

Town of Pelham, NH
Pelham Conservation Commission
6 Village Green
Pelham, NH 03076-3723

MEETING OF 01/11/23

Members Present:

Karen Mackay, Al Steward,
Ken Stanvick, Christine Kamal (alt),
Mike Gendreau, David Abare

APPROVED 03/08/23

Members Absent:

Paul Gagnon, Scott Bowden (alt),
Lisa Loosigian, Kara Kubit (alt)

Al Steward brought the meeting to order at 7:07. Mr. Steward led the Commission in the Pledge of Allegiance. Mr. Steward appointed Ms. Kamal as a voting member for this meeting. He invited the public to a Forum Event to discuss the Master Plan which is in the process of being rewritten. Community input from residents is desired as this will make the plan more inclusive of all the members of our town. The more input from different residents, the better the plan will be and the better town officials will be able to meet the needs of our community. The Forum will be held on February 21, 2023 from 6-8 p.m. Information can be found at bit.ly/Pelham-master-plan. Ideas can be submitted and viewed by residents.

PRESENTATION

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| Presentation of a NH Department of Environmental Services (NHDES) Dredge and Fill application – Proposed sonication treatment of annual cyanobacteria blooms in Long Pond – Presentation by Emile Demers and Patricia Parece of the Long Pond Clean Water Committee |
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The Long Pond Clean Water Committee (LPCWC) purchased ultrasound units to control cyanobacteria in 2020. Prior to this time, cyanobacteria had been treated with copper sulfate. This treatment is not allowed in NH waters. The devices are approximately 1x1 foot square and are anchored to the bottom of the pond and are attached to docks. The devices are plug-in and have a built in extension cord of 150 feet in length. The devices float on top of the water and are visible by a flag on top of the unit. The sound radiates out from the device in all directions up to 500 meters from the device. The cost of the units is \$5,000.00. They are full electric. Mr. Demers and Ms. Parece are not sure if solar devices are available or what that cost would be.

These devices have been sold all over the world. The manufacturer has never heard of anyone needing a permit to operate these devices. The state of NH is requiring a permit to use these devices in Long Pond. The applicant is here with a dredge and fill application so they can get permission through the state to install the units in NH state waters. The LPCWC contacted the Massachusetts Department of Environmental Protection (DEP). DEP directed the LPCWC to discuss the matter with their local Conservation Commission. The LPCWC met with the

Dracut Conservation Commission where the Commission unanimously voted in favor of the LPCWC using the devices to control cyanobacteria.

The units have been in the water since 2020. There has been a significant improvement in water quality in the lake. Four units were installed in Massachusetts waters and one in NH. In July 2020, David Neils from NHDES, asked the LPCWC to remove the device from NH waters. He came down to inspect the device and listen to the members of the LPCWC talk about the unit. He then consented to the LPCWC using the device for the 2020 season. He requested the LPCWC remove the device at the end of the season and proceed with a permit through NHDES to use the devices. LPCWC agreed to the terms and is working on the permit process at this time. They would like the Pelham Conservation Commission to consent to this treatment and recommend to NHDES to allow the use of the units in Long Pond. The length of the permit would be 3 years and the LPCWC would work with the state to implement the permit.

Mr. Demers was told the cyanobacteria is an ancient microbe. Excessive nutrients in water bodies can cause explosive growth which lowers water quality and can be toxic. Cyanobacteria normally live at the bottom of water bodies. They need sunlight to multiply. Cyanobacteria has a bladder that helps the bacteria to float to the top of the water column where it is exposed to sunlight. The devices emit sound waves at a frequency that breaks the bladder in the cyanobacteria. The bacteria cannot float without the intact bladder and sink back to the bottom. The bacteria require sunlight to reproduce so their reproduction is severely inhibited if they cannot reach the surface.

Mr. Abare asked about fertilization, animal (duck) waste, runoff and septic issues in the pond and if all contribute to the cyanobacteria blooms. He mentioned algae in the pond and that catfish will eat algae. Mr. Demers said they did not have a problem with algae in the pond at this time, the problem is cyanobacteria. Algae and cyanobacteria are different organisms. LPCWC and the Lake Association have hired biologists in the past. One about 8 years ago at a cost of approximately \$20,000.00. They have been working on this problem for many years. They have held meetings with state officials and lake residents, had trainings and mailed out educational materials about the condition of the lake and how to improve the health of the lake. Educational materials have been sent to houses off Sherburne in order to make the owners aware the runoff from their lawns is finding its way into Long Pond.

They do not seem to have major problems with animals, or septic seepage at this time, but fertilizers and runoff are a major problem. NH has regulations regarding commercial companies applying fertilizers near water bodies, but Massachusetts does not.

