when not even causing any problems; learn to tolerate bears. And remember, negative confrontations with bears are usually the result of bears reacting defensively rather than acting aggressively. By understanding their behavior and their needs, you can avoid unpleasant encounters. After all, safely observing a wild black bear in your own yard can be a rewarding and exciting experience!

Winter is Coming: What's A Fish to Do?

Have you ever wondered what life is like for the fish in our lakes when ice covers the surface and cold sets in? Ice anglers bring some of them up to the surface, but others remain in the darkness below.

As temperatures drop and ice encroaches from the shorelines of lakes and rivers, fish have fewer options for retreat than other creatures. Fish are *poikilotherms,* that is, "cold-blooded," meaning their body temperature remains close to that of the surrounding environment. They do not (in general) possess a mechanism for regulating their body temperature like mammals. Body heat is lost directly to the surrounding environment as they respirate. So, as water temperatures approach 38° F and colder, what's a fish to do?

In the cold, fish move very slowly and metabolic processes take place slowly. When weather is warmer, they can move more quickly. In this way, fish do not have to spend much of their energy on keeping a constant temperature. Much of the food mammals eat is burned to maintain body heat (we and other mammals are *homiotherms*). There are tradeoffs in both lifestyles. A handful of fish species, such as some bullheads, partially burrow in mud to stay a little warmer. Other fish, such as bass, become very inactive and live off bodily energy stores developed in summer and fall. Still others, such as pike, are better adapted to cooler water and remain relatively active during winter, taking advantage of dead or slow-moving prey. These species are also more likely to spawn earlier in the spring.

All fish will continue to feed through winter, but at a relatively slow rate, because they are not using much energy to move or maintain body temperature. Fish of all species tend to congregate in areas where food is relatively easily obtained, and where shelter is nearby. For bluegill or perch, food is frequently small, worm-like midge larvae (chironomids), which can be found on muddy lake bottoms. For pike, food is where the bluegill and perch are!

Rivers present additional challenges for wintering fish. Food is less readily available and cold water temperatures make fish less active, but currents do not relent. Slow-water habitat becomes crucial for many species, and others seek the deepest holes they can find. In large rivers such as the Mississippi, channelization for barge traffic and levee construction in the name of flood control has eliminated or isolated a great deal of side-channel or backwater habitat. Side channels and backwaters are slow-water areas on the margins of the main river channel that traditionally provided refuge for many fish in winter. These areas offered greater abundance of food and slow or still water. Today in many parts of large rivers this type of habitat is unavailable, and fish are forced into less desirable alternatives.

For example, in the Mississippi River, the areas just downstream of and just behind wing-dams provide key areas with deep water and little current. However, these areas are much more exposed to the main channel than traditional backwater sloughs, and do not provide the same diversity and amount of habitat once available. Pressure waves from barges passing in winter are of sufficient force to physically move fish out of their refuges and send them into the main channel, where they are forced to use precious energy to get back to safe haven. Another regularly observed phenomenon in large rivers is "winter drift" of catfish, where catfish of all sizes are seen alive near the surface, but passively drifting downstream. The ultimate fate of these fish is unknown.

Whether home is a lake or a river, a fish faces survival challenges throughout the long winter. A chilling thought, indeed.

by Joe Hennessy,
Wisconsin Department of Natural Resources

BUOYS ON RUSH LAKE

When on the waters of lakes or rivers you will come across buoys or markers on the water. They assist in marking channels, denoting unsafe areas and directing traffic and controlling speed. To understand the buoy markers and their meanings refer to the manual that comes with your watercraft licensing.

The RLIA has volunteered to support the Chisago County Water Patrol to oversee the buoys on East and West Rush Lake. The Chisago County Water Patrol is responsible for the areas that are marked with buoys. The RLIA volunteers have taken GPS readings for the placements of markers and supplied them to the Chisago County Water Patrol, which they have verified.

There are three main buoys that are needed on Rush Lake.

HAZARD: These buoys mark hazards above and below the water surface. Anytime there is a hazard buoy, take caution. When there are more than one buoys in an area they are placed around the perimeter of the hazard. NEVER drive between hazard buoys.

CHANNEL: These buoys are red and green and are positioned on each side of a boating channel. The navigation is between these markers.

SLOW NO WAKE: Slow No Wake is defined as the operation of a watercraft at the lowest possible speed necessary to maintain steerage and in no case greater than 5 MPH. State statute gives the county the authority to regulate the water surface use. County Ordinance has adopted resolution number 001115-5 which gives definitions and explanations for this ordinance. Officers have discretion in enforcing the ordinance, just as they do enforcing with most other laws. Violation of the Slow No Wake ordinance is a misdemeanor and is a mandatory court appearance for the violator. As with other misdemeanor crimes the officer must witness the offense to issue a citation. There are a few exemptions to the Slow No Wake rule. Authorized resource management, emergency and enforcement personal are exempt when acting in the performance of their official duties.

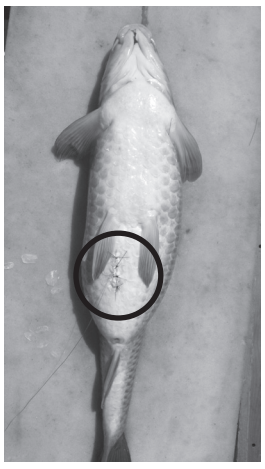
Each spring the RLIA volunteers take the buoys out of storage and check their condition and repair or replace them as needed. With the aid of two or three volunteers and a pontoon, they place the buoys on the specified places on the lake. At random times through the summer the markers are checked and replaced if missing or damaged. In late September or early October the markers are removed from the lake and replaced back in storage at Rush Lake Resort or Rushmore Resort. It is unlawful for anyone to move or tamper with buoys unless they have authorization from the Chisago County Water patrol. A map of the approximate locations of the buoys can be found at www.rlia.org. If you are interested in becoming involved as a Buoy volunteer, please get in touch with a RLIA Board member (listed on page 2).

Larry Steeves,
RLIA Vice President and Buoy Volunteer

East/West Rush Lake Common Carp Project

The East/West Rush Lake Common Carp project began in Januray 2013 with the issuance of a permit from the MN DNR to radio tag and mark common carp in both lake basins with the goals of: 1.) Determining the habitat usage of both lake basins by common carp; 2.) Developing a population and biomass estimate of common carp; 3.) Reduce common carp densities in East/West Rush Lake to protect critical habitat.

The field portion of the project got off to a late start (first week of May) due to the later than normal ice out conditions. MN DNR staff from the Hinckley office agreed to provide common carp captured in fyke nets during a muskellunge recapture period for the purposes of radio tagging and marking. Fifteen fyke net sets were made over the course of two weeks but only two live common carp were captured during this period.



Radio tag surgical implant site

These two fish were radio tagged with high frequency tags manufactured in Isanti, MN by Advanced Telemetry Systems, Inc., on May 11th and released. The fish measured 24.6 inches (9 lbs.) and 17.9 inches (1.5 lbs.) respectively.

The two fish were then tracked between May 11th and July 6th. The smaller fish stayed in the extreme northwestern bay of West Rush Lake during all tracking events except for the July 6th tracking run. On this date the fish was found just south of the East/West Rush Lake connecting channel. The larger fish was found in multiple locations during the tracking events; these locations include the northeastern bay of West Rush, the bay on the south side of Dennis Frandsen Park, and the grassy islands in the northeast bay of West Rush Lake. Both fish seem to moving and behaving normally post radio tagging.

