



You can **become a Member in 2018**. The Sand Lake Association, Inc. is a 501c3 charitable organization. You can deduct a part of your \$20 (or any greater amount) donation from your 2018 taxes. You can bring your donation to any of the meetings, or go to: <http://www.sandlakewi.com/>, or mail a check to: Al Lechleitner, 5560 Wild Rose Lane, Eau Claire, WI 54701. Make checks payable to Sand Lake Association, Inc.

Sand Lake Association Inc.'s Mission Statement: To keep Sand Lake and its surrounding areas clean, invasive species free and safe for all residents and visitors.

News from the Sand Lake Water Quality Committee

There is much exciting news for Sand Lake water quality this summer. Sand Lake Association, Inc. has again been awarded a Clean Boats Clean Waters (CBCW) grant from the DNR. So, we will have a student checking boats for invasive species on weekends this summer, starting Memorial Day weekend until mid-August. Stop by the boat landing and say "hi".

This year's student has sent us the following information about himself: "Hello, my name is Garrett Miller and I am an ecology and environmental biology major from the University of Wisconsin-Eau Claire. I am excited to work at Sand Lake this summer to share my knowledge of ecology and help educate visitors about invasive aquatic species. I am a passionate and avid outdoors-man who enjoys mountain biking, fishing, and hiking. It's because of these hobbies that I am so passionate about conservation and protecting our lands and waters. The experiences that I will gain from Sand Lake will help me achieve my future goals of going to graduate school to become an aquatic ecologist. "



This is the second year our Association has contracted with Beaver Creek Reserve's Citizen Science Center to administer our CBCW program. Garrett will be a Beaver Creek employee. This arrangement works very well for our Association because we have no paid staff or payroll system. Our Association remains responsible for ensuring that DNR grant requirements are met. Last year two students and several volunteers monitored the boat landing throughout the summer and reported that an average of 8 and up to 18 boats were inspected on assigned days. 262 boats were inspected total and 461 people were spoken to regarding the intent of this CBCW project by the end of the 2017 summer.

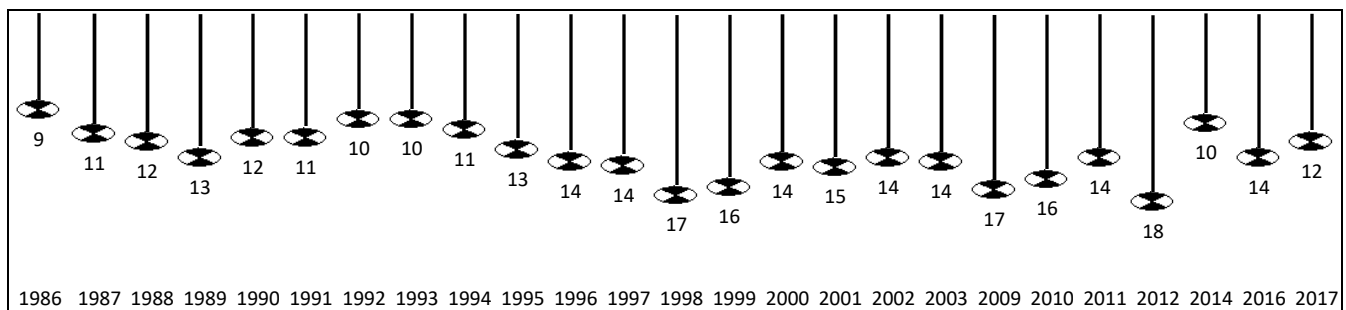
Steve Johnson reports that the DNR plans to set Fyke Nets out soon after the ice is off the lake. A Fyke Net is a net attached to the shoreline and set out perpendicular from the shoreline to

deeper water with a bag net which holds the fish until they can empty it and record what they catch. It does not harm the fish like a gill net does so the fish are released unharmed back into the lake. In 2014 and 2016 the DNR planted 4500 fingerling walleyes in Sand Lake and plan on another 4500 in 2018. The Fyke net survey will show the growth rate of these previously planted walleyes and their abundance compared to other species.

The DNR will also be doing a Fish Creel Study and will have a DNR person on the lake throughout the summer monitoring the time people spend fishing and what they catch. This person will not be doing any enforcement activities only observing fishing habits and catching patterns.

Sand Lake has also been a part of the Citizen Lake Monitoring Network (CLM) to measure the clarity of the lake since 1986. Volunteers use a Secchi Disk reading, as an indicator of water quality. This information is then used to determine the lakes **trophic state** (see **Lakes 101** article below). Monitors are trained to read the disk and report the data. Sand Lake's Secchi Disk readings began in 1986 when Fred Cook reported clarity until 2002. Fred Peter also monitored clarity from 1995 to 2003. In 2008 Greg and Ellen Mihm monitored clarity until 2014. Dave Cook started monitoring clarity in 2016 and will continue monitoring water clarity throughout the summer.

Average Secchi Reading July-Aug in feet



The Water Quality Committee would also like to remind lake owners of the following suggestions to help prevent sedimentation and contamination of our lake:

- a. Maintain a buffer zone of native plants along the shoreline.
- b. Reduce areas of impervious surfaces, especially close to the lake.
- c. Avoid disturbing the soil near the shoreline.
- d. Avoid use of lawn fertilizer in areas where run off may carry it into the lake.

