

Attendees: Roxy Johnston, Liz Moran, Bob Johnson, Steve Penningroth, Jim McGarry, Jose Lozano, Bill Foster, Brian Eden, Rich DePaulo, Bert Bland, Dooley Kiefer, Jeff Myers

- **DEC updates**

- TAC group met September 11th, 2013. Jay Bloomfield (DEC) chairs. Other members include Rosella O'Connor from the EPA, John Halfman from FLI, Aaron Ristow from TC SWCD, Richard Yager from USGS and Roxy Johnston (Monitoring Partnership-WRC). Liz Moran (Ecologic), Jim Adams (Cornell University), and Jeff Myers, Krishona Brown and Chandler Rowell (DEC) also participated in the call to provide support.
 - Draft TAC charge was reviewed for comments. Roxy had questions regarding the TMDL focus. She will send suggested language. Jim Adams requested clarification that Cornell's role was to complete the monitoring/modeling effort, not develop a TMDL.
 - A more detailed project review meeting will be held in winter.
- Quality Assurance officer from DEC visited UFI's lab and participated in lake sampling in August. Everything was satisfactory with the work and procedures.
- Solicitation for data relevant to the 303d lists continues through the end of September. Jose submitted his lake data on fecal coliforms. Jeff will combine Steve and Jose's data and review the case for delisting the pathogen impairment. He thinks a good case can be made but stresses the EPA will require a high degree of certainty that there are no possible issues before allowing a delisting.

- **Review of August notes**

- Add information about Jose's PISCES unit: ithacawaters.org
- Correction: Jose provided lake data, not WWTP data, to Jeff Myers for 303d list updates

- **Review Monitoring Data**

- Based on temperature readings, the thermocline did not set up until after July 9th and is already breaking down.
- Specific conductivity is changing with temperature, in general
- Clarity is generally high. The epilimnion shows some decreases as temperatures increase though overall measures remain good. Deeper waters show some lower measures of clarity. One storm event noticeably decreased clarity off Taughannock Creek.
- Chlorophyll numbers were highest, 1-2 ug/L, in the spring in deeper waters. Chl increased to 6-9 ug/L in waters 1-40 m deep. Later in June numbers were fairly uniform from 2-5 ug/L. July average values are 4-6 ug/L in the 10 m of water. August and September values hovered around 4 ug/L from the surface to 15 m of water. Peaks are described above – other portions of the water column typically have 1-2 ug/L chl.

- PAR is measureable throughout the water column most sampling days at shallow locations (south shelf and sites 8 and 9). PAR ranges from 10-40 m in deeper water sampling sites, depending on the sampling date.
- Secchi disc profiles provide similar information as PAR measurements.
- MP and Jeff M. asked lab data be posted to the website as it becomes available. Liz Moran will follow up.

- **Monitoring in 2014 and beyond**
 - The monitoring matrix developed by Ecologic will aid in updating some information.
 - Specific programs from the 2008 Monitoring Program were briefly reviewed.
 - IAWWTP lake monitoring continues
 - Inlet and other monitoring needs added
 - Todd Cowen will be contacted about future plans for the RUSS and ADCP
 - CSI continues to monitor in the Lake and on the south shelf
 - COI monitoring has been suspended but will resume in the lake and streams
 - LSC monitoring has changed from what it was when the Monitoring Plan was developed in 2008. Current LSC monitoring is focused on developing a model for DEC and will end this year. Future LSC sampling locations will be identified to highlight any locations remaining consistent through time.
 - Data regarding comparison of sites 1 and 4 (old LSC) to sites 1.1 and 4.1 (IAWWTF locations) will be found and cataloged for historical purposes. Conclusions will be reviewed, i.e. were sites truly redundant
 - The RIBS program will be added – presuming DEC wants to participate as a formal part of the Monitoring Partnership
 - Floating Classroom monitoring will be added
 - CSLAP was discussed – no monitoring has occurred in Cayuga Lake since 2007. Roxy will talk to Hilary Lambert and Sharon Anderson about previous Network involvement. Jeff Myers indicated that while DEC was still involved in the program, NYSFOLA played the lead role.
 - CSI can now provide bench analysis of chlorophyll samples
 - Bill Foster and Roxy Johnston are interested in calibrating the hydrolab so we can capture accurate chl data on our sampling trips.
 - Bob Johnson (and others) has extensive data on macrophytes in the southern shelf to support the hydrilla eradication effort, that monitoring is expected to continue.
 - *Mysis relicta* is being studied via the current modeling effort.
 - *Diporeia* – It's unknown if anything has been done with this organism, Roxy will follow up with Nelson Hairston
 - *Dressenidae* are being studied much as outlined in the 2008 Monitoring Plan as part of the current modeling effort by Lars Rudstram. Sampling may have occurred in August.