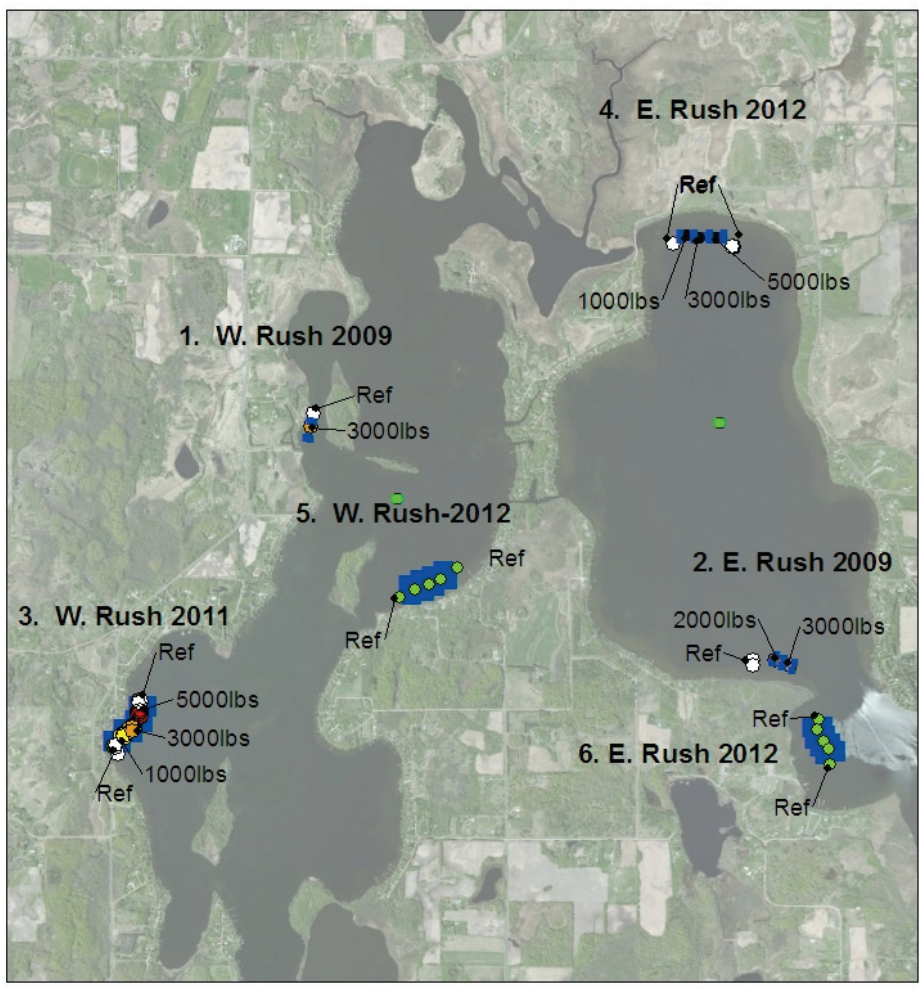
The original plan was to radio tag four fish in the spring period and 6 in the fall period to have additional coverage after the first four radio tag batteries expired. Unfortunately, no additional adult carp were captured, so the remaining eight tags will be implanted fall 2013.

The two radio tagged fish will continue to be tracked throughout the summer and be used to find the larger aggregation of carp in the fall as water temperatures decrease. Carp will be fin clipped (marked), radio tagged, weighed, and measured to calculate total lake population and biomass of carp. A winter 2013/2014 removal is planned.

Tony Havranek,
Wise Waters, LLC

Use of Iron *Continued from Page2*

Rush Lake Iron Amendment Sites 2009-2012



The red numbers in the above figure indicate the weight of IP added to each acre, in thousands of pounds.

On ***February 26, 2011*** a crew of 45 volunteers arrived at 8:30 AM *[at location #3 in the above map-figure]* and the next figure is a composite of six photos showing numerous people performing tasks associated with the deposition. Clockwise from the upper left corner, the photos are:

- *Steve McComas and his son Conner taking sediment samples before Iron;*
- *two (2,000 lb) bags of Iron Concentrate loaded on Larry Steeves' trailer;*
- *Jerry Spetzman watching an underwater camera being used to observe the spreading of the Iron Concentrate as it slowly sinks to the sediment;*
- *a panorama of the activity on the lake during the deposition; and*
- *two people using ice augers to drill holes for the Iron deposition.*
- *the photo in the center shows a shovel loading the Iron Concentrate that was then weighed before poured into the hole.*

The next two figures show the first "open water" deposition of Iron Concentrate on ***July 26, 2012*** at site #4 *(adjacent map)* and again 1,000, 3,000; 5,000 lbs/acre were used. Note the spatial extent of the deposition and uniformity was accomplished by slightly "overlapping" on each pass made by the pontoon boat.

Rush Lake – 26 July 2012: Depositing Iron Particles
George Harrington and Larry Steeves

George Harrington and Larry Steeves, both members of the RLIA, spent more than 3 months constructing and "fine tuning" an auger/ spinning disk device for performing "open water" deposition. An illustration of the basic device is shown in the two photos below.

See Use of Iron
Continued on Page 9

Iron Concentrate Feb 26,2011

Use of Iron *Continued from Page 8*

It is important to again stress that using "open water" deposition at 5,000 lbs/acre, the thickness of the layer of Iron Concentrate would be well ***less than 1/32 of an inch thick if the Iron Concentrate is spread uniformly.*** We therefore believe that the "open water" technique has come close to achieving the optimum uniformity of Iron Concentrate on each acre.

Operationally, for the 9 acres using the "open water" technique, George and Larry had to make 9 separate trips to each 3-acre site to deposit all 9,000 pounds because the RLIA pontoon boat could only carry 1,000 pounds on each trip. The process they developed was to load 5-gallon pails with 47.5 pounds and take 21 such pails on each trip with the pontoon boat. That means that 9 trips were required to deposit all the Iron Concentrate on each 3-acre site that received a total of 9,000 pounds.

The RLIA would like to use this opportunity to thank the volunteers who helped construct the deposition apparatus and also helped with the filling of the 5-gallon pails with 47.5 lbs per pail. Those volunteers that helped with the 9 acres using the "open water" technique ***(July 26; September 6; September 13;*** (all in 2012) were: *George Harrington, Larry Steeves, Tom McKenzie, Steve Schneider, Stan Siedel, Ron Rogosheske, Kurt Koroschetz, Helen Leier, Carole Cartwright, David Cartwright, and a father-son pair whose names were not recorded.* It would have been very difficult, if not impossible, to perform the "open water" experiments without the support from these volunteers.

This "open water" process was repeated at two more 3-acre sites (#5 and #6 shown in the earlier map) and a brief summary of those last two 3-acre sites is provided next.

September 6, 2012: 2nd "open water" at site #5

This site is on West Rush Lake, almost directly east of Wilson Island, and this photo shows the pontoon boat leaving the borrowed boat dock, with George and Larry on board.

September 13, 2012: 3rd "open water" at site #6

Site #6 is slightly North and East of the Flickabird's Resort and they allowed us to use their dock as a staging location. The next photo shows how the containers were transported to the location in a large trailer, in 2 trips, from Nessel Township Hall. If one looks carefully at the photo below, you can see the pontoon boat in the distance depositing the Iron Concentrate. This photo was taken early in the morning and shows Steve Schneider and Stan Siedel in the photo waiting for the pontoon boat to return so that it could be re-loaded.

There is an important difference with site #6 relative to the sites #'s 3, 4, 5 in that instead of depositing 5,000 lbs, we installed 7,000 lbs on the 3rd acre. The

reason for that change was simply because we had an excess of about 2,000 lbs in the last shipment of 9 tons and we decided that we should use it all and then learn if it makes a difference in the effectiveness of sequestering Phosphorus.

How will RLIA Determine if Iron Works to Sequester Phosphorus?

Numerous sediment samples will be collected from all 6 sites shown in the map on page 8 and, for the 3-acre sites that incorporated an Iron Concentrate dose-dependence (sites #3, #4, #5, #6), additional samples will be taken on each acre.

Those sediment samples will be analyzed by the U Minn. Soils Lab (a certified Lab) to determine the ***available***-Iron-to-***available***-Phosphorus ratio as well as the ***total***-Iron-to-***total***-Phosphorus ratio. There is currently considerable discussion around the world as to how much Phosphorus is available in lake sediments for sequestration by Iron and the work being done on Rush Lake could well contribute to that important research activity.

