

Lake Management Study Committee

Minutes of June 7, 2022

Meeting via Zoom

Members present: Laura Russell, Debbie Tatro, Dan Lewenberg. Guests: Gary Bluestein, Josh Philibert. Colin Barbera joined 12:10 and Ken Hyman joined 12:30. Kevin Davis joined 1:11 pm.

Introductions for Dan's first meeting – Dan brings wealth of expertise, BS in Environmental Biology, with courses in limnology, phycology and hydrology. Also: Chair of Finance Committee.

Approve the minutes of May 12, 2022 Meeting: Motion – Debbie, Second – Laura. Approved 2-0. Dan & Colin abstained (not present at the meeting)

Reports:

All contracts signed: TRC (Deep Hole and coves extensive testing), G&L (Inlet Phosphorus) and NepRWA (Sucker Brook). All 3 have done their first round of testing. NEAS DASH also signed.

G&L Phosphorus Results: Highest 0.726 at 123 Beach St (drains from wetlands as well as septic), 0.545 at SHS wetlands, 0.35 at inlet from lagoon, 0.133 at Foxboro St. inlet to Fletcher's cove, and 0.049 at Canoe River inlet. Note: 0.03 mg/l supports algae growth.

TRC preliminary report: Lake is thermally stratified which is normal. Over 100% oxygen saturation at surface (>100% due to photosynthesis). Zero oxygen at over 33 ft of depth due to consumption by microorganisms breaking down organic matter. Secchi disk transparency was only 2.25 m, which may be due to algae or suspended sediment.

Votes when Colin joined:

Dan – moves, Laura seconds to add L4 (north cove) to second and third TRC testing @ \$642/test
All yes: Colin Josh Laura Dan Debbie.

Colin moves to spend \$435/pair of tests for chlorophyll and cyanobacteria measurement at the Deep Hole in second and third round, Debbie second. All yes: Colin Josh Laura Dan Debbie.

Ken moves, Laura second to offer reimbursement at 14 cents a mile for LMSC travel, and also reimburse for boat gas used in lake sampling. All yes: Colin Josh Laura Dan Ken Debbie.

Discussion: Laura proposes \$90 - \$180 to test Phosphorus and Nitrogen in lake before and after fireworks (at approximate barge site and downwind shore). Gary suggests an alternative: write a letter to July 4th committee chair requesting a list of ingredients, and for 2023 ask to cover costs of before and after phosphorus and nitrogen tests, research availability of low phosphorus/low nitrogen versions, and consider choosing more eco-friendly fireworks.

Discussion: Unless legislature passes extension and revision of open meeting law, meetings may need to be in-person again beginning July 15. Dan evenings better, Gary also prefers at night for in-person. For zoom meetings, noon meetings can work.

Discussion: Looking for a committee-specific email for website, emails, etc. Laura was waiting for committee name change, will ask about a generic one like lakecom@townofsharon.org. Consider a shared Google calendar.

Josh on Lake Levels: Lake level raised to 10.5 ft this spring, but falling with lack of rain, and outflow is at its lowest allowable output into Massapoag Brook: 1.5 cfs whenever possible. After the leaves come out it takes a large rain to restore the lake level due to transpiration. Outflow into Massapoag Brook can adjusted to be as low as 1 cfs with Con Comm approval. Josh indicates he is pinned between wanting to get nutrients and heat out of lake, and not wanting a lot of shallow areas that will heat up fast.

Josh supports letting water out to lower lake temp under one condition: warm weather and a strong southwest wind is pushing hot water towards Memorial beach. Laura asked when heavy rain (such as forecast this week), can we focus on building lake volume and level back to 10.5 feet as priority (vs. immediate maximum drainage), which will increase as lake refills. Agreed.

Gary comment: Re Procedures and Schedules, at last meeting we voted to ask Con Comm to add a town employee to be secondary backup for Josh, for regulating the lake water level. Josh reported between John and Josh's terms, Peg did it. Debbie or Josh should get on Con Comm agenda to discuss backup for lake water level regulation, any amendments Josh might recommend after his experience this summer, and ask for formal approval of the digital version Laura created of the original document with more legible text and tables (and any updates).

Kevin Davis joined 1:11 pm to discuss Septic Systems

Title V: Put in place by DEP 1995. Banks were seeing failed septic systems so wanted Title V. Triggered when transfer home title or upon failure of the septic. Exempt: trust or sell to offspring, cash sales not exempt but can fall through cracks.

Checklist for inspection. Systems that fail have to meet the depth to groundwater requirement or install an Innovative and Alternative (I/A) septic system to meet compliance. The distance from septic to groundwater is important: it directly relates to input of nutrients into the groundwater. Variances can be granted. I/A systems allow you to get closer to groundwater. No specific zoning for septic systems, but there is a Ground Water Protection District, Surface Water Protection District, and Zone 2 Well Protection District.

To determine the number of older septic systems around the lake would require a time intensive scanning the pdf for every address, and making an excel sheet spreadsheet.

A List of I/As is available via Barnstable County tracking program. Kevin will send that, along with DPW's new Guide to Septic Systems Maria produced, and a sample I/A monitoring report. Aeration is most popular I/A system; it promotes beneficial bacteria growth/treatment. The Town's low-interest loan program set up in 2021 is through the state; loans directly from towns to residents are not legal. It has made two loans to date. With interest rates rising, there may be more interest in low-rate loans for septic replacement.

Most I/A systems require a maintenance plan of \$1-2K/year, with testing once or twice a year for nutrients coming out of the system. Mechanical components also tested. Most I/As focus only on nitrogen, not phosphorus. Adds \$5-15 K to the cost of septic (total cost \$25 - \$35K). Some offer a smaller system size. Traditional systems don't need testing of nutrient output.

What are other towns doing? Most neighboring towns have sewer. Massachusetts Alternative Septic System Test Center (MASSTC) works with lake committees. There has to be interest on both sides: a lakeside community would have to be on board to partner and apply for grants. Could get about \$5K per system through a grant.

DEP recommends septic pumping 2-3 years. But there is no downside to pumping every year. Depends on age, usage, household size, and condition. See the Guide to Septic Kevin will send.

Dan question: High E. coli most likely due to septic issues. Kevin: Yes.

Kevin points out that decaying organic material (ie leaves and grass clippings) is an important source of phosphorus and nitrogen.

More Discussion Items

Ken's poster: Content good and print legible, recommend to print with CPC funding after July 1. Reword #2: "Fertilize once a year in fall (no phosphorus), avoid herbicides and pesticides."

Eagle Scout candidate interested in building Memorial beach kiosk, enthusiastically endorse.

Gary noted that departments are getting inundated with requests. Gary's recommendation: Requests go to Gary for Rec matters, Debbie for Con Comm, Dan for Finance, Ken for Select Board, Laura for Planning, etc. Laura noted Eric asked to be cc'd on all requests. Gary recommended building a Punch "to do" list, and update monthly. Discuss at next meeting.

Request: Josh will ask Kevin to change download of flume level and flume gauge data to hourly, so more manageable to analyze it.

Laura will poll members re July meeting date.

Voted to Adjourn 2:02 pm.