

# Providing Leadership and Assistance to Protect Our Valuable Resource



[www.priorlakeassociation.org](http://www.priorlakeassociation.org)

## 2017/2018 Calendar of Events

April 22  
Boating Safety Class

May 20  
Carp Angling Contest

July 2  
Ice Cream Social On  
The Lake

July 4  
Boat Parade and  
Fireworks

August 5  
Lakefront Days Parade

August 6  
PLA Family Fishing  
Tournament

September  
Community Fest

October  
PLA Membership  
Annual Meeting

February 2018  
Ice Golf

February 2018  
Ice House Contest

February 28 2018  
PLA Photo Contest

## Join The PLA

If you use the lake or just appreciate it's natural beauty, please consider joining the PLA. Member-ship is only \$30 per year. To join go to our web page!

## Holy Carp!

# Spring Lake Carp Seining Hauls In Destructive Fish

Beginning in 2015 the Prior Lake-Spring Lake Watershed District was awarded a Minnesota Pollution Control Agency grant for carp management on Spring Lake and Prior Lake through the Clean Water Partnership. The strategy is to track the movement and population of carp, identify spawning areas and installing carp barriers, in addition to targeted carp removals.



*Fred Corrigan*

To that end, ten carp in Spring Lake and 16 carp in Prior Lake were implanted with radio tags to track their locations. Using the information from tracking the radio tags, PL/SLWD successfully netted and removed 1.9 tons of carp from Upper Prior Lake (pictured below) that

ended up at the Shakopee Mdewakanton Sioux Community's Recycling Facility.

In the spring of 2016 the watershed district conducted a seine on the east bay of Spring Lake where several radio-tagged carp were found congregated. That seine only netted 22 carp.

However, the District's patience paid off in January of this year when eight of the tagged carp were closely grouped, along with other carp, on the north side of Spring Lake and WSB & Associates coordinated a seine with a commercial fisherman. The result, according to Watershed District President Fred Corrigan, was the removal of 2,575 carp totaling over 34,000 pounds (17 tons) from Spring Lake. Based on the preliminary population estimate, this seine captured over 50% of the carp in Spring Lake. Future tracking and seines are to be conducted as well.

With a successful removal under their belts in Spring Lake, the District is concentrating most of its efforts in 2017 on removing a significant population of carp in Upper Prior Lake. However, Upper Prior poses a few challenges as it has only



*Shown above is a portion of the massive haul of carp harvested this past winter by commercial fisherman on Spring Lake.*

been netted twice before and little is known about the lake bottom. Commercial fishermen are concerned that unknown obstructions (rocks, woody debris, etc.) in the lake may rip their nets. This leads to a waiting game on Upper Prior for the perfect moment when the fish are not only congregated in one spot, but a spot that the fishermen are willing to net. Once the carp group up in the right place, the watershed district will be working quickly with commercial fishermen to net and remove them in the Spring and Fall of this year.

President Corrigan added that two temporary carp barriers are to be installed this month. One in the connection between Spring and Prior and the second will be placed between Spring Lake and a pond where carp are suspected of spawning.



# Prior Lake Association President Tom Stephenson



It is important that all lake users be aware of local rules and ordinances. To that end, the Water Surface Use Management group, in the past year, was tasked with various issues related to the actual use of the lake recreationally. One of the first tangible results from these efforts is the updated lake ordinances for Prior and Spring lakes. Highlights are shown below this article.

There were two significant changes in the ordinances. First, the 150 foot No Wake Zone around the shoreline has been adopted for Spring Lake also. There were some other changes, such as speed limits, to the Spring Lake ordinance to make the regulations the same on both lakes, making it simpler for boaters and law enforcement.

Second, there is no towing of water toys in a No Wake Zone. This includes the channel between Upper and Lower Prior, the channel off Reeds Island and the other bays marked No Wake. There have been many dangerous incidents with riders falling off tubes and tubes straying across the other lanes of boat traffic. This is a much needed safety change.

Paradise Bay has also been made No Wake. This was requested by the residents due to the fact that there is no real boating area that is outside the 150 foot shore line zone and it will be less confusing for boaters.

As always, feel free to stop by one of the monthly Board meetings. Board members and meeting details can be found on the website. [priorlakeassociation.org](http://priorlakeassociation.org).

Hope everyone has a great fun-filled and safe summer on the lake!

## Eliminating Phosphorous

**Carp Control:** The first netting in Fall of 2016 was very promising and netting efforts will continue. In addition to carp removal, the district is also tracking the carp to identify spring spawning areas and install carp barriers to prevent carp from accessing their spawning sites.

