

MICHAEL MARTIN LAKE MANAGEMENT PRESENTATION, 10/25/19
Q&A after presentation

TOPIC: ALUM

Steve Hyman, Waccabuc

Q: What is the effect of alum treatment on aquatic plants and fish?

A: None when applied properly, and preceded by a proper chemical analysis. Alum treatment has been used and studied for about 35 years.

Joe Garrity, Waccabuc

Q: Does alum treatment have an effect on oxygen levels?

A: The primary role of alum is to capture phosphorus, which won't change the oxygen level. Alum seems to reduce the oxygen depletion rate, but we limnologists aren't yet sure why.

Paul Fennelly, Oscaleta

Q: How is alum put into the lake?

A: It is injected as a liquid into the hypolimnium from a barge. It isn't broadcast throughout the lake.

Grace Mango, Oscaleta

Q: What is the best time of the year for an alum application?

A: Spring – before the bottom layer of the lake becomes anoxic.

Q: The alum and PhosLock® treatments are very expensive. Is state funding available?

A: Funding opportunities are listed at the end of the report which will be posted on your website.

Jan's input: 3LC donors are very generous, but we take in only about \$35,000, all of which is spent on our testing and educational efforts. We are working with the Town and County to seek grants, understanding that most come through State grant opportunities.

Q: What about the new State program on HABs?

A: That is a significant program to fund lake studies. Our lakes were not included in the studies, however nearby lakes (Peach Lake and Lake Carmel) were included.

Jim Crimmins, Oscaleta

Q: Since whole lake alum treatment is so expensive, is it possible to treat just a portion of the lake?

A: No. You need to do it all at once. Also, since just bringing in the equipment is a big part of the expense, it is more cost effective to do it all at once. Remember that we have had experience applying it to lakes where it is still effective 30+ years later.

Sharon Slocum, Waccabuc

Q: Where can we find less expensive ways (compared to alum) for reducing nutrients that enter the lakes?

A: There is a lot of information on the internet about establishing rain gardens, using rain barrels, etc. Remember that in Waccabuc, 75% of the phosphorus comes from internal loading.

TOPIC: WEEDS

Bob Gureasko, Waccabuc

Q: Is it advisable to stock sterile grass carp to eat weeds?

A: No. Studies on Candlewood Lake have been done and no progress is seen. They prefer to eat the good, native vegetation and dislike the invasive Eurasian milfoil. Limnologists find the outcome too difficult to predict and do not recommend grass carp. Once carp are introduced into the lake, if weeds are reduced to an acceptable level, they are difficult to remove before they eliminate all of the plants.

Ann Goodson Daly, Oscaleta

Q: Weed growth at the east end of Oscaleta is very dense. Is there an environmentally safe way to kill the weeds?

A: Some new herbicides are now available that are safe if applied appropriately and approved by the DEC. They target only certain weeds, and are effective at a low concentration. They can be applied ONLY by a licensed applicator, and permits would be needed from both the State DEC and the Town of Lewisboro. In some situations, benthic mats and rollers are used, but before anything is permitted, the DEC requires a comprehensive lake management plan.

Jan's addition post-meeting: Use of herbicides is further complicated because downstream in Lake Waccabuc residents use the lake as a household drinking water supply.

TOPIC: CHANNELS

Kathy Fennelly, South Side of Oscaleta

Q: The channels are becoming impassable. What can be done? Is dredging an option? The east end of Waccabuc is full of sediment and aquatic growth is excessive.

A: The flow and flushing rates through the channels changes from year to year, but weren't investigated this year. Dredging is highly regulated - studies and permits are involved

Chris Ferrarone, Waccabuc

Q: The Waccabuc-Oscaleta channel is becoming more shallow and has increased weed growth. Is it advisable to dredge?

A: No. Dredging issues are very complex. First, any dredging must be preceded by a scientific hydrologic study. If dredging allows the water to drain from Rippowam too fast, that lake could be negatively impacted as it has the smallest watershed.

TOPIC: STORM WATER RUNOFF

Peter Bysshe, Waccabuc

Q: You mentioned using good aggregate surfaces for roads to lessen the amount of silt runoff entering the lake. Tarry-a-bit Road is a private road not paved by the Town, and it would be a big expense for homeowners. Would planting at the edges of the road be a less costly option to control runoff?

A: First, you should address the cause of the erosion by putting down a good aggregate surface, and also finding ways to control runoff coming from driveways into the road. You might consider the availability of grants. Remember that the sand currently on the road surface and washing into the lake is phosphorus laden. After the erosion issue is addressed, roadside planting would help control the remaining runoff.

Alan Young, Rippowam

Q: What actions could individual homeowners take to have the most impact?

A: Minimize storm runoff from your property that comes from lawns, roofs and driveways, etc.

Pat Simpson, Waccabuc

Q: Do boat ramps serve as a vehicle for phosphorus to enter the lake?

A: Not if properly designed to prevent runoff. Plantings can help too. Permits are needed.

TOPIC: PHOSPHORUS ENTERING THE LAKE FROM TLWW USE OF ORTHOPHOSPHATE

Input from Jan:

There are 91 homes receiving drinking water supplies from the Twin Lakes Water Works. The County requires use of orthophosphates to keep copper and lead from reaching faucets. The County resists discussion of alternatives when orthophosphate is working. The County is interested only in the quality of the water distributed by the system, not the effect on lake health.

TOPIC: SAFETY OF HOUSEHOLD WATER FROM LAKE

Renee Goldstein, Waccabuc

Q: Is it safe to use lake water for showering and cooking if it has been treated?

A: It depends on how it has been treated, but in general lake water is not recommended for household use.

Q. What water treatment is used to treat lake water in drinking water supplies?

A. A water professional should answer, but most will probably include a sequence of filters coarse to fine, to extend the life of the smallest filter, culminating in a 1 micron absolute filter, and then a granulated activated charcoal (GAC) filter.

Pat Simpson, Waccabuc

Q: My artesian well is very close to the lake. Do lake contaminants infiltrate my well water?

A: Most likely yes.

TOPIC: BOTTOM SEDIMENT

Rich Cochran, Waccabuc

Q: How much sediment is on the bottom?.

A: I don't know, but remember that it has been accumulation for thousands of years, since the ice ages when these lakes were formed. Too much to consider removing, you could never get enough out.