

**Town of Wolfeboro
Wolfeboro Waters
Assessment Subcommittee Meeting
Meeting Minutes
1:00pm -Tuesday October 11, 2022
Beaver Room
Wolfeboro Library
Wolfeboro, NH 03894**

Present: Bree Rossiter, Beth Marcoux, Andra Dekkers, Warren Muir, Linda Murray, Abby Adams

Absent: Steve Wingate, Emilie Clark

1. **The meeting was called to order by Warren at 1:05pm**
2. **The August 18 minutes were approved as written. Linda abstained.**
3. **Information Items:**
 - a. **Back Bay, Upper Beech Pond, and Lake Winnepesaukee sampling – Abby** reported that the sampling went well this summer. The volunteers who are sampling Back Bay have been very helpful, even taking grab samples in emergencies. Abby reported that the full profile is not done on the grab samples. Linda asked where in Back Bay the samples were taken and Abby described them. Upper Beech Pond will test again at the end of October. Otherwise, most sampling has been completed for the season.
 - b. **Bridget's observation of likely Metaphyton – Bridget** contacted Warren about an observation of fuzzy growth along the bottom of Upper Beach Pond. He said that it was likely metaphyton and offered to test the sample using Fluorometry. However, it disappeared before a sample was taken.
 - c. **Bree** noted that this has been a difficult year around Lake Winnepesaukee with increases in sightings of possible toxins. She reported the presence of a benthic cyanobacteria called tolypothrix off of Moultonboro Neck. A discussion followed and Warren recommended two webinars – one on benthic cyanobacteria and the other on managing cyanobacteria blooms. The links to both are provided below.
 - d. **Purchases – Warren** reported that we purchased and received the following items: test tube holders, more sample bottles to support PCR testing; mini centrifuge; and bottles that don't allow cyanotoxins to stick to the sides (PETG bottles). Within our authorized budget approximately \$950.00 has been spent. Andra recommended distributing some of the PETG bottles to subcommittee members at a future meeting.
 - e. **2023 Intern – Warren** contacted UNH, Plymouth State, Dartmouth and others regarding the possibility of a summer intern to help with PCR testing. Amanda indicated that UNH will help us find an intern for 6-weeks in the summer of 2023 to be shared with UNH. Pete Countway agreed to train the intern in PCR testing. We will pay UNH \$5,000 and they will deal with insurance, travel, etc. in exchange for the 6-weeks internship. Katheryn Cottingham, Chair of the Biology at Dartmouth, has a former grad student and current post-doctoral fellow (Jessica Trout-Haney) working with her and would be a good contact for us.
 - f. **Jessica Trout-Haney conversation – Warren** has been in contact with Jessica and learned she is working in Pico cyanobacteria and has analytic capabilities that could help us. Warren told her we have a lot of cyanobium in our water and don't know if it's good or bad, or much about it. She suggested we collect samples at different depths, for example, on the thermocline. She is currently working under a NASA grant with satellite images of our lakes, looking at wavelengths to see the extent and trends of cyanobacteria. Warren invited her to come and learn PCR.
 - g. **Update on Wolfeboro Waters data archive – Beth** stated that all data is now on a hard drive. Warren indicated there is still some data on paper will be digitized and added to the drive. Beth will meet with Bree on Nov. 7th to see about organizing our data in similar ways and to create trend data to be shared with the town Selectmen. Bree indicated that she has the 2021 data from Bob Craycraft. She is reviewing it and updating the monitoring map. She is also preparing a "State of the Lake" report. Bree reported she has used the test kit and strips for Microcystis and Anatoxin A only once and that it is easy to use, but time consuming and the results were inconclusive. Bree is interested in getting an AmeriCorps volunteer next summer to help with Winni Blue program so she could do more sampling and analyses.

