

# Big Sugar Bush Notes

Spring 2019 Volume 29 Number 1

## **Big Sugar Bush Annual Meeting Sat. June 8, at new town hall 9:00 a.m. rolls and coffee 10:00 a.m. annual meeting**

### **CONCERNS WITH WAKE BOATS**

Wake boats, also known as wake surf boats, operated on BSB several weekends last summer and during the 4<sup>th</sup> of July week. The operation of these boats on BSB resulted in many BSB property owners contacting some Lake Association Board members with multiple concerns, including observations/perceptions that these boats were causing ecological harm to the lake. Since then, some BSB Board members and other concerned property owners have spent hundreds of hours researching this issue, including contacting dozens of local and Minnesota entities, as well as entities in other states and Canada, to try to determine if there is legitimate cause for the expressed concerns.

The information gathered, including scientific studies, indicate that when wake boats are operated on bodies of water where there is not enough distance from shore to dissipate their strong wakes, and/or in depths too shallow to mitigate their powerful downward thrust, there will be damage to the water ecosystem, fish habitat and shoreline.

With that said, none of us are experts on water ecosystems. To that end, a few people felt strongly enough about the possible short and long-term effects on BSB water quality that a consultant hydrologist was hired to review and interpret available scientific studies and other relevant information. He will apply his conclusions specifically to the characteristics of BSB and provide us a report. To be clear, the costs associated with this consultant are not coming out of the BSB Lake Association budget. It is being funded by a few BSB property owners; however, we are hopeful that other property owners will see the value and contribute to the cost of the consultant.

When the consultant's report is complete, we will schedule a special meeting for him to present his findings to our BSB Lake Association members. Based on the potential harm to BSB, I'm asking that you strongly consider not operating a wake boat on BSB or allowing your relatives, friends or other guests to bring one of these boats onto BSB. This request is particularly relevant with observations of significantly higher water this spring, further compounding the harmful effects of waves hitting the shoreline, including reduced water quality and loss of shoreline.

If you have comments or questions, or would like to contribute to the cost of the consultant, please contact me.

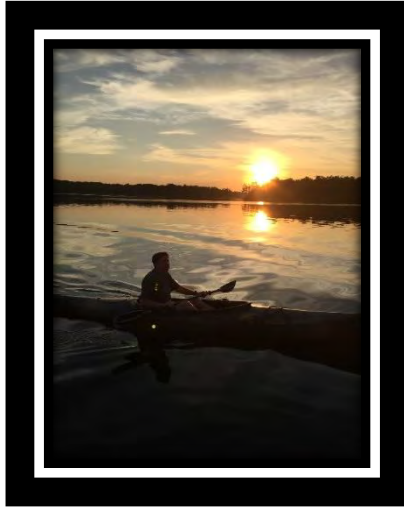
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### **More Food for Thought** by Nancy Lacina

In my opinion “the wake boat” is not the real issue facing lake residents. The wake boat is the canary in the coal mine. It got our collective attention because of its noise and noticeable impact on the lake and shoreline. It personifies in one motorized vehicle what has gradually been happening across Big Sugar Bush Lake for the last decade. Lake residents were able to notice disrupted vegetation floating in huge clusters whenever the wake boat had been used on the lake. Shoreline disturbances and other erosion activity in one collective timeline was evident after the surfing activity.

It’s easy to overlook how motorized watercraft and climate changes have gradually evolved in recent years. Much of motorized travel on the lake is faster than when the first cabins were built here. The market place and family economies have given home owners choices. There are now bigger engines, faster speeds, more boats and more people. Each family has its own version of what healthy family recreation looks like and plans accordingly. What do lake owners understand about how each motorized vehicle impacts lake quality on our narrow lake? What is the impact of all water toys on the environment, pontoon engine size and speed as well as all other water craft. We have got to understand the big picture and use long-term care tactics to preserve our “haven”.



### **What are the the main environmental and safety concerns with wake/surf activity on Big Sugar Bush Lake**

\*Wake/surf boat propulsion system churns up sediment that settles to the bottom of the lake, disrupting fish spawning habitat and smothering aquatic vegetation. Turbulence also can churn up nutrients such as phosphorus that could increase algae growth, turning the lake water from a beautiful blue to a less than attractive green over time with a reduction of water clarity.

