

Lake Zoar Authority

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Member Towns

Monroe-Newtown-Oxford-Southbury

The regular meeting of the Lake Zoar Authority was held Tuesday, April 6, 2021, at 7:00 p.m. at the Oxford Town Hall, 486 Oxford Road, Oxford, CT 06478.

Commissioners Present:

Gary Fillion, Chairman
Bill May, Treasurer
Lesley Pires, Secretary
Frank Cavallo
John Downs
Jerry Kozera
Mark Saksa
Dick Speer

Absent:

Herbert Garber
Jeff Thomas

Gary Fillion, Chairman, called the meeting to order at 7:03pm.

Secretary's Report:

A motion to accept the minutes as read from the March 2, 2021 minutes was made by Bill May, seconded by Mark Saksa; the motion was passed unanimously.

Public Comments:

None.

Correspondence and News Clippings:

None.

Treasurer's Report:

Bill May, Treasurer, presented account balances, as \$222,874 cash and assets on hand, with \$114,831 designated for the budget and \$108,000 on reserve catastrophic boat or motor replacement, which has been maintained consistently in years past. The 2021 town contributions will be received over the summer. Worker's compensation, liability, and boat insurance will possibly combined with one comprehensive policy under CIRMA this year, with the move saving thousands of dollars. Lake Lillinonah and Candlewood Lake Authorities both use CIRMA. A \$500 slip deposit has been sent to Lakeside Marina for the 2021 season, with the total cost for two slips to be \$1925. Currently, winter moving and storage fees for the boats are \$3,325.32 with the current vendor. An \$1,800 estimate was received by this vendor to clean both of the boats before they are returned to the marina. This will be put on hold until a proposal can be received from Lakeside Marina regarding year round boat storage and overwintering which may provide substantial savings.

Marine Patrol Report:

None.

Publicity/ Public Awareness:

None.

Water Quality / Grants Report:

Dr. George Knoecklein, Limnologist & Certified Lake Manager, of Northeast Aquatic Research, LLC gave a presentation on his professional studies of Lake Zoar, concerning the following aquatic plant and cyanobacteria topics:

Invasive Water Chestnuts:

Water chestnuts are primarily spread by the Great blue heron, which gets the nutlet stuck in it's feathers and actively transports it to another waterbody, where it sinks and germinates. Geese may also do the same. Water chestnuts were surveyed in Lake Lillinonah in 2019 and hundreds were found. It is suspected that water chestnuts entered Lake Zoar from there, with possible entry way through water turbines (not the spillway, as the water chestnut does not float). Hand pulling controls current plants but does not prevent regrowth next season due to seeds falling to the bottom sediment and rooting. However, hand pulling is still recommended for single plants, as they haven't become established yet. They should be put in a plastic bag and in the garbage, and residents should notify the LZA of where it was found.

Cyanobacteria:

In August 2020, the Lake Zoar water sampled showed a concentration of 1.2 million cells per milliliter of cyanobacteria. The typical concentration should be less than 20,000 per milliliter. Cyanobacteria make gas vacuoles and are lighter than the water, and they float due to overbuoyancy. As the cells reach the surface, they are susceptible to UV light destruction and begin to decompose at the surface. It creates a scum that smells on the top. Excess nutrient loading of nitrogen and phosphorus into the water due to fertilizing causes more cyanobacteria to grow. Dr. Knoecklein hypothesizes that the blooms in Lake Zoar come from overfertilizing the Pomperaug river, as blooms tends to start at I-84 bridge and spreads south, while the water north of this area remains clear. He hopes to coordinate data from neighboring river studies to further research the issue.

Dr. Knoecklein warned that the cyanobacteria blooms can aerosol toxins into the air, and the local public health departments have the authority and obligation to monitor water where there are public ramps or beaches, but they are not mandated to by law. The LZA does not have the authority to measure the levels and shut down a beach, the public sanitarians do. The LZA can do additional monitoring but is constrained by funding. Dr. Knoecklein is doing a state funded Lake Zoar cyanobacteria study with up to ten testing sites to monitor the lake this season. The nutrient study results will require up to four months of data collection and analysis workup before the phosphorus levels can be properly analyzed in relation to tributary inputs. This study will be done in addition to LZA participation in the Western CT State University Cyanobacteria Monitoring Program. All information will be available to local health authorities to assist public health and safety programs.

