



Mouth of Lake Sarah

TO THE NON MEMBERS OF THE LAKE SARAH IMPROVEMENT ASSOCIATION

Jerry Wise

We hear from the LSIA members on what they want the Board and the Association to accomplish, but we don't hear from you, the non-member. **We need your input.**

This is not a plea for you to join, even though some of you have thought about joining, some of you have been members in the past, and some probably have never been nor ever will be members. That's okay, but if you have any interest in the lake what-so-ever, you have a stake in the future of Lake Sarah.

Have you ever thought about what the lake was like before it was Lake Sarah? What was the fishing like? Could you drink the water? What was the shoreline like? Could you safely swim in the lake? Were there any exotic weeds restricting its use?

Since I have become LSIA president in 2004, the board has made some changes in priorities. Not that past presidents and boards did not put the lake first in their priorities, but the fact is, mother nature and us humans have done some things to this lake that make it one of the most impaired lakes in Minnesota.

In the past, we have had disagreements about the water level, no-wake zones, what the speed limit should be, etc. etc. None of these things will matter if we continue on the same path with lake quality. We are talking about something that is very serious to the well being of this lake. Have you noticed the clarity of the lake is not as good as it once was? Have you seen the algae is thicker than ever? Have you noticed an increase in carp, dogfish and other non game fish species? If you haven't noticed any of these things, you have not been on the lake in the last few years.

The main culprit is phosphorous and the main cause of the phosphorous is curly leaf pondweed. Most lakes, such as Lake Independence, obtain higher phosphorous levels from watershed runoffs and sources outside the lake. Lake Sarah's internal loading is caused by the abundance of the curly leaf pondweed. We also get phosphorous from fertilizers, animal waste, etc. from the surrounding land. To rectify our situation is not a small task and is going to take the cooperation of the entire watershed, especially the owners of Lake Sarah's shoreline.

This is why clean water is the number one priority of the Association and is why we created a special Clean Water

To rectify our situation is not a small task and is going to take the cooperation of the entire watershed, especially the owners of Lake Sarah's shoreline.

Committee. This committee is headed up by Harold "Huck" Burrows and has become a task force which includes representatives from the Pioneer-Sarah Creek Watershed Management Commission, Three Rivers Park District, Hennepin County Environmental District, Independence Horse Owners Association, LSIA, and the cities of Independence, Greenfield, and Loretto. They are now meeting once a month and you can read the notes from the September meeting in this newsletter.

So you see, you don't have to be a member of LSIA to get involved. And if you are a lakeshore owner, or someone who uses the lake, or if you are in the watershed, you are already involved. Are you concerned enough to restore Lake Sarah to its natural beauty and clarity? My hope is that you are and that you will back and support the Clean Water Committee.

Ooh, by the way, LSIA dues are only \$35.00 per family.

Thanks for reading,
Jerry Wise, LSIA President

Water Clarity

Mike Peterson

Lake Sarah's water clarity is high in the spring, deteriorates throughout the summer, and then starts to slowly improve in late July and early August.

In 2006, Lake Sarah's water clarity deteriorated much earlier than 2005. One of the major factors has to be the warmer temperatures we experienced earlier in the year. The warmer temperatures cause everything to bloom, which in turn clouds the water.

Despite the earlier drop in water clarity this year, the lowest readings during the summers of 2005 and 2006 came at about the same time of month, as did the slow return to clarity. Also, according to my observations, 80% of the Curly Leaf Pondweed visible on the surface of the lake was gone by June 8th of this year. In 2005, this didn't happen until June 21st. Some interesting Secchi Disk readings to compare are listed in the following chart:

<u>2005</u>	<u>2006</u>
05-22-05 — 17' 0"	05-22-06 — 10' 6"
05-29-05 — 14' 6"	05-29-06 — 6' 6"
06-23-05 — 3' 6"	06-23-06 — 2' 0"
07-16-05 — 1' 6"	07-16-06 — 1' 6"
07-29-05 — 2' 0"	07-29-06 — 2' 0"
09-10-05 — 2' 6"	09-10-06 — 2' 6"

Note: Secchi depth is a parameter used to determine the clarity of surface waters. The measurement is made with a "secchi" disk, a black and white disk that is lowered into the water and the depth is recorded at which it is no longer visible. A secchi depth recording of 5 ft indicates that the device was last visible at 5 ft below the surface. High secchi depth readings indicate clearer water that allows sunlight to penetrate to greater depths. Low readings indicate turbid water which can reduce the passage of sunlight to bottom depths. Limited light penetration can be a factor in diminished aquatic plant growth below the surface, thus reducing biological reaeration at lower depths.

