

**Lake Champlain Basin Program
Technical Advisory Committee meeting
May 6, 2026, 9:00am – 12:30pm
Held remotely**

Approved TAC meeting summary

TAC Members: Jennifer Callahan, Laura DiPietro, Bryan Dore, Brian Duffy, Laurie Earley, Peter Isles, Neil Kamman, Steve Kramer, Margaret Murphy, Tony Prestigiacomo, Quinn Rufa, Andrew Schroth, Jamie Shanley, Daniel Tremblay

LCBP + Lake Champlain Staff: Mae Kate Campbell, Kelsey Colbert, Corrie Miller, Meg Modley, Matthew Vaughan, Sonya Vogel, Erin Vennie-Vollrath, Colette Ward, Lizzy Gallagher

Guests: Stephi Drago, Josh Serpe, Joe Bartlett, Frank Piasecki, Bridget Butler, Don McFeeters, Kent Henderson, Scott Sainsbury, Hilary Solomon, Julie Butler, Jake Campbell, Tim Mihuc, Lindsey Cookson

1. Updates, announcements, public comments

- Tony Prestigiacomo, the new New York State Department of Environmental Conservation (NYSDEC) appointee to TAC, introduced himself.
- Neil (VTDEC): Vermont Department of Environmental Conservation (VTDEC) staff visited Lake Carmi to undertake the first annual spring monitoring following the alum treatment. We were excited to observe a Secchi depth of 7.2 m with a view scope - over 3 m better than the historic best in our monitoring record prior to alum treatment.
 - Andrew (UVM): My team sampled sediment and water under the ice over the winter, and you could see the aluminum core in the samples.
- Margaret (VTFWD): Our crew was out last week completing sturgeon netting and encountered 24 sturgeons in 3 days. We placed 15 tags on fish in the Winooski around the delta and will survey Otter Creek next.
- Laurie (USFWS): Sea lamprey control program fieldwork is underway for the season. We re-installed the Morpion barrier on Monday. We are starting to see lamprey showing up in our traps. Seasonal employment continues to be a challenge. Our team's work was recently published. The Lake Champlain Fish and Wildlife Management Cooperative held its annual policy meeting this week and approved the strategic plan, which will be posted online shortly.
- Matt (LCBP): Thanks again to TAC for reviewing the FY26 Research for Clean Water and Healthy Ecosystems full proposals. Your recommendation and the overall LCBP annual budget was approved by our Steering Committee in April. We are hiring a Resource Room specialist position. The responsive water quality sampling program will be launching this season. State University of New York (SUNY) Plattsburgh has a new research vessel that will be in the lake this season.
- Meg: The US Geological Survey (USGS) just published a manuscript summarizing the early detection monitoring data collected by partners. We've seen lots of news coverage about round goby and prevention efforts as a result. The Lake Champlain Aquatic

Nuisance Species Information System (LCANSIS) project portal has been launched and includes 51 species profile for non-native and invasive species present in Lake Champlain. Baitfish signs warning about round goby are being printed for fishing access sites in Vermont. The Lake Champlain boat launch steward program is launching next week with training. We are adding a decontamination station to the Point Au Roche boat launch.

Review and approve summary of previous TAC meeting

Motion: To approve the meeting summary

By: Laurie

Second: Steve

Vote: All in favor

2. Informational presentation: *Reconnecting VT Rivers through Dam Removal in the Lake Champlain Basin* (Stephi Drago, Vermont Natural Resources Council)

- Stephi shared a presentation. This project prioritized five dams for removal and/or advanced engineering: Breadloaf dam (removal), Wainwright Mill dam (engineering and removal), Connolly Pond dam (removal), Jockey Hollow dam (engineering design) and Mountain School dam (engineering design). Stephi provided additional details on each dam and which portions of the dam engineering or removal process were funded by the LCBP grant. This project also funded scoping efforts to identify sites for future dam removal efforts. Seven site visits were conducted, and three dam sites were selected for future project development.

Discussion

- Matt: This project originated in what is now the research grant program and was funded when that opportunity included implementation efforts also. We now have a separate aquatic organism passage grant program supporting much of this type of ongoing work.
- Neil: Do you have a sense of how well wood structures at the Wainwright dam have been working for holding back sediment?
 - Stephi: I know the engineers who worked on that site have been feeling good about the function of those structures so far.
- Brian: What are the regulations around sediment and sediment contamination that need to be considered during dam removals?
 - Stephi: Sediment must be tested to inform the removal and disposal process. There are ongoing conversations with the State about how much sediment needs to be removed so it's not impacting the hydraulic system. It's a balance between nutrient and sediment loading vs. enriching sediment starved downstream reaches that could benefit from inputs. Sediment removal is often the most expensive part of a dam removal, so that decision has a lot of influence.

