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Troubled Water? The Tale Of Seymour Lake

State Officials Look To Possible Legislative Fix For Septic Prohibition

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Peggy Barter, longtime lake advocate, and her son out on Seymour Lake in Morgan on Sept. 17, 2021. (Photo by Katherine Fiegenbaum)

Two decades ago, quickly-rising phosphorus levels were of great concern at Seymour Lake in Morgan.

In the 1990s, the clear, deep oligotrophic lake measured in at about 6 parts per billion for phosphorus. In the early 2000s, it jumped to around 12 parts per billion.

Rising phosphorus levels will eventually lead to murkier water, increased growth of aquatic plants and prized fish species disappearing, the Caledonian previously reported.

“We called the state and said, ‘uh, did you notice our lay monitoring? It’s double what it was in the 1990s ...’” said Peggy Barter, longtime water quality advocate and current chair of the Seymour

Lake Association’s water quality committee. “And they said ‘oh, that’s not good ...’”

Barter describes how the state then started coming up to Seymour Lake, dispersing guidance regarding best practices for lake-shore roads, forests, farms, shoreline properties — Seymour Lake has upwards of 300 shoreline landowners — and others. Barter herself helped host “septic socials” where the lake’s second-home owners, many of them used to municipal water systems, learned about how their sewage could be affecting the lake.

“The state gave us step-by-step guidance because we showed interest,” she said. “There was absolutely zero coercion; only patience with local skepticism until many were won over.”

“When we started, people just didn’t want anybody telling them what to do with their land,” Barter explained. “But then they found out that if the increase continued, we could have blue-green algae blooms.”

Now, because of the watershed community’s collective efforts, Seymour Lake’s trends are looking up: there are no aquatic invasive species, the water is clearer and phosphorus numbers are down to about 9 parts per billion.

“Dreamers like me, I’d like it back down at 6,” said Barter. “But we have a long way to go to get there.”

Barter, a native Vermonter who has been coming to Seymour with her husband, Bruce, since the 60s, explains that the state has used its experience with Seymour Lake to form the basis of its watershed action plans, which now serve communities across the state. In fact, things have improved so much in Morgan that Oliver Pierson, the Department of Environmental Conservation’s Lakes and Ponds program manager, nominated the Seymour Lake Association for an Environmental Merit Award from the EPA, which was awarded in 2020.

“Apparently, no other lake of high water quality has made that reversal in this EPA area,” said Barter. “They say it’s very rare; Kellie [Merrell, aquatic ecologist with DEC] has told that maybe there was one other lake in the country that has done so.”

Barter was no stranger to the importance of water quality when she retired and started attending Seymour Lake Association meetings in the early 2000s.

A native Vermonter who studied Zoology at the University of Vermont, she wound up teaching eighth grade in Nashua, N.H, her primary place of residence for the past 40 years. In the late 90s, she was looking for real-world projects for her chemistry classes and was asked by the state’s Department of Environmental Services to help collect water samples from the Merrimack River.

“It was the beginnings of citizen science,” Barter said. “I loved it.”

When she learned about the increasing phosphorus at Seymour Lake, though, it was her sons who encouraged her to act.

“They said, ‘uh, mom, you told us that the phosphorus is getting worse here ... you know something about this: so do something! You can do it,’” she recounted.

So she — with the many volunteers of the Seymour Lake Association and work done by a multitude of community members, all with the support of DEC — did.

Reclassification Efforts At Seymour Lake: A Bit More Complicated

Seymour is one of the seven lakes — six of which are in the Northeast Kingdom — identified by the DEC as good candidates to reclassify their waters from B(2) or “good” status to A(1) or “excellent” status. However, since it has already reversed its phosphorus trends, things feel less urgent and, well, are a bit more complicated.

“We were patting ourselves on the back when this landed on our plates [last August],” said Barter. “But we said, ‘okay, well, this is good because it keeps our focus.’”

Reclassifying the lake to A(1) for aesthetic use means that the state would be required to help the community restore it if it hits 12 parts per billion instead of 18 parts per billion of phosphorus — when it would likely be too late. However, this designation comes with three mandatory restrictions.

According to Oliver Pierson, DEC’s Lakes and Ponds Program Manager, in a watershed with an A(1) water body, there can be no direct discharge of waste and no solid waste management facilities: those are pretty straightforward and easy to rally support around. However, these watersheds also cannot have any new large septic systems with a design flow greater than 1,000 gallons per day.

Pierson explains that most houses are well below that limit — they’d have to have around 12 bedrooms to meet it — but the state statute can be difficult for watersheds who wish to put in a new large campground, hotel, school or other building in the future.

However, as Barter notes, the rule is from the 1980s and septic system technology has advanced since that time. While yes, poorly functioning septic systems can affect the lake, newer large discharge systems can actually clean the water better than smaller, older systems.

Due to the septic rule, both the Morgan select board and the Seymour Lake Association have not decided to pursue reclassification ... until legislative action is taken on the issue, potentially as early as next year.

In the meantime, the Seymour Lake Association is hard at work educating stakeholders and seriously considering everyone's concerns.

Pierson notes that, as in the case with Seymour Lake two decades ago, DEC is not just waiting around for any lake across the state to hit their B(2) phosphorus limits.

"We are doing things all the time to maintain water quality," he said. "But in the event that we did reclassify a lake and it failed the A(1) status, at that point we'd have to come in with [greater] resources and energy and a plan to restore it."

