

Lake Champlain Basin Program
Technical Advisory Committee meeting
Wednesday, March 4, 2026, 10:00 AM – 2:00 PM
Held remotely

Approved TAC meeting summary

TAC Members: Jennifer Callahan, Sarah Coleman, Laura DiPietro, Bryan Dore, Brian Duffy, Laurie Earley, Neil Kamman, Steve Kramer, Bridget O'Brien, Quinn Rufa, Jamie Shanley

LCBP + Lake Champlain Staff: Mae Kate Campbell, Meg Modley, Matthew Vaughan, Sonya Vogel, Erin Vennie-Vollrath, Colette Ward, Sarita Croce

Guests: Roy Schiff, Liz Doran, Mike Kline, William Bastian, Hannah Rubin, Todd Chaudry, Josh Serpe, Jody Stryker, Chris Smith, Staci Pomeroy, Logan Reese, Evan Nelson, Maya Dehner, Judson Peck, Heidi Britch-Valenta, John Merrifield

1. Updates, announcements, public comments

- Quinn (CCHD): Clinton County is beginning renewing their hazard mitigation plan. The last was issued in 2021. It will be a county-wide resilience plan this time, and we are targeting a year for development.
- Laurie (USFWS): The Lake Champlain Fish and Wildlife Management Cooperative has approved a new strategic plan for 2025-2030. The plan incorporates forage fish surveys, American eel, and aquatic invasive species, adding objectives and actions.
- Jamie (USGS): We are moved in to our new Waterbury office if people want to stop by.
- Brian (NYSDEC): We have a new Deputy Commissioner for Water - AJ Smith.
- Neil (VTANR): The legislative session is moving along. We don't anticipate legislation aimed at impacting the implementation of the Lake Champlain total maximum daily load (TMDL).
- Matt (LCBP): TAC members should have received review materials for research full proposal review. We will meet in person (with remote participation option) on April 1st to review these proposals. The Lake Champlain Steering Committee will meet on April 14th and 15th to review and approve the LCBP budget for the next fiscal year, which would include TAC's recommendations on research proposals. Our team is preparing for the 2026 field season and will be launching our responsive water quality sampling program. This will supplement the long-term monitoring program (LTMP) and respond to events like flooding, drought, and other areas of concern. We would like to have a TAC subcommittee to bounce ideas off of for this program. If you're interested in participating, please let us know. We plan to host a meeting soon.
 - Neil: Sarah, please pass this along in DEC to have a few folks participate.
 - Bridget: Please include me.
 - Jamie: Are there funds in house for this? Also where will PFAS be analyzed? And where will samples be collected, is the whole geography possible?
 - Matt: Yes, we have funds in house. We intend to target mouths of rivers and recreational sites, and also need to consider geographic range.

- Jamie: USGS is getting really involved in PFAS monitoring. It will be interested to see your results. I'd be interested in joining these discussions.
- Colette: Are you looking to establish sites in QC? If so, I can put you in touch with contacts at the Ministry.
- Matt: We could, please get in touch if that's of interest.

Review and approve summary of previous TAC meeting

Motion: To approve the summary of the February 2026 TAC meeting

By: Laurie

Second: Jenn

Discussion: Neil: I added minor comments to address a misunderstanding on something I said.

Vote: All in favor

2. Final report review: *Expanding Vermont's Functioning Floodplain Initiative (FFI) to Advance the Science and Conservation of Healthy Stream, Riparian, Wetland, and Floodplain Ecosystems* (Dr. Roy Schiff, SLR, Mike Kline, Dr. Liz Doran, UVM, and Dr. Jody Stryker, Stone Environmental)

