

Dear Friends of the TPEPA,

Just as the natural world around us on beautiful Trickey Pond was waking up to spring, all other parts of our world were put on an extended pause. After a winter of good, but not overwhelming, snow cover and some sturdy ice for ice fishing, skating, snowmobiling and just a lot of walking on the pond, ice-out came on April 2<sup>nd</sup>, a bit earlier than normal. This spring in particular it was comforting to see and hear the loons on the pond again, first spotted on April 1<sup>st</sup>, and to observe the migration home of many of our other bird species. Nature kindly offered us a bit of much needed normal in a most unusual time.

The public boat launch saw boat activity almost immediately. Small fishing boats began to appear the same week as ice-out; local folks grateful for a new escape, no doubt, while social distancing. This early season boating served as a reminder that soon the boat launch will be busy with summer activity. So, a big thank you to all our donors for making it possible for the TPEPA to pay for Courtesy Boat Inspector hours this coming season. Without your generous contributions we wouldn't be able to maintain this important line of defense against invasives coming to Trickey Pond.

Speaking of generous donors, be sure to check out the back page of this newsletter to see our business donors and benefactors as well as our municipal partner, the Town of Naples. Thank you!

If you're looking for other ways to protect Trickey Pond, please know that your boating habits and how you choose to live and play on the land and on the water have a direct impact on the pond. See articles related to these topics, as well as to the 2019 water quality test results and our on-going watershed study in this spring newsletter.

Again, thank you for your support and your interest in protecting Trickey Pond.

Warm regards,

The TPEPA Board of Directors

### Please Support TRICKEY POND

The primary purpose of the TPEPA is to raise money to take care of Trickey's pristine waters. Your donations fund boat inspector hours at the public ramp to keep milfoil and other invasive species out of Trickey Pond. Thank you for your support!

### Sign Up For AMAZON SMILE!

<https://smile.amazon.com>

Type "Trickey Pond Environmental Protection Association"  
0.5% of every purchase made  
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### How do I Connect with the TPEPA?



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**Our Website**  
[www.trickeypond.org](http://www.trickeypond.org)

# 2019 Water Quality Testing Results

By Dick Meyer

If you're new to the TPEPA newsletter, you wouldn't necessarily know that every year TPEPA purchases a package of water quality tests from the Lakes Environmental Association (LEA). It's not cheap. In 2019 we spent \$975 for all the tests offered. Summer interns or staff visit each of the 40+ lakes under LEA's watch every two weeks to take readings or collect samples. These tests are much more extensive and much different than just testing to see if your drinking water is safe. It takes about five months to compile the data for all the lakes that LEA monitors, and the 2019 report only arrived in late April 2020. The report for just Trickey Pond is 17 pages long. Granted, some of the report is dedicated to definitions of terms, but the data, having been collected for nearly 50 years, provides a clear picture of not only the condition of TP today, but, when analyzed, shows the trend line of the important water quality parameters. Trickey Pond is such a clear and beautiful water body I think it is obvious why we as camp and homeowners want to know the condition of the pond, know what the trends are, and know when and how to take remedial steps. Speaking of remedial steps, if you think you have a problem or just want confirmation that some project that is planned falls within good practice, LEA is the place to consult, free of charge (although a nice contribution to show your appreciation for their help would be appropriate).

From time to time, LEA offers tests for significant properties of the pond water that do not require annual testing. One such test required sediment samples that were analyzed for the iron to aluminum ratio. When the bottom water oxygen becomes depleted, phosphorus locked up in the sediment can re-enter the water column if the ratio is too much one way. Fortunately, TP sediment was on the good side

of the ratio. Gleo bacteria was tested for 2 or 3 years and again, the concentration was low and it is not expected to be a problem.

Two statistics not included in this report are the ice-in and ice-out dates. Of course, these dates are not strictly water quality, but

the change of dates tend to coincide with climate change, and the shorter the ice period the more time the water has to warm, possibly resulting in more algae growth.