Hope For Legislative Action

"I think an unintended consequence of saying 'no new septic greater than 1,000 gallons per day in a class A(1) watershed' is that it's a deterrent to increasing lake protections," said Pierson. "That's an old piece of statute; I think when it was passed there were probably good reasons. [...] I don't think we need to use the size of the septic system as such a comprehensive tool to regulate development in a watershed ... I think there are other ways to achieve a similar outcome."

Pierson explains that this is why he is asking the Department of Environmental Conservation and Agency of Natural Resources leadership to help support an effort to work with the legislature in 2022 to cautiously and carefully amend the legislation.

ANR Secretary Julie Moore and DEC Commissioner Peter Walke agree.

"We don't design septic systems anymore so that they have an impact," said Walke on Monday. "This sort of arbitrary nature of the 1,000-gallon limit is a challenge."

Walke points especially to Maidstone Lake, who turned in their reclassification petition on Sept. 7. The lake is home to Maidstone State Park, which has a development plan to add a new bathroom complex that would likely exceed the size limit.

Pierson notes that the Maidstone petition puts the ANR in an interesting position since FPR, DEC's sister agency, may decide to oppose the reclassification process.

"DEC's broader resource protection goals for high-quality water might, as a result of this particular statute, be in conflict with state park expansion goals, namely their need to construct a [large] septic

system so that they can provide excellent service and modern facilities to the public,” he said. “Unless this particular piece of statute is modified, ANR may have to make a choice between increasing protections for Maidstone Lake via reclassification or pursuing the expansion of the park’s septic system — and that’s a challenging situation for the Agency of Natural Resources to be in.”

Walke admits that it is an odd dynamic to have competing priorities within ANR.

“To my mind, we need a statutory amendment that I’m happy to engage in a conversation with the legislature on,” said Walke.



Seymour Lake in Morgan. (Photo courtesy Doug Gimler)

Echo Lake, Seymour’s Neighbor, Submits Petition ...

On Monday, Sept. 20, the Echo Lake Protective Association submitted their petition for reclassification to A(1) status for both aesthetics and for fishing. According to Holly Wall-Bull, who spoke with the Caledonian-Record on behalf of the Echo Lake Reclassification Committee, the petition garnered 86 signatures and co-sponsorship from the town of Charleston, as well as letters of support from numerous nearby non-profits.

However, reclassification of Echo Lake would mean that Seymour Lake would be reclassified to A(1) status as well, since it is located entirely within Echo Lake’s watershed.

“We’re more than sister lakes, we’re bound by an umbilical cord I think,” said Barter. “The distance between Seymour and Echo is probably a city block.”

While Wall-Bull admits that this might mean that those in support of and those in opposition to



The Echo Lake Watershed (outlined in yellow), for which a reclassification petition was submitted on Sept. 20, includes Seymour Lake, which has chosen to wait for a legislative fix on the septic prohibition to submit their petition. (Screenshot from ANR’s Lake Score Card)

reclassification in Seymour will turn out at Echo Lake's reclassification pre-rulemaking hearings, the association did not believe they had time to wait.

"The way we see it is that Seymour may not be in a hurry because they were able to get their phosphorus under control," said Wall-Bull. "We have not. Our rising phosphorus levels have to be addressed now; we don't have time to wait and we feel that we should be pursuing it on our behalf because our goal is to protect Echo Lake."

Wall-Bull also notes that the Echo Lake community does not have or foresee any large septic systems.

Pierson said that DEC will be making a concerted effort to reach all the folks that would be affected by Echo Lake's reclassification during the petition process.

"Any reaction from Seymour and Morgan, positive or negative, will factor into Secretary Moore's decision on rulemaking," he said. "And that could help us in our case to push the legislature to fix [the septic] issue."

Pierson also notes that the petitioning process can take some time: petitions to reclassify several brooks in Ripton, Vt. were submitted in Dec. 2019 and are still working their way through the pre-rulemaking hearing process.

DEC, ANR Leadership In Support Of Reclassification In General

While there are some wrinkles to be ironed out, Walke expressed gratitude to lake associations on behalf of himself and Secretary Moore earlier this week.

"We are always happy when community groups come together to support water quality initiatives," he said.

Regarding reclassification efforts, Walke said that "generally speaking, the data speaks for itself."

"Many of our water bodies throughout the state have been monitored for years now and show quality levels that would indicate a higher classification is warranted."

Walke noted that the process is primarily reliant on petitions at present. However, in a future with a legislative fix for the septic issue, ANR and DEC will consider using their unilateral powers to

reclassify water bodies to protect them.

“[The petitioning process] is a lot to ask for a lake association,” he said. “And not all of our water bodies have that kind of support and friendship. So it’s an ongoing challenge for us, and one that we would like to continue working on and we want to make sure we do it thoughtfully.”

Walke said that Secretary Moore will evaluate the incoming petitions separate from the septic amendment process playing out in the legislature.

“These processes should all go forward together,” he said. “All of the body of work around reclassification is interrelated and all of these things matter together, but are not contingent upon one another.”

More information on lake and pond reclassification, including to-be-determined dates for the first pre-rulemaking hearings at Maidstone, Echo and Caspian lakes, can be found at dec.vermont.gov/watershed/lakes-ponds/reclassification.

Part one and two of this series ran in the Sept. 22 and Sept. 24 editions of the Caledonian-Record.

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Reporter