



# LAKE CHAMPLAIN STEERING COMMITTEE

## MEETING SUMMARY

**APRIL 13-14, 2021**  
(VIA WEBINAR/TELECONFERENCE)

### Attendance:

**Steering Committee members:** Julie Moore (Meeting Chair, VTANR) Joe Zalewski (NYS DEC), Nathalie Provost (Quebec MELCC), Vic Putman (Chair, NY CAC), Pierre Leduc (Chair, Quebec CAC), Mark Naud (Chair, VT CAC), Buzz Hoerr (Chair, E&O Committee), John Krueger (Chair, HAPAC), Neil Kamman (Chair, TAC), Mel Cote (EPA R1), Mario Paula (EPA R2 for Rick Balla), Maya Dehner (USACE), Andrew Milliken (USFWS), Breck Bowden (Lake Champlain Sea Grant), Dennis Deweese (NRCS NY for Blake Glover), Stephanie Mikesell (NYS Empire State Development), Laura DiPietro and Ryan Patch (VT AAFM for Alyson Eastman), Laura Trieschmann (VT ACCD), Jenn Callahan for Craig DiGiammarino (VTRANS), Joe Giordano (NY Local Municipal Representative – Town of Ticonderoga), Daniel Mackay (NYS Office of Parks, Recreation and Historic Preservation), Brian Steinmuller (NYS Dept of Agriculture and Markets)

**Staff:** Eric Howe, Jim Brangan, Colleen Hickey, Ryan Mitchell, Elizabeth Lee, Meg Modley Gilbertson, Matthew Vaughan, Lauren Jenness, Mae Kate Campbell, Katie Darr, Kathy Jarvis, Erin Vennie-Vollrath (LCBP-NYS DEC), Koon Tang (NYS DEC), Lauren Townley (NYS DEC), Julie Berlinski (NYS DEC), Sarah Coleman (LCBP - VTANR), Pete Laflamme (VTANR), MaryJo Feuerbach (EPA R1), Bryan Dore (EPA R1), Peter Zaykoski (NEIWPCC), Susan Sullivan (NEIWPCC)

**Guests:** Tom Berry (Sen. Leahy's office) Haley Pero (Sen. Sander's office), Thea Wurzburg (Cong. Welch's office), Peter Isles (VTANR)

*Julie Moore (VTANR) Chaired this meeting.*

### April 13, Day 1 Teleconference and webinar open, networking

**9:45 AM**

#### Introductions

Julie Moore led a round of introductions.

#### Approval of minutes from previous meeting

#### **ACTION ITEM: Approve Meeting Summary from December 2020 Steering Committee meeting**

- **Motion By:** John Krueger
- **Second by:** Joe Zalewski
- **Discussion on the motion:** Neil Kamman noted that the TAC has placed the discussion around possible funding sources for the Lower Saranac River's Restoration on an upcoming TAC agenda. Pierre Leduc noted a typo on page 4 that Eric Howe incorporated into the meeting summary.
- **Vote:** All in favor
- **Abstentions:** None

### Public Comment

**10:20 AM**

No public comments were offered.



## Congressional Updates

10:30 AM

- **Tom Berry, Sen. Leahy's Office:** Senator Leahy is the chair of the appropriations committees and Senate Pro Tempore. Our office is tracking a lot of moving parts for the FY22 budget and discussions around earmarks have been active in the senate and house, which Senator Leahy supports. Staff are going through the normal process for identifying priorities. Biden's skinny budget has increased funding on most water infrastructure, water quality, climate priorities which can complicate the budget in a good way compared to the previous administration. In addition, the large COVID-19 relief bill passed last month commits billions of dollars to States, and some of the funds can be put toward water infrastructure, water quality, and climate projects. Senator Leahy is also working on bill to reauthorize the CVNHP, extend its sunset date, and expand its funding authorization with Congressman Welch and Senator Sanders. They are hoping to get a standalone bill into the Senate quickly, find a NY delegation member to co-sponsor, and the office can run drafts by those on the call most involved with the CVNHP.
- **Haley Pero, Sen. Sander's Office:** The increases in funding has provided the Senate with a lot of different opportunities. Senator Sander's staff met with EPA R1 as part of their annual update and is pleased with the collaboration with state and local partners. The new administration provided a new, re-energized change in their tone of work, however there are concerns from staff about bandwidth. Biden has put high-level priorities into his Infrastructure Bill, including investments to upgrade and modernize significant amounts of hard infrastructure and nature-based solutions with \$56B in grants and low-cost flexible loans, \$10B toward PFAS, and \$10B to the creation of a Civilian Conservation Corps. Senator Sander's office continues to track and advance VT priorities.
- **Thea Wurzburg, Cong. Welch's Office:** Congresswoman Pelosi is hoping to move quickly on the Infrastructure Package by July 4<sup>th</sup>. Congressman Welch is involved in the Energy and Commerce committees and the house has come to an agreement on earmarks. Congressman Welch's office is in the process of going through the proposals submitted for community funding projects which will soon be posted on the website. The next few months will be busy with the passing of all of the appropriation bills, reauthorizing the National Heritage Areas, and the big public lands blanket reauthorization.

## FFY21 LCBP Budget Presentation

10:45 AM

### LCBP FY20 Annual report – Eric Howe

Eric Howe stated that the main reason the Steering Committee is gathered today is to approve the FY21 budget. He provided an overview of the [LCBP 2020 Annual Report of Activities](#) and its [summary](#) which is a compilation of all of the LCBP work completed in FY20 (about 500 active projects!) organized around OFA goals. The report is perhaps a bit longer than other reports because of the emergency COVID-19 awards LCBP issued and additionally, many grants were extended due to the pandemic. The length of the report reflects the strong support LCBP has received from our congressional delegation.

### FY21 Key Functions – Eric Howe

The draft LCBP budget for FY21 is \$16.019M in expected appropriations. GLFC is level funded; NPS funding has increased to \$400K from \$330K last fiscal year. The EPA appropriation has increased by approximately \$2M.

The proposed FY21 key functions budget is \$3.03M. Staff lines are level-funded from FY20. Office operations lines were reduced due to the pandemic. New proposed tasks include the 2022 Research Symposium, commemoration of the 50<sup>th</sup> Anniversary of the Clean Water Act, LCBP Diversity Equity and Inclusion initiatives, and support for the Champlain-Adirondack Biosphere Network (CABN).

\$480K of the drafted FY21 budget is going toward the CVNHP, \$923K for education and outreach budget, \$5.91M for the technical budget, and \$6M for the VT TMDL projects.



**Technical Budget – Neil Kamman, TAC Chair and LCBP technical team**

The LCBP Technical Team provided a brief highlight of seven FY20 projects via a PowerPoint presentation. The Steering Committee asked clarifying questions about the Lake Champlain Boat Launch Steward Program's decontamination stations and about the hydrodynamic modeling report. The NYCAC Chair noted that the report listed a gap to be river temperature data. NYS DEC asked for the Steering Committee to think about modeling approaches for their 2026 update of the NY Lake Champlain TMDL. It was noted that the Missisquoi Bay sediment study may be delayed if the border remains closed due to the pandemic.

The LCBP Technical Team summarized the proposed FY21 Technical Core projects. The Steering Committee asked clarifying questions about the funding for the LCBP/NEIWPCC NY Agronomist Position. NYS DEC, LCBP, and EPA R2 concurred that it is more efficient for the funding to go through NEIWPCC to support the position rather than having a direct contract with NYS DEC.

The Steering Committee discussed the possibility of having a conversation about the procurement processes for the larger long-term project components of the LCBP budget such as the Cyanobacteria Monitoring Program Volunteer Network and the Long-Term Monitoring Program. Eric Howe noted that LCBP is within EPA's procurement guidelines to direct funds to the organizations but can work with the processes and have a discussion if the Steering Committee is interested in doing so. LCBP can easily issue RFPs and the competition might yield interesting results, but the programs are running smoothly and at this point it is unknown if LCBP would end up contracting with a different organization.

- Lake Champlain Sea Grant noted that this process could be done every 3-5 years as a middle-ground between the older every year procurement process and the new process.
- The TAC Coordinator added that the TAC does review and approve the workplans of the core line-item projects each year and could look to do a more in-depth review.
- VTANR noted that creating an intentional forum for periodically revisiting the work would have real value, especially for the cyanobacteria monitoring program.
- Senator Leahy's office added that this may be a longer-term exercise. LCBP has had the luxury of seeing an incremental growth in the core projects budget which may not always be the case.

**Line-Item Projects – VT DEC, NY DEC, LCBP staff**

Lauren Townley, Sarah Coleman, and Meg Modley reviewed the seven FY21 line-item requests. The Steering Committee asked clarifying questions about how the enhanced agricultural best management practices line-item is coordinated with the NY Agronomist position. NYS DEC answered that they have a memorandum of understanding with the NYS Dept of Agriculture and Markets to contract directly with the county soil and water conservation districts (SWCDs) and the NY Agronomist works directly with the SWCDs and farmers to identify opportunities for nutrient management plans and implementation projects. The majority of the funding would be going to purchase covercrop seeds and the SWCD staff time to work with farmers to implement the covercropping. The Steering Committee asked clarifying questions about the target sub watershed of the Municipal Roads General Permit and Rural Roads Acceptable Management Practices Implementation line-item. VTDEC answered that the priority sub watershed(s) will be identified through the project's request for proposals process.

**Executive Session**

**1:00 PM**

After lunch, the Steering Committee entered Executive Session to review the competitive technical budget program requests.



#### **ACTION ITEM: To enter Executive Session.**

- **Motion By:** Neil Kamman
- **Second by:** John Krueger
- **Discussion on the motion:** None
- **Vote:** All in favor
- **Abstentions:** None

#### **Exit Executive Session.**

### **FY21 TMDL Projects Review – VT DEC**

**2:00 PM**

VTDEC provided an overview of the existing TMDL projects which are all underway and making good progress after experiencing delays due to the COVID-19 pandemic. The Steering Committee requested an update on the wetlands restoration and mapping project at a future meeting which should include how the restoration projects are addressing fish and wildlife passage and habitat and how VTDEC is making financial arrangements with the farmers who own the land. EPA R1 noted that the presentation speaks to the thoughtful, deliberative process we have taken to develop the TMDL projects and that the process is working and should continue.

### **Presentation: 2021 State of the Lake update - LCBP Staff**

**2:30 PM**

LCBP Staff presented an update on the 2021 State of the Lake Report which is on schedule to be published at the end of June via a digital release. Staff noted that they brought the drafted report into several 8<sup>th</sup> grade classes to get feedback. Staff then reviewed each section and highlighted new figures and graphics. The Steering Committee provided feedback on the new phosphorus loading to lake segments graphic, the new annual mean chloride concentration graphic, and new combined sewer overflows infographic.

### **Jurisdictional Updates**

**3:15 PM**

- **Nathalie Provost, Quebec MELCC:** It is a matter of weeks, at most, to have the finalized Memorandum of Understanding between QC and VT that will strengthen our continued collaboration. QC appreciates and is proud of the work being done and thanked VTANR for the partnership. VTANR also noted their appreciation of the partnership. Additionally, QC MELCC will have a new QC Coordinator in the upcoming months.
- **Pierre Leduc, QCCAC:** OBVBM will have a boat launch station in Venise-en-Quebec this season and has a long-term plan to make the station permanent. OBVBM received \$8K to do an inventory of water chestnut on the Pike River. Work continues to help farmers apply erosion reduction methods to farm ditches. To strengthen communication with farmers a farmer advisory committee has been formed. OBVBM is also working with the City of Sutton and commercial tourism operators on the Missisquoi River to find a balance between protecting critical habitat areas while maintaining recreational access as Canada doesn't have the same Wild and Scenic designation as the US does and the pandemic has placed an increased recreational pressure on the river system.
- **Koon Tang, NYSDEC:** Within the newly approved NYS Budget, there is a healthy line for the Environmental Protection Fund. Because of that, we expect that WQIP implementation grant will be strong this year. Last year it was paused due to the pandemic. Within that there is a non-point source planning grant. Important grant program, allows us to build a project pipeline related to stormwater BMPs, any kind of non-point project not supported by ag non-point source grants. Reviewing wastewater P loading permits, looking for grants to help with implementation. Drinking water source protection program; several years ago we received funding to develop a program to help communities/municipalities to make drinking water source protection plans. Evaluates pressures to water sources (chemicals, nutrients, toxins) that could affect surface or groundwater sources. Pilot program about to be launched, a few communities in LCB. Wastewater and stormwater management;



## LAKE CHAMPLAIN STEERING COMMITTEE - MEETING SUMMARY

APRIL 13-14, 2021

(VIA WEBINAR/TELECONFERENCE)

started pilot program to help communities better upkeep their sewage and wastewater treatment plans. Was a 3-year program, now working to develop another round of funding for a phase 2. This time around, we'll focus on engineering capacity. We want to train more engineering firms to undertake this work. Eventually this may be a permit requirement to undertake long term stormwater management.

- **Brian Steinmuller, NYS Dept of Agriculture and Markets:** The Agricultural non-point source program also was funded at \$15M, looking forward to getting those funds out the door. We recently were able to make awards for funding that was available 2 fiscal years ago: 4 projects funded at about \$0.5M in the Lake Champlain Basin. There also are awards through climate resilient farming program (\$200K for projects in the Basin around soil health). Program is focused on building soil carbon, but there are water quality co-benefits. Essex County has participated at a high level in this program. Piloting implementation funds to go along with planning grants. Excited to see what conservation districts do with those funds. NYS DAM has a new MOU with NYS DEC to pilot some innovative approaches to soil health projects and buffers, excited to bring that to the LCB.
- **Mel Cote, EPA R1:** For those who apply to grants from EPA R1, the deadline is mid-July. See written submission for additional updates.
- **Mario Paula, EPA R2:** EPA R2 does not have a new regional administrator yet and we are still operating under the acting administrator. The new EPA administrator wants to increase emphasis on climate change and environmental justice, and we are excited about that.
- **Andrew Milliken, USFWS:** See written update which highlights the VTDEC and USFWS net pen pilot project.
- **Breck Bowden, Lake Champlain Sea Grant:** See written updates which highlight a series of coastal tourism videos being rolled out in May that will be used to train state park staff but may also have utility to others, Sea Grant publications that have been compiled in a library, and two exciting partnerships with DEC Lakes and Ponds and with Audubon Vermont on conservation research fellow. Sea Grant has some additional funding that may be valuable for other partnership positions and I'd be happy to chat with VT and NY about the opportunities.
- **Maya Dehner, USACE:** Work on Waterbury dam is continuing. The canal barrier study update was provided by Meg Modley. Rifat and I working on scoping for 542 projects for which summaries have been approved and we are working to get project partnership agreements together.



## April 14, Day 2 Teleconference and webinar open, networking

9:45 AM

*Pete LaFlamme (VTANR) Chaired this meeting.*

### Attendance:

**Steering Committee members:** Pete LaFlamme (Meeting Chair, VTANR) Joe Zalewski (NYS DEC), Nathalie Provost (Quebec MELCC), Vic Putman (Chair, NY CAC), Pierre Leduc (Chair, Quebec CAC), Mark Naud (Chair, VT CAC), Buzz Hoerr (Chair, E&O Committee), John Krueger (Chair, HAPAC), Neil Kamman (Chair, TAC), Mel Cote (EPA R1), Mario Paula (EPA R2 for Rick Balla), Maya Dehner (USACE), Andrew Milliken (USFWS), Breck Bowden (Lake Champlain Sea Grant), Steve Garceau (Quebec Ministère des Forêts, de la Faune et des Parcs), Laura DiPietro (VTAAFM for Allison Eastman), Laura Trieschmann (VT ACCD), Joe Giordano (NY Local Municipal Representative – Town of Ticonderoga), Brian Steinmuller (NYS Ag), Gil Gerardo Gollo (DRMONT-E St Hyacinthe)

**Staff:** Eric Howe, Jim Brangan, Colleen Hickey, Meg Modley Gilbertson, Matthew Vaughan, Lauren Jenness, Mae Kate Campbell, Katie Darr Kathy Jarvis, Peter Zaykoski (NEIWPCC), Erin Vennie-Vollrath (LCBP-NYDEC), Koon Tang (NYS DEC), Lauren Townley (NYS DEC), Julie Berlinski (NYS DEC), Sarah Coleman (LCBP VT ANR), Pete Laflamme (VTANR), MaryJo Feuerbach (EPA R1), Bryan Dore (EPA R1), Rifat Salim (USACE), Susan Sullivan (NEIWPCC)

**Guests:** Tom Berry (Sen. Leahy's office)

## Introductions. *New participants introduced.*

10:00 AM

Steve Garceau of the Quebec Ministère des Forêts, de la Faune et des Parcs introduced himself.

## Advisory committee updates

10:15 AM

The Education and Outreach Committee, Heritage Advisory Committee, Technical Advisory Committee, New York Citizens Advisory Committee, Quebec Citizens Advisory Committee, and Vermont Citizens Advisory Committee all referenced their written updates.

## FFY21 LCBP Budget Presentation, Continued

10:30 AM

### Education and Outreach Budget – Buzz Hoerr & Colleen Hickey, E&O Committee Chair & Coordinator

The E&O Committee Coordinator provided an overview of FY20 Project highlights and the FY21 Education and Outreach budget. The Steering Committee expressed strong support for the proposed 2022 Classroom Summit which will bring over 3,000 students together for a student conference. They recommended getting some of the monitoring community together to be a part of the conversations, including the Forest Ecosystem Monitoring Collaborative (FEMC) as they are experts in housing volunteer datasets. The Steering Committee also recommended that LCBP think about translating the SOL exhibit into other languages in addition to English and French for New American communities.

## Executive Session

The Steering Committee entered Executive Session to review the competitive education and outreach project requests.





## LAKE CHAMPLAIN STEERING COMMITTEE - MEETING SUMMARY

APRIL 13-14, 2021

(VIA WEBINAR/TELECONFERENCE)

### **ACTION ITEM: To enter Executive Session.**

- **Motion By:** Buzz Hoerr
- **Second by:** Neil Kamman
- **Discussion on the motion:** None
- **Vote:** All in favor
- **Abstentions:** None

### **Exit Executive Session.**

#### **Champlain Valley National Heritage Partnership Budget– Jim Brangan**

Jim introduced interpretive themes and the focus of heritage area programming. He provided overview of CVNHP and recent work including the wayside exhibit inventory, and virtual 2020 CVNHP international summit and highlighted collaborative work with local museums and organizations.

### **Executive Session**

The Steering Committee entered Executive Session to review the competitive CVNHP project requests.

### **ACTION ITEM: To enter Executive Session.**

- **Motion By:** Neil Kamman
- **Second by:** Brian Steinmuller
- **Discussion on the motion:** Breck Bowden recused himself for the CVNHP Executive Session.
- **Vote:** All in favor
- **Abstentions:** None

### **Exit Executive Session.**

#### **FFY21 LCBP Budget discussion and approval**

**12:30 PM**

Eric Howe reviewed the adjustments to the GLFC funding to accommodate the additional project of interest identified during Executive Session.

### **ACTION ITEM: Approve FFY2021 LCBP/CVNHP Budgets**

- **Motion By:** Neil Kamman
- **Second by:** John Krueger
- **Discussion on the motion:** Eric Howe removed \$40K from a number of different GLFC staff lines. Reduced E&O coordination (have lots for biosphere). Communications and publications reduced to \$0 because of funds in reserve. Technical coordination and AIS coordination reduced by a few thousand. Removed from administrative, office operations.
- **Vote:** All in favor
- **Abstentions:** None

#### **LCBP updates - Eric Howe**

**1:00 PM**

Written updates stand. Eric acknowledged the work of the Advisory Committee chairs in the LCBP budget process. They are working for us as retirees or taking time out of their day jobs not just to serve but manage committees. It is a big job to plan out committees, coordinate with staff, committees, related work. They also are responsible, with support from staff, for the bulk of the work that is approved and identifying new priorities.



**June Steering Committee Summit - Eric Howe, Lauren Jenness**

**1:05 PM**

Eric and Lauren reviewed the approach to the June 2 Summit that will serve to identify themes to focus the budget around within the four OFA goals. We are holding two pre-Summit roundtable meetings in advance (May 19th and May 20th 10-11:30). We are going to group goals together for each day to initially identify some ideas for budget themes and OFA 2022 priorities. The idea is to have informed, rich conversations, and to come out of these roundtables with a straw list of themes to discuss with larger group on June 2nd. On June 2nd, we will have an introductory presentation and then roll into breakout groups with participants into different cohorts to create a mix of backgrounds across the cohorts. Each cohort will focus on each goal. The Steering Committee members will approve the themes for the budget at the end of the day.

**LCBP Diversity, Equity, Inclusion - LCBP Staff**

**1:30 PM**

The Steering Committee just approved a \$10K line item for DEI-related initiatives for LCBP. We are thinking about the groups and communities we connect with, how they are accessing information, the public facing work we do with outreach activities and grant programs and we are looking internally with staff, advisory committees, and staff-driven work. The three LCBP advisory committees - TAC, HAPAC, E&O – are reviewing their charge and their membership, and are reviewing their approach to fill gaps in expertise and look at ways to build diversity of members across committees. The Staff and Chairs are prepared to speak to these conversations within their respective committees.

- HAPAC: We have set up a spreadsheet to look at the areas of expertise we feel we should have on the Committee, current membership, and how current members cover the areas of expertise. This process will make it easier to identify strengths and weaknesses. We will then try to recruit to fill weaknesses. We certainly will be looking at diversity for new members.
- TAC: currently has 21 members, lost several over past 1-2 years to retirements and other circumstances, so TAC has gaps to fill, and also are thinking about how to increase diversity. First we are looking at list of expertise areas, hoping to gain more perspective. This includes conflicts of interest, deepening expertise in some areas, and will explicitly make it clear that we will value different types of voices - underserved communities, people of color, and different backgrounds. TAC will work on this over the next couple of meetings, and maybe over the summer. TAC went around table and identified names, Neil also thinks there is value to doing outreach, and clear outreach for what it means to serve on the committee.
- E&O: We have had a lot of conversations and thoughts. Buzz noted that he is a big believer in the wisdom of committees and will not make profound statements. He feels that the chemistry in committees is as important or more than whose running it. Need to find out what the E&O committee thinks, and are scheduling a meeting to have that conversation now. Buzz is pleased to see that in the latest animated LCBP videos, there are little figures of color, and at least we are doing that without even thinking. E&O needs to discuss who we want to include, but want to avoid the appearance of "quotas". Colleen added that we are taking a look at SOL, reflecting on our committee make up, and areas of expertise that range from marketing, to K-12, to college organizational development, interpretation, and environmental literacy. Katie is exploring other programs similar to LCBP to learn how they are addressing volunteer committee recruitment through the DEI lens.
- Mark: thanked the LCBP staff for their work on this. As we think about our work, its focused on doing this hard work for future generations. In E&O we have strong connection to youth, but not many other places in our committees. Now there's an opportunity for mentoring and engaging youth on committees, and to engage future leaders. The next generation is far smarter, connected, and engaged in realities in a globalized diverse population. It would be great to create opportunity for younger engagement on committees as we move along.