Water Level

Mike Peterson

Precipitation in our watershed plays a big role in the water level of Lake Sarah, but it's not the only factor. *When* the precipitation falls, along with wind, temperature, soil moisture and more play a role too.

In 2004, 2005, and 2006, precipitation in our watershed January through April was about the same. However, in May through July 2006, precipitation was approximately 35% to 40% less than the same period the previous two years. Lack of rain in May through July, record-setting temperatures, and minimal runoff from the rains we did get are why Lake Sarah was low much of the summer. Note - the water has been below the weir since mid-July.

Most would like Lake Sarah to be higher than it was much of this summer. On the flip side, most

don't want a return to the levels we experienced in 2002. However, regardless of your opinion, it will likely take one more year of data before regulatory agencies will re-access controlling factors that impact the level of Lake Sarah.

Lake level readings taken on September 4th for the past five years are listed below. Note that on September 4th in each of the last three years, the lake's level has been very close to the same. Please extend a special thanks to Ed Penney for his ongoing efforts taking these readings.

<u>Lake Level on September 4th:</u>
2006 — 978.57 feet
2005 — 978.76 feet
2004 — 978.66 feet
2003 — 979.43 feet
2002 — 981.00 feet

Nominating Committee Members Needed LSIA Board Elections

Becky Jacobsen

Volunteers Needed for the Nominating Committee

At the October General Meeting (10/26), we will be looking for volunteers for the Nominating Committee for the April LSIA Board Elections. These individuals will be the contact people for anyone wishing to run for a LSIA Board position, and also asked for ideas and suggestions of others who may be interested.

LSIA Board Elections—April, 2007

The LSIA Board and Committee members have worked hard and successfully completed many projects to benefit our community. Our continued success depends on people willing to participate in a large variety of capacities.

LSIA Board positions up for election in April, 2007 include:

- Vice President
- Treasurer
- 3 Directorships

Each position is a two year term. Anyone interested in either being part of the Nominating Committee or a LSIA Board position, please contact a current board member or come to the October General Meeting on Thursday, October 26th at Independence Hall.

Thank you for your time and support.

Need Information on the Anderson's Inn / Shady Beach Resort bell

Brad Spencer

The old Anderson's Inn / Shady Beach Resort bell used in the 1920's to call guests to dinner or warn fishermen of approaching storms now has a new home.

Denny and Jackie Johnston have had the bell in their family since the 1950's, but are selling their home and have transferred it from their garden to the Spencer's hillside on Shady Beach Circle.

The bell, which was likely cast in the 1890's at the Blymyer, Norton & Co. Foundry in Cincinnati, Ohio, probably came to Anderson's Inn from a local schoolhouse.



The Bell from Anderson's Inn / Shady Beach Resort

Information is being sought from anyone with memories of this bell while it was at the Anderson's Inn / Shady Beach Resort (1920-56), or any memories or photos of the Wagner school (formerly located at Independence road & County rd 11 from 1910-20), or any other information on

this bell's origin. Please contact Brad Spencer 763.479.3525 or email b.spencer@lakesarah.com.

A full article on this bell and the history of its ownership will be included in a future newsletter and posted to the lakesarah.com website.

Clean Water Committee Notes 8/16

John Barten of Three Rivers Park said that they will be using the same team that worked on Medicine Lake to do the TDML Study for Lake Sarah. The cost for the curly leaf pondweed treatment for Medicine Lake was \$230,000. They did 320 acres of treatment on a 1000 acre lake. Curly leaf pondweed grows in 0' to 12' of water depth. Lake Sarah is 620 acres and it will have to be determined how much will need treating.

Concern was expressed if by eradicating Curly Leaf we will be trading for more Milfoil growth. If so we may have to treat for curly leaf pondweed in mid to late April and possibly for Milfoil in June. The DNR permit covers 2 treatments.

Funding for the treatment may come from numerous different sources. The city of Plymouth donated for funding for Medicine Lake since they have a fund from storm run off fees. Currently we have applied for grants of \$30,000 and \$5,000 from the DNR. Approximately \$9,000 for the TDML study for Lake Sarah is funded by the Pioneer - Sarah Creek Watershed Commission.

Fred Bills reported treating an area using Lake Management for the curly leaf pondweed and then Lakeshore Restoration for milfoil with success for \$500.