Additional information to help keep our lake clean can be found at: <https://dnr.wi.gov/lakes/>.

Lakes 101

By Michala Feigal, UWSP

(Taken from "Lake Tides", a newsletter from the Wisconsin Lakes Partnership, Volume 43, No.1 Winter/Spring 2018)

A lake's trophic state is a snapshot of its water quality, nutrients and clarity during its aging process.

Much like humans, lakes age throughout their lifetime. This process is well defined by a lake's trophic state. A lake's trophic state is a snapshot of its water quality, nutrients and clarity during its aging process. Trophic state is divided into three categories: oligotrophic, mesotrophic and eutrophic. A lake in its early life is oligotrophic and eventually is filled in with sediment and lots of vegetation.

Oligotrophic

Oligotrophic lakes are generally clear and deep with little aquatic vegetation. Often times they are low in nutrients and are therefore free of algae blooms. These lakes do not support large fish populations. Although, they do consist of a food chain that can support desirable fish species such as trout. The bottom of these lakes tend to be sandy or rocky, and the shores may be steeply sloped. An example of an oligotrophic lake is Lake Superior.

Mesotrophic *

Mesotrophic lakes are in between oligotrophic and eutrophic lakes. These lakes are slightly nutrient enriched and have some aquatic vegetation, along with an accumulation of organic matter on the bottom. Along the shoreline of mesotrophic lakes you may find wetlands, cattails and wild rice beds. A lake in the mesotrophic state is at the midpoint of its life. These lakes can expect to see more aquatic vegetation in the years to come.

Eutrophic

Eutrophic types of lakes are very productive and have high levels of nutrients, organic matter and sediments. Because of the high levels of nutrients, the lake is able to sustain lots of aquatic vegetation. High nutrient levels can also lead to large algal blooms in the hot summer months. Aquatic vegetation attracts waterfowl and wildlife to the lake, which in turn makes the lake more aesthetically appealing. Eutrophic lakes usually support large fish populations. Many of the fish within these populations are considered to be rough fish. Rough fish are often able to withstand warm temperatures, poor water quality and limited oxygen. These conditions are present in late summer months. A eutrophic state is the last stop along a lake's lifetime. Eventually the lake will become much like a wetland: filled in and fully vegetated.

*According to the DNR website, Sand Lake is listed as a mesotrophic lake. This is the ideal state for a lake. More information on water quality and any related information along with issues of *Lake Tides* can be found at: www.uwsp.edu/uwexplakes. Any questions can be addressed to: uwexplakes@uwsp.edu.



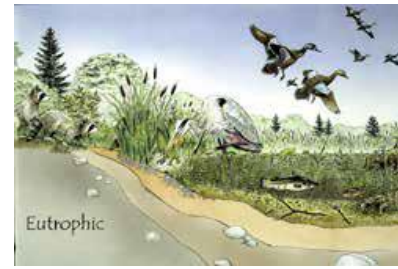
Oligotrophic

- Clear water, low productivity
- Very desirable fishery of large game fish



Mesotrophic

- Increased production
- Accumulated organic matter
- Occasional algal bloom
- Good fishery



Eutrophic

- Very productive
- May experience oxygen depletion
- Rough fish common

Did you know loons require a runway for takeoff?

By Mitchel Block, UWSP Student

(Taken from "Lake Tides", a newsletter from the Wisconsin Lakes Partnership, Volume 43, No.1 Winter/Spring 2018)

Loons are perfectly adapted birds for water. They have large bodies, small wings, and legs located near the rear of their body, making them agile divers and swimmers. Although these traits greatly aid in a loon's water-bound lifestyle, they prove to be a great hindrance on land. In fact, loons have difficulty even walking on land, and takeoff from it is nearly impossible!



So, in order to achieve takeoff, loons often require a water runway. To position their runway, loons must first determine which way the wind is blowing. Then, they will begin to run across the top of the water, straight into the wind, while rapidly flapping their wings. This allows air to rush underneath them, and with enough air, they will be able to take flight. During ideal conditions, it usually only takes a runway of about thirty yards to gather enough air for lift-

off. However, in unfavorable conditions, loons may require runways of up to an astonishing quarter mile in length!

Due to their takeoff troubles, loons must be particularly cautious of where they choose to land. Choosing a lake that is too small could leave them stranded without enough room to take flight. Because of this, loons tend to prefer long lakes that run parallel to the direction the wind normally blows.

So, next time you see a loon, think of how many lakes it had to fly past in order to find the perfect one, and keep in mind all of the specifics that need to be in place for the loon to do something as regular as taking flight. Maybe, if you're lucky, you will witness the loon in action on its water runway!

Announcements and Upcoming Events:

Steve Johnson won the board seat for our area on the Chippewa Valley Electric Coop. He thanks everyone for voting. If you have any questions or comments please reach out to Steve directly. (Please note: CVEC is a coop and a not-for-profit organization. We do not allow for profit or privately held advertisements)

Dave Stanton is looking for volunteers for the spring Hwy 40 clean-up.

We need volunteer hosts for 2018 for **Coffee on the Dock**. Use the [contact us](#) form on our website (www.sandlakewi.com) or info@sandlakewi.com if interested.



Our first meeting is coming up on Sat. May 26th at 10:00 at the Big Bend Town Hall. Come and find out what is planned and share your ideas for another wonderful summer on Sand Lake.