## LAKE CHAMPLAIN STEERING COMMITTEE - MEETING SUMMARY

APRIL 13-14, 2021

(VIA WEBINAR/TELECONFERENCE)

- John added that HAPAC met as full committee month ago, and discussed that for better or worse many HAPAC members have been on the committee since the CVNHP was created. Everyone without exception was enthusiastic of being more inclusive. HAPAC is going through their process and John is hopeful it will result in some additions. To Mark's point, HAPAC specifically talked about student representation on the Committee, but need the right kind of student. John encouraged the Steering Committee to include student voices on the advisory committees.
- Eric added that the Committees, chairs, and staff are all thinking about this, and ideas that could be shared as well. Including youth is a great step forward – graduate and college students can bring great perspective and energy.

### **Resolutions from VT CAC for herbicide and pesticide monitoring - Mark Naud 2:15 PM**

Mark noted that the Resolution from the Vermont CAC, with support from the members of the NY CAC, was shared with the meeting materials. The CAC requested that LCBP explore options to formalize a monitoring program for agrochemicals in the lake. This request stems from recognition that there is a trend of increased use of herbicides and pesticides with an increased use of cover cropping in the Basin. There does not appear to be a coordinating reporting mechanism, monitoring mechanism, or sampling program for the presence of what that increased use of these chemicals might be. There are some initiatives, but the CAC has heard there's challenges with access and coordination of data. The CAC is asking TAC to investigate what sampling process and a budget would look like for a coordinated monitoring program. The CAC is seeking comment and support from SC.

Neil added that TAC did have a preliminary conversation around this topic last week. TAC discussed limiting that the request to some pesticides that are most commonly used or most of concern, and to learn that from experts. That would inform a subsequent conversation about what a design could look like, whether we should incorporate something routine. It will be important to collaborate with agencies that regulate these pesticides in all three jurisdictions. We want to make sure the program is broadly applicable to the Basin, and not solely focused at specific subwatersheds or particular producers.

Vic shared that the NYCAC did receive a copy of the VTCAC resolution, and although the NYCAC didn't have quorum, all members present were enthusiastically in support of the resolution. Vic wants the Steering Committee to know that NY is totally behind this resolution to move forward.

There was substantial discussion around this topic; ultimately the group agreed that LCBP and the TAC should explore this request further. TAC will assemble a group of experts for their May meeting to learn about current and historical monitoring efforts, which pesticides might be of greatest concern, and potentially costs for analyses. The Steering Committee recognized the value of cover crops for agricultural practices, including many benefits to water quality and soil health. However, they also felt it is important to understand the tradeoffs associated with elimination of cover crops each spring, which is commonly done through herbicide applications. The group discussed iterative approaches and the need for literature reviews. TAC will consider this in May, and LCBP will bring some suggestions to the Steering Committee for their September meeting.

### **LCBP Guiding Principles Update – Quebec local representation (Eric Howe) 3:00 PM**

Tabled to September 2021 Steering Committee meeting.

### **LCBP Advisory Committee Membership Appointments 3:15 PM**



## LAKE CHAMPLAIN STEERING COMMITTEE - MEETING SUMMARY

APRIL 13-14, 2021

(VIA WEBINAR/TELECONFERENCE)

The Steering Committee entered Executive Session to discuss Education & Outreach Committee membership nominations.

### **ACTION ITEM: To enter Executive Session.**

- **Motion By:** Breck Bowden
- **Second by:** Pierre Leduc
- **Discussion on the motion:** Julie Berlinski recused herself from the Executive Session.
- **Vote:** All in favor
- **Abstentions:** None

### **Exit Executive Session.**

### **ACTION ITEM: Approve the Education & Outreach Committee membership appointments**

- **Motion By:** Mel Cote
- **Second by:** Breck Bowden
- **Discussion on the motion:** none.
- **Vote:** All in favor
- **Abstentions:** Pierre Leduc and Joe Zalewski abstained.
- Julie Berlinski (NYS DEC) and Anthoni Barbe (OBVBM) were appointed to the Education & Outreach Committee.

## **Closing Comments**

Koon shared that this will be his last Lake Champlain Steering Committee meeting, as he will be retiring from NY DEC next week. Koon shared the following comments with the Steering Committee:

I wanted to address all of you. I joined NYDEC close to 31 years ago, but the last decade or so I've been in the division of water. My first major job was permitting, and it was challenging. Doing this work, working with watershed programs, has been really rewarding. I've been thinking about my retirement, started laying the ground so that after I leave, LCBP will have strong support from NY. I appreciate the opportunity to work with you all to protect this beautiful resource. I'm an outdoor person, so appreciate this work. I've seen the strength, knowledge, dedication, professionalism of everyone in this group. Will miss John's story telling. Thanks to all of you. Lauren Townley is going to take over my involvement with the LCBP. She has been with DEC for many years, has great expertise. She will easily fill my shoes to advance this work. Julie Berlinski, Ryan Waldron, and Erin Vennie-Vollrath will assist. I wanted to acknowledge Eric's great leadership and the hard work and dedication of all the LCBP staff. I feel honored to be able to work with you all. I promise I will pay you back with more High Peak hikes and catching more trout.

- Steering Committee members shared their sentiments with Koon, and wished him well in retirement.

Eric thanked Julie and Pete for managing the meeting and keeping us on track. A lot of hard work goes into this meeting, and it is the culmination of 8-10 months of work. LCBP is fortunate to have strong support from our congressional delegation and our committees. Next steps will be to build workplans and agreements with EPA, GLFC, and the NPS for October 1<sup>st</sup> to start these new projects moving forward.

## **Meeting adjournment**

**3:30 PM**



## LAKE CHAMPLAIN STEERING COMMITTEE - MEETING SUMMARY

**APRIL 13-14, 2021**

(VIA WEBINAR/TELECONFERENCE)

### **Anticipated Outputs for this meeting include:**

1. Approval of Meeting Summary from December 2020
2. Review of 2021 State of the Lake and Ecosystem Indicators graphics
3. Approval of FY21 LCBP/CVNHP budget
4. E&O Committee membership appointment

**Upcoming Meetings:** <https://www.lcbp.org/about-us/meetings/>

# LCBP FY21 Draft Budget

- Anticipated appropriations: \$16.019 Million
- \$14,996,000 EPA (\$8.996 million general LCBP priorities, \$6 million TMDL)
- \$619,500 Great Lakes Fishery Commission
- \$400,000 National Park Service

# LCBP FY21: Key Functions

- Fy21 Proposed: \$3.03 million
  - FY20 approved: \$2.97 million
- Staff lines all level-funded from FY20
- Office operations reduced by \$22,000 (fewer expenses due to COVID)
- New proposed tasks (\$105,000):
  - i. Research symposium (\$15,000)
  - ii. Commemoration of 50<sup>th</sup> anniversary of Clean Water Act (\$50,000)
  - iii. Diversity, Equity, Inclusion initiatives (translation, organizational assessment, staff training; \$10,000)
  - iv. Champlain-Adirondack Biosphere Reserve Coordination (CABN) – reduced request to \$30,000.  
Clarify reduction in cost for the CABN coordination task – reduces some effort, and costs for events, etc, for this first year. Proposed to be supported with mix of NPS and GLFC funds.
    - This would be a recurring task in future budgets.

# LCBP FY21: CVNHP/Heritage

- Fy21 Proposed: \$483,196
  - FY20 approved: \$458,186
- NPS FY21: \$400,000; GLFC FY21: \$83,196
  - NPS FY20: \$338K; GLFC FY20: \$150K
- CVNHP Core Programs and Grants: \$257K
  - CABN funding (\$30K) in Key Functions



# LCBP FY21: Education/Outreach

- Fy21 Proposed: \$923,000
  - FY20 approved: \$878,000
- \$336,000 to new Large E&O grants
- \$600,000 for core projects and line item requests
  - Includes Small E&O grants, professional development grants, E&O Stewards, CBEI, Video production, ECHO State of the Lake Exhibits update, Streamwise, Lakewise, Artistic Water Interpretation

# LCBP FY21: Technical

- Fy21 Proposed tasks:
  - Core: \$2.3 million (does not include \$500K for local implementation grants, in Key Functions)
    - FY20 approved: \$1.96 million
  - Line Item requests: \$1.27 million
    - Includes \$4K increase in support to VT DOH for drinking water supply testing for cyanotoxins (\$12K total)
    - FY20 \$793,000.
  - Technical projects: Proposed at \$2.24 million (Details to be reviewed in Executive Session)
    - FY20: \$1.13 million
  - TMDL Projects: \$6 million
    - FY20: \$6 million
    - Similar to FY20 budget for GSI in School infrastructure and public-private partnerships, agricultural BMP implementation, and priority wetland acquisition, restoration, and conservation

## **Draft LCBP FFY2021 Budget:**

### **Key Functions**

#### **Summary:**

The Federal Fiscal year 2021 (FFY21) LCBP Key Functions budget reflects the typical recurring costs for LCBP staff, staff support costs, and office expenses. This portion of the overall LCBP budget also includes priorities of the LCBP Director, which include the annual Local Implementation Grant programs that address pollution prevention, habitat conservation, AIS Spread Prevention, and Organizational Support programs. Education & Outreach grants are addressed in the E&O budget. Several new tasks (Tasks 16-19) are proposed in this budget; Tasks 16,17,18 are one-time tasks, and Task 19 would be a new recurring task in the Key Functions annual budget.

This budget reflects reductions in meeting support costs, staff travel and other typical LCBP expenses that were not realized in calendar year 2020 due to COVID-19 constraints. Staff costs are all proposed at level-funding from the FY2020 budget approved by the Steering Committee in April 2020, and the LCBP Office Operations budget is reduced by \$22,000 as a result of unrealized meeting expenses.

All grants under \$100,000 directed through NEIWPCC are subject to NEIWPCC indirect rate fees, as are costs for staff, travel, and supplies; the NEIWPCC indirect rate for FY2022 will be 20.5%, applicable for all projects that invoice for work between October 1, 2021 and September 30, 2022. This is an increase from the current rate of 19.25%, applied to work invoiced between October 1, 2020 and September 30, 2021. Indirect rates do not apply to grants that are greater than \$100,000, participant support costs, equipment (single items over \$5,000), or rental space.

Funding source assignments are based on previous years, and are expected to be the same for this budget cycle.

#### **FFY2021 Key Functions Task Descriptions:**

Recurring tasks from the previous Fiscal Year budget

##### **1. Vermont Coordination EPA to VT**

**Status:** The Steering Committee directs funds to VTANR to provide Vermont Lake Champlain Coordination to facilitate communication and coordination of LCBP and related Lake Champlain

management actions that involve Vermont Agencies, serve as a State liaison for the VT Citizens Advisory Committee, and assist the LCBP Program Director in coordinating LCBP activities involving Vermont. In FY2018, funds were added to this task to include support for an 0.3 FTE position to provide assistance with grant management. This additional support was requested due to the increase in funding through the LCBP appropriation. This task is level-funded from FFY20.

**Description:** This task supports the implementation of *Opportunities for Action* in Vermont ANR with a staff member assigned to work closely with the LCBP staff, including coordination of and collaboration with educational and outreach activities. Duties of the Vermont Lake Champlain Coordinator include:

- Provide liaison and staff support to the Commissioner of VT DEC on LCBP implementation activities, including those of the Water Investment Division.
- Supervise VT DEC Lake Champlain Grants Manager, which manages, VTDEC federal LCBP-EPA grants, provides and coordinates technical project management on individual federal and state-funded grants and contracts, and supports clean water project tracking and communications
- Coordinate the work of VT agency staff on the implementation of LCBP projects and activities (VT agency work group) and facilitate communication between LCBP Management and the Secretaries or Commissioners and staff of other Vermont state agencies on Lake Champlain-related activities.
- Serve as State liaison to the Vermont Citizens Advisory Committee on Lake Champlain's Future
- Present information about VT implementation activities to interested groups, the Legislature and at conferences.
- Assist the LCBP Program Director in coordinating funding for implementation activities in Vermont.
- Serves as a VT contact for the public in LCBP outreach and citizen involvement activities conducted in the VT portion of the Lake Champlain Basin.

**Estimated Direct and Indirect Cost: \$162,604;**

## **2. New York Coordination** *EPA to NEIWPCC on behalf of NYS*

**Status:** In FFY2020, after a staffing transition, the NY DEC requested that the Steering Committee direct funds to NEIWPCC to support this position. This task is level-funded from FFY20.

**Description:** The NYS Lake Champlain Coordinator provides coordination among New York State Agency staff to implement New York's portion of the Lake Champlain Basin Management Plan, and serves as a liaison with NEIWPCC, the LCBP Program Director, the Vermont and Quebec Lake Champlain Coordinators, EPA staff, and other staff to facilitate the smooth operations of the Program and NY-related priorities for the Lake Champlain basin. Serves as the State liaison to the NY Citizen's Advisory Committee. This task supports the implementation of *Opportunities for Action* in New York DEC Region 5 with a staff member assigned to the LCBP staff, including provision of grant and contract oversight as needed. Duties of the New York Lake Champlain Coordinator include:

- Provide liaison and staff support to the Regional Director and staff of NYS DEC with LCBP management regarding implementation activities.
- Coordinate participation by NYS DEC staff serving on LCBP technical committees.
- Facilitate Lake Champlain projects funded through the Clean Water/Clean Air Bond Act.
- Serve as the State liaison to the New York Citizens Advisory Committee.
- Assist the LCBP Program Director in ensuring coordinated efforts among State, Federal, and local agencies and organizations involved in LCBP actions occurring in New York.
- Assist the LCBP Program Director in securing funding for implementation activities in New York from federal, state, local and private sources.
- Organize and administer the budget agreements for LCBP-funded projects in NY receiving support directly from EPA, and with tracking these projects in coordination with the LCBP Program Director.
- Serve as a NY contact for the public in LCBP outreach and citizen involvement activities conducted in the NY portion of the Lake Champlain Basin.

**Estimated Direct and Indirect Cost: \$156,000; (1 FTE)**

### **3. Education and Outreach Coordination**

***EPA, GLFC, NPS (\$210,000) to NEIWPCC***

**Status:** This task supports 1.3 FTE: the Education and Outreach Coordinator and 0.3 FTE support position (Technical Associate). This task is level-funded from FFY20.

**Description:** The E&O Coordinator is responsible for oversight for all education and outreach components of LCBP programs, including coordination of the efforts of other LCBP staff working on E&O tasks. This task is carried out by the Education and Outreach (E&O) Coordinator and support staff. It includes the following activities:

- assisting the LCBP Director in providing staff with program management guidance as requested,
- providing lead staff support to the Education and Outreach Advisory Committee,
- coordinating E&O staff implementation of activities defined in the annual workplan,
- delivering community and school presentations,
- drafting the annual E&O operating budget, administering budgeted projects, and assisting the LCBP Director in the financial tracking of E&O projects,
- coordinating opportunities for public involvement in LCBP programs and tasks,
- serving as a project officer for LCBP grant programs, developing RFPs, facilitating workplan development and final report approval, and administering grant programs in the E&O components of the budget,
- sharing LCBP media relations responsibilities,
- representing LCBP on external committees/community projects as assigned,
- coordinating educational initiatives and teacher training programs,
- recruiting, training and supervising E&O volunteers and interns; sharing staffing and supervision responsibilities for the Resource Room at ECHO at the Leahy Center
- serving as co-editor of *Casin' the Basin*, and
- sharing responsibilities for the *Champlain Connection* program development.
- Supervision of LCBP Communication and Publications staff

- Other duties as assigned
- This task line also includes 30% time (~12 hours weekly) for additional LCBP staff to provide assistance to E&O Coordinator position

**Estimated Direct and Indirect Cost: \$210,000; (1.3 FTE + Fringe, Indirect, Travel, Professional development)**

#### **4. Communication and Publications Coordination**

***EPA, GLFC (\$275,000) to NEIWPCC***

**Status:** This task supports 2.0 FTE, the Communication and Publications Coordinator and the Communication and Publications Associate. This task is level-funded from FY20.

**Description:** The Communication and Publications Coordinator and Associate are responsible for most communications programs and publication of the LCBP, working under supervision of the LCBP Program Director and in coordination with the E&O Coordinator and other LCBP staff.

This task includes (a) technical information system and web maintenance and presentation tasks and (b) the preparation of exhibits, publications, and communication through educational programs and (c) development and presentation of public educational programs as needed.

(a) Technical web maintenance and web presentation of technical and scientific concepts:

- maintaining the LCBP-hosted websites; coordinating required ISP services and related IT consultants,
- maintaining and updating the digital Lake Champlain Atlas project as needed,
- managing production of E-NEWS, (*Casin' the Basin*) serving as co-editor and lead writer,
- coordinating the graphic design and editing for most LCBP publications,
- editing communication products for special LCBP projects,
- coordinating LCBP computer network maintenance with service consultants,
- coordinating computer stations in Grand Isle and in the LCBP Resource Room,

(b) The preparation of exhibits, publications, and communication through educational programs:

- responding to public and student information requests,
- designing and completing LCBP website updates, and related content management,
- writing and preparing exhibits for the Resource Room & ECHO on current LCBP-related research or local grants,
- developing interactive exhibits for students in the Resource Room,
- training staff and volunteers and sharing staffing and supervision for the Resource Room, and
- presenting programs to school and community groups and LCBP committees on occasion.

**Estimated Direct and Indirect Cost: \$275,000; (2 FTE + Fringe, Indirect, Travel, Professional development)**



## **6. Coordination of New York and Vermont Citizen Advisory Committees** ***EPA, GLFC (\$120,000) to NEIWPCC***

**Status:** Created in FY20, this task supports 0.8 FTE: The CAC Coordinator. This task is level-funded from FY20. The Steering Committee may consider augmenting this position with an additional 0.2 FTE support for coordination of the Champlain-Adirondack Biosphere Network (see Task 19, below).

**Description:** This position will serve to coordinate the meetings and related activities of the New York and Vermont Citizen's Advisory Committees, and increase coordination of these committees with the Quebec CAC. The CACs were initially created by the 1988 MOU between VT, NY, and QC. They are independent committees comprised of citizens representing recreation, tourism, farmers, business, cultural heritage, and advocacy groups and may include some legislative representation. The CACs advise the Steering Committee and the public on lake issues and priorities of importance to the public. The VT CAC also provides an annual report to the VT legislature. The New York CAC has fourteen members appointed by the Commissioner of NYSDEC; the Vermont CAC has fourteen members appointed by the Governor and the Legislature; and the Quebec CAC has eight members appointed by the Minister of Environment that serve as the Board of Directors of the *Organisme Bassin Versant Baie Missisquoi* (OBVBM).

### **Duties of the CAC Coordinator include:**

- Coordination of the New York and Vermont Citizen Advisory Committees, under supervision of the E&O Coordinator.
- Work with the Committees to establish meeting schedules, agendas, and annual goals for each committee. Recruit speakers, secure meeting spaces, provide necessary meeting supplies, and meeting documentation.
- Work with LCBP, New York DEC, and Vermont ANR to develop and fulfill committee membership for each jurisdiction.
- Conduct outreach to communities to promote CAC meetings, activities, and annual goals or priorities.
- Work closely with New York and Vermont State staff to ensure coordinated messaging and communication between the States, LCBP, and the CAC membership. Arrange legislative days for CAC committee members to engage in discourse with State legislators and other officials. CAC Coordinator will not engage in advocacy or lobbying efforts.
- Attend the Quebec CAC (OBVBM) meetings on a regular basis.
- Coordinate one joint meeting among the three CACs annually to foster collaborative work, communication, and messaging across the jurisdictions of the Lake Champlain basin.
- Attend LCBP Committee meetings as appropriate.

**Estimated Direct and Indirect Cost: \$120,000; (1.0 FTE + Fringe, Indirect, Travel, Professional development)**

## **6. Coordination of Technical Tasks**

### ***EPA, GLFC, IJC (\$285,000) to NEIWPCC***

**Status:** This task supports 2.3 FTE: The Technical Coordinator (1.0 FTE), Technical Associate (1.0 FTE), and Technical Associate (0.3 FTE) support positions. Funding from the International Joint Commission supports 50% of the 1.0 FTE Technical Associate position.

**Description:** The Technical Coordinator and Associate are responsible for most technical programs supported by the LCBP, working under supervision of the LCBP Program Director and in coordination with the ANS Coordinator and other LCBP staff. The Technical Associate is supported by the International Joint Commission at 50% time through March 2022 for US project coordination of the LCCR flood mitigation study. Activities in this task are carried out by the Technical Coordinator and Technical Associates. The Technical Coordinator provides staff support for the Chair of the Technical Advisory Committee, facilitates the work of the TAC and subcommittees, assists the LCBP Program Director with policy and program development, and serves as the liaison between the LCBP and other technical staff working on Lake Champlain basin issues at the local, state, and federal levels. The Technical Coordinator is supervised by the LCBP Director. The Technical Coordinator oversees the administration of technical grant programs supporting local projects and facilitates technical assistance to those projects and to other entities undertaking technical projects. The Technical Coordinator is project officer for larger technical tasks and is a NEIWPCC Quality Assurance Program Manager designee.

#### **Duties of the Coordinator and technical staff include:**

- Work with technical staff at all levels to synthesize and evaluate technical data.
- Coordinate Technical Advisory Committee meetings and Technical Workshops.
- Track review by technical and professional staff of completed technical contracts and technical publications, and arrange for LCBP publication of results, where appropriate.
- Guide special projects such as Ecosystem Indicators, LCBP Task Forces, Monitoring Programs, Climate Change and Flood Resilience, and other initiatives that may develop.
- Assist local groups and agencies to design local implementation projects and proposals.
- Develop requests for proposals for grant programs.
- Provide guidance to contractors preparing technical workplans and coordinate plan reviews.
- Provide or supervise assistance in development and implementation of all QAPPS for LCBP tasks.
- Coordinate the review and evaluation of technical grant proposals.
- Track local grants, provide technical assistance and assess products.
- Support all LCBP committees on technical issues as needed.
- US Project Coordination of the IJC Lake Champlain-Richelieu River Flood Mitigation Study

**Estimated Direct and Indirect Cost: \$285,000; (2.3 FTE + Fringe, Indirect, Travel, Professional development)**

## **7. Aquatic Nuisance Species Management Coordination**

### ***EPA, GLFC (\$230,000) to NEIWPCC***

**Status:** This task supports 1.7 FTE: The Aquatic Nuisance Species Management Coordinator (1.0 FTE), Technical Associate (0.4 FTE), and a temporary staff (0.3 FTE) support position. This

task is level-funded from FFY20.