*Data used for this article was provided by Lakes Environmental Association. The complete Trickey Pond Water Quality Test Report is available at [www.mainelakes.org](http://www.mainelakes.org)*

## TEMPERATURE STRING

The annual test program tells several stories. The most visible sign of water quality testing is the buoy not far from Camp Skylemar. It has a string of eight recording temperature sensors every 2 meters (about 6-1/2 feet) in the 57-foot depth. These record water temperature every 15 minutes from early May through mid-November. The graph is difficult to reproduce, but some of the information provided is:

- ◆ There was less than 3°C/5.6°F difference between surface and bottom waters when the sensors were deployed on May 9, 2019 (Ice-out probably occurred in April)
- ◆ The initial bottom temperature was 6°C/43°F
- ◆ The peak temperature at a depth of 1m/3-1/4 ft. was reached on July 21 (28.5°C/83.3°F)
- ◆ When the peak temperature was reached, the bottom waters were still only 8°C/46°F
- ◆ As the water warms up it stratifies and the upper and lower layers do not mix. The deep- and cold-water loving fish, must live on whatever oxygen there is until the water again mixes which occurred on November 11
- ◆ The stratification is also good because it reduces the chance that more nutrient-rich deep water could come to the surface and feed algae

## CHLOROPHYLL-A

Chlorophyll-a is the green pigment found in all algae. Chlorophyll-a sampling in a lake is used to estimate the amount of algae present in the water column. These algae are found "sitting" on top of the thermocline (that band of water between the upper warmer water and the lower colder water). Chlorophyll-a affect the clarity of the water which is measured with a Secchi disk. The 2019 chlorophyll-a average was 1.63 ppb, putting it into the low category, and it is below the long-term average of 1.82 ppb, but the **long-term trend analysis indicates chlorophyll-a concentration is increasing.**

## PHOSPHORUS

Phosphorus is the nutrient that makes algae grow. The more phosphorus the more algae. The algae reduce clarity. The **amount of phosphorus in 2019 readings were stable**, that is, not changing significantly. **Nevertheless, chlorophyll-a is increasing and clarity is decreasing.**

## COLOR

The average color reading for 2019 was 13.35 SPU indicating that water in Trickey Pond is moderately colored. Coloration can result from the decay of organic matter, such as leaves, or silt; material other than chlorophyll-a.

## SEECHE DISK

The average Secchi disk reading for 2019 was 9.16 meters (30.05 feet), this still falls into the high clarity range, but was shallower than the long-term average of 10.03 meters (32.91 feet). **The long-term trend for clarity is decreasing (bad).** This is consistent with the increasing chlorophyll-a trend.

Considering all the shore-line building and boating activity over the past 50 years, Trickey Pond is doing fairly well. But unfortunately, the long-term trends are not good, although, the downward trends are at a low slope. The flush rate is a mere 0.1 flushes per year. This is because there are no real streams or rivers flowing into TP, and this is good because the spring water that does feed the pond is filtered through the soil. However, if something like excess phosphorus from a point source contaminated the pond, but was mitigated, it takes 10 years to flush one pond full of water. Also, since the water shed is only 555 acres feeding TP of 315 acres the land owners have the power to control what goes into the water.

# Tips on Environmentally Conscience Boating

By Martina Witts

Many lake associations are offering suggestions on how to boat in the most environmentally responsible way. Our friends at the Kezar Lake Watershed Association, after researching the matter of boat wakes, put together a helpful tip sheet and campaign they named *Be Wake Wise*. You can view their tip sheet at <https://klwa.us/wp-content/uploads/KLWA-WakeWise-Flyer.pdf> With some modifications, their suggestions also make sense at Trickey Pond. Here's how you can help to minimize damage to the environment and personal property when boating on the pond:



- ◆ Boat in the widest part of the pond so that wakes will diminish before reaching shore and where propeller wash won't scour the bottom.
- ◆ Operate your boat at least 200 feet from shore if moving at greater than headway speed, per Maine state Law; (note, the KLWA study recommends 500 feet from shore.)
- ◆ Operate in water more than 20 feet deep.
- ◆ Comply with the No Wake zone around the islands where loon habitat typically exists.
- ◆ Leave and approach the shore in a straight line. Turning makes large wakes.
- ◆ Trim your boat properly to reach plane to avoid plowing which creates larger wakes.
- ◆ Operate at least 500 feet from small water craft.

Next time you're at the public boat launch, look for our new Safe Boating sign. It offers an abbreviated version of these environmentally conscience boating tips. This year, the sign is sponsored by a local business supporter of the TPEPA, Long Lake Marina.

