

**Lake Champlain Basin Program
Technical Advisory Committee Meeting
Wednesday, March 2, 2011
10:00 AM – 3:00 PM**

Final Meeting Summary

I. Updates and Announcements

- a. A Consortium of Universities (Concordia, UQAM and UQAR) has received a grant from Ouranos "Consortium on Regional Climatology and Adaptation to Climate Change" to develop a River Management Approach for the Rock River and 2 other rivers in QC in the context of climate change. For more info on Ouranos, see this website: <http://www.ouranos.ca/en/>. Also, McGill University applied for a Ouranos's grant to evaluate the impact of climate change in the Pike River Watershed Agriculture in the context P reduction in Missisquoi Bay.
- b. Julie Moore has left Clean and Clear to work at Stone Environmental. Clean & Clear has been renamed to the Ecosystem Restoration Program, to more accurately reflect the charges for this program. It has been moved from the DEC Commissioner's office to be integrated into the Water Quality Division. Julie Moore's position will be re-filled, but maybe not with the exact same function that Julie served. Position will be open to internal and external applicants. ERP budget is proposed to be increased by \$2.5 million. DEC may refill some of these C&C positions that were lost over the years as the re-evaluation of the program nears completion. ERP will continue to focus on all of Vermont, not just Lake Champlain.
- c. TAC officially thanks Julie for her long and positive service to LCBP and the Lake Champlain Basin. Breck will send a letter to Julie from TAC with those thanks.
- d. VT DEC Surface Water Quality Management Strategy – newly released basin planning process with a streamlined tactical approach. New basin plans are implementation, action-oriented documents. These will be the vehicles through which we funnel the Lake Champlain and other lake TMDLs in Vermont.
- e. VT house has passed legislation that restricts P and N in non-agriculture fertilizers. Moves on to Senate next.
- f. VT AAFM has hired a second Deputy Secretary – Jolinda LaClair. One of the Deputy Secretaries (Diane Bothfeld is the other) will likely participate in LCBP Executive Committee meetings and Chuck Ross (AAFM Secretary) will participate in Steering Committee meetings.
- g. WASCoBs – VT AAFM funded project (will be funded through LCBP later this year) – field sites have been identified, changes in wetland rules in VT may require some extra work to ensure the WASCoBs can be permitted. Working with VT DEC Wetlands and US Army Corps on this.
- h. VT AAFM grants are out for livestock exclusion projects. Implementation should occur over this summer.
- i. NRCS – VT may have a sizeable amount of money to accelerate practice implementation in VT. May amount to an additional 6-7 technical staff for a 2-3 year period. Final approval is still pending. Will require a 25% State partner match. Will hopefully help NRCS-VT address existing backlogs and allow them to solicit for higher levels of project funding.

- j. Kip recently testified at the VT Senate Agriculture Committee. He was asked to explain why the water quality of Lake Champlain has not improved yet, and why we should continue monitoring if no improvements are happening. Kip explained to them why monitoring is so important to the management program. Kip suggests that we should have a document that we can provide to the legislative committees (and others) explaining why monitoring is so important.
- k. Seminar at Middlebury College, April 8 on North Atlantic Landscape Conservation Cooperative, part of a suite of national LCCs. Andrew Milliken, Coordinator, is going to speak about the Cooperative. Ecosystem Team will coordinate a follow-up discussion to talk about climate change research in the Basin. Current projects include identification of umbrella species and application of sustainable landscape models. The LCC is also downscaling the climate change project to examine effects of climate change on hydrology & salmonids. These projects will be complete in next year and will include Vermont.
- l. VT Water Center has been zeroed out of the USGS budget, and may not be put back in.

II. Summary of Previous TAC Meeting

- a. Review and approval of minutes from January 5th TAC meeting.
- b. Motion by Neil, Second by Vic all in favor as amended.