TMDL Study:

- The TDML Study is being done by Three Rivers Park District. Once completed, Three Rivers Park will present the study to the Pioneer-Sarah Creek Watershed Commission, who will then present it to the MPCA, who will submit it to the EPA. The EPA must approve it. Prior to their approval, it's just a draft.
- The EPA approval mandates that the cities involved address the problem. For MS4 communities, Independence and Medina, the TMDL study becomes part of the required Storm Water Pollution Prevention Plan permit. Development could be stopped if the TMDL is not implemented. However, at this time there is very little that can be done to force compliance in Greenfield.
- John Barten and his staff started monitoring Lake Sarah 2 weeks ago at 3 locations. They will monitor Lake Sarah the balance of this summer and all of next summer. Drought causes a lot of dust that gets washed into the lake during a rain. This dust can skew results. Previous study done in 1991 and 1992 will be a foundation on which the new study is built. Goal of the study is to establish what the phosphorous loading is and identify major sources.
- Killing curly leaf pondweed and milfoil, both surface plants, will allow native plants that live below the

surface to take over. There are lots of seeds from native plants currently in the lake.

- Goal for Lake Sarah is to cut the phosphorous loading to 36 Micro Grams per Liter. Current phosphorous load is over 100 Micro Grams per Liter
- Cost to eliminate phosphorous from storm water can be \$250 to \$700 per lb.
- Discharge from septic systems must be zero.
- Treatment to kill curly leaf pondweed would start at the shoreline, so permission is needed from all property owners to treat within 150 feet of the shoreline.
- To treat a general area, with multiple lake-front properties, requires all homeowners to approve. If they fail to approve, treatment could not be applied in front of their property.
- Cities could charge a storm water fee to offset costs.

Lake Independence:

- Implementing their TMDL study will cost \$550,000 to \$750,000 dollars over 3 years. The study is close to completion.
- City of Independence has not yet allocated any funds or addressed the issue. Lake Independence may receive funds from a newly established State of MN fund called the Clean Water Legacy Act.

Medicine Lake:

- 2.3 million dollars has been allocated.
- They are in the 3rd year of their program. Their program is \$120,000 per year for 3 years.
- They only treated for curly leaf pondweed, not milfoil. They treated the lake with Aquathol.
- Residents appear to be happy with the results.

Weaver Lake:

- Residents appear to be happy with the results.

Lake Sarah - Anticipated Problems:

- If we were to do a whole lake program to kill curly leaf pondweed on Lake Sarah, the DNR might not grant homeowners permits to be able to treat their individual shorelines.
- Treating Lake Sarah could easily cost \$200,000 over 3 years.
- Determining what percentage of the costs should be allocated to each of the cities involved.

(Continued on page 5)

(Continued from page 4)

- Determining within each city the specific sites that are contributing significant phosphorous and trying to correct.

Actions:

- Need to emphasize that this is a long-term plan. In the first year of treatment the problem may get worse.
- Need to allocate costs between the cities of Loretto, Greenfield and Independence.

- Need to target major sources of phosphorous loading within each city.
- Need to have a formal "Aquatic Vegetation Management Plan" that details what will be done AFTER the curly leaf pondweed is eradicated.
- Need to have 1 year of plant data.
- Private citizen groups, like the Blandin Foundation, could contribute. These types of foundations generally are limited to contributions under \$15,000.

Water Quality Affects Property Value

ASSOCIATED PRESS

BEMIDJI, Minn. - A new study of lakes in north-central Minnesota shows that clear water can boost the value of lakeshore property, giving property owners and elected officials a new reason to think about land-use and development issues.

"We concluded that water clarity is very significantly related to the price per foot of lakeshore," said Charlie Parson, a geography professor and co-author of the study. "We have enough lakes and enough parcels to establish that this is a real relationship."

Water clarity, a measure of how deep you can see into a lake, can be affected by pollution, erosion and other factors, such as the removal of shore vegetation.

Leech Lake, for example, is clear to a depth of about 10 feet. The study said that if the water got clearer -- so that you could see down another 3 feet -- a lake property's value would rise by \$423 for each foot of frontage. For a 40-foot lakefront lot, that amounts to nearly a

\$17,000 gain in value. Property values on other lakes would be less dramatically affected by changes in water quality, the study said.

Lakeshore property is under tremendous development pressure, she said, and builders and landowners change the landscape.

"They need to follow guidelines that are advantageous to good water quality and that prevent erosion and nutrient runoff," she said.

Parson said the worst practices include removing trees, native plants and aquatic vegetation in front of the property, "and then mowing everything down to the water and fertilizing the heck out of it."

He said "the golf-course look" might increase property value in the short term, but such changes by too many owners will eventually alter a lake's ecology and degrade its water.

Membership Report—Fall 2006

Brad Spencer

As of the end of August, there are 154 paid memberships. This ties last year's record number of memberships and compares to 137 members in 2004.

78 of our current members are taking advantage of the LSIA discounted residential trash program.

