Milfoil in Lake Fairlee

A contemporaneous chronicle of our efforts to control this invasive nuisance

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Even the divers have to eat lunch »

Milfoil at 'tipping point' in Lake Fairlee

More news coverage of our July 23rd meeting

by Lillian Gahagan, Journal Opinion

WEST FAIRLEE—A group of about 50 people turned out for an informational meeting at Horizons Day Camp on the evening of July 23 to discuss strategy and options for controlling an invasive weed in the waters of Lake Fairlee. The 457-acre lake is spread out across the towns of Fairlee, West Fairlee and Thetford. Eurasian milfoil, a non-native weed, has reached a "moderate" level of infestation there on a scale used by the state that goes from light to moderate to heavy.

Lakeshore users and homeowners are now contemplating what to do next since the milfoil is growing faster than it can be removed using manual and mechanical means. It is estimated that milfoil affects between 10% and 20% of the lake. Milfoil spreads by seeding itself, through root propagation and by fragmentation such as when boats churn through the weeds. The harvesting operation itself spreads the weeds, but the association has continued to remove as much as possible this way. Ten to 15% of the milfoil is removed each season, according to a fact sheet distributed at the meeting, but lake temperature, sunlight and phosphate levels all contribute to the weed's growth.

The chair of the Lake Fairlee Association, Skip Brown, moderated the meeting that brought together representatives from the Vermont Agency of Natural Resources' Department of Environmental Conservation, divers who have been pulling the milfoil from the lake, people who have coordinated the treatment of milfoil in neighboring Lake Morey and others from the area who have a connection to Lake Fairlee. Brown assured the group that no decision had been yet been made about what to do and he did not expect the group to arrive at an outcome at that meeting.

"Everyone here has a love for Lake Fairlee," said Brown in his introduction of the various parties present. He said as chair of the Lake Fairlee Association, he had the "dubious honor" of running the current milfoil program for the lake. The meeting was held to provide an opportunity to hear from everybody concerned about the lake and to try to build a consensus about what to do in the future. To date, there has been a "no chemical" approach to treatment.

Brown described the status of Lake Fairlee as at a "tipping point" with the weed infestation as current efforts to control the milfoil are not enough. The milfoil grows in waters up to about 15 feet in depth, when severe, can form dense mats at the surface that "umbrella" out, making boating and swimming extremely difficult as the tangle of weeds becomes impassable.

Milfoil has been growing in Lake Fairlee for at least 15 years. The lake association has been removing it by hand pulling for most of those years. Suction harvesting and bottom barriers have been added to the effort in recent years at a cost in excess of $100,000 per year. Costs are shouldered by the state taking on 40%, the towns kicking in about 10% and donations making up the balance. But donations and membership in the

association have shrunk from 120 donors in the past to about 70 currently, according to Brown. He expressed pessimism about how the economy will affect individual donations and future appropriations from the state and municipalities for milfoil treatment, but was hopeful that money will continue to be received from all sources.

This year, for example, because of the reduced amount of money received from donors, the dive program will run out of money before the season ends. Despite being a model program for the state, the resources to support it are limited.

Divers who spoke at the meeting expressed a strong opposition to a chemical approach, stating that they thought with more personnel and more time, the current strategy could make a difference.

Neighboring Lake Morey has also contended with a milfoil infestation that became severe in several locations, particularly at the north end of the lake. Morey's history with milfoil is longer and the locals have not had an easy time deciding what to do over the years. In 1991, an application to apply herbicides to the lake was approved by the state of Vermont. The permit was challenged in a lawsuit brought forward by three individuals who pled to vacate the permit in order to stop the herbicide application, according to Don Weaver, chair of the Lake Morey Commission, a board which advises the Fairlee Selectboard on matters regarding Lake Morey. Weaver said there was a "great deal of political rancor in town on whether [a chemical application] was a good or bad idea."

The use of bottom barriers was "ramped up" after the permit failed but observers and DEC personnel were concerned about the damages to the lakebed. The barrier killed all the plants, not just the milfoil. Then when it was removed, the milfoil would proliferate in the areas that had been covered with the barrier.