**Description:** This task supports LCBP coordination of the *Lake Champlain Basin Aquatic Nuisance Species Management Plan* implementation and several related bi-state tasks. The ANS Management Coordinator facilitates the LCBP TAC Aquatic Nuisance Species Rapid Response subcommittee, which guides implementation of the management plan, to advise the TAC on budget priorities and emerging ANS issues, facilitates developing a rapid response protocol for the Basin, and strengthens ANS spread prevention efforts. The Coordinator also organizes and participates in field programs to implement Rapid Response actions to manage or control aquatic invasive species. The Coordinator also implements other tasks, funded by the USFWS grant to VTDEC, in both states and facilitates the implementation of numerous ANS management projects supported by the LCBP. This position also represents the LCBP on the national Aquatic Nuisance Species Task Force. The ANS Management Coordinator is supervised by the LCBP Director. The ANS Coordinator also provides support for the LCBP Director when needed. This task also supports 40% of an FTE (~ 16 hours weekly) support staff position to assist with coordination of the Lake Champlain Boat Launch Steward Program as well as other ANS-related tasks throughout the fiscal year, and a temporary staff position equivalent to an 0.3 FTE position to manage the Boat Launch Steward data and assist the ANS Management Coordinator with related tasks.

**Estimated Direct and Indirect Cost: \$190,000; (1.3 FTE + Fringe, Indirect, Travel, Professional development)**

## **8. Administrative Assistance**

***EPA, GLFC, NPS (\$120,000) to NEIWPCC***

**Status:** This task supports 1.0 FTE; the LCBP Administrative Assistant. This task is level-funded from FFY20.

**Description:** This ongoing task provides administrative assistance as part of the LCBP staff, dealing with administrative matters and with management of the program office in Grand Isle, VT. This task supports an Administrative Assistant responsible for day-to-day office coordination and management. Duties of the Administrative Assistance staff include:

- Assist the LCBP Director in administering the Lake Champlain Basin Program, including NEIWPCC cooperative agreements and contracts.
- Manage the LCBP office operations in Grand Isle.
- Prepare NEIWPCC invoices and timesheets and contract materials for approval by the LCBP Director, track office expenses, and assist in tracking project budgets.
- Assemble and review with the LCBP Director the NEIWPCC quarterly project status reports and monthly disbursement records to ensure accuracy in the assessment of project status.
- Review quarterly financial reports for accuracy and work with the LCBP Director and financial staff at NEIWPCC to make corrections and adjustments.
- Maintain a database of committees, constituent groups, interested citizens, and facilitate other needed information management tasks.
- Maintain a central calendar of meetings and activities.
- Coordinate monthly mailings to committees and newsletter distribution as needed.

- Coordinate logistics of the Steering and Executive meetings, ensuring that adequate notes are taken and preparing draft minutes for LCBP Director to review. Maintain a full set of hard copy and electronic records of Steering and Executive Committee meetings in the office files.
- Serve as a receptionist for office visitors & incoming phone calls during business hours.
- Respond to public requests for information.

**Estimated Direct and Indirect Cost: \$120,000; (1 FTE + Fringe, Indirect, Travel, Professional development)**

## **9. Lake Champlain Basin Program Direction**

***EPA, GLFC, NPS (\$170,000) to NEIWPCC***

**Status:** This task supports 1.0 FTE; the LCBP and CVNHP Program Director. This task is level-funded from FFY20.

**Description:** The LCBP Director oversees the administrative functions of the program to maintain the effective operation of the LCBP, and to carry out management functions at the Basin Program Office in Grand Isle. Management duties include overall coordination and administration of an international and bi-state management program for the natural, recreational and historic resources of Lake Champlain. Extensive interaction occurs with scientific and technical experts, private citizens and with representatives of state and federal governments, businesses, universities, environmental and economic development organizations, and others. The Director is a NEIWPCC employee and reports to the Steering Committee and its Executive Committee on programmatic matters and to the Executive Director of NEIWPCC on administrative matters. The Director provides effective coordination with the Lowell office of NEIWPCC on administrative matters. Duties include the following tasks:

- Provide leadership of a team which includes the other LCBP staff, the New York/Vermont/Quebec Coordinators, and NEIWPCC staff based in Lowell track and approve disbursements;
- Review contracts and ensure compliance;
- Provide ongoing information to staff and committees about fiscal status;
- Serve as a liaison between federal agencies, International Commissions, NEIWPCC, the states and the LCBP.
- Serve as LCBP Staff Team Leader. (LCBP staff support includes EPA Project Officers, Vermont and New York Coordinators, Province of Quebec staff, and Technical, Education, Communications, and Cultural Heritage & Recreation Coordinator). Schedules and leads staff meetings monthly or as needed.
- Coordinates program planning involving staff, advisory committees, and Steering and Executive Committee,
- Coordinates Advisory Committee work on annual budget development and prepares draft budgets for Steering/Executive Committee review.
- Coordinates the Promotional Activities of the LCBP
- Designs and implements a planning process to actively involve the public in developing policies and strategies.
- Facilitates public meetings to maximize public participation and to determine public priorities.

- Works under the direction of the Steering Committee and the Executive Committee to develop policies for the management of the Lake's natural, historic and recreational resources.
- Works under the direction of the Steering Committee and the Executive Committee to support and coordinate *ad hoc* committees and workgroups concerning the implementation of *Opportunities for Action*.
- Works under the direction of the Steering Committee and the Executive Committee to develop and administer the LCBP budget.
- Coordinates federal and state legislative tracking and provides an information resource about resource management to federal and state officials and legislators.
- Oversees production of the *State of the Lake* report as required.
- Prepares press releases and serves as spokesperson to the media in coordination with LCBP partners and staff.
- Oversees newsletter production and promotion of special lake events.
- In cooperation with NEIWPCC's Lowell office, is responsible for overall direction of the LCBP office including:
  - supervision of LCBP staff,
  - coordination of an annual workplan preparations for federal funds,
  - administration of NEIWPCC cooperative agreements, contracts and amendments of LCBP projects,
  - oversight of quarterly reporting requirements,
  - oversight of financial aspects of projects.
  - oversight and final LCBP approval of Quality Assurance Project Plans
- Provides lead staff support to the Steering Committee and its Executive Committee, along with other LCBP staff.
- Secures funding for implementation activities from federal, state, local and private sources.
- Provides annual reports on the fiscal status of the LCBP to the Steering Committee and Executive Committee.
- Serves as *Director of the Champlain Valley National Heritage Partnership* with primary responsibility for communication with federal partners and oversight of implementation activities.
- Participates in organizing intergovernmental meetings and conferences.
- Coordinates with Quebec on program and policy matters affecting the Lake.
- Other duties as assigned.

**Estimated Direct and Indirect Cost: \$170,000; (1.0 FTE + Fringe, Indirect, Travel, Professional development)**

## **10. LCBP Office Operations**

***EPA, GLFC, NPS (\$50,000) to NEIWPCC***

**Status:** This task is reduced 30% (\$22,000) from FY20, due to COVID-related reductions in meeting costs.

**Description:** This task includes normal operating expenses such as heat, electricity, insurance,



telephone services, computer maintenance, lease or purchase agreements for copying, printing, postage, supplies, meetings, and publications. This task also includes the costs of Steering and Executive Committee meetings and professional consultation services related to office operations.

**Estimated Direct and Indirect Cost: \$50,000**

### **11. Resource Room Staffing**

***EPA (\$195,000) to NEIWPCC***

**Status:** This task supports 1.5 FTE: 1.0 FTE, and 2-4 temporary staff at a total of 0.5 FTE equivalent hours. This task is level-funded from FY20.

**Description:** This task supports full time and temporary LCBP staff to assist the public for 7 days per week at the Resource Room within ECHO at the Leahy Center, augmented by volunteers when available. The Resource Room staff also deliver other Education and Outreach projects as time permits. LCBP operates and staffs the Resource Room during ECHO's normal business hours (typically 362 days a year plus occasional evenings for special events). Visitors tend to view maps, ask questions about the Lake, use the computers for Lake research, peruse library books, videos and exhibits, and use the activity kits created by LCBP staff. Resource Room staff also respond to general inquiries about the Lake submitted to LCBP through various electronic portals. Historically, up to 25% of all ECHO guests visit the Resource Room.

**Estimated Direct and Indirect Cost: \$195,000; (1 FTE +3 PTE+ Fringe, Indirect, Travel, Professional development)**

### **12. NEIWPCC Administration**

***EPA, GLFC, NPS (\$198,000) to NEIWPCC***

**Status:** This task supports 0.75 FTE NEIWPCC Lowell-based staff, including the NEIWPCC Water Resource Protection Division Director and administrative staff. This task is level-funded from FY20.

**Description:** This task supports the direct NEIWPCC costs for the NEIWPCC Division Director and administrative staff in the NEIWPCC Lowell, MA office responsible for grant applications, tracking disbursements, reviewing and issuing task contracts and ensuring compliance, Quality Assurance, and providing general oversight of LCBP operations.

**Estimated Direct and Indirect Cost: \$198,000; (0.75 FTE + Fringe, Indirect, Travel, Professional development)**

### **13. CVNHP Administration**

***NPS, GLFC (\$185,000) to NEIWPCC***

**Status:** This task supports 1.0 FTE: Assistant Director of the Champlain Valley National Heritage Partnership. This task is level-funded from FFY20.

**Description:** This task supports the Cultural Heritage and Recreational Resources Coordination



staff tasked with implementing partnership programs of the ***Champlain Valley National Heritage Partnership (CVNHP)***. This position serves as the Assistant Director of the CVNHP and works in close collaboration and is supervised by the LCBP Director (who also is CVNHP Director) in the implementation of the CVNHP Management Plan. Tasks include:

- Work as a team member with LCBP staff in the course of implementing priorities of ***Opportunities for Action*** that highlight the importance of Lake water quality in the context of recreation and cultural heritage interests.
- Develop and maintains program partnerships to implement the CVNHP Management Plan, working in collaboration with the CVNHP Director.
- Serve as coordinator and project officer for LCBP program grants, prepare RFP language, coordinate the review of proposals and the development of workplans, track ongoing contract work and facilitate the final review of projects.
- Work with education and outreach staff on issues that pertain to cultural heritage and recreational enjoyment of the Lake and that leverage a broader public commitment to improved water quality in Lake Champlain.
- Provide lead staff support of on-going cultural heritage, recreation, and sustainable tourism programs such as the Lake Champlain Byway and the coordination of 400<sup>th</sup> Anniversary commemorations among VT, NY & QC entities.
- Coordinate the ***Wayside Exhibit Design*** Program.
- Assist the LCBP Director in the financial tracking of recreational and cultural heritage projects.
- Provide staff support for the ***Heritage Area Partnership Advisory Committee (HAPAC)***.
- Conduct research, analyze results and prepare reports and fact sheets in the course of implementing the related priority recommendations of ***Opportunities for Action***.
- Write, edit and prepare contract completion reports and materials for publication and distribution as needed.
- Attend public meetings concerning Basin Program interests in cultural heritage and recreational programs.
- Develop recreational and heritage resources for inclusion on the LCBP web site and ***E-news*** the LCBP newsletter.

Other duties as assigned.

**Estimated Direct and Indirect Cost: \$185,000; (1.25 FTE + Fringe, Indirect, Travel, Professional development)**

#### **14. Gordon Center House Rent EPA to VT**

**Status:** NEIWPCC, on behalf of the LCBP, leases office space in Grand Isle from the VT Fish & Wildlife Department. The current lease was initiated in March 2017 and expires in March 2022. Renewal of the lease will be negotiated by September 2021. This task is level-funded from FFY20.

**Description:** This task covers the cost of the annual rental agreement between NEIWPCC/LCBP and VT FWD for rental of office space for LCBP operations in the Gordon House in Grand Isle, VT. The agreement includes space for meetings for other organizations when available.

**Estimated Direct and Indirect Cost: \$18,500**

### **15. Local Implementation Grants – several targeted local grant programs:**

***EPA, GLFC (\$550,000) to NEIWPCC***

**Status:** This task is level-funded from FFY20.

**Description:** Implementation grants fund critical projects, including boots-on-the-ground and planning grants, to eligible applicants, including municipalities, not-for-profit organizations such as watershed organizations, schools, conservation districts and others specified in the Requests for Proposals, to implement in the basin.

This task will support implementation grants targeted in the following areas prioritized by the Steering Committee (amounts within each category are approximate to accommodate demand among the three categories):

- **Local Grants 1: Pollution Prevention & Habitat Conservation** Projects approx. \$290,000
- **Local Grants 2: Aquatic Invasive Species Prevention** Projects approx. \$200,000
- **Local Grants 3: Organizational Support** Projects approx. \$40,000

**Estimated Direct and Indirect Cost: \$550,000**

***\*\*\*NEW PROPOSED TASKS IN FFY2021\*\*\****

### **16. 2022 Lake Champlain Research Symposium GLFC (\$15,000) to NEIWPCC**

**Status:** This is a new, one-time task proposed for this budget.

**Description:** The LCBP supports a Lake Champlain-focused research symposium every 3-4 years, in partnership with the Lake Champlain Research Consortium and Lake Champlain Sea Grant. The last symposium was held in January 2018. Over 200 people participated in the 2-day symposium in 2018. With support from LCBP, LCRC, LCSG and other partners, we were able to keep registration costs very low to allow for increased participation from graduate and undergraduate students, staff and volunteers from watershed groups across the Basin, and interested members of the public. Staff from federal, state, and local governments also participated. We anticipate the general topics in the 2022 agenda will generally reflect the typical breadth of Lake Champlain issues (monitoring, water quality, nutrient reduction, contaminants, fish and wildlife, AIS, heritage and recreation, and education/outreach programming). Keynote speakers may address a number of topical areas, but we expect to commemorate the 50<sup>th</sup> anniversary of the U.S. Clean Water Act (1972) and the 30<sup>th</sup> anniversary of the Lake Champlain Basin Program grant programs during this symposium.

**Estimated Direct and Indirect Cost: \$15,000** (additional support anticipated from Conference partners)

### **17. Commemoration of the 50<sup>th</sup> Anniversary of the Clean Water Act**

## **EPA, GLFC (\$50,000) to NEIWPCC**

**Status:** This is a new, one-time task proposed for this budget.

**Description:** The United States will mark the 50<sup>th</sup> Anniversary of the Clean Water Act in 2022. The LCBP also marks the 30th anniversary of its grants program in 2022. EPA and GLFC funds will be utilized to mark the event with a set of traveling interpretive exhibits, a retrospective 1972 State of the Lake Report, special programs, and a signature event that features partners in water quality improvement.

**Estimated Direct and Indirect Cost: \$50,000**

## **18. Diversity, Equity, Inclusion in the LCBP EPA, GLFC (\$10,000) to NEIWPCC**

**Status:** This is a new task proposed for this budget. Smaller recurring annual costs may be included as part of other tasks in future budgets.

**Description:** This task will allow the LCBP to continue to invest in ensuring that staff are adequately trained in diversity and inclusion elements and LCBP products and programs are accessible to diverse and underserved communities. These funds will support consultant time for training for staff, translation of selected LCBP outreach products, and other related work.

**Estimated Direct and Indirect Cost: \$10,000**

## **19. Champlain-Adirondack Biosphere Network Coordination and Outreach GLFC, NPS (\$30,000) to NEIWPCC**

**Status:** This is a new, recurring task proposed for this budget. Future costs for this task will likely be similar.

**Description:** The newly reconstituted Champlain-Adirondack Biosphere Network (CABN) has made progress in addressing the goals of the UNESCO Man and the Biosphere Program and incorporating the efforts of the LCBP with its work. This task will support an 0.1 FTE position (likely connected to the 0.8 FTE CAC Coordinator position described in Task 5 above) for CABN coordination and communication with the LCBP Steering Committee and its advisory committees. Funds will also be used for outreach and educational materials that highlight the shared work of CABN and the LCBP, and support a joint conference to be held in 2022.

**Estimated Direct and Indirect Cost: \$30,000**

## LCBP FFY21 Core Project Requests

<b>Project #</b>	<b>Requesting Organization(s)</b>	<b>Short Project Title</b>	<b>Funding Request</b>
1	LCBP	Enhanced BMP Grants	\$500,000-\$1,000,000
2	LCBP	AIS Rapid Response	\$90,000
3	LCBP	Lake Champlain Boat Launch Steward program	\$220,000
4	LCBP/NY DEC/VT DEC	Lake Champlain Long-Term Monitoring	\$618,199
5	LCBP/NY/VT DEC	LTMP Sensor Array maintenance	\$19,000
6	VT DEC	Water Chestnut Management	\$90,000
7	NY DEC	NY Agronomy Support	\$160,000
8	LCBP	Cyanobacteria Monitoring	\$100,500

**Lake Champlain Basin Program  
FY21 Conceptual Technical Task Description**

**TITLE:** FY21 Enhanced Best Management Practices for Pollution Reduction: Implementation and Planning Grants

**ONE SENTENCE ABSTRACT:** Grant funds for two categories of pollution reduction projects: shovel ready, and planning/prioritization.

**DESCRIPTION OF PROJECT SCOPE, OUTPUTS, OUTCOMES, METHODS, AND TIMEFRAME:**

These grants provide resources for local implementation or planning for projects that cause a direct reduction of pollution in the Lake Champlain Basin. The Pollution Prevention and Habitat Conservation category of the LCBP Local Implementation Grants has a maximum of \$25,000, so this provides an opportunity to fund larger-scale projects. A single RFP would be released for two categories of grants:

- A. Projects with a direct, on the ground, pollution abatement component would be eligible for grants of \$50,000 - \$125,000. Eligible projects in this category might include shoreline stabilization, green infrastructure project implementation, purchase of equipment to be shared among entities, or stormwater management projects at highway department facilities. Projects clearly identified in a municipal, regional, or similar plan would be favored.
- B. Projects that would provide planning and prioritization for future on the ground pollution reduction would be eligible for grants under \$50,000. Eligible projects in this category might include green infrastructure planning at a municipal level, combined sewer reduction strategies, or watershed scale assessments and prioritizations.

**TOTAL COST WITH NEIWPCC INDIRECT:** \$500,000 – 1,000,000

**BRIEF BUDGET EXPLANATION:**

This task was approved in the FY20 budget for \$615,717.

Total requested funds in 2016: \$1,065,000

Total requested funds in 2017: \$994,878

Total requested funds in 2018: \$1,278,433

Total requested funds in 2019: \$2,217,630

**Lake Champlain Basin Program  
FY21 Conceptual Technical Task Description**

**TITLE:** FY21 Aquatic Invasive Species Rapid Response Fund

**ONE SENTENCE ABSTRACT:** The Lake Champlain basin AIS Rapid Response Fund provides a reserve of resources that may be used at the recommendation of the Lake Champlain AIS Rapid Response Task Force to effectively contain, control or eradicate a new aquatic invasive species invasion in the basin.

**POINT OF CONTACT:** LCBP, Meg Modley. Aquatic Invasive Species Management Coordinator, 54 West Shore Rd., Grand Isle, VT 05458, (802) 372-3215, [mmodley@lcbp.org](mailto:mmodley@lcbp.org)

**DESCRIPTION OF PROJECT SCOPE, OUTPUTS, OUTCOMES, METHODS, AND TIMEFRAME:**

The timing and location of the next harmful aquatic invasive species to the Lake Champlain basin is unknown. The Lake Champlain Aquatic Invasive Species Task Force is a dedicated group of experts from NY, VT, and QC that respond quickly to the report of a new infestation. The Lake Champlain Aquatic Invasive Species Rapid Response Plan approved in May 2009 by the Lake Champlain Basin Program Steering Committee contains clear steps for species confirmation, delineation of the infestation, notifying the public, species risk assessment, implementation for control and monitoring. A dedicated source of funding which is readily available to respond to a new invasive species threat is a critical component of any rapid response plan. As an example, Rapid Response funding could be used to help contain a new aquatic plant or fish, or be used for direct control and management of a new invasive species spread or arrival in the basin. The AIS Rapid Response Fund would provide a source of resources that could be used in a rapid fashion to support management, tools, and resources necessary to implement control when the Task Force deems it technically feasible. While \$75k is currently available\* for the Task Force, the goal is to have \$150k available to respond to a new infestation. Outputs from the use of these funds would be measurable and the outcome of this funding would be that the basin is prepared to take steps to respond to new introductions rapidly.

\*Any AIS Rapid Response Funding that may expire will be used on the boat launch steward program. AIS Rapid Response funds were used to support the development of an eDNA monitoring tool for quagga mussel in the Lake Champlain basin in 2019. Due to the COVID-19 pandemic the LCBP Steering Committee redirected AIS rapid response funds to the COVID-19 emergency relief grant funding opportunity to keep watershed organizations operating in the spring and early summer.

**REQUEST AMOUNT:** \$75,000 US dollars

**TOTAL COST WITH NEIWPCC INDIRECT:** \$90,000

**BRIEF BUDGET EXPLANATION:** Program funding is unknown but could be used for direct management to contain, control, or eradicate the introduction of AIS (contracted services, control materials, permitting, etc.) This funding request will help build the fund up closer to the \$150k target of the AIS RR Task Force.



## **Lake Champlain Basin Program FY21 Conceptual Technical Task Description**

**TITLE:** FY21 Lake Champlain Boat Launch Steward (Watercraft Inspection and Decontamination) Program

**ONE SENTENCE ABSTRACT:** LCBP/NEIWPCC will hire 16 stewards to inspect and decontaminate, if necessary, boats launching and retrieving from Lake Champlain in NY, VT, and QC to prevent the introduction and spread of aquatic invasive species

**POINT OF CONTACT:** LCBP, Meg Modley, Aquatic Invasive Species Coordinator, 54 West Shore Rd., Grand Isle, VT 05458, (802) 372-3215, [mmodley@lcbp.org](mailto:mmodley@lcbp.org); Frédéric Chouinard, Organisme de bassin versant de la baie Missisquoi

**DESCRIPTION OF PROJECT SCOPE, OUTPUTS, OUTCOMES, METHODS, AND TIMEFRAME:**

The Lake Champlain Boat Launch Steward program will enter its fifteenth season in 2021 and will continue to prevent the introduction and spread of aquatic invasive species in the Lake Champlain Basin with watercraft inspection and decontamination as noted in the Healthy Ecosystems section of *Opportunities for Action* in partnership with NY, VT, and QC partners. Direct outputs from this program include the number of courtesy boat inspections and individuals that receive AIS messaging, summary of last body of water visited, number and types of organisms removed from boats and associated equipment, and percent of public that take certain types of AIS spread prevention measures. The public will be better informed and equipped with steps to help reduce the spread of AIS in the basin and resource managers will be better informed about where to place limited resources (stewards and decontamination stations) across the landscape to reduce landscape level spread of AIS.

