

*final*

**Minutes of the Environmental Management Council Special Meeting  
December 13, 2012  
Public Meeting on the Proposed Cayuga Lake Modeling Project  
Tompkins County Public Library**

**EMC Voting Members Present (15):** Steven Bissen, Spring Buck, John Dennis, Brian Eden, Kate Engler, Darrick Evensen, Martha Ferger, Emily Hamilton, Jim McGarry, Scott Miller, Steve Nicholson, Carolyn Peterson, Gary Stewart, Lucia Tyler, Ed Wilson

**EMC Voting Member Excused (1):** Pegi Ficken,

**Voting Member Absent (7):** Poney Carpenter, Kenny Christianson, Bill Halton, Katie Kelly, Dan Lamb, Kristine Shaw, Roger Yonkin

**Non-Voting Member Present (1):** Dooley Kiefer

**Staff Present:** Scott Doyle, Kathy Wilsea

**Guest Presenters:** Sharon Anderson (moderator -- Cornell Cooperative Extension), Steve Effler (Upstate Freshwater Institute), John Halfman (Finger Lakes Institute/Hobart & William Smith Colleges), Darby Kiley (Coordinator, Cayuga Lake Watershed Intermunicipal Organization), Jeff Myers (Director, NYS Department of Environmental Conservation Bureau of Water Assessment and Management)

**Water Resources Council Members Present (9):** Sharon Anderson, Roxanna Johnston, Darby Kiley, Jose Lozano, Steve Penningroth, Marjory Rinaldo-Lee, Craig Schutt, Tom Vawter, Linda Wagenet

**Other Guests signed in (31):** Jim Adams, Steve Beyers, Bert Bland, Dave Bouldin, Becky Bowen, Andrew Casler, Rich DePaolo, Jeremy Dietrich, Barbara Eden, Seth Eden, Chris Engler, Herb Engman, Jeff Furst, Fay Gougakis, Walter Hang, Angel Hinickle, Tony Ingraham, Lanny Joyce, Barbara Lifton, Dave Matthews, Pat McNally, Liz Moran, Joe Schwartz, Seth Schweitzer, Ken Smith, Joe Solomon, Katie Stoner, Sue VanPatten, Tom Whitlow, Stephanie Wostowicz, Matt Yarrow

**Call to Order** – The meeting began at 4:03 PM with word of welcome from the Moderator, Sharon Anderson, and background from EMC member Brian Eden. Brian said local interest in the health of Cayuga Lake seems to be limited to ecosystems, but climate change also needs to be discussed in the future. Guest speakers were introduced.

**DEC:** Jeff Myers, Director of the Bureau of Water Assessment and Management for DEC, said his office collects information on all waterbodies. He has been involved in Cayuga Lake issues for the last nine months. He provided a slide show. The reasoning behind the draft permit for Lake Source Cooling is that DEC remains uncertain focusing on LSC will resolve the water quality problems of Cayuga Lake. Water quality impacts predate LSC and phosphorus is increasing lakewide. The reductions of phosphorus from wastewater treatment have not reduced overall levels of phosphorus in the lake. The planned modeling project will address phosphorus on the southern shelf of Cayuga Lake and find out if some is coming from the rest of the lake. The draft SPDES permit is out now, and DEC feels this is the best opportunity to gather data and proceed to Total Maximum Daily Loads (TMDL). TMDL limits will replace the default limits of the SPDES permit. He noted there is currently no phosphorus limit on the LSC discharge.. Cornell must meet TMDL or final phosphorus limits, which may include relocation of the outfall site.

**Upstate Freshwater Institute:** Steve Effler provided background on UFI, which will be conducting the lakewide phosphorus study. UFI is a not-for-profit research organization. The end product will link water quality application to phosphorus, which DEC will use for establishing TMDLs in Phase 3. Dr. Effler described the tasks for UFI and Cornell

University for Phases 1 and 2. UFI will document phosphorus bioavailability, which will be analyzed by a national expert. Sampling sites will be throughout Cayuga Lake, some weekly at the southern end, and some bi-weekly. Some water quality sampling will be at depth and some at the surface. He stressed it is important to use all available data – soluble reactive phosphorus, dissolved phosphorus, total phosphorus, and inorganic forms. The goal is to integrate all into the modeling initiative.

**Finger Lakes Institute:** John Halfman was present as an independent panelist to provide insights from his work in eight of the Finger Lakes. He provided data on his work in the lakes, showing secchi depths, soluble reactive phosphorus records from surface and bottom water collections, and much more in a quick review. He noted Cayuga Lake has many streams into the south end of the lake. Phosphorus levels here have been dropping since reductions were instituted for wastewater treatment. He showed correlation between phosphorus levels and reduced rainfall the last few years.

**Cayuga Lake Watershed Intermunicipal Organization:** Darby Kiley said the IO has a Restoration and Protection Plan (RPP) which is a watershed management plan for the whole lake. This may or may not be useful to DEC, and is based on IO's Watershed Characterization of 2000. The RPP has eleven strategies for action. The biggest project was accomplished, which was establishment of the Floating Classroom. She met today with representatives of the Department of State about funding for an update to the RPP. There are many new issues to address, including updating priorities of the municipalities, but going forward depends of municipal participation. The IO needs to coordinate with regional groups to target the best projects to be addressed.