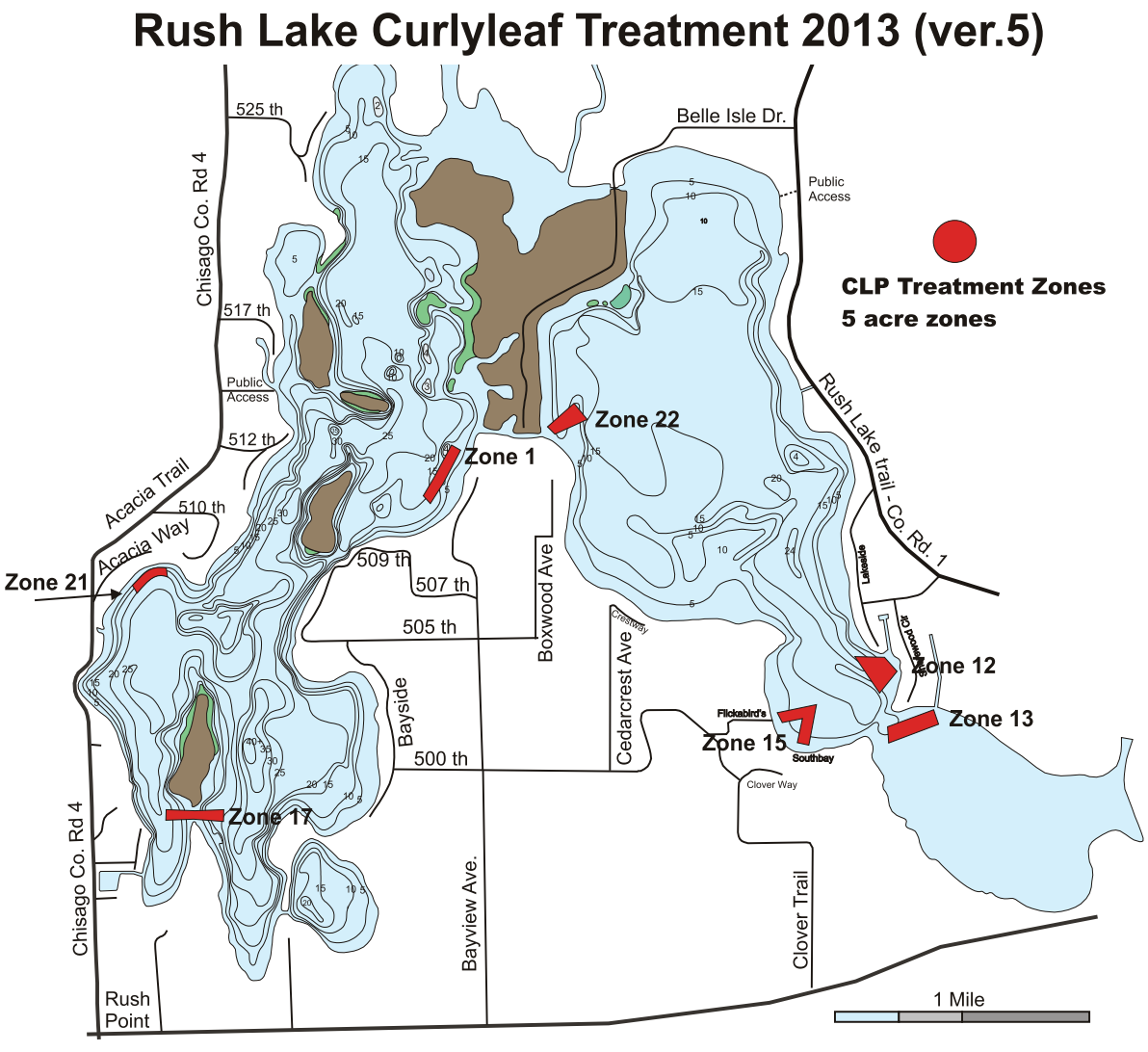
The "rule of thumb" is that if the measured ratio for "available" is:

- *greater than 15 (Iron) / 1 (Phosphorus); Iron will sequester Phosphorus;*
- *in the range 8-12 / 1; some sequestration will occur; and*
- *in the range 2-3 / 1; little sequestration will occur.*

It will be very interesting to learn what we achieve on Rush Lake!

2013 Curly-leaf Pondweed Treatment Update

by George Harrington, RLIA Director



The Rush Lake Improvement Association has partnered with Lake Restoration for more than 10 years for the purpose of reducing Curly-leaf pondweed (CLP) in the "Common Water Ways" of Rush Lake. Lake Restoration was initially chosen from the other herbicide applicators because they provided the lowest cost estimate.

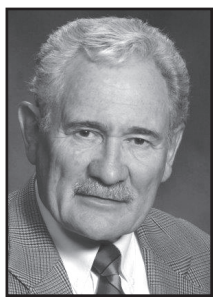
Aquathol K, the EPA approved herbicide for CLP, is a "contact herbicide" which means it must stay in contact with the plant for a specific length of time. Treatment can start when the water temperature reaches 50 degrees but must be stopped when the water temperature reaches 60 degrees. Ideally, winds should be calm and boat traffic minimal in the areas that are to be sprayed. MN DNR regulations require that the spraying equipment maintain a minimum distance of 150 feet from shore. This is called "off-shore" spraying while "on shore" spraying (less than 100 feet) is for individual property owners; the RLIA does not participate in any on-shore treatments, property owners must work directly with a permitted service provider.

Over the years, the Lake Restoration has sprayed between 30 and 70 acres each year, using "Aquathol K" at 1 ppm (parts per million) and the total acreage that was sprayed usually depended on the availability of funds within the RLIA. Over the years, the CLP that was sprayed in some areas worked very well while other areas did not work well at all.

In early April 2013, three members from RLIA met with staff from Lake Restoration to discuss the past performance of Aquathol K for controlling CLP and the discussion quickly turned to the Aquathol K concentration used for the spraying. Lake Restoration and the RLIA members at the last meeting jointly agreed that the 1 ppm application rate from past years was probably the reason for the poor performance in certain areas. It was then decided to change the application rate from 1 ppm to 3 ppm in order to have better control of the CLP.

However, when the Aquathol K concentration is changed from 1 ppm to 3 ppm, the total cost per acre will also increase because of the 3x greater concentration of Aquathol K. At 1 ppm the rate was $330 per acre while the 3 ppm rate is $756 per acre. Because of budgetary limitations within the RLIA, it was therefore necessary to reduce the number of acres to be sprayed in 2013 to 35. We also removed one of the zones we've sprayed in previous years and reduced the acreage to the seven remaining acres to 5 acres each. The adjacent map illustrates the 5-acre treatment zones that were sprayed this year.

President's "State of the Lake" Message



I would first like to thank the RLIA Board for the leadership they continuously provide to enable the RLIA to meet its primary mission of improving the water quality and environment associated with Rush Lake. Of equal importance are the many volunteers who regularly contribute time and energy to make the RLIA the successful organization that it is today. Volunteers contribute their own time to accomplish important tasks such as: installing & removing buoys; ice-clean up; spraying CLPW; the Iron Concentrate experiments, etc.

It is also important to recognize the many Agencies that have helped the RLIA to accomplish its goals including Chisago County SWCD, Hinckley Area Fisheries, Blue Water Science, MPCA, DNR, UMN, Rush City businesses, and our local state legislators.

It is also important to thank Ron Eiden for his tireless efforts associated with RLIA Gambling because we would not be able to accomplish the many improvements associated with Rush Lake without the revenue Ron generates.

During the last 24 months, the RLIA has started, or completed, six projects that have potential to substantially improve both the environment and information flow associated with the RLIA and Rush Lake (RL).

(1) With the expert help of Bob Shaw and Ron Rogosheske, the RLIA installed a new web site at www.rlia.org.

(2) The RLIA Directors and membership voted to commit at least $5,000 to the DNR for the purchase the 196 acre Fahrenholz property [located just south of the cemetery on the East side of East Rush Lake (ERL)].

(3) Thirteen streams entering RL and Rush Creek were sampled by a RLIA volunteer team (headed by Kenny Nash & Casey Thiel) in 2009 & 2010 to identify streams with excess Phosphorus levels. The northern most stream (which had the greatest Phosphorus content) enters RL immediately south of the DNR boat ramp on ERL and RLIA is exploring ways to mediate the Phosphorus from that stream.

(4) On February 26, 2011 45 volunteers from the RLIA deposited 9 tons of Iron Concentrate (IC) through the ice on 3 of the 12 acres approved by the MPCA coordinated by Steve McComas. The MPCA then asked the RLIA if they would perform "open water" deposition on the remaining 9 acres because it would produce better uniformity of the Iron. George Harrington and Larry Steeves then engineered and constructed a device to spread the IC from a pontoon boat. Their machine worked very well and the remaining 9 acres were completed on September 13, 2012.

(5) Under the leadership of Gary Reilly, the RLIA decided to try radio transmitters [developed by Peter Sorenson (UMN)] to determine when carp are "schooling" for more effective harvesting. From this study, the RLIA will determine if Rush Lake has sufficient carp to enable efficient harvesting of the carp.

(6) In 2011, both the RLIA and Chisago County provided "in kind" support to an EPA 319 proposal from John Gulliver (UMN, CE) which are ranked by the MPCA from a priority standpoint. Gulliver was unsuccessful in 2011 but he asked the RLIA and Chisago County to participate again in June of 2013. This time he was successful by receiving one of the 4 proposals (out of 10 applications) the MPCA approved. The RLIA will contribute "in kind" support by allowing Gulliver and his students the use of a pontoon boat to collect sediment samples on Rush Lake.

In 2013/14, the RLIA will continue to stress improvement of both water quality and the environment on Rush Lake. The RLIA will use Steve McComas to examine the effects of using Iron Concentrate to sequester Phosphorus and will explore methods to reduce the Phosphorus entering ERL from the stream adjacent to the DNR boat ramp on ERL,

Let me urge all of you to renew your membership to the RLIA because doing so will provide an opportunity for you to contribute to the continuing effort to improve both the water quality and boating experiences of Rush Lake.

– David Cartwright

Gambling Manager's Report

Our Charitable Gambling had a phenomenal year, the most profitable of my career as the RLIA's Gambling Manager. Our gross sales for the fiscal year ending June 30, 2013 were over $1,191,000, yielding a net profit of over $40,700. The profit exceeded our projection of $34,050 for the 12/13 fiscal year budget which allowed us to meet our expenses with a little breathing room. We attribute the majority of our success this year to several identifiable reasons; increased business at Sidelines, the addition of The Grumpy Minnow site, and the outstanding work of our employees and volunteers.