The boat launch stewards will use tablets to collect data in the field using survey applications on iPads. The program will operate under an EPA and NEIWPCC approved quality assurance project plan. Stewards will be trained to operate boat decontamination stations where available to treat high risk watercraft.

\*The QC portion of Lake Champlain on Missisquoi Bay implemented their first year of boat inspections in 2017 with support from LCBP. The program will be continued in 2021. LCBP provides training, French translated materials (uniforms, sandwich boards, handouts), and program support. QC stewards are supervised by Organisme de bassin versant de la baie Missisquoi and data is collected on LCBP iPads for review and quality assurance.

**REQUEST AMOUNT:** \$200,000 US dollars

An additional amount of \$20k for OBVBM to support boat launch stewards = \$220,000

**TOTAL COST WITH NEIWPCC INDIRECT:** \$222,000 (with indirect on OBVBM contract)

\*other if NEI charges indirect on the \$200,000

**BRIEF BUDGET EXPLANATION:** Program funding supports up to 18 stewards (2 in QC) most of which cover Memorial Day – Labor Day, four days a week. At sites where decontamination units are present double staffing is required for the launch and the decontamination unit.

Increases to the budget include raising the starting wage to \$15/hr, increasing coverage to 5 days a week, and increasing the number of stewards to 16. This will allow two stewards to be stationed at the Shelburne, Malletts Bay, and South Hero launches where there is the greatest amount of traffic.

**Lake Champlain Basin Program  
FFY21 Conceptual Technical Task Description**

**TITLE:** Lake Champlain Long-term Water Quality and Biological Monitoring Program.

**ONE SENTENCE ABSTRACT:** Lake and tributary monitoring to detect environmental change, assess progress in TMDL implementation, detect/assess AIS introductions/spread, and support public health response in the event of cyanobacteria blooms.

**POINT OF CONTACT:**

Oliver Pierson, Interim Project Manager  
VT DEC, Watershed Management Division  
1 National Life Dr., Davis 3  
Montpelier VT 05620-3522  
802-490-6198  
[Oliver.pierson@vermont.gov](mailto:Oliver.pierson@vermont.gov)

Robert Streeter, Interim Project Manager  
NYS DEC  
232 Golf Course Road  
Warrensburg, NY 12885  
518-623-1221  
[robert.streeter@dec.ny.gov](mailto:robert.streeter@dec.ny.gov)

**DESCRIPTION OF PROJECT SCOPE, OUTPUTS, OUTCOMES, METHODS, AND TIMEFRAME:**

The primary purpose of the Long-term Monitoring Program (LTM) is to detect environmental change in the lake. It supports a key function of LCBP and OFA - measure and monitor success relative to benchmarks – as well as several strategies articulated as part of the Clean Water, Healthy Ecosystems, and Informed Public goals. This program is implemented each year during the ice-free periods.

The LTM consists of the following activities:

- Water quality monitoring: NYSDEC and VT DEC collect and analyze a suite of chemical, physical, and biological parameters from an established network of lake and tributary monitoring stations. Environmental indicators, monitoring stations, monitoring frequencies, and sampling procedures have all been specifically selected for this purpose, and statistical considerations were applied to optimize the design of the monitoring program.
  - Outputs - Publicly available database that documents water quality conditions, the biological community, and lake environmental health;
  - Outcomes – Data to evaluate successes of OFA strategies/goals, progress towards the Lake Champlain Phosphorus TMDL Implementation Plan, and management activities around the basin; increasing public engagement in clean water goals around the basin, cooperative efforts resulting in a healthier Lake Champlain.
- Champlain cyanobacteria monitoring network: Project partners VTDEC, VT Dept. of Health, and the Lake Champlain Committee monitor cyanobacteria conditions around the lake during peak recreational months. Data are shared with key public health stakeholders around the basin and used to inform public health response to bloom events.
  - Outputs – Common approach for reporting cyanobacteria bloom data across the Lake Champlain basin and Vermont; the Cyanobacteria Tracker map, weekly email updates to key stakeholders around the basin, outreach materials providing guidance for communities and the general public, and a database of conditions, toxin concentrations and cyanobacteria composition.
  - Outcomes – Increasing awareness of potential health issues associated with cyanobacteria exposure, increased understanding of the connection between water quality and bloom occurrence, increased proactive response from town health officials and the general public when they encounter cyanobacteria outside of regularly monitored areas.
- Zebra mussel monitoring: The VT DEC monitors veliger populations around the lake and monitors susceptible inland lakes in VT for potential new invasions.

- Outputs – Database of veliger densities on Champlain, early detection, invasive species outreach materials
- Outcomes – Increased understanding of the planktonic food web, better public understanding of the impacts of invasive species, support of the rapid response plan through early detection
- The Rock River Watershed Targeted Best Management Practice Implementation Project: VT DEC, VAAFM, and NRCS developed this project is to demonstrate water quality improvements from a focused agricultural BMP implementation effort in a small watershed where very high rates of phosphorus loading to Lake Champlain have been documented.
  - Outputs – Database tracking water quality change in after coordinated implementation of agricultural best management practices and Vermont's Phase I Implementation Plan.
  - Outcomes – Increased understanding of ability of BMPs to improve water quality, ~~increased usage of BMPs in the target watershed and beyond~~, improved water quality in a highly impacted area of the basin. Data collected from the Rock River project contribute to understanding effectiveness of BMP implementations to improve instream water quality.
- High Frequency Monitoring and Sensor Array: In 2021, the LTM project will install and operate a paired lake buoy and tributary sensor system to monitor basic water quality parameters (dissolved oxygen, temperature, pH, turbidity, chlorophyll, phycocyanin). The paired sensors will be placed in Malletts Bay and the Lamoille River. An operating budget for FFY21 has been submitted as a separate budget request.

#### REQUEST AMOUNT:

**TOTAL COST WITH NEIWPCC INDIRECT: NA**

#### BRIEF BUDGET EXPLANATION:

Costs include staff, supplies/materials/equipment, laboratory analyses, data management, and reporting.

Category	NEIWPCC-VT	EPA-VT	Total to VT	Total to NY	TOTAL
Personnel		116,002		0	<b>116,002</b>
Travel		0		0	<b>0</b>
Supplies		3,292		0	<b>3,292</b>
Equipment		0		0	<b>0</b>
Contractual		6,000		194,250	<b>200,250</b>
Laboratory Services		78,350		0	<b>78,350</b>
Administrative Direct		44,732		0	<b>44,732</b>
Indirect Charges		11,126		0	<b>11,126</b>
<b>TOTAL</b>	<b>\$ TBD</b>	<b>259,502</b>		<b>\$194,250</b>	<b>453,752</b>

## Lake Champlain Basin Program FY21 Conceptual Technical Task Description

**TITLE:** Maintain sensor array for the Long-term Monitoring Program

**ONE SENTENCE ABSTRACT:** This project would maintain modernization upgrades to the LCBP Long-term Monitoring Program to collect more useful and accessible data on Lake Champlain and its tributaries to better inform management decisions.

**POINT OF CONTACT:** Matthew Vaughan, LCBP

**DESCRIPTION OF PROJECT SCOPE, OUTPUTS, OUTCOMES, METHODS, AND TIMEFRAME:**

The Long-term Monitoring Program (LTMP) has provided high quality environmental data on Lake Champlain and its tributaries for 30 years. The resulting dataset has been enormously useful to inform management decisions and to guide LCBP's pressure-state-response adaptive management strategy. The strength of this dataset is in its consistency and longevity. The traditional LTMP approach has limitations, however. Because samples are collected by hand, 10-20 measurements per year are made at each site. This relatively low sampling frequency can introduce significant errors when estimating environmental conditions that change on much shorter timescales.

Water quality monitoring technology has developed greatly since the advent of the LTMP. Researchers can now measure several key water quality parameters remotely at sub-hourly frequencies, and transmit data in real-time to stakeholders. Online tools can present real-time data graphically so the public can interact with, learn from, and react to measurements as they are collected. The goal of this project is to leverage newer technologies to improve our understanding of the LCB ecosystem while maintaining the strength and longevity of the LTMP. This work would support *Opportunities for Action* Strategy I.A.2: Fund and Interpret Monitoring Programs and Task I.A.1.a: Increase accessibility of data on Lake Champlain.

The Lake Champlain Steering Committee approved upgrades for the Long-term Monitoring Program in April, 2020 to be installed in the 2021 field season. This task will provide ongoing support and maintenance for the sensor array during the 2022 field season. Further upgrades may be considered for FY22.

Maintenance support for data buoy and sensor array (physical and chemical parameters)

This will support deployment and maintenance of one buoy that would measure all parameters listed above and the following at a 15-minute frequency with remote data access online:

- Temperature
- Conductivity
- pH
- Dissolved oxygen
- Turbidity
- Phycocyanin (and/or Chlorophyll as options)

Total buoy annual maintenance cost: \$11,000

Includes: Ten-year replacement cost, cellphone plan, labor, and incidental costs.

Tributary monitoring:

This will also support maintenance of the Lake Champlain tributary monitoring station, which is planned to be positioned on a river that drains to an area where a buoy is installed. A monitoring system would measure the following parameters a 15-minute frequency with remote data access online:

#### Water

- Temperature
- Conductivity
- pH
- Dissolved oxygen
- Turbidity
- Nitrate (possible addition)

#### Weather

- Wind speed
- Wind direction
- Barometric pressure
- Air temperature
- Precipitation

Total tributary station annual maintenance cost: \$8,000

Includes: Ten-year replacement, cellphone plan, labor, incidental costs.

**REQUEST AMOUNT: \$19,000**

#### Notes:

- This complements the task description for the Lake Champlain Long-term Monitoring Program. They have been kept separate for clarity in the budget development process, but will be managed together in practice.
- In addition to staff time listed here, the NEIWPCC portion of the LTMP budget and LCBP staff will also contribute as personnel resources to deploy and maintain the LTMP sensory array.

## Buoy monitoring system

Item	Cost	Capital or Annual	Notes
Fondriest 450 buoy	\$ 7,000	Capital	
Weights, moorings, lines	\$ 3,000	Capital	
Batteries	\$ 800	Capital	
Datalogger	\$ 3,000	Capital	
Marine safety light	\$ 600	Capital	
Deployment pipe	\$ 200	Capital	
Eureka sonde (Temperature, conductivity, pH, optical DO, turbidity)	\$ 7,800	Capital	
Sonde cable	\$ 400	Capital	
Phycocyanin probe	\$ 2,370	Capital	
Weather station (wind speed, wind direction, atmospheric pressure, air temperature, solar radiation)	\$ 3,122	Capital	Includes mounting supplies
Thermister chain	\$ 7,225	Capital	\$355 per meter, 20 meters + mooring line (\$
Freight	\$ 500	Capital	
Additional 5% for incidental costs	\$ 1,776	Annual	
Ten-year replacement cost	\$ 3,602	Annual	
Cellphone plan	\$ 360	Annual	
Labor	\$ 5,000	Annual	
<b>Total</b>	<b>\$ 46,755</b>		

## Tributary monitoring system

Item	Cost	Capital or Annual	Notes
Tributary monitoring station	\$ 3,150	Capital	
Eureka sonde (Temperature, conductivity, pH, optical DO, turbidity)	\$ 7,800	Capital	
Cables and connectors	\$ 2,000	Capital	
Deployment supplies	\$ 1,000	Capital	
Weather station (wind speed, wind direction, atmospheric pressure, air temperature, precipitation)	\$ 2,500	Capital	
Freight	\$ -	Capital	Included in buoy freight cost. Would increase
Additional 5% for incidental costs	\$ 823	Annual	
Ten-year replace cost	\$ 1,645	Annual	
Cellphone plan	\$ 360	Annual	
Labor	\$ 5,000	Annual	
<b>Total</b>	<b>\$ 24,278</b>		

e if not purchasing buoy.



## **Lake Champlain Basin Program FY21 Conceptual Technical Task Description**

**TITLE:** Water Chestnut Management Partnership – Lake Champlain Basin

**ONE SENTENCE ABSTRACT:** Monitor, remove and dispose of water chestnut at over 80 Lake Champlain sites and 25 other Lake Champlain Basin waterbodies.

**POINT OF CONTACT:**

Kimberly Jensen  
Lakes and Ponds Management and Protection Program  
Vermont Department of Environmental Conservation (VTDEC)  
(802) 490-6120  
kimberly.jensen@vermont.gov

**DESCRIPTION OF PROJECT SCOPE, OUTPUTS, OUTCOMES, METHODS, AND TIMEFRAME:**

This funding is sought to continue management efforts of the aquatic invasive plant water chestnut (*Trapa natans*) in the waters of Lake Champlain and the surrounding basin. These efforts have been ongoing for decades, and have successfully reduced the problematic infestation of this plant to a fraction of what it once was. While hand-pulling and mechanical harvesting efforts have had significant positive effects, it is currently crucial to continue those efforts, or the progress that has been made will be lost.

In 2021, VTDEC will continue to prioritize management of water chestnut on Lake Champlain and adjoining tributaries with a north-to-south approach with both removal by hand and mechanical control. VTDEC will also collaborate with NYSDEC and the town of Dresden, NY for control in the Dresden region that supports a north-to-south management program. A second VTDEC element that manages water chestnut in other Basin waterbodies in Vermont will also continue. To date, removal efforts in these other waterbodies involve only the use of water chestnut removal by hand, and no change in control methods is expected in 2021. The funds sought from the Lake Champlain Basin Program will support hand-harvesting efforts in the Basin only; the complementary mechanical harvesting element will be supported with other funding sources.

VTDEC also plans to expand the use of drone technology to monitor water chestnut populations, which was a new initiative in 2018. The pilot program in 2018 focused on exploring methods for how this technology can be used as part of our management program. In 2020, we have attempted to continue to improve the methods by using a motorboat to access water chestnut populations that were not accessible by the former contractor. In doing so, contractors are capturing drone images in challenging and unharvested locations, i.e. wetlands, along edges of cattail stands, etc., where the mechanical harvesting operations are unable to harvest. In 2021, VTDEC will utilize these drone services with a new handpulling initiative to capture pre-and-post harvesting efforts as below.

In 2021, VTDEC will initiate a new handpulling operation that will target these unharvested and challenging locations by using motorboats rather than kayaks, to access and hand harvest dense mats of water chestnut that are mixed with native plants. This operation will work in concert with the mechanical harvesting operators, and load spoils onto the transporter. A portion of the funds sought from LCBP will contribute to this element.

This work significantly contributes to several goals outlined in *Opportunities for Action*. The aerial photography element is in line with tasks **I.A.1.a** and **I.A.1.b**, as it will provide the research community with datasets that

will inform future management, and supports an innovative management approach that should prove invaluable in long-term monitoring efforts. Because the aerial photography will also be used to assess current management techniques, it satisfies task **II.B.1.d**. The water chestnut management project satisfies tasks **II.C.1.a-c** due to monitoring efforts for new populations and subsequent response. In-water harvesting also contributes to task **II.C.3.a**.

**Project Outputs:**

With anticipated 2021 management funds (including sources other than this request):

- Manage over 80 Lake Champlain water chestnut sites between St. Albans, VT and Dresden, NY on both sides of the lake by removal by hand, mechanical removal or a combination of the two methods. Dispose of collected material via composting or in approved, upland, non-wetland locations.
- Manage over 25 other waters within the Lake Champlain Basin in Vermont by the removal of water chestnut by hand. Dispose of collected material in approved, upland, non-wetland locations.
- Survey/search for water chestnut in other areas of Lake Champlain and in other Basin waters of Vermont. Implement a control response if water chestnut is found.
- Utilize aerial photography (drones) to assist with on-the-water monitoring efforts, and to gauge long-term success of the harvesting regime. This information will inform future harvesting plans.

**Project Outcomes:**

2021 harvesting efforts, hand and mechanical, will support existing water chestnut management goals: reduce densities, prevent further spread, shift Lake Champlain populations from dense mats in need of mechanical harvesting to populations harvested by hand, and continue surveillance. In addition, the use of aerial photography will help us make more informed management decisions in future and better gauge long-term success.

**REQUEST AMOUNT:** For the State's ongoing water chestnut management program in the Lake Champlain Basin, we request \$90,000 from the Lake Champlain Basin Program. We also anticipate receiving \$450,000 from the U.S. Army Corps of Engineers, \$46,775 through the Aquatic Nuisance Species Program from the U.S. Fish and Wildlife Service (USFWS), in addition to another \$30,000 from the USFWS Partners Program to assist in funding this initiative.

**TOTAL COST WITH NEIWPCC INDIRECT:** Total Project Cost = \$90,000 (No NEIWPCC Indirect costs)

**BRIEF BUDGET EXPLANATION:** The request for \$90,000 for FFY21 (as outlined in the table below). Within each season, \$75,000 of requested funds will be used to support roughly 40% of the estimated cost of contracted hand-pulling overseen by VTDEC. The remaining \$15,000 will be used to support the aerial photography component of the program. The balance of the hand-pulling contract (~\$110,000), the mechanical harvesting component (~\$300,000), access to southern Lake Champlain and disposing of collected spoils (~\$7,500), and VTDEC staff time (\$50,000) will be paid out of other State and Federal sources. Work occurs on both sides of Lake Champlain and in other Basin waterbodies in Vermont.

<b>Workplan Timeline</b>	<b>FFY18</b>	<b>FFY19</b>	<b>FFY20</b>	<b>FFY21</b>	<b>Total</b>
July 1, 2019 – June 30, 2020	\$30,000	\$60,000			\$90,000
July 1, 2020 – June 30, 2021		\$30,000	\$60,000		\$90,000
April 1, 2021 – June 30, 2022			\$90,000		\$90,000
April 1, 2022 – June 30, 2023				\$90,000	\$90,000
<b>Total</b>		\$90,000	\$150,000	\$90,000	

# DRAFT

## Lake Champlain Basin Program FY21 Conceptual Technical Task Description

**TITLE:** NY Lake Champlain Basin Agronomy Support and Agriculture BMP Implementation.

**ONE SENTENCE ABSTRACT:** Agronomic assistance to agricultural producers to increase acceptance of, and implementation of, best management practices to reduce soil and nutrient losses to surface waters.

**POINT OF CONTACT:** NYSDEC, Robert W. Streeter, Region 5 Water Program Manager

### **DESCRIPTION OF PROJECT SCOPE, OUTPUTS, OUTCOMES, METHODS, AND TIMEFRAME:**

Continuation of services oriented program by providing technical assistance to farmers in the New York portion of the Basin and promoting implementation of Ag. BMPs intended to reduce P loadings to surface waters while sustaining on-farm productivity. Project will result in increased adoption of pollution prevention BMPs, improved utilization of available cost-share programs by producers, and improved farm sustainability. The Agronomists will provide direct one-on-one assistance regarding:

- Nutrient Management including farm nutrient mass balance, manure storage, milking center and silage leachate management, and nutrient management plans
- Conservation practices including cover crops, soil health, conservation tillage, field buffers, grass waterways, livestock exclusion, pasture improvement, field ditch improvements, rotational grazing
- Guidance towards state and federal cost-share programs
- Conduct on-farm workshops, demonstrations, and educational meetings.

This proposal is aligned with OFA Task Areas I.C.2.a: Provide Technical Assistance for Land Treatment Plans (LTPs) and Nutrient Management Plans (NMPs), I.C.2.b: Research and Promote Programs to Optimize Fertilizer Applications to Reduce Nutrient Load, I.C.2.d: Help farmers meet Clean Water regulations with targeted cost-share support for small farms, I.C.2.f: Research and support sustainable agricultural practices that address water quality concerns and also are economically sustainable. Expected outputs include targeted education and outreach to producers on BMPs intended to reduce P loadings, assistance with CNMP development, assistance with federal cost share programs, and organized demonstrations and workshops showing conservation practices. Outcomes will include increased acceptance and utilization of BMPs and reduction in nutrient losses from farms.

**REQUEST AMOUNT:** \$160,000

**TOTAL COST WITH NEIWPCC INDIRECT:** \$160,000

**BRIEF BUDGET EXPLANATION:** This project will support agronomic services to NY farmers to promote implementation of BMPs intended to reduce P loadings while sustaining farm viability.

**TECHNICAL REFERENCES CITED:**

## **FY2021 LCBP Conceptual Budget Technical Task Description for the 2022 Year**

**TITLE:** Lake Champlain Watershed Cyanobacteria Monitoring Program

**ONE SENTENCE ABSTRACT:** This project will support a cyanobacteria monitoring program to recruit, train and support a network of monitors to assess and report on water conditions; track frequency and distribution of blooms; and publicize conditions through a data tracking map and other outreach mechanisms during the 2022 year and field season.

**POINT OF CONTACT:**

Lake Champlain Committee

Lori Fisher, Executive Director

208 Flynn Avenue, Building 3, Studio 3F, Burlington, Vermont 05401

(802) 658-1421 direct office line | (802) 238-8321 cell phone | [lorif@lakechamplaincommittee.org](mailto:lorif@lakechamplaincommittee.org)

**DESCRIPTION OF PROJECT SCOPE, OUTPUTS, OUTCOMES, METHODS, AND TIMEFRAME:**

**Project Scope and Methods** - The Lake Champlain Watershed Cyanobacteria Monitoring Program is focused on the broad goals of Opportunities for Action (OFA) of “Clean Water”, “Healthy Ecosystem”, “Thriving Communities”, and “Informed and Involved Public”. By training and supporting community science and volunteers to assess conditions at over 100 Lake Champlain and inland waterway locations and broadly disseminating information, the program will help meet the following OFA objectives:

- Objective I.A. Improve scientific knowledge and understanding of water quality conditions and trends in Lake Champlain and the effectiveness of management approaches
- Objective IV.A. Enhance formal learning at all educational levels
- Objective IV.B. Build awareness through informal learning of Lake Champlain Basin issues across all age groups.
- Objective IV.C. Facilitate changes in behavior and actions of citizens

Monitoring of cyanobacterial blooms is critical to evaluate the success of management efforts to reduce those blooms. The Lake Champlain Committee (LCC) will recruit, train and support monitors to provide at least weekly assessments of water conditions from mid-June through early fall at over 100 sites on Lake Champlain and select Vermont inland lakes. Monitors will conduct qualitative visual assessments of the amount of cyanobacteria in the water. Visual assessments allow monitoring to be done over a broad spatial scale at low cost. The methodology for the qualitative assessments replicates the original surveys done to produce the water quality standards. A small subset of monitors will also collect laboratory samples in addition to completing visual monitoring. This monitoring program complements on-going analytical sampling and analysis conducted by the Vermont Department of Health (VDH) and Vermont Department of Environmental Conservation (VT DEC).