Mr. Stanvick thought the application could have been filled out with more extensive documentation. He mentioned there were multiple fields that were left blank. He is concerned we are treating the symptoms (cyanobacteria blooms) rather than the causes (runoff, excess fertilizers) of the problem. Mr. Stanvick is concerned these devices could have unintentional side effects to other life in the pond even though the manufacturer says the devices are great.

Gove Environmental was hired to fill out the application. Mr. Demers said there is a problem with storm water runoff into the lake. Dracut has 12 outfalls that run directly into the lake. He is on the Water Committee in Dracut. There is no money to fix the problem of water runoff into the lake. The state was concerned with zooplankton as it is a source of food for fish. The state has seen no decline in zooplankton.

Ms. Parece has been working with the state for approximately 20 years. The state comes each year on the first week of July to test the water. The same locations are used for testing each year to maintain consistency. She has all the records of the water tests for the past 20 years. State tests have shown phosphorus has been the biggest problem. Long Pond receives runoff from Sherburne Road and the homes upslope of Sherburne Road on the Pelham side of the pond. Mr. Steward would like to get the data from these tests and contact Dena Hoffman our town water resource person. Ms. Hoffman has mapped the outfalls in Pelham and could have some ideas of how to deal with this runoff problem.

Ms. Parece's family has lived on the pond since the 1940's. The quality of the water the past 2 summers has been the clearest it has ever been. Visibility has improved so features on the bottom could be seen in 12 feet of water. Other lake residents have commented to the LPCWC about how clear the lake has been. She has had problems of soapy water in front of her house along the beach all summer last year. She has tried to determine where this water is coming from, but has not been successful.

The cyanobacteria blooms happen throughout the lake. The town beach has the problem of the bacteria floating over in the prevailing winds and stacking up on the beach. The beach has to be closed when the bacteria is blooming as it is toxic to humans and animals. Mr. Brian Johnson, the Pelham Parks and Recreation Director, said when the cyanobacteria blooms, dead fish wash up on the beach. The water at the beach is tested monthly in the summer. Samples are driven to Concord to the state lab for testing at a cost to the Parks and Rec. Department. The beach was closed down at times last summer for these blooms. Mr. Johnson supports the use of the sonic devices and has talked to Ms. Hoffman and said she also supports the use of the devices.

Mr. Stanvick read an article from the Congressional Research Service titled *Fresh Water Harmful Algal Blooms: Causes, Challenges, and Policy Considerations*. He recommended the LPCWC read the article along with other interested parties. Mr. Demers said NH has a committee addressing cyanobacteria that was formed this year. Mr. Stanvick questioned if the bladder is broken and the cyanobacteria float back to the bottom, will they die and release their toxins anyway. He felt that even if you cannot see them stacking up on a beach they may still be causing a problem at the bottom of the pond. Mr. Mackay thought that if they stay on the bottom, they will not have a chance to multiply and fewer will decay and release their toxins which would lead to cleaner water.

Mr. Abare appreciates what the LPCWC is doing, but like other members of the Commission, he wants to make sure the use of these devices is not just a band aid. He wants there to be action to control causes of cyanobacteria. He would like to see the continuing education and work to bring the ecosystem back. He does not want people to think this is a solution so they

don't need to worry about runoff any longer. Mr. Demers said he was on the Dracut Storm Water Commission and the president of the LPCWC, Richard Lannan is on the Pelham Storm Water Commission so they are committed to working to educate the public and improve the lake.

Mr. Gendreau asked if other ponds in Dracut have the same issues. Mr. Demers said they did. The Long Pond Lake Association collects money to improve the lake, but only about half the lake front residents contribute to this cause. Pelham Parks and Recreation is a member and does give money to keep the pond healthy. The Lake Association Board meets once a month, then holds a forum once per year with the members. At this meeting, biologists come and teach what problems to look for and how to preserve the lake. Commission members asked if we could be informed when this meeting would be held this year.

Long Pond is surrounded by the towns of Pelham, Dracut and Tyngsboro. Dracut and Tyngsboro have full town sewerage. Pelham has septic systems. Sewage is not the major problem in Long Pond, runoff from development and chemically treated lawns is the largest problem. The LPCWC has not been to the Selectmen to discuss this problem, though, Mr. Lannan is on the Pelham Storm Water Commission.

Ms. Mackay asked if there was space to add swales and or detention ponds prior to runoff entering the lake. This would slow down water entering the lake and provide a space for treatment of the water. Mr. Demers and Ms. Parece were not sure. They said a pipe was added several years ago from the north side of Sherburne Road to the south side when beaver activity threatened the stability of the road. This pipe runs under Sherburne Road and into the pond.

