

Lost Lake Sewer Committee Minutes
March 28, 2013

Present: Dr. Horowitz, Board of Health; John G. Petropoulos, Selectman; Tom D. Orcutt, Water/Sewer Superintendent; Jay M. Prager, Finance Committee; Angela Garger; Committee Member; and Mark Deuger, Guest

- I. Risks to private and public drinking water supplies
 - a. Over time fluid from septic systems will eventually reach water systems.
 - i. The complication with the Lost Lake Area is that there is such a concentration of systems
 - ii. Mr. Deuger said that nitrates tend to be highly mobile and don't degrade quickly. Once they are in the water table they "go places".
 1. Mr. Orcutt has been monitoring nitrate levels in the Whitney well for some time.
 2. Phosphorous effects to people are not as significant nitrates
- II. How can we establish the sources of the nutrient loading in the lake?
 - a. Mr. Deuger said this would be difficult
 - i. A test would have to be designed to determine where the nitrates are coming from – i.e. fertilizers vs. septic.
 - ii. Marc said he would look into it for us.
- III. Is there a way to determine the long term danger to the Whitney Well?
 - a. Mr. Deuger said that the whole lake is a capture zone for the well. He added that there is a zone of influence around the well.
 - b. Selectman Petropoulos asked if there was any reason to believe that we will see a significant change in the nitrates given that things stay the same?
 - i. Mr. Deuger said the system appears to be relatively stable, but, that the water system needs to be monitored consistently.
 - c. Mr. Prager asked what the addition of sonar would do since the balance may now be upset. How will the sonar treatment affect the nitrate level in the lake and thus the well?
 - i. If the plants are killed the nitrates and nutrients become mobile again. Mr. Deuger said you could see a bump in the nutrient level.
 - d. Mr. Deuger said that he would not be unconcerned about contamination to the well, but, he would not be in a panic.
 - i. Presence of nitrates have been documented since the 80's report
 - ii. Mr. Deuger said that in his opinion the presence of nitrates, in fact, indicates a problem and those sources should be identified and eliminated.
 - e. Mr. Deuger said that groundwater tends to flow in the same direction of the topography. The water table tends to be a subdued form of the topography.

- f. How would a water study be designed?
 - i. Probably need to send it out to bid
 - ii. Mr. Deuger estimated that it would probably cost several hundred thousand dollars.
 - iii. Build a model and base a sampling plan on that model.
 - iv. You would need to monitor quarterly for a year
 - 1. There will be a lot of variation depending on the season
 - v. Sampling points in the feeder streams would be important
 - vi. Flow rates and concentrations would need to be measured
 - vii. How the sample is taken is important as well
 - viii. What would the water be tested for besides nitrates?
 - g. Mr. Deuger mentioned a well head detection plan which is a system that may identify contaminants weeks before they get to the well.
- IV. How do you prove that private wastewater is contributing to the problem in the lake?
- a. Mr. Deuger said you don't need to prove it. It had already been determined.
 - i. Can this be quantified?
 - ii. How much is caused by private systems and how much is from other sources
 - 1. Mr. Deuger said it will be difficult to determine.
 - iii. Variables
 - 1. When the 80's report was done there was more livestock which are now gone
 - 2. There has been an increase in full time resident's since the 1980's
- V. Next meeting dates April 18 at 7:00pm and May 2 at 7:00pm
- VI. The committee discussed attending a Board of Health meeting to meet with Ira