- h. **PCR lab move** – Wolfeboro Waters continues to look for space for the lab that is currently on the porch at Warren’s house. While we continue to look for space, Andra will move the lab to the kitchen of her guest house so we can continue to test during the winter. Linda indicated she will have a better idea of what space might be available once town officials have all been hired and assigned.
 - i. **PCR training**- Andra reported we are still looking for dates with Pete Countway to go to Bigelow for further PCR training.
 - j. **Wentworth Gloeotrichia outbreak**—Gloeo was seen in Wentworth and Winnepesaukee. Quantities were significant but not at alert level in Wentworth, but a NHDES was issued for Lake Winnepesaukee outside of Wolfeboro. Bigelow is interested in doing full metagenomics on Gloeo samples taken in those lakes. Bigelow got cyanotoxin analyses on samples collected in 2018 of the Gloeo bloom in Winter Harbor that found to have significant, but not hazardous levels of microcystins and BMAA, more BMAA than microcystins. In addition to the analyses done by Bigelow, Julie Brown and Warren did fluorometry on samples collected this year. Andra asked if there might be different species from lake to lake. Warren indicated it was not likely. Bigelow will do a comprehensive analysis with a goal to determine what toxin genes might be present and what genes there are that would produce phycocyanin or phycoerythrin. Warren reported we have a phycocyanin/phycoerythrin (PC/PE) fluorometer and are not seeing a lot of PE.
 - k. **Fluoroquik update**—Not a ton have been done to date. Analysis of an unconcentrated sample, doesn’t show much. Warren would like more samples where people think there is something going on. He recommended that when we see changes in Secchi disk readings, we may want to collect associated samples.
 - l. **Bigelow metagenomics (see above)**
 - m. **NHDES is reviewing the makeup of two benthic samples** – Andra collected two samples from a site at the mouth of the T20 stream that crosses her property labeled T20. This site has been monitored for some time. She recently saw it was full of thick green material and took samples of green and brown scum. The green scum was taken from rock and the brown scum from the bottom of the lake. Samples are being sent to Kate at NHDES for analyses. Samples with preservative as well as those without preservatives will be sent.
 - n. **Lake Winnepesaukee Assoc activities and capabilities**—Bree has updated the Restoration Map and provided a demonstration of the update to members. Data used in the map was previously owned and while you could access it from the LWA website, they were unable to update or edit it. Bree got all previous data and has now created a new data set and restoration map on the LWA website that can be updated. One goal is to put water quality data up as well.
 - o. **Recent webinar on dissolved phosphorus and BMPs**—see links below.
 - p. **Changes in town officials** – David Ford whose responsibilities included Town Engineer, Head of Public Works, Water Supply, and Sewers, is retiring at the end of the year. The town has hired a new public works director to replace him. Scott Pike is Assistant Public Works Director focusing on town water management and may also retire. The Town has a contract and engineers will cover the sewer system. LWA would like to meet with all Town Managers around the towns for updates. The town plans on putting a sewer line down Forest Rd that will hopefully address many of the failing septic systems that are problematic, possibly due to wet lands in the area. Linda reported that bids for two pump stations came back higher than expected. The town is looking to get federal money to remove lead pipes. Matching funds are still in place at this point. A discussion was held about BMPs and webinar from EPA and UVM researchers.
4. **New business** –
- a. **Proposed purchase of Thermocycler upgrade to three channels**-- Wolfeboro Waters currently owns a 2-channel thermocycler that is not meeting our needs. A 3-channel thermocycler is needed to analyze the many samples that have already been collected. The committee discussed options for meeting this need. The upgrade from a 2-channel to a 3-channel thermocycler will cost approximately \$2,000. As this is cutting edge work, Pete Countway from Bigelow is helping to negotiate pricing for the upgrade with

Biomeme, the maker of the 3-channel unit. Linda looked at budgets as of September for all Wolfeboro Waters subcommittees. If there is money in the budget at end of year, it can be spent. Money that was donated is still available. It was moved and seconded that we pursue upgrading the thermocycler to 3 channels even if it encroached on donation money. It was unanimously approved.

- b. Communications about our activities and findings**—Warren proposed we have two meetings in the near future. One meeting with colleagues from the local lake associations to share data and discuss capabilities, findings, and concerns. The second meeting would be for the subcommittee to discuss what we want to present the town selectmen in an update. This would be different from the 2021 report to the board of selectmen. In this report we would identify general trends and discuss the evolution of our work and discuss the opportunities and approaches for the future. The goal would be to determine the key points for a three-four page report and/or very brief PowerPoint.

- c. Other new business-- NONE**

- 5. **Public comments-- NONE**
- 6. **The committee has 2 scheduled meetings. The first will be held in the Beaver Room of the Wolfeboro Library on Nov. 9 at 1pm to discuss what we will present to selectmen. The second will be held in the Beaver Room of the Wolfeboro Library on Dec 5 from 1:15pm to 4pm. This is the meeting when we would meet with colleagues from other lake associations. The meeting with the town selectmen is tentatively set for Dec. 21.**
- 7. **The meeting adjourned at 3:28pm**

[Links to webinars mentioned above.](#)

[Strategies for Preventing and Managing Benthic Harmful Cyanobacteria Bloom \(HCB-2\) Webinar](#)

When: Oct 13, 2022 from 13:00 to 15:15 (ET)

and

[Strategies for Preventing and Managing Harmful Cyanobacteria Bloom \(HCB-1\)](#)

When: Nov 8, 2022 from 13:00 to 15:15 (ET)

<https://itrcweb.org/events/calendar>