The Lake Sarah Improvement Association thanks you all for your continued support! If you would like information on membership or about the residential trash service discount for members please contact Brad Spencer at (763) 479-3525 or visit the website www.lakesarah.com

WELCOME to some of our newest Lake Sarah neighbors. (former homeowners name in parenthesis):

John & Victoria Marley – 5240 Lake Sarah Heights Drive (Pridey)
Brent & Heidi Foster – 4755 Lake Sarah Heights Circle (Hibbard)
Greg & Bridgett Vanyo – 4775 Lake Sarah Heights Circle (Dietrich)
Suzette Rothberg – 4508 Shady Beach Circle (Douma)
Rick & Kelly Spychalla – 4504 Shady Beach Circle (Emmer)
Cindy Wenell – 4574 Shady Beach Circle (Jorgenson)
William & Renee Schuyler – 5350 Sunset Lane (Lundeen)
Tom & Shari Dalum – 5150 Fern Drive (new construction)

LAKE SARAH PAVILION'S "POP CORN GIRLS"

By Kathy Hahn



Left to right: Betsy, Carol, Margie

Growing up on Lake Sarah and at the Mitchell Farm had many benefits, but it was a lot of work for the Mitchell Girls.

Betsy was the first to be recruited to helping on the Mitchell Farm. Before the dance hall was built, she sold cans of angleworms for ten cents to the people that rented boats from her parents. The Mitchell Resort had 5 cabins and 10 boats. At the same time her parents farmed the 84 acres that Sydney Mitchell had moved to when he was 9 years old. At night Sydney would play the fiddle and banjo at different barn dances, three to four times a week in the season. In 1931, the Mitchells decided to build a 50' x 100' dance hall called the Lake Sarah Pavilion, up on the hill of their farm.

The Pavilion opened Easter, 1932. The Lake Sarah Pavilion had a maple dance floor and shutters that opened to the lake, which was needed for the breeze since there wasn't any air conditioning, but there *weren't* any screens. Every year it opened at Easter and stayed open until Halloween, when it was closed for the winter.

There were other Dance Halls in the area. One was in Loretto, just south of the railroad. It was built before the Lake Sarah Pavilion. Another one was at Reinking's, west of the Mitchell farm on the north side of Lake Sarah. Reinking's had a Gazebo where you could buy pop, candy, and ice cream cones (Margie's favorite). And they had great fireworks! Between Mitchell's place

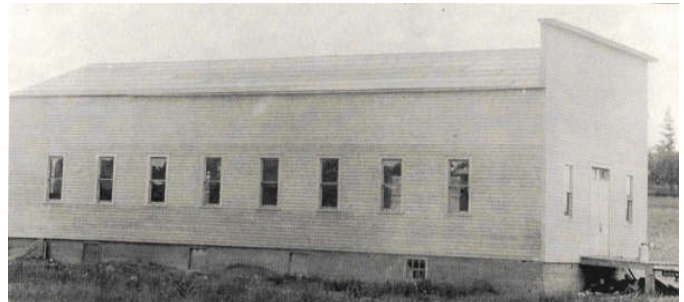
and Reinking's Resort was the train depot. Sometimes the train would stop four times a day, if necessary. Sydney Mitchell said he had seen as many as 50 or more people get off the train on a Saturday evening.

Once the Lake Sarah Pavilion opened, the first official pop corn popper and seller was Sydney Mitchell, Jr. (Sonny). Three years later, Betsy's job description increased. Now she would sell popcorn that she made by hand besides selling angleworms. She was the first "**Pop Corn Girl**" at 10 years old. Each bag of popcorn held approximately 2 cups of popcorn and sold for

ten cents. After 7 years, Betsy had saved \$900 and loaned it all to her future husband, Lloyd Vergin, for a milk route. This adventure proved to be a successful one, and so did their marriage.

Betsy passed the popcorn job on to her two younger sisters, Carol and Margie. They also had the job of cleaning up the dance hall and their Uncle Ben had told them they could keep all the change they swept up off the floor. *They didn't know until years later that he had sprinkled change on the floor for them to find.*

When Carol and Margie took over the "Pop Corn Girl" job, modern times had arrived and they had a popcorn popper. The popcorn still had to be watched and Uncle



The Loretto Dance Hall, located just south of the railroad tracks, was a popular site until it was destroyed by fire. Couples came by horse and buggy on weekend evenings to kick up their heels to the tunes of local fiddlers and other musicians.

(Continued on page 7)

(Continued from page 6)

Ben would check on it ever so often. He wouldn't be very happy when he'd catch Margie out dancing with a cute fella and not doing her job because the popcorn would be burnt. Then they'd have to redo it and that would come out of their profits. Carol retired her title after 6 years to marry Jerry McCann. She used the money she had saved to buy furniture.