The Maine Lakes Society has moved their 2020 in-person conference on-line. In a series of 45-minute weekly Wednesday webinars participants can learn about everything from loons to native plants for LakeSmart landscaping to participating in lake health as a citizen scientist. Webinars run through June 20 and are all archived on their website for you to view at your leisure. Go to <https://mainelakessociety.org/conference-archive/>. A few fun loon facts that I learned from watching the webinars include:

- ◆ Loons have a feather arrangement similar to Emperor penguins, this helps keep them warm in winter
- ◆ The average age for first time breeding for loons is 8 years old; loons will either stay at the ocean until they are ready to breed or explore a few lakes before they "choose" their preferred breeding lake
- ◆ Loons return to their same summer lake 80-90% of the time



**Remember, personal watercrafts are not allowed on Trickey Pond.**

Please share this information with your renters, visitors and campers.

To report a violation, call the Game Warden 24-hour dispatch center at :

**1-800-452-4664**



# Trickey Pond Watershed Study

By Martina Witts

Trickey Pond is among the clearest and cleanest water bodies in the Sebago Lake watershed. First time visitors often marvel at the clarity of its water. Yet, simultaneously, it is the *only* lake or pond in the greater Sebago Lake watershed that is showing a *decreasing* water quality trend. Water testing by Lakes Environmental Association (LEA) has found worsening clarity and chlorophyll trends, as well as high deep-water phosphorus readings. As a result, Trickey Pond warrants a “high” degree of concern from LEA. That’s why, in 2019, the Maine DEP placed Trickey Pond on its NonPoint Source (NPS) Priority Watershed list. So, in September 2019, the TPEPA partnered with Lakes Environmental Association and the Town of Naples and contracted

with FB Environmental to conduct a watershed study of the 555-acre Trickey Pond watershed.

The watershed study will consist of three phases. First, in the fall of 2019 a watershed survey was conducted to identify NPS sources in the watershed. Late fall weather conditions delayed the survey completion to early spring 2020. As of this writing, FB Environmental is completing the Watershed Survey Report. Survey results identified more than 35 NPS sites of varying degrees of concern. This part of the project had a cost of \$3000 which was funded with \$2000 from the Town of Naples and \$1000 from the TPEPA.

Phase two is a shoreline survey planned for early May 2020 that will document the condition of each parcel of land using a scoring system. At a cost of \$4000, TPEPA has committed \$1000 toward this phase and has requested \$3000 from the Town of Naples. Funding from the Town of Naples will need to be approved at the June 25<sup>th</sup> Town Meeting.

In phase three, FB Environmental will write a watershed protection plan using the data from these surveys that, once approved by the State, will enable stakeholders (land owners and road associations in the watershed) to receive funding to improve the water

quality of Trickey Pond. The plan will include:

- ◆ a full watershed assessment of current conditions and threats to Trickey Pond.
- ◆ recommendations and measurable milestones to restore and protect Trickey Pond, including locations to remediate polluted runoff issues as well as a long-term schedule for completion.
- ◆ a Maine DEP approved plan that would unlock additional funds for partners to implement recommendations for sound management of Trickey Pond.
- ◆ a detailed photographic record with GPS coordinates of all shoreline properties which can be used by the Town, TPEPA, and partners to understand and address identified issues.

The TPEPA would like to thank the Town of Naples for its financial support of this project. Also, thank you to the LEA for donating staff hours to assist with both the watershed and shore line surveys. More information on NPS and its effect on water quality can be found at <https://www.maine.gov/dep/land/watershed/nps/index.html>

The Maine Nonpoint Source Management Program Plan 2020-2024 can be found at:

[https://www.maine.gov/dep/land/watershed/Maine%20NPS%20Mgmt%20Plan%202020-2024%20Final\\_Fog019.pdf](https://www.maine.gov/dep/land/watershed/Maine%20NPS%20Mgmt%20Plan%202020-2024%20Final_Fog019.pdf)



