WILSON LAKE NEWSLETTER
Fall 2021

"We are not born all exactly alike but different in nature, for all sorts of different jobs" ~Plato *The Republic*

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Going Green?
If you no longer wish to receive a hardcopy of our newsletter please email us. Newsletters will be emailed and are also always available on the website.

Letter from the Lakeside

We live in a world of crises. It's easy to become numb to them. And yes, we cannot single-handedly solve every problem. But the thing is, there are 7.7 billion people in the world. What if each of us did something to make things better in our own little piece of it?

Plenty has changed since my inaugural *Letter from the Lakeside* two years ago. Yet as I undertake a third year of service as president my message is the same:

The world is crazy. We can't solve all the problems, but we can protect Wilson Lake. BIG problems like federal debt, environmental degradation, epidemics, and RUN-OFF (the theme of this newsletter) do not happen overnight. They are the culmination of small actions. Like a glass of water, it only takes one drop to spill over the glass, but it takes trillions of water molecules to fill that glass.

Fortunately, I'm a "glass is *always* full" kind of person (i.e. water *and* air). Water clarity dropped this year and we must address this. However, there were also many positives: no invasive plants were observed, the boat parade was successful, membership is up (thank you all!), we had solid attendance at the annual meeting, and on Facebook we are up to 300 likes.

The challenges remain: Run-off/Erosion. Algae blooms. Invasive plants. This summer of torrential downpours was the opposite of last summer and is evidence that significant erosion problems exist. More development has occurred—and will continue. As I said last fall, more use of Wilson requires an equal and opposite reaction of greater participation.

Each of us is a water droplet in the glass. With over 200 camps on the lake, we have at least 1000 people that enjoy Wilson every year. We can all do our part.

My call is for each of us to do at least ONE thing next summer to improve the lake. An easy action is to participate in our Spring 2022 watershed survey, which we last performed in 2009. Another easy way to participate is to purchase WLA gear (see last page!).
For those looking for more of a challenge, consider these efforts:

- Installing erosion control mulch, gravel pebbles, or a "weaving" mulch pathway
- Getting Invasive Plant Species Certified (check out our website for links)

A "weaving" mulch pathway.

In the spring, I dubbed 2021: The Year of the Platitude. I don't want to be like our politicians spewing false promises and doing nothing for decades. I aspire to be like our Wilson Lakers who first started doing watershed surveys in the '90s. It takes many water drops to fill a glass, and that many more to fill Wilson Lake. Join us. ***~Isobel Michaud***

Spring 2022 Watershed Survey

- All lake properties owners are invited to participate
- We plan to do it April/May 2022
- Volunteers are welcome!
- Details to follow soon via email

2021 Water Quality Report

Hello to all at Wilson Lake. I hope you have enjoyed the 2021 season. My name is Rich Chevalier. I test and record water data from Wilson Lake for the Lake Stewards of Maine (LSM).

Water Clarity DROPPED this year: My first readings this year took place on April 21st. The Secchi disk reading for water clarity was 7.05 meters down (21.1 feet). We believe this good clarity was due to the slow melt (ice out was March 29th) and no severe rain storms. The lake stays clear if it does not experience a great inrush of water flow from run-off.

However, on September 25, 2021 water clarity had fallen to 5.20 meters (~17.1 ft). This is also much lower than readings taken at the same time the last two years (7.71 m on Sept. 29, 2020 and 6.42 m on Sept. 9, 2019 the year of the beaver dam break). Typical Secchi disk readings are between 6 to 8 meters down from the surface of the water and this low reading suggests that the rainy summer and increased development are contributing to significant run-off.

An outside concern was brought up this year about algae that looks like green "cotton candy." Called "metaphyton" or filamentous algae, it normally appears in August and is non-toxic. According to LSM's web report, metaphyton has appeared more frequently in the last 10-15 years and is caused by several factors, including runoff. Runoff happens when large amounts of water rush into the lake from grounds that can't absorb or hold back the water. When raging storms occur, washing through our properties and into the lake, we are in danger of seeing more metaphyton and other, potentially dangerous algae blooms.

Example of metaphyton which tends to attach itself to aquatic plants or rocks and in the water looks like a grand plume of "cotton candy."

It is normal and non-toxic, but may be occurring more often.

Luckily, there are several things we can do to prevent run-off. As noted earlier, next spring WLA will host a watershed survey. Essentially, it is a review of our lake properties to reduce possible sources of run-off and phosphorus into Wilson Lake.

Weeds, cloudy water, green cotton candy…oh my! Let's keep the lake clean!