"In 2002, we lost control of the lake. Growth became exponential," said Weaver. By 2004, the situation had worsened to the point that "action was taken with the DEC, legislators and other agencies which descended on the town to deal with the problem." People with property on the lake were thinking about their tax bills on "homes you can't use." A new application to use chemicals was brought forward late in 2006 and was approved by the state early the next year. Chemical treatment began in the early summer of 2007, and has continued each year since.

"Until three years ago when we were able to start using the chemical," said Win Ameden, Director of Buildings and Grounds at the Aloha Foundation, the situation had become impossible to deal with especially in the boating and swimming areas. The Aloha Camps run three campuses on Lake Fairlee and three on Lake Morey. Ameden said he has watched "milfoil grow for years." He stated that "in areas that were treated [this year on Lake Morey], there are no milfoil plants. The results are stunning."

In comments from Ameden and Weaver, both said that eradication of the worst milfoil beds in Lake Morey does not mean there is no milfoil. "The plants are here and there, but the lake is in much better shape," according to Ameden. He said the parents of all the campers were notified about the chemical treatment in detail. No campers were pulled from any camping programs.

In follow-up interviews with Ameden and Weaver, both said that the criteria for the chemical permit for Lake Morey emphasize using the minimum amount of the chemical. As the infestation comes under control, it is expected that in each subsequent year of treatment, the amounts of chemicals needed for milfoil control will diminish. This year's total cost for the lake treatment was about $90,000 for all aspects of it, including manual and mechanical controls and the costs are expected to fall in subsequent years as less chemical is needed.

John Chapin, who lives on Quinibeck Road, said at the meeting that he thought the experience Lake Morey has had "is relevant" to what is happening at Lake Fairlee. Pete Kelsey reported milfoil is "more and more abundant. They pull the milfoil, but there is no appreciable improvement. Our experience is unsatisfactory."

"The longer you wait, the more expensive and long-term the solution becomes," said Susan Kerr. Doug Tifft, who lives at the north end of the lake where Blood Brook flows into Lake Fairlee, said, "Everything looks like weeds to me."

Ann Bove, a biologist with the DEC, said she keeps tabs on the lakes based on monitoring from volunteers and others. She said that 78% of the lake is not infested because it is too deep for the weed to grow. As far as treatment, "If there was one answer, we would be using it. There are tools in the toolbox to be used based on the characteristics of each lake." In response to the question "how quickly do you go from moderate to terrible," Bove said there are four or five lakes in that category that have no management plans whatsoever.

"Do nothing, it would take a few years." She stressed that each lake is different and management plans are tailored to the differences. Bove said that the state of Vermont takes the permitting process further than the EPA, requiring five criteria that must be met. A long-range plan must exist to minimize chemical exposure.

Bove said that the chemical is a systemic herbicide that attacks plants. To kill milfoil, a licensed applicator uses a measured amount, which targets a specific plant, such as milfoil. Risks to humans are minimal when used according to label directions, she said. In response to a question about cumulative risk, Bove said in the case of "triclopyr," the chemical breaks down very quickly.

While many seemed to be receptive to the data explained at the meeting about treating milfoil with chemicals, there were several residents who expressed opposition to ever using any chemical treatment. Joe Blandin mentioned the use of Agent Orange in the Vietnam War and the pesticide DDT, which nearly wiped out the bald eagle.

"Would you consider diving if the chemicals were used?" Alexis Jetter asked the dive team members. "I would have to move on from this job," said a dive team member.

Blandin said, "Hire these young people to do the work needed and everyone's winning without the exposure to chemicals like Agent Orange and DDT."

As the meeting wound down, Brown asked for suggestions on the "next steps" to be taken to achieve a consensus. Dale Gephart said it would be helpful to have a relative risk assessment done to figure out "how risky is this? There is suspicion about these people at the state level. Are we 'smarter' about the relative risks of chemicals now than we were years ago when DDT and Agent Orange were used?" Residents want an impartial list and fact sheets based on the science. Jim Morgan suggested an evaluation of the "risk benefit ratio" which considers the tax base, property values and the risk of the course itself.

"Some risks are obvious. Both doing and not doing have risks associated with them," said Morgan.

"The hybrid method is happening already in Lake Morey," Tifft said. "People want to see things in black and white, when really it's more complicated. People here are attending to the process and making sure no harm comes to the lake. These are things that can build confidence and is a sophisticated level of monitoring. It's very impressive."

For more information on Lake Fairlee, visit www.lakefairlee.org.

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