# Phosphorous and Water Quality

By Dick Meyer

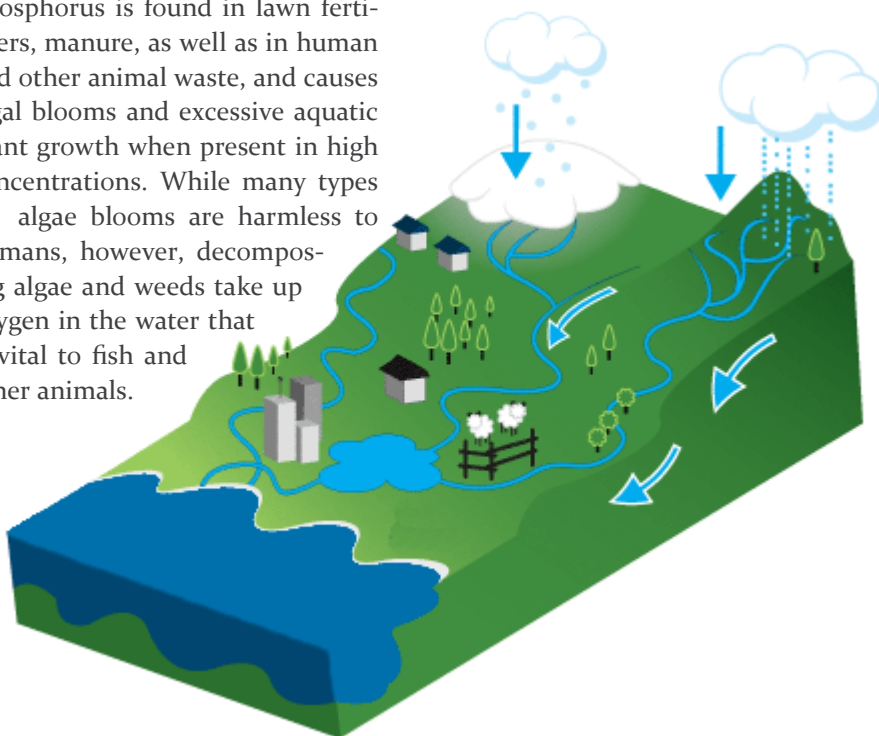
The May issue of the Granite State Analytical Services, LLC had what I think is the best description of what happens when you put a fertilizer, especially one that contains phosphorus, on your lawn.

The winters in New England are long and our lawns can take a beating with the weather. When the nice weather finally arrives, many people like to add fertilizers to their lawn trying to achieve that lush green lawn we all desire. Did you know that adding fertilizer to your lawn can affect our water quality? Even if you live far from a lake or river, your lawn and household maintenance can affect water quality. This is because everyone lives in a watershed!

In short, a watershed is a precipitation collector. It is an area of land that drains all the streams and rainfall to a common outlet such as the outflow of a reservoir, mouth of a bay, or any point along a stream channel. It is also the land area where water soaks through the Earth filling an underground water supply called an aquifer. Water is a universal solvent, affected by everything that it comes in contact with: the land it passes over, and the soils through which it travels. The important thing about a watershed is that what we do on the land affects water quality for all communities living downstream.

Phosphorus is the nutrient that has the greatest impact on the growth of algae in lakes. Research has found that just one pound of phosphorus can feed 300-500 pounds of algae in a water body. Phosphorus is found in lawn fertilizers, manure, as well as in human and other animal waste, and causes algal blooms and excessive aquatic plant growth when present in high concentrations. While many types of algae blooms are harmless to humans, however, decomposing algae and weeds take up oxygen in the water that is vital to fish and other animals.

Oxygen depletion is the most common cause of fish kills in ponds. They can also cause your water to have a foul smell until the algae bloom has passed.



## Meet Our Members

The TPEPA wouldn't be able to do the work it does without our members. And while we certainly enjoy getting new followers and likes on our social media, we'd like to know you better! Beginning in our Fall Newsletter we'll include a new feature that will be all about our members. Send us a short paragraph or two (200 words or less) about you and your connection to Trickey Pond, or about your favorite TP memory, or your first visit, or "best summer ever" story, you get the idea. Photos are welcome too. Be sure to include your home town and name. You can email your stories to [Martina.Witts@gmail.com](mailto:Martina.Witts@gmail.com) or mail to TPEPA, PO Box 417, Naples, ME, 04055.

Coming  
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Already a member? Give your friend or neighbor a gift membership!  
Includes one t-shirt and a membership letter mailed to the recipient.

To become a member of TPEPA, please visit our web site at [TrickeyPond.org](http://TrickeyPond.org)

Please make a tax-deductible donation this year! Our hope is that every homeowner, friend, family member and renter will help protect Trickey Pond.

You can donate on the website with a credit card: [www.trickeypond.org](http://www.trickeypond.org)  
OR mail a check to TPEPA, P.O. Box 417 Naples, Maine 04055