

Vermont Citizens Advisory Committee (VTCAC) on Lake Champlain's Future

February 12th, 2024

5:00 – 7:00 pm

Zoom

Approved Meeting Summary

View Recording [here](#)

Committee Members Present: Denise Smith (Chair), Karina Dailey (Vice-Chair), Eric Clifford, Wayne Elliot, Bob Fischer, Lori Fisher, Sen. Martine Laroque Gulick, Mark Naud, Rep. Carol Ode, Hilary Solomon

Committee Members Absent: Sen. Randy Brock, Rep. Kari Dolan

LCBP Staff in Attendance: Mae Kate Campbell, Katie Darr, Sarah Coleman (VTANR)

Presenters: Dr. Matthew Vaughan (LCBP), Dr. Kris Stepenuk (UVM/Lake Champlain Sea Grant)

Public Guests: Lynne Hale

Meeting summary prepared by Katie Darr, Lake Champlain Basin Program

1. Welcome and Introductions

2. Public Comments

No public comments were made.

3. ACTION ITEM: Review and vote on draft January 8th meeting summary

- Motion to approve the meeting summaries by: Rep. Ode
- Second by: Wayne Elliot
- Discussion: Mark corrected a typo.
- Abstentions: None
- Vote: All in favor

4. 2024 Lake Champlain Action Plan Legislative Presentation Debrief – Denise Smith, Chair

The VTCAC reviewed the legislative presentations of the Action Plan to Governor Scott, Commissioner Batchelder (VTDEC), Deputy Commissioner Pembroke (VTDEC), Lt. Governor Zuckerman, Speaker Krowinski, Senate Committee on Agriculture, House Environment and Energy, House Committee on Agriculture, Food Resiliency, and Forestry, and the House Committee on Commerce and Economic Development.

Denise shared the presentations went well and there was a good level of engagement. There are some sections of the presentation that could be tightened up, but overall it went well and it was good to get it out early.

Lori noted that there were some specific questions that the CAC needs to follow up on, including the cost of boat wash stations, requests for written testimony, and how many farmers took advantage of the pay for performance programs. She suggested a small group who were involved in the presentations coordinate on those follow up items.

- Eric shared ~45 farms participated in the pay for performance programs.
- Hilary will follow up with the Agency of Ag to confirm.

- Committee members echoed the importance of timely follow-up.

Rep. Gulick asked if the CAC was going to meet with Senate Health and Welfare, they are working on a PFAS bill. Katie had not reached out to that committee this year, the CAC had a very short amount of time on their agenda last year. Rep. Gulick will keep Katie posted about committee interest and availability to hear testimony from the CAC. Rep. Gulick noted the committee's testimony on S.197 could be useful as PFAS can have a large impact in waterways.

- Denise noted the CAC could provide information on the Action Plan, but the CAC has not previously been asked to provide testimony on a particular bill.
- Rep. Ode added as long as the committee agrees on the talking points, the CAC could testify on specific bills.

5. Long-term chloride trends for Lake Champlain and its tributaries – Dr. Matthew Vaughan, LCBP Chief Scientist

Dr. Matthew Vaughan provided an overview of the long-term chloride trends for Lake Champlain and its tributaries, the presentation is available with the meeting materials ([here](#)).

- Mark asked about the history of the La Platte, noting it has a relatively low load but high concentrations with a dramatic reduction. The corresponding bay and tributary are tracking now but were way out of whack historically. Matt noted that a lot of the available data speaks to the “what” and not the “why.” He shared a few ideas: it is a small tributary that was likely affected by point source pollution, wastewater treatment there. Most of the improvements took place in the first decade and levels out after that, looking like the rest of the tributaries that are more dominated by land use than point sources. That initial sharp decrease was likely due to successes in point source chloride reduction. In terms of how it tracks with the bay, it is a smaller tributary and Shelburne Bay does have interactions with the main lake so La Platte and Shelburne Bay might not track as closely.
- Mark asked about the changes in Poultney Mettawee, noting ~50% increase in loading but both tracking pretty similarly. What are the examples of watershed management changes? Looking at the twin axis probability, what are the management practices that cause these changes? Matt clarified that “management” is a catchall term for anything happening in the watershed. These changes are not limited to development, number of plows, cultural expectations of how roads should be treated during storms, funding for department of public works, etc. The available data suggests an increase in salt application frequency and amount in addition to an increase in the roads and surfaces that are present and salted. There are relatively low loads for Poultney, but sharp increases. Solutions include more tracking of salt application, training road crews to apply judiciously at the right time with the right data, brining, and shifting mindsets.
- Bob commented on the potential for a chloride TMDL. Matt clarified that there is not a TMDL for chloride currently, the benchmarks referenced in his presentation were the EPA thresholds developed for fish toxicity. Wayne Hastings and others on the TMDL team are working on developing a framework to start working with EPA to develop a chloride TMDL for waterbodies, Sunnyside Brook would be a pilot for a chloride TMDL. EPA is developing new benchmarks for chloride as the current toxicity levels may be true for fish, but lower levels of chloride have impacts on other trophic levels. The updated draft EPA thresholds should be available later this year or early next year.