In addition to providing a dataset for long-term trend analysis, the program will provide weekly input during the summer and early fall recreation season about the location, density, and persistence of cyanobacteria blooms, allowing public health and recreation managers to make informed decisions about when and where blooms may require beach closings. Once vetted, the monitoring reports will be made publicly available via the online cyanobacteria data tracker map housed at VDH, through social media postings and website listings and through weekly reports to monitors and a list-serve of interested individuals. LCC will also provide regular reports to media throughout the monitoring season and develop educational materials to help people identify, report and avoid blooms. We will seek to strengthen and build outreach to under-served communities and the agencies that support them as part of LCC’s ongoing work to better meet goals of diversity, equity, and inclusion (DEI).

Continued monitoring of cyanobacteria blooms will allow the Lake Champlain Basin Program and state environmental agency staff to assess progress on OFA goals. Program data will help track changes in cyanobacteria bloom frequency or extent that may occur as a result of implementation of the TMDL or even independent of changes in phosphorus concentrations while continuing to provide important public health information. This project will provide funding for program development and updating, recruitment and training of volunteers, continued communication and troubleshooting with volunteers throughout the monitoring season, collection and processing of data from the volunteers, publicity about conditions, and ongoing outreach and educational materials focused on cyanobacteria and water quality.

**Outputs:** LCC will produce training and educational materials about cyanobacteria and conduct between 20 to 25 in-person sessions or a minimum of 10 online training sessions for volunteer monitors, recreational and health personnel throughout the watershed. The types of trainings offered will be based on monitor preference and health and safety protocols. We will also provide the majority of the data for the cyanobacteria tracker map and contribute to the database outlining conditions, toxin concentrations and cyanobacteria composition. During bloom season, we will capitalize on increased public interest and host additional cyanobacteria information sessions to help raise awareness about blooms and educate people on how to recognize, avoid and report them. We will also expand partnerships to reach disadvantaged communities who may not have easy online access to reporting results or the cyanobacteria data tracker and will seek outside funding to do this. To support monitors throughout the season we will produce weekly email updates and also be in contact by phone, email and in person as conditions warrant. A separate weekly email will be produced for key stakeholders and interested citizens who subscribe to our cyanobacteria list-serve. In addition to providing information on weekly conditions, the emails will include educational information, links to resources and training materials to educate recipients about bloom causes, how to avoid exposure, and actions to take to protect water quality.

**Outcomes:** The program will gather information about water conditions at specific locations on Lake Champlain and inland lakes, help increase awareness of cyanobacterial blooms and potential health issues and improve understanding of the connection between water quality and bloom occurrence. Through ongoing education and outreach it will increase proactive response from municipal and state officials and the general public when they encounter blooms.

**Timeframe:** Program work is conducted year-round. Preparation for the monitoring season will take place from late fall through early spring with training sessions held during the spring, summer and fall. Monitoring, reporting and disseminating information will be conducted during the summer and early fall.

**Anticipated partnerships:** Primary project partners are the VT DEC, VDH and the Lake Champlain Basin Program. We will also coordinate with New York state environmental, health and recreation agencies, the Vermont Department of Forests, Parks and Recreation, municipal recreation departments for lakeshore communities, public water supply operators, and recreation centers located on Lake Champlain to offer training and provide weekly information about bloom conditions. We will also seek to establish or strengthen partnerships to help us reach disadvantaged and under-served communities.

**REQUEST AMOUNT:** \$100,500

**TOTAL COST WITH NEIWPCC INDIRECT:** \$100,500

**BRIEF BUDGET EXPLANATION:**

The budget is the same as 2021 levels. While LCC plans to expand communication and outreach to reach under-served communities we will seek non-LCBP funding to conduct this important work.

<b>Budget Expense</b>	<b>Task 1 Monitoring program development, coordination</b>	<b>Task 2 Implement monitoring program</b>	<b>Task 3 Project assessment, reporting and future planning</b>	<b>LCBP Request Total &amp; Budget Percentage</b>
Personnel	\$16,000	\$40,000	\$14,000	<b>\$ 70,000 (69%)</b>
Total fringe	\$ 1,600	\$ 4,000	\$ 1,400	<b>\$ 7,000 (7%)</b>
Supplies	\$ 1,000	\$ 4,000	\$ 0	<b>\$ 5,000 (5%)</b>
Communications	\$ 1,000	\$ 4,000	\$ 500	<b>\$ 5,500 (5%)</b>
Insurance	\$ 3,500	\$ 0	\$ 0	<b>\$ 3,500 (4%)</b>
Travel	\$ 350	\$ 2,000	\$ 150	<b>\$ 2,500 (3%)</b>
Indirect	\$ 1,600	\$ 4,000	\$ 1,400	<b>\$ 7,000 (7%)</b>
<b>Totals:</b>	<b>\$25,050</b>	<b>\$58,000</b>	<b>\$17,450</b>	<b>\$100,500</b>

**Personnel** includes staffing to develop and update program materials, recruit, train and support the monitors, run cyanobacteria information sessions for the general public, produce related education and outreach materials, and analyze and assess results.

**Supplies** includes gloves, thermometers, jars, masks, printed documents, portfolios, and other monitor toolkit materials along with training expenses (Zoom and/or venue fees), monitor T-shirts or hats, Abraxis strips, sanitization equipment, and materials to support field staff.

**Communications** include database, phone, email, website and printing expenses associated with the monitoring program.

**Insurance** covers related program expenses for volunteer coverage.

**Travel** covers mileage and ferry expenses for recruitment, training and support of monitors along with regular site assessments.

**TECHNICAL REFERENCES CITED:** 2018 - 2023 Lake Champlain Cyanobacteria Monitoring QAPP

## LCBP FFY21 Line Item Requests

<b>Project #</b>	<b>Requesting Organization(s)</b>	<b>Short Project Title</b>	<b>Funding Request</b>
1	NY/VT DEC	Forest P Load Allocation	\$300,000
2	NY/VT DEC	Stormwater planning & Inland Lake action plans	\$400,000
3	NY/VT DEC	Interstate Clean Water Accounting	\$100,000
4	NY/VT DEC	MRGP and RRAMP Implementation	\$200,000
5	NY/VT DEC	Enhanced Agricultural BMPs	\$400,000
6	LCBP/LC Sea Grant	Lake Champlain ANSIS database	\$60,000
7	VT DEC	Cyanotoxin monitoring in Vermont Drinking water supplies	\$12,000



## **Lake Champlain Basin Program FY21 Conceptual Technical Task Description**

**TITLE:** Forest Phosphorus Load Allocation Developing Assessment and Planning Tools for Implementation of the Lake Champlain TMDLs (Forest Load Allocation)

**ONE SENTENCE ABSTRACT:** This project would assist Vermont and New York continuing its work in developing and piloting the framework for addressing the forestland load allocation of the Lake Champlain TMDLs through an assessment of managed forestland, the identification, design and construction of forestland BMPs, and development of accounting methods for forestland improvement practices in targeted basins of Lake Champlain.

**POINTS OF CONTACT:**

Vermont Department of Environmental  
Conservation (VTDEC)  
Ethan Swift  
802-490-6141  
[Ethan.Swift@vermont.gov](mailto:Ethan.Swift@vermont.gov)

New York State Department of Environmental  
Conservation (NYSDEC)  
Lauren Townley, Chief, Watershed Section A  
(518) 402-8283  
[lauren.townley@dec.ny.gov](mailto:lauren.townley@dec.ny.gov)

**DESCRIPTION OF PROJECT SCOPE, OUTPUTS, OUTCOMES, METHODS, AND TIMEFRAME:**

Forested lands compose 73% of land use in the Lake Champlain Basin and contribute 20% of total phosphorus loading to Lake Champlain. The Phosphorus TMDLs for Vermont Segments of Lake Champlain require a ~19% reduction in total phosphorus from forested land uses. The Missisquoi Bay lake segment is 62% forested land use and contributes the greatest mean annual phosphorus load from the Vermont portion of the Lake Champlain Basin (170 metric tons per year). Because the TMDL calls for the greatest phosphorus load reductions from forestland in the South Lake and Missisquoi sub-basins, these forestlands are prioritized for targeted BMP implementation in Vermont. The efforts complement water quality protections conferred by the recently revised (2017) Acceptable Management Practices for Logging Jobs in Vermont (VT AMPs), to prevent sediment, petroleum products, and woody debris (logging slash) from entering Vermont's waters.

Phosphorus reductions from forested land uses will primarily involve bringing forest trails, roads, and stream crossings into compliance with VT AMPs, remediating erosion and altered hydrology associated with forest trails and roads due to legacy timber management operations. Due to the remote nature of these sites, optimal locations for phosphorus-reducing best management practices (BMPs) or targeted acceptable management practice inspection are not easily identifiable without mapping and ground truthing.

New York and Vermont are seeking support for assessing forestlands to identify, prioritize, and implement water quality improvement projects to reduce phosphorus loading from forested land uses. This project could support the following phases and associated tasks:

*Phase 1* Identifying forestland in Vermont and New York, including managed<sup>1</sup> forestland parcels such as national forests, state forests, state parks, municipal parks, and Use-Value Appraisal lands (lands enrolled in current-use programs) and the current and historic activities within them that could contribute to loading (e.g., recreational trails, forest roads, timber harvesting, sugaring).

1. Determining erosion risk hotspots on managed forestlands, particularly legacy erosion associated with historic management practices such as hydrologically connected forest roads, streambank erosion, and BMPs to address them.

---

<sup>1</sup> There is natural loading from non-managed forested lands outside of these areas, but no reasonable approach for dealing with diffuse, low level loading. For example, there is no BMP to apply in the case of a homeowner with 1.5 undisturbed acres of forest within a parcel boundary.

2. Develop a method to account for phosphorus reductions associated with the implementation of forestland AMP's and the remediation of legacy erosion.
3. Estimating interim phosphorus reduction targets by sub-basin (HUC—12 scale?), achieved through regulatory and non-regulatory means.
4. Develop accounting methodology to track and report on AMP compliance, and to identify and target high priority legacy erosion sites for restoration
5. Compile all the forestland parcels information, priority areas and recommended forestland BMPs in a final report that can be used to guide implementation.

#### *Phase 2*

1. Groundtruth landscape analysis to calibrate prioritization framework of critical source areas.
2. Develop prioritization framework to address legacy erosion in high priority basins (South Lake Champlain and Missisquoi Bay in Vermont) to achieve target load allocations for lake segments that won't meet through VT AMP compliance alone.
3. Groundtruth existing BMP implementation for recreation trails and other forestland uses calibrate BMP design life and O&M requirements,
4. Deploy these tools to enhance implementation of forestland BMPs projects using complementary funding initiatives as well as piloting a suite of forestland BMPs for design and implementation to reduce sediment erosion.

Project **outputs** for Phase 1 could include prioritized maps of disturbed areas and other areas at risk for erosion in managed forestlands; accounting methods for forestland BMP efficiencies; and interim targets for forested land uses by sub-basin, to be achieved through regulatory and non-regulatory means. Project outputs for Phase 2 include the design and implementation of forestland best management practices. The **outcomes** of this project are an increase in our understanding of phosphorus and sediment sources from forestland uses and how to address them, which will help to inform future state and federal investments to support TMDL implementation, resulting in reduced nutrient loading from forested land uses and improved surface water quality in the Lake Champlain Basin. Overall, this project will provide a framework for implementing the forestland load allocation of the Lake Champlain TMDLs.

This project contributes toward Lake Champlain Basin Program's Opportunities for Action (OFA) through the following objectives, strategies and task areas:

Objective I.C: Reduce Nutrient Loading: Strategy I.C.4: Fund Programs to Reduce Nutrient Inputs from Forested Lands, Task Area I.C.4.a: Fund programs to promote forestry practices with water quality benefits.

Objective III.B: Support Water-Wise Economic Development: Strategy III.B.3: Support working landscapes that help protect water quality, Task Area III.B.3.a BMP Implementation

**Timeframe:** November 1, 2022 – October 31, 2023

**REQUEST AMOUNT:** \$300,000 (\$200,000 – VT, \$100,000 – NY)

**TOTAL COST WITH NEIWPCC INDIRECT:** \$300,000

**BRIEF BUDGET EXPLANATION:** Vermont has established an interdepartmental technical team and New York is assembling an interdisciplinary team within NYSDEC that will oversee preliminary assessment work related to this scope with state resources in SFY21, but additional resources will be required for further assessment, piloting methodology, and implementation. For FFY21 New York will mainly be continuing Phase 1 tasks while Vermont expects to be mostly done with Phase 1 and ready to focus on Phase 2 tasks.

**TECHNICAL REFERENCES CITED:**

Crosswalk between the Vermont Phase 1 Plan and EPA's BMP scenario identifying achievable phosphorus reductions

<https://www.epa.gov/sites/production/files/2015-09/documents/appendix-b-crosswalk.pdf>

Concentration, load, and trend estimates for nutrients, chloride, and total suspended solids in Lake Champlain tributaries, 1990 – 2017

[http://lcbp.org/techreportPDF/86\\_LC\\_Tributary\\_Loading\\_Report.pdf](http://lcbp.org/techreportPDF/86_LC_Tributary_Loading_Report.pdf)

**Lake Champlain Basin Program  
FY21 Conceptual Technical Task Description**

**TITLE:** NY Stormwater Master Planning

**ONE SENTENCE ABSTRACT:** This project proposes to further develop stormwater planning in non-regulated communities in New York.

**POINTS OF CONTACT:**

Lauren Townley, New York State Department of Environmental Conservation  
(518) 402-8283  
[Lauren.Townley@dec.ny.gov](mailto:Lauren.Townley@dec.ny.gov)

**DESCRIPTION OF PROJECT SCOPE, OUTPUTS, OUTCOMES, METHODS, AND TIMEFRAME:**

This project proposes to pilot stormwater planning in communities not regulated by New York's Municipal Separate Stormwater Sewer System (MS4) General Permit. Stormwater planning is a critical step in determining cost-effective approaches to mitigate negative impacts of stormwater and target pollution prevention. NYSDEC proposes to develop stormwater master plans for 2 - 4 non-regulated communities that have been identified in New York's draft Watershed Implementation Plan as needing assistance with stormwater infrastructure. Guidelines for stormwater master planning have been developed by VTDEC; similar guidelines will be followed for plans developed in New York. Communities that receive stormwater master plans will become eligible for further planning, design, and implementation funding through NYSDEC's water quality grant programs.

Project **outputs** include development of Stormwater Master Plans in New York. Anticipated **outcomes** include reduced sediment and nutrient loading, and natural resource restoration after projects identified and prioritized in the plans are implemented.

**Timeframe**

October 1, 2021 – September 30, 2023

This project contributes toward Lake Champlain Basin Program's *Opportunities for Action (OFA)* through the following objectives, strategies and task areas:

Objective I.B. Reduce Contaminants of Concern and Pathogens

Objective I.C: Reduce Nutrient Loading

Strategy I.C.3: Fund Programs to Reduce Nutrient Inputs from Developed Lands i. Task Area I.C.3.b: Fund research and implementation programs to reduce effective impervious surface area. Address nutrient runoff from impervious surface areas in critical watersheds, incorporating predicted effects of climate change on precipitation events.

Objective II.A. Support Conservation of Vulnerable Habitat

Strategy II.A.1: Protect Important Riparian, Shoreland and Wetland Habitat Areas

**REQUEST AMOUNT:** \$200,000

**TOTAL COST WITH NEIWPCC INDIRECT:** \$200,000

**BRIEF BUDGET EXPLANATION:** Funds will be utilized for the development of Stormwater Master Plans (NY). Any remaining funding will be directed to implementation of priorities identified in the plans.

**Lake Champlain Basin Program  
FY21 Conceptual Technical Task Description**

**TITLE:** Development and Review of Interstate Clean Water Project Tracking and Accounting Methodologies

**ONE SENTENCE ABSTRACT:** This project would support the coordination and development of a basin-wide approach for Clean Water Project Tracking and Accounting Methodologies that establish consistent pollution reduction efficiencies, total phosphorus load reduction estimates, as well as the Standard Operating Procedures.

**POINTS OF CONTACT:**

Helen Carr, Vermont Department of Environmental Conservation  
802-490-6115  
[Helen.Carr@vermont.gov](mailto:Helen.Carr@vermont.gov)

Lauren Townley, New York State Department of Environmental Conservation  
(518) 402-8283  
[Lauren.Townley@dec.ny.gov](mailto:Lauren.Townley@dec.ny.gov)

**DESCRIPTION OF PROJECT SCOPE, OUTPUTS, OUTCOMES, METHODS, AND TIMEFRAME:**

This project would support the coordination and development of a basin-wide approach for Clean Water Project Tracking and Accounting Methodologies that establish consistent pollution reduction efficiencies, total phosphorus load reduction estimates, as well as the Standard Operating Procedures for doing so. This project proposes to have an external review of Vermont and New York's Tracking & Accounting Standard Operating Procedures to ensure scientific integrity of the methods currently used to estimate total phosphorus load reductions associated with clean water projects. This assessment and review will also identify where BMP tracking and accounting procedures could be better aligned between New York and Vermont so that total phosphorus load reduction estimates and progress reporting for Lake Champlain is consistent and comparable across the entire basin.

Under the Clean Water Service Delivery Act (Act 76 of 2019), Vermont is required to publish methods to estimate phosphorus reductions for all clean water project types in the Lake Champlain and Lake Memphremagog basins by November 1, 2021. To meet Act 76 requirements and centralize all of Vermont's TMDL tracking and accounting methods, VTDEC's Clean Water Initiative Program (CWIP) has been developing TMDL Tracking and Accounting Standard Operating Procedures (SOPs) for each land use sector (developed lands, agriculture, wastewater, and natural resources). After the initial publication of Tracking and Accounting SOPs in late 2021, the state is required to periodically review accounting methods at least every five years to determine the adequacy or accuracy of pollutant reduction values and design lives. NYSDEC is concurrently developing a statewide BMP tracking database with SOPs that will account for project implementation in the Lake Champlain basin. While the database is being finalized, New York's SOP will be complete.

This project proposes to have an external review of the published tracking and accounting SOPs assessing the adequacy of pollutant reduction methods, similar to the peer review process for scientific journals, after Vermont's first publication of its SOPs. An analysis and comparison between NYSDEC and VTDEC's Tracking and Accounting SOPs will be needed to ensure basin-wide consistency. The states could use this external review to inform future revisions to SOPs and improve the states' overall TMDL tracking and accounting methods. This project would be able to build off of existing efforts and collaborative initiatives including LCBP projects that address accounting of soil

**Commented [CS1]:** Will be administered by LCBP after budget development process. LCBP may also help coordinate input from NY and Quebec ahead of spring budget approval....

**Commented [CS2]:** And Quebec?

and sediment phosphorus reductions, agricultural BMPs, as well as broader collaborative efforts such as the work of the NEIWPCC Tracking and Accounting Collaborative, to establish consistent methodologies within the region.

The **outputs** of the external review will identify where BMP tracking and accounting procedures could be improved within each state and also better aligned between the **two states** so that phosphorus reduction estimates and progress reporting for the Lake Champlain TMDL employs the strongest current methodology. Across the entire basin this effort will support **outcomes** of regional coordination for consistent tracking and accounting methodologies to support informed decision-making, comparison, and progress in meeting clean water targets for Lake Champlain.

**Timeframe**

December 1, 2021 – September 30, 2023

This project contributes toward Lake Champlain Basin Program's *Opportunities for Action (OFA)* through the following objectives, strategies, and task areas:

Objective I.A. Improve scientific knowledge and understanding of water quality conditions and trends in Lake Champlain and the effectiveness of management approaches

Strategy I.A.1: Fund and Interpret Management-oriented Research Task Areas I.A.1.c: Increase understanding of factors affecting BMP performance and efficiency. I.A.2.c: Assess progress of existing water quality management programs.

**REQUEST AMOUNT:** \$100,000

**TOTAL COST WITH NEIWPCC INDIRECT:** \$100,000

**BRIEF BUDGET EXPLANATION:** Funds will be utilized to perform an external review of VTDEC and NYSDEC tracking and accounting SOPs, and pollution reduction methodologies.

Commented [CS3]: And Quebec?



## **Lake Champlain Basin Program FY21 Conceptual Technical Task Description**

**TITLE:** Implementation of VT Municipal Roads General Permit (MRGP) Standards and NY Rural Roads Active Management Program (RRAMP) on Non-Regulatory Road Networks

**ONE SENTENCE ABSTRACT:** As a continuation of previous work completed to inventory and prioritize projects on non-regulatory road networks in both NY and VT, this initiative will support the assessment and implementation of identified projects in high priority subwatersheds and any additional inventory work not covered under the pilot phase of this project.

**POINTS OF CONTACT:**

Helen Carr, Vermont Department of Environmental Conservation  
802-490-6115  
[Helen.Carr@vermont.gov](mailto:Helen.Carr@vermont.gov)

Lauren Townley, New York State Department of Environmental Conservation  
(518) 402-8283  
[Lauren.Townley@dec.ny.gov](mailto:Lauren.Townley@dec.ny.gov)

**DESCRIPTION OF PROJECT SCOPE, OUTPUTS, OUTCOMES, METHODS, AND TIMEFRAME:**

In FFY20, the Lake Champlain Basin Program piloted the adaptation of MRGP inventory methodology for non-regulatory road networks (e.g., rural and municipal roads in New York and private or state-owned roads in Vermont) to identify and prioritize road best management practices (BMPs) to reduce phosphorus loads to Lake Champlain. The initiative proposes FFY21 funds continue to support inventory on non-regulatory road networks and implementation of road improvements geographically targeted to priority subwatersheds.

VTDEC data demonstrates unpaved road runoff is one of the largest phosphorus sources per acre, and road-related projects are among the most cost-effective actions to address loading from developed lands. In addition, road best management practices improve road resilience to large storm events. Approximately 15% of Vermont road miles are private and there is currently no other regulatory or funding incentive to address erosion or degradation of these road systems. Vermont DEC has developed a Road Erosion Inventory methodology under the Municipal Roads General Permit (MRGP) program that is a streamlined process for inventorying roads and prioritizing projects to improve water quality. This framework was adapted with FFY20 Lake Champlain Basin Program funding to inventory non-regulatory roads (mainly private roads) within a priority sub-watershed. New York state is adopting a similar framework in partnership with Soil and Water Conservation Districts and municipalities, building upon the existing Rural Road Active Management Program (RRAMP).

Project **outputs** include road erosion inventories within priority watershed(s), prioritized list of road segments in need of improvements, and may include construction of road best management practices to improve water quality.

Anticipated **outcomes** include reduced sediment and nutrient loading from road networks and access areas not covered by the Vermont MRGP and all the unregulated roadways in New York within the Lake Champlain Basin.

