



SAND LAKE PROPERTY OWNERS ASSOCIATION, P.O. BOX 690, DEER RIVER, MN 56636-0690 • WWW.SLPOA1.COM • SPRING 2018

CAROLE OLSON

As I am writing this letter spring is in the air, most of the ice is off the lake and the loons are back singing their amazing song. I am looking forward to hearing more of the sounds of spring and seeing my flowers starting to bloom.

Representing SLPOA were board members Chuck Baker, Myron Hahn, and myself along with Steve Casselman, Cliff Olson, Mike Stettler and Phil Thompson.

In February Dave Weitzel from the DNR went before the Itasca County Board of Commissioners and received approval to continue pursuing the purchase of land around Birdseye Lake to create additional Aquatic Management Area (AMA). This is a project that SLPOA has been supportive of for many years. There were several property owners present to support Dave.

March brought the first Itasca Area Business Water Summit to Grand Rapids. The summit was hosted by Itasca County AIS Program, funding provided by Outdoor Heritage Fund. Representing the Sand Lake area were Resort Owners, Elaine Rasmussen, Islandview Resort, Tom Bosinger from Edgewater Resort, Phil Thompson, AIS Detector and myself.

Mike McCartney from U of M AIS Research Department was the main speaker followed by an open forum and lunch. Mike talked about genetics and how they determine where the zebra mussels came from. See the article in this sandpaper.

We also have a busy summer ahead of us; Ditch Cop, roadside cleanup will be scheduled for mid May as the ditches dry up. Then on June 9th at the community center there will be a mini detector seminar for invasive species conducted by Itasca County AIS Program, followed by our Annual Fish Fry the following Saturday 6-16-18 at 5PM. The Fish Fry will once again be a potluck with SLPOA providing the fish and beverages along with door prizes.

Mark your calendar for the annual meeting scheduled for 8-18-18 at noon. A catered lunch will be provided by SLPOA and elections will be held.

Where has the time gone, it's hard to believe that my three year term on the board is already coming to an end. I have learned so much and would like to personally thank you all for the opportunity to serve on the SLPOA Board. It has been fun working hand in hand with you, the rest of the board, the DNR, and the County to make Sand Lake and our Association stronger and better. Thank you all for allowing me this opportunity.

Carole Olson

SLPOA President

We did it! IT'S OFFICIAL AS OF 5-3-20018!
The Birdseye property is now "FOREVER WILD" and is part of protected public lands. Thanks to all who worked so hard to get this done.

It happened it really happened after about 20 years of hard work and cooperation, the difficult has been made possible for those who love Birdseye Lake.

Thanks to the perseverance of the Department Of Natural Resources, most generous gifts by private citizens, the Itasca County Board of Commissioners, and the support of SLPOA and its members the DNR has finally acquired the land on Birdseye Lake to be used as Aquatic Management Area.

In addition to this amazing news we stayed very busy this winter with many related lake activities; hopefully you followed them on our website or on Nextdoor I will highlight some of them for you:

We wrapped up last fall with a great turn out for cleaning up the roadsides followed by a picnic at Staff and Julie Kings. Thanks guys it was a fun time.

Then the DNR held a public meeting at the community center regarding Northern Pike limits; we had a decent turn out. The experimental limits for our lakes have been changed and the northern limit for this upcoming season beginning 5-12-18 will be 10 in possession (not more than 2 over 26". All from 22-26" must be immediately released.) Please see DNR Fishing regulations for more information on limits.

Our official lake freeze date was 11-10-17, but Mother Nature played a little trick. The channel by the boat launch opened back up and didn't freeze back over until 12-21-2017. The Sheriff's department came out and posted unsafe ice signs. Since the first of the year we have had 39 days below zero, but before we know it the lake will be open and spring will be in full bloom.

January we met with the DNR who put together our new lake management plan. Please see the website for a detailed version of the plan at SLPOA1.com. In attendance at this meeting were Dave Weitzel and Matt Ward from the Department of Natural Resources Fisheries Department.



From left to right: Chuck Baker, Bernie Troje, Gary Weaver, Carole Olson, Myron Hahn, Stafford King.



Hey Sand Lake...

The Bird's Eye acquisition is officially complete! DNR & SPLOA have been associated with this acquisition priority for nearly 20 years & we are happy to see it to completion. Thanks to everyone involved, your efforts made this a reality. The addition of these acres and all the lakeshore now completes the preservation of Birds Eye Lake and protects thousands of feet of quality walleye spawning habitat on Sand Lake. Successful completion of this project will be heralded as a great conservation effort between many partners for years to come.