3. **Final report review: *Rock River Sub-Watershed Drainage Network Assessment*** (Josh Serpe, Friends of Northern Lake Champlain, Joe Bartlett and Frank Piasecki, Fitzgerald Environmental)

- Josh (FNLC), Joe, and Frank (Fitzgerald) shared a presentation. The Rock River project was motivated by the outcomes of the 2021 Missisquoi Bay Tactical Basin Plan and the 2019-2023 Rock River stream geomorphic assessment study, as well as the concerns of landowners and stakeholders. Objectives of the work included assessment of agricultural ditches and Rock River tributaries, best management practice successes, site-specific information to incentivize water quality improvements, and identifying key segments responsible for sediment-bound phosphorus (P) loading to Missisquoi Bay. Methods included water quality data collection (samples taken during baseflow and stormflow at all 9 sites) and processing (total P, total dissolved P, and total N), and analyzing concentrations to determine if certain reaches of the watershed had elevated total P, total dissolved P, or divergent ratios between total P and total dissolved P. This study completed drainage delineation using hydrological tools in GIS; field assessments were used to identify features of the reaches including culverts, ditches, etc. The project resulted in the identification and prioritization of 56 future projects within study watersheds (e.g. gullies, erosion control, buffer plantings, etc.), as well as lessons learned for improving project methodology for similar work in the future.

Discussion

- Neil: Are you saying that natural/unmanaged stream channels had greater erosion than managed reaches?
 - Joe: Kind of. The unmanaged reaches we were able to access for this assessment were either fed by managed reaches or were previously managed. This could have been the influence of site selection, potentially happening to choose the two worst reaches, who knows?
- Josh: Thank you to Frank and Joe! They brought much expertise to this work.
- Neil: Taking a look at the interim report, the water quality results suggest you may have a high proportion of total dissolved P to total P at base and storm flow. I wonder if the Rock River is behaving like Jewett Brook in St Albans.
 - Joe: I believe it was around 70% total dissolved P to total P consistently.
 - Neil: Very interesting
- Peter: My memory of the initial proposal was that we wanted to look at the watersheds and see how best management practices (BMPs) were impacting water quality. Were you able to gather information on that?
 - Joe: We haven't looked at that yet. We certainly would like to do that. It's tricky to get field specific farm data to do so. What we assessed were specific pieces of each drainage area. Unsure if that would be useful for the areas we assessed, but we would like to try!
- Andrew: As a reviewer, I thought the work was great. The report needs a bit more work, particularly at the end. The last three slides you presented on would be excellent to incorporate more fully in the report to better synthesize how the impacts you observed are influencing conditions.

- Kent: We are highly interested in ongoing work in this watershed. We picked out a dozen doable projects from the recommendations made by this assessment. Many are simple, requiring visits to the farm. I think there will be 9 strong projects that could be started pretty much immediately. For example, there is very little surface manure spreading going on in this area. Injection is ideal for farms struggling with limited labor availability. We are down to fine tuning on these farms right now. It is in the non-compliant farms that need attention now, we've legislated to get control of that situation, but that is not what we do. I am really excited about the projects that will come out of this.

Motion: To approve the final report pending approval by LCBP and point people

By: Peter Isles

Second: Steve Kramer

Vote: All in favor

4. Informational presentation: *Flower Brook Floodplain Function and Flood Resilience Assessment* (Hilary Solomon, Poultney Mettawee Natural Resource Conservation District, and Joe Bartlett and Jake Campbell, Fitzgerald Environmental)

- Joe, Jake, and Hilary shared a presentation on their stream geomorphic assessment (SGA) work in the Flower Brook watershed. Flower Brook experienced pretty severe flooding during Tropical Storm Irene, which has identified the areas for flood resilience work, better understanding of sediment transport, and prioritizing work to reduce sediment and mitigate rates of sediment deposition. The outputs of the work included updated Phase 1 and 2 SGAs, projects identified, and conceptual designs. Examples of projects identified are undersized culverts, gravel fills, and erosion. The Phase 2 SGA found that Flower Brook and its tributaries were sensitive to changes in hydraulic, geomorphic, or sediment regime. 136 Functioning Floodplain Initiative (FFI) projects were identified (5 high priority, with 3 matching with field observations) and 68 site-level projects identified (13 prioritized with descriptions and 3 with 30% conceptual designs). FFI can be a useful tool for identifying general areas of interest, but in this watershed, the project team found that it was not ideal for identifying specific projects. Phase 2 and FFI conclusions were that historic incision was dominant for mid-upper Flower, Fall, and Purchase Brooks, sediment deposition and widening in the lower Flower Brook, and Beaver Brook was generally stable. High volumes of coarse gravel moving through the system, minimal development and agricultural impacts, and changes to rainfall patterns may be driving increased sediment transport. Future work identified includes educating landowners on incorporating low-cost and low-tech projects, working with funders to advance project implementation, data collection, and long-term monitoring, and updates to the current DEC model for P crediting.

Discussion

- Margaret: Curious about the sediment and gravel accumulation in Pawlet. Are you planning to remove it, or remedy downstream?

- Hillary: It's difficult to remove sediment, but we have thought about it. I am unsure if the town has thought about dredging, but that could only occur near the bridges. We also want to be careful about further destabilization.
- Neil: Does Flower Brook discharge into Mill Pond?
 - Hilary: Yes.
- Neil: Is the barrier to formula grant funding related to not having appropriate P crediting methodology developed for certain interventions?
 - Hilary: Jake has been working with Staci on data collection expectations. We didn't anticipate that this work would require so much administrative burden. I think Keith and Staci are working on methods for crediting in-stream woody addition projects.