**Timeframe**

October 1, 2022 – September 30, 2023

This project contributes toward Lake Champlain Basin Program's *Opportunities for Action (OFA)* through the following objectives, strategies and task areas:

Objective I.C: Reduce Nutrient Loading

Strategy I.C.3: Fund Programs to Reduce Nutrient Inputs from Developed Lands

Objective III.B: Support Water-Wise Economic Development

Strategy III.B.3: Support working landscapes that help protect water quality

Task Area III.B.3.a: BMP Implementation. Provide Financial and Technical Assistance to Support Practices that Help Protect Water Quality.

**REQUEST AMOUNT:** \$200,000

**TOTAL COST WITH NEIWPCC INDIRECT:** \$200,000

**BRIEF BUDGET EXPLANATION:** Funds will be directed to implementation and additional inventories. The cost effectiveness of roads BMPs on hydrologically connected road miles to fully comply<sup>1</sup> with the MRGP:

- Cost of road inventories per mile: \$287<sup>2</sup>
- Cost of improvements per linear mile: \$68,490<sup>3</sup>
- Cost per TP load reduction unit (kg/yr): \$11,838<sup>4</sup>

---

<sup>1</sup> Includes both change from not meeting to fully meeting standards and partially meeting to fully meeting standards.

<sup>2</sup> Based on VTrans-funded inventories and performance measures reported voluntarily by Regional Planning Commissions.

<sup>3</sup> Based on SFY 2018 Municipal Roads Grants-In-Aid results

<sup>4</sup> Based on SFY 2018 Municipal Roads Grants-In-Aid results

## **Lake Champlain Basin Program FY21 Conceptual Technical Task Description**

**TITLE:** Enhanced Agricultural Best Management Practice (BMP) Pilot Projects

**ONE SENTENCE ABSTRACT:** Development and implementation of several BMP pilot projects to fill gaps in existing state and federal funding opportunities.

**POINTS OF CONTACT:**

Marli Rupe, Vermont Department of Environmental Conservation  
802-490-6171  
Marli.rupe@vermont.gov

Lauren Townley, New York State Department of Environmental Conservation  
(518) 402-8283  
[lauren.townley@dec.ny.gov](mailto:lauren.townley@dec.ny.gov)

**DESCRIPTION OF PROJECT SCOPE, OUTPUTS, OUTCOMES, METHODS, AND TIMEFRAME:**

Agriculture provides one of the greatest sources of phosphorus loads in the basin. While many state and federal programs exist to assist agricultural operations, there are gaps in funding opportunities to achieve greater load reductions in the agricultural sector. The VTDEC and NYSDEC propose to support the development and implementation of several agricultural BMP pilot projects that will supplement other state and federal funding initiatives.

Addressing gaps in existing funding opportunities in Vermont could include BMPs such as enhanced agricultural land buffers. The phosphorus reduction benefits of riparian wooded buffers along agricultural fields are well known; not only do wooded buffers improve filtration, infiltration and uptake of field runoff, woody vegetation decreases erosion and the loss of legacy phosphorus from streambanks. While multiple programs exist to identify sites and plant trees (Trees for Streams, CREP, NRCS riparian buffer practice), there is very limited support available for the long-term comprehensive management of these buffers<sup>1</sup>. The ongoing success of a buffer is contingent on the implementation of multiple best practices including mitigation of deer browse, management of weeds, and ongoing maintenance activities. Additionally, the success of buffers may be increased by innovative planting methods, including denser populations, hydroseeding, diversification of species and site-specific planting area treatments.

New York proposes a pilot watershed-wide cover crop program. Existing federal and state programs in NY have not been effective for the implementation of cover crops. Cover crops require specialized equipment and short contract terms only encourage implementation for a 2-3-year period. Under these contracts, farmers are usually responsible for planting the cover crops themselves. The need for a regional cover cropping program was identified in the Lake Champlain Nonpoint Source Pollution Subwatershed Assessment and Management Plan. NY has piloted watershed-wide cover crop programs in the Chesapeake Bay, Genesee River, and Finger Lakes watersheds where federal or state funding has been dedicated to purchase or retrofit equipment that is shared across multiple counties and funds Soil and Water Conservation District staff time to plant cover crops on behalf of farmers. NY proposes to replicate and pilot this program in the Lake Champlain watershed.

---

<sup>1</sup> USF&W Partners for Fish and Wildlife Program concluded 10 years of monitoring and reported that on average, only 48% of plantings survived on the 18 sites monitored across VT and also found that survivorship varied greatly across sites.

Project **outputs** would include implementation of enhanced agricultural BMPs that maximize phosphorus reduction that otherwise would not be implemented due to funding gaps.

Anticipated **outcomes** from this project include phosphorus reductions from one of the largest loading sectors and providing cost share to farms that otherwise may be unable to afford to implement BMPs due to the current state of the agricultural economy.

**Timeframe**

October 1, 2021 – September 30, 2023

This project contributes toward Lake Champlain Basin Program's *Opportunities for Action (OFA)* through the following objectives, strategies and task areas:

Objective III.B: Support Water-Wise Economic Development

Strategy III.B.3: Support working landscapes that help protect water quality

Task Area III.B.3.a: BMP Implementation. Provide Financial and Technical Assistance to Support Practices that Help Protect Water Quality.

**REQUEST AMOUNT:** \$ 400,000

**TOTAL COST WITH NEIWPCC INDIRECT:** \$400,000

**BRIEF BUDGET EXPLANATION:**

It is expected the largest share of the budget will be for services/time provided by soil and water conservation staff and direct implementation project costs.

**TECHNICAL REFERENCES CITED:**

Lake Champlain Non-Point Source Pollution Subwatershed Assessment and Management Plan:  
<https://lclgrpb.org/blog/lake-champlain-non-point-source-pollution-subwatershed-assessment-and-management-plan/>

**Lake Champlain Basin Program  
FY21 Conceptual Technical Task Description**

**TITLE: Lake Champlain Aquatic Nonindigenous Species Information System Creation**

**ONE SENTENCE ABSTRACT:** Support the creation of a Lake Champlain equivalent of the Great Lakes Aquatic Nonindigenous Species Information System to enable geographic mapping and query of ANS in the Lake Champlain basin.

**POINT OF CONTACT:**

Kristine Stepenuck, PhD (she/her/hers)  
University of Vermont  
Extension Assistant Professor, Rubenstein School  
Extension Program Leader, Lake Champlain Sea Grant  
81 Carrigan Dr, Rm 312F  
Burlington VT 05405  
802-868-1048  
[kstepenu@uvm.edu](mailto:kstepenu@uvm.edu)

Meg Modley  
AIS Management Coordinator  
Lake Champlain Basin Program  
54 West Shore Rd., Grand Isle, VT 05458  
802- 372-0215  
[mmodley@lcbp.org](mailto:mmodley@lcbp.org)

Dr. Rochelle Sturtevant  
GLANSIS Program Manager  
NOAA Great Lakes Environmental Research Laboratory  
4840 South State Road, Ann Arbor, MI 48108  
734-741-2287  
[rochelle.sturtevant@noaa.gov](mailto:rochelle.sturtevant@noaa.gov)

**DESCRIPTION OF PROJECT SCOPE, OUTPUTS, OUTCOMES, METHODS, AND TIMEFRAME:**

The creation of the Lake Champlain Aquatic Nonindigenous Species Information System requires a two-year graduate level student commitment to conduct literature reviews, herbarium and collections research and species first detection verification to populate and map data for the Lake Champlain watershed. Lake Champlain Basin Program and Lake Champlain Sea Grant propose to share support of the grad student and house the student at the University of Vermont.

The Lake Champlain ANS Information System will be created equivalent to Mills 1993 (the baseline research paper used as the initial quality baseline in creating Great Lakes Aquatic Nonindigenous Species Information System (GLANSIS) lists for the Great Lakes), brought to the present time -- preferably with earliest dates for each of the HUC8 level watersheds of the Lake Champlain basin. The graduate student will be required to conduct direct investigation of local museum/herbarium collections and enter findings into the Lake Champlain template model that mirrors GLANSIS. Dr. Rochelle Sturtevant has agreed to serve as a project advisor to the student/project. Dr. Kris Stepenuck will serve as the Lake Champlain Sea Grant project advisor. An initial evaluation and location of existing species specimen collections will need to be identified and investigated.

The project idea has been recommended by a collaborative effort between the Lake Champlain Basin Program and EPA Region 1, 2 and the Great Lakes office as a result of increased communications

about the geographical region's respective aquatic invasive species programs due to the passage of the Vessel Incidental Discharge Act in December 2018. The Act authorizes the Great Lakes Lake Champlain Aquatic Invasive Species Program.

In order for the student to provide the actual map data for the system, the individual would simultaneously collate the actual georeferenced species records into a database format. The U.S. Geological Society that operates the Nonindigenous Aquatic Species (NAS) national database is available to provide training and data-entry password to the database or can import data from a spreadsheet format.

If any species are identified that are not in common with the Great Lakes, impact assessments and additional information will need to be gathered to build species profiles. The profiles will be built off literature reviews. NOAA Library Research Service access will be provided to the student to conduct species profiles as necessary (for consistency, initial searches for species information for GLANSIS are conducted through this system with results in EndNote libraries to which grey literature from local agencies is added to write up syntheses) and NOAA GLERL can provide the templates (specific questions/methods for the assessments and an outline of the 'core information types' gathered consistently).

The master's student will work with LCBP and LCSG committees to review and evaluate the work product and coordinate with NOAA GLERL and USGS for technical support. The student will be asked to present project to regional stakeholders and travel to MI for professional development/GLANSIS model training.

**REQUEST AMOUNT: \$50,000 (total cost \$100K split between LCSG and LCBP)**

Master's level student for two years

LCBP Cost break out:

\$25k for cost for master's student

\$8k

25.7 indirect

Travel

**TOTAL COST WITH NEIWPCC INDIRECT: \$60,000**

**BRIEF BUDGET EXPLANATION:** Funding will support a MS-level student hosted by Lake Champlain Sea Grant at the University of Vermont for two years. Includes salary, travel, other related costs.

**TECHNICAL REFERENCES CITED:**

Great Lakes ANSIS: <https://www.glerl.noaa.gov/glansis/>

## **Lake Champlain Basin Program FY21 Conceptual Technical Task Description**

**TITLE:** Monitoring for Microcystin in Public Drinking Water from Lake Champlain

**ONE SENTENCE ABSTRACT:** This project will provide routine microcystin analyses to Lake Champlain drinking water suppliers to support public health and operational decisions.

**POINT OF CONTACT:** Vermont Department of Environmental Conservation, Drinking Water and Groundwater Protection, Heather Campbell, Cyanobacteria Coordinator, 1 National Life Dr., Davis 4, Montpelier, VT, 802-585-4893, [heather.campbell@vermont.gov](mailto:heather.campbell@vermont.gov) and Vermont Department of Health, Bridget O'Brien, Senior Toxicological and Radiological Analyst, 108 Cherry St., Burlington, VT 05402, 802-951-0114, [bridget.obrien@vermont.gov](mailto:bridget.obrien@vermont.gov).

**PROJECT SCOPE AND METHODS:** This project will continue efforts from the previous six summers (2015-2020) to provide analyses for cyanotoxins to Vermont based public drinking water suppliers on Lake Champlain. There are currently 22 public drinking water systems on Lake Champlain in Vermont, and historically there has been strong participation in the program. For 12 weeks, drinking water system staff will collect weekly raw and finished drinking water samples and bring them to central locations where they will be picked up by a courier and transported to the Vermont Department of Health Laboratory. Samples will be analyzed for total microcystins using the enzyme-linked immunosorbent assay (ELISA) method. The results of the analyses will be provided to the Vermont Department of Environmental Conservation, the public drinking water utilities, and posted on the DEC website. In the event of microcystin detections, additional follow-up sampling will also be conducted.

**TIMEFRAME:** Anticipated start date of the week of July 12, 2021 – week of September 27, 2021 (12 consecutive weeks)

**PARTNERSHIPS:** Partners include participating drinking water systems, especially those serving as central drop-off locations, engineers in the DEC Drinking Water and Groundwater Protection Division who provide technical assistance to drinking water systems when necessary, and cyanobacteria taxonomists in the DEC Watershed Management Division-Lakes and Ponds Program who provide technical assistance on the presence of cyanobacteria in raw water when necessary.

### **OUTPUTS:**

1. Weekly data on microcystin in raw and finished drinking water from the 22 drinking water systems in Vermont on Lake Champlain from July 12- September 27.
2. Data displayed on the DEC website weekly.

### **OUTCOMES**

1. Data-driven public health decisions are made to protect the health of the 155,000 people who access this drinking water source.
2. Improved understanding of the presence of microcystin in Lake Champlain.
3. Improved understanding of the effects of drinking water treatment on microcystin.
4. Improved understanding of the impact of cyanotoxins on public drinking water from Lake Champlain.

This project will directly support the following Lake Champlain Basin Opportunities for Action:

- I.A.1.a: Increase accessibility of data on Lake Champlain.
- I.B.1.a: Understand Emerging Contaminants and Points of Control
- I.B.1.b: Support screening for raw lake water periodically for toxic substances, including herbicides, pesticides, and personal care products.



**REQUEST AMOUNT:** \$12,000 USD.

Staff time for coordination of the program and laboratory analysis is not included in the budget.

**BRIEF BUDGET EXPLANATION:**

Sampling supplies for 12 weeks = \$650

Courier service to pick up water samples at select locations = \$4000

Laboratory supplies = \$7350

**EXPLANATION OF CHANGES:** In previous years, the salary, indirect, and fringe cost for a summer intern was included. That has been removed, as the sample pickup can be more appropriately conducted by a courier service.

**Federal Fiscal Year (FFY) 2021 Vermont TMDL Project Concepts**  
**January 27, 2021**

<b>FFY2021 Initiative</b>	<b>Project Overview</b>
Priority Wetland Acquisition, Restoration, and Conservation	Continuation of existing initiative working to acquire and restore priority wetlands. <u>Funding Request: \$2,000,000</u>
Enhanced Agricultural Practice Implementation	Continuation of technical and financial assistance to the agricultural community across several initiatives to meet water quality goals in the Lake Champlain Basin. <ul style="list-style-type: none"> <li>Continued support for implementation of the Farm Agronomic Practice Program</li> <li>Continued support of AAFM Best Management Practice Program</li> <li>Conservation Reserve Enhancement Program enhanced incentive payments and technical assistance</li> <li>Engineering Services</li> </ul> <u>Funding Request: \$2,000,000</u>
Green Schools Initiative and Public Private Partnerships to Support Stormwater Compliance	Continuation of support for Stormwater Design, Permitting, and Implementation to meet the "Three-Acre General Permit" <ul style="list-style-type: none"> <li>Green Schools Initiative</li> <li>Public Private Partnerships (P3)</li> </ul> <u>Funding Request: \$2,000,000</u>

**Review of FFY2020 TMDL Projects:**

<b>FFY20 TMDL Projects</b>	<b>Overview</b>
Priority Wetland Acquisition, Restoration, and Conservation	Acquire and restore priority wetlands \$1,650,000
Enhanced Agricultural Practice Implementation	Technical and financial assistance for conservation practices and BMP implementation \$1,150,000
Green Schools Initiative to Support Stormwater Compliance	Stormwater Design, Permitting, and Implementation to meet the "Three-Acre General Permit" \$2,161,000
Deer Brook Restoration Project	Erosion control and stormwater management projects in Deer Brook \$400,000
Winooski Headwaters Targeted Intervention	Erosion control and stormwater management projects in Winooski River headwaters \$825,000
Lake Carmi Watershed Restoration Work	High-priority road remediation projects in Lake Carmi \$200,000

**Lake Champlain Basin Program  
FFY21 LC TMDL Implementation Project Description**

**TITLE:** Enhanced Agricultural Practice Implementation

**ONE SENTENCE ABSTRACT:** This project would provide funding for farms to implement soil-based agronomic practices to improve soil quality, increase crop production, and reduce erosion and agricultural discharges.

**POINT OF CONTACT:**

Mary Montour, Vermont Agency of Agriculture,  
Food & Markets (VTAAFM)  
[Mary.Montour@vermont.gov](mailto:Mary.Montour@vermont.gov)  
802-461-6087

Marli Rupe, Vermont Department of  
Environmental Conservation (VTDEC)  
[Marli.Rupe@vermont.gov](mailto:Marli.Rupe@vermont.gov)  
802-490-617

**DESCRIPTION OF PROJECT SCOPE, OUTPUTS, OUTCOMES, AND TIMEFRAME:**

The Vermont Agency of Agriculture, Food and Markets (AAFM) has been a recipient of Lake Champlain Basin Program (LCBP) TMDL Implementation funding for several years, allowing the successful expansion of technical and financial assistance for field and farmstead conservation practice implementation. Looking ahead, AAFM anticipates a continued and increased need to provide technical and financial assistance to the agricultural community across several initiatives to meet water quality goals in the Lake Champlain Basin.

For FFY21, AAFM requests funding to support increased implementation of the Farm Agronomic Practice Program to address soil quality, erosion, and reduce phosphorus loss from farm fields. Funding for the AAFM Best Management Practice Program would supplement State funding to support farmstead practices that improve water quality and reduce phosphorus runoff. Funding to support the Conservation Reserve Enhancement Program (CREP) and Engineering Services including enhanced CREP incentive payments and support for personnel is also requested. The AAFM partnership with LCBP is essential in serving the agricultural community and promoting the adoption of water quality conservation practices to achieve water quality goals.

This funding will be directed to the following priorities:

Farm Agronomic Practices (FAP) Program

The AAFM Farm Agronomic Practices (FAP) Program provides assistance to Vermont farms to implement soil-based agronomic practices that improve soil quality, increase crop production, and reduce erosion and agricultural waste discharges. Eligible practices include, but are not limited to, cover cropping, crop rotation, strip cropping, cross-slope tillage, grazing management, conservation tillage, and manure injection, some of the most cost-effective phosphorus reduction practices available. Currently, requests for funding far exceed available state dollars.

Engineering Services and Farmstead Best Management Practices (BMP) Program

The Best Management Practices program provides engineering services on a priority basis for the design of BMPs at no cost to the farmer and can cost share on the construction of eligible practices. Examples of conservation practices eligible for cost share include manure storage, composting stack pad, barnyard runoff collection, gutter/ditch clean water diversion, laneway development and stream crossings, exclusion fencing and watering facilities, milk house waste collection and treatment, and silage leachate collection. Currently, requests for funding far exceed available state dollars.

Conservation Reserve Enhancement Program (CREP)

Vermont's Conservation Reserve Enhancement Program (CREP) is a voluntary program designed to reduce sediment runoff and improve water quality by removing land from agricultural production and establishing vegetative buffers. State and federal funds are used to compensate landowners for the loss of productive agricultural land through upfront incentive payments and annual rental payments

based on the total acreage dedicated to vegetated filter strips, forested buffers, or grassed waterways. Funding would support the development and integration of additional CREP incentive payments to promote and increase the enrollment of agricultural lands in the CREP program.

The activities that will be carried out through this workplan support the following LCBP goals, strategies and tasks in Opportunities for Action: OFA I.C.2.a.: Provide technical assistance for Land Treatment Plans and Nutrient Management Plans; 1.C.2.d.: help farmers meet Clean Water regulations with targeted cost-share support for small farms; 1.C.2.f.: Research and support sustainable agricultural practices that address water quality concerns and are also economically sustainable.

This project addresses the Vermont Lake Champlain Phosphorus TMDL Phase 1 Implementation Plan Table 1b. Vermont Phase 1 TMDL Plan Summary of Vermont Commitments, Section A. Agriculture, Nutrient Management Planning and Additional Efforts in Critical watersheds for the following tasks: increase NMP efforts, expand implementation efforts, increase implementation in critical watersheds, increase technical assistance in critical watersheds (see pages 12 and 13).

Outputs: Anticipated outputs include increased implementation of verified and critical best management practices for nutrient reduction and prevention from farms including conservation practices on agricultural fields, and the development and implementation of production area water quality improvement systems. The phosphorus load reduction achieved through these activities will be estimated and reported as projects are completed.

Outcomes: Outcomes are improved water quality through implementation of production area and field best management practices and reduced nutrient loading to surface waters, with increased Best Management Practice capacity in high priority watersheds. Extend visibility and demonstration value of farm water management and agronomic practices.

**REQUEST AMOUNT:** \$ 2,000,000

**BRIEF BUDGET EXPLANATION:**

\$750,000 to Vermont Agency of Agriculture, Food and Markets (AAFM) Farm Agronomic Practices Program.

\$875,000 for the AAFM Best Management Practice Program.

\$200,000 for Engineering Services

\$175,000 for Conservation Reserve Enhancement Program

**Lake Champlain Basin Program  
FY21 Conceptual Technical TMDL Task Description**

**TITLE:** *Green Schools Initiative and Developing Public-Private Partnerships (P3) to Meet the Three Acre Stormwater General Permit*

**ONE SENTENCE ABSTRACT:** This initiative will complete stormwater design and permitting, and construction to meet the Three-Acre General Permit for public schools through the Green Schools Initiative, and support Public-Private partnerships to complete stormwater design and permitting to meet the Three-Acre General Permit and maximize stormwater mitigation benefits.

**POINTS OF CONTACT:**

Vermont Department of Environmental Conservation (VTDEC)  
Sarah Coleman, Vermont Coordinator to the Lake Champlain Basin Program  
802-272-1491, [Sarah.Coleman@vermont.gov](mailto:Sarah.Coleman@vermont.gov)

Vermont Department of Environmental Conservation (VTDEC)  
James Pease, Environmental Analyst VI  
802 490-6116, [Jim.Pease@vermont.gov](mailto:Jim.Pease@vermont.gov)

**DESCRIPTION OF PROJECT SCOPE, OUTPUTS, OUTCOMES, METHODS, AND TIMEFRAME:**

Act 64 of 2015, commonly referred to as the “Vermont Clean Water Act,” signed into law June 2015, mandates the Agency of Natural Resources to issue new clean water regulations. These additional regulations support the implementation of the TMDL and include the requirement of treating stormwater runoff from impervious surfaces – hard surfaces such as roof tops, roads, and parking areas – and preventing pollutants in runoff from entering waters. Specifically, Act 64 requires establishing the [General Permit 3-9050](#) (i.e., “Three-Acre General Permit”). The Three-Acre General Permit currently requires stormwater treatment at sites with three or more acres of impervious surface that are unpermitted or permitted under standards prior to the [2002 Stormwater Management Manual](#) in Lake Champlain, Lake Memphremagog, and in stormwater-impaired watersheds. This initiative proposes to continue to assist public schools through the Green Schools Initiative, and to pursue the innovative Public-Private Partnership project (funded with FFY18 TMDL implementation dollars) to provide technical and financial assistance to achieve compliance with the Three-Acre General Permit in the Lake Champlain Basin.