Now Margie was the solo "Pop Corn Girl". After 6 more years she retired and had saved enough for a down payment on their first home as she became Mrs. Jerry Klaers.

Ben Mitchell, was the Dance Hall proprietor. He hired the bands and sold the dance hall tickets. Some times as many as 700 tickets would be sold for a dance. Lloyd Vergin was the hand stamper and some nights there were a lot of hands to stamp. There were a lot of name bands that played and here is an example of a line up for a few weeks.



Lake Sarah Train Depot

During the dances, there were several security people to help out — Delbert Loeffler, Glenn Conzet, Leo Leuer and Ted Reimer.

Lake SARAH BALLROOM

SUN. AUG.	12	IVAN KAHLE
SAT. "	18	Wedding Dance <small>Gene Anderson & May Wietsheller</small>
SUN. "	19	EARL SCHMIDT
SAT. "	25	Free Wedding Dance <small>Nick Gelling & Kathleen Dussler</small>
SUN. "	26	Whoopie John
SUN. SEPT.	2	IVAN KAHLE
SAT. "	8	Free Wedding Dance <small>Genevieve Pugh & Elaine Hagg</small>
SUN. "	9	Jolly Lumberjacks
SUN. "	16	Six fat Dutchmen
SUN. "	23	Whoopie John
SAT. "	29	Free Wedding Dance <small>Dorrie Ahern & Mildred Wachman</small>

Dance every Sun. Nite

There is a story that several times Sydney would tap a keg and never shut it off until it was empty. A glass of 6 oz. beer was ten cents. As fast as Sydney could pour, Alex & Agnes Schumacher and Otto & Della Arens would sell them, along with fifteen cent set ups, pop, and Laura's (Mitchell) famous hamburgers with onions.



There aren't many pictures of the Lake Sarah Pavilion, but here is one with Carol as a small girl. The Lake Sarah Pavilion is in the background. After 32 years of business and 2 maple dance floors, the LAKE SARAH PAVILION closed on Halloween, 1964. It was sold and taken down board by board.

There are many residents that live in the area that can tell you stories about dancing, having their wedding receptions, or other great memories at the Pavilion. Thank you "Pop Corn Girls" (Betsy, Carol and Margie), for sharing your memories and time with me. For me, it was a very enjoyable morning. Kathy Hahn

Your Lake, Our Lakes:

Three ways to reduce pollution from your Lakeshore Property

Paul Radomski

DNR NEWS Summer 2006

Lakehome owners have a strong desire to protect their lake. Healthy lakes provide the recreational and aesthetic benefits lakeshore residents value. In addition, healthy lakes enhance lakeshore property values. There are three ways we can reduce pollution and maintain healthy lakes.

- Reduce runoff from roofs and driveways by getting rainwater into the ground near where it falls.
- Reduce lawn size by reverting back to natural shorelines.
- Maintain our septic systems.

REDUCE RUNOFF

Rainwater runoff is a major source of water pollution. Nationally, runoff is responsible for up to 15 percent of rivers and lakes with poor water quality. Rainwater runoff comes from roads, driveways, roofs and lawns. Rainwater that does not infiltrate into the ground or evaporate becomes runoff. Runoff is not only occurring when streams are full after a rain, but it also occurs when small sheets of water flow over the surface of our lawns and head down to the lake. Runoff carries pollutants, such as oil, dissolved metals, pesticides, suspended solids, pet waste and nutrients, such as phosphorous, which can lead to algae blooms.

Good rainwater management can help reduce pollutants and excessive nutrients from entering our lakes. When rainwater is allowed to infiltrate into the ground, the soil and plants can purify the water before it reaches the lake or river.

There are two ways to manage rainwater. The traditional way has been to move water off fast. This approach uses stormwater sewers, pipes and ponds. Unfortunately, civil engineers have found that this expensive approach does not work well. Often, the outcome is water quality and water quantity problems downstream or downhill.

The second way of managing rainwater is to get the water and the pollutants it carries into the ground near where it falls. This can often be a small-scale, decentralized and low-cost option. This approach uses infiltration basins, rain gardens, grass overflow parking areas, grass swales, porous or pervious paver blocks, and fewer impervious surfaces. Infiltration reduces pollutants and nutrients entering our lakes, thus protecting the lake water quality.

For lakeshore owners, a simple start to managing rainwater is to redirect gutter downspouts that run onto

impervious surfaces, such as driveways and sidewalks so they run onto vegetated areas instead. Rain gardens are a good way to capture runoff when greater infiltration is needed.

Homeowners can use rain gardens to manage rainwater on their property. Rain gardens are landscaped areas planted with wild flowers and other native vegetation that soak up rainwater coming right off the roof and driveway. The rain garden fills with water after a rain, and the water slowly infiltrates rather than contributing to the runoff problem.

