

New York Citizens Advisory Committee (NYCAC) on Lake Champlain's Future

Monday March 29th, 2021
1:00 pm – 3:40 pm

MEETING SUMMARY

Attendance: Vic Putman (Chair), Steve Kramer, Charlotte Staats, Walt Lender, Peter Hagar, James Dawson, Tom Metz, Corrina Aldrich, Jackie Bowen, Rick Laurin, Fred Woodward, Chris Ballou

LCBP Staff: Erin Vinnie-Vollrath, Lauren Jenness, Katie Darr, Eric Howe, Colleen Hickey, Matt Vaughan, Laura Hollowell, Meg Modley, Myra Lawyer

Presenters: Meg Modley, Matt Vaughan, Mark Naud

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

1:00 – 1:10 pm

1. **Welcome and Introductions** – Vic Putman
2. **Public Comments**

No public comments were made.

1:10 – 2:10 pm

3. **Overview of LCBP Aquatic Invasive Species Work**– Meg Modley

Meg Modley, LCBP Aquatic Invasive Species (AIS) Management Coordinator, shared an overview of priority initiatives including the Lake Champlain Boat Launch Steward Program (BLS), the Champlain Canal AIS barrier feasibility study, and an update on the Vessel Incidental Discharge Act (VIDA) and the Great Lakes and Lake Champlain Invasive Species Program (GLLCISP). Her presentation can be found in the meeting materials.

Aquatic Invasive Species Overview: Invasive species are plants, animals, and pathogens that are nonnative to a region and cause harm to the environment, economy, or human health. Lake Champlain has 51 nonnative and invasive species but faces additional pressure from surrounding major water bodies. Canals have been identified as the largest pathway for the introduction and spread of AIS. Invasive species in the Erie canal system, but not yet present in Lake Champlain include Hydrilla, round goby, quagga mussels, and Asian clam. AIS management is costly and AIS can have significant environmental, economic, and social impacts to the region.

Boat Launch Stewards Program: The BLS Program has been active since 2007. The LCBP partners with the Adirondack Watershed Institute to cover the New York side of the lake. BLS are ultimately conducting a risk assessment. They conduct boat inspections, conduct decontamination as needed and where it is available, administer surveys, and deliver interpretive invasive species spread prevention messages to boaters on Lake Champlain. Decontamination stations at boat launches tend to be utilized more than stations on roadways. The BLS program obtained enough PPE to carry out the 2020 field season and maintained 10-foot distancing. The program is now well-situated to have in person and virtual trainings.

- Fred Woodward asked why there was not a decontamination station or stewards North of Point Au Roche considering the multiple points of access that exist. Meg noted that NY is well armored with decontamination stations at the busiest boat access locations. On Lake Champlain, there are NYSDEC decontamination stations located seasonally at South Bay, Ticonderoga, Willsboro, Westport, Port Henry, Port Douglas, Peru, and Plattsburgh. It is an outlier that there is not one on the northwest portion. Fewer people access the lake through those Northern locations, and it has been difficult to get stewards to apply for those locations. The NYCAC could help recruit stewards for those locations in the future.
- Fred noted that the antique classic boat show will be in Burlington next summer which will bring boats in from all over. Meg asked to be put in contact with the event organizers to ensure AIS prevention messaging is getting across before people arrive.

Partnership and the Champlain Canal Barrier: There is a long history of interest in the Champlain Canal as an AIS Vector. The Champlain Canal Barrier Feasibility Study was authorized in the Water Resources Development Act 2000 and amended in 2007 and funded through the USACE Section 542 program. The key attributes of a barrier are that it must be feasible, affordable, not impede boat traffic, have minimal non-target effects, and be effective against a range of taxa. Of six types of barriers identified in a 2005 Lake Champlain Sea Grant and UVM study, physical/mechanical modification of the canal and/or locks was identified to be the most effective against the spread of canal borne AIS. The LCBP worked with the Army Corps to initiate the feasibility study with matching funds from the Great Lakes Fishery Commission secured by Senator Leahy. The USACE study targets the height of the canal between locks 8 and 9 where the mouth of the Glen Falls feeder canal brings Hudson water to support water levels for navigation which drains both south and downstream into the Hudson drainage and north and downstream into the Champlain drainage. A study is underway to look at the cost/benefit analysis of different control measures including constructing a berm south of Lock 9, lifting smaller recreational boats at lock 9, and lifting larger marine boats at lock 9. They hope to have a cost benefit analysis report out by the end of this year.

Great Lakes and Lake Champlain Invasive Species Program (GLLCISP): The Vessel Incidental Discharge Act of 2018 (VIDA) established the GLLCISP. The GLLCISP is authorized up to \$50 million annually for AIS activities, but no money has been appropriated to the program yet. The Great Lakes EPA has been named as the administrator of the program, but it is unclear if appropriations would be made to different programs. In 2019, the GLLCISP presented a report to Congress with recommendations to achieve the program's purposes more fully including establishing a more robust Lake Champlain AIS program.