The Green Schools Initiative currently supports two phases with funding from federal fiscal project years 2018-2020. Phase 1 supports obtainment of the Stormwater General Permit 3-9050, including 100% design, site plans, and an engineering feasibility analysis to demonstrate compliance with the Three-Acre General Permit. Phase 2 supports implementation of construction work needed for permit compliance. Work may only begin under Phase 2 for sites that have completed the Phase 1 requirements (i.e., Stormwater General Permit 3-9050 obtainment). Federal Fiscal Year (FFY) 2021 funding provides funding for Phase 1 activities. This project will assist three-acre sites/permittees with meeting the state’s Stormwater General Permit 3-9050 standards, by supporting Phase 1 design and permitting, of green stormwater infrastructure (GSI), all of which will result in reduced phosphorous loading to Lake Champlain. The goal is to support the completion of Phase 1 for all public schools in Lake Champlain Basin. If funding remains dollars will go towards Phase 2 construction.

This stormwater initiative also aims to continue to establish partnerships between Vermont municipalities and private landowners to maximize stormwater mitigation, coordination, and long-term stewardship of projects. Federal Fiscal Year 2021 funding will support private-public partnerships in completing Phase 1 activities (design and permitting) in achieving compliance with the Three-Acre General Permit. These partnerships encourage or incentivize regional stormwater treatment practices that may treat additional impervious cover. The project will encourage the development of public-

private landowner partnerships in meeting regulatory requirements as well as lowering the total financial cost for meeting the TMDL.

*This project addresses the 2016 Vermont Lake Champlain Phosphorus Phase 1 Implementation Plan:* Developing the general permit to address stormwater from existing developed lands equal to or greater than three acres is a commitment of the Vermont Lake Champlain TMDL Phase 1 Implementation Plan.

*This project contributes toward Lake Champlain Basin Program's Opportunities for Action (OFA) through the following objectives, strategies, and task areas:*

**Objective I.C: Reduce Nutrient Loading**

**a. Strategy I.C.3: Fund Programs to Reduce Nutrient Inputs from Developed Lands**

- i. Task Area I.C.3.b: Fund research and implementation programs to reduce effective impervious surface area. Address nutrient runoff from impervious surface areas in critical watersheds, incorporating predicted effects of climate change on precipitation events.
- ii. Task Area I.C.3.c: Fund design and implementation of GSI/low impact development (LID) projects in critical areas. Support a grant program targeting design and installation of GSI projects in critical watersheds.

**Objective III.B: Support Water-Wise Economic Development**

**b. Strategy III.B3: Support working landscapes that help protect water quality**

- i. Task Area III.B.3.a: BMP Implementation Provide Financial and Technical Assistance to Support Practices that Help Protect Water Quality.

The project will result in the completion of Phase 1 Design and Permitting for 30-35 school permittees and public and private partnerships. Upon completion of final design and construction this project will lead to 30-35 projects treating an average of about 6.5 impervious acres. An average removal rate for each site of impervious surface is about 3.64 kg/acre. Approximately 127.4 kg/yr of Total phosphorus are expected to be removed following project construction.

**REQUEST AMOUNT: \$2,000,000**

**BRIEF BUDGET EXPLANATION:**

	<b>EPA Grant</b>	<b>State Match</b>
<b>Personnel*</b>	\$89,170	
<b>Fringe</b>	40,677	
<b>Travel</b>		
<b>Equipment</b>		
<b>Supplies</b>	\$1,969	
<b>Contractual</b>	\$1,753,095	
<b>Other CAP, Fleet, etc.</b>	\$104,925	
<b>Indirect</b>	\$10,164	
<b>Total</b>	\$2,000,000	

**EXPLANATION OF CHANGES:**

## **Lake Champlain Basin Program FY21 Conceptual Technical Task Description**

**TITLE:** Priority Wetland Acquisition, Restoration, and Conservation to Improve Water Quality in Vermont's Lake Champlain Basin

**ONE SENTENCE ABSTRACT:** Enhance implementation of land conservation projects directed at sites in the Lake Champlain Basin where land management changes can be made to enhance and restore wetlands that will have a myriad of benefits including but not limited to water quality enhancements, wildlife habitat improvements and increased public access opportunities.

### **POINT OF CONTACT:**

Vermont Fish and Wildlife Department (VFWD)  
David Sausville, Fish and Wildlife Scientist III  
802-324-4206  
[David.Sausville@vermont.gov](mailto:David.Sausville@vermont.gov)

### **DESCRIPTION OF PROJECT SCOPE, OUTPUTS, OUTCOMES, METHODS, AND TIMEFRAME:**

The VFWD has a long, successful history of conserving, managing and restoring wetland habitat in Vermont. In fact, the first state-owned Wildlife Management Area (WMA) established in the eastern United States was Sandbar WMA, established as a refuge for migratory waterfowl in Milton, Vermont in 1920. Nearly 100 years later, VFWD has conserved nearly 30,000 acres of some of the largest, most significant wetland systems in Vermont and is the largest owner of wetland habitat in the state. In 1986 VFWD established the Vermont Duck Stamp Program to enhance the Department's wetland conservation efforts. The Vermont Duck Stamp program has been responsible for some of our state's greatest wetland conservation success stories, raising \$4.5 million for the conservation of nearly 12,000 acres on 93 separate projects. Over the past 10 years, VFWD, in conjunction with partners such as the federal Natural Resources Conservation Service (NRCS) and US Fish & Wildlife Service (USFWS), has restored nearly 50 acres of wetlands on WMAs. However, hundreds of acres of wetlands restored through NRCS via the Wetland Reserve Program, with the critical support of USFWS and Partners in Fish and Wildlife, have been added to WMAs to ensure long-term, effective stewardship. VFWD owns 98 WMAs constituting 145,000 acres of outstanding wildlife habitat with the majority of those areas supporting wetland habitat. This illustrates a long-standing commitment by the VFWD for conserving, restoring and stewarding wetland habitat throughout Vermont.

This initiative continues implementation of the highest-priority, shovel-ready wetland acquisition, restoration, and conservation projects to improve water quality in Vermont's Lake Champlain Basin. Projects are currently being prioritized using a set of qualitative criteria established by technical experts from both within and outside ANR, while the Agency works to develop robust, quantitative estimates of the nutrient and sediment reductions that can be ascribed to a typical acre of restored wetlands. One example of this work, supported by FFY19 Lake Champlain TMDL implementation funds, is the restoration and acquisition of a 124-acre property abutting Rock River Wildlife Management Area, which will reduce sediment and phosphorus run-off into the Rock River, in the last wetland system before emptying into Lake Champlain. This \$400,000 project, a collaboration of Vermont Fish and Wildlife Department (FWD), Vermont Department of Environmental Conservation and the Vermont Housing and Conservation Board, includes the following elements: wetland construction; conservation of significant wetland habitat; removal of grazing operations and manure application; conservation of buffer habitat; significant public access benefits through the addition of the lands to the Rock River Wildlife Management Area. With FFY21 funding, FWD anticipates acquiring 5-7 wetland acquisition and restoration projects in the Champlain Basin of marginal farmland whose acreage, on average, is 40% restorable wetlands.

This project supports the Lake Champlain Basin Program Opportunities for Action (OFA) Objectives I.C. Reduce Nutrient Loading (Strategies I.C.1. and I.C.4.); II.A. Support Conservation of Vulnerable Habitat (II.A.1.); and II.B.1. Preserve and Enhance Biodiversity (II.B.1.c); III.D.1 Provide sustainable and accessible recreational opportunities for everyone within the CVNHP (III.D.1.b).

This project aligns with the Vermont Lake Champlain Phosphorus Total Maximum Daily Loads (TMDLs) Phase I Implementation Plan Table 1b. Vermont Phase 1 TMDL Plan Summary of Vermont Commitments, Section E. Wetland Protection and Restoration, for the following tasks: Coordinate wetland restoration projects and expand technical, educational and regulatory assistance (see page 16).

### **Outputs**

- VFWD will develop 5-7 wetland acquisition and restoration projects in the Champlain Basin, with a minimum of 40% of the lands acquired restorable to wetlands.
- Estimated phosphorus load reductions are anticipated to be achieved through wetlands conservation and restoration. Estimation approaches are in development by the DEC Clean Water Initiative Program, and DFW will track and provide the necessary data to estimate total phosphorus reductions attributable to this project by the end of the project timeline.

### **Outcomes**

- Improved functions and values of existing, degraded wetland acres in the Lake Champlain Basin, such as surface water nutrient retention, stormwater retention, filtration, and gradual discharge, groundwater recharge, reduced soil erosion, and floodwater attenuation, which will result in improved surface water quality.
- Improved coordination of wetland acquisition and restoration projects for efficiency and more effective use of federal and state resources.
- Enhancement of wildlife habitat, public access, flood protection, and wildlife-based recreation.

These projects will be implemented as is feasible based on when funds are transferred from the EPA to the state and in consideration of the COVID-19 Stay Home Stay Safe Order.

**REQUEST AMOUNT:** \$2,000,000

**TOTAL COST WITH NEIWPCC INDIRECT:** \$2,000,000 (No Indirect Cost to NEIWPCC)

**BRIEF BUDGET EXPLANATION:** The total LCBP TMDL implementation budget for this project is \$2 million.

- VFWD Staff Capacity – \$250,000
- Land Acquisition of sites by the FWD, including, restoration design, implementation, and contractual services to administer land acquisition projects \$1.75M



## Education and Outreach FY21 Line Item tasks

Task	Title	Requested Funds
Task A	E&O Grants	\$319,400
Task B	CBEI Clean Water Student Summit	\$40,000
Task C	CBEI Website	\$18,000
Task D	Video Production	\$24,000
Task E	Artistic Water Interpretation	\$40,000
Task F	ECHO SOL Lake News Studio Update	\$9,500
Task G	Streamwise, Phase 3	\$75,000
Task H	E&O Stewards	\$40,000
Task I	LakeWise Vermont	\$60,000
	Total	<b>\$625,900</b>

**Lake Champlain Basin Program**  
*Education and Outreach Task Description*  
*FY2021 Budget*

**TASK A**

**1. Task Title:**

Education and Outreach Grants

**2. One-sentence abstract of task:**

The task will support grants to support education and outreach efforts of partner organizations throughout the Basin.

**3. Describe the task and the specific work-product(s) or output that might result.**

Four categories of grants will support education and outreach efforts within LCBP and by partner organizations in the Basin:

- i) Local Implementation Grants: Up to \$10,000 for general education and outreach projects that support objectives of Opportunities for Action. Total: \$240,000.
- ii) Professional Development Mini-grants to watershed organizations: Up to \$500/year. Total: 14,400.
- iii) Boots and Bugs: Fund a program for teachers/classrooms in grades K-12 for classroom supplies for studying the watershed. (waders, bug nets, etc). Total: \$20,000

This task will address the following Task Areas from *Opportunities for Action*:

III.A.1.a: Financial Resources for Local Watershed Groups

**4. Estimated cost**

\$319,400

Notes:

- 1. Bullets i) and: ii) and iii) issued through purchase orders
- 2. Enhanced E&O Grants are now considered separately via a grant competition and will be reviewed in Executive Session. LCBP supported approximately \$180,000 in awards for this grant program in FY20. These grants typically range in scale from \$20,000-\$50,000, to help build better watershed connections and offer outreach opportunities for the public that are larger in scope than the traditional small E&O grants program.

**Lake Champlain Basin Program**  
*Education and Outreach Task Description*  
*FY2021 Budget*

**TASK B**

**1. Task Title:**

Champlain Basin Education Initiative (CBEI) *Clean Water Student Summit*

**2. One-sentence abstract of task:**

CBEI will host up to 25 classrooms and their teachers/chaperones teachers as students present their water studies and monitoring programs and join us in celebrating the 50<sup>th</sup> anniversary of the Clean Water Act.

**3. Describe the task and the specific work-product(s) or output that might result.**

CBEI partners will host up to 400 students from 25 New York, Quebec, and Vermont schools as they share their 2021-2022 watershed monitoring results with their peers. (Water quality but other monitoring results as well.) Expected outputs from the summit will be three-fold: 1) linking students directly with field experts and resources about Lake Champlain watershed issues, 2) providing students an opportunity to present their hands-on exploration and data results re: water quality, fish and wildlife, and possibly heritage connections in the Champlain Valley, and 3) to encourage and recruit teachers for additional watershed trainings through CBEI or partnerships. Expected outcomes from the Clean Water Student Summit would be 1) providing students with a deeper understanding of water quality and place based education within specific communities, and how they link to a broader appreciation of the Lake Champlain watershed and 2) linking teachers with local experts and scientists within their community.

This task will address the following Task Areas from *Opportunities for Action*:

IV.A.3.a: Professional Development Trainings for Educators

IV.A.3.b: Curriculum Development

IV.A.2.b Maintain and Expand On-lineTools using Social Media

IV.A.4.a Engage Youth in Stewardship Opportunitites ( in this case reporting their results)

**4. Estimated cost**

\$40,000 (6-9 months) via purchase orders

(Funds would cover Facility fees, \$10,000 transportation subsidies for up to 25 schools, speaker fees, CBEI partner stipends for logistical support, \$5,000 to offset substitute teacher fees, \$3,000 for boat/research vessel/sailing/longboat/paddleboard experience, supplies/classroom materials, etc)

**Lake Champlain Basin Program**  
*Education and Outreach Task Description*  
*FY2021 Budget*

**TASK C**

**1. Task Title:**

Champlain Basin Education Initiative (CBEI) Website

**2. One-sentence abstract of task:**

This task will fund an update of the CBEI website (Currently called *WatershED Matters*).

**3. Describe the task and the specific work-product(s) or output that might result.**

*WatershED Matters* is currently the CBEI's primary online presence. The website, which was launched in 2012, is dated and requires a restructuring and refocus of content. This task will fund the design and programming of a new website that meets contemporary design and technical standards. The site will serve a resource and communications tool for watershed educators in the Lake Champlain Basin, and will spotlight educator and student work. The outcome of the task will be improved student knowledge and understanding of watershed issues. This task area will address the following Task Areas of Opportunities for Action:

IV.A.2.a: Web Outreach

IV.A.3.a: Teacher Professional Development Training

IV.A.3.b: Curriculum Development

IV.A.5.d : CVNHP Educational Programs

**4. Estimated cost**

\$18,000 RFP ( Oct 2021 – March 2022)

**Lake Champlain Basin Program**  
*Education and Outreach Task Description*  
*FY2021 Budget*

**TASK D**

**1. Task Title:**

Video Production

**2. One-sentence abstract of task:**

This task will fund the production of videos for public outreach about watershed issues.

**3. Describe the task and the specific work-product(s) or output that might result.**

The task will fund the production of five to seven videos, each 2-3 minutes in length. Videos will focus on interpreting science and management issues in the Basin and/or highlight grant and contract projects funded by the LCBP, resulting in a public that is more informed about watershed issues and able to take stewardship actions. This task addresses the following Task Areas of *Opportunities for Action*.

IV.B.1.b: Non-personal Interpretation

IV.B.1.e: Web/Electronic Outreach

IV.C.1.a: Web/Social Media Outreach

**4. Estimated cost**

\$24,000 Contract amendment RFP

**Lake Champlain Basin Program  
Education and Outreach Task Description  
FY2021 Budget**

**TASK E**

**1. Task Title:**

Artistic Water Interpretation

**2. One-sentence abstract of task:**

This task will fund three or four projects that illustrate and interpret watershed topics using art.

**3. Describe the task and the specific work-product(s) or output that might result.**

This task will fund three or four projects that use art to inform members of the public about water resource or watershed topics, or to help them make personal connections to and find meaning in the water resources of the Lake Champlain Basin. The projects will inspire consideration of personal actions and change of behavior in ways that benefit clean water and healthy ecosystems. At least one project will be awarded to an artist in each of the Basin's jurisdictions (Vermont, New York, and Quebec). Priority consideration will be given to projects that recognize the 50<sup>th</sup> Anniversary of the Clean Water Act in the United States or interpret the LCBP's 2021 *State of the Lake Report*. This task could address a number of Task areas in *Opportunities for Action*, including:

IV.A.4.a: Community Service Projects

IV.A.5.a: Connect, promote and improve cultural heritage sites through interpretation

IV.B.1.a: Report on the Condition of the Lake

IV.B.1.b: Develop Non-personal interpretation (wayside exhibits, interpretive exhibits, brochures, etc.)

IV.B.1.f: Print publications

**4. Estimated cost**

\$40,000 RFP (October 2021-December 2022)

**Lake Champlain Basin Program  
Education and Outreach Task Description  
FY2021 Budget**

**Task F**

**1. Task Title:** ECHO Lake News Studio Exhibit Upgrade

**2. One-sentence abstract of task:**

This task will update the Interactive Lake News Studio exhibit at ECHO to align with new data highlights in the *2021 State of the Lake* report/

**3. Describe the task and the specific work-product(s) or output that might result.**

IV.B.1.a Report on the Condition of the Lake

IV.B.1.b Develop Non-personal interpretation ( wayside exhibits, interpretive exhibits, brochures, etc.)

This task builds on a key partner project launched with ECHO in 2015-2016 to build an exhibit which interprets the *State of the Lake* exhibit on-site. The inside Lake News Studio was launched in 2018. Once the 2021 *State of the Lake* is released this summer, ECHO will consult with LCBP staff to identify data in need of updating, create a list of content changes, and translate selected content to French. The output will be new signage that is designed, created and installed which includes new content and French translation.

This component was designed so that while the original full exhibit remains, specific content could be updated through the replacement of interpretive panels. Outputs include the development of (3?) interpretive panels, some of which is translated into French. The outcome will be that students and ECHO guests will acquire new scientific information about the Lake Champlain ecosystem in easy to understand language.

**4. Please provide the estimated cost of this task, and a timeframe (# months or years).**

**\$9,500 (October 2021-June 2022) Purchase Order**

**Lake Champlain Basin Program**  
**Education and Outreach Task Description**  
**FY2021 Budget**

**Task G**

**1. Task Title:** Streamwise, Phase 3

**2. One-sentence abstract of task:**

After completing the pilot campaign from Phase 2 of this Social Marketing Campaign, this task will fund the coordination and participation in the Phase 3 landowner parcel assessment component of the Streamwise program, providing financial support for up to an estimated 75-100 site assessments to educate and incentivize private landowners to adopt BMPs to protect and restore riparian buffers.

**3. Describe the task and the specific work-product(s) or output that might result.**

Significant progress has been made on Phase 1 of this project in 2020-2021. Similar to the successful Lake Wise program administered by the VT DEC, the goal of the Stream Wise program is to establish a new normal of riparian landscaping that is proven to help protect streams and rivers. Phase 1, which is well underway, is producing coordinated messaging around riparian buffers that can be applied throughout NY, Quebec and Vermont portions of the basin and developing a marketing cookbook that can be used by partners to engage landowners at the local scale. The program itself will be run through local organizations ( e.g.watershed groups, conservation districts and others) who are well positioned to foster watershed communities within the areas they serve. Municipalities will be encouraged to support the program by developing and delivering education and technical assistance on the social, ecological and economic value of riparian buffers, such as through enhancing co-benefits like flood resilience, water quality, or protection swimming holes. Phase 2 will pilot the marketing campaign in 2 watersheds within each state or province and provide training of additional partners outside of the pilot watersheds. This component will launch in 2022.

After Phase 2 is complete, Phase 3 may be ready to launch quickly, and it is important that continuity and implementation of the program not stall. Phase 3 will allow for coordination of the program to continue with an estimated 75-100 on-site assessments possible. (It will be determined as Phase 2 is complete whether these assessments will be targeted to just a couple of sub-watersheds or occur across several watersheds through multiple organizations.) Funds will be used to subsidize the local partners who will complete site assessments while they visit and evaluate properties, provide incentives for landowners to implement BMPs, coordinate up to 3 meetings of all interested partners to share feedback meetings with the partners, and provide additional refined training as needed for community partners.

**4. Please provide the estimated cost of this task, and a timeframe (# months or years).**

**\$75,000 (over a 12-24 month period) ( in-house or RFP) (Initiated fall 2022...I think)**



- Continue to coordinate and facilitate meetings of a self-selected committee of volunteers to include scientists, environmental interests, fisheries related businesses to oversee marketing campaign \$9,600 (3-6 meetings over 12 months)
- Oversee implementation of up to 100 assessments ( \$55/hr X 5 hours-includes initial outreach, assessment, follow-up per site with landowner) (27,500)
- Mileage = .58X50 ( avg round trip) X 100 sites = (2,900)
- Provide cost-share incentives for landowners to implement BMPs (20,000)

**Lake Champlain Basin Program**  
**(7) Conceptual Education and Outreach Task Description**  
**FY2021 Budget**  
**Task H**

**1. Task Title: *Lake Champlain Education and Outreach Stewards***

**2. One-sentence abstract of task:**

*Lake Champlain education and outreach stewards will conduct outreach at public events in NY, VT and Quebec to inform the public and answer watershed questions and provide them with opportunities to take positive steps on behalf of Lake Champlain and its tributaries.*

**3. Submitted by:** [Include name(s) and organization(s).]

*LCBP Staff*

**4. Describe the task and the specific work-product(s) or output that might result.**

*Up to 2 individuals would be hired to expand the LCBP lake outreach from Memorial Day – Labor Day. There are many opportunities for expanding our reach, including farmers' markets, municipal, and lake events. They can visit state parks, river events, upper reaches of the watershed and downtown locations, answering questions about Lake Champlain and offering opportunities for citizen action. They might be recruited through AARP, work force development, watershed groups, etc. (e.g. Summit Stewards and similar programs.) they should be able to discuss a variety of watershed issues with the public and provide resources for getting involved or changing behavior to benefit the watershed. Outputs might include representation at 20 farmers markets, 80 additional summer events reaching up to 4,000 individuals over the summer period.*

*This task addresses Task Areas IV.B.1.c: Personal Interpretation of OFA.*

**5. Please provide the estimated cost of this task, and a timeframe (# months or years).**

Estimate: \$40,000

**6. Post-Project monitoring:**

*The success of the task would be assessed by tracking analytics (numbers greeted, etc) and possibly reported out on LCBP social media through YouTube or other mechanisms.*

**TASK I**  
**Lake Champlain Basin Program**  
**Conceptual Education and Outreach Task Description**  
**FFY2021 Budget**

1. **Task Title:** Growing the Lake Wise Program through Increased Work with Bioengineering Practices
2. **One-sentence abstract of task:** The Lake Wise Program will continue to lead and demonstrate the lake-friendly shoreland practices essential for restoring and protecting shore and lake conditions.
3. **Submitted by:** Amy Picotte, Vermont DEC
4. **Describe the task and the specific work-product(s) or output that might result.**

This proposal seeks funding for on-going Lake Wise work for annual trainings with NRCD staff to ensure sufficient availability and increased capacity of technical resource staff available in the Lake Champlain Basin for assisting lake communities with stormwater management practices, protecting lake conditions, wildlife habitat, and building resilient shorelands. These trainings and work with other lake user groups, will also connect the emerging Stream Wise practices with the Lake Wise work to present a watershed approach to protecting lakes, and broaden the tool kit for how and why to practice watershed-friendly development.

