



## SPRING NEWSLETTER 2019

Dear Friends of Trickey Pond,

After a long and cold winter, spring is finally here!

In addition, we have launched a new website! Please visit [www.trickeypond.org](http://www.trickeypond.org) to see our new "look." Our simplified website aims to help you better access the information you need easily and quickly.

In this newsletter, we have included a letter that you can print or email to people who rent your home this summer! Our aim is to educate renters about life on Trickey Pond, and to help them become invested in protecting it. If you are interested in providing other information to your renters, please let us know.

We look forward to seeing you this summer. Look for the TPEPA table at the 4<sup>th</sup> of July Parade on Trickey Pond Road, and consider joining us at our summer meeting on June 22, 2019.

Please consider supporting the TPEPA in our mission- you can quickly and easily donate online at our new and improved website, [www.trickeypond.org](http://www.trickeypond.org). We would love some new faces at the TPEPA, so please email us at [info@tpepa.org](mailto:info@tpepa.org) if you would like to get involved.

See you soon!

The Members of the TPEPA

## HOW DO I CONNECT WITH THE TPEPA?

**“Like” Our Page on Facebook**

Trickey Pond Environmental Protection Association



**“Follow” Us on Instagram**

@trickeypond



**Visit our Website**

[www.trickeypond.org](http://www.trickeypond.org)



## Welcome, Renters!

Dear Renter,

Welcome to Trickey Pond. We are so glad you are here! Whether this is your first year visiting Trickey, or you have been here for decades, we hope that you consider her your summer home. Our pond has pristine waters, and is considered one of the cleanest ponds in Maine. Trickey Pond is home to spectacular wildlife including a variety of birds, mammals and fish. We are home to a pair of nesting loons who will charm you with their songs throughout the day and night!

Here are some guidelines to help you take good care of Trickey Pond while you visit:

- Never litter and please dispose of used fishing equipment properly- you can find a artificial bait disposal at the public ramp.
- You may put your boat in the water using our public boat ramps, please inspect for and wash off plant life before entering.
- Maine Law prohibits the use of Jet Skis or other “personal watercraft” on Trickey Pond.
- Obey the no wake zone near the islands- they are for protection of our nesting loons. Please do not disturb nesting loons in any way.
- If your boat is not registered in the state of Maine, you must acquire a Maine Lake and River Protection Sticker from the Town office or at the bait shop on Route 35.
- Children 10 years of age or younger must wear type I, II or II Personal Floatation Device at all times on a watercraft. All vessels, including canoes and kayaks, must have at least one USCG–approved Type I, II, III, or V PFD (life jacket) for each person on board. In addition, one USCG–approved Type IV (throwable) PFD must be on board vessels 16 feet or longer.
- Power boats must pass on the operator’s port (left) side, when a power boat approaches a sail boat or non-motorized craft, the non-motorized craft has the right of way.
- Drive slowly on all roads surrounding the pond.

The Trickey Pond Environmental Protection Association (TPEPA) is here to protect Trickey Pond, and to help you enjoy your stay. In addition to educating our families, we also pay for annual water quality tests, and for a boat inspector at our public boat ramp.

We are a non-profit organization and rely on funds from our Trickey Pond family to protect Trickey Pond. We hope that you love Trickey as much as we do, and will support us in our mission. You can donate on the website: [www.trickeypond.org](http://www.trickeypond.org). Please follow us on Facebook and Instagram (@trickeypond) to keep in touch with your second home throughout the year!

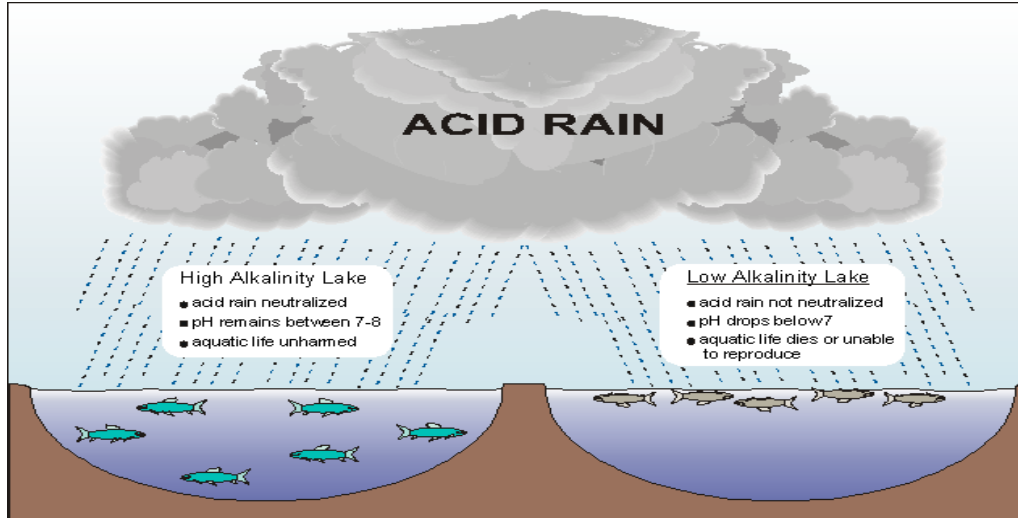
Have a wonderful visit, and we hope to see you back next year!  
Your friends and neighbors at the TPEPA