First and foremost we thank our business partners for supporting our charitable gambling in their establishments by participating in Pull-tabs (both bar op and booth op sales), Bar Bingo and Paddlewheel meat raffles. We hope you will help show our appreciation by patronizing these businesses: The Grumpy Minnow, Rush Lake Resort & Campground, Rush Hour Bar & Grill and Sidelines Sports Bar & Grill.

Our paid employees continue to be outstanding and are vital to our success. They are: Assistant Gambling Managers Delores Eiden and Cathy Shevcheck, and Sidelines pull-tab sellers Don Belland, Vi Belland and Laurie Gray. Thank you all for your professionalism and hard work.

Equally important to our success are our Bingo volunteers. Without them we would have a difficult time supporting a profitable Bar Bingo program. Our dedicated volunteers are: Don Belland, Ron Peltier, Al Petschl, and Cathy Shevcheck. Thank you all, we really appreciate your efforts.

To date we have chosen to pass on electronic gambling (e-tabs and linked bingo). There are still issues with electronic gambling that need to be ironed out, so at present we feel it is not in our best interest to get involved with it.

Bingo will resume soon! Watch for announcements about time and place on our meeting reminder postcards and on our website www.rlia.org.

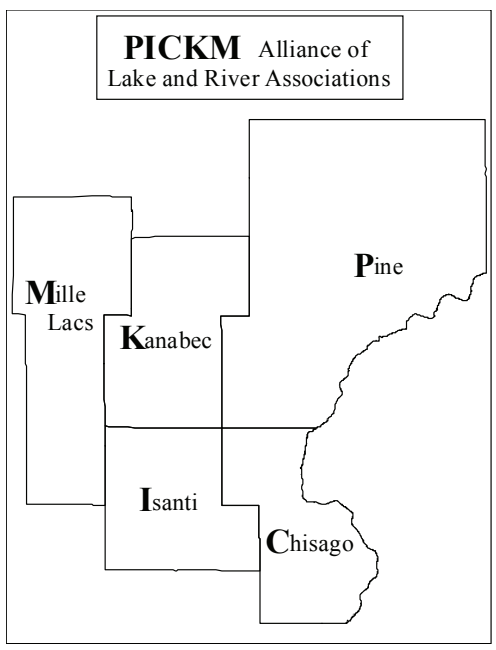
– Ron Eiden

PICKM Alliance of Lake and River Associations

Chisago County is fortunate in having an abundance of high quality lakes and rivers. People value these water resources for their scenic beauty and abundance of recreational opportunities. In many instances, homeowners have formed lake and river associations to help organize around a specific lake or river. The Rush Lake Improvement Association is a prime example.

Lake and river associations provide many valuable services such as control of aquatic invasive species, constructing water quality improvement projects, and educating their members. While these associations do great things for the lakes and rivers, many such associations are not aware of the good work being done in neighboring lakes or counties by other associations.

Lake and river associations in the 5 PICKM counties (Pine, Isanti, Chisago, Kanabec, and Mille Lacs) formed the "PICKM Alliance of Lake and River Associations". The vision of the PICKM Alliance is to become a united group of lake and river associations whose primary purpose is to achieve healthy, clean water, now and forever, within the five PICKM counties. The RLIA is a member of the PICKM Alliance.



PICKM Alliance members meet every-other month to share resources and ideas. 3 to 4 RLIA Board members generally participate in those meetings, usually held at the Park Café in Braham. All members of the RLIA are welcome to participate in the PICKM Alliance.

If you are interested in attending please contact either David Cartwright (RLIA President and current Chair of PICKM) at 320-358-4660 or Larry Steeves (RLIA Vice President) at 320-358-3657 to find out the date for the next PICKM meeting.

PICKM is not the originator of the idea of forming an alliance of lake and river associations, most MN counties with an abundance of lakes have formed alliances. These county alliances have united to form a statewide association called Minnesota COLA (Coalition of Lake Associations). Today, the Minnesota COLA represents 42% of the lake and river associations across the state. Minnesota COLA has made its highest priority the reduction of the spread of aquatic invasive plants and animals.

Visit Our Redesigned Website!

The Rush Lake Improvement Association (RLIA) recently launched its new redesigned website, www.rlia.org, offering a variety of features of interest and benefit to all who visit our site.

First and foremost, the new RLIA website provides its lake association members and visitors with up-to-date information on RLIA activities and its lake improvement projects. Interested persons can read about current projects such as improving water quality and lake weed mitigation efforts. The new site boasts informative and convenient navigation, logical organization of pages and their information, and a number of new features RLIA members and all visitors will use and appreciate.

Reports and documents can be downloaded to stay abreast of the RLIA's work, along with many other documents of interest from other resources like the MN DNR. The documents section contains a secure area where meeting minutes and financial reports can be accessed only by RLIA members (RLIA members in good standing can obtain the login by contacting the RLIA Secretary; see page 2).

The new website features a free-to-join Forum where people can discuss and offer input on RLIA projects. The forum has sections for general discussion including "Rush Lake Living", "For Sale/Wanted", "Rush Lake Fishing Reports", and a special section for uploading one's personal Rush Lake photos.

"We are very pleased that the new website will be of greater value to our members and all who visit and enjoy East and West Rush", said RLIA President David Cartwright. "Website visitors can now be more informed than ever of our lake improvement efforts and, through the forum, enjoy sharing ideas, stories, photos, and experiences with other lake residents and the public."

The RLIA Board is exceedingly grateful to Rush Lake residents Bob Shaw for volunteering to take on the task of building a new RLIA website and, as webmaster, maintaining it going forward, and Ron Rogosheske for volunteering to take on the all-important role of Forum Administrator. Together they will be keeping our site safe, current and user friendly.

We invite you to visit the new website, explore all it has to offer, and use it frequently to stay in touch with RLIA news and activities. If you encounter any problems or wish to comment, just send an email to webmaster@rlia.net.

RLIA Membership Roster As of July 20, 2013

The code preceding your name represents the year your dues are paid through and the level of your membership. The membership level codes are: S for $20 Sunfish, B for $50 Bass, W for $100 Walleye and M for $101+ Muskie. Example: 13.B means dues are paid for Jan. 1-Dec. 31, 2013 at the Bass level. The roster reflects dues payments received through July 20, 2013; please contact the Secretary if you have any questions or corrections to the report (see page 2 for contact information).

Annual dues are due in January for the calendar year Jan. 1-Dec. 31. Please be sure to include a completed Membership Registration Form with your dues when you send in your membership renewal. A form has been inserted in this publication and is also available online at www.rlia.org and at the monthly membership meetings. Be sure to let us know if your address has changed or if any other corrections need to be made.

The NEW "RLIA Member" sign is available at the monthly RLIA Membership Meetings or by contacting a Board Member to make arrangements for pick up!

