

Lake Champlain Basin Program
Technical Advisory Committee Meeting
Wednesday May 4th, 2016
10:00 AM – 3:00 PM
LCBP Conference Room, Gordon Center House, Grand Isle, VT

TAC Meeting Summary

I. Updates and Announcements

- a. Mark Malchoff, SeaGrant- SeaGrant is working through several proposals – one for renewal of current program status, second for application for Institute status. Will be holding strategic planning meetings for this later this month.
- b. Kip Potter, NRCS VT – The 2016 Edge of Field (EOF) monitoring program. \$2 million nationwide for this. New targeted watersheds are East Creek (Champlain Basin) and Black River in the Memphremagog watershed for advanced planning by NRCS.
- c. Martin Mimeault, MDDELCC – MDDELCC will be participating in May 11 RACC workshop, including OURANOS. Tree planting & shrubs 1,180 trees & 660 shrubs along Richelieu in Notre-Dame de Stanbridge and Pike River, will serve as demonstration as streambank protection for climate change resilience. Richard Lauzier green buffers program will be taken over by the watershed groups along Rock River, approx. 33 km of protected banks.
- d. Vermont EPSCoR was awarded an NSF grant as Phase 2 of the RACC project, called “Basin Resilience to Extreme Events”, for \$20 million over the next 5 years.
- e. Bernie Pientka, VT FWD– VT FWD is in the final stages of F&W omnibus bill – contains language clarifying fishing language, including authority of F&W pertaining to identifying which species can be sold commercially.
- f. Eric Perkins, EPA Region I – Lake Champlain TMDL anticipated for release later this month.
- g. Laura Pietro, VAAFm – RAPs have been filed with ICAR (Interagency Committee on Agency Rules) for consideration.
- h. Breck Bowden, UVM – Anna Morales Williams, from Iowa State, was hired into the limnology faculty position, to start at Rubenstein School in 2017. Her partner, Chad Williams is also a limnologist and will accompany Anna to the Rubenstein School.
- i. Angela Shambaugh, VT DEC – There is a small budget shortfall for the VT DEC funded gages this year. DEC is looking to find ways to cover this gap. Will likely discontinue the lake level gage on Lake Bomoseen. There is a new gage to be installed in St Albans on Stevens Brook as part of the MS4 requirement. This may make the downstream St. Albans gage redundant. Proposing to fund the shortfall for funding on this gage with extra LTMP funds this year, from the reduction in Winkler DO samples. The current gage captures a small amount of agricultural land; the new gage will be sited to capture runoff from the city for MS4 monitoring purposes. The LTMP water quality sampling site will remain at the same location. There should be some further discussion of a TAC subcommittee to review the gage network, particularly in the St Albans network. Eric will coordinate this meeting over the summer.

- i. Volunteers for the subcommittee: Mike W, Neil, Angela, Kip, Laura D/Maria Steyaart, Eric Perkins.

II. Summary of Previous TAC Meeting

- a. TAC reviewed the minutes from the April 6th TAC meeting.
- b. Angela moved to approved as submitted, Martin second. All in favor. No abstentions.

III. LCBP updates, *Bill Howland, LCBP*

- a. Bill provided updates on LCBP activities since the last meeting:
- b. The LCBP Steering Committee met in April at Valcour in NY. Discussed the process for the Director search as well as OFA. Shared draft of the FY16 budget. Still in negotiation with EPA and GLFC for contracting.
- c. May 10 Executive Committee meeting will be rescheduled or canceled due to conflicts that day.

IV. Workplan Review, Human and ecosystem health risks of mercury and cyanotoxins in Lake Champlain, *Mark Swinton, Darrin Fresh Water Institute*

- a. Mark reviewed their workplan, and plans to have DFWI staff at the busiest weigh-in stations; LCI has some well-qualified Derby captains at several stations who they are confident can do this competently. DFWI staff will be on-site at the other busiest locations. DFWI staff plan to collect fish during several LCI derbies – Father’s Day and another one in Missisquoi Bay in September for mercury and cyanotoxin analyses. They will be working with Angela and the LTMP monitoring crews to collect water samples for cyanotoxin analysis.
- b. TAC provided feedback for workplan, including species selection for mercury analyses, to clearly state the study objective, and suggested adding a table with list of species and lake segments to be studied, sanitation of gear for AIS.
- c. Motion to approve as amended by Mark, second by Bernie. All in favor. No abstentions.

