

Alum Treatment Approved For Hinckley's Pond

by William F. Galvin

HARWICH — While the heavy nutrient loading in Hinckley's Pond that has caused serious algae blooms and fish kills in recent years needs to be addressed, the conservation commission made it clear it wants long term monitoring of the pond's health after the chemical remediation is applied. The town had hoped to employ aluminum sulfate/sodium aluminate – also known as alum – to the pond this past fall to address excessive fertilization that has been causing the algae blooms and fish kills. But approval was delayed because of absence of a response from the Natural Heritage and Endangered Species Program within the state Division of Fish and Wildlife.

Over the past decade, the pond has had several instances of algae blooms and fish kills caused by excessive phosphorus buildup in the sediment. In 2012, consultant CDM Smith conducted a study of conditions in the pond and recommended an alum treatment to bind phosphorus, the root of the problem. Last May town meeting approved the use of \$650,000 in Community Preservation Act funds the treatment, including \$75,000 for better access to the pond. Natural Resources Director Heinz Proft was before the commission in October seeking approval for the application with treatment planned in December. In October, commission members had some

reservations about the use of alum, noting a lack of science on the long-term impact on the aquatic environment.

Last week, after hearing from the state agency, the commission issued its approval of the treatment, but made it clear it wanted to see long-term monitoring conducted, not only on the science, but the biological environment as well.

The Division of Fish and Wildlife determined there will be no adverse impact on the natural habitat of the area from the application. However, the agency did set a window for making the application from June through September.

“I’d like to avoid the summer months. It’s a busy time on the pond,” Proft told the commission. “If we can push it to September that would be great.”

In the off chance there is an impact on fish there, Proft said DFM wants immediate notification and the process stopped until officials are satisfied it is resolved. He also said the state agency wants a report filed 60 days after the application is made.

Members of the commission also wanted a report filed with them at that time. Proft said bids would be sought for a firm to do a monitoring plan. He emphasized it would be a separate group than the company doing the application.

“I’ve had reservations,” commission member John Ketchum said of an alum application. He said he has been educating himself

about the process. "Acute toxicity is not an issue if done properly. There should be nil."

But Ketchum said the long-term affects of alum are not understood. He said there can be unknown affects on flora and fauna. He recommended the commission should look to the future to find other solutions.

"If we are going to proceed, we should make a big effort to collect data, pre-imposed data, so we know what the long term affects are," Ketchum said.

Pond acidification could have an impact, he said, adding that as the pH drops alum will release from the sediments and get involved with the pond water and could cause problems, impacting shore grasses and aquatic organisms.

Proft said the alum application in Long Pond has worked very well. There have also been successful applications in drinking water reservoirs. The binding process takes place in 12 feet or more water where there is no fauna and limited pond life, he said.

"At 12 feet or deeper there is no oxygen, it's muck, black mayonnaise," Proft said. "It's treating what is there and we're looking for the biggest bang for the buck right now."

"With the problems in Hinckley's Pond right now it would be negligent not to do something right now," commission member Carolyn O'Leary said. "We have to defer to people who do this for a living. This is a band aid and we still have to deal with sewers and addressing the in-flow. My worry is if we do this, the

town will put off other preventive measures." "This is like a light switch, it's an immediate reaction," Proft said.

Commission member Stan Pastuszak wanted to know about the history of such treatments and period of effectiveness. Proft said treatments go back to 1995, though he said there was a fish kill in Hamblin Pond in Barnstable at the time of its treatment in 1995, but more has been learned about application quantities since then. Proft said the projection is it will work for 20 years.

Commission member James Donovan called for town regulations to reduce phosphorus flow into the ponds. Commission Chairman Brad Chase agreed, suggesting the formation of a subcommittee of conservation commission and health board members to shape regulations.

Ketchum pushed for a comprehensive monitoring plan, pointing out science studies the chemistry and there is a need to closely examine the biological impacts. The commission agreed, noting that it would be helpful in assessing the needs for future alum applications for other town ponds, such as Seymour Pond, which is adjacent to Long and Hinckley's ponds. The commission voted to approve the alum application.

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