

**Lake Champlain Basin Program
Technical Advisory Committee meeting
Wednesday, September 5, 2018, 9:30 AM – 3:00 PM**

Approved TAC meeting summary

Attendees: Bill Ardren, Eric Perkins, Bryan Dore, Fred Dunlap, Mark Malchoff, Jennifer Callahan, Curt Gervich, Andrew Schroth, Leigh Walrath, Ryan Davies, Bernie Pientka, Neil Kamman, Angela Shambaugh, Laura DiPietro, Mario Paula, Breck Bowden, James Jutras

Staff: Ellen Kujawa, Matthew Vaughan, Eric Howe, Jane Ceraso (NEIWPC), Bethany Sargent (LCBP/VTDEC)

Guests: Marli Rupe (VTDEC), Jordan Geller (VTDEC)

9:30 AM Updates, announcements, and public comments

- Eric Perkins: Bryan Dore has started as the EPA Region 1 Lake Champlain Coordinator. Welcome Bryan!
- Mark: Lake Champlain Sea Grant has an open RFP. Applications are due October 19th. Matt will circulate this RFP to TAC. There is another site review coming up this winter.
- Curt Gervich: Several IJC LCRR meetings are coming up. The next Technical Working Group workshop is October 10-12, and there are three public forums November 7-9.
- Andrew Schroth: New EPSCoR lake modeler Clelia Marti has started, and will be working on Missisquoi Bay. On September 17th, Rick Stumpf from NOAA will be visiting to talk about remote sensing of cyanobacteria blooms and bloom early warning systems on Lake Erie.
- Bernie: Bass fishing is now an official high school sport in Vermont, and the first tournaments will be held this fall. Fifteen schools are participating, and the NH program will be used as a model.
- Neil: The first 2019 ecosystem restoration grants have been awarded. There have been several others issued (river corridors, Lake Carmi ACAP program, municipal roads general permit block in aid). VTDEC staff will be meeting with LCBP staff to determine phosphorus reduction of individual projects. Act 185 has been passed by the VT legislature, which means that private entities can now apply for the state revolving wastewater fund at a slightly higher rate. As a result, municipalities can also get a more advantageous interest rate. Winooski Tactical Basin Plan should be approved later this year. The state has completed a management plan for the St. Albans Black Creek Marsh USACE Section 542 plan.
- Angela: The final report for the second phase of the Lake Carmi project (aeration design) is complete. The consultants support using aeration from a bottom line. Next phase is implementation, and this RFP will likely be released in the next two weeks. Construction is set to start in spring 2019.
- Bill Ardren: USFWS and NYSDEC will begin sea lamprey treatments in New York this fall, likely beginning with the Boquet River next week.
- Laura DiPietro: Two new staff were recently hired. Released nutrient management RFP and plan to select a contractor this fall/winter.
- Bethany Sargent: Vermont CAC is finalizing meetings to review the 2018 State of the Lake in St. Albans, Burlington, and Rutland, later this fall.
- Breck: Award to fund LCSG Institute has come in and will last four years. We will run an RFP this year and next, and every other year after that.

Review and approve summary of previous TAC meeting

Neil moves to approve the June meeting summary with minor edits mentioned. Jenn Callahan seconds. All in favor, none opposed. Motion is carried.

LCBP updates, 2018-2019 TAC schedule, *LCBP staff*

- LCBP is excited to work with Bryan Dore in his new role.
- The 2018 State of the Lake report was published in June.
- IJC water quality project is underway. Thank you for serving as a review committee for this project.
- The Lake Champlain Atlas is now live on our website.
- The high-resolution Lake Champlain Basin Land Cover mapping products are now available upon request.
- LCBP Boat Launch Steward program is wrapping up now.
- Rock River RFP is currently available and closes on September 19th.
- The following final reports were approved by subcommittee over this summer: Land cover mapping project, Mercury and Cyanotoxins in Fish Tissue, and Jewett Brook Treatment Train Phase 1, Wastewater Treatment Facility Asset Management Plans
- Bill Howland will be awarded the EPA Region 1 Lifetime Achievement Environmental Merit Award next week.
- NALMS 2019 will be held in Burlington and LCBP will be serving in planning roles.
- Vermont Phosphorus Innovation Challenge is currently underway to connect people in the business community with new phosphorus reduction projects; committee will hear project proposals next week and will advance a subset to a pilot phase.
- We are fortunate to have support for this program from the congressional delegation; the FY19 funding has not been passed yet, but LCBP's funding will likely remain level and may increase to our full \$11 million EPA appropriation. GLFC funding is still under debate but hope that it will remain similar to previous appropriations.
- A workshop was held on July 24 to discuss contaminant management in the Lake Champlain Basin. We hope that collaboration and new projects may result from this meeting. Jason Stockwell and LCBP will be working to put together a contaminant management project based on the Great Lakes CSMI project.
- We will be holding a Long-term Monitoring Program workshop to evaluate the program and consider new technologies on October 9. Please let Matt know if you are interested in attending.
- TAC members have been provided with a rough 2018-2019 schedule. In general, meetings are held on the first Wednesday of the month, except for January. Between November and December, TAC members will be asked to review pre-proposals for the FY19 budget cycle. Those that are advanced to full proposals will be reviewed by the TAC in March.

