

2022 STATE OF THE LAKE FAQ

Summary of presentation:

- What is going on with cyanobacteria in Damariscotta Lake?
 - 3 cyanobacteria outbreaks have occurred in the lake this year. The first in early June was in the entire lake, the second in late July was in the North part of the South Arm, and the third in early August in the Southern part of the South Arm.
- Is it safe to swim in Damariscotta Lake?
 - There are always inherent risks to open water swimming so we recommend following the best practices listed on our website (<https://www.midcoastconservancy.org/damariscotta>) and social media including, avoiding inadvertently swallowing lake water if you are swimming, avoiding dense or scummy areas of the lake, preventing pets from drinking the lake water, avoiding using lake water for drinking and household use (including showering, cooking, etc.)
- Why is this happening to Damariscotta Lake?
 - Unfortunately cyanobacteria outbreaks are becoming more common across the state. However, temperatures are increasing in Damariscotta Lake as well as phosphorus levels, which both contribute to increased algae and cyanobacteria growth.
- What is Midcoast Conservancy doing about this issue?
 - We continue to monitor the situation regularly and share that information with the public through our social media channels and the website. We restarted our Youth Conservation Corps this summer in efforts to reduce erosion around the lake. We maintain a partnership with Bigelow Laboratories to better understand the cause and impact of the cyanobacteria outbreaks. We are also working to reduce erosion and phosphorus pollution through the [LakeSmart](#) program, through our Youth Conservation Corps and other restoration projects funded by the EPA through Maine



Department of Environmental Protection's Nonpoint Source Water Pollution Control Grants.

- What can landowners do to help prevent cyanobacteria?
 - Educate yourself and talk to your neighbors about the health of the lake and the ongoing cyanobacteria problems. Have a [LakeSmart](#) evaluation conducted to find sources of erosion on your property and get personalized recommendations for remediating them. Maintain undeveloped land between developed areas and the lake, and generally within the watershed.

Questions in person:

- Did you know there are 95 new building permits in Jefferson?
 - Not all development is bad, responsible development is possible. Follow local and state regulations, minimize erosion, maintain good vegetated buffers.
- How to inform neighbors about BMPs/regulations?
 - It's good to approach people in a friendly manner and assume that they have the best interest of the lake in mind - education is important. Maintaining a good relationship with neighbors is more likely to end in a favorable way. Provide them with the local ordinances and ask them to join in on protecting Damariscotta Lake.
- Are there septic system maintenance or inspection requirements in Maine? And are septic systems a source of nutrients to the lake?
 - There isn't a requirement to maintain or inspect septic systems except when a property changes hands. Failing septic systems can be sources of nutrients to the lake so it's important to have them maintained and inspected regularly.
- Can the phosphorus that is on the bottom of the lake be remediated?
 - Unfortunately remediation efforts like Alum are not a silver bullet, they're extremely costly financially and to the lake ecosystem. Additionally they are not a solution that prevents algae or cyanobacteria blooms for long periods of time, many lakes have to

reapply the treatments on a consistent schedule. The most important way to keep cyanobacteria at bay is to prevent additional phosphorus from entering the system.

- Question from a swimmer, Why is it that there are highly differentiated areas of temperature in a very localized area? Would this impact our temperature monitoring?
 - There are many natural springs in and around the lake that bring colder water to the lake. Our temperature monitoring is conducted at a fixed location so we can look at trends through time in a more controlled way to prevent these types of influence.
- Wake surfing boats create a significant amount of boat wake. Is there anything that we can do to protect the shoreline, property and other boaters?
 - Wake surfing boats are designed to create a large amount of wake. There is research being done to better understand the impact of these larger wakes, but it's still in early development as the technology is relatively new. Some lakes have recommended (that's all we can do at this point) that wake surfing boats create these large wakes greater than 500 ft. from shore. First, we need people to follow the no wake law within 200 ft. from shore.

Questions asked on notecards:

- There are new homes with clear cuts and lawns down to the water that were built since the set-back regulations. How and why can this happen?
 - This can happen when development happens that doesn't follow local and state regulations. It is important to follow those regulations as they were put in place to protect our important natural resources like Damariscotta Lake. If you notice development or tree removal, please contact us AND your local Code Enforcement Officer at the town office.
- I'm wondering if the utility company at Damariscotta Mills manipulated the water level of the lake to the detriment of nesting loons. Loons

could not access their traditional nesting sites. Hence, no or very few young loons in Great Bay.

- The utility company is federally permitted and required to follow a specific schedule for turbine use and power generation. They are not allowed to run the turbines between July 1 and November 30 “except by mutual agreement among the licensee, the Fish Committee of the towns of Nobleboro and Newcastle and the Maine Department of Marine Resources.”
- Are there any restrictions on logging in the watershed?
 - There are statewide standards for logging within shoreland zones that are designed to minimize impacts to water bodies and protect water quality. Specific details on the standards can be found here:
https://www.maine.gov/dacf/mfs/policy_management/water_resources/sws/sws.html
- How is the increase in alewife population impacting the phosphorus load in the lake? How are alewives related to cyanobacteria?
 - Alewives are a natural part of the lake ecosystem and while they may bring marine derived nutrients into the lake, the impact of development is likely greater than the impact of alewives.
- Boaters pulling tubers and water skiers are coming dangerously fast and close to the shore. This causes damage to the property and shoreline. How can we obtain no/low wake or slow down signage?
 - The official buoys are placed by the state and follow the strict letter of the law. If you see someone violating boating laws, please contact the Game Wardens at 1-800-452-4664.
- What percentage of the lake residents draw water from the lake? Should folks with dishwashers and washing machines be pulling from the lake?
 - We don't know how many intakes utilize lake water for drinking and household use, it isn't documented or regulated anywhere. We recommend that people avoid using lake water for drinking and household purposes.

- We were watering our veggie garden with lake water. I understand that cyanotoxins will build up in the soil and affect the plants and people who eat the veggies. How long do the cyanotoxins persist?
 - Unfortunately, it really depends on the soil type, amount of organic material in the soil and the pH of the soil.
- Is there anything being done to address the decrease in water depth where Davis Stream enters Great Bay?
 - We're not aware of any efforts to address this, dredging requires permitting through the Maine Department of Environmental Protection.
- What about all the vegetation at the Mills end of the lake? Can that be mitigated?
 - Native vegetation is a natural part of lake ecosystems that provides critical habitat, oxygenates the water, and helps trap harmful sediment. Removal of vegetation requires a permit from the Maine Department of Environmental Protection.
- Is a significant amount of phosphorus entering the lake from Davis Stream?
 - That's a great question and something we want to look into in the future.
- Are there camps on the lake that have inadequate septic systems?
 - It's more than likely that there are inadequate septic systems around the lake. Having a regular maintenance schedule can help you identify if there are issues with your septic system.
- Where are the streams that flow into the lake? Streams that we need to protect.
 - There are many seasonal streams around the lake and a few more major streams including Davis Stream and Mill Stream from Cooks Pond. It's always good to maintain vegetated buffers between development and any streams, including seasonal streams.
- I see water trucks taking water from the Vannah Rd boat ramp often. Water levels are low. Who and why are they taking water?



- Damariscotta Lake has a surface area of 4,381 acres, a maximum depth of 114 feet, and an average depth of approximately 30 feet - tanker trucks do not have a significant impact on lake levels considering the considerable volume of the lake relative to tanker trucks.
- What percentage of the problem is temperature increase, phosphorus, erosion, or re-release of phosphorus from the sediment?
 - That's a great but very complicated question. It would take highly specialized modeling capabilities to calculate the contribution of each of these factors.