*Thanks again to all involved,
David Weitzel MN DNR Area Fisheries Supervisor*

2018 SLPOA FISH STOCKING HAS BEEN DOUBLED

According to the DNR, 2018 is a non-stocking year for Sand Lake, so SLPOA will stock the lake. The permit's approved. The supply of FRY is assured.

All we have to do is put them in the lake. The plan: 950,000 fry @ \$11.50/1000 which will cost us \$10,925.

We have \$10,463 in our stocking fund. It will cost us an additional \$150 to have them delivered.

PLUS an anonymous donor is matching SLPOA funds so we will stock almost 2 million fry.

The DNR will be putting in 950,000 fry every year after this year under our new management plan.

If we would like to put fingerlings in this fall... they are \$20.11 per pound with an average of 25 fish per pound. Any questions contact Chuck Baker.

Minnesota DNR

Dave Weitzel

Sand Lake Fishery Update

Spring 2018

DNR Completes Fisheries Lake Management Plan with buy in from the SPLOA

Fisheries managers must consider three distinct areas of responsibility to properly manage a fishery. The first area includes biological considerations based on fish surveys and ecological data. These considerations include identifying the fish species that are best suited for a lake, determining if the full potential of the fishery is being met, and if this potential is not met, determine limiting factors that hold back the fishery. The second area includes social considerations. Managers must determine how anglers value a lake. What do they enjoy fishing for and how well do they understand the issues facing the fishery? The third area includes fiscal considerations. Fisheries budgets are limited and expensive management strategies are often ineffective when applied for the wrong reasons or in the wrong situations. Fisheries managers must be good stewards of the angler's dollars and management strategies must be efficient so that anglers get a good return on their investment.

DNR Fisheries Lake Management Plans (LMPs) are where the three areas of responsibility merge into a working document that guides fish management actions over a 5 to 10 year period. These plans identify goals, objectives, and reasonable expectations through the application of science based methods. The plans develop a road map for future activities and help avoid social conflict by identifying and discussing social concerns. The public has a very important role in the planning process. This includes helping the manager understand areas of concern that impact fishing success, identifying social concerns that can't be discovered with fish surveys, and increasing personal knowledge while sharing information among peers.

The DNR worked closely with the general public and the SPLOA in the development of the 2018 Sand LMP. Highlights of the plan include summaries of recent fish survey work. The 2016 spring panfish survey captured good numbers of Black Crappie and Bluegill and found that size quality was good for both species and trophy bluegill were present. The 2017 summer surveys examined a changing lake ecosystem, as zebra



mussel infestation had increased water clarity and changed sampling efficiency. Despite these changes, most fish, including Walleye, occurred in typical numbers compared to lakes with similar habitats. Smallmouth Bass were captured in record high numbers and may be benefiting from the zebra mussels tendency to contribute energy to organisms in the lake bed, such as crayfish. Northern Pike had historically occurred in high numbers on Sand, but were sampled in typical numbers compared to similar lakes in 2017. This is good news, as high pike density results in poor average size and slow growth. The size quality of pike in 2017 was among the highest recorded on Sand, suggesting that the experimental regulation was improving size quality. The new Northeast Minnesota zone regulation is similar to the experimental regulation that had been in place for a decade and is expected to continue to contribute to better quality pike on Sand. Walleye numbers were down from the previous three surveys, but still within the

expected range when compared to similar lakes and above average for the Grand Rapids area. The walleye population continued to be dominated by small, young fish, and a lack of female spawners appears to limit reproduction. The current 17-26 inch slot limit is expected to improve the numbers of female spawners on Sand Lake. The age distribution of the Walleye population continued to show that natural reproduction is important and may be supplemented with fry stocking. The strongest year class was from 2013, a non-stocked year. Given the importance of natural reproduction, and the past success of fry stocking, the new plan implements an annually fry stocking plan with a reduced fry density. A lake can only produce so many young fish in a given year. Stocking above this "carrying capacity"

will not increase fish numbers and may even result in a poorer year class. The new strategy on Sand increases the odds of fry being present on years with good conditions for survival, but limits numbers so that naturally produced fish are not crowded out.

The plan also reviewed the data needs for future management and recommends fish surveys in 2021 and 2023. A special spring panfish assessment is also planned for 2023. Electrofishing surveys will be suspended at this time, because increased water clarity has reduced sampling efficiency and natural reproduction can be documented using other methods.