12.S ABRAHAMSON, DOUGLAS & SHELLEY
13.S ADAMS, EDWARD
13.S ADAMS, WALLY
13.S AKERSON, DONALD & CAROL
13.S ALDINGER, GAYLORD & DONALEE
12.S ANDERSON, ARNE & WENDY
13.S ANDERSON, MARVEL
12.S ANDERSON, MIKE & WENDY
12.S ANDERSON, RAY & SHELLEY
13.B ASHLIN, DENNIS & ANDI
13.S AUSMUS, KEN & CHERY,
13.S BACHMEIER, RALPH & ALEXIS
14.S BARTH, LUVERNE
15.S BEACH, JOHN & JANICE
13.S BEACH, GARY & MARIE
13.S BEERS, DOUGLAS
13.S BELLAND, DONALD & VIVIAN
12.S BERGMAN, CJ & JENNY
13.S BERGQUIST, LEROY & JERI
12.S BITTNER, RICHARD & JULIE
13.S BLACK, DAVE & CHERYL
13.S BLEED, HOWARD & MARY RAHMAN
12.S BLOMQUIST, HOWARD & LORNA
13.S BROKKE, WAYNE & DEBBIE
14.S BUSH, JAMES & LAURA
12.W CAMPBELL, JAMES & LISA
13.S CARDINAL, DOUG & DIANE
13.S CARLSON, CHARLES & SHARON
13.S CARROLL, MIKE
14.S CARTWRIGHT, DAVID & CAROLE
13.S CEAGLSKE, NORMAN & BEVERLY
13.S CHILSON, DONALD & RUTH ANN
12.S DILLNER, DAVE & MARY
12.S DOOLEY, EDWARD & MARLENE
13.S EGELKRAUT, MARLENE
13.S EIDEN, RON & DELORES
12.S ELLSWORTH, KEN & JOANN
13.S ELMQUIST, JAMES & ROSALIND
12.S ENGLAND, VAUN & LEONA
12.S ENRIGHT, RICHARD & JANEL BJERKE
13.S ENZENAUER, KIRK & GLADYS
13.S ERICKSON, JAY & SHERRY
12.S ERICKSON, KENT & JANICE
13.S FABER, LAURIE
13.S FAIRCLOUGH, TIM & CARRIE
13.S FANGEL, MARION
12.S FARRAR, RONALD
13.S FINDELL, DEAN & ROBIN
12.S FLECK, JEROL & MARY PAT
12.W FLICKABIRDS RESORT
17.S FOERSTER, DENNIS & DIANA
13.S FOLK, GEORGE & JULIE
14.B FORTUNA, RAY & CAROL
13.S FRANDSEN, BOB
13.S FRANTZEN, MICHAEL
13.S GARBE, RONALD & CINDY
12.B GEORGE, STEPHEN & DONNA
13.S GILLITZER, ROBERT & SHARON
13.S GLAUNER, GARY & DIANA
13.S GOETZE, JIM
12.S GRANDT, TODD & NANCY
13.S GREGORY, QUINTIN & KATHERINE SMITH
13.S GRELL, ROGER & JULIE
13.M GROEN, TIM & SARA
13.S GULDEN, FRED & JOYCE
13.S HALEY, DAVID & SUSAN
12.S HAMMOND, CRAIG & RENAE
13.S HANSEN, HAROLD & SANDRA
13.S HANSON, JEREMY & JESSICA SCHULTZ
13.W HANSON & KATHY LIND, STEVEN
12.S HARMON, JAMES & SALLY
13.B HARRINGTON, GEORGE & DIANE
13.S HAUGRUD, CRAIG & SUSAN
13.S HEDMAN, DAVID & ADRIENNE
13.S HEMMER, RONALD & DEBRA
13.S HENDERSON, RA
12.S HOCKERT, CHRIS & EVONNE
13.S HOFFMANN, ARMIN & CINDY
12.S HOFFMANN, JOHN & COLLEEN
13.S HORN, ROBERT & RENEE
12.S ISKIERKA, STANLEY & JO ANN
13.S JANSEN, CATHERINE
12.S JOHNSON, MARK & CAROL
12.S JOHNSON, MARK & LINDA
13.S JOHNSON, RAY & HEIDE
12.S JOHNSON, WARREN & JOY
13.S JONES, WINNIE
12.S JUDD, STEPHEN & MARILYN
13.S JURCHISIN, BILL & ANITA
13.S KANE, JAMES & SUSAN
13.B KIEPER, WILLIAM & MAE
12.S KLOSE, LOWELL & MARILYN
13.S KNAPP, DAVID & CAROLE
12.S KNIGHT, STEVE & MICHELLE
13.S KNOSS, KEN & BERNIE
12.S KNUDSON, DeLON
13.S KOROSCHETZ, KURT & TRUDY
13.S KOWITZ, BECKY
12.S KUNTZ, CHRIS & MARILYN
13.S LANGER, TOM & RUTH
12.S LANGEVIN, JIM & JO
12.S LANGRECK, FRANCIS & MARIA
13.S LARSON, JEFF & DOROTHY
12.S LAWRENCE, RICHARD & SANDRA
13.S LEE, FRANK & SHEILA
13.S LEHN, RAYMOND & LINDA
12.S LEIER, HELEN
12.S LERCH, TROY & CHANNA TASTIDES
13.S LILLIS, CLARE & KATHY
13.S LINDHOLM, PAUL & LYNN
13.S LINDSTROM, ROGER
12.S LINDSTROM, SCOTT & LORI
15.S LINDSTROM, VIRGIL & KAREN
13.S LINDSTROM, BRENT
13.S LINDSTROM, WAYNE & HOLLY
13.S LUEBECK, LOWELL & DENISE
13.S LUNDY, RON & LINDY
13.S LUNSETH, JOHN & MARY ANN
13.S MAGNUSON, JEANE
13.S MANDERS, DAVID & LINDA
13.S MANNING, ANDREW & BARBARA
13.S MANSFIELD, JAMES
13.S MANSUN, WILLIAM & JUDITH
12.S MARHOLTZ, WILLIAM & BETTY LOU
12.S MASON, JOHN & JUDY
14.S MATSON, GORDON & PHYLLIS
14.S MATTSON, DARRELL & DENISE
13.S McAFEE, DALE & DARLENE
12.S McCALL, CRAIG & MARGIE
13.M McCALL, DUANE & SANDY
13.S McKENZIE, TOM & DELORIS
13.S MEANS, DAN & SUE
13.S MEATH, TERRY
13.S MECHELS, ROGER & IRMA
12.B MELL CONSTRUCTION
13.S MEYERS, ROBERT & BECKY
13.S MICHOG, MYRA
14.S MILLARD, RAY
13.S MILLER, SHIRLEY ANN
12.S MITCHELL, FRANK & JOSEPH
12.W MOLD, BRIAN & DEBRA
12.S MOLIN, CRAIG & MARCY LINN
13.S MOREAU, BRIAN & BERNICE
12.S MUELLNER JR, THOMAS & TERESA
13.S MUELLNER SR, THOMAS G
13.S MULNIX, EMILY A
13.S NASH, KEN & KATHLEEN MALONEY
12.M NAVICKAS, JOEL & CAROL
13.S NAWROCKI, ROGER & GWEN
13.S NELSON, ANGIE
12.S NELSON, CONRAD & PAULETTE
12.S NEUMANN, RALPH & CARO
13.S NIELSEN, LYNN
13.S NOORDERGRAAF, JESKE & JIM MCCARTHY
14.S OBERG, TIM & MARY JURGENSEN
13.S O'CONNOR, STAN & PAM
13.S OLSON, DARRELL & CANDYCE
13.S OLSON, LORING & ANNE
12.S OPATZ, KEN & SHEILA
12.S ORTON, DAVID & MARY
13.B OSTENSO, JOHN & BEVERLY
13.B PARTRIDGE, CARROLL & MARY
13.W PELTIER, RON & JUDIE
13.S PERKINS, ROY & JANE
16.S PERREAULT, RANDY & JULIE
13.S PETERS, WILLIAM & MILLIE
13.S PETSCHL, ALBERT & MARY LOUISE
13.S PEYLA, DAVE & LYNNE HANNIFORD
13.S PHILLIPS, EDWARD & BARBARA
13.S PICHA, BILL & PATTI
13.S PIEPER, WENDELL & RUTH
13.W PIERSON, WARD & LAURA
12.S PRICKETT, DAVID & AMY
13.B PROTIVINSKY, TODD & TERRY
13.S PUNG, JOE & VICKI
13.S RADER, BRENT & JENNIE
13.S REILLY, GARY & DEB
14.S ROBERTS, JIM & VERNA
13.S ROGOSHESKE, RON & PATRICIA
12.S ROLOFF, RICHARD & COLLEEN
12.S ROTH, MYRTLE
13.B RUE, DAVE & JANE
13.B RUSHMORE CAMPGROUND
13.S RUSH POINT STORE
13.S RYBERG, KENN & KATIE
13.S RYBERG, SCOTT & ANN
13.S SAARI, MARK & DEANNE
13.S SAYRE, STANLEY & MARLENE
12.S SCHECHTER, HERB & MARTA
15.S SCHELLBACH, JERRY
13.S SCHIK, STEVE & DONNA
13.S SCHINDELDECKER, JOHN & MARLENE
14.S SCHMIDT, CONNIE
13.S SCHMITZ, ROGER & MARGARET
13.S SCHNEIDER, ELAINE
13.S SCHNEIDER, STEVE & LaVONNE
12.S SCHRAMM, SCOTT & RHONDA
12.S SCHREINER, CORBIN
13.W SCHROEDER, BOB & EVANGELINE
13.S SCHROEPFER, TED & KAREN
13.S SCHWARTEN, STEVE & SUSAN
13.S SCOFIELD, DAROLD & JANE
12.S SCOFIELD, DWAYNE & ANGELA
13.S SEDLER, LOWELL & ELLIE
13.S SEIDEL, STAN & KATHY
13.S SHAW, ROBERT & RITA
13.S SHEVCHECK, CATHY
12.S SHOQUIST, RON & GERRY
13.B SILCHER, BRENT
13.S SLAVIK, DAVID & KELLI
13.S SOLORZ, THOMAS & SHIRLEY
13.S SORNSEN, GERALD & MARY
12.W SOUTH BAY RV PARK
13.S SPANGLER, EVERETT
13.S SPLETT, PHILIP & PATRICIA
13.S STAMBAUGH, RANDY& JANA
13.S STANGRET, KEVIN & LANAYA
13.S STEEVES, LARRY & JOAN
13.S STENMO, RALPH & PAT
13.S STIVLAND, RODNEY
13.S STOKS, JEFF & PEGGY
13.S STREAM, GLENN & CLARICE
13.B STREETAN, TIM & JODI AND DOUG & SUSIE MILLER
13.S SYBRANT, KEVIN & MAUREEN
13.S TESSMAN, STEVEN & NADINE
12.S THELL, CHARLES & MARLYS
12.S THOMPSON, ELLEN
14.S TORGERSON, PAUL & SANDRA
13.S TRUDEAU , DAVID & GARY
13.S TRUSKOLASKI, ED & JACKI
14.S TSCHIDA, GREGORY & SANDRA
13.S TUBBS, PAUL & CYNDY
13.S WALLACE, SCOTT & TINA
14.S WALSH, WILLIAM & JANICE
12.S WALLSKOG, WAYNE & JOAN
12.B WEBB, JERRY & KIM
13.S WEGLEITNER, JOE & LIL
13.S WEIBELER, BARBARA
13.S WEINREICH, WILLIAM & HELGA
12.S WENDE, JEFF & LEANDRA
12.S WHEELER, GREG & JULIE
13.S WHELEHAN, KATHY
13.S WIDELL, GARY & JEANETTE
13.S WIDELL, JOSEPH & JENNIFER
13.S WILSEY, GRANT & BRENDA
13.S WURST, GEORGE & ARLETTE
13.S YANTA, JAMES & SUSAN
12.S YURICH, GORDON & DANA