Mr. Stanvick is disturbed that runoff from Pelham is going into the pond and causing problems. Pelham needs to fix this problem. He commented that wetland conservation districts (WCD) being intact would help prevent some of this runoff from causing these problems, but that developers keep coming to us and saying they only want to take a little bit of the WCD. Then another developer says they only want a little of the WCD. This all adds up to water quality not being protected.

Mr. Steward asked if another device could be used in the pond in the Pelham area. The presenters agreed it could. Mr. Steward asked them to come up with a proposal for the Commission to help purchase a device that could be used in the pond.

Long Pond water testing is done through the Volunteer Lake Assessment Program (VLAP). The Commission is charged a fee every year for the testing of Long Pond water. This is different than the testing at the swimming beach. Ms. Parece works with David Neals who is the chief biologist at DES.

This permit application is not an expedited application therefore it will go through the normal permitting process. The Conservation Commission will write a letter to the state about the use of this device after voting to support or oppose its use.

Public Input:
None.

Motion: (Stanvick/Abare) to approve the installation of these units in the Pelham section of Long Pond.
Vote: 6-0-0 in favor.

WALK IN ITEMS:

Mr. Stanvick invited the Commission to a ZBA site walk at 9:00 a.m. Saturday, January 14, 2023. There is WCD infringement for an addition to a house.

Mr. Gendreau thanked volunteers, including Eddie Ayotte, snowmobile, Forestry, Conservation and boy scouts for working to repair bridges damaged in wind storms on the Moose Pond Area.

Mr. Abare said the proposed project to bring a sidewalk from the Hobbs Center to the Terraces is moving forward. He has spoken to the Selectmen who thought the idea was good. He will keep us updated about the progress. There are no final plans yet.

Ms. Kamal asked about the two wells on town land on the south side of Sherburne Road. These wells were set up by a developer. That developer then sold the land to another developer who went in a different direction with the project and did not use the wells. The land the wells sit on is now owned by the town. Mr. Greenwood said the wells, at testing, pumped 30 and 130 gallons per minute. Mr. Steward said details could be checked in Planning. He also thought the cost to bring the water from the wells up slope to houses north of Sherburne Road could be expensive.

Ms. Kamal thanked all involved with purchasing and building trails on town land. She was out recently and spoke with hikers from Dracut. Mr. Steward said many people from neighboring towns come to hike in Pelham. There are scenic and historic sites like beaver dams and old foundations along with miles of trails.

Ms. Mackay and Ms. Kamal walked the Little Island Pond Conservation Area on January 5, 2023. The property is required to be monitored once per year. This monitoring was for 2022. The property was in good condition. There were some invasive species and boundary markings were faded. Ms. Mackay will fill out the monitoring report for the Land and Community Heritage Investment Program (LCHIP). The questionnaire is short and asks questions regarding the condition of the property, trail markings, boundary markings, and signs. This property was harvested approximately 15 years ago. Mr. Steward suggested it may be time to harvest again. Ms. Mackay did not think the area looked ready to harvest again.

Ms. Mackay emailed Ms. Helen Dunlap about a conservation easement on her property. The land is located in the corner of Pelham and Dracut. A granite marker in the farm field shows the corner of the town/state. This property has an easement held by the Forest Society and requires monitoring once per year. Ms. Mackay did not make it to the property in 2022. She

has asked to come visit in April or May in order to get back on track with the monitoring visits. The property is in excellent condition as stated by Ms. Dunlap. Ms. Mackay has visited several times and the property is always in great condition. The property is a working farm with chickens and cattle. She will tell members when she makes a date to visit so members can come to see the property.

Mr. Stanvick asked about e-bikes. Mr. Steward explained. Class 1 e-bikes are treated like normal pedal bikes. They do not have any throttle. Class 2, 3, 4 are required to have some authorizations for use on town properties because they have a throttle and can go up to 28 miles per hour. Forestry will be discussing the use of these bikes at their next meeting.

MINUTES:

Motion: (Stanvick/Kamal) to approve the amended minutes of November 9, 2022, with letters and comments of town residents included.

Vote: 5-0-0 in favor.

Motion: (Stanvick/Kamal) to approve the non-public minutes of November 9, 2022

Vote: 5-0-0 in favor.

Motion: (Stanvick/Kamal) to approve the minutes of December 14, 2022.

Vote: 5-0-0 in favor.

Motion: (Stanvick/Kamal) to approve the non-public minutes of December 14, 2022.

Vote: 5-0-0 in favor.

ADJOURNMENT:

Motion: (Mackay/Abare) to adjourn.

Vote: 5-0-0 in favor. Mr. Gendreau excused himself from the meeting at 8:40.

Adjourned at 8:47 p.m.

Respectfully submitted,
Karen Mackay,
Recording Secretary