The 2018 LMP is available upon request by contacting the Grand Rapids Area Fisheries Office at 218-328-8836 or grandrapids.fisheries.state.mn.us

David Weitzel

DNR Grand Rapids Area Fisheries Supervisor

SAND LAKE ANGLING LIMITS



WALLEYE

6 COMBINED TOTAL

6 or fewer under 17" 1 over 26"



NORTHERN PIKE

10 COMBINED TOTAL

10 or fewer under 22" 2 over 26"



P perch... 20 daily 40 in possession

Sunfish... 20 total

Crappies... 10 total

Bass... 6 combined total largemouth or smallmouth bass

Compliments of Sand Lake Property Owner Assoc.
See full Minnesota fishing regs for complete info.

Update on UMN Zebra Mussel Research, Spring 2018

By Michael A. McCartney, PhD, Research Assistant Professor
Minnesota Aquatic Invasive Species Research Center

This spring finds us busy at work on the genome of zebra mussels. In one project, our colleagues are completing the sequencing of this genome, patching together the long and short fragments of DNA and assembling them together to map out and identify the genes. In the other project—the one that might interest people up in Cass and Itasca counties—we are using this genome to type thousands of genetic markers, per mussel, at once. This approach is really pretty similar to the one used by 23andMe and Ancestry.com. Those companies use more automated and higher-throughput methods but the technology is otherwise very much the same. In our case, our interest is to put together a bunch of "family trees" of zebra mussels in MN to find the source waters that mussels were carried from to infest lakes.

By using these thousands of markers it's become clearer that we can do this. Already, using just 9 DNA markers per mussel that we developed prior to sequencing the genome, we've learned part of the story that is unfolding up in your region. Lake Ossawinnamakee in Crow Wing County was the first natural MN inland lake infested with zebra mussels, in 2003. Mussels in that lake are genetically very similar to mussels in lakes all over Crow Wing and southern Cass County (including big, high-traffic lakes like Gull and Pelican).

These mussels form what we call a "genetic cluster" that is genetically unlike mussels from anywhere else we've looked in MN; not by a lot but clearly distinguishable to us. This tells us that Crow Wing was colonized once from outside the region, and then the mussels spread from lake to lake, over short distances.

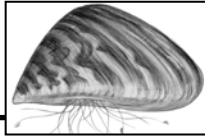
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Update on UMN Zebra Mussel Research (Continued)

The mussels that were carried to Cass Lake (discovered there in 2014) also originated from the Brainerd-Nisswa region, and later Winnibigoshish was infested by the same strain—most likely by veliger larvae carried down the Mississippi River from Cass.

Sand and Little Sand Lake mussels, however, are genetically different, and this tells us that they were carried to those lakes from some other water body (not in the Brainerd area). This brings us to the limits of what we can say at this point. In other words, you might have noticed that above I said nothing about the river or the lake that was the source of the mussels that invaded Ossie. That's because we cannot tell, yet, using those 9 markers, and why we are so anxious to get the thousands-of-markers analysis done. With this new genome-scale analysis, we'll also be looking at North Star Lake and some mussels that Rich Rezanka kindly collected for us, way downstream of Little Sand on the Big Fork River. [By the way, we thank Rich for his help and enthusiasm for this work, and also residents that helped him collect from Sand Lake].

With these findings, I would offer a few pointers for management up in your region. First of all, it certainly makes sense to keep all eyes on pathways of AIS entering the region from afar. This means not blaming people to the south, just recognizing that there are a lot of infested lakes



down there, so getting a handle on traffic in (like you are already doing) makes good sense. But, along with not pointing fingers, don't make assumptions. It's surprising, but none of your area lakes were infested from Mille Lacs or Minnetonka—that we can say with certainty, based on the genetics.

Secondly, once your lake is infested (as in the case of Sand Lake), join forces in your association to lower the risk that your lake now becomes a source of spread to other lakes. So, in other words, be thinking about short-range vectors of spread (short trailered boat trips, docks, lifts, other equipment) that we suspect are the cause of these of invasion clusters in places like the Brainerd region. There are some straightforward, effective approaches here. Never move a lift or dock from an infested lake without taking it out and at a minimum, allowing it dry out of the lake at least 21 days (the law in MN). I'd suggest never, ever move a piece of equipment from an infested lake. If you feel like you have to do that, don't move it in the summer when it could be covered with newly settled mussels. Much better to leave it outside to freeze over winter, then clean off any attached (frozen and dead) mussels and sell it right away in the spring. With that kind of behavior, you'll be going the extra mile to stop spread to the other beautiful lakes that are still free of these things, and that (to me) is the most noble thing you can do.

Fish Management Challenges in a Changing Ecosystem.