Update on VTDEC/LCBP RFPs, *Bethany Sargent (VTDEC, LCBP)*

Bethany provided an update on VTDEC/LCBP collaboration RFPs, which are all focused on reducing phosphorus inputs in the watershed.

10:10 Executive Session: Review Agricultural BMP Challenge RFP, *Marli Rupe (VTDEC)*

Angela Shambaugh moves to go into executive session, James Jutras seconds.

Bill declared the TAC out of executive session. Breck moves to approve the RFP with suggested edits as discussed; James seconds. Motion is passed. Angela, Neil, Laura abstain.

10:30 FY19 LCBP core project review

Matt provided an overview of the LCBP core projects: Long-term Monitoring Program, Enhanced BMP grants, AIS Rapid Response funds, Boat Launch Stewards, Cyanobacteria Volunteer Monitoring Program, and Water Chestnut Management

- Long-term Monitoring: No major changes. Fifteen lake stations, plus tributaries and cyanobacteria monitoring and zebra mussel veligers. Rock River BMP study is also included in this budget.
- Enhanced BMP: No major changes from last year.
 - Breck: This is a very important category, suggest at the very least keeping it level and perhaps increasing the funding if total LCBP budget increases as well.
 - James: Is there any required match? Could we add one to stretch funding further?
 - Eric: EPA requires match and the state of Vermont provides that; we are not able to require additional match.
 - Bethany: Was this category run in FY18?
 - Matt: Yes – number was not finalized yet, but the RFP will be released in mid-September.
- AIS rapid response funds: goal is \$150,000; any unused funds are rolled into the boat launch steward program.
- Boat launch steward program: \$170,000; a portion of these funds go to OBVBM to support two stewards in QC.
- Cyanobacteria monitoring: Increase in proposed budget to \$80,000, due to longer monitoring season and more educational materials.
 - Angela: The cyanobacteria monitoring program typically runs from Memorial to Labor Day, but we find that fall blooms are becoming increasingly common. Last year, LCC did significant end-of-the-season outreach and volunteer coordinator; VT state parks is picking up this slack this year.
 - Andrew: Seems to me that the program starts very early.
 - Angela: LCC is mostly doing training in the early part of the season.
 - Bernie: There's little mention of New York in this workplan; suggest adding discussion of NY volunteer monitors in the workplan.
 - TAC requests additional justification of budget increase.
- VT Water chestnut management:
 - Breck: What is the cost of the drone component?
 - Bethany: \$15,000. This season the resources went toward determining how best to utilize this tool; next field season, they plan to begin documenting success of mechanical harvesting and prioritizing hand harvesting sites.
- Wastewater treatment optimization: support to evaluate existing WWTF processes and implement processes to decrease phosphorus loads.
 - Breck: Are we preferencing projects proposed by the state? That's what it seems from the movement of this project from pre-proposals to core projects.
 - James: Agree with your point. EPA has mentioned that they will consider permitting at current reduced loads.
 - Bethany: DEC's in both VT and NY have agreed that they are in favor of this project.

- Bernie: is \$260,000 the total budget for three years, or the annual budget times 3?
 - **Note:** The answer TAC received in error was that this was the annual budget times three. However, this amount is intended to fund one year, and a commitment of three years is requested (total \$780,000).
- Mark suggests adding microplastic management to the project goals.
- The TAC discussed the process for reviewing state-sponsored projects.
- **Angela suggested forming a sub-committee to discuss this further.** Matt will follow up with TAC members to form this sub-committee.
- Breck: Motion to advance all projects except wastewater treatment optimization to the Executive Committee and Steering Committee. Bernie seconds. All in favor. Abstentions by Neil, Angela, Fred.