# ACID RAIN

*Written by: Richard Meyer*

The following article appeared in the December 2018 newsletter from A & L Laboratory in Auburn where I used to get my well water tested:



## pH and Alkalinity in Drinking Water

pH is simply a measure of the concentration of hydrogen ions, and is short for "potential of hydrogen." The higher a liquid's pH, the fewer free hydrogen ions it has; the lower its pH, the more free hydrogen ions it has. It measures how acidic or alkaline a substance is on a scale of 0-14. For example, something with a pH of 1 would be very acidic, and something with a pH of 13 would be very alkaline.

Natural water on our planet ranges in pH from 6.5 to 8.5, depending on surrounding soil and vegetation, seasonal variations and weather, and even time of day responses to sunlight. Human activities further influence the pH of our water, from the barrage of toxic industrial pollutants.

The alkalinity of water may be defined as its capacity to neutralize acid and means that the pH is greater than 7. High alkalinity is good to have in our drinking water because it keeps the water safe for us to drink. The amount of alkalinity that should be in our water is 20-200 mg/L for typical drinking water. Alkalinity is basically dissolved minerals in the water that help neutralize the water we drink.

Alkalinity of natural water is determined by the soil and bedrock through which it passes. The main sources for natural alkalinity are rocks which contain carbonate, bicarbonate, and hydroxide compounds. Borates, silicates, and phosphates also may contribute to alkalinity. Limestone is rich in carbonates, so waters flowing through limestone regions or bedrock containing carbonates generally have high alkalinity.

Drinking too much alkaline water, or drinking water with a high pH, may disrupt the body's normal pH. This can lead to a condition called metabolic alkalosis, which may cause confusion, nausea, vomiting, hand tremors, muscle twitching, and tingling in the face, hands or feet.

## Treating Algae Blooms

*Written by: Richard Meyer*

Last fall I wrote about algae blooms in general. This article is about what one Maine lake community is doing about persistent blooms and the cost of the treatment. The story, written by Ben Peierls, appeared in the *LEA Lake News*, winter 2018-2019. This story is relevant and significant for us because there is still a construction site within the Trickey Pond watershed with the potential to seriously pollute TP with dirt that contains phosphorus. Fortunately, a few years ago TPEPA sponsored sediment testing for the iron/aluminum ratio, and the yearly testing of the temperature and oxygen levels in the water play into this scenario. Phosphorus binds with both iron and aluminum and precipitates to the bottom of the lake. However, if the oxygen in the water is depleted (typically as the water heats up in the summer) the phosphorus bound with iron can re-enter the water column, but that bound with aluminum does not. Note, in the article on ice-out/ ice-in data the oxygen level in the water is also affected by the length of time of the winter ice cover.

East Pond in Kennebec County is a 1700 acre lake with a history of algae blooms. Ben and Colin Holm of LEA were there to observe the application of alum. Alum (aluminum sulfate) will combine with the phosphorus in the water making aluminum phosphate which is insoluble and the precipitate settles to the bottom, locking it away from the water column. However, the aluminum phosphate is acidic so a second chemical, sodium aluminate, is added as a buffer to keep the lake pH at normal levels. A buffer is a solution that can resist pH change upon the addition of an acidic or basic component. It is able to neutralize small amounts of added acid or base, thus keeping the pH of the solution relatively stable. (Wikipedia)

The company hired to do the application was using a 30 foot barge and a smaller skiff to pump the aluminum-based chemicals into the lake. Ben, Colin, and Colby College researchers followed in Colby's floating lake laboratory, the *Colby Compass*.

Alum is an effective way to bind phosphorus and prevent it from fueling the growth of algae. Lakes and ponds have been treated with alum since the early 1970's. However, it is expensive, about \$1 million for East Pond. This equates to \$588 per acre, or for Trickey Pond, if necessary, over \$185,000.

Hopefully, we never have to face serious algae blooms, but it's nice to know there is a remedy, although it is expensive. The better, almost no cost, method is to prevent the entrance of phosphorus from the watershed in the first place.

## Ice In/Ice Out

*Written by: Richard Meyer*

Before moving away, Daphne and I recorded ice in and ice out dates for 11 years and also transmitted the data to VLMP (now Lake Stewards of Maine) in Auburn and later to LEA, Bridgton. These organizations keep official records of this data for lakes and ponds in their district and around the state. I had a probe in Trickey Pond that transmitted the water temperature back to an instrument on our porch, so Daphne also recorded the water temperature occasionally, that if graphed, would show a skewed bell shaped curve of rising temperature until a peak in early August and then falling off more rapidly in the fall until ice-in, when I removed the probe. The exact dates of ice in/out are a little arbitrary because the ice does not usually go in or out all at once. However, the importance of the timing is very much related to climate change. From ice in until ice out the water receives no new oxygen, so the marine animals must survive with whatever amount is in the water all winter. The remarks column applies to the ice-out date. Note that merganser and loon observations coincide with the ice-out date. We have been told these birds fly over every day so they know exactly when there is enough water for them to roost and fish. Notice, some years have two dates. This is because some years the lake froze then thawed and refroze. Also, some year's ice did not form until January of the following year.