- Roy shared a presentation and introduced the project team including Mike, Liz, Jody, and Staci Pomeroy from VTDEC who is a collaborator and houses the functioning floodplain initiative tool.
- The Functioning Floodplain Initiative (FFI) uses datasets to measure and scale existing stream and floodplain connectivity. The tool is used to help identify and prioritize implementation projects to benefit clean water and healthy ecosystems. This project focused on expanding the FFI, and looked at new focus areas, including:
 - Instream Habitat Function Scoring units: High gradient headwaters (cascades, step-pools, plane beds), low gradient headwaters (riffle pools, ripple dunes, braided, beaver-flowages, plane beds, etc.), lower valley streams and rivers (riffle pools, ripple dunes, braided)
 - Data: Also draws on a Nature Conservancy barrier tool used to study instream habitat fragmentation
 - FFI can help understand how reconnection projects are impacting rivers and streams- e.g. buffer plantings, dam removals, etc.
 - Floodplain Habitat Connectivity: Natural communities (e.g. impacted by land use, large wood, beavers, etc.) provide co-benefits for nutrient retention and flood attenuation.
 - Data: Mapped natural communities, stream geomorphic assessment (SGA) Phase 2 reaches, rapid community assessment surveys (targeted sites that were being used by project team and collaborators to assess nutrient and erosion characteristics)
 - 3D Floodplain Habitat Connectivity: Lateral, Longitudinal, Upland
 - Lateral score = f(bank incision, buffer vegetation, river corridor vegetation, hand floodplain vegetation)
 - Longitudinal score = f(upstream and downstream buffer vegetation, upstream and downstream river corridor vegetation)

- Upland score = f(river corridor connection to VCD habitat blocks, size of VCD habitat blocks)
 - FFI floodplain habitat connectivity score is a function of the lateral, longitudinal, and upland scores, as well as the FFI protection score
 - FFI Webtool allows users to plug in restoration initiatives to see the benefits and co-benefits of these projects on river connectivity.
 - FFI Habitat: Temperature, cover, reproduction, habitat barriers
 - Background data: Habitat -> trout patches, VT conservation design forest blocks, etc.
 - FFI corridor and stream layers (custom pop-ups): connectivity details, project selection, vulnerability details, habitat metrics, priority projects
 - Add project screening: Intended to give users a high-level view of existing conditions in a particular reach/corridor and potential benefits gained from projects done in that area
 - Project Planning tool: search for projects based on locations and functions of interest
 - Can see estimated water quality benefits, habitat benefits, and floodplain resiliency benefits

Discussion

- Neil: The protected lands piece, does that refer to if the land is under a conservation easement, etc.?
 - Liz: No, this is a component of the existing FFI. There are tiers of protection based on their own set of criteria. Protection criteria make a big difference in the ability of a landscape to make stable regimes whether they are long-term forest environments, or high use etc.
- Mae Kate: We don't have a project advisory committee for this project, so we would appreciate folks who are interested in looking at the final report materials. VT DEC will also review materials before publishing. Reach out if you are interested!
- Matt: I was interested in the weighting of the different habitat types. The way you have it broken out in the tool it seems like you can see the different stages with restoration. Could those be tweaked?
 - Roy: Are you talking about instream or floodplain?
 - Matt: Floodplain.
 - Liz: We have gone a little bit through different weighting schemes, the evenly balanced scheme is where we landed. It can be changed.
 - Matt: I'm thinking, if you want to prioritize black bear habitat, can you tweak it?
 - Liz: I don't believe we planned to have that functionality in the tool. I will say that the current distribution does have a bias towards larger scale restoration. Other species that need smaller scale habitat requirements, you may be satisfied by other edits to subcomponents.
- Neil: I am always mindful with LCBP projects that they have benefits for the other jurisdictions. What would it look like to modify the FFI for NY/QC? I know it's based on years of VT data. Could it fast forward implementation in other regions?