Cumulatively, numerous rain gardens in a neighborhood can have substantial positive environmental benefits. They can reduce drainage problems and pollutants entering lakes and streams, and they can recharge groundwater and create bird and butterfly habitat.

REDUCE LAWN SIZE

Managing rainwater also includes protecting natural areas important for water transport and filtering, such as wetlands, streams, and vegetated buffers near water. A shoreline buffer of natural vegetation traps, filters and impedes runoff. The simplest and sometimes most effective way to recreate this buffer is to stop mowing down to the lake. A smaller lawn with a larger shoreline buffer will help infiltration and reduce runoff.

MAINTAIN SEPTIC SYSTEMS

Finally, for those lakehome owners who use septic systems to treat and disperse waste and recycle water, maintenance is critical. Sludge builds up in the septic tank and should be pumped out every two to three years. If sludge accumulates to the level of the outlet pipe, clogging will occur, which will damage the drainfield and reduce the life expectancy of the system. Drainfields can also fail when they are overloaded, either with too much water or too much garbage disposal waste. The average life of a drainfield is 10 to 20 years.

Lakehome owner management of septic systems is sometimes inadequate. Some government organizations and communities have developed septic system management programs that track routine maintenance and compliance with public health standards. These programs can save home-owners money, because regular maintenance and inspection costs are much less than cost to replace failed systems.

Your Lake, Our Lakes: Do we need to reforest our lakeshores?

Paul Radomski and Russ Schultz

DNR NEWS Summer 2006

Some lakeshore owners prefer the lawn-to-lake style, but there are drawbacks to this type of shoreland. Lawns to the lake decrease habitat and increase the runoff of nutrient-rich rainwater into the lake or river.

Water runs off lawns because grass roots are shallower than the roots of native vegetation and the soil under lawns often becomes compacted. The deeper roots of native vegetation enhance aeration and infiltration. Many lakeshore sites with lawns to the lake have been heavily graded during construction. The depressions and swales that would normally retard runoff are often graded over, topsoil removed, and the underlying soil compacted, making a flat lawn. But, flat lawns are more like pavement in their inability to infiltrate and retard stormwater runoff. Rainwater runoff from lawn-to-lake shorelines is 5 to 10 times higher than forested shorelines.

Runoff can be a major source of pollutants. Everything in the lawn, as well as on the streets and driveways, is carried by stormwater runoff into the lake. Water flowing over lawn surfaces picks up dirt, pesticides, toxic chemicals, fertilizers, pet waste, and other pollutants. Runoff often contains phosphorous, a plant nutrient, which can increase algae growth, and in turn lower water clarity. Just 0.2 pound of phosphorous can produce 100 pounds of algae. And although runoff from lawn-to-lake lakeshore sites varies considerably, on average a lawn-to-lake lot produces 0.2 pounds of phosphorous per summer compared to 0.03 pound per summer for a natural shoreland lot.

Minnesota soils are often phosphorus rich. So even an unfertilized lakeshore lawn allows seven to nine times more phosphorus to enter a lake than a naturally vegetated shoreline. Excess nitrogen, another plant nutrient, can also be trans-

ported to lakes from these lawns at higher rates.

Shoreline buffers can help minimize impacts associated with the lawn-to-lake style. These corridors of natural vegetation along rivers and lakes help protect water quality. A shoreline buffer of natural vegetation traps, filters, and impedes runoff. Buffers stabilize banks of lakes and rivers, offer scenic screening of shoreland development, reduce erosion, and control sedimentation. A natural shoreline also provides food and habitat for fish, waterfowl, songbirds, frogs, turtles, mammals, and butterflies.

...perceptions and laws are changing. Many people now realize that a manicured lawn impacts the ecological balance of the lake.

In the past, many people thought that a lawn to the water's edge was beautiful. But perceptions and laws are changing. Many people now realize that a manicured lawn impacts the ecological balance of the lake. Many agencies and organizations can help you learn more about shoreland buffers or the location of demonstration sites you can visit. Several links are available through the North Central Minnesota Lakes website at www.dnr.state.mn.us/lakes/ncml_j.html.

Details of the Shoreland Rules Update project are online at <http://www.dnr.state.mn.us/waters>.