5. Interim report and workplan: Lake Champlain Long-term Monitoring Program (Dr. Peter Isles, VTDEC and Dr. Tim Mihuc, SUNY Plattsburgh)

- Matt provided an overview of the long-term monitoring program and cyanobacteria monitoring program. Peter, Kelsey, and Tim shared a presentation. Season highlights of the 2025 season reflect conditions associated with typical spring flows, followed by a dry summer and fall. Very low lake levels in the summer resulted in high chloride concentrations. High dissolved organic carbon and total nitrogen were measured during the first flush following the drought. Low chlorophyll levels were observed in St. Albans Bay, while Missisquoi Bay had high total phosphorus (relative to recent years). The program exceeded targets for lake sampling but was below target for tributary samples due to a staff injury + few high flow events. The program observed similar distributions of spiny and fishhook water fleas relative to previous years, with fishhook dominating, particularly in late summer. For the 2026 season, a new high-frequency buoy will be deployed in the Northeast Arm, the team will continue trying to collect winter tributary loading data, and hiring is underway for a new VTDEC long-term monitoring and cyanobacteria monitoring lead.

Discussion

- Andrew: I know there's been other years where Jewett Brook has dried up, have you looked to see if those also correspond to low bloom years?
 - Peter: I have not, but that would be interesting.
 - Andrew: How far does that record go back? Curious how many times that's dried up.
 - Matt: I believe it's 15 years. We have a shorter record in this tributary.
 - Peter: Also, it would be interesting to look at the length of time the brook has dried up in previous years.
- Neil: Do you think internal loading was contributing relatively more to Missisquoi Bay due to the drought?
 - Matt: Evaporative concentrations are also a factor.
 - Peter: This came up in the International Joint Commission (IJC) studies as well. Looking at concentrations, even lower values at the start of the season are relatively high, and that was prior to drought conditions.

- Andrew: Following years with big floods, you tend to have more reactive phosphorus in the sediments. It could be a combination of many factors.
 - Matt: 2024 saw flooding again in mid-July, but it wasn't really focused in the Missisquoi.
 - Peter: The timing of calm, stratified periods is influential, but hard to tease out.
- Matt: VTDEC, SUNY, and LCBP teams are working on buoy deployment logistics for the 2026 season.
- Neil: Did you mention the "Loads of Confusion" paper has been accepted for review?
 - Peter: A draft was submitted to *Science* and they are in the process of reviewing.
- Andrew: I'm curious about chloride concentrations in South Lake - is that segment typically that high?
 - Matt: It is among the highest in the lake consistently, but I can't recall ever seeing it this high.
 - Neil: What do we know how potential chloride loading from International Paper could be factoring in?
 - Matt: Not sure.
 - Peter: The concentrations in the lake we measured are getting into the levels that have been shown to impact some species, but still below EPA thresholds. Will be cool to have the LCBP responsive sampling program starting up, where we could target moments that could be impactful in terms of seasonal or weather-related impacts.

Interim report and workplan: Lake Champlain Cyanobacteria Monitoring Program

(Dr. Peter Isles, VTDEC)

- Peter shared a presentation. In 2025 there were 3,383 visual reports, 152 samples analyzed via microscopy, 143 lake water samples analyzed for cyanotoxins, and 18 weeks of drinking water monitoring (extended timeline in 2025 to include September-November). There were major blooms throughout the lake, but blooms were generally less intense than previous years of the monitoring dataset. The data gathered through this program are not an unbiased assessment of cyanobacteria populations, distributions, and trends. Some high concentrations (above the recreational threshold of 8 ug/L) of microcystin were measured in St. Albans Bay and Main Lake Central. There were 2 detections of cyanotoxins in raw water and none in finished drinking water. The low lake level in 2025 resulted in more benthic cyanobacteria on the lakebed; samples that were taken did not have toxins present. Not enough benthic samples were collected to say anything definitive. In 2025, the team worked on building a training library for a plankton classifier using transfer learning to train an image classification model. This will be useful for reducing sample processing time, allowing quantitative data collection from more locations, reduced training time for seasonal staff, can check identification, etc. The team is looking to incorporate satellite imagery into identifying hotspots, inland lakes that need monitoring, and gathering unbiased trend data.

Discussion

- Neil: Which FlowCam were you using?

- Peter: From UVM
- Neil: Region 1 has one.
- Matt: We got the Lake Champlain cyanobacteria monitoring partners together last week, and it was the first year we didn't have any major projects to work out!
- Lindsey (LCC): Things are going well with recruitment and volunteers. We are looking to have more St. Albans Bay coverage this season.

Motion: To approve the annual reports for the long-term monitoring and cyanobacteria monitoring projects

By: Jenn Callahan

Second: Margaret Murphy

Vote: All in favor

Abstentions: Peter

6. Discussion: TAC point people for FY26 Clean Water and Healthy Ecosystems research projects

- This discussion was conducted in executive session as award notifications have not been made public.

Motion: To enter executive session

By: Jenn

Second: Laurie