- Roy: My inclination is yes. One of the key drivers, incision ratio, benefits from years of data. As part of the project, an incision ratio was developed for when we don't have that measurement. We have done this exercise in the Memphremagog basin, too. One thing is that this is a tool that requires field validation. I think you could pretty quickly extend it, but information would require field verification, especially for areas that have less existing data.
- Liz: On the floodplain habitat side, I would say that the methodology does rely on some unique datasets that don't exist outside the state. However, the methodology is there now, and the components of the scores are easily replicated provided that similar metrics could be implemented in the regions.
- Mike: One of the first things to consider is whether we have the same scale of land use and LiDAR data. We also used Phase 2 SGA data as a part of the project screening. So, where we don't have that data, the screens wouldn't be as tight.
- Neil: LCBP has funded some SGA in the NY side of the basin. The Nature Conservancy has also done some broad scale work. I'm just always thinking about how great projects can be built out in the whole basin.
- Liz: From my end, the upland piece is really important, so as long as that can be built in.
- Staci: Partners find this complex, should be considered if it is expanded. You also need a designated person to oversee it, if you want it to be sustainable in other places/over time.
- Neil: For VT that's you, correct?
- Staci: Yep, currently! We've done some nice updates with Jody. We are looking to add tracking within the tool, too.

Motion: To approve the final report pending the incorporation of edits from LCBP staff

By: Jenn Callahan

Second: Steve Kramer

Discussion: VTDEC review will proceed independently, unless timing/coordination works out

Vote: All in favor

3. Final report review: *Development of a Soil Health Calculator Tool to Quantify Impacts of Agricultural Management Practices on Soil Health in the Lake Champlain Basin* (Dr. Jody Stryker, Stone Environmental)

- Jody shared a presentation. The goal of this project was to adapt an Agricultural Policy/Environmental eXtender (APEX) model-based tool to report on the field specific impacts of long-term agricultural management on key soil health metrics. Project objectives included:
 - Evaluate model predictions for key soil health indicators to ensure outputs are scientifically robust.

- Evaluate model performance with respect to changes in practices and management options (e.g., rotations, tillage, etc.) that are expected to impact soil health metrics.
- Provide a publicly available tool that enables users to evaluate soil health outcomes at the field and farm scale.
- Functionality was built into the existing Farm-PREP (Farm Phosphorus Reduction Planner) web-based tool.
- Project tasks included: the development of a quality assurance project plan (QAPP), establishment of a project advisory committee, data compilation and modeling approach development, evaluating soil health metrics in the APEX model, performing a multi-objective APEX calibration, evaluating model performance, integrating the model into the Farm-PREP web-based tool, and hosting a training session.

Discussion

- Neil: So, is the parameter suite used for calibration a subset of parameters used in this tool?
 - Jody: We tested a large range of parameters: some calibration values need to be updated based on our results, and the existing Farm-PREP calibration was upheld for others.
- Laura: Jody and Stone have been amazing in implementing this project. We like the concept of providing feedback to farms on this individual basis. We'd like to take this concept further at the VT Agency of Agriculture, Food, and Markets (VAAFM). Jody mentioned the other project helping farmers increase resilience to extreme weather events, which we are excited to move forward as well. It does take a lot of data from a farm to use these tools, but we've improved our ability to support farmers and do this work.
 - Jody: VAAFM has done a great job with this program. APEX/Farm-PREP are data hungry, but there are advantages to that.
- Steve: Fantastic, so much information! One key thing I picked up on is the ability to capture soil moisture, which influences other soil health and nutrient dynamics. It's great to have those data.
- Neil: Is this extendable to agricultural areas in NY?
 - Jody: We are using mostly publicly available, nationwide datasets, so yes. I'd need to compare agronomic management systems used in NY and confirm they align with the parameters we have in Farm-PREP currently. We have customized workflows in parts of the tool to support the Pay for Performance program, so that may not be applicable.

Motion: To approve the final report pending the receipt of edits from TAC point people

By: Jenn

Second: Steve

Vote: All in favor

4. Review: US Army Corps of Engineers 542 Program Requests

- Meg provided an overview of the Lake Champlain Watershed Assistance Program, which implements the Army Corps 542 Program to provide technical assistance for critical restoration projects in the Lake Champlain watershed. Meg reviewed the process for TAC considerations of proposals to this program. Projects from two municipalities were presented.