- *Plankton* were studied recently by Nelson Hairston, Roxy will follow up to get results.
 - Fish – it's unknown what studies may have happened regarding fish. Roxy will contact Cliff Kraft. Jeff will contact DEC fisheries.
 - Lamprey eel – Jeff will get information on the planned treatment in Cayuga Lake
 - New – a paleolimnological study is planned as part of the modeling effort. EPA is providing funding, Chandler Rowell of DEC is overseeing the work. Jeff will provide a summary to the Partnership.
 - Review of the 2008 plan will resume in October at *Sediment Transport, Stream Monitoring and Outreach*.
 - Members were asked to review parameters listed in the table titled *Monitoring Schedule* and provide comments on those that should stay, go or be added.
 - *Toxics* was highlighted as vague - discussion followed regarding bench tests and various options with costs and time +/-'s. Jose and Steve specifically discussed ELISA tests that may be available.
 - Jose mentioned that endocrine disruptors and pharmaceuticals in the wastewater stream will be studied next year.
 - Water plants were suggested as partners in monitoring data. Roxy discussed the limitations of that data set but will review required monitoring data and also what extra monitoring data may be available from the 3 large surface water plants in the area.
 - Members were asked if hydrilla should be added as a specific item or be part of *Macrophytes*. Also, Invasive species are not specifically highlighted in the 2008 plan.
- **Sharng WQ Data with the Public**
 - Michael Smith, professor of *History of American Environmental Thought* at IC was suggested as a possible narrator for carrying the message of science and history of the lake to the public.
 - CSI has suggested a forum with sessions focusing on specific aspects of lake history/science followed by a summary meeting that includes a brief review of the individual topics and then provides a panel of lake advocates/researchers/managers for discussion and public questions. Focuses include history, regulations, phosphorus and TMDL's.
 - Concern was raised that this format would not engage a new set of the public, or a broad set of public.
 - Fisherman, restaurateurs and winery owners were suggested as target audiences
 - Jose – most talk focuses on the lake front, we need to talk about the watershed highlighting goals, uses, lake connections and the cost of achieving our goals
 - Bert – there should be more focus on macrophytes. The phosphorus entering the lake is largely bound to sediment and is contributing to macrophyte growth. The public's perception is that water column phosphorus numbers are high and causes algae blooms. There is a disconnect.

- Bob agrees with the need for a focus on macrophytes. He is beginning to think that if hydrilla is not stopped – it will be 5 years to the closure of the Inlet and 10 for complete closure of the shallow southern basin of the lake.

Q: Bert - Is hydrilla worse than Milfoil?

A: Bob – Yes. Milfoil fills a canopy and does not produce tubers. It does not build a seed bank to out compete other natives and does not fill all growing space. Hydrilla does both. Hydrilla will not eventually become a part of the macrophyte assemblage but will fill the basin from sediment to surface. Whether it grows an inch or a foot a day, that is a LOT of mass. It does not need much light to thrive. It will create impassable waters and poor, if not toxic, water quality situations when present in mass. California is still battling a Clear Lake infestation, a lake with the same surface area as Cayuga so it is not unreasonable to consider the lake treatable. Bob is getting some pushback that we've passed the point of eradication and should focus on management. An article in the local paper today suggested the same thing – it also suggested biocontrols. Those are not available for hydrilla now or anytime in the near future. Carp are not a viable option as they would create another type of environmental disaster and the costs and time lines involved are not better than herbicides. Management is permanent and quickly becomes more expensive than any eradication effort.

- **Adjourn**