



Wilson Lake News

Fall, 2017

Mission Statement: The Wilson Lake Association will establish and maintain a program that will reverse any trend of degrading the water quality in Wilson Lake and result in continuous improvement in water quality. The Association will also encourage all the Lake's stakeholders to be involved and support a cooperative effort to reduce or eliminate the impact of contaminants on lake water quality.

Board of Directors:

- President: Jeanne Achille
477-0310/jach28@gmail.com
- Vice President: Jeff Brown
- Treasurer: Ann Marie Nadeau
- Secretary: vacant
- Linda Cote
- Arlie McGaw
- Heidi McGaw
- Dan Orino
- Bill Pimental
- Teg Rood
- Betty Wildes
- Glenn Wildes

Next Board Meeting:

April 7, 2018

9:00AM

94 Peacock Road

All WLA members welcome

Our Website:

wilsonlake.net

Wayne Sylvester of Milton Three Ponds Speaks at Our Annual Meeting:

We were honored on July 8, at our Annual Meeting, to have Wayne Sylvester share the experience of the folks who live on Northeast Pond in Milton as they deal with the discovery and rapid spreading of European Naiad. This is one of the dreaded 11 invasive plants plaguing water bodies in Maine. Once established it takes over and crowds out native plants totally filling in shorelines with its leaves and ruining recreational activities enjoyed by homeowners.

Wayne explained that the plant was first discovered by Dennis Roberge, a Mousam Lake owner, who snorkels lakes all over Maine to search out these nasty invaders. Once this plant was discovered and reported many individuals and organizations sprang into fighting mode. The Maine Department of Environmental Protection, New Hampshire Department of Environmental Services, Maine Volunteer Lake Monitoring Program, York County Invasive Aquatic Species Project, Three Ponds Protective Association, other lake associations including Wilson Lake Association, all became involved in mapping the infestations and/or planning remediation.

Currently, the TPPA has applied for and received grants to help pay for some of the costs incurred in treatment. Herbicides are being applied in the most heavily infested area at the north end of the lake, and a company specializing in manual harvesting has been contracted to work in other areas. This work includes using a Diver Assisted Suction Harvesting (DASH) boat which is outfitted with a generator powered vacuum. The hose is taken underwater by a SCUBA diver who manually pulls the plants which are collected in a large bin topside and then carted to a composting site away from the lake.

Because the Three Ponds are on the Maine/New Hampshire border, the TPPA is receiving grants from both states. Obviously, the homeowners are facing costs to help with the treatments, as well as reduction of their property values and loss of recreational activities. The plant has already spread downstream to Milton Pond and nearby Spaulding Pond (which, also, is horribly invaded by Eurasian Milfoil!)

Mr. Sylvester stressed the need for everyone who uses any water body for recreational activities to be very careful of transporting tiny fragments of any plant to a new water body. No lake is safe and vigilance is the best form of prevention. After using any equipment in a lake, river or stream, be sure to wash and dry it thoroughly before entering another water body. Avoid going to water bodies that you know are affected. Locally, that would include: The Three Ponds of Milton, Spaulding Pond in Lebanon, Balch Lake and Belleau Lake in Wakefield, Lake Arrowhead in Limerick, the Ossipee River in Ossipee and Cornish, Pickerel Pond in Limerick (declared free of Hydrilla, but be careful) and probably others as yet undiscovered.

And, please, learn what's growing in front of your shoreline. See something you don't recognize? Call for help!



President's Message from Jeanne
Musings from my dock:

It's Sunday, September 25, about 9:00 AM. I'm sitting on my dock with my steaming coffee mug resting on the table and my flute on my lap. There is no one on the lake or anywhere in sight. Not even a loon. A gentle breeze is sending ripples floating across the surface of the lake to the cove at this north end of Wilson Lake.

Summer crowds are gone, many boats have been pulled from their moorings and stored away for the approaching winter. Some remain, rocking ever so slowly with the tiny currents. The warm September sun shines over the landscape and reminds me to relish this moment. I can't bring myself to lift my flute and disturb the serenity of the silence.

How rare...how peaceful...how blessed am I?!

Priceless!