Town of Plattsburgh

- Trevor Cole, Senior Planner, shared a presentation on the former Plattsburgh Air Force Base Redevelopment Plan.
- Background: The Plattsburgh Air Force Base included 0.8 square miles that were inherited by the Town of Plattsburgh. The base was closed in 1995, and parts of the property were bequeathed to the Town and City of Plattsburgh. Some of the built infrastructure was in poor condition, and the Town has already completed some work, including addressing water lines, wastewater lining, 60 manholes, and putting in a new pump station. The Base was built for different infrastructure uses than the Town currently supports (i.e. 4-lane roads to support military machinery), which creates impacts to surface water from impervious surfaces. In 2024, severe rain events revealed additional impacts to the base infrastructure (stormwater, rail, electrical, natural gas). The Town is seeking support through the Army Corps 542 program to conduct a scoping project to identify infrastructure that needs to be addressed and develop plans for implementation. When implemented, the project will benefit water quality by reducing impervious surface cover and improving stormwater infrastructure. The proposed cost of the scoping study is \$650,000. The total projected cost for implementation is estimated at \$30 million. The scoping project will include a video inspection of the entire stormwater system, development of final design plans, National Environmental Protection Act (NEPA) compliance activities, including agency coordination and the preparation of an environmental assessment, public outreach, and support for project management. The Town has received a \$50,000 grant from NYSDEC to support scoping efforts as well.

Discussion:

- Erin: I work within the NYSDEC as well as the LCBP. I am excited to see this project come through this group. I think you addressed this some, with Plattsburgh being one of our biggest urban areas on the NY side of the basin, it has a combined sewer overflow system. Will this feed into the combined sewer system?
 - Trevor: No. The City accepts inputs from the Town, but this is not part of that combined. Wastewater and stormwater are separate from the base.
- Quinn: You've got the non-point source grant for a study- are there two different studies you are looking to do?
 - Trevor: That grant will cover a small portion of the \$650,000 estimated cost. That request from NYSDEC was a request to initiate a study, then this opportunity

came up. We are looking to hopefully incorporate that funding into this study, supplementing this work. Not duplicative.

- Quinn: Did this start when the sinkholes started? Or was this in the works ahead of time?
 - Trevor: After the summer of 2024 and we had already applied for the Green Infrastructure grant, a stack of reports was found that included a report of the Plattsburgh Air Force Base redevelopment study from 1988. This study listed many pipes as “poor (replace immediately)”. There were plans to do that, but they were not the Town’s plans, and those initiatives were not communicated once the Town received this land. It’s meaningful to me that the base was built with tax dollars from all over the country. However, in such a small town like Plattsburgh, we don’t have the taxpayer capacity to maintain that infrastructure.
- Neil: First, an idea/recommendation. Fund stacking is totally appropriate and can be used as match. From personal experience, the Army Corps will also accept State revolving loan fund dollars. Next, what is the role of the Department of Defense (DoD) when they walk away from infrastructure like this?
 - Trevor: There were several steps of the property being broken up. One piece of the parcel became the airport property, managed by the county. The area we are looking at was conveyed to the Town of Plattsburgh, and the area closer to the lake was given to the City. Plattsburgh Air Force Redevelopment ceased operation in 2021 because all of the property is in private hands. The role of the DoD was to transfer responsibility to Plattsburgh.
- Neil: Is this part of your MS4?
 - Trevor: We are not an MS4, nor is the City.
- Matt: Thanks for this presentation. Meg, can you clarify for the committee that the TACs role is to affirm that the project aligns with the goals of *Opportunities for Action*, provide technical feedback, etc., but not to approve the project, correct?
 - Meg: Correct, the TAC reviews the project and can recommend the project move forward to the Lake Champlain Steering or Executive Committee for further review. This is a planning project to start, with implementation possible in future stages/pending further review. This area is approved for 10% match, with Town and NYSDEC grant funding eligible to be used as match.
 - Evan: The Army Corps can accept any non-federal funding sources as match. Right now we are pursuing the planning portion of this study. We may pursue funding under a different authorization (254) for design and implementation.
 - Trevor: The Town is committed to meeting the required match.