By David Weitzel, DNR Area Fisheries Supervisor

To quote Bob Dylan, "the times, they are a changing", and fisheries scientists and every day anglers are taking notice. It seems that news of a changed lake or stream ecosystem or a new exotic invasion is being released or shared on a regular basis. Several recent studies have documented some of these changes. Minnesota DNR research staff published a study in 2014 that documented changing catch rates for a variety of fish species. This study examined catch data from DNR surveys from 1970 to 2013 and found that crappie, bass, pike, and bluegill had increased, while yellow perch and white sucker had decreased. Walleye numbers increased from the 1970s to the 1990s, but have since declined to numbers similar to those of the 1980s.

A similar change in walleye production has been documented throughout the upper Midwest and in Ontario. In fact, a recent study from Wisconsin researchers found that walleye production has declined in both stocked and natural populations. This study did not determine the cause of production declines, but suggested that climate change and food web changes are likely involved. Another recent study from Wisconsin found that bass populations have expanded, while walleye populations have declined. This study showed a strong relationship between population trends and temperature during the growing season. Water clarity itself is part of the equation. Walleye thrive in dark environments, but lose this advantage as the water clears, especially following a mussel invasion. One Ontario study suggests that the biological limit for walleye production (what biologists call carrying capacity) declines as water clarity increases. These studies document declines in populations managed with a vast variety of strategies, strongly suggest an environmental cause(s), and if this holds true, there are no biological "fixes" available.

DNR understands the social and economic importance of the walleye fishery and we are committed to doing what we can to provide the best opportunities, but our tools are very limited and our efforts are often unsuccessful. In fact, recent research has shown that a decade long attempt to improve walleye numbers with increased fingerling stocking failed to produce more fish for anglers. In 1948, early fish researcher John Moyle wrote that "We cannot replace Nature; we can only aid her. Modern fish-culture is essentially the business of helping the fish to take care of themselves". The fundamental fact is that nature is changing, our lakes are not the same environment as they were a decade ago, and some lakes are less well suited for walleye. This presents us with some big challenges. A fish manager's challenge is difficult, how can DNR help nature provide opportunities for a species whose popularity grew under different and more favorable environmental conditions? The anglers is equally difficult "How can I continue to enjoy fishing in a changing environment, especially considering that the most popular fish may become more difficult to catch?" Water clarity changes alone are drastically impacting angler success on lakes that traditionally supported daytime fishing. We fully understand that it is difficult for people to change their behaviors or values, and I personally struggle with changes on many of the lakes I fish.

Like many Minnesota Lakes, Sand Lake is going through a period of change. Climate change and invasive species introductions are contributing to fish community shifts. Unfortunately, zebra mussels drastically change aquatic environments, causing increased water clarity and food web alterations. This does not mean that the lake cannot support a high quality, multi-species fishery that includes walleye, but it does mean that the character of the fishery is changing and will continue to change.

DNR worked with representatives of the SPLOA and the public at large and recently completed a new fisheries lake management plan (LMP) for the lake. The new LMP adjusted goals and strategies to reflect the new conditions in the lake. The plan lists walleye, black crappie, and bluegill as primary management species and pike and bass as secondary species. The plan acknowledges that smallmouth bass are increasing due to climatic trends and are likely benefiting from the mussel invasion as energy is shifted to the lake bottom and into crayfish. The bass may become a more important part of the fishery as time goes on. The plan notes that perch have declined and it is difficult to produce a quality perch fishery while managing for predators such as pike and walleye. The plan also acknowledges that management tools are limited and that most species are taking care of themselves and do not require additional management.

The new plan describes the challenges of walleye management and recommends an intensive management strategy. No amount or type of stocking can recreate the Sand Lake of old, but fry stocking appears to continue to contribute to the fishery. The good news is that the 2017 survey showed fry are in fact surviving, despite the zebra mussels. The 2013 year class was statistically strong, even though no fish were stocked that year. This shows that natural reproduction successfully occurred. The 2014 and 2015 year classes were normal and fry were stocked in those years, showing that fry survived. This suggests that there is food available for fry, even with the zebra mussels. The new plan calls for an increased fry stocking effort and 950,000 fry will be stocked each year to bolster natural reproduction. Annual fry stocking increases the odds that fish are stocked in a spring with good conditions. Several studies have shown that fingerling stocking will not increase walleye numbers in lakes with natural reproduction, but fry stocking may supplement year classes. This is why fingerling stocking is not included in the current Sand Lake Plan.