III. Lake Champlain Basin Program Update, *Eric Howe*

- a. Steering Committee meeting, Jan 20-21. Slightly revised the TAC prioritized project list. Also awarded grants to SUNY Plattsburgh for the bass dispersal project and to BioDiversity Research Institute for mercury & PCB assessment in fish.
- b. FY11 budget is still looking thin – LCBP staff are working with VT ANR, NYS DEC staff to slim down the LTMP to ensure there is funding to cover all critical aspects of this project.
- c. TMDL – LCBP is working with EPA, VT to determine what role LCBP will play in the TMDL revision process.
- d. Love the Lake Champlain Basin Program – schedule is out, see LCBP website for remaining speakers.
- e. State of the Lake Champlain Basin Program – goal is to publish by the end of 2011; further discussion later in agenda.
- f. Recent grant awards - workplans to be reviewed by TAC in April
 - i. Littoral Habitat Assessment – awarded to Fitzgerald Environmental Associates (\$114,985)
 - ii. AOP – awarded to Ausable River Association (\$46,910) and to the Missisquoi River Basin Association (\$17,450)

IV. Technical Presentation: *LimnoTech, Inc.*

- a. The LimnoTech group provided an update on their internal phosphorus loading project in Missisquoi Bay, scheduled for completion in September 2011.
- b. Steve Kramer, Director of Lab Studies at Miner Institute provided overview of the field data collection component of the Missisquoi Bay internal phosphorus cycling project.
- c. Ed Verhamme, LimnoTech, provided an update of the modeling effort using the data collected by the Miner Institute group.

- d. Concerns from TAC
 - i. LimnoTech should address how they are incorporating under ice/winter conditions & dynamics into the model. Currently planning to simulate zero exchange with the atmosphere in water quality model. TAC suggested that they probably develop a time series dataset. Could sample under the ice to at least get an idea of the conditions under there. Could then drive model by observations of ice cover period in system. May be able to obtain data from winter turtle sampling – 5 year dataset, and other research projects. Neil will check into the availability of the VT DEC crew to collect some data profiles.

V. State of the Lake 2011

- a. TAC will discuss an approach to the 2011 revision of the State of the Lake report for Lake Champlain
- b. Eric H will remind TAC to send feedback on their favorite sections by end of March, and set up working groups at a future TAC meeting
 - i. Extract key ideas from this discussion and circulate ahead of time.

What to keep:

- Ecosystem indicator dots – centerfold

What to improve:

- improvements in lake segments, tributary monitoring data
- How the public can do their part – add this to each section of the report (currently only in AIS)
- Clearly explain why monitoring is so important
 - Pressures are still increasing, but WQ is not deteriorating (as rapidly, at least)
- P. 4 figure – consider thumbs up or down approach?
 - Need to address scaling on y-axis of these figures
- Fig 6 – indicate how much P per acre from different land uses (see Troy et al report)
- Emphasize that new information is continually becoming available; direct readers to the appropriate weblinks to find this information

What to add:

- New USGS trib loading analyses
- Consider inclusion of special studies – i.e. CSA, Rock River, LimnoTech
- Population trends, land use change trends, identify changing pressures in Basin
 - Illustrate how people use the Lake – potable water supply, supply for ag, industry, other pressures
- Comparison of state of Lake Champlain to other lakes in the country, continent, world(?)
- Remember that this is also state of the “watershed”, not just the lake. Expand SOL webpage to include links to available data

- Illustrate how much P is imported into and exported out of the Basin – include table of what these imports are (food, detergents, fertilizer imports, manure exports). See Cassell report from 1990s.
- Road sand P concentrations
- Comparison of lake acres not meeting recreational vs. aquatic life use standards
- Explanation of seiche effects on mixing
- WWTP
 - many need upgrading, expensive to do this. Identify specific WWTPs.
 - Steady state impacts – see Chesapeake Bay report – capital costs for repairs, operational costs for maintenance
 - Create map with WWTPs, indicate when built, design lifetime
- Suggest looking at 3 sectors – ag, WW, stormwater – develop example for each sector – pick a WWTP that shows cost to upgrade, maintain, etc. then pick a farm.
 - If a chart or list indicating how much investment has been made over some period of time, also provide a corresponding indication of unmet need in each of these areas. Illustrate what has been done and what still needs to be done to meet identified needs.
 - Check with South Burlington costs. Need to make sure that people understand they have to pay for the WW and stormwater for long-term
- Map indicating where funding has been spent – can be for all organizations, LCBP Steering Cmte groups, LCBP only?
- Suggest releasing this report in 2012, after most of the FY10 research & implementation projects are complete, or nearly complete
- Reformatting SOL – have one page focusing on each lake section and the issues within it?
- Adaptive management workgroup information

What to remove:

No comments.