MEMBERSHIP AS OF JULY 20, 2013

Paid through Dec. 31 of:	S	B	W	M	Total
2012	60	3	4	1	68
2013	146	10	4	2	162
2014	12	1			13
2015	3				3
2016	1				1
2017	1				1
Total:	223	14	8	3	248

TOTAL CURRENT (2013 & UP): 180

HOW TO SIGN UP FOR E-MAILED POSTCARDS

We offer the option of receiving Meeting Reminder Post Cards electronically! All you need to do is send an e-mail (from the address you want to receive post cards at) to secretary@rlia.net. Type "email only" in the Subject line and let Sue know who you are (name & address) so she can remove your name from the postal mailing database and add your e-mail address to our electronic database. The option is also on the Membership Registration Form.

In Memoriam Donations

The Rush Lake Improvement Association has established a Memorial benefit for the RLIA Membership and other friends of Rush Lake. For a tax-deductible gift of $50 or more we will list the memoriam on our website www.rlia.org and in the Rush Report for a minimum of 5 years. New additions to the list will be printed one-time on the meeting reminder post card. Memorial donations will be used exclusively for water quality improvement purposes designated by the RLIA Board of Directors as those that fulfill the mission of the Association. Please see the 2-sided form that has been inserted in this issue, or go to our website to download the form. Forms are also available at monthly meetings or by contacting the Secretary (see page 2). An example of an In Memoriam listing is shown on the form. One does not need to be a member of the RLIA to participate.

Reach Out!

A Message to all RLIA Members

Please help us raise awareness about the RLIA. There are many new residents on the lake who may not know the RLIA even exists. Or they may have heard of our association, but don't know what our mission is, what we do, or how to join. You can help! Please review the Member Roster and look for your neighbors. If they aren't listed please take a minute to visit with them and ask them to join. This Rush Report is distributed inside the Scotsman all around the lake, and each one contains a Membership Registration Form. Forms can also be downloaded from our website www.rlia.org. If you see unretrieved papers sitting in Scotsman delivery boxes, take them out and hand deliver them to your neighbors to be sure new residents get their Rush Report! Our goal is 100% membership of all property owners and campground resort residents. Lake property is an investment and one that will lose value if the quality of the lake is not cared for. The more members we have, the more we can do to preserve, protect and improve Rush Lake. If each of our current members recruits one new member we can double our membership in no time! Thank you for being an active member of the RLIA.

MARK YOUR CALENDAR!

FISCAL YEAR 2013/2014 RLIA MEETING DATES

August 17, 2013
September 21, 2013
October 19, 2013
November 16, 2013
December 7, 2013
January 18, 2014
February 15, 2014
March 15, 2014
April 19, 2014
May 17, 2014
June 21, 2014
July 19, 2014

RLIA Membership Meetings are usually held on the 3rd Saturday of each month at the Nessel Town Hall, 49205 Acacia Trail, Stanchfield, MN 55080. We begin serving fresh coffee & baked goods at 8:00 a.m. The meeting starts promptly at 8:30.

Visitors are always welcome! We try to schedule guest speakers in advance, and announce it on the postcard and website, but that's not always possible. The best way to avoid missing out on an informative topic or special guest speaker is to attend the meetings! Meetings usually adjourn by about 9:45 and a little later when we host a guest speaker. We look forward to seeing you at the meetings, please join us! ~ ***Your Board of Directors***

In Memoriam

Gladys Goetze, Wife, by Jim Goetze • David Miner, Family and Friends, by Linda Miner
Sheila Mitchell, Wife/Mother, by Frank Mitchell Family
Kimmerle Joy Tessman, Daughter/Sister, by Nadine R. Tessman/Susan L. McCurdy

Grant Allen Scholarship Awarded to Braham Senior

The 8th annual $600 Grant Allen Scholarship was awarded at the June 15, 2013 RLIA Annual Meeting to Braham High School Senior and Rush Lake denizen Drew Reilly.

Drew has lived on Rush Lake for his entire life. In fact, while his address is Stanchfield, if you ask him where he's from he will say he's from Rush Lake! In Drew's essay about what Rush Lake means to him he reflects on many childhood memories, from time spent on the water, on the ice, and around campfires to floating from cabin to cabin on West Rush Lake to visit his many aunts, uncles and cousins. One of his most special memories is of when he was thirteen and built a pontoon with his dad, building not just a boat, but a bond.

Drew developed a passion for writing in junior high. Some of you will recall that from sixth through eighth grade Drew was our Junior Reporter and wrote several interesting and informative articles for the Rush Report.

During his junior and senior years Drew attended Anoka-Ramsey Community College and took a full load of classes. Not only did he make the Dean's List for both semesters of 11th and 12th grades there, he was awarded the 2012-2013 Outstanding English Student of the Year, the 2012-2013 Outstanding Economics Student of the Year, and was recognized for outstanding work as Student Government President. Drew was honored by Braham H.S. as a Student of Excellence, an award given to the three seniors with the highest cumulative GPAs. This fall Drew will be attending the University of Minnesota Carlson School of Management majoring in Business Management and Finance with a concentration on entrepreneurship. Drew wrote that moving away is bittersweet, but he is ready for the next big adventure and is confident that life's path will bring him back to his favorite place, Rush Lake, where he hopes to someday build a home and raise a family.

From left: Joe Pung (RLIA Director and Scholarship Committee), Drew Reilly (Recipient) and Drew's dad Mike Reilly. Photo by Carole Cartwright (RLIA Member, Scholarship Committee).

The Scholarship Committee consists of RLIA Board Directors Kathleen Maloney-Nash and Joe Pung, RLIA Secretary/Treasurer and Scholarship Account Bookkeeper Sue Griffin, and RLIA Members Carole Cartwright and Candy Olson. Thank you for your dedicated service again this year.

The scholarship was initiated in 2006 in memory of Grant Allen Jestus. On May 24, 2003, five year old Grant drowned on West Rush Lake in a tragic boating accident in which he was not wearing a life jacket and fell, un-noticed, out of his father's boat. Our gratitude to Grant's mom Kimberly, her daughter Stephanie, and Kim's parents Allen and Nancy Johnson for continuing to be supportive of the scholarship in many ways. In fact, it is important to know that in 2010 Nancy and Allen donated five years worth of awards to the scholarship fund to ensure that it would be awarded through the year that Grant would have graduated from high school.

The RLIA Grant Allen Scholarship is available to any student attending a post secondary school who can write an essay about what Rush Lake means to them. The application instructions for the 2014 scholarship will be posted this winter on our website www.rlia.org and at all the area high schools. Tax-deductible donations can be sent to: RLIA, Attn Scholarship Fund, PO Box 677, Rush City, MN 55069. Thank you for your support.

Grant Allen Law

The law requires that a U.S. Coast Guard approved life jacket be worn by children younger than age 10 in boats that are underway or otherwise not tied up to a dock or permanent mooring.

Grant Allen Scholarship Recipients

2006: Rachel Piersdorf, North Branch H.S.
2007: Matthew Saari, Rush City H.S.
2008: Amy Carlson, Rush City H.S.
2009: Cody Luebeck, Braham H.S.
2010: Taylor Mallinger, Rush City H.S.
2011: Sadie Kolke, North Branch H.S.
2012: Marissa Belau, Rush City H.S.
2013: Drew Reilly, Braham H.S.

What does Rush Lake mean to these Recipients?
Visit www.rlia.org where all of their essays have been posted for you to enjoy.

