

# Lost Lake Watershed Advisory Committee (LLWAC)

Town of Groton, Groton, MA 01450 978-448-1111

## Meeting Minutes - January 8, 2015

At Town Hall

**Present:** Mark Deuger, Tom Orcutt (Groton Water Dept. - arrived at 7:08pm), John Petropoulos (BOS), Arthur Prest (Finance Comm.)

Not present: Susan Horowitz (BOH), Michael Rosa

Visitors: Alex Woodle, Michelle Collette (Dir. Land Use, Groton), Jane Peirce (Mass Dept. of Environmental Protection)

**Recorder:** Stephen Legge

The meeting began at 6:12 PM. **This portion of the notes is informational only and not considered "minutes" because there was no quorum of members (4 min) until 7:08 PM.**

Members of the committee introduced themselves to guest Jane Peirce, Mass Department of Environmental Protection (Mass DEP), BRP/S.319 Nonpoint Source Program Manager.

Peirce explained that the Clean Water Act required a non-point source program in the state. Non-point sources are non-regulated sources by definition. Grant funding is available from the state under Section 319. She is excited about the work done in Harvard in the Bare Hill Pond watershed. They have successfully reduced plant growth and phosphate levels in the pond. Additionally, they have dredged portions of the pond to reduce phosphates retained in sediments.

Peirce explained that the (US) EPA is frustrated at the slow pace of work on point sources and storm water discharges to waterways. They are renaming storm water as a point source in some cases.

Peirce mentioned that Clean Water Act Section 604B funds are not as limited for use in projects as 319 funds, and may be used for analyses and measurement programs. Program timing and deadlines were laid out for the current year funds. A request for responses will be issued in February. Responses/proposals will be due on March 27<sup>th</sup>. The grants are competitive. Money should be in hand for CY 2016.

Mass DEP is available to informally help draft proposals and comment on drafts **BEFORE** the request for proposals is issued in February. After that time, no further informal contact and feedback is allowed.

Peirce asked of the committee, do people believe septic systems are not contributing to the problems in the Lost lake Watershed (based on the town's rejection of a sewer system in 2012).

Petropoulos explained the committee's thinking on using a "Request for Information" to draw in outside experts to tell us what we can do to answer that question more definitively and authoritatively, and other questions relating to possible causes of problems in the watershed.

Deuger explained our thinking that Martin's Pond Brook may be a possible major contributor vs. septic systems, and our need for strong and consistent data to prove what the real problem(s) may be.

Peirce asked what the local Board of Health has done/is doing about septic systems in the watershed. She commented that the state regulations permit all septic systems to be tested as necessary.

Collette commented that Groton's local BOH has been aggressive about getting failed systems fixed; she expressed concern about failed well water tests and the presence of E.coli in well water.

Deuger added that he was chair of the BOH in the 1990s and they were proactive and creative about fixing problems in that time period.

Prest questioned Peirce about the authority to test systems widely in town. She answered that any system can be forced to be tested. It is a political decision to do so, and of course there can be consequences to that kind of decision.

Regarding Bare Hill Pond, Peirce commented that the bottom is rich farmland sediment. They (Harvard) have done some significant dredging to lower the average phosphate load in sediments.

Deuger and Woodle combined to say that it is possible Lost Lake may have phosphate rich sediments at its bottom, reminding us that Lost Lake is quite shallow and was a wetland in the 1800s before becoming a dam-created lake. Given the diligent BOH work over the years and low nitrates now found in the two lakes, it is difficult to think that septic systems are the major culprit in observed plant growth and phosphate loads.

Prest said the presence of filamentous algae in Lost Lake, but not in Knops Pond, suggests that possible sources of phosphates are the brooks running into Lost Lake. Peirce offered that erosion near roads caused by storm water runoff can be a major source of phosphates that were bound in soil.

Petropoulos asked Peirce, what should we do to define what our problem is, and any fixes, with sufficient authority and certainty to convince voters it is the right answer. Peirce answered, apply for 604B grant funding and test the water and sediments comprehensively; sediment is very important and should be tested well. Also storm water erosion areas should be tested to determine if they are significant problems.

Woodle asked, how do we test sediments for phosphate levels?