HAVE A SAFE AND WONDERFUL WINTER. SEE YOU IN THE SPRING



Volunteers:

Many of the "chores" that need to be attended to in order to increase our enjoyment at the lake are handled by volunteers who put in their time and efforts and receive no recognition. You may know your officers and Board members but do you know who puts out the "Headway Speed Only" buoys? It's Heidi and Arlie McGaw. Who transports the water quality testers from UNH every other week? It's Susan Chadbourne, with back-ups by Arlie McGaw. Who paddles the lake looking for those terrible invasive species that have entered nearby lakes? We have a team that includes Wayne & Sharon Reetz, David & Diana Spahn, Jeff Brown & Rachel Haft, Isobel Michaud, JoAnn & Wayne Perks, Heidi & Arlie McGaw, Celia Thibodeau, Jeanne Achille, Linda Sango & Annie Fullagar (neither of whom have homes here but love the lake), Brian Achille, Susan Chadbourne and Margaret Sitarz. Dan Orino has taken the annual water quality certification test for years and only recently retired from those duties which have been taken over by Rich Chevalier this Summer. Stephanie Thornton of Lovell Lake tests our lake for cyanobacteria every other week from May to October, as well as helping with our Plant Team. Heidi and Arlie McGaw also watch the water level of the lake and work with David Winchell, Jr. to control the dam.

Be sure to give your thanks when you see these folks. They are your neighbors and they help take care of our lake.

Cost Sharing Pilot Program Produces No New Projects

This year the WLA Board introduced a pilot program to encourage our community of home owners to take advantage of the Acton Wakefield Watersheds Alliance (AWWA) Youth Conservation Corps storm water abatement program. We thought that by offering to share some of the cost of materials used by the Corps, more of our shoreline could be protected from erosion and, thereby, prevent the introduction of the nutrient phosphorus into the lake. This element, which is naturally attached to soil particles and is a significant "greening" chemical in fertilizer, is responsible for increased plant growth and algae blooms in water bodies.

The local teens who form the Corps use hand tools to install BMPs (nationally approved Best Management Practices) to encourage rainfall and snow melt to penetrate into the ground which filters out the phosphorus before it can enter the lake. To become involved, a homeowner calls Amy Arsenault, AWWA's Project Manager, (603-473-2500) and requests a visit. Amy walks the property with the owner and determines if and where run-off is an issue. This is usually apparent where slopes are steep enough to develop gullies or rills, or has bare spots with exposed roots showing where soil has been washed away. Amy then draws up a Technical Assistance Plan to show how the issues can be resolved with simple corrective measures (the BMPs) installed by the owner or by the YCC.

The Corps works for free, though a donation of approximately 20% of the value of the labor is requested and greatly appreciated. Materials for the work are paid for by the owner. This is where WLA has hoped to help. We set aside \$400 dedicated to offsetting up to \$100 of the materials for anyone qualifying for a YCC Project. Only two owners inquired about becoming Project Hosts and since each of the properties were on fairly flat sites and needed very little remediation they did not qualify to become Hosts. Their inquiry showed their concern about the lake and we are very grateful for that.

What does this mean? Since its beginning in 2006, AWWA's Project Manager completed 43 Technical Assistance Plans for Wilson Lake owners. Of those 43 TAs, 19 have become Project Hosts, and some others may have had some or all of the work completed by the homeowners or someone whom they have hired. That leaves up to 36 sites identified in the 2009 Wilson Watershed Survey needing remediation. Every site with identified problems received site specific letters with recommended fixes and instructions for getting help. How can we encourage those folks to take advantage of the YCC program to correct them? Why are these homeowners not taking advantage of this great service, especially with the added incentive of monetary help from the lake association? We have decided to continue the program for another year in hopes that more sites can become Lake Friendly.

WILSON LAKE

2016 Summary Data
Station – 1 Deep
 Acton, ME

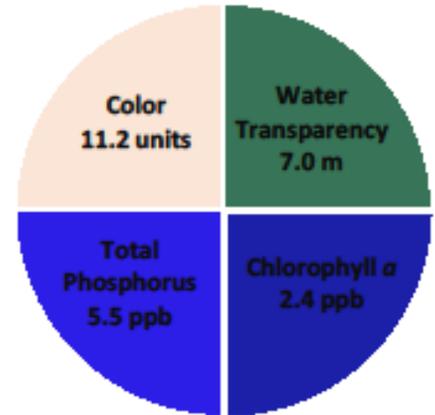


Figure 1. Wilson Lake Water Quality (2016)