Rush Lake Fosters a Father-Daughter Relationship

by Hannah Thiry, Stanchfield, Cambridge-Isanti High School

2013 Grant Allen Scholarship Application Essay
"What Rush Lake Means to You"

If there is one thing that has not changed with the evolving world, it is Minnesota Lakes. Buildings are destroyed and built, new IPods are created, medicine is discovered, and new officials take office. There are few things that can refuse to change with the times, and I absolutely love that I live so close to one: Rush Lake is an escape from the busy world of technology and fast-pace of everyday living. In the recent years, my dad has taken up the hobby of muskie fishing. I have always gone out hunting or fishing with my dad when he has asked, but now that I'm my senior year of high school, I truly appreciate the time spent with him out on Rush Lake. Muskies are known to be the fish of 10,000 casts, which means that after an evening of fishing, we are lucky to see one surface after following the lure up to the boat. Quite honestly, I used to dread muskie fishing; it was long and monotonous with the hundreds of casts that I threw out, and rarely with a fish on the other end. I never understood my dad's addiction. The moment I realized how important fishing was to him was when I caught my first 49.5" muskie; it wasn't how big the fish was, or even that I caught it; it was the excitement I had when I reeled it in the boat. He was happy that his little girl could go to her big cousins and uncles and brag about the fish she caught, and how he could share that moment with me and put the picture up on the wall. That was the moment I first noticed how much he loved fishing with me, not why he loved fishing with me. There were many nights where we never caught anything; he would still always say, "That was a fun night, Kid. Thanks for coming with me," and I knew he fully meant it with his heart.

"She ain't even thinkin' 'bout, what's really goin' on right now, but I guarantee this memory's a big'in, and she thinks we're just fishin'," Trace Adkins wrote "Just Fishin'" about his daughter; according to the song, she is too young to fully understand the significance of being together in the boat, and can only think about her kittens or ballet shoes. My dad loves muskie fishing, but I believe he wants to find time for us to get away and cherish the summer evenings we have together. I never really saw what was goin' on out on those trips out to Rush Lake until I noticed the joy in his face the night I caught my muskie, but now I can guarantee that the memories I have with my dad are more than just fishing; it's the experiences we shared, and moments of a father-daughter relationship that will stay in my heart forever.

Where Have All the Herons Gone?

by Kathleen Maloney-Nash, a concerned Rush Lake resident

My favorite thing to do at the cabin is enjoy my morning coffee lakeside at dawn and watch all the activity as nature comes to life with the rising sun. There are the usual, expected sights and sounds, often an unexpected surprise, and occasionally a feeling of disappointment when I don't see something on my mental checklist. One of the highlights of my coffee ritual is the visits to our West Rush Lake shoreline by great blue herons; they put on quite a show that I am always captivated by. First the rather awkward looking flyer lands in the shallow water with quiet precision. Then the great blue silently, slowly, intently wades through the shallow water in search of breakfast. At times he stands erect and motionless, those yellow eyes patiently scanning for unsuspecting victims. Minutes, or even seconds later, his long, scissor-like beak pierces the water's surface with lightening speed to spear or grab a small fish or other morsel. Not every strike yields a treat, but either way it is a quite a sight to witness this expert fisherman's technique. I have been missing the majestic visitors that would keep me rooted to my spot in the morning, and feel privileged if even one heron makes an appearance.

Why are there noticeably fewer herons now? Is it because the natural balance of Rush Lake Island (locally known as Crane Island), our treasured great blue heron rookery on West Rush Lake, has changed over the past few years? A couple observations seem plausible; severe storms have toppled many nesting trees, and a noticeable upsurge of our bald eagle population. My guess is the downed trees probably aren't numerous enough to have a marked effect, so eagles became my focus. On any given day I see more eagles than herons, and don't get me wrong, I cherish our magnificent raptors and never tire of spotting and watching them, but my concern is for the heron population and the state of the rookery.

I set out to learn what effect eagles have on heron rookeries and found an article written on May 8, 2013 about Heron Habitat Helpers in Seattle. The area's great blue heron population has been relocating their nesting sites due to an increase in eagle predation, and Heron Habitat Helpers is asking residents for help with finding their new nesting locations. According to the group, the majority of 90-plus heron nests established this spring in Kiwanis Reserve had failed due to eagles preying on their eggs and chicks. The Helpers are asking that residents report sightings of herons building new nests in other areas. Perhaps we should establish such a group on Rush Lake! Maybe some of you out there can start a forum on this topic at our website! In Northwest Nature Notes, a Slater Museum of Natural History blog, it was noted that the recent successful comeback of bald eagles has had an adverse affect on herons; eagles visit the colonies as they are forming and take eggs, young, and even adult herons if they can catch them, because few adult herons will stick around to defend their nests in the face of a direct eagle attack as they are likely to become prey themselves. I found a similar reference on a US Fish & Wildlife website. I also queried friends who reside in other locations on the lake, and they share the same observations that the heron population is declining and there are more eagles than there used to be. It seems like a logical conclusion that eagles are at least one factor impacting the state of our great blue heron rookery.

For the benefit of our newer Rush Lake residents, here's a little history about Minnesota's first SNA (Scientific and Natural Area). In the 1960s the Legislature authorized the DNR commissioner to set up a program protecting wild places of scientific and natural merit. In 1973 an advisory committee began recommending potential sites. In 1974 Rush Lake Island (aka Crane Island, Bird Island, Heron Island and Pig Island), a 21 acre sliver of land, became the first SNA. It was described then as; "The tops of the tallest trees are festooned with bundles of sticks—as many as 500 haphazard nests of great blue herons." And now, still on the DNR website, as; "protects one of the state's largest heron rookeries, with as many as 500 active great blue heron nests each year." The best time for viewing the island rookery is in the spring and early summer, from the water. Heron rookeries are sensitive to human disturbance so it is best to observe them from a distance. Landing on the island is not permitted between April 15 and July 15 to protect herons during nesting season.

The SNA system in Minnesota has grown to 160 natural areas. The purpose of the system, according to the SNA program policy statement, is to "preserve and perpetuate the ecological diversity of Minnesota's natural heritage, including landforms, fossil remains, plant and animal communities, rare and endangered species, or other biotic features and geological formations, for scientific study and public edification as components of a healthy environment."

It is not my intent to ruffle any feathers, but last fall the president of Wild River Audubon (Chisago County) made a statement in a letter she published in a local newspaper that Crane Island is one of Minnesota's "crown jewels". I beg to differ; it once was, but it appears Minnesota's first SNA fell off the DNR's radar nearly a decade ago. The "crown jewel" statement is what compelled me to do something about raising awareness of the current state of the rookery.

I have been in contact with the SNA division of the MN DNR several times to report my observations and concerns, and to request copies of all the survey data and reports (which are public records) on file to share with all of you. Obtaining the data has been a prolonged process as the DNR departments have reorganized and finding the person who can locate the records is complicated, but we are making progress thanks to Peggy Booth, SNA Program Supervisor, and Larissa Mottl, Central Region SNA Program Coordinator. While I have not received copies of any actual surveys or reports yet, I did receive the following messages from two coordinators.

In response to my request for all the survey documents; "The colony has been visited periodically from 1969 to 2004. The count method (visual estimate, total count, partial count with extrapolation) and the census technique (ground, boat, air) have varied, so care should be taken when interpreting the variation between years. For Great Blue Herons, the active number of nests has ranged from 45 to 464. In 2004 the number was 175 and in 1999 the number was 194. For Great Egrets, the active number of nests has ranged from 1-75. In 2004 the number was 10 and in 1999 the number was 2. Double-crested Cormorants and Caspian Terns (1 adult) have also been documented at or near the colony." Lisa Joyal, Natural Heritage Information System Data Distribution Coordinator & Endangered Species Environmental Review Coordinator.

In response to my request for the observation logs of the unnamed volunteer site steward on Rush Lake; "The SNA site stewardship program in its current form is quite new (really kick-started in early 2012 by Kelly Randall, SNA outreach coordinator, through funding from the ENRTF). Our current site steward submitted a report from a visit in mid-June, and she noted that she could see 13 nests from her boat, but no nest occupants. Having only been with the DNR for 10 months, I'm still unfamiliar with the monitoring that's been done in the past. I've asked Lisa and Erica if we could engage our site steward in a specific monitoring protocol. Knowing about the need is the first step. It is very useful, and encouraging, to receive inquiries about our SNAs and to know that people care enough to voice their concerns. I'd like to understand why the rookery has declined as well." Larissa Mottl, Central Region SNA Program Coordinator.

As of this writing, Larissa is checking-in with their nongame staff and others about how they can facilitate the conveyance of the public info I've requested, and Peggy will be contacting me regarding what it will take to get Rush Lake Island SNA on the schedule for an official survey and evaluation. Larissa explained that in her Central Region there are 50 SNAs covering over 10,000 acres across 23 counties, with only 4 regional staff to care for them. My hope is Rush Lake Island becomes a priority.

I think we can all agree that the rookery is in decline given the number of nests has gone from about 500 in 1974, to 175 in 2004, to possibly just 13 in 2013. Can anything be done to restore it? As Larissa said, knowing about the need is the first step. I am just one voice, so if you share my concern that our "crown jewel" will be lost forever, at least as a heron rookery, I've arranged a simple way for your voice to be heard and counted. All you need to do to let the SNA Program know you care enough to voice your concern is send an email to Larissa.Mottl@state.mn.us with the following in the Subject line: Rush Lake Island SNA. Larissa will keep track of how many she receives. Every voice counts in letting it be known that we care!