How can we solve the problem of heavily laden sediments? Peirce answered, one can use alum (hydrated potassium aluminum sulfate, according to Wikipedia); it sinks to the bottom and chemically binds phosphates, effectively sealing the sediment layers.

Deuger offered some comments on sediments, phosphates and the dynamics of leaching out phosphates.

Collette asked how much do we really know and understand about the science here. Lost Lake is a flooded swamp. How much phosphate is coming from soil and naturally occurring sources?

Referring to Steve Webber, Meredith Scarlett (local farmers) and Lawrence Academy, Collette offered a big “shout-out” for long standing efforts to use modern mitigation techniques/practices to minimize phosphate loads and runoffs in their operations. The last ten years have seen big improvements.

Referring to earlier discussion with Petropoulos, Peirce commented that \$50,000 grants from the state are typical under 604B.

Petropoulos asked, who are the entities who can do the kind of testing we need? Peirce answered, she can provide a list of testers.

Prest asked Peirce, the state changed the water quality rating on Martins Pond Brook from 5 to 2 - what does she know about this?

**Call to Order:** Chairman Prest called the meeting to order at 7:08 PM when member, Tom Orcutt entered the room and contributed to a quorum.

Peirce (responding to Prest question on MP Brook) said “de-listing” process can be a drawn out bureaucratic process. If MPB is downgraded again it may bring regulatory requirements. Section 319 money cannot be applied to a regulated watershed, so one advantage to the improved rating is that this money could be applied.

Orcutt commented that Gibbett Hill Farm went from 200 head of cattle under Marion Campbell’s earlier ownership to 20 under Webber’s ownership. This is a big change in numbers and certainly must have affected MPB water quality, independent of any additional “mitigation techniques”.

Peirce asked, what was our goal for Lost Lake in previous years?

Alex Woodle answered, “to lower phosphates in the lake resulting in reduced noxious weed growth, which in turn was impairing safety, fishing and recreation on the lake. It was additionally desired to re-charge the area (in a positive manner) for town wells.

Orcutt: We have a town by-law which requires septic testing in a watershed with excess nutrient loading.

Peirce commented that we can also obtain (competitively) state revolving funds for storm water management for testing purposes. This might enable us to demonstrate that storm water management does affect nutrient loading into a water body of interest (Lost Lake).

Peirce said our first job may be to determine definitively where the phosphate loads are coming from.

Discussion between Deuger and Peirce on Bare Hill Pond (Harvard): storm water management and remediation has had up to \$750,000 in funding.

Peirce said if we do another round of septic testing, the Mass Community Septic Management Program may help homeowners finance repairs.

Peirce said there will be a meeting on January 27<sup>th</sup> in Worcester on Section 319 requests for grant funding. She strongly recommends we go to it.

Special Guest Peirce left the meeting at 7:38 PM.

#### **Approval of Meeting Minutes:**

Petropoulos moved and Deuger seconded that the December 4, 2014 meeting minutes be accepted as revised by Prest. Passed as amended, unanimously.

The notes from the informal (no quorum) meeting of December 11<sup>th</sup> do not need to be approved.

#### **Request for Information Document:**

Orcutt moved, Petropoulos seconded the amended draft be accepted for issue by the committee. Approved unanimously. Prest will fix the dates in the document.

#### **Other Discussion:**

Prest announced Ed Himlan will meet with us at a future time, as yet undetermined.

Deuger commented: Phosphates in the soil/sediments – there are two questions: How much is there? And, how available is that to the water (i.e., is it bound and therefore unavailable)?

Deuger continued, Harvard has put a lot of its own resources into storm water management. School roofs and parking lots all used to run off into Bare Hill Pond. Now, much of that water is collected and treated. Town money matching will help us with grant fundings. We have some (not much) funding to use to obtain grants requiring matching for 319 remediation or 604B analysis and testing.

\$30,000 dedicated now is not very much for remediation. Likely best use is for analysis and testing, to establish with authority what our problems are, and what solutions make the most sense.

Prest will be unavailable January 9<sup>th</sup> - 22<sup>nd</sup>, for a vacation.

**Adjournment:**

Orcutt moved and Petropoulos seconded for adjournment. Unanimous consent. The meeting was adjourned at 8:00 PM.

**\*\* No date was given for the next meeting, but it is expected in early to mid February \*\***