Water Temperatures & Oxygen Levels: September 10, 2021. Top of the water was 71.06°F. At 25' down it was 59°F. Like in the spring, the lake is starting to turn again. Oxygen at the top of the water: 7.7 ug/L, 5 meters: 7.5 ug/L, 7 m: 1.3 ug/L and 13 m: 0.2 ug/L.

I also test for *Gloeotrichia echinulata* (Gloeo) in the lake. It is a colonial cyano-bacteria species. Fortunately, there is none in Wilson Lake, but we must remain on watch. Gloeo have been shown to push lakes toward eutrophication (too many nutrients in the water) and produce toxins.

It's interesting to me about the water temperature changes in our lake this year. I have recorded temperatures and oxygen in our lake for the past five years. I have given the data to LSM and not examined it closely and now have more time to do that. I'm not a scientist, but interested to see changes and monitor our lake conditions for all of us to know and understand water quality at Wilson Lake. I hope everyone has had fun on and around the lake this year! Please stay safe and healthy and enjoy the recreation. Best regards, ***Rich Chevalier***

Plant Patrol Update

The invasive plant patrol continued its survey of Wilson Lake. I am happy to report we did not detect any invasive plants. Our lake continues to stand out among some of our neighboring lakes. That said, things could change in a heartbeat.

We kayaked around most of the perimeter of the lake, paying particular attention to the areas at greatest risk for infestation. On one such patrol, we saw a large clump of milfoil plant that was seen last season; however, it had increased from several plants to several large patches. Last year's finding was Low Water Milfoil, a native plant. Was this something different or had the plant been misidentified? We obtained several samples and consulted with other members of our team and the conclusion was that it was indeed Low Water Milfoil. Pictures were taken and submitted to LSM for a second opinion. The good news came back; our assessment was correct.

Lakes in our area that have had infestations of invasives have had to undergo expensive remediation (tens of thousands of dollars annually) to try to eliminate the invasion. Property values plummet and so do the pleasures of lake life.

The best way for us to avoid this situation is for ALL of us to be vigilant. No one knows your lakeshore better that YOU. If you see something different, please contact WLA. Early detection is the key to successfully dealing with invasive plants.

As Rich noted, many have noticed metaphyton, a wispy filamentous form of algae that grows in shallow areas of a lake. It is a normal, natural organism. However, its presence can be enhanced by warm weather and also by the presence of large amounts of phosphorus, a result of storm

water runoff. While we cannot control warmer weather, we can impact the storm water runoff from our properties—such as joining our survey next spring. ***~David and Diana Spahn***

A NATIVE milfoil called Low water milfoil in the lake (left) and out of water (right). Its fruits (circled in yellow) are found underwater and are smooth balls. It's NOT invasive.

Wilson Lake's Water Level

WLA's goal is to maintain a consistent lake water level during the recreational boating period from late May to mid-October. During these months, we keep the lake artificially high with the use of the dam. Without the dam the natural lake level would be lower, and many rocks could become a boating issue. But we cannot allow the lake water level to become too high or some properties will become flooded and shoreline erosion will result from wave action.

There are markings painted at the dam to indicate our goal lake level. Below the white mark means the target level is low. Our target level is the very bottom of the white mark. Within the white mark indicates slightly high, but acceptable. In the orange means we open the dam to prevent flooding and shoreline erosion.

If a major rain and wind event such as a hurricane is forecast (2 this year), the dam may be opened in advance of the storm even if the level is in the white below the orange mark. We can lower the lake by about one inch per day in the summer with the dam opened, so an approaching hurricane may mean the dam is opened a couple of days in advance, as occurred this summer.

We are beginning a new program to alert the Horn Pond Lake Association (HPLA) when we open our dam to assist them in regulating the water level on Horn Pond into which Wilson Lake flows. The State of New Hampshire regulates that dam and needs to be contacted by the Horn Pond Association when that dam needs to be opened. It can take a day or two for the State to respond, so our alert to HPLA should help in that process.

The mechanism for opening and closing the dam to regulate water levels allows for easier regulation of Wilson Lake's surface level. We are experimenting with partial dam openings in an attempt at even better water level regulation. But overall, this past summer, water levels have been consistently maintained. The dam will be opened fully in mid-October to prepare for the winter ice and to allow fish movement. ~***John Nadeau***

Loons

This summer we generally had three loons on the lake with no known mating or nesting activity. Our guess is that the third loon is a young un-mated loon that was raised in previous years by the pair. This is something we have seen in the past. It takes a number of years (4-6 we have read) for juvenile loons to mature and return to the lake/area in which they were hatched and raised their first summer. One loon was particularly noisy all summer and we presume it was the young loon returned and advertising for a mate.

