

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

Monday, June 13<sup>th</sup>, 2022

5:00 pm – 6:00 pm

## APPROVED MEETING SUMMARY

**Committee Members Present:** Mark Naud (Chair), Eric Clifford, Karina Dailey, Wayne Elliott, Bob Fischer, Lori Fisher, Hilary Solomon, Jeff Wennberg

**Committee Members Absent:** Denise Smith (Vice-chair), Sen. Chris Bray, Sen. Randy Brock, Rep. Kari Dolan, Rep. Carole Ode

**LCBP Staff in Attendance:** Sarah Coleman (VTANR), Katie Darr

**Speakers:** Joseph Ayotte

**Public Guests:** Tom Berry, Crea Lintilhac, Craig Roskam

Meeting summary by Katie Darr, Lake Champlain Basin Program (LCBP)

### 5:00 – 5:15 pm

#### **Welcome and Introductions**

Mark welcomed attendees.

#### **Public Comments**

No public comments were made.

#### **ACTION ITEM: Review and vote on the draft May 9<sup>th</sup> meeting summary**

Eric moved to approve the May 9<sup>th</sup> meeting summary. Bob seconded. The motion was approved unanimously.

### 5:15 – 5:45 pm

#### **USGS Synoptic Study of Glyphosate Entering Lake Champlain- Joseph Ayotte**

Joseph Ayotte, Supervisory Hydrologist in the New England Water Science Center provided an overview of the USGS pilot study to measure glyphosate, AMPA and neonicotinoids in streams draining into Lake Champlain from representative agricultural, urban, and wastewater treatment facility sources. The study was funded in large part by the Lintilhac Foundation. Part of the impetus of the project was to measure concentrations of compounds with a low laboratory reporting level. Sampling was planned to occur at 6 sites throughout the summer of 2021: Stevens Brook (mixed urban and agricultural), Rock River (agricultural), Englesby (urban), Potash Brook (urban), Burlington Main Wastewater Treatment Plant Outflow (urban), and Jewett Brook (agricultural). However, Jewett Brook had zero flow from May to October 2021 and no samples could be collected. The project was designed to sample a range of flows with 3-4 samples collected per site with at least 1 sample targeting a high flow event as compounds like glyphosate tend to be more mobile under high flow conditions. Only 1 high flow storm event was captured in Burlington during the study area. The samples took place under low streamflow conditions and are representative of straight groundwater discharge to streams. All of the data are included in the data release which is available at <https://www.sciencebase.gov/catalog/item/627954a8d34e8d45aa6e3c0a>.

Joe walked through some of the data highlights. Almost no glyphosate was detected during the entire summer. This is not particularly surprising because it didn't really rain and there was not a lot of runoff into the streams. A 0.08 sample of glyphosate at Englesby did follow a rain event. They also measured AMPA, which is one of the primary degradates of glyphosate. Glyphosate has a relatively short half-life of ~1 week and sticks strongly to

sediment. When glyphosate degrades to AMPA, AMPA has a much longer half-life and dissolves more readily in water. Even at low levels, the data do not show a lot of evidence of glyphosate, but there is lots of evidence of the breakdown products of glyphosate. Atrazine and atrazine breakdown products also appeared in both urban and agricultural sites with similar concentrations at both kinds of sites. Neonicotinoids appeared on a more regular basis than glyphosate or AMPA, but they were also at a fairly low level. The data will be further interpreted to look at the co-occurrence of contaminants and pesticides and their distribution in urban versus agricultural areas.