\*The safety of others whether they are swimming, paddle boarding, waterskiing, canoeing, kayaking, tubing or pontoon cruising on the lake when surfing waves are present is a very real concern..

\*Because wake boats produce a long-lasting, larger wake, there is more potential for erosion on shorelines compared to other motorboats.

\*Wake boats displace large amounts of water and have a propulsion system that reaches deeper into the water, so the boat should be kept at depths that keep the lake environment safe. If water is not deep enough, the propulsion system will cut off plant shoots and even uproot whole plants. This has been evident on Big Sugar Bush Lake with numerous complaints of large quantities of uprooted vegetation. These aquatic plants provide food and habitat for aquatic wildlife and some species can even improve water quality.

\*A recent University of Mn study indicated that wake boats are a particular danger in terms of transporting zebra mussels from one lake to another because of ballast systems. The large wakes can also disturb nesting birds along the shore, as well as other organisms that use shorelines to nest, spawn. or feed.

**“Finding Nemo” in Big Sugar Bush-Well Almost**  
*By Jimmy Olsen*

Many of us are familiar with the Disney movie and the storyline in Finding Nemo. Nemo’s father, Marlin, a clownfish living in the shallows of the great barrier reef witnesses his wife and all but one of her eggs being eaten by predators. As a result, Marlin is an overprotective father of his son Nemo and cautions Nemo to stay in the safety of the shallows where he is protected within the lush and colorful vegetation of the barrier reef and the safety within the “school” of other fish.

However, Nemo ventures out into the perils of the deep water and is promptly captured in a net by a human scuba diver. Later escaping, he faces many other adversities. The story revolves around Nemo’s father attempting to “find Nemo” and bring him back to the safety of the lush shallows within the barrier reef.

But wait a minute, how are we to relate to this storyline in Big Sugar Bush? We don’t have colorful small fish living in the shallows that face predators and threats from nets and other human activities - or do we? Just maybe we can “find Nemo” in our lake – let’s see.

It was a warm summer day on July 17<sup>th</sup> 2017 that a band of fishery biologists from the Minnesota Department of Natural Resources (DNR) ventured into the shallows of Big Sugar Bush to conduct the first targeted survey of shallow water fisheries. Their goal was to develop a Fish-based Index of Biologic Integrity (FIBI) score that describes the overall health of the lake. The FIBI uses fish community data to measure a lake's health, and the types of fish species present can help identify any stressors that may be negatively affecting the lake environment.

Sampling stations were evenly spaced around the lake. Each was sampled by backpack electrofishing and seining with a 50-foot or 15-foot seine, where possible. Backpack electrofishing was completed at all ten stations with two sites sampled from the boat due to a substantial fringe of abundant bulrush, water lilies, and wild rice out to deep water. A 50-foot seine was used to sample two stations and a 15-foot seine was used at six stations. However, an overabundance of emergent vegetation in deep water prevented the use of seines at two sampling sites.

Nearshore sampling captured 13 native species of fish including three species that are *intolerant of habitat disturbance (Banded Killifish, Blackchin Shiner, and the Iowa Darter)*.<sup>1</sup> [emphasis added]

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<sup>1</sup> Retrieved from Minnesota DNR

website <https://www.dnr.state.mn.us/lakefind/showreport.html?downum=03030400>

These three small fish species each have unique characteristics – but, like Nemo, they are all colorful in their own way. They live in the relative protection of the shallows of Big Sugar Bush within the lush vegetation that grows in the sandy and sediment bottoms of our lake. Let’s take a look at them, since most of us have never had the opportunity to see them first hand. (See Figures 1 – 3)

Wait a minute! Gee, these fish are very pretty and colorful; and the Iowa Darter could almost pass as a streamlined Nemo. Well, what do you know about that- we may be able to find Nemo in Big Sugar Bush after all! I know I will be looking for him. In the meantime, let’s do our best to make sure its shallow water habitat isn’t unduly disturbed.



**Figure 1. Iowa Darter**  
(*Etheostoma exile*)

Since the Iowa darter is colorful and lives in the shallows, it probably falls prey to piscivorous (fish-eating) fish, like northern pike, yellow perch and largemouth bass. Fish-eating birds, such as herons, might also eat Iowa darters.