**Question and Answer Period:** Sharon Anderson reviewed ground rules. Brian Eden noted the open comment period to DEC will end December 19.

Q: Do we know we will have TMDLs? How would they be developed for non-point source (NPS) phosphorus?

A: Jeff Myers: There are well-established ways of setting TMDLs. NPS phosphorus is a large part of the load. The Watershed Modeling Project will show activities on the landscape that contribute to tributaries. Point sources are easier to identify. Non-point sources are more difficult and we need to set reasonable assurances based on research. DEC has experience in this from other watersheds.

A: Steve Effler: A land use phosphorus model is in the study. These have been extremely valuable elsewhere. This will quantitatively assess how much particulate phosphorus is capable of growing algae. Usually the bioavailable percentage of phosphorus is small – 10 to 15%, sometimes 20%.

Q: Didn't UFI have a role in designing Lake Source Cooling? Wasn't a full study wanted then and Cornell refused to do it? Are there examples anywhere else in the world of facilities like LSC?

A: Steve Effler: UFI helped develop the sampling program for LSC.

A: John Halfman: Other locations have shown that when warm water is deposited back into deep water, it will rise to the surface. Maybe the outflow should be moved up the lake, but remain at a shallow depth. He doesn't feel there would be much difference between having the discharge on the shelf or in deep water.

A: Steve Effler: It is not clear the current discharge site is bad. The study will examine whether it needs to be moved. Science first.

A: Jeff Myers: Concerning whether or not a similar facility exists anywhere else, he is not aware of other locations. DEC wants better certainty. They want to have data before they dictate relocation of the outfall. Study may confirm the need to move the outfall, or the need to do more on the land.

Q: Will DEC identify stakeholders to participate in TMDL establishment?

A: Jeff Myers: There are a few steps before that. TMDL is a fairly public process, and we are not at a stakeholder phase yet.

Q: LSC contributes half of phosphorus. Why not do some mitigation now instead of allowing a higher limit temporarily?

A: Jeff Myers: Limits follow a typical process and current policy. To meet the water quality level that is in place, they are based on facility history. LSC is not treating wastewater, it is moving water, and there is currently no limit at LSC.

Q: John Halfman: If giving permit to a coal-fired power plant, would that have TMDL on phosphorus?

A: Jeff Myers: He is not well-versed on that. His office has policies that limit to current discharge.

Q: The modeling is geared to the entire lake. If appropriate, would delineation be done between the south end and the main body of the lake for the purpose of regulations?

A: Jeff Myers: It's unlikely. The reason for the delineation has to do with the stream classifications and the shelf. If the study shows need to change the delineation it is possible, but he does not expect that.

Q: Doesn't the impaired designation extend to Taughannock?

Q: Jeff Myers: He believes segmentation is based on classification, and aligns mostly with the southern shelf. Most in NYS align to stream classifications.

Q: What is the justification for linking the study to the permit renewal?

A: Jeff Myers: This is because of the resources involved. His department has long been interested in establishing TMDL for Cayuga Lake. The study budget is \$2 million. His whole DEC department budget is \$800,000 per year. Cornell University has the resources to do this study.

Q: As part of the plankton study, are any fish experts involved?

A: Steve Effler: Yes, fish experts are involved. But fish studies are not a work element in the water quality monitoring. The majority of water quality models would not explicitly involve fish studies.

Q: Giant circles were used on the map to show sampling sites. Are detailed maps available? Can we include sampling sites in our comments?

A: Steve Effler: We do have specific locations planned, and will work with GPS locations.

A: Jeff Myers: This will be part of public outreach. The Quality Assurance Plan will have sampling program oversight. As data becomes available, it will be available to the public and may be the topic of some conference calls. The TMDL process has a public component. The current public comment period is for the overall permit.

Q: The permit was illegal and violates existing laws. It contained a provision that increased phosphorus would mean amendment to permits, but this was not enforced. TMDL was a high priority in 2004 and sources were never cleaned up. When will TMDL be implemented?

A: Jeff Myers: DEC is enforcing the existing permit, but people have looked at it and disagreed. DEC's General Counsel has examined the issue and is satisfied with the current approach. He screened Cayuga Lake for the 303d Impaired Waterbodies list and wanted TMDL, but DEC doesn't have resources to do it. This study and permit will move DEC toward decisionmaking.

Q: There is a statewide backlog that could take 75 years for creating TMDLs. When will resources be available?

A: Jeff Myers: We recognize the need to get information and activities in place. DEC will develop TMDL based on this model. This permit and model allows us to go forward.

Moderator Sharon Anderson said guest panelists will take walk-up questions, too. The meeting ended at 5:38 PM

Respectfully submitted,  
Kathy Wilsea, Secretary  
Tompkins County Planning Department  
Approved by Council on January 10, 2013