Station 1 Deep was used as a reference point to represent the overall Wilson Lake water quality. Water quality data displayed in Table 1 represent surface water measurements that were collected on a bi-weekly basis between June 6 and October 17. The color coding depicted in Figure 1 corresponds to the positioning of the 2016 seasonal average Wilson Lake water quality values on the Lakes of Maine color ramps: <http://www.lakesofmaine.org/lake-water-quality.html?m=3920>

Table 1. 2016 Wilson Lake Seasonal Average water quality measurements

Parameter	Wilson Lake 2016 Seasonal Average (range)
Water Clarity (meters)	7.0 meters (range: 4.5 – 8.4)
Chlorophyll a (ppb)	2.4 ppb (range: 1.3 – 3.5)
Total Phosphorus (ppb)	5.5 ppb (range: 4.8 – 6.5)
Color (color units)	11.2 color units (range: 7.0 – 16.5)
Alkalinity (mg/L)	10.7 mg/L (range: 10.5 – 11.3)
pH (std units)	7.2 standard units (range: 6.7 – 7.6)
Specific Conductivity (uS/cm)	88.2 uS/cm (range: 86.1 – 90.4)

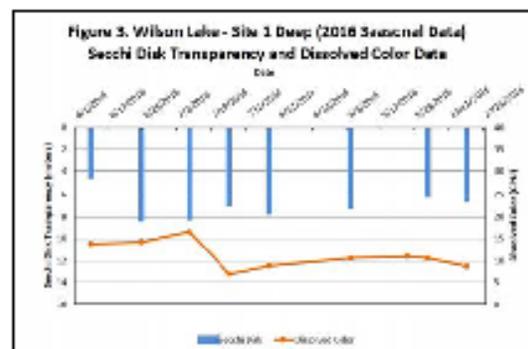
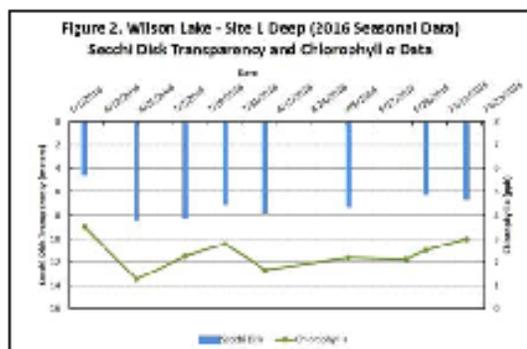


Figure 2 and 3. Seasonal Secchi disk transparency, chlorophyll a concentrations and dissolved color concentrations. Figures 2 and 3 illustrate the interplay among Secchi Disk transparency, chlorophyll a and dissolved color. Shallower water transparency measurements oftentimes correspond to increases in chlorophyll a and/or color concentrations.

LONG-TERM TRENDS

WATER CLARITY: The Wilson Lake water clarity measurements, measured as Secchi Disk transparency, display a trend of increasing water clarity over the past thirty-seven years.

CHLOROPHYLL: The Wilson Lake chlorophyll *a* concentrations, a measure of microscopic plant life within the lake, have intermittently been collected over the span of eleven sampling seasons. Due to data gaps among years and the small sample size (oftentimes one measurement collected per year) a trend analysis was not performed on the chlorophyll *a* data.

TOTAL PHOSPHORUS: The Wilson Lake total phosphorus concentrations, the nutrient most responsible for microscopic plant growth, have been intermittently collected over fourteen sampling seasons. Due to data gaps among years and the small sample size (oftentimes one measurement collected per year) a trend analysis was not performed on the total phosphorus data.

