

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

**Monday, June 27th, 2022
1:00 pm – 3:30 pm**

APPROVED MEETING SUMMARY

Committee Members Present: Vic Putman (Chair), Jane Gregware, Steve Kramer, Tom Metz, Charlotte Staats

Committee Members Absent: Jackie Bowen, James Dawson, Ricky Laurin, Walt Lender, Hannah Neilly, Bill Wellman, Fred Woodward

LCBP Staff: Katie Darr, Mae Kate Campbell, Erin Vennie-Vollrath (NYS DEC), Erik Reardon (NYSDEC)

Presenters: Steve Kramer, Laura Klaiber

Public Guests: Rachel (Intern at Miner Institute), Anna Reynolds, Joe Gregware

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

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

Joe asked what the NYCAC was doing to ensure boats are dumping their waste properly.

- Erin suggested that more education and outreach may be needed.
- Jane noted the French/English language barrier may be contributing to improper pump out and waste disposal. This is hard to enforce.
- Tom shared that most marinas will let members use their pump out stations for free and for a charge for non-members.
 - Jane noted that individual landowners who are renting moorings do not have the pump out equipment. A neighboring campground rents out moorings to 10-20 boats and lacks a pump out station.
- Vic added that Willsboro considered creating a harbormaster position to help patrol the lake and enforce pump out rules. Willsboro Bay boat launch has a pump out facility, but no boats can moor up to it because it needs to be dredged. There are maintenance issues with existing pump out stations.

Jane asked whether there had been action on dredging the Chazy River to allow for more sailboats.

- Vic noted the US Army Corps of Engineers is responsible for dredging. Many years ago, he wrote a resolution for the town requesting help to move the dredging forward, but no action has been taken.

Joe asked if anyone takes samples of water for manure and if it was getting better.

- Erin confirmed that the long-term monitoring project out of SUNY Plattsburgh does. It changes year to year, depending on flow levels but on average it seems to be staying fairly constant. It also varies tributary to tributary.

- Tom added that the state beaches have to test all of the time, marinas probably do not have to test.
- Erin confirmed that state beaches test regularly for Harmful Algal Blooms (HABs) and E.Coli.

Joe asked why some places in Vermont discharge sewage into the water.

- Vic shared that these are called combined sewer overflows (CSOs).
- Mae Kate added that CSOs happen when stormwater and sanitary sewage are combined and carried by one pipe network—a combined sewer system—to a wastewater treatment facility. When heavy rainfall generates more stormwater runoff than can be accommodated by these combined systems, treatment facilities can be overwhelmed by the high volume of water; partially treated sewage may then enter the rivers and streams and eventually the Lake through overflow pipes. The number of CSOs within the Basin has decreased significantly since the 1990s. With funds from the Infrastructure Bill, there are plans to address many remaining CSOs.
 - Tom noted that this is still a problem for Plattsburgh City.
 - Mae Kate shared that LCBP has funded 3 phases of a project to identify and address illicit discharges in the City of Plattsburgh. LCBP also previously funded mapping of Plattsburgh’s sub-surface separate stormwater sewer system.

Joe asked if tiling provides a lot of benefits since rain would just runoff fields that were not tiled.

- Laura noted that a lot of different factors impact the efficacy and impacts of tiling including soil type, crop type, manure management. From an economic standpoint, tiling is beneficial, but there are risks that to be aware of.

Tom asked if agricultural soils are monitored to determine how much it has been degraded.

- Laura shared that CAFO farms are required to monitor soil every 3 years, so they are aware of their Phosphorus levels. If a threshold is reached, they cannot apply anymore manure to that area. Generally, they are not monitoring other biota in the soil. No-till and cover crop research demonstrates those practices increase soil biota diversity.
- Jane noted that the Ausable River previously had high phosphorus levels despite having very little agriculture and asked whether that was still the case.
 - Steve shared that there are natural sources of phosphorus, including forests.
 - Erin noted that the Ausable River Association has made a lot of progress. The [2021 State of the Lake Report](#) indicates long-term decreases in phosphorus levels.