V. Project Update, Edge of Field Monitoring, *Julie Moore and Don Meals, Stone Environmental*

- a. Julie and Don provided TAC with an update on the past year of work on the Edge of Field Monitoring project. They reviewed the previous four sites as well as the fifth new site located in Charlotte, VT which is now online. The monitoring strategy is designed to produce representative samples from runoff events at each of the field sites. More than 90% of P and N coming off the fields in Charlotte is dissolved, and nearly all TDP is SRP. There are very good regressions in Charlotte between the control and treatment sites for flow, P and sediment. WASCoB results – this project came offline last fall. Initially there were notable increases in P concentration for most analytes, then there was a decrease over time.
- b. For the rest of the sites, all sites except Shoreham were transitioned from calibration to experimental phase between Fall 2013/Spring 2014. Shoreham calibration still required more time to develop a more robust dataset for calibration. This site and Williston are now being operated by Josh Faulkner at UVM.
- c. Response to analysis – used ANCOVA to test for differences in slopes and intercepts between control and treatment sites.
- d. Discussion –
 - i. WASCoB – no evidence of beneficial effect of WASCoB, but challenges measuring flow at these sites due to environmental conditions. Observed

performance substantially lower than literature reports; WASCoB size is smaller than recommended for watershed size. May also require a “grow-in period” for plants along sides of WASCoB to become established before there is a real benefit from this practice.

- ii. Conservation tillage – Franklin – long-term treatment, so study period of 2 years of treatment data may be insufficient to see real benefits from this practice
- iii. Cover Crop – appears to have little beneficial effect on sediment or nutrient losses, possibly because of poor germination rates. Suggested rolling seed after application. This resulted in much better germination.
- iv. Soil aeration did not reduce volume of runoff (it is supposed to do this), with mixed results for other parameters. This practice is typically conducted immediately after hay removal, but did not typically receive rainfall after this occurred, so ground was very dry.
- v. If continuing EOF, we should have a discussion about strategy and types of practices that are monitored. One challenge is the sign up process and which farms volunteer, and then whether they follow up with their enthusiasm. Might be better to use “discovery farm” model rather than working with private landowners or to focus on certain practices that can show benefit within time period available for the project (3-5 years) rather than practices like conservation tillage that require longer time period. Experimental design that relies less on variable weather patterns (e.g. 2014 and 2015 were dry summers)
- vi. Results are unexpected, and some of the numbers you’re seeing are real, and what happens if the patterns continue? How will these results be used to inform management decisions? Need to really think about how these practices are being installed – are they the right practice for the right location, the right size for the location/field/study area?
- vii. Motion to approve with amendments including the summary table by Breck, second by Eric Young. All in favor. Mike Winslow abstained.

VI. Workplan Review, 2016 Blue-Green Algae Monitoring, *Angela Shambaugh, VT DEC*

- a. Angela reviewed the Vermont DEC/DOH workplan for the 2016 season of the Blue-Green Algae Monitoring Project and their 2015 field season report for TAC feedback.
- b. In 2015, VTDOH included new online data entry system so that information was more readily available to the public
- c. Monitoring began June 13 and ended in September, 2015.
- d. Continued visual monitoring protocol on shore that has been in use for the past few years; LTM sites also use BGA counting protocol in addition to visual assessment and 5-tier alert protocol.
- e. Nearly 1,800 volunteer reports submitted in 2015. Most reports are safe (many high alerts continue to be in Missisquoi, St Albans and also Lake Carmi). Main lake has sporadic blooms in July, but sustained blooms occur in St Albans/Missisquoi in late August. Lake Carmi blooms in October.
- f. Routine toxin samples collected at LTM and select LCC volunteer sites. Test for microcystin, anatoxin and cylindrospermopsin. Only microcystin found.
- g. New last year was public drinking water testing- VT DOH offered testing at no cost. 22 public facilities participated. Over 500 samples run for toxins. There were 3 low detections of microcystin in raw water (prior to treatment). When samples were re-run,

no toxin was detected. Emergency response plan in place now for public drinking water facilities.