Aquatic Plant Management Plan:

Dr. Knoecklein smized that Milfoil and Curly leaf are mostly eradicated after the first herbicide application each season. However, native plants are more dense in July by the second application (includes River pondweed, Narrow lead pondweed, flat-stemmed pondweed, Yellow star grass, and Coontail, Tapegrass. He suggests the LZA needs to decide how to control the native plants that are inhibiting recreational use of the waterways after the invasive plants are treated.

Dr. Knoecklein explained that each time the plants go through a growth and death cycle, they add more nutrients to the sediment through decomposition. Spraying the weeds and killing them does release nutrients, but the cyanobacteria blooms happen during the first week of August, and any nutrient from herbicide related decomposition should be gone by then, since the flushing rate in Lake Zoar is on the order of days. The Milfoil does release the nutrients slowly, but it does not contribute a high enough concentration to cause a cyanobacteria bloom.

There need to be a sustained phosphorus source over the entire season to cause those cyanobacteria blooms. It is unlikely that the herbicide applications are a direct cause of the blooms. In addition, Dr. Knoecklein explained the following:

Timing of herbicide application is important for successful treatment. The herbicide needs contact with the plants, so treatment is recommended when enough plants have grown large enough to be sprayed, but also before the recreational season. Spraying the plants earlier in the season would not allow for adequate contact.

Milfoil is mostly in the northern part of the lake and may have originally entered Lake Zoar from upstream. Milfoil does not reseed, it fragments and re-roots from a one inch node, therefore, the machine harvester did not help eradicate milfoil, as it can actually cause more growth. There are some additional areas of the lake that are still full of milfoil and curly leaf and are not on the treatment plan. They can be reconsidered for treatment and requested for approval by the CT DEEP.

Dredging the shallow areas would be more effective for weed removal, but it is not affordable. The process would involve digging out enough sediment to make the water 10 feet deep or more so the plants can't survive there. However, it would also release and spread all the harmful PCBs (polychlorinated biphenyls) from the sediment. Chemical treatment of the selected 80 acres currently cost \$36,000 and is much more affordable.

Chairman Gary Fillion reported that the 2021 weed treatment estimate was received at \$36,488. The first treatment (80 acres) will cost \$24,910, the second treatment (60 acres) will cost \$11,328, and the permit fee is \$250, which the treasurer needs to send this month.

Gary reminds all residents that permits are required for the use of all lands and waters within FirstLight Project boundaries. Therefore, all dock modifications and installation plans must be lawfully approved by FirstLight. Applications may be submitted on their website, at <https://firstlightportal.myadept.com/ShorelineGuidelines.html>.

Boats and Motors Report:

The boats will be brought to the electrical vendor in Seymour within the next two weeks to activate the newly installed lights, and then they will be transported to Lakeside Marina for the season.

Grants:

Frank Cavallo and his partner Barbara submitted a proposal to the Environmental Professionals Organization of Connecticut (EPOC). The grant requested \$3,593.70 for a grassroots effort for the LZA to educate residents about proper water chestnut management, including funding for compost piles for all four towns. Decisions will be made by the end of May. In regards to the previous grant proposal submitted on behalf of the LZA, the CT DEEP reported that 50 applications were received for the Aquatic Invasive Species Control on Lakes, Ponds and Rivers program, and there has been no decision made yet.

Unfinished Business:

None.

New Business

Jerry Kozera of Newtown was appointed by the Newtown Democratic Party as the newest commissioner on the LZA.

Adjournment

A motion to adjourn was made by Dick Speer, seconded by Frank Cavallo, the motion was passed unanimously. Gary Fillion adjourned the meeting at 8:33pm.

Respectfully Submitted,
Lesley Pires, Secretary

The minutes are not considered official until approved at the next regular meeting of the Lake Zoar Authority to be held on Tuesday, May 4, 2021 at 7:00 pm at the Southbury Town Hall.