DATE	ICE-OUT	REMARKS	ICE-IN
2004	-----		12/19
2005	4/14	Male merganser spotted	12/16
2006	3/26	Merganser	----
2007	12/7 & 4/22	Mallards spotted	1/17 (2008)
2008	4/22	Heard loons	12/21
2009	4/12	Merganser 12/23	
2010	3/20	Mergansers & mallard s	12/30
2011	4/12	2 Beavers playing	----
2012	3/21	Mergansers	1/4 (2013) & 12/2
2013	4/7	Mergansers on 4/8	12/16
2014	4/21	Mallards Mergansers Loons	12/31
2015	4/18	Loons	----
2016	----	Moved from lake	1/7

There have been no reports from TP the last two years. Amanda Pratt, of LEA, reported that for the region ice out in 2018 was later than usual. It would be nice if someone would continue reporting the ice in/ice out dates for TP. Please let the TPEPA know if you would be able to help!

# WATER QUALITY REPORT

*Written by: Richard Meyer*

Trickey Pond is one of over 40 lakes or ponds LEA monitors and reports on. The number of water bodies they monitor keeps growing, indicating that more and more people and lake associations see the value of teaming with LEA. Water testing is conducted with the funds paid by lake organizations such as TPEPA. In 2018 it cost us \$925 to get the series of periodic collection of samples, tests, and analysis of our water. The overall results for TP in 2018: Oxygen depletions is severe; High phosphorus at depth is over 12 ppb (bad); Clarity trend (combination of clarity, phosphorous, and chlorophyll-a) is worse; Phosphorous alone is unchanged; Chl-a trend = worse; Coldwater fish = yes (good). The degree of concern = HIGH because 4 out of the 7 reported categories show worsening trends.

Chl-a is the chlorophyll in algae as opposed to the chlorophyll in tree leaves. At a value of 2 it is still in the LOW range, but the trend is increasing, i.e. in the wrong direction.

Some of the absolute numbers are: Clarity 2018 = 9.43 meters, Long term = 10.04 meters; Phosphorus 2018 = 2, Long term = 1.73. There are a couple of caveats to the phosphorus number in the LEA report – still the clarity is significantly lower and not subject to the same caveats.

Dissolved oxygen concentrations in the deep waters of the pond are high enough to support coldwater fish species throughout the summer, although their habitat is slightly limited by low oxygen conditions at the bottom of the pond.

By comparison, of the 40+ lakes monitored in 2018, 84% had deeper or similar clarity, 76% had lower surface phosphorus, and 82% had lower or similar chlorophyll. Nevertheless, Trickey Pond is still the clearest lake/pond in the LEA purview.

One of the more interesting data in the report is from the string of temperature sensors suspended from the buoy half way across the pond in front of Camp Skylemar. There are 9 sensors spaced about 6 feet apart that record the water temperature every few hours from early May through mid-November. Even on May 1st the water was beginning to stratify and showed about a 13 Fahrenheit degrees difference between the surface temperature and bottom of the lake, with the coldest temperature being about 42° F and the depth at 3 feet about 55° F. When I was recording temperatures, my probe was in very shallow water at the shore and would show just above freezing at ice-out, usually in April, but by early May was showing 54-55° F.

The highest temperature was 84.4° F on August 7, and the bottom layer was still only 45° F. The deepest parts of the water column show a gradual temperature increase even until late October, but the surface layers cooled after the peak in early August until all the layers came together on November 4 and the water column was all equalized at 48° F. An important aspect of this phenomenon is that in the middle layers there is no mixing of the water column so that no new oxygen is added to the bottom layer that the cold water fish need during the summer. And this is significant because cold water holds more oxygen than warm water and if the bottom layer gets too warm the cold water fish would starve for oxygen.

## PLEASE SUPPORT TRICKEY POND

The primary purpose of the TPEPA is to raise money to take care of Trickey's pristine waters. This summer, we hope to increase the hours that boat inspectors are at the public ramp to keep milfoil and other invasive species out of Trickey pond, and we need your help to make this happen!

\$112 = 1 Day of Boat Inspections

Please consider giving us a day or even a week of boat inspections! With your help, we could have boats inspected from April through October!

### JOIN THE TPEPA BOARD!

Our next meeting is on June 22<sup>nd</sup> at 9:00 am at the Naples Town Office. We love to see new faces! Please just drop in. If you are interested in joining the Board but are not able to come to the next meeting, please email Kristin Finkelstein at [kkushlan@gmail.com](mailto:kkushlan@gmail.com) to learn more about how you can get involved!

### SIGN UP FOR AMAZON SMILE!

<https://smile.amazon.com>

Type "Trickey Pond Environmental Protection Association" to find the TPEPA!

0.5% of every purchase you make will go to protecting Trickey Pond

Please make a tax-deductible donation this summer!

Our hope is that every homeowner 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: TPEPA, P.O. Box 417 Naples, Maine 04055