Lakescaping and Shoreland Restoration

www.dnr.state.mn

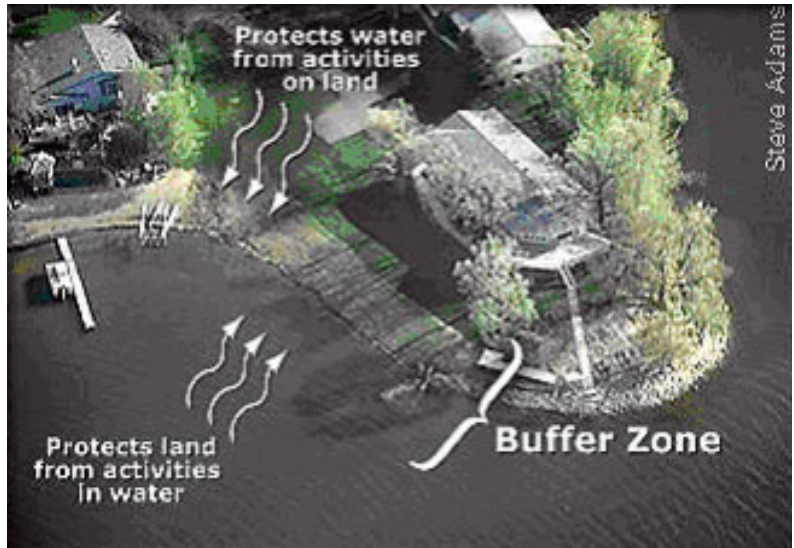
Principles

Shorelands are naturally full of a rich diversity of life: plants, animals, and microorganisms, including humans. As we understand more about the structure and function of shoreland, we also become aware of the importance of our role in keeping these systems healthy. Our efforts can lead to the restoration of a quality outdoor resource, and a community full of life and beauty.

The Problem

Traditional lawns, while not particularly harmful, have few of the benefits of a more natural shoreline. Lawns are shallow rooted, provide little wildlife habitat, need frequent maintenance and are often over-fertilized. These factors can lead to problems such as:

- Shoreline erosion and lake sedimentation
- Algal blooms and excessive aquatic plant growth
- Loss of wildlife habitat, but an increase in nuisance animals
- Loss of leisure time



- Provide habitat for a variety of wildlife
- Filter out pollutants and runoff that degrade water quality
- Prevent shoreline erosion by absorbing wave action
- Enjoy abundant nature: flowers, shrubs, trees, aquatic plants, fish, insects, birds
 - More leisure time to relax and enjoy the nature of life at the lakeshore



Restoring the balance of nature enhances the aesthetic quality and recreational opportunities we appreciate. It will also balance your lifestyle with the needs of the natural communities of plants and animals that also call the shoreland home.

Buffer Zone Solution

Creation of a buffer zone is the essence of the lakescaping concept. It is an opportunity to balance our needs and priorities with the needs and priorities of those with whom we share life at the edge of the water.

Lakescaping and shoreland restoration can return many desirable features to your shoreline:



Winter Bird Feeding

www.dnr.state.mn



Winter is the time to change the composition of bird foods offered and possibly the arrangement of your feeders. This will help the birds survive and increase your enjoyment of bird feeding in the snowy months ahead.

Permanent residents, such as chickadees and cardinals, are dependable every year. But some winter visitors

include birds of boreal regions that are unpredictable because they tend to be cyclic, where numbers peak at three to four or nine to ten year intervals, or irruptive, meaning periodic appearances of unusually high numbers. If seeds are in short supply, some species, such as **Red-breasted nuthatches**, **Common** and **Hoary redpolls**, **Pine siskins**, **Red** and **White-winged crossbills**, and **Pine grosbeaks**, may wander far from their normal ranges in search of food.

Black-oil sunflower seeds and cardinal mixes have the greatest appeal to the broadest variety of winter birds and contain a high energy content. The list of birds that favor sunflower seeds is impressive: **Northern cardinals**, **Blue jays**, **Black-capped** and **Chestnut-backed chickadees**, **House** and **Purple finches**, **American goldfinches**, **Evening** and **Pine grosbeaks**, **Gray** and **Steller's jays**, **nuthatches**, **crossbills**, **titmice**, and many more.

If you provide sunflower seeds on your deck or patio, you may wish to try sunflower hearts to avoid the mess that occurs in spring when you discover several inches of sunflower seed hulls under your feeders. Peanuts provide a nutritious diet for birds, including **Black-capped chickadees**, **nuthatches**, **woodpeckers**, and **Blue jays**. Even **Northern cardinals** will come to a peanut feeder. **Cracked corn or milo (sorghum)** is so attractive to **House sparrows** and **starlings** you may not want to used them.