3. ACTION ITEM: Review and vote on Draft April 25th NYCAC Meeting Summary

- No quorum, moved to the next meeting’s agenda.

4. Updates

Aquatic Invasive Species

Erin welcomed Erik Reardon, the AIS Outreach Specialist with LCBP/NYSDEC focused on the Champlain canal corridor. He conducts outreach to anglers, angler groups, stakeholders, and communities along the Champlain Canal to increase awareness of round goby and reduce the risk of overland transportation. He will educate stakeholders on bait fish rules and how to avoid bait bucket transfers.

Eric will also be talking to communities about the U.S. Army Corps of Engineers study to construct an AIS barrier.

USGS is conducting monitoring efforts to track the leading edge of round goby habitat in the Hudson River using eDNA, trawling, and electrofishing. Round goby has moved just downstream of lock 1 on the canal system. It has moved a little bit but has not yet made it to locks. Canal Corporation staff, DEC staff, and partners have been working on developing a rapid response plan based on thresholds of where round goby may be found. The plan is in development but should be out soon. The current actions being taken at lock 1 and 2 include scheduled lockages and double flushing before boats go through. Monitoring efforts also include VHS (Viral Hemorrhagic Septicemia) testing, as there is concern that round goby may be hosting this pathogen. The VHS results are not in yet. VHS can cause hemorrhaging of fish tissue and can cause the death of infected fish. The first threat of VHS occurred in 2009 and resulted in the bait bucket legislation we have today.

The first USACE released the [Champlain Canal Aquatic Invasive Species Barrier Study Phase 1 Report](#) in May. The recommendation is to construct a physical berm in the canal system to separate the two watersheds, boats would be lifted out of the water at the berm, cleaned and deposited on the other side of the berm. Phase 2 of the study includes design, permitting, and potentially additional studies to support the design of the selected alternative. It could take 18-36 months. Phase 3 is the implementation phase.

Vic added that DEC now requires all operators of motorized watercraft to certify that they have cleaned, drained, and dried their boats and equipment each time they launch into a new waterbody in the Adirondack Park and within 10 miles of the Blue Line. Boat Stewards can perform the inspection and issue certification, or boaters can follow Clean, Drain, Dry steps on their own and fill out a self-issued certificate online before launching their boat. More information is available [here](#).

Katie shared that at the June 13th Vermont CAC meeting, members discussed recent lock crossings and were disappointed in the outreach from Canals around round goby and aquatic invasive species. They have drafted a follow-up letter to their round goby resolution to press for additional education and outreach from Canals.

- Jane asked if anyone records who is using the locks and where they are coming from. That information is important to figure out what other areas should be targeted for round goby education and outreach.
 - Erin confirmed that the Canal Corporation does have some of that information. There are about 1,200 people using the locks. She was unsure if they track destination and point of origin.
 - Vic added that Fred Woodward has mentioned the antique boat show in Burlington which will have boats coming up through the Hudson. There is an opportunity to target education and outreach efforts towards that audience.
 - Erin shared that Erik's work will involve identifying the best target audiences and most effective communication styles for AIS outreach.

New York's Climate Act Disadvantage Communities Criteria public comment opportunity

New York State is looking for comments on the Draft Disadvantaged Community Criteria. **The public comment period has been extended to August 5th.** According to the draft criteria, only 4 communities in the New York portion of the basin are classified as disadvantaged communities. LCBP is working on refining a definition of communities with environmental justice concerns that is appropriate to our Basin

communities. This definition is required by EPA to determine which communities will be eligible for project funding through the Bipartisan Infrastructure Legislation. A summary document of relevant New York and Vermont definitions is included in the meeting materials. **LCBP welcomes thoughts on what should be included in the definition of communities with environmental justice concerns.** Vic shared some environmental Justice concerns that impact New York Lake Champlain Basin communities but are not reflected in the draft criteria including: people who are impacted by salinization but are not being compensated, acid rain contamination, and mercury contamination.

