

# Lake Auburn Watershed Protection Commission

## Special Meeting Minutes

**Wednesday February 13, 2013**

**Location:** City of Lewiston Council Chambers

**Time:** Meeting began at 5:00PM

**Commissioners Present:** Bruce Rioux, John Butler, Dave Jones, Bethel Shields, Dick Thibodeau, Joe Grube, John Bonneau, Bob Thompson, Steve French

Commissioners Absent: none

Commissioner Grube called the meeting to order at 5:00 PM

### **Agenda Item 1: Approve Minutes of Regular Meeting of January 9, 2013**

**Vote 1– Motion by Commissioner Jones and seconded by Commissioner Bonneau to accept the minutes of January 9, 2013, and place on file.**

Passed 9 -0

### **Agenda Item 2: Update on “Swimmability Study” – John Storer**

John Storer informed the Commissioners that a final draft of the “Swimmability Study” is available for review. This study was performed by CEI at the request of the City of Auburn. The study was done to determine the long term feasibility of using the Outlet Beach for swimming.

The City will schedule a workshop to review the results of the report with the Consultants. The report will be available on the Auburn Water and Sewer District Website at [www.AWSD.org](http://www.AWSD.org) under the Lake Auburn Watershed section.

### **Agenda Item 3: Presentation of Phase I Water Quality Diagnostic Study of Lake Auburn and its Watershed**

John Storer, Auburn Water and Sewer Superintendent, and Clerk of the Lake Auburn Watershed Protection Commission, provided a brief history on the current problems facing Lake Auburn. Last Summer, lab personnel noticed some distressed fish. We started to work with the Maine Department of Environmental Protection (MDEP), Inland Fisheries and Wildlife (IFW), Maine

Drinking Water Program, Bates College, and the Volunteer Lake Monitoring Program (VLMP). Early investigation revealed low oxygen levels in the deep part of the Lake, as well as algae issues. Our intake pipe is far removed from this area: however, the lake issues were a big concern for us. We assembled a consultant team of CDM Smith for in-lake issues, and CEI for watershed related issues. Both of these consultants have extensive history with issues around Lake Auburn.

## **Consultant Presentation**

Jim Pescatore provided background and current status of the project. Phase I of the project includes data collection, analysis and findings, diagnostics, and short-term Management Actions. A draft of the Phase I report is nearly complete. An executive Summary was posted today. Phase II will include management options (both watershed and in-Lake), Public Participation, Grants and Permitting, and Reports. The draft of Phase II recommended actions will be done by May 2013. The project will be complete by December 2, 2013.

Rebecca Balke and Ben Lundsted from CEI provided Phase I diagnostics and recommendations from the watershed perspective. They are in the process of developing a water and nutrient budget, and identifying pollution sources in the watershed. Their next steps are to complete a Phase 2 report which will identify short and long term measures, and develop site specific data for the six key areas to construct controls.

Bernadette Kolb from CDM Smith provided in-Lake Phase I diagnostics and recommendations. She reviewed precipitation patterns, water temperature, phosphorus levels, dissolved oxygen readings, sediment samples, Secchi depth, and the algae/turbidity relationship. She concluded that management measures will need to be implemented in both the Lake and the watershed. We will need to implement a revised monitoring program in the lake and tributaries, continue discussions with the Maine DEP about permitting the use of algicides if warranted.

Dr. Ken Wagner provided an overview of management options for Lake Auburn including the use of algicides, dredging, aeration, and phosphorus inactivation by the use of Aluminum compounds.

## **Q&A Session**

Dan Bilodeau: Q. The executive summary recommended regulations to strengthen watershed protection. Do the consultants feel this is necessary in order to maintain the waiver of filtration?

Eileen Pannetier: A. That part of the analysis has not been done yet, but noted they would look at steep slope restrictions.

Dan Bilodeau: Q. In conversation with Eric Cousens, City Planning Coordinator, Dan noted that Eric favored limiting forestry activity on steep slopes to the wintertime when frozen ground could support the machinery. If there are new property owner regulations, are there funding mechanisms for the loss of recreation opportunity? These costs have never been calculated.

Jim Pescatore: A. That has not been looked into yet.

Dan Bilodeau: Q. The Surface Water Act compliance agreement states that recreation and farming are detriment uses. He hopes the continued recreation use of the lake will be considered moving forward. Will there be any new restrictions for recreation or farming?

John Storer: A. Exclusive of the southern 1/3 that is restricted, the lake is open for fishing, boating, a ½ marathon was hosted on the Spring Road. LAWPC has a bad rap for not supporting recreation. In 2007 a study was sponsored to build a trail around the southern part of the lake. Recreation is not necessarily inconsistent with watershed protection. The Commission maintains the boat launch, as well a porta-potty at the launch and at the North end. Doggie bags are provided on the Spring Road so pet owners can clean up. The report, which will be available in a few weeks, does not indicate any loss in recreation. We need to find a way to work with the Farmers on a voluntary basis, and build stakeholder support. Through the hiring of Lynne Richard, we hope to do more education and outreach.

Tim Doughty

He had questions about what happened to the Lake, and what is different now that caused the problem. There was a lot of data from the original report when the waiver was granted.

Jim Pescatore stated that they did not specifically look at the data that was gathered before the waiver. He will consult with the team to see if it warrants consideration.

Tim Doughty: Q. stated that the solution options looked like they would be expensive. Would we try to get the best bang for the buck?

Jim Pescatore:A. They will look for the most cost effective/high impact solutions.