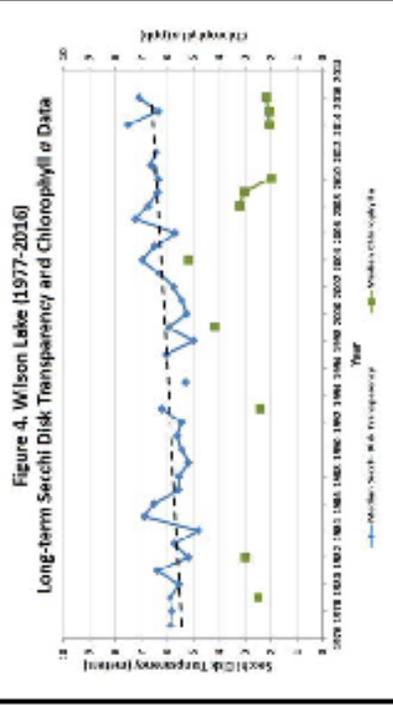
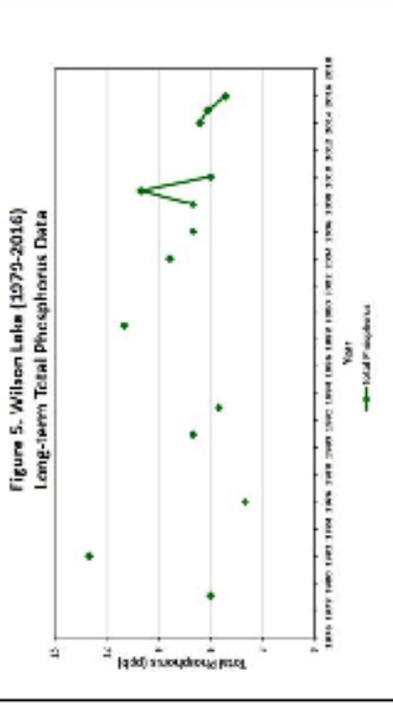


Table 2. Salmon Falls Headwaters Seasonal Average Water Quality Inter-comparison (2016)

Lake	Average Secchi Disk Transparency (meters)	Average Chlorophyll <i>a</i> (ppb)	Average Total Phosphorus (ppb)	Average Dissolved Oxygen (ppm)
Great East Lake	11.6	1.2	4.4	8.6
Wilson Lake	7.0	2.4	5.5	0.1
Lovell Lake	7.5	2.8	6.5	1.7
Horn Pond	7.3	1.9	5.7	2.9
Lake Ivanhoe	4.1	3.9	7.9	-----

- Water quality data are reported for a deep reference sampling location in each water body
- Dissolved oxygen measurements were collected in the summer (late July and August) in the bottom water layer (metallimnion or hypolimnion).
- — indicates the site is too shallow to form a bottom water layer (metallimnion or hypolimnion) during the summer months.



Figures 4 and 5. Changes in the Wilson Lake water clarity (Secchi Disk depth), chlorophyll *a*, dissolved color and total phosphorus concentrations measured between 1989 and 2016. These data illustrate the relationship between plant growth and water clarity. Total phosphorus data are also displayed and are oftentimes correlated with the amount of plant growth.

Table 2. Water quality summary statistics for the Salmon Falls Headwater Lakes. The inter-lake comparison provides insight into similarities and differences among the five water bodies that were sampled during the 2016 sampling season.

Recommendations

Implement Best Management Practices within the Wilson Lake watershed to minimize the adverse impacts of polluted runoff and erosion into the lake. Refer to the Action Wakefield Watersheds Alliance website for a list of "Conservation Practices for Homeowners" that provides a summary of problems associated with polluted runoff and what can be done to fix the problems. The website also includes a link to a series of Do-it-Yourself guides and fact sheets produced by the Maine Department of Environmental Protection.

• <http://awwatersheds.org>

Paddle Board Yoga by Susan Chadbourne



Paddle Board Yoga on Wilson Lake

Paddle board yoga was a weekly occurrence on Wilson Lake this summer. An increasing number of Wilson Lake residents as well as others on nearby lakes have taken up the practice. Often times passersby on foot or in cars had a chance to see the circle of paddle boards in the cove near the Young's Ridge Launch when an early evening class was in progress. Susan Chadbourne taught classes on a regular basis and offered private and group sessions on request. Most people are certain they will fall in the water but that was not usually the case, rather the exception.

Performing the yoga poses while balancing on the board certainly offers an additional challenge but provides a solid core workout in the process. Most students were pleasantly surprised at how much they were able to achieve while practicing on the water. Paddle board yoga is an extremely beautiful practice when accompanied by the sounds and sights of nature that surround you while out on the water - a truly zen-like experience. We are hoping for at least one more class before the snow flies!

Spilled Gas?? A few drops of Blue Dawn dish detergent will take care of any gas you might accidentally spill when filling your boat's gas tank. It's a great idea to keep a small bottle of the detergent near your refill tank. The gas will dissipate immediately!

Finding "Plastigon Noodlius"

This season there were two virtual invasive plants growing in Wilson Lake. Did you look for them? Several of our members have accepted the challenge of finding them each summer while they are out enjoying the lake and keeping an eye out for true invasives at the same time. It's a fun way to help protect our water from these horrible plants that are showing up in neighboring lakes all around us and destroying property values as well as the recreational activities we love.