- Tom Metz asked if this initiative includes Canada, remarking that it is necessary to work on parallel legislation to have comprehensive coverage of the lake. Meg noted that VIDA legislation does not extend to Canada, but they have been informing their Canadian counterparts of VIDA legislation.
- Vic Putman asked if there is support needed by our legislators to move this forward. Meg agreed that it would be useful to bring awareness that the GLLCISP exists as it was added to VIDA just before it passed in 2018. We currently lack a comprehensive AIS monitoring program and implementation of this program would help address that gap.

2:15 – 2:55 pm

4. Review of the Lake Champlain Long-Term Monitoring Program – Matt Vaughan

Matt, the Technical Coordinator of the Lake Champlain Basin Program, presented lessons learned from the three decades of water quality monitoring through the LCBP Long-Term Monitoring Program. His presentation can be found in the meeting materials.

The Long-Term Monitoring Program has been a flagship program of the LCBP since its founding. As we continue to invest resources in the program, it is valuable to see water quality trends, especially in response to investments and factors outside of our control. The program conducts in-lake analyses and tributary analyses of key chemical, physical, and biological parameters. Tributary analyses are done using a weighted regression on time, discharge, and season (WRTDS) model to predict concentration and load along with USGS stream flow data. Many lake segments are at or near the EPA approved targets for phosphorus concentration. Missisquoi Bay, South Lake A, and St. Albans Bay are often above these limits, and are the subject of restoration efforts. The Northeast Arm is the only segment of the lake that has had a significant increasing trend of phosphorus concentration. There are no significant long-term trends for annual phosphorus loading from the Winooski River or Saranac River.

Nitrogen has decreased lake-wide since 1990 at shallow and deep sites, but this trend may be changing. The ratio of total nitrogen to total phosphorus (TN:TP) is changing, which has important implications for phytoplankton and cyanobacteria. The lower the ratio is, the more competitive nitrogen fixing cyanobacteria may be, which could lead to blooms.

Chloride concentrations are increasing lake-wide, and it is relatively well mixed throughout the lake and water column. Current concentrations are well below the EPA thresholds for chloride chronic and acute toxicity. We do understand how changing concentrations might impact the ecosystem.

The WRTDS model does not work as well for total suspended solids as it tends to vary with parameters that we do not measure.

- Fred Woodward asked if they have tried to determine how sediment load has changed from the lowering of the lake. Matt clarified that the data he presented is the result of what is measured in the tributary, they have not yet combined it with lake level data.
- Steve Kramer asked how to best handle tributary measurement during winter periods. Matt noted they have sparse chemical data for winter periods. He has extended the relationship between late fall and early spring into winter noting it is the best they can do even though it is not as accurate. Steve offered to share Miner's spring melt data.
- Vic Putman asked if it is possible to quantify what residuals accumulate to get a better idea of what is entrenched instead of what escapes. Matt explained that the implications of that are especially important for shallow bays as sediments are releasing nutrients. The most important loading for shallow sites is internal loading from sediments itself. There is not good data on what is in sediments in deep sites. There are studies from St. Albans and Missisquoi Bay to look at sediments and nutrient profiling, potentially looking for an engineering solution to prevent nutrients from released in water column. This kind of solution has been done in smaller waterbodies around the world. The question remains whether we can apply these technologies to prevent the availability of nutrient sources in a lake as large as Champlain or its bays.
- Vic Putman asked about chloride concentrations in the lake and whether that could have human health impacts. Matt reiterated that the EPA drinking water limit for chloride is well above what we see in Lake Champlain and there is not a human health concern. Vic also noted that the Mirror Lake study showed that salt entering the lake creates a denser volume at the bottom of

the lake which reduces turnover. Matt affirmed that we see the same thing in Lake Champlain, chloride makes water denser and concentrations are higher in the bottom of the lake.

2:55 – 3:25 pm

5. VTCAC Contaminants Monitoring Resolution – Mark Naud

Mark Naud, chair of the Vermont CAC, presented the VTCAC's Contaminants Monitoring Resolution. Presentations from the Vermont Agency of Agriculture, Food and Markets and the Agency of Natural Resources reported increases in the use of glyphosate and atrazine from several sources including, forestry, agriculture, and rights-of-way. This prompted the VTCAC to create the resolution asking the Steering Committee and the Technical Advisory Committee to formalize a routine monitoring and sampling program for the presence of herbicides, pesticides, and other toxins. The goal is to understand how much of these chemicals are making their way into streams or lakes. Mark also mentioned a USGS project that will be taking place this summer to look at glyphosate loading and potentially neonicotinoids in Lake Champlain.

The NYCAC did not have enough voting members present for quorum, but the seven members present voiced support for the resolution and agreed to consider working on a parallel resolution at a future meeting.

- Jim Dawson asked for DEC to present at a future NYCAC meeting to share what level of monitoring and identification is currently occurring or has occurred.

3:25 – 3:40 pm

6. NYCAC Discussion “Where Do We Go from Here?” – Vic Putman, Katie Darr, and Erin Vennie-Vollrath

Vic provided a general overview of the membership process. Katie provided an update on the work to formalize the membership process. At the next meeting, they will share a draft membership manual for review.

The NYCAC agreed to reduce the default meeting length from 3 hours to 2.5 hours.

Future agenda items: pesticide and herbicide monitoring, overview of CWICNY projects in the basin, update on LCBP Education & Outreach efforts in NY.

The next meeting is April 26th.