- Bob asked about legacy chloride in the soil. Matt noted chloride is a conservative constituent, it is very different from phosphorus. Chloride does not cycle between different forms throughout its movement through the ecosystem. Lower concentrations of chloride are seen at high flow and higher concentrations of chloride are seen at low flows, which is the opposite of phosphorus.
- Wayne noted some of the graphs flattened out for a period of time before increasing and asked if Matt had thoughts on practices that decreased chloride loading at that time. Matt shared that Eric Smeltzer reported on this a bit in a paper released in 2012 that tracked salt application from the State of Vermont. Generally, there was an increase in application in the first part of the record and a decrease in road salt application in the second half. However, that paper was published over 10 years ago and increases in chloride concentration and loading has since been observed. It is challenging to track this data on a watershed wide scale because it is a nonpoint source pollutant from many different sources.
- Lori emphasized the importance of monitoring efforts, as evidenced by the data presented today and in Matt's November presentation about the summer floods. At times there is pressure to focus on implementation with a lack of understanding of how important the data gathering stage is. She also shared there is legislation that some advocacy groups, including Lake Champlain Committee, are working on related to more training for applicators. That might not move forward this year but should be a priority for the CAC in the next biennium.
- Hilary asked about road salt application trainings and whether that is something LCBP is funding or planning. Matt shared that LCBP has funded a lot of work in this area, including supporting Lake Champlain Sea Grant's road salt programming.
- Rep. Ode asked about potential legislative solutions to deal with the issue. Matt clarified that in his role at LCBP, he cannot lobby or advocate but can provide information. One tool in the toolbox to deal with chloride pollution is the TMDL which is a federal regulation that is being piloted and explored in the state of Vermont.
- Rep. Ode noted that next year's action plan will be too late. Once the session ends, the CAC needs to work with the chairs of the environmental committees in the house and senate to get this moving.

6. Understanding salt use practices by winter snow and ice management professionals in the Lake Champlain Basin – Dr. Kris Stepenuck, UVM Extension Assistant Professor & Lake Champlain Sea Grant Associate Director

Kris provided an overview of three surveys conducted to better understand road salt use and application practices on campuses across the US, in municipalities/counties in the Adirondacks and Vermont, and by private contractors in the basin. The presentation is available with the meeting materials ([here](#)).

- Lori thanked Kris for her longstanding interest and commitment to this issue and asked about the costs related to salt use reduction. Kris shared Hyde Park invested ~\$108,000 for the brine maker to pre-wet road salt, investment in temperature sensors, nozzles on the trucks, and buckets to store the brine. Costs vary on the size of the brine making system, a small system costs ~\$36,000. There are a broad range of costs from segmented plows ranging from \$4,000 to \$25,000. Likely a \$50,000 investment per truck is needed for the segmented plow and secondary plow technologies. South Burlington indicated that segmented and secondary plows were more effective for them than pre-wetting the salt. Temperature sensors and ability to track application cost ~\$8,000.

- Lori noted this is a relatively small investment for a large impact. Kris added that trucks last ~10 years. When speaking to decision making body, South Burlington shared it is helpful to get the same brand over time so they have a cluster of vehicles using the same operational tools and not just accept the lowest bidder.
- Lori added this is an area where state agency leadership could come into play, there may be an opportunity to pull resources and secure a contract that would help the municipalities. Kris noted communities have brought that up and wondered about having power in many communities wanting to invest in many similar things and having a statewide contract to support that.
- Wayne suggested working with Vermont Local Roads to provide education on this topic through webinars or workshops. Kris shared the State is using brine to pre-wet at the spinner like Hyde Park, her understanding is there are a number of spots around the state where they have brine systems. She thought they were doing trainings for the state but not necessarily to municipalities.
- Denise asked for clarification about whether there have been trainings for local municipalities. Kris clarified that she has conducted trainings for municipalities. In December she conducted one for Hyde Park with 60 participants from more than a dozen communities. She plans to offer more trainings in the fall. Lake Champlain Sea Grant has a grant from LCBP to get South Burlington and Burlington in the room together to talk about what practices and technologies they are using, South Burlington tends to use more new technologies. The goal of the grant is to support hands-on training that allows people to practice what they're learning and inform the training as well as related the Englesby Brook. Businesses are another important audience, she plans to talk to businesses within the Englesby Brook watershed to figure out how they're making salt application decisions and what can be done to help those people. The third piece of the grant is conducting custodial trainings on campus in multiple languages.
- Mark commented that [S.81](#) would establish 3 new positions, 2 in the Agency of Natural Resources, 1 in the Agency of Transportation for a Chloride Contamination Reduction program to train commercial and municipal salt applicators in best management practices, it seems to address many of the issues brought up in the survey Kris presented.
- Kris shared a link to the [Vermont Agency of Transportation's Snow and Ice Control Plan](#) and [New Hampshire's Green SnowPro Certification program](#).

7. Membership Recruitment Update – Katie Darr, Denise Smith

Breck Bowden applied over the summer and was appointed to the committee effective January 10th. There is one remaining vacancy, applications are due to Katie by February 29th. A subgroup of committee members will form a nominating committee to review the submitted applications and endorse a candidate following the March 11th meeting.

8. Meeting Wrap-Up

The VTCAC is scheduled to meet next on **March 11th from 5:00 – 7:00 pm via Zoom**. The focus of the next meeting will be on climate resilience and flood relief programs.