

ENVIRONMENT & SCIENCE

Lake Kanasatka Feted for Reversing Cyanobacteria, Potentially Impacting Winnepesaukee

By PAULA TRACY, InDepthNH.org July 17, 2024



Paula Tracy photo

Lake Kanasatka in Moultonborough

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MOULTONBOROUGH – After a cyanobacteria bloom on Lake Winnepesaukee last fall where Lake Kanasatka’s waters empty, the smaller lake is now celebrating its success and collective efforts to fight the problem.

Statewide lake officials said Lake Kanasatka is offering an example of what can be done to help turn things around when toxic blooms strike.

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Owners on the 353-acre Lake Kanasatka (just below Red Hill, which can be seen

from Route 25) have been working with the Lake Winnepesaukee Association, which took over the LakeSmart Program on Kanasatka in 2021.

Lake Kanasatka has been involved with the LakeSmart Program since its inception in 2019.

In the fall of 2023, an aerial image over Blackey Cove on Lake Winnepesaukee, where the Kanasatka water flows captured an extensive blue-green algae bloom.

This June after a warm winter with little ice, the problem of cyanobacteria was all over the Big Lake and blooms identified in just about every bay and even in the Broads, with the exception of Alton in the far south.

Those have subsided.

After an alum treatment this spring on Lake Kanasatka, and extensive efforts by residents of the lake to improve their properties to reduce storm runoff and nutrient loading, things have turned around here.

Erin Mastine, outreach manager for the New Hampshire Lakes Association, said the organization is planning an awards ceremony Thursday (July 18) to honor the Kanasatka Watershed Association, residents and shorefront property owners with its LakeSmart Community Award.

“You may have heard about the extensive cyanobacteria blooms they have experienced on their lake in recent years. They have really come together doing all they can to help prevent more blooms,” Mastine said in an email to InDepthNH.org.

She said the LakeSmart Program through the NHLA offers free advice to property owners on what they can do with their property to become more “lake friendly.” And Kanasatka will be honored statewide for their efforts.

Cyanobacteria is naturally occurring but in high concentrations can create blooms of scum on the water which have neurological toxins. It can kill animals and sicken people who come in contact with the blooms.

After multiple bouts which have kept kids and pets out of the water the past four summers, including a summer camp for children, Lake Kanasatka started getting involved with the LakeSmart Program and planning the watershed management plan as a result.

The watershed management plan project started in 2021 with funding help from the town of Moultonborough

The Lake Kanasatka watershed management plan was finished in August 2022, prepared by FB Environmental Associates and the Lake Kanasatka Watershed Association.

The plan can be found here https://kanasatka.org/wp-content/uploads/2023/02/LakeKanasatka_WMP_Final_20220816.pdf (https://kanasatka.org/wp-content/uploads/2023/02/LakeKanasatka_WMP_Final_20220816.pdf)

Its summary had shocking conclusions that the lake was facing long-term “internal phosphorus loading” and would face more long bouts of blooms without action. The report said it would likely need to try an alum treatment which would cost a lot of money.

An alum treatment is a management technique where aluminum sulfate is placed in

the bottom of the lake which permanently binds with phosphorus to hinder the release of phosphorus sediments from the bottom of the lake. It has recently been used at Nippo Lake in Barrington, but is costly.

U.S. Sen. Jeanne Shaheen, D-NH, was able to secure \$650,000 in directed spending for cyanobacteria and water quality studies.

One hundred percent of the alum treatment for Lake Kanasatka was covered by a cyanobacteria mitigation fund grant. To date, there have been no cyanobacteria blooms seen.

An InDepthNH.org article about what the senator, a senior member of the U.S. Senate Appropriations Committee, and state leaders had to say on lake issues is here <https://indepthnh.org/2024/05/30/shaheen-talks-lake-water-quality-with-advocates-on-lake-winnepesaukee/> (<https://indepthnh.org/2024/05/30/shaheen-talks-lake-water-quality-with-advocates-on-lake-winnepesaukee/>).

The Kanasatka Watershed study said as much as \$1.4 million will need to be spent on the problem over the next decade, but the treatment is only half the problem.

The report warned that if the alum treatment is to sustain its efficacy or lifespan, it will require change through education, septic remediation and action to reduce runoff of phosphates into the lake that contribute to the cyanobacteria problem.

The study cited 22 problem sites and 121 shorefront issues on the water body that were having some sort of impact on water quality, including evidence of erosion or lack of shorefront buffer such as plants or berms protecting the water from runoff.

The lake association has also offered a Septic System Inspection Assistance Program which pairs owners with someone to give them advice on fixing problems.

Mastine said as of February, over 25 percent of “eligible parcels” or lakefront owners had participated in the LakeSmart Program and of all eligible parcels, almost 9 percent were certified LakeSmart so far.

One lakefront property owner who took advantage of the free LakeSmart evaluation and is waiting on certification is Rachael Keays who highly recommended the program. A link to the program is here: <https://nhlakes.org/lakesmart/> (<https://nhlakes.org/lakesmart/>).

She said Wednesday in addition to an online questionnaire, “actually it was great because they came out, gave us a whole report, took pictures and then sent us (a document) which said ‘here’s things you can do’ and it was like, they were so kind, nobody was pushy, nothing was super expensive that we had to do. I think it’s great.”

She was on her parent’s property unloading kids and groceries nearby on Lake Kanasatka, which is certified as LakeSmart and pointed to a small bump of dirt across the driveway, like a speed bump, which is actually a protective barrier that keeps the road runoff from the lake.

This was installed as part of LakeSmart certification.

Typical recommendations are to plant native bushes like blueberries or buttonbush, whose roots go deep into the soil and protect or at least delay nutrients from going from the land to the lake and also get information about the septic system to ensure it is not leaking.

“We’re doing all the things,” she said, and it is for good reasons including health,

safety and future property values.

Keays said she has been coming to the lake since childhood and now has her own kids here along with her sister's family and they all have lots of dogs and kids who spend a lot of time in the water.

They were there "long before cyanobacteria was a problem" and the state Department of Environmental Services reports show that in 2020 there were two state advisories, one that lasted 14 days and another 10 days and in 2021 another advisory which kept everyone out of the water as a precaution for 15 days.

"For about four summers now, it has certainly impacted us. We swim every day. So if there is a bloom notice and we have a lot of little kids and dogs and it is super dangerous for dogs. There were really days when we couldn't get in the water and were cautious and also, when there are advisories, they tell you not to get in," she said.

Keays noted a "biggie" concern is Camp Quinebarge, a "quintessential summer camp" on the lake which since 1936 has offered opportunities for boys and girls ages 6-16.

"It's really impacted them," she said. "They have specific swim times every day."

Fortunately, this summer, the water is clear after the alum treatment and as of July 3, according to the Lake Kanasatka Watershed Association's Facebook Page, a water clarity test found that the "secchi" disk dropped into 30 feet of water to determine clarity could be seen from the surface, a sign of excellent water quality.

In fact, it also had a post where Camp Quinebarge was offering other lake property owners a chance to play on their inflatable water-front slides this coming Saturday.

The annual LKWA meeting, held at the home of the Kelly family July 13 was part of a business meeting and celebration. The post included efforts taken to clean up from fireworks displays on Independence Day, which also impacts water quality.

Kevin Kelly, host of the meeting, posted "we are living in a different time now and need to look very closely at how we are impacting our lakes, ponds, streams and wetlands."