Maine Audubon has had a loon count each year for over 35 years in which we have participated for Wilson Lake. Maine Audubon reports that the loon population is stable in Maine and that the chick population fluctuates a bit. Our area seems to have a healthy loon population as 8-12 loons can be seen on Wilson Lake from time to time when no nesting or chick raising occurs. This high number of adult loons in the area may be a reason that our Wilson Lake loon nesting and chick hatching has been quiet for some years. Loons are very territorial when nesting and in the past Wilson Lake has supported only one nesting pair at a time. ~***John Nadeau***

Runoff, again?

To paraphrase the old saying; "The price of a clean lake is eternal vigilance." Many of the words you will read below have appeared in this newsletter before. They bear repeating though for both the long-time property owners and the new arrivals.

Runoff is one of the two biggest threats to our lake: the other being invasive plants. What is runoff? Runoff is the water that flows across the watershed (all the land that surrounds the lake that "sheds" water into it) from snowmelt and rain and deposits into the lake. With that runoff comes all the pollutants that cause algae blooms, cyanobacteria blooms, and other scary stuff.

As you can see in the picture below, the Wilson Lake watershed covers almost 4 square miles around the lake. All the rain and snowmelt run from that area into our lake. In undeveloped areas the water is filtered, slowed, trapped, and cleaned by the forest and plants. In the developed areas, like our camps, much of that filtering plant life is missing.

When the water has a free and open run to the lake, instead of being filtered it becomes a highway for pollutants to get into our lake. The more development there is around the lake, the greater the risk of runoff.

And the biggest pollutant we need to worry about is phosphorus. Phosphorus occurs naturally in soil. It is also a component of fertilizers and sewage. If you fertilize your lawn or your septic tank leaks, the phosphorus from those sources gets swept up as the water flows from a rainstorm and is deposited in the lake.

What can you do to help reduce the amount of phosphorus that flows into Wilson?

Have your septic tank checked. Is it working? Are your sinks and toilets draining well, or are they slow or backing up? Do you smell sewer odors? When did you last pump the tank?

Eliminate or reduce fertilizing your lawns—and always use phosphorous-free fertilizers.

Take a look at your property, is the flow of water unrestricted to the lake? If it is there are several things you can do to slow the flow and filter it, ranging from simple mulch or crushed stone to more complex landscaping and plantings.

We all have an interest in keeping our lake clean. We want to be able to swim in clean water and we want to maintain our property values.

The most important thing you can do though is to educate yourself on the issue. Visit our website. You will find the 2010 Wilson Lake Watershed Survey Report there as well as links to other resources.

Finally, take a minute to join the WLA. Your membership dues will help our volunteer board help you to keep Wilson Lake the clean wonderful refuge from the outside world that we all cherish. ***~Eric Cook***

Wilson Lake Gear is finally here!

Short and Long Sleeve T's, Sweatshirts, and Children's too!

Classic Design

https://www.bonfire.com/wilson-lake-classic-design/

"Sunset" Logo

https://www.bonfire.com/wilson-lake-sun-and-water/

Fire Safety on Wilson Lake

1. Using a fire pit? Get your fire permit online at Acton Fire-Rescue - Emergency Services
2. Never leave an outdoor fire unattended & always keep a container of water nearby
3. Consider installing a Knox Box system so the Acton Fire Department can enter your home on a call without knocking down the door: Emergency Key Box
4. Install smoke detectors on every level of your home including the basement: Where to Position the Fire and Smoke Detectors in Your Home
5. Replace any smoke alarms more than 10 years old. Hardwired interconnected devices with battery backup circumvent the problem of expired batteries. Replace batteries twice a year
6. Fireplace or woodstove? Embers can stay live for over 24 hours. Keep a fire extinguisher nearby and visible. Ensure your chimney is clean and in good operation
7. Store fuels in approved cans outside of your home and 50 feet away from heat sources.
8. Fireworks are beautiful but can lead to accidental fire. Maine laws for fireworks displays include applying for a permit 20 days before use, providing proof of at least $1,000,000 in liability insurance and a site plan, and allowing inspection of your site.
9. If you have a clothes dryer, ensure the exhaust vent duct is flexible or hard metal, rather than plastic, and clean out annually
10. Finally, make sure your family has a fire safety plan. ***~Rachel and Jeff Brown***