**Vegetation Management:** Aquatic vegetation can improve water clarity because it uses phosphorus in its growth cycle. However, some plants are invasive and take over native plant communities. The PLSLWD treats the invasive aquatic plant, Curlyleaf Pondweed, to allow room for natives to grow.



*Blue-Green Algae on Upper Prior Lake October, 2016*

**Alum Treatments:** Another option to reduce phosphorous involves dispersing Aluminum Sulfate (alum) into the lake. The alum binds to phosphorus rendering it unusable to the algae. Spring Lake (which feeds into Prior) was treated with alum in 2013 with promising results. The treatments typically reduce the phosphorus levels for 10 to 30 years. Unfortunately, high carp population can reduce the longevity of alum and treating Upper Prior will cost about \$900,000. Carp removal is significantly less expensive. Depending upon the effectiveness of the carp removal program, an alum treatment may not be necessary.

**Other options:** Dredging and aerating the lake were also considered. It was determined an alum treatment would be more cost effective if further treatment is needed after carp removal.

### *Beat The Heat And Get A Treat*

## On The Water Ice Cream Social!



It's become an annual Prior Lake tradition: free ice cream on the lake! Prior Lake Association volunteers will again be handing out free ice cream treats from 1 - 3 p.m., Sunday, July 2 from a boat flotilla located in the no-wake zone north of the Wagon Bridge. Pull up for a cool treat for everyone aboard!



### BOATERS RESPONSIBLE FOR KNOWING THE RULES

Prior Lake Ordinance Section 703 - Spring Lake Ordinance #16-002



### NO TOWING IN ALL NO WAKE ZONES



### NO WAKE WITHIN 150' OF SHORE



### SUNRISE TO 1/2 HOUR AFTER SUNSET

WEEKENDS & HOLIDAYS, MEMORIAL DAY TO LABOR DAY



### 1/2 HOUR AFTER SUNSET TO SUNRISE

ALL TIMES DURING THE YEAR

*The glass in the young lady's left hand contains a water sample from Upper Prior Lake. In her right hand is a sample from Lower Prior Lake last year.*



## The Fight Against Phosphorous

# Aiming For Blue

Late summer algae blooms on Upper Prior Lake created excessively green, unswimmable, and potentially unhealthy lake conditions in 2016. The underlying cause is complicated and the following, written by PLA Board member Steven Reinders and Jamie Rockney and Katherine Keller-Miller of the local watershed district, is a summary of why this could be happening and what is being done to address the problem.

Phosphorus is the main factor that causes algae growth. The average concentration of phosphorus in Upper Prior is higher than Lower Prior, which is one of the main reasons for the difference in water quality between the two lakes. But other factors can impact algae growth, including lake depth, carp, vegetation, temperature and weather and boat traffic.

**Depth:** A lake that is 15 feet or less in depth is considered shallow and a lake deeper than 15 feet is classified as a deep lake. Thus, Upper Prior is considered a shallow lake and Lower Prior a deep lake. Shallow lakes generally have higher concentrations of phosphorus for many reasons, so the water quality standards for deep and shallow lakes are set at different levels. It is not “fair” to expect the water quality of a shallow lake to be as good as a deep lake.

Water layers circulate more easily and frequently in shallow lakes. This brings phosphorous-laden sediments at the bottom of the lake to the upper water layers where they feed algae blooms. This is especially true if other factors are helping to churn up the phosphorous and bring it to the surface. Water layers in deeper lakes tend to circulate less, leaving the sediments and phosphorous on the bottom.

**Carp:** An invasive, this bottom feeding fish which root up and erode lake floor sediments, releasing phosphorous and making it available to feed algae blooms. Carp also destroy vegetation which takes up phosphorous and keeps sediments in place.



*Upper Prior filtration disk on left, Lower Prior on right.*

The recommended maximum threshold for a lake's carp population is approximately 100 pounds per acre. Given recent fish surveys, Lower Prior Lake is at or below that level whereas Upper Prior Lake has approximately 3 to 5 times that amount. Carp also prefer higher oxygen levels in the water. In shallow lakes, higher oxygen levels can extend all the way to the bottom of the lake, making the entire lake hospitable for carp. In deeper lakes, higher water oxygen levels are found around the shorelines but the deeper waters have lower oxygen levels, limiting the area that carp will inhabit and damage. Carp also excrete one half of their total daily food intake into the lake which provides additional fertilizer for algae blooms.