Conditions are changing at an unprecedented rate and fisheries managers certainly do not have all the answers, but I can tell you that the new lake management plan is not business as usual. First, the current DNR stocking guidelines are the best researched guidelines ever produced. Based on these guidelines, fry remain the most likely life stage to benefit Sand Lake walleye. Keep in mind, three of five walleye year classes were not stocked at all from 2012-2016 so that natural reproduction could be evaluated. Despite the lack of stocking, the 2017 survey catch rate remained one of the highest compared to area lakes with similar habitats. The change to annual fry stocking is a much different approach on Sand Lake. Fry were stocked annually in Sand from 1969-1973 and from 1977-1980. The 1975 and 1980 surveys produced the two of the four highest catches observed, so there is a past history of success with this approach. Secondly, the protected slot limit is relatively new and will take some time to benefit the population. Past surveys show that female spawners have been limited in Sand Lake. Improved spawning stock may lead to better natural reproduction and the protected fish will provide a "reserve supply" of fish during periods of poor production (which happens in all walleye fisheries). Finally, the DNR is investing in several research projects across the state to better understand the impacts of zebra mussel infestations that will hopefully help drive future management and provide better tools.

I realize that this information does not provide you with any assurances and may raise more questions than it answers, but I hope it does demonstrate that multiple factors are being considered and public concerns are valued. For more information or to request a copy of the LMP, please contact the Grand Rapids DNR fisheries office at 218-328-8836 or grandrapids.fisheries.state.mn.us.

Sand Lake Property Owners Association

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Join our Sand Lake Social Network.

Nextdoor... It's the place where we share what's happening around the lake... summer & winter.

Go to the website & start posting!
www.nextdoor.com

www.slpoa1.com

Your SLPOA website continues to be an asset to our community. We hope you'll visit the new site often. As always we look forward to your feedback.... John Perkins

\$LPOA

TREASURY

Total Cash & Investments...
\$78,235.82

The treasurer's report is unchanged from the fall 2017. See SLPOA1 website for the archived report.



Mini-Seminar - Detecting Invasives Specific to Sand Lake - June 9, at 9AM SLCC

Want to learn more about Aquatic Invasive Species (AIS) and how to identify the most prevalent in our area. Mark your calendar for Saturday, June 9th. **Itasca County AIS Specialists, Bill Grantges and Chris Evans will conduct a three-hour mini detector seminar, from 9:00 a.m. to 12:00 Noon at the Sand Lake Community Center, specially tailored for residents on Sand, Little Sand and Portage.** There will be plenty of time for questions and answers with lunch being served at Noon. The more people trained in AIS identification means more eyes watching and protecting the lakes. In preparing for the seminar it will be helpful to know how many are attending, so we know how many brochures and how much food to plan for. Please RSVP Phil Thompson at 218-659-2136 or philbeth@paulbunyan.net. In addition to the seminar, throughout the summer Bill and Chris plan to visit the resorts to provide AIS material and training.

Again, this year the County and DNR will provide inspectors at the public access spring through fall. Last year there was 1,174 hours of coverage often with a high-pressure decontamination unit. Another matching grant for inspector hours was approved, so hours of coverage to be similar as last year. As a trained AIS Detector I am ready to assist with questions or AIS identification. Feel free to contact me at any time. **Phil Thompson...218-659-2136.**



Member Email Address... PLEASE

We're doing better but we haven't got everyone's email address yet. Please include it on the Membership Application or send it to me direct... jfpc2@paulbunyan.net. Thanks... John Perkins



If you want your mail delivered to the lake... write that address. If you have a different address... write that one. Thanks...

Remember... This is your 2018 membership.

Not 2017 or 2019

TEAR OFF ON DOTTED LINE

MEMBERSHIP

APPLICATION FOR 2018 CALENDAR YEAR • RETURN THIS PORTION WITH YOUR PAYMENT

Voting members must be property owners on Sand Lake, Portage Lake, or Little Sand Lake in Itasca County. Sand Lake Property Owners Association is a tax exempt, non profit association whose purpose is to represent the



members' common interest in the Sand Lake area & its environment. Our association is managed 100% by Lake Owner volunteers. There are no salaries. We operate completely on Dues & Donations.

HELP!

When you send us this form, please volunteer for activities that maintain the health & beauty of our wonderful Sand Lake area.

Yes. Contact me... I'd like to help with:

- Weed Cops, Invasive species monitoring at the public landings
- Adopt a Highway... Trash pickup on Rt... 35 & Rt.4... twice a year.

MAIL TO: Sand Lake Property Owners Association PO Box 690, Deer River MN 56636
Your check is your receipt • Signed receipt sent on request.

Name(s) _____

MAILING Address _____

E-Mail: _____ MAIN Phone # _____

2018 DUES... \$15.00 _____ Alternate/Lake) Phone # _____

DONATIONS \$ _____ STOCKING DONATION \$ _____