11:10 FY19 technical priorities discussion

Matt reviewed draft priorities for the FY19 request for technical pre-proposals, and presented the joint NY-VT priorities for the TAC's consideration. The TAC recommended merging the two lists of priorities into one, and suggested that LCBP staff wordsmith following the meeting.

12:00 PM Lunch

12:30 PM IJC water quality reference draft summary report, *Jane Ceraso (NEIWPC)*

Jane provided an overview of the IJC's water quality project literature review.

- Curt: In my experience in the flooding study, the scope of the reference is very limiting, but there's significant overlap between the water quality and flooding reference. Making a connection between these two references is important, though difficult.
- Neil: Helpful to include reference to the Carry Bay Causeway study.
- Eric Perkins: In the interest of being complete, you do cite Manley et al. 2018 (the Lake Champlain Research Conference poster), but I suggest mentioning the possibility that there is additional, ongoing work on this topic.
 - Eric Howe: As this is a poster, it should likely be cited as unpublished information or as the research conference poster.
- Angela: I have several specific comments and will share them via email.
- Curt: It would be useful to include a paragraph on flooding and water quality in section 2.
- Andrew: Missisquoi Bay hydrodynamics are sensitive to short-term meteorological patterns and to terrestrial interactions as well. In addition, the nutrient enrichment should be discussed in terms of both external and internal loading.
- Jane: Are their additional lake restoration efforts that should be discussed in this literature review?
 - Neil: There have been two mechanistic restoration alum projects in VT: Lake Morey and Ticklenaked Pond. There are a handful of drawdown experiments as well – Lake Bomboseen for example.
 - Breck: Suggest you contact Jason Stockwell and perhaps tap the larger GLEON network.
 - Neil: Suggest also contacting Perry Thomas for more information on recommendations.
 - Eric Perkins: Are you focused entirely on mechanistic restoration or are you also interested in long-term restorations achieved through nonpoint source reductions? If the latter, there are a number of examples of successful lake

restorations in Maine. These are documented on the Section 319 Success Story page of EPA's website.

- TAC members will send additional comments to Matt; Matt will forward to Jane.

1:10 PM USACE Section 542 project summary, Erin Rodgers (Trout Unlimited)

- Erin Rodgers provided an overview of proposed work in the Mettowee sub-watershed, including removal or refurbishment of the Wallace, Sugarhouse Lane, and Lowhead dams.
- Neil: DEC may have additional recommendations for this proposal; TAC may need to review the plan again after DEC's feedback.
- Breck: What is the TAC's role in this project at the current stage?
 - Matt: The Army Corps will conduct its own thorough review; the TAC needs to weigh in on concept and budget.
- Neil: The Wallace Dam language is very careful – refurbishment, not removal. Why is that?
 - Erin: We don't yet have full information on structure design or on organism passage feasibility, so we're at a preliminary place in the process.
- Neil: Have you engaged with the rivers program and the Vermont Dam Removal Task Force on these dams?
 - Erin: Not yet. We've worked with the rivers program in the past, but they are not yet involved in these projects.
 - Neil: You could likely gain support from the dam taskforce.
- Bill: Contact Chris Smith at USFWS.
 - Erin: Yes – have worked with him on this project already.
- Neil: Are you looking for \$50,000 for this project?
 - Erin: Looking for enough to conduct the project; not sure yet of the actual cost of engineering.
- Neil: Propose that you run this project through other partners to maximize funding and collaboration – refining the scope and budget for the project at an early stage is probably a positive course of action.
- Eric Howe: Suggest that you speak with Matt Cosby at USACE to firm up a budget.
- TAC decides to table this review and suggests that Erin speak with Vermont Dam Removal Task Force, VT Rivers Program, and USACE to get feedback and firm up a budget. TAC plans to review this proposal at a later meeting.

1:30 PM Hatchery tour and presentation on walleye work, Kevin Kelsey (VT Fish and Wildlife)

Kevin Kelsey shared the excellent walleye culture work underway at the Ed Weed Fish Culture Station. The Lake Champlain Walleye Program was moved to Ed Weed FCS in 2011. The production objectives include 25 river-specific paired matings (3,000,000 eggs) and 165,000 advanced fry for pond stocking and fingerling production. Kevin shared the advances his team has made by controlling and modifying variables such as temperature, light, turbidity flow/exchange rates, density, tank hygiene, and feeding rates. Because of these advances and other techniques, they have observed increased survivability. The first harvest in 2011 had a 5.8% survival rate; the 2018 survival rate is up to 60.9%.

3:00 PM Adjourn