- Jane asked if there has been much work to reduce the amount of salt being applied. Vic noted that many communities have implemented monitoring and are reducing salt use. Erin added that the New York State Salt Task Force has been meeting and hopes to release a report this summer. Lake Champlain Sea Grant has also been doing a lot of work related to road salt reduction.

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

The NYCAC will meet next in the fall. There will be another round of member recruitment in the fall to fill open seats. Suggested topics for future meetings: AIS updates, stream gauge updates, and Climate Smart Communities program overview.

6. Tile Drainage & Silage Leachate Treatment Presentation and Field Visit– Steve Kramer, Laura

Steve and Laura presented an overview of the history of Mr. Miner and the work of the Miner Institute. Their presentation will be included with the meeting materials. One of the areas of research at Miner Institute is field crops and nutrient management. The goal of the nutrient management research program is to evaluate best management practices that optimize crop yield/quality and minimize nutrient losses to the environment. Ongoing research at Miner is looking at the amount of Phosphorus and Nitrogen leaving fields in the form of surface runoff and tile drain flow and the effect of controlled subsurface tile drainage and cover crops as best management practices for reducing nutrient export. Tile drainage is one of the primary technologies used to drain excess water and reduce the incidence of ponding and crop loss. Water that drains through the tiles interact with the soil in the bulk profile where the water interacts with reactive soil particles that can remove things like nutrients and agrochemicals from the soil. As soil dries macropores develop, when a macropore ends at a tile, high nutrient water exits the tile drain. It is necessary to understand the prevalence of cracks, especially for manure application. Soluble phosphorus in manure can immediately feed an algal bloom. One possible solution is to till just over tile lines to fill cracks, to fill cracks while leaving some of the soil biology undisturbed. This requires knowing where the tiles are and is becoming a more realistic solution with precision agriculture. Drainage is becoming increasingly important with a changing climate.

The paired tile drainage study involves two fields that are treated the same for two years, with a treatment added to one of the fields in the third year, and four additional years of monitoring. The fields receive regular tillage and manure application, following typical management of dairy farms in the region. Most of the nutrient losses are from surface run-off. On average $\frac{1}{3}$ of nutrient losses has come from tile drains with 83% of water draining through the tiles. There is more water that leaves the field but it's lower in phosphorus concentration. There is a tradeoff between tile flow and phosphorus loss. 1.4% of phosphorus applied to the field is lost, most is being retained in the fields. The majority of phosphorus is lost in the non-growing season (late October to early April), figuring out how to address non-growing season losses is a major goal.

Silage is a type of animal feed that is kept in an acidic brine. Silage leachate can have a negative impact on aquatic life. At Miner Institute, they have a vegetative treatment area for silage leachate. They have installed a series of wells that can be pumped out to promote sheet flow across a grass structure. The wells remove a lot of phosphorus. In 2021, they added a clarifier to help minimize particulate matter from the silage bunker. To improve the system, they need to know how much water is flowing through in order to come up with the mass that is moving through the system.

- Tom asked if there are problems during the dry season since the water that would have been in the system was removed. Steve clarified that the water is retained in a grass field which naturally equilibrates and evaporates over time, it is not being artificially removed. Laura added that the only water that is treated from the silage leachate is what lands on the feed bunk concrete, that water needs to be funneled to a vegetative area.
- Tom asked about tile drainage and drought. If water is drained from tiled fields, it would promote a deeper root structure. If there is a drought, that water is lost. Has there been any thought to store tile drained water and reapply it to the fields if needed? Laura noted that there is work being done on that in more arid regions. Our region has a much greater volume of water. One thing that is being done to combat more recent droughts is to slow the rate of tile drainage during the non-growing season.

Meeting attendees visited one of the study sites.



The Miner Institute Open House is on August 6th from 12-4.