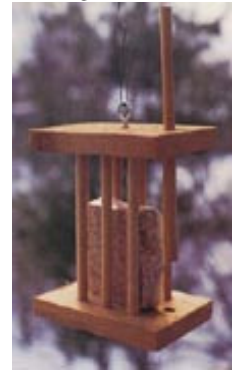
Millet mixes contain 80 to 90 percent millet and a small percentage of sunflower seeds and other ingredients, such as milo, wheat, rape and canary seed. Small amount of millet can be scattered on the ground or on tray feeders to accommodate **Dark-eyed juncos**, **Mourning doves**, and **American tree**, **Fox**, **Harris'**, **White-throated**, **White-crowned** and **Golden-crowned sparrows**.

The most important change from fall feeding to winter feeding is to decrease the proportion of millet mix from 30 to 40 percent in the fall to about 10 percent in the winter as the **migrant sparrows** and **juncos** move farther south. Niger seed—thistle—is an excellent all-winter staple for **American** and **Lesser goldfinches**, **Common** and **Hoary redpolls**, **House** and **Purple finches**, and **Pine siskins**.

Many wintering birds benefit from the high energy nutritional benefits of suet, suet mixes, and peanut butter. Suet can be fed

in onion sacks, wire mesh feeders, wooden dowel (cage) feeders, or placed on open platforms that are secure from dogs and other "suet robbers."

Pileated woodpeckers seem to prefer their suet on solid platforms instead of suspended feeders. Conventional suet feeders sometimes attract **European starlings**, another nuisance exotic species that drives native songbirds from your yard and from nesting cavities in the spring. If **starlings** are a problem, use a "starling-proof" feeder that forces the birds to feed upside down. **Chickadees**, **woodpeckers**, and **nuthatches** have no trouble feeding this way, but **starlings** have weaker feet and are not able to feed in such an awkward position. Peanut butter is another good choice for filling log-style feeders and smearing on pine cones



When switching from fall to winter feeding, you may want to place a group of feeders closer to the house. Tray feeders and fly-through feeders can be placed on a deck railing so they are easier to access when the snows accumulate. As in fall feeding, use several feeder clusters of three to four feeders per cluster and a ground feeding site. Each cluster has a variety of feeder types that offer larger seeds, smaller seeds, and suet. Corn feeders are placed toward the back of the yard to accommodate squirrels, rabbits and pheasants. If possible, feeders should be near the protective cover of pines, spruce or juniper trees so birds can rest in the shelter of those trees between visits to the feeders.

The best feeder sites are downwind from the shelter provided by conifers, switchgrass plantings, cattail marshes or buildings. To avoid giving raptors or cats an advantage in catching birds, feeders should be at least ten feet from the nearest cover where such predators could hide. If your feeders are within ten feet from heavy cover, encircle them with 2" x 4" welded wire fencing at least thirty inches high and about six to eight feet in diameter. This will help deter predators.

If placing feeders closer to the house increases the number of bird/window collisions, try using stick-on window feeders, or move feeders to within one or two feet of the window. By reducing the distance between the feeder and the window, birds have less room to build up the speed that causes serious collisions.

If **House finches** become a problem, an anti-House finch feeder is available. **Goldfinches** are able to perch upside down and feed, but **House finches** can't. If you experience a large number of **redpolls** or **Pine siskins** trying to use your feeders, scatter a few handfuls of niger seed on top of sunflower seeds in tray feeders. Small tray feeders can also be stocked with niger to attract **Pine siskins** and **redpolls**



Lake Sarah Improvements Association
P.O. Box 25, Loretto, MN 55357-0025

NON PROFIT ORG.
U.S POSTAGE
PAID
LORETTO, MN
PERMIT NO 6

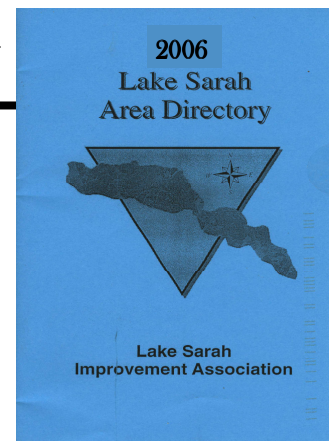
Place label here

2006 Lake Sarah Directories Mailed

Brad Spencer

The 2006 Lake Sarah Directories were mailed to all paid member households this summer. Any member or new resident who did not receive a directory can contact a board member.

If you have any corrections or information on new neighbors for next year's directory, please contact Brad Spencer at (763) 479-3525 or by email at b.spencer@lakesarah.com.



2007 LSIA Calendar

Mark your calendars for these upcoming 2007 LSIA events!

- | | |
|----------------------|---|
| Saturday, March 3 | Ice cleanup day |
| Thursday, April 26 | Spring membership meeting and elections |
| Wednesday, July 4 | Boat parade / decorating contest |
| Sunday, July 22 | Membership picnic and Summer membership meeting |
| Thursday, October 25 | Fall membership meeting |