**Figure 2. Blackchin Shiner**  
(*Notropis heterodon*)

This species mostly resides in cool glacial lakes. However, the habitat preference is for a protected weedy area. The blackchin shiner is a food source for juvenile northern pike and yellow perch.



**Figure 3. Banded Killifish**  
(*Fundulus diaphanous*)  
Banded Killifish are fairly common in Minnesota. They are an important forage fish for several sportfish species, including largemouth bass and northern pike.

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<sup>2</sup> Pictures and information retrieved from University of Minnesota website:  
<http://academics.cehd.umn.edu/hatch/research/fish/fishes/>

### **What Would Big Sugar Bush Look Like Today If Not For Concerned Property Owners Over the Years**

by Fran Mattson

There have been so many action steps over the years that have made a difference in terms of protecting the Big Sugar Bush Lake environment. The list is long. Big Sugar Bush was developed with lots for sale in 1968. The first lots were advertised at \$1,000. Property owners gathered as early as 1975, to form a lake association which set up by-laws with the intention of protecting the lake environment. Pretty impressive leadership over forty years ago. The newsletter started in 1991, filled with information, education, and general amusement. Articles all through the years dwell on the same topics that are still very relevant in today's world. BSB is a small, fragile lake and if we aren't diligent, it will be destroyed by human carelessness.

Over the years we have gotten the attention of a number of individuals locally and state wide including conservation leaders who made comments related to observing "unusual determination of people on a small lake to commit considerable time and money to preserve a natural environment." Minnesota Department of Natural resources acknowledged lake owners for their stewardship and implementation that will insure the health and well-being of the lake for the future.

Human activity can greatly accelerate and shorten the lifespan of a lake. The ways humans use or abuse a lake can move the lakes aging process into high gear and turn a lake green and cloudy. We need to continue to be careful stewards. We have been reminded repeatedly in newsletters and as also has been revealed in meeting minutes that we need to protect the health of the lake.

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Once again, we have to be alert. We have a major concern that threatens the well-being of the lake. Individuals have done in depth research learning about the environmental impact of the wave action created by surf/wake boats. They have read and talked to hydrologists and water specialists both locally and internationally and there is cause for concern. Hopefully, once again action steps can curb short-and-long term damage as this type of activity becomes more popular. Take pride in the leadership demonstrated over the years.

**Action steps initiated by environmentally concerned property owners over the years:**

\*May 1975-First meeting of the Big Sugar Bush Lake Association (30 present)- This group was forward thinking in realizing that an effective means of tackling problems of lake management is to form a lake association. It has met more regularly since the 1980's.

\*Spring 1991-First issue of Sugar Bush Notes which is an important part of education and information.

\*1990's-Began monitoring water quality and water clarity. A first secchi reading was done as early as 1975.

\*Purchased island/peninsula.

\*1994-Donated island/ peninsula to Dept. of Natural Resources.

\*Sewer surveys conducted-even though it is costly to replace sewer systems, it is critical to do when needed. BSB was moved up on sewer inspection which resulted in replacement of noncompliant sewer systems.

\*Worked to keep boat access in useable condition.

\*Summer 1997-Eighty concerned Big Sugar Bush individuals overflowed the county courthouse zoning meeting to object to permitting a campground on Big Sugar Bush Lake which was unanimously denied by the zoning commission. The zoning office had received 54 letters of objection.

\*Spring 1999-Taylor Investment proposed adding 22 lots. Action taken reduced that number to 10, which was possible with existing zoning regulations. A request for an environmental assessment petition was presented to Becker County Commissioners and they unanimously accepted the petition and ordered Taylor Investment Co to carry out an environmental assessment for the property.

\*2002-Worked with COLA for the Sustainable Lakes Management Plan. Big Sugar Bush was one of five lakes selected to participate in this program.

\*Initiated score the shoreline data collection which informed each property owner how their shoreline scored with the hope that action steps would be taken by individuals to improve their scores.

\*2017-Planted 100 white pines on the island/peninsula.

\*Shoreline and adopt a highway clean-up is carried out.

\*Continual education on buffer zones, aquatic invasive species, and general good conservation practices. This is just some of the action steps.



Our township supervisor-Larry Michelson taken by Pam M.