- h. Online tracking map got 32,000 hits last year on main page. Map itself got over 9k hits.
- i. Discussion-
 - i.* TAC discussed some bias in alert reporting statistics, as there have been a lot more reports in recent years, so it could appear to have more alerts based on more reporting.
 - ii.* Same protocols will be used in 2016. VT DOH will continue most sampling and drinking water testing will continue. LTM monitoring begins first week of June and volunteers scheduled to start June 12.
 - iii.* TAC suggested installing a camera at a site to understand day-to-day bloom changes.
 - iv.* Mike said there was limited coverage in south lake and Malletts Bay. NY has fewer volunteers, but are evenly spaced geographically. Martin will try to get QC volunteers involved.
 - v.* Questions about Lake Erie satellite imagery and updates coming to VT (East coast). New joint efforts on Great Lakes led by NASA, USGS, NOAA.
 - vi.* New guidance from EPA for drinking water toxin levels (0.16 microcystin- at test limit). No anatoxin guidance yet because there is not enough information. Believed to have caused dog deaths in past years in LC.
- j. Motion to approve workplan by Jenn, second by Breck. Abstentions: Fred, Angela and Mike. Workplan same as 2015 except removal of 3 stations.

VII. Water Chestnut Management

- a. Ann Bove reviewed the hand harvesting work for 2015 and the workplan for 2016. Found no additional sites in Lake Champlain. Work expected to continue as from previous years. Will plan on increasing some hand harvesting in areas with larger than expected infestations. Changes also reflect TNC ending their role in this work (2015 was last year of TNC involvement). Will pick up this loss by recruiting volunteers, etc.
- b. Martin will share Quebec data for inclusion in 2015 report.
- c. There is a separate report that includes hand and mechanical harvesting (this report only summarizes hand harvesting due to scope of LCBP funding).
- d. Motion to approve by Ed, second by Martin. All in favor. Angela abstained.

VIII. Opportunities for Action 2016 planning

- a. Eric reviewed feedback from various LCBP committees on the draft management plan.
- b. Eric thanked TAC for feedback and passed around summary and draft of clean water section for the new OFA.
- c. Some performance measure tracking still needs to be built into plan (called for by Steering Committee). Will continue working with partners to include links to current management plans. Possibly will include priority watersheds (which has never before been a part of the plan and may affect budget process).
- d. Tables of OFA chapters are transitioning into Word Doc to make it easier to read.
- e. Breck suggested that “outcome tracking” may be confused with objectives achieved. it is easier to achieve outputs than outcomes, so metrics tied to outcomes are more desirable. Distinguishing between outcome and output. Change to “Objective”?
- f. Suggested to look at other management plans at future TAC meeting.

- g. Eric will incorporate TAC comments (some were sent via email) into new OFA draft and will circulate at end of next week. Steering Committee will sign off on plan in June, and it will be sent out for comment. Hope to finalize in Oct/Nov 2016.

IX. 3:00 PM Adjourn

Attendance:

TAC: Mike Winslow, Jamie Shanley, Eric Perkins, Kip Potter, Bernie Pientka, Ed Snizek, Mark Malchoff, Fred Dunlap, Eric Young, Angela Shambaugh, Jenn Callahan, Martin Mimeault (Phone: Bob Brower), Breck Bowden, Laura DiPietro, Kevin Farrington, Bill Ardren

LCBP Staff: Eric Howe, Bill Howland, Stephanie Castle, Bethany Sargent (LCBP/VT ANR)

Guests: Mark Swinton, Sandra Nierzwicki-Bauer (RPI Darrin Fresh Water Institute), Heather Campbell (VT GWDWD), Sarah Vose (VTDOH), Julie Moore and Dave Meals (Stone Environmental)