Tim Doughty : It looks like they are looking at the watershed for the majority of the phosphorus loading.

Jim Pescatore: It may look that way, but it is more of a 50/50 between the watershed, and in - lake sources.

Tim Doughty : Q. Are the monitoring wells still at the Gracelawn landfill? Are we sure the flow has not changed?

John Storer: A. Monitoring had been done that indicated groundwater was flowing away from the lake.

Tim Doughty : Stated he was on the original Commission that appropriated money for land purchase to protect the Lake. He feels the data presented is too vague, and wants to know why the lake is turning green, and does not want to lose the waiver.

Jim Pescatore: we are working to get that answer, and what can be done to reduce that. We are currently at Phase I of the Study which is data collection. Phase II of the study will address these questions.

John Storer clarified that we have had seasonal hits of algae, but now the counts are very low due to the winter season. We are not currently having a problem with water quality.

John Storer stated that some people may ask why we don't filter the water. In 2004 we looked at using UV to meet all future drinking water regulations. At that time we considered membrane filtration at a cost of 30-40 Million. This type of filtration would not have been effective at removing algae. We need consistent water quality data to determine the next best step. Our efforts will be on cleaning up the source water to meet the regulations, benefit the fish, and avoid a filtration plant that could double or triple the water rates.

Tim Doughty: Q. Is what happened to the lake cyclical, and does anyone know why this happens?

Jim Pescatore: A. There is some evidence of past algae blooms, but not to the extent we saw in 2011/2012

Tim Doughty – his plumbing fixtures are turning black, and he has never seen this before.

John Storer – when we get these issues in the distribution system we run bleeders, and flush flush hydrants to get fresh water into the system. This tends to happen more on dead end lines where use is not as great.

Tim Doughty : Q. This seems to be a phosphorus issue. Where is it coming from?

Jim Pescatore : A. That is what we are trying to determine.

Tim Doughty: Q. Has IFW been involved in this issue?

Jim Pescatore : A. IFW was a stakeholder in early meetings.

Tim Doughty: Q. Are we funding a fisheries study?

Dave Jones: A. Francis Brautigam from IFW has been involved from the beginning. We are not specifically studying the fisheries, but we hope improving water quality will benefit the fish as well. IFW has monitored the lake and determined that some Lake trout survived the algae blooms. We will work with IFW as a stakeholder.

Jeff McNelly : Q. Executive Director of the Maine Water Utilities Association- Could you elaborate on the oxygen injection system?

Ken Wagner: A. It could be liquid oxygen which works under its own pressure, or pumped air

Dan Bilodeau : Q. Within 800 feet of Lake Auburn there has been a lot of development over the last five years. There has been 1400 gallons/day of septic effluent centralized in the area in deep gravel soils. Is it ideal for this to be located so close to the Lake, and if not, is there some consideration there?

John Storer : A. CEI's nutrient budget covered this.

Rebecca Balke: A. In accordance with EPA guidelines, systems within 300 feet were considered to be potential phosphorus contributors. We consider cumulative effects of several systems.

Bruce Rioux:Q. Are there any quick fixes we could be addressing now to keep phosphorus from entering the watershed?

Ben Lundsted: A. In the Townsend Brook area, there are several things that could be done, and they will be outlined in Phase II.

Bruce Rioux: Q. Will we be getting that information around May 1?

Ben Lundsted: A. Yes

John Storer – After reading the report, he believes a multi- phase approach will be recommended to fix the problem. The first year we may work with permitting entities to approve the use of an algaecide. In subsequent years we may look at a nutrient binder. This will buy us time to address issues in the watershed.

There was an acceptable baseline phosphorus threshold of 10ppb that was exceeded in 2011/2012. We are now looking for reasons why this number has crept up. There are a number of little things that could be contributing. There has been erosion from the North Auburn Road where new culverts were installed. There have been washouts from the roads along Little Wilson Pond as well. There seem to be a lot of little things that have had an accumulative affect. The solution will be a long process.

Dick Thibodeau: Q. We need to reach out to the neighboring communities that share the watershed and include them as stakeholders. Even if we install a filtration plant, we will still need to maintain water quality by protecting the watershed. It seems we have gone from an Oligotrophic to a Mesotrophic Lake. Can this be reversed?

Ken Wagner: A. Yes it can. The surprising thing about this lake is that in the last two years things have gone particularly bad, and it is not typical for a lake to go that bad, that fast. There should be a “smoking gun”, but they have not been able to find it. It could be that phosphorus had built up in the bottom of the lake, in combination with weird weather events have caused it to go over the edge. With an alum treatment we could get three times the detention time of the lake, or about 12 years of benefit. It is still treating the symptom, not the original cause. He feels the excess phosphorus most indicative of an internal load, but the load initially came from the watershed. The question is where or when to apply the pressure to make it better.

John Bonneau: Q. Can the team come up with a recommendation they can all agree with?

Jim Pescatore: A. This is a dynamic and complex situation, but he believes the team can come up with the correct short and long term recommendations. Phase II recommendations will be coming in May, but it will take them until December 2013 to complete their report. It will be important to see what happens to the Lake during the coming summer.

#### **Agenda Item 4: Adjourn Meeting**

**Vote 2 - Motion by Commissioner Shields, and seconded by Commissioner Jones to adjourn the meeting.**

**Passed 9 - 0**

**The meeting was adjourned at 6:55 PM**

A true record, Attest:

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Robert Thompson,  
Secretary of the LAWPC