- Lori asked (1) what the timeframe for further data analysis is, (2) whether the dryness of the sampling period influenced the level of atrazine and neonicotinoids in general, and (3) whether they plan to repeat the study under other conditions given the low flow conditions of this sampling period. Joe confirmed that dryness has an impact. The hydrologic regime contributes to the things that control pesticide concentrations: the compound's half-life and how much they adsorb to stream particles. If a pesticide is applied during a time of marginal precipitation, it will stay in its application zone longer and degrade further and concentrations would be expected to be lower. Conversely, if you have direct runoff after application you might have higher concentrations at certain periods along the hydrograph. He agreed it would be good to repeat this study under different hydrologic regimes. USGS will be collaborating with Stone Environmental on their LCBP-funded monitoring and will be looking at the concentration of these compounds and others.
- Eric asked if there was a difference in the concentration of neonicotinoids in urban and agricultural areas. Joe's recollection is that they saw neonicotinoids in both settings, in some cases they were very similar but not in others. They will be interpreting this data further.
- Wayne asked whether the concentrations of some compounds in urban areas provide enough information to tie back to certain products being used in the public or private sector? Joe shared that thinking about what land uses are happening in small drainages and what concentrations of compounds we see will most likely allow one to shed light on the types of products being used. Looking at the co-occurrence of compounds will also shed light on products and uses.
- Bob shared that he was good friends with Greg Hilgendorf, a USGS colleague. Joe shared that there is a nice memorial plaque to Greg on the tributary to the Winooski in Montpelier near the post office building.
- Crea asked if the Stone Environmental Grant is multi-year and how much of that grant will go towards monitoring. Joe shared that it is a \$300,000 grant award largely aimed at the development of a framework for monitoring in Lake Champlain. It is not specific to pesticides, but it is inclusive of pesticides. Part of Stone's interest in working with USGS was to take advantage of the USGS neonicotinoid and glyphosate labs.
  - Mark added that the Request for Proposals and study were a direct response from the Technical Advisory Committee to the VTCAC's request that some baseline monitoring related to herbicides, pesticides, and other emerging contaminants begin. It is fairly comprehensive, but targeted in response to the VTCAC's request for a broad literature review, initial sampling, and development of a sampling protocol that may be used in the future. It was approved by the LCBP Executive and Steering Committees.

**5:45 – 6:55 pm**

**Round Goby Response Follow-Up**

Meg Modley was unable to join the meeting to provide an update. Updates on the status of Round Goby and the progress in developing a Rapid Response plan from New York will be shared at the upcoming LCBP Executive Committee meeting on July 7 from 1:00 -3:00pm. This meeting is open to the public, please contact Katie Darr ([kdarr@lcbp.org](mailto:kdarr@lcbp.org)) if you would like to attend. The Champlain Canal Aquatic Invasive Species Barrier Phase 1 study was released. The study report and appendices can be found [here](#).

The committee discussed the round goby response measures that have been taken so far. Mark shared that his daughter went through the canal shortly after its opening on May 24th and there was no meaningful outreach or education on round goby or aquatic invasive species. Lori asked whether they had scheduled entry and double drainage. Mark confirmed that they did have to go through a scheduled entry and they were double draining between locks 5 and 6, which was lower than expected. They did not explain the need for scheduled entry or double drainage to those coming through the canal. Lori suggested following up with a letter to reinforce the importance of their role in educating the public, especially as that is such a big part of their proposed response. Members agreed it would be valuable to follow up with a letter, Mark will draft the letter and share it with members.

**5:55 – 6:05 pm**

**Meeting Wrap-Up Discussion**

The End of Session Legislative Recap agenda item has been moved to the July Retreat agenda. Based on the poll responses, July 26<sup>th</sup> from 9am – 3pm is the target date for the July Retreat. The location is to be determined, ECHO and the Community Sailing Center are booked with camps. Potential venues include Main Street Landing, the Grand Isle Lake House, and Gordon House.

- Lori noted the importance of having our legislative members at the retreat. Legislative input is critical in the development of the Action Plan. Mark will reach out to confirm the Retreat date with the legislative members.
- Wayne suggested the conference room at the Burlington Main Wastewater Treatment Plant as a potential venue.
- Bob added that the South Burlington Wastewater Plant also has a conference room of similar size available to use.

Mark reminded the committee that elections of chair and vice-chair historically take place at the retreat. He and Denise are happy to continue serving, but also welcome others who may be interested in a leadership position to consider.

Wayne asked if there is a residency requirement for appointment to the committee. Mark did not believe so, members have tended to be based in the basin on the Vermont side.

More details related to the July retreat to follow soon.