Winter 2019

Over 105 inches of snowfall

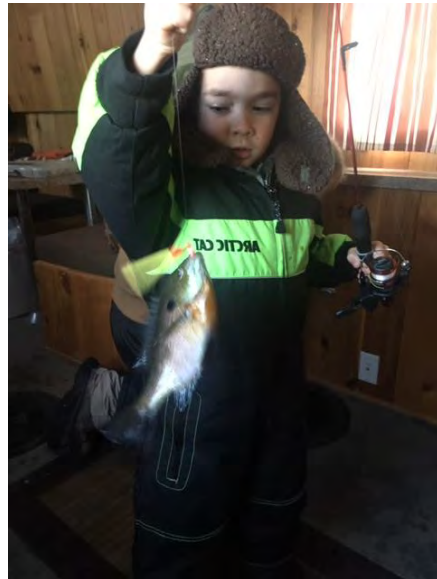


Photo by Chuck Becker



Photos by Dave Braaten



Photo by Mary Kohlhepp

## Lake Time Is Family Time

Our family has been coming to this lake for as long as my kids can remember. They started out coming here as babies and they are still coming as teenagers. I must say that their interests have changed a lot over the years. They are now teenagers with our oldest actually graduating from high school this year (I still can't believe that!!). Time is a hot commodity around our house right now. As I'm sure any busy family with teenagers can attest to we are in constant competition with sports, school work, summer jobs, and friends for family time. The lake has been a bit of a refuge for our family this summer. To have three teenage sons that want to come up north and hang out with their grandparents, parents and siblings is wonderful! No video games, tv, snapchat or whatever other screen there is will get them off the lake on a beautiful afternoon wake surfing, wake boarding, water skiing or tubing. I hope that as a lake community everyone can respect each others interests and love for this lake. We try our best to be mindful and not to ride too early, stay in the middle of the lake and not turn the tunes up too loud, unless it's the Rolling Stones ;) I think we were able to come for a total of 4 weekends this summer and as short as that may have been it has provided lasting memories for our family. Listening to the loons, kayaking, pontooning, canoeing, swimming, fishing, bonfires, smores and great conversations all go along with a great weekend at the lake. What a wonderful thing to just be able to have fun on the lake even if just for an afternoon! I'm sure someday things will calm down and our kids will be adults with jobs and families of their own. Some day my husband may prefer a pontoon ride to a fast boat and I may finally get my kayak. Some day our kids may even move away. With all of life's unknowns all I know is that right now I'm so thankful for these moments with family, friends and the lake!

Kayla & Brent Johnson  
Steve & Mary Kohlhepp Family

Our newest township supervisor-Dan Granbois:



Photo taken by Larry Michelson

**Big Sugar Bush Lake Association Board Members** With the change to one meeting per year, terms were extended through the spring meeting, 6 months later as indicated below, when the next election will take place (as voted by the board of directors.)

**President: Chuck Becker 2015-2019**

**VP: Ken Mattson 2016-2020**

**Treasurer Kay Lommen 2017-2021**

**Secretary: Kent Anderson 2016-2020**

**Steve Odegaard 2015-2019**

**Larry Michelson 2015-2019**

**Mary Kohlhepp 2016-2020**

**Bob Backman 2017-2021**

**Johanna Christenson 2017-2021**

**Webmaster: Ross Collins**

**Web content: Nancy Nornes Olson**

**Newsletter editor: Fran Mattson**

**Big Sugar Bush Website: [bigsugarbush.net](http://bigsugarbush.net)**

#### **Worth Noting**

**\*Ice out date for 2019 was April 25.**

If you are on Facebook, please like us and let your families know we have a Facebook page. We have lots of great photographers on BSB. Send your photos and BSB updates to

[marykohlhepp@gmail.com](mailto:marykohlhepp@gmail.com).

\*We continue to maintain a section of Cty 142, Adopt a Highway. Give Ken Mattson a call if you are willing to help with the two-mile section. Also, be vigilant on your own road as well in eliminating all litter.

\*Submissions for fall 2019 newsletter are due Aug. 1. Email stories and photos to [fnkmattson@gmail.com](mailto:fnkmattson@gmail.com) Photos taken by Fran Mattson when not indicated otherwise.