Motion: To advance the project proposal to the Lake Champlain Executive or Steering Committee for further consideration, with concurrence the project meets the objectives of OFA

By: Laurie

Second: Jenn

Vote: All in favor

Village of Swanton

- Heidi Britch-Valenta, Grants Manager for the Village of Swanton, shared a presentation. The Village of Swanton's wastewater treatment facility needs to perform essential maintenance, which is estimated to cost \$10 million. Heidi provided background on the Village. Swanton is a small community of 2,300 residents. The community includes the Abenaki Nation of Missisquoi. The Village employs 42 full time staff who operate services including wastewater, drinking water, electricity, highway, police, and fire. The wastewater treatment facility is of concern to local, regional, state, and international communities due to Swanton's geographic location close to the border with Canada. The facility discharges into Missisquoi Bay, which faces challenges including cyanobacteria blooms and water quality concerns. The Village is working on other water quality improvement projects outside of the support being sought on the wastewater treatment plant, including stormwater. This wastewater treatment project is being required by the State DEC. Heidi clarified that raising utility rates to fund this wastewater project is not feasible, due to the small size of the community, the expected magnitude of capital needs, and that customers are already facing an increase in wastewater costs due to an ongoing upgrade to reduce phosphorus concentrations from the treatment plant.

Discussion

- Meg: What would this assistance funding go towards, and what is the estimated cost?
 - Bill: We have a facultative lagoon system at our wastewater treatment facility. The lagoon on the right has been building up sludge essentially since its inception. We will be required by the State to remove this sludge. The Town is fully committed to meeting the 10% match requirement. Completing this project will allow for an additional 50-100 years of operating this facility at peak performance.
- Quinn: This desludging project is separate from ongoing upgrades? And evaluation was completed to keep the lagoons in service following upgrades?
 - John: These are the biggest lagoons by surface area that we have in the state, and they are shallow. All lagoon facilities fill up over time. Costs have increased since lagoons were constructed to address sludge. While there is still adequate treatment at the facility, completing this project to address the sludge is important to ensure the facility continues to operate as designed. From the State DEC perspective, we did not determine the lagoons need to be replaced.
- Neil: Curious whether as part of preliminary engineering review if the lagoons came up as a limitation to capacity?
 - Bill: We know we have to address these lagoons. This was flagged in the engineering review, but not as a permanent limitation on the facility.
 - Neil: So, it doesn't create a limitation in terms of treatment capacity currently?
 - John: These lagoons are so big, and Swanton isn't delivering the full flow it was designed for. Today, the facility is running as it should. However, if changes occurred that increased loading to the wastewater treatment facility, it would create capacity challenges. My recommendation is to begin addressing this issue now before it becomes a capacity challenge. However, as long as the facility is

not violating its effluent limits, the state would likely not include this in a permit or enforcement action. We prefer to work together to address this now before it gets to that point.

- Evan: We are forecasting a 90%/10% cost share on this project. Included in that cost, we'd require the contractor to produce an operations and maintenance manual to guide the Village in periodically conducting their own dredging to remove smaller amounts of sludge and not create a future large project like today's conditions.
- Neil: Recommendations on the proposal – background on the ongoing wastewater treatment facility upgrades should be included in the proposal to provide greater context for the project. There is also a statement suggesting the State of VT may be able to cover part of the match. That's uncertain at this point and could be clarified.
 - Heidi: Noted, thank you. Another reason this funding source was attractive to us is the timeframe. We have time to complete this study and make these decisions now while the facility continues to operate functionally.

Motion: To advance the project proposal to the Lake Champlain Executive or Steering Committee for further consideration, with concurrence the project meets the objectives of *Opportunities for Action*

By: Jenn

Second: Laurie

Vote: All in favor