**Vegetation:** Plants compete with algae to take up phosphorous; more plants mean fewer algae blooms and less green water. Based on studies by the Watershed District, approximately 10% of Upper Prior has plants growing on the lake bottom compared to about 40% or more in Lower Prior. Plant coverage of 40% or more is ideal for water clarity.



*Steven Reinders*

Vegetation plays an important role in stabilizing the lake bottom and reducing phosphorous release. When vegetation is absent, wind, waves and boat traffic can cause lake sediment to become suspended. Carp play a major role in the lack of vegetation as their bottom feeding habits uproot naturally occurring vegetation.

Water clarity also impacts vegetation growth. When water clarity is low, sunlight cannot reach plants to provide sunlight for photosynthesis. 85% of Upper Prior lake is less than 15 feet deep, which is the ideal depth for plant growth. If water clarity increases significantly in Upper Prior Lake, it is possible that plants could grow in 85% of the lake bottom, rather than the current 10%. Although this would significantly benefit water clarity and habitat for aquatic life, vegetation can be a hindrance to recreation.

*(Continued on back page.)*

# Thanks!

Fireworks Contributors

A sincere "Thank You" to our Prior Lake Association members, as well as local businesses and organizations that contributed to the PLA-sponsored events in 2016. Without their support, these events would not be possible.

## PLATINUM

City of Prior Lake  
Prior Lake Rotary

## GOLD

Charlie's on Prior  
Integra Telephone  
Lunds & Byerlys  
Norex, Inc.

Prior Lake Lions Club  
Prior Lake VFW

## SILVER

Advanced Waterproofing  
Advanced Sandjacking  
Knotty Oar Marina

Jerry Young - 1st MSP Realty  
Prior Lake Rental Center  
Drs. Steve & Jennifer Reinders  
Viking Liquor Barrel

Village Liquor  
Voyageur Financial

## BRONZE

Dr. Michael Babcock  
Cal Tech Electric  
Edina Realty  
Haugen Insurance  
Julie Muelken Agency  
Klein Bank

Metro Cabinets  
Prior Lake Auto Collision  
Prior Lake-Savage Optimists  
Todd Spratt Chiropractic

## CONTRIBUTOR

Blahnik Law Office  
Flowers Naturally of Prior Lake  
Swanke Financial Group

## FAMILY FISHING TOURNAMENT

Prior Lake Bait & Tackle  
Prior Lake-Savage Optimists Club  
Mills Fleet Farm  
eXtream Bass



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## Aiming For Blue *(Continued from inside)*

Temperature and Weather: Heavy winds can churn up lake bottom sediment and release phosphorous. This happens more commonly in shallow lakes because the sediments are closer to the surface. As 2016 had some very windy weather, extra phosphorus was probably stirred up from the lake bottom and further fueled algae growth.

Shallow lakes also tend to be warmer than deep lakes which further contributes to algae growth. The winter of 2015-16 saw a very late Ice-On and an early Ice-Out which allowed the lake to warm up sooner than normal, potentially increasing algae growth.

According to the DNR, 2016 was the fifth warmest year on record for Minnesota since 1895. Not only was 2016 very warm, it experienced the second wettest year on record. The DNR also noted that none of the past 122 years have been both this wet and warm. Heavy rains and storms create mixing conditions in the lake while adding additional phosphorous into the lake from stormwater runoff, providing more phosphorus for algae. High lake levels can also allow cause phosphorous to seep into the lake from shorelines. The 2014 flood saw record rains and high lake levels which may have contributed to the current problem.

Boat traffic: Wakes from boats can mix lake sediments and erode shorelines thus releasing phosphorous. This is also more common in shallow lakes as the sediments are closer to the surface and more easily disrupted.

## Fishing Tournament August 6th

The Prior Lake Association's 17th Annual Family Fishing Tournament will be held Sunday, August 6 from 11 a.m. to 2 p.m. Charlie's on Prior will again be hosting the tournament.



Watch the PLA website and Facebook for further details. Trophies, like last year (see above) will be awarded.

## Fifth Annual Carp Tournament

The check-in time for the annual Prior Lake/Spring Lake Carp Tournament is 7 p.m. Saturday, May 20 with the start scheduled for 8 p.m. The close and weigh-in will be at 7 a.m. Sunday according to the event's sponsor Knotty Oar Marina. Teams can be comprised of up to three people with a registration fee of \$50 per team. Each boat will be restricted to a single lake with no more than 10 teams on Spring and 40 on Prior. To compete anglers should register at the marina or email [thane@knottyoar.marina.com](mailto:thane@knottyoar.marina.com). Cash and prizes will be awarded.