VI. Adaptive Management Workgroup – Phosphorus update

- a. Philip Halteman (*UVM/LCBP*) will provide a brief progress report on the Adaptive Management workgroup.
 - i. Provided an overview of the goals of the AM group, brief explanation of the indicators. Indicators are currently Vermont-specific; Philip will be working with NY & QC partners to expand this list to better incorporate information from these sectors.
 - ii. Philip explained where the project is now and what the next steps are. – develop decision making framework, acceptable levels, expected reductions & hypotheses
 - iii. Will ideally have the indicators in place in time for FY12 recommendations
 - iv. Comments:

1. Need to document reductions from actions. Huge challenges to put numbers on some of these indicators.
2. Might be easier to say that the opportunity is high, medium, low vs specific metric tons. i.e. percentage of facilities meeting TMDL threshold is a high opportunity.
3. Need to make sure that the indicators, monitoring, and historical information are communicating. Is adaptive management too slow to respond to implementation projects? Modeling efforts need to be incorporated as well.
4. TAC should have a more extensive opportunity to discuss the current AM plan.
5. Consider inviting Jim Nichols to an AM workshop
6. The adaptive management time scale is a fundamental question – if this is the way to do it, and there is a 15 year wait, how do justify the lag times to the public, and will we ever be able to answer the management question?
7. There are lots of examples where we've planned and implemented and then never looked to see if the implementing worked to know if the project made a difference. Need to be able to come back somehow and say if the plan did or did not work.

VII. FY10 Workplan approvals

- a. TAC comments on the SUNY Plattsburgh bass dispersal & survival study
 - i. Consider reducing the time period for the telemetry monitoring component to increase number of tags that you can use
 - ii. Should work with VT F&W on the tournaments
 - iii. Recommend focusing on late-July or August tournaments, as these are the tournaments that are most likely to see the highest-stressed fish due to the high surface water temperatures.
 - iv. Also suggest collecting spines and scales from the fish, as the scales will be very difficult to interpret given the age of the fish (8+ years) that you will likely be handling.
 - b. Motion: Neil , Doug second. would recommend approving the SUNY work plan after addressing the comments above, unanimous approval, Mark and Fred abstain.
 - c. BioDiversity Institute mercury & PCB fish assessment study
 - d. Motion to approve pending amendments as noted below by Bernie, second by Mark, all in favor, no abstentions.
- Project locations on Page 2 should be clarified – St. Albans corrected from “St. Albany”; definition of HUC 10 watersheds is confusing. Please delete references to the HUC 10 watersheds, as these are no longer widely used (have been replaced by HUC12). Identifying the lake segment by name and referencing the map that will be provided to the anglers is sufficient.
 - Clarify that precision of measurements is adequate, particularly due to the likelihood of desiccation. The methods indicated on Page 17 of the workplan indicate that the plug and tube will be weighed to the nearest mg. Should be able to obtain a greater level of precision than 1 mg. Also, please ensure that the concentration is related back to the original wet weight of the sample.

- Letter to LCI participants: omit reference to Wilcox Dock in your materials and simply state that you are collecting fish samples to evaluate changes in fish PCB contamination
- Please use LKT for lake trout, not LTR, as LKT is the standard shorthand used for lake trout in the northeast.

VIII. Discussion of TAC operations

a. Tabled

TAC: Vic Putman, Fred Dunlap, Mark Malchoff, Doug Facey, Martin Mimeault, Bill Ardren, Bernie Pientka, Jamie Shanley, Neil Kamman, Mike Winslow, Laura DiPietro, Kip Potter, Breck Bowden, John Kanoza

Public: Miner Institute staff: Eric Young, Steve Kramer, Laura Klaiber, Lisa Klaiber; Bob Brower (NYS AG & Markets), Wayne LaRoche (LCI), Drew Snell (CWICNY), David Borthwick-Leslie (public)

LCBP Staff: Eric Howe, Nicole Grohoski, Meg Modley