"Plastigon Noodlius"

First time finders will be awarded a Wilson Lake cap as their reward. Wear it proudly!

The Invasive Plant Team: by David Spahn

The other day my wife and I had friends visit from out of state and got to talking about our lake. We explained that we were part of the "Wilson Lake Plant Patrol". Our friends then asked, "What's that.?" That question reinforced in my mind that there is a need to further inform and educate people of the dangers that invasive plants pose to lakes and more specifically Wilson Lake.

Invasive plants are plants that are not normally found in an ecosystem, therefore, there are no local counter forces to prevent their rapid growth and proliferation. With this unchecked growth these plants can rapidly take over an entire lake, completely changing the ecosystem so that the lake is no longer suitable for all the activities we enjoy. Just think: it's a nice hot summer day and you want to cool off but your shoreline is now a thick jungle of vegetation preventing you from jumping in. This could happen to Wilson Lake! It has happened to lakes not all that far away. These changes are often associated with significant drops in land value.

What can we do to make sure that never happens to our beloved lake? By becoming more acquainted with the plants that naturally occur here we will be able to more quickly detect any invasive incursion. You may ask, "How do invasive plants get introduced into a lake.?" One of the more common ways is being inadvertently introduced on our boating or fishing gear. Perhaps someone visiting our lake has a small piece of a plant on their boat's prop. That's all it can take.

The Wilson Lake Plant Patrol consists of a number of folks that care deeply about our lake and its future. It provides me with a great opportunity to learn more about my surroundings. On August 14th we gathered by the river/marshy part of the southeast corner of Wilson Lake. Laurie Callahan, a trained plant biologist, joined us and helped us identify and become familiar with our local plant community. I think we all learned so much. There is no better way to learn than hands on with the aid of a knowledgeable person.

We invite anyone to join us on our paddles. Paddling around Wilson Lake is not a bad way to spend a few hours!



PO Box 162
Acton, ME 04001

To:

The dam boards will be removed on or about October 15. The water level will begin to decrease and boats should be removed.

Water Quality Testing: by Rich Chevalier

My name is Rich Chevalier, your new certified 'Voluntary Lake Monitoring Program' (VLMP) person. I have taken over the water testing on the lake which was formerly done by Dan Orino. Dan has been involved with our lake (along with others) as a watch guard of its health for years and I hope to continue the job in the same way.

I have been certified by the State of Maine to observe water quality and clarity using a Secchi disk along with instrumentation to check dissolved oxygen, temperature, and clarity. Also, I take water samples occasionally to check for phosphorus and E-coli along with a visual inspection through a scope for Gloeotrichia (Gloeo) testing. Gloeo is a toxic bacteria which can impair a water and affect recreational use.

The Secchi disk is an 8" round flat plate with two colors, white and black that is connected to a tape measure and lowered into the water. I use an aquascope to view the disk as it is lowered into the water as deep as I can until it goes out of sight. I pull it back into sight and continue doing that until I can just barely see it. At that point I take a tape measure reading at the surface of the water to determine how far the disk has been lowered before going out of sight.

The dissolved oxygen and temperature data is recorded using a 'YSI Pro20' instrument that electronically stores data by means of a cable connected probe. It is lowered into the water in increments of 1 meter to a depth of 13 meters. The lake basin (deepest area of the lake) is approximately 14 meters (45'). I input the data every meter as it is lowered to the full 13 meters. Dissolved oxygen is necessary for the survival of cold water fish, like trout.

I take water samples using a sealable flask and following a pre-described method to draw the water. The sample then goes to a lab for chemical analysis.

The Gloeo test is checking to see how many particle bits of Gloeo are free floating in the water as I look through the end of the scope. The scope is a 4.5" round, 2.1' long plastic tube that has a mask for your face on one end and a slanted clear Plexiglas near the opposite end to cut out any reflections. I make a comparison of what I see in the water to a chart with a number assigned to different samples of clarity.

All my readings and data are entered on a field sheet and sent to VLMP in Auburn, Maine. They take the data and record it in the state records. I encourage all to check out the web site www.mainevlmp.org/ and see what your lake looks like along with other lakes in Maine that are listed.

I love our lake and hope we continue to enjoy the benefits of recreation and the beauty it provides for us as we are the keepers of the environment and the waters around. Please continue to keep vigilant in the watch to keep the natural wonders of our lake healthy and clean.