Osprey Triplets on Rush Lake!

Juvenile Markings

The proud parents reside on David & Carole Cartwright's northern platform on East Rush Lake. Osprey usually lay a clutch of 3 eggs (normal range being 2-4), 1 to 3 days apart, which hatch after about 40 days in the order they were laid. The 1st photo, taken July 2, 2013, shows 3 nestlings being attended to. In the next photo taken 10 days later it appears all 3 are thriving. Osprey young can be very hard to see; when their parents are gone, they often flatten themselves against the bottom of the nest, assuring near invisibility to any nearby birds of prey. My how they've grown; in the 3rd photo taken Aug 5th a parent is on the perch, the bird in the air can be recognized as a fledgling by the spots on its wings. The stunning Osprey family photos were captured by Candace Cameron of neighboring Goose Lake. Thank you Candace for sharing your amazing photos with us!

Hermann Insurance Services, Inc.

Complete Insurance Service

JEFF HERMANN
SANDY LUECKEN
JOANN BELAU
Insurance Representatives
310 W. 4th St.,
P.O. Box 678, Rush City, MN

AUTO | HOME | BUSINESS
LIFE | HEALTH | BONDS
& MORE!

320-358-3744
Toll Free 866-664-8954
Website: www.hermann-insurance.com
Email: hermann.insurance@gmail.com

Need a Break from the Lake?

Go Bowling!!

Chucker's Bowl & Lounge offers economical entertainment and exercise for the whole family.

Located in Rush City and featuring 16 synthetic lanes with computer scoring and automatic bumpers, a full bar, food, Wi-Fi, game room, indoor bean bag toss, dance floor, large banquet area, and more!

See You at Chucker's!

(320) 358-0879
Chuckersbowl@gmail.com
www.facebook.com/chuckersbowl

Chucker's Bowl & Lounge

May-August SUMMER HOURS

Friday & Saturday
11:00 a.m.-1:00 a.m.
Sunday
11:00 a.m.-10:00 p.m.
Monday-Thursday
by appointment

1270 W 3rd Street
Rush City

Join a Bowling League!
Men's, Women's, Mixed, Junior
Something for everyone
Starting September
Call for more info and to reserve a space

Cosmic Bowling - Saturday Nights at 9

FULL REAL ESTATE SERVICES FROM A BROKER YOU'VE GROWN TO TRUST!

Rush Point REALTY LLC
The Standard for Excellence

Victoria Frieberg
Broker, Short sale experienced, SFR Certified by NAR TRC

Independent and Proud of It! No Administration Fees, ever. 90% Referral Driven Business means we must be doing something right!

With the most sold lake shore properties in the area for years running, why go anywhere else? Meet me on my kayak, or stop by the houseboat...no problem, or, I do house calls! Farms, residential, townhomes...SOLD! Full service real estate office assures all listings are on NorthStar MLS within 24 hours....making your house visible throughout the country. Transnational Referral Certified by NAR. Search for properties on Rushpointrealty.com or download the App on iTunes and the Google Play Store!

Office 763-689-5343 • Cell 612-369-3746
www.rushpointrealty.com

REALTOR® MULTIPLE LISTING SERVICE MLS EQUAL HOUSING OPPORTUNITY

Lakeshore, Land, Lots, Hobby Farms, Townhomes

Clare & Kathy Lillis

Rush Lake Residents

This address...
www.realhomepro.com
will sell your address.

(Source of all MLS listings)

Lake Shore Specialists
62 Years Experience

COLDWELL BANKER

Pro IV Realty

CALL NOW!
651-248-7888
651-248-7757

1220 4th St., Rush City, MN 55069

Each Office is Independently Owned and Operated.

We handle all your real estate needs:
local – state – national

√ lakeshore √ townhomes √ hobby farms
√ new construction √ lots √ in town homes
√ golf course √ commercial

e-mail: klillis@realhomepro.com

REALTOR® MLS EQUAL HOUSING OPPORTUNITY

Taking Care of Water is Everybody's Business

The Rush Lake Improvement Association is a proud member of the Adopt-a-River program, part of the Department of Natural Resources' Division of Parks and Trails, that encourages Minnesota volunteers to "adopt" a section of a lake, river, wetland, ditch or ravine to ensure its long-term health through annual cleanups. The program provides groups with free bags and gloves for cleanup events, and collects data from participating groups via an annual report card which includes number of volunteers, pounds of trash removed and hours spent on the cleanup.

Volunteers are making a difference!

The RLIA extends our gratitude to each and every individual who has volunteered to pick up trash left on the ice by irresponsible fisherpeople, snowmobilers and other recreational users. If not for the efforts of our volunteers, all that trash would end up on our shoreline and at the bottom of the lake, for as long as one million years. We also thank East Central Sanitation for supporting the program by donating roll-off dumpsters for our ice cleanup events.

Do unto those downstream as you would have those upstream do unto you.

~ Wendell Berry

Reel In And Recycle!
Monofilament Recycling Program

Monofilament fishing line takes over 500 years to decompose

Meanwhile, discarded line can tangle itself around your boat prop, and worse yet, fish, birds and other wildlife become entangled in it, or ingest it, causing injury or death. Even swimmers are at risk from entanglements. To help keep line out of the environment, the Rush Lake Improvement Association partnered with the BoatU.S. Foundation and installed a monofilament recycling bin at each of the Rush Lake public accesses. The bins for the program are funded by the NOAA Marine Debris program, the National Fish and Wildlife Foundation and the BoatU.S. Foundation. The collected line is sent to Berkeley for recycling into useful products such as tackle boxes and fishing line spools. The Berkeley Conservation Institute has recycled more than 9 million miles of line since 1990. That's enough line to fill two reels for every angler in America.

Participation in the program required a two-year commitment. The bins were installed at the East and West public accesses by Kenny Nash, a RLIA Member volunteer, on May 8, 2011. Kenny collected the contents in the periscope-like tubes and Kathleen Maloney-Nash sorted, documented and sent in the monofilament. The RLIA's two year commitment was fulfilled in May 2013, but we will continue to participate as long as we have volunteers willing to collect, sort, document and send in the monofilament.

Unfortunately, while the signage on the collection bins is conspicuous, the volume of trash retrieved was many times greater than the monofilament. All of it had to be cataloged and discarded appropriately, but was most concerning was the potential for injury when retrieving the contents. Fortunately, no used sharps were part of the trash dumped in the bins, but there was one syringe for plumping worms that still had the needle in it. Responsible boaters and fishermen/women pack a trash bag, and take it home or to a dumpster, hopefully recycling whatever they can. It's disheartening that so many irresponsible and inconsiderate people discarded their trash in the monofilament only bins.

Here's the lengthy list of the non-monofilament items retrieved from the bins from May 2011 to May 2013: a dirty diaper, 28 aluminum beverage cans, 3 glass beer bottles and a few pieces of a broken bottle, 22 plastic beverage bottles, 4 convenience store coffee cups w/plastic lid & straw, 8 empty cigarette packs, 19 cig butts, 2 cigar wrappers, 2 empty tobacco tins, 1 lighter, 11 various chip and sunflower seed bags, 8 candy bar wrappers, 4 fruit snack packages, 5 granola bar wrappers, 3 used Ziploc sandwich bags, 7 fast food wrappers and a Subway sandwich bag full of wrappers, 1 broken light bulb (for a boat), the top of a can of baked beans, 6 beer bottle caps, 11 wet wipes and napkins, 1 wadded up Home Depot receipt, 2 antifreeze labels, 1 wide rubber band, 20 ft. of plastic cord, 2 ft. of nylon rope, 3 wads of black electrical tape, 1 newspaper ad insert, 7 jigs, 8 small hooks, 3 leaders, 15 sinkers (some lead), 2 spinners, 1 foam bobber, 1 spongy worm, 12 wads of firewire and spiderwire type line, 5 good size wads of braided microline, 2 empty plastic bait packages, 1 blue plastic worm tub, 1 empty Stren box, 1 empty monofilament spool, 1 plastic wall mount spool full of braid with a sinker, hook & Swedish pimple, 1 clear plastic poncho, a paycheck stub (name, address, wages and all), an empty prescription bottle (with the label including name and address), and a new, unopened Walbro carburetor repair kit.

Despite the abuse, it could have been worse, and if nothing else, at lease none of the trash was dropped on the ground, on the ice, or in the water. The good news, we collected and recycled an estimated 4,773 feet of monofilament fishing line!

This monofilament recycling program is one way people can help keep Rush Lake clean and safe, and protect its wildlife, now and for future generations.

Reel In and Recycle: Please use it, and use it for what it is intended for!

Native American Proverb. ***Photo by Kyle Kenneth Nash Maloney of West Rush Lake. Taken during a fall 2012 scenic flight with Hawk Aviation in Rush City.***