Additional work will focus on implementing Lake Wise shoreland assessments, prioritizing projects for the Tactical Basin Plans and promoting use of the new bioengineering fact sheets for stabilizing eroding shorelands. The LCBP funding has supported the first shoreland bioengineering projects installed in Vermont and continued outreach about these techniques to restore living shorelands is needed for these practices to become more widespread and commonly used throughout the basin. Being able to provide technical support for installing more shoreland BMPs, including the bioengineering practices, is essential to evolve towards a new cultural trend for restoring living shorelands and diverging from the traditional practices of clearing the shore for lawns, which the science shows to be the most degrading and destructive land development practice to lake ecology.

The Vermont Lake Wise Program offers science solutions for restoring and protecting shorelands, and the LCBP support has helped grow these lake-friendly practices throughout the basin. Hydrologically connected lakes in the Lake Champlain Basin will continue to be prioritized for Lake Wise work. Vermont lakeshores make up the highest developed density (more than double) than anywhere else in the State of Vermont, and as the 2016 Vermont Lake Champlain Phosphorus Phase 1 Implementation Plan states, developed land uses should be considered in setting phosphorus reduction priorities.
5. **Please provide the estimated cost of this task, and a timeframe (# months or years).**

*Estimated costs: \$60,000*  
Timeframe: October 1, 2021 – December 31, 2022
6. **Post-Project monitoring:** The Lake Wise assessments and practices are best evaluated through the number of lake communities engaged in Lake Wise work; the number of NRCD staff involved in Lake Wise partnerships; and the number of Lake and Watershed Action Plans (these include Lake Wise work) completed. All of these growing efforts show the influence the Lake Wise Program is having on creating improved shoreland conditions for water quality protection.



## CVNHP FY21 Core Projects

### **CVNHP International Summit:** \$7,200 (includes NEIWPCC Indirect)

The Champlain Valley National Heritage Partnership will convene its 12th Annual International Summit on September 20, 2021 at the historic Hotel Saranac in Saranac Lake, New York. The meeting will commence with an overview of what's been accomplished over the past year and include keynote speakers on the upcoming 50<sup>th</sup> Anniversary of the Clean Water Act (CWA50) in 2022 and the CVNHP's interpretive theme focus in 2023 (TDB). The summit's "Knowledge Cafés" help build on networking, partnerships, and ideas for collaboration in 2022, 2023 and 2024. A pre-summit field trip is scheduled for Sunday, September 19 from 9:30 a.m. to 4:00 p.m. LCBP Steering Committee members are encouraged to attend.

### **CVNHP Wayside Exhibits:** \$12,000 (Includes NEIWPCC Indirect)

Funding will support the continuation of the CVNHP/LCBP wayside exhibit design program. Started in 2001, the program provides free design services (a \$600-\$700 value) to communities and organizations that wish to utilize the interpretive sign content detailed in the LCBP Wayside Exhibit Manual. This award-winning program has provided design services for more than 290 wayside exhibits since it began. The program, in addition to developing new designs, will continue the replacement of damaged waysides and include the design of new exhibits.

### **Champlain-Adirondack Biosphere Network Coordination and Outreach:** \$30,000 (Includes Indirect) (also described in LCBP Key Functions)

The newly reconstituted Champlain-Adirondack Biosphere Network (CABN) has made progress in addressing the goals of the UNESCO Man and the Biosphere Program and incorporating the efforts of the LCBP with its work. This task will support an 0.1 FTE position (likely connected to the 0.8 FTE CAC Coordinator position described in Task 5 above) for CABN coordination and communication with the LCBP Steering Committee and its advisory committees. Funds will also be used for outreach and educational materials that highlight the shared work of CABN and the LCBP, and support a joint conference to be held in 2022. This is a new, recurring task proposed for this budget. Future costs for this task will likely be similar.

TASK #	Funding			Key Functions
KF-1	0.0%	100.0%	0.0%	VT Coordination
KF-2	0.0%	100.0%	0.0%	NY Coordination
KF-3	0.0%	95.0%	5.0%	E&O Coordination
KF-4	0.0%	95.0%	5.0%	Communication and Publications
KF-5	0.0%	90.0%	10.0%	CAC Coordination
KF-6	0.0%	98.0%	2.0%	Technical Coordination
KF-7	0.0%	98.0%	2.0%	ANS Coordination
KF-8	2.0%	98.0%	0.0%	LCBP Administrative Assistance
KF-9	2.0%	96.0%	2.0%	Program Direction
KF-10	2.0%	73.0%	25.0%	Office Operations
KF-11	0.0%	100.0%	0.0%	Resource Room
KF-12	2.0%	96.0%	2.0%	NEI Administration
KF-13	100.0%	0.0%	0.0%	CVNHP Coordination
KF-14	0.0%	100.0%	0.0%	Gordon Center House rent
KF-15	0.0%	95.0%	5.0%	<b>Local Implementation Grants</b> PP (300k) / AIS (200k) / OS (50k)
KF-16	0.0%	0.0%	100.0%	2022 Lake Champlain Research Symposium
KF-17	0.0%	100.0%	0.0%	50th Anniversary Clean Water Act Commemoration
KF-18	0.0%	100.0%	0.0%	Diversity, Equity, Inclusion in LCBP
KF-19	0.0%	0.0%	0.0%	Champlain-Adirondack Biosphere Network Coordination and Outreach
-	0.0%	0.0%	0.0%	State of the Lake 2021: Printing, copy-editing, full translation for website
				Funding Scenario FY2021

<b>TASK #</b>	<b>Funding</b>			<b>Heritage Area Tasks</b>
H-1	100.0%	0.0%	0.0%	FY21 CVNHP Competitive Grants
H-1	100.0%	0.0%	0.0%	Historic Saranac Lake CVNHP Collections Project
H-1	100.0%	0.0%	0.0%	The Clean Water Act at 50
H-1	100.0%	0.0%	0.0%	Fostering Historical Thinking in Students from the North Country and Beyond
H-1	100.0%	0.0%	0.0%	Cambridge Historic District Signage Celebrating the Clean Water Act
H-1	100.0%	0.0%	0.0%	Project to design and install 3 interpretive panels in Clinton County
H-1	100.0%	0.0%	0.0%	Cataloging and Mapping the Frank Schlamp Native American Collection
H-1	100.0%	0.0%	0.0%	Called by the Water
H-1	100.0%	0.0%	0.0%	Collections Management training for a student of museum studies, anthropology or history
H-1	100.0%	0.0%	0.0%	Public History and Education Internship at Rokeby Museum
H-1	100.0%	0.0%	0.0%	Revolutionary War Collections Inventory
H-1	100.0%	0.0%	0.0%	Maritime Trades Internship
H-1	100.0%	0.0%	0.0%	Connecting Cultures in the Missisquoi River Basin
H-1	100.0%	0.0%	0.0%	Graduate Internship Program – Ticonderoga Historical Society
H-1	100.0%	0.0%	0.0%	STEM at the Seeds of Renewal Gardens
H-1	0.0%	0.0%	100.0%	The Clean Water Act (CWA) and the Lake Champlain Basin: Origins, Implementation, and Impacts
H-1	100.0%	0.0%	0.0%	LaChute River Walk Interpretive Trail Improvement Project
H-1	100.0%	0.0%	0.0%	Celebrating the legacy of the Clean Water Act in the multinational geography of the Lake Champlain Basin
H-1	100.0%	0.0%	0.0%	Stewardship, Interpretation, and Accessibility of Bixby Library's Objects and Artifacts Collections
H-1	0.0%	0.0%	100.0%	Heritage enhancement of the rest stops along the Richelieu River
H-1	0.0%	0.0%	100.0%	LCMM Spitfire
H-1	0.0%	0.0%	100.0%	CVNHP Proposals
H-1	0.0%	0.0%	100.0%	CVNHP Proposals
H-4	0.0%	0.0%	100.0%	Quebec Regional Stakeholder Coordination*
H-5	100.0%	0.0%	0.0%	Wayside Exhibit Program Continuation*
H-6	100.0%	0.0%	0.0%	Annual International Heritage Summit*

<b>TASK #</b>	<b>Funding</b>	<b>Education &amp; Outreach</b>
---------------	----------------	---------------------------------

EO-1	0.0%	95.0%	5.0%	E&O Grant Programs (Annual EO local grants (240k), Professional Development (15k), Boots-n-Bugs (20k)
EO-2	0.0%	0.0%	100.0%	CBEI Clean Water Student Summit
EO-3	0.0%	100.0%	0.0%	CBEI Website
EO-4	0.0%	100.0%	0.0%	Video Production
EO-5	0.0%	0.0%	100.0%	Artistic Water Interpretation
EO-6	0.0%	100.0%	0.0%	ECHO SOL Lake News Studio Update
EO-7	0.0%	100.0%	0.0%	Streamwise, Phase 3
EO-8	0.0%	100.0%	0.0%	E&O Stewards
EO-9	0.0%	100.0%	0.0%	LakeWise Vermont
EO-10	0.0%	100.0%	0.0%	E&O FY21 PROPOSALS (Large E&O Grants)
EO-11	0.0%	100.0%	0.0%	The Giant Lake Champlain Basin Map Project, Phase 2
EO-12	0.0%	100.0%	0.0%	Increasing Access to Field Trips in 2022
EO-13	0.0%	100.0%	0.0%	Developing Consistent and High-Quality Skills Training in Clean Water BMP Implementation on Sub-jurisdictional Small Sites
EO-14	0.0%	100.0%	0.0%	Lake George Floating Classroom and Stream Education Programs 2022
EO-15	0.0%	100.0%	0.0%	Continuing the New York Watershed Alliance- Year 4 education activities
EO-16	0.0%	100.0%	0.0%	Ahead of the Storm Guidance Manual and Community Outreach
EO-17	0.0%	100.0%	0.0%	Protecting our Waters - An experiential learning module for elementary students that Benefits the whole community
EO-18	0.0%	100.0%	0.0%	Improving Communications through Updated Informational Kiosks at Winooski Valley Park District Parks
EO-19	0.0%	100.0%	0.0%	
EO-10	0.0%	100.0%	0.0%	

				<b>Technical Tasks</b>
T-1	0.0%	90.0%	10.0%	CORE PROJECT: Lake Champlain Boat Launch Steward Program 2021
T-2	0.0%	100.0%	0.0%	CORE PROJECT: NEIWPCC-- Lake Champlain Long-Term Water Quality and Biological Monitoring ( <i>LTMP</i> )
T-3	0.0%	100.0%	0.0%	CORE PROJECT: VERMONT DEC - LTMP
T-4	0.0%	100.0%	0.0%	CORE PROJECT: New York DEC/SUNY Plattsburgh LTMP
T-5	0.0%	100.0%	0.0%	CORE PROJECT: LTMP Sensor Array - annual maintenance
T-6	0.0%	100.0%	0.0%	CORE PROJECT: Cyanobacteria Monitoring
T-7	0.0%	100.0%	0.0%	CORE PROJECT: Water Chestnut Management

T-8	0.0%			CORE PROJECT: LCBP Enhanced BMP Grants
T-9	0.0%	0.0%	100.0%	CORE PROJECT: AIS Rapid Response Fund
T-10	0.0%	100.0%	0.0%	CORE PROJECT: NY Lake Champlain Basin Agronomy Support and Agriculture BMP Implementation
FY20	0.0%	100.0%	0.0%	LINE ITEM: WWTF Optimization in Lake Champlain Basin - NEW YORK: YEAR 3 of 3
FY20	0.0%	100.0%	0.0%	LINE ITEM: WWTF Optimization in Lake Champlain Basin - VERMONT: YEAR 3 of 3
T-11	0.0%	100.0%	0.0%	LINE ITEM: VT Forest P Load Allocation
T-12	0.0%	100.0%	0.0%	LINE ITEM: NY Forest P Load Allocation
T-13	0.0%	100.0%	0.0%	LINE ITEM: NY Stormwater Master Planning
T-14	0.0%	100.0%	0.0%	LINE ITEM: Rural Roads General Permit & BMP Implementation: New York
T-15	0.0%	100.0%	0.0%	LINE ITEM: Rural Roads General Permit & BMP Implementation: Vermont
T-16	0.0%	100.0%	0.0%	LINE ITEM: Interstate Clean Water Accounting
T-17	0.0%	100.0%	0.0%	LINE ITEM: Enhanced Agricultural BMPs
T-18	0.0%	100.0%	0.0%	LINE ITEM: Enhanced Agricultural BMPs
T-19	0.0%	100.0%	0.0%	LINE ITEM: Lake Champlain Aquatic Nonindigenous Species Information System Creation
T-20	0.0%	100.0%	0.0%	LINE ITEM: VT DOH Cyanobacteria laboratory costs
T-21	0.0%	0.0%	0.0%	<b>Technical Tasks</b>
T-22	0.0%	100.0%	0.0%	Going deep: evaluating deep and shallow water drivers of mercury in Lake Champlain fish
T-23	0.0%	100.0%	0.0%	Lake Iroquois Watershed Action Plan
T-24	0.0%	100.0%	0.0%	Lake assessment and watershed action planning for New York lakes
T-25	0.0%	100.0%	0.0%	Flower Brook Geomorphic and Flood Resilience Assessment
T-26	0.0%	100.0%	0.0%	Fairfield Pond Lake Watershed Action Plan
T-27	0.0%	100.0%	0.0%	Caspian Lake Watershed Action Plan
T-28	0.0%	100.0%	0.0%	Washington County Brine Maker
T-29	0.0%	100.0%	0.0%	Reconnecting VT Rivers through Dam Removal in the Lake Champlain Basin
T-29	0.0%	0.0%	100.0%	Geomorphic assessment of Pike River
T-29	0.0%	100.0%	0.0%	2022 Lake St. Catherine Watershed Action Plan
T-29	0.0%	100.0%	0.0%	Expanding Vermont's Functioning Floodplain Initiative (FFI) to Advance the Science and Conservation of Healthy Stream, Riparian, Wetland, and Floodplain Ecosystems
T-29	0.0%	100.0%	0.0%	Action Plan to Improve Water Quality in Lake Champlain through the Assessment of Streams, Lakeshore, and Wetlands
T-29	0.0%	100.0%	0.0%	Developing a Comprehensive Binational Phosphorus Mass Balance Model for the Missisquoi Bay
T-29	0.0%	100.0%	0.0%	Achieving Verifiable Phosphorus Removal from Tile Drains Discharging to Lake Carmi Tributaries
T-29	0.0%	100.0%	0.0%	NRCC Trees for Streams Program
T-29	0.0%	100.0%	0.0%	Castleton Main Street Drainage Scoping Study



<b>T-29</b>	<b>0.0%</b>	<b>100.0%</b>	<b>0.0%</b>	
<b>T-30</b>	<b>0.0%</b>	<b>100.0%</b>	<b>0.0%</b>	<b>TMDL Project:</b> Green Schools Initiative to Support Stormwater Compliance
<b>T-31</b>	<b>0.0%</b>	<b>100.0%</b>	<b>0.0%</b>	<b>TMDL Project:</b> Priority Wetland Acquisition, Restoration, and Conservation to Improve Water Quality in Vermont's Lake Champlain Basin
<b>T-32</b>	<b>0.0%</b>	<b>100.0%</b>	<b>0.0%</b>	<b>TMDL Project:</b> Enhanced Agricultural Practice Implementation
<b>FY20</b>	<b>0.0%</b>	<b>100.0%</b>	<b>0.0%</b>	<b>TMDL Project:</b> Deer Brook Restoration Project (FY20 project)
<b>FY20</b>	<b>0.0%</b>	<b>100.0%</b>	<b>0.0%</b>	<b>TMDL Project:</b> Winooski Headwaters Targeted Intervention (FY20 project)
<b>FY20</b>	<b>0.0%</b>	<b>100.0%</b>	<b>0.0%</b>	<b>TMDL Project:</b> Lake Carmi Watershed Restoration (FY20 Project)
<b>T-33</b>	<b>0.0%</b>	<b>100.0%</b>	<b>0.0%</b>	

<b>EPA FY20 base</b>
<b>EPA-2016 TMDL</b>
<b>NPS (CVNHP)</b>
<b>GLFC</b>

April 2021 DRAFT **FY2021 LCBP Budget**

Task Management	2021 TASK Request	FY2020 Approved Budget	DRAFT TASK Cumulative Total	NPS Allocation
VERMONT	\$ 162,604	\$ 161,412	\$ 162,604	\$0
NEIWPCC for New York	\$ 156,000	\$ 156,000	\$ 318,604	\$0
NEIWPCC	\$ 210,000	\$ 210,000	\$ 518,104	\$0
NEIWPCC	\$ 275,000	\$ 275,000	\$ 779,354	\$0
NEIWPCC	\$ 120,000	\$ 120,000	\$ 899,354	\$0
NEIWPCC	\$ 285,000	\$ 285,000	\$ 1,184,354	\$0
NEIWPCC	\$ 230,000	\$ 230,000	\$ 1,414,354	\$0
NEIWPCC	\$ 120,000	\$ 120,000	\$ 1,534,354	\$2,400
NEIWPCC	\$ 170,000	\$ 170,000	\$ 1,700,954	\$3,400
NEIWPCC	\$ 50,000	\$ 72,000	\$ 1,738,454	\$1,000
NEIWPCC	\$ 195,000	\$ 195,000	\$ 1,933,454	\$0
NEIWPCC	\$ 198,000	\$ 198,000	\$ 2,131,454	\$3,960
NEIWPCC	\$ 185,000	\$ 185,000	\$ 2,316,454	\$175,000
VERMONT	\$ 18,500	\$ 18,500	\$ 2,334,954	\$0
NEIWPCC	\$ 550,000	\$ 550,000	\$ 2,884,954	\$0
NEIWPCC	\$ 15,000	\$ -	\$ 2,899,954	\$0
NEIWPCC	\$ 50,000	\$ -	\$ 2,949,954	\$0
NEIWPCC	\$ 10,000	\$ -	\$ 2,959,954	\$0
NEIWPCC	\$ 30,000	\$ -	\$ 2,989,954	\$7,514
NEIWPCC	\$ -	\$ 20,000	\$ 2,989,954	\$0
	<b>\$3,030,104</b>		Category Sum	\$193,274
EPA FY21 base	<b>\$9,000,000</b>			
EPA-2016 TMDL	<b>\$6,000,000</b>			
NPS (CVNHP)	<b>\$400,000</b>			
GLFC*	<b>\$619,500</b>			
Total	<b>\$16,019,500</b>			

Task Management	2021 TASK Request	FY2020 Approved Budget	DRAFT TASK Cumulative Total	NPS Allocation
NEIWPCC		\$ 240,586	\$ 2,989,954	
Historic Saranac Lake	\$ 8,944	\$ -	\$ 2,998,898	\$8,944
LCMM	\$ 32,198	\$ -	\$ 3,031,096	\$32,198
The Fort Ticonderoga Association	\$ 8,944	\$ -	\$ 3,040,040	\$8,944
Hubbard Hall Center for the Arts and Education	\$ 8,944	\$ -	\$ 3,048,984	\$8,944
Clinton County Historical Association	\$ 4,234	\$ -	\$ 3,053,218	\$4,234
The Fort Ticonderoga Association	\$ 8,944	\$ -	\$ 3,062,162	\$8,944
Lake George Historical Association	\$ 8,944	\$ -	\$ 3,071,106	\$8,944
Clinton County Historical Association	\$ 5,963	\$ -	\$ 3,077,069	\$5,963
Rokeby Museum	\$ 5,963	\$ -	\$ 3,083,032	\$5,963
LCMM	\$ 8,944	\$ -	\$ 3,091,976	\$8,944
The Fort Ticonderoga Association	\$ 5,963	\$ -	\$ 3,097,939	\$5,963
Missisquoi River Basin Association	\$ 4,770	\$ -	\$ 3,102,709	\$4,770
Ticonderoga Historical Society	\$ 5,963	\$ -	\$ 3,108,672	\$5,963
The Vermont Indigenous Heritage Center	\$ 4,770	\$ -	\$ 3,113,442	\$4,770
Center for the Study of Canada and Institute on Quebec Studies, SUNY Plattsburgh	\$ 45,940	\$ -	\$ 3,159,382	\$0
PRIDE of Ticonderoga	\$ 8,944	\$ -	\$ 3,168,326	\$8,944
Paul Smith's College Adirondack Watershed Institute	\$ 46,150	\$ -	\$ 3,214,476	\$46,150
Bixby Library	\$ 8,944	\$ -	\$ 3,223,420	\$8,944
City of Beloeil	\$ 4,770	\$ -	\$ 3,228,190	\$0
NEIWPCC	\$ 40,000	\$ -	\$ 3,268,190	\$0
NEIWPCC	\$ -	\$ -	\$ 3,268,190	\$0
NEIWPCC	\$ -	\$ -	\$ 3,268,190	\$0
NEIWPCC	\$ -	\$ 2,200	\$ 3,268,190	\$0
NEIWPCC	\$ 12,000	\$ 12,000	\$ 3,280,190	\$12,000
NEIWPCC	\$ 7,200	\$ 7,200	\$ 3,287,390	\$7,200
<b>CVNHP Totals</b>	<b>\$297,436</b>		<b>\$ 3,584,826</b>	<b>\$206,726</b>

Task Management	2021 TASK Request	FY2020 Approved Budget	DRAFT TASK Cumulative Total	NPS Allocation
-----------------	-------------------	------------------------	-----------------------------	----------------

NEIWPCC	\$ 279,316	\$ 252,000	\$ 3,566,706	\$0
NEIWPCC	\$ 40,000	\$ -	\$ 3,606,706	\$0
NEIWPCC	\$ 18,000	\$ -	\$ 3,624,706	\$0
NEIWPCC	\$ 24,000	\$ -	\$ 3,648,706	\$0
NEIWPCC	\$ 40,000	\$ -	\$ 3,688,706	\$0
NEIWPCC	\$ 9,500	\$ -	\$ 3,698,206	\$0
NEIWPCC	\$ 75,000	\$ 47,200	\$ 3,773,206	\$0
NEIWPCC	\$ 40,000	\$ 70,800	\$ 3,813,206	\$0
VERMONT	\$ 60,000	\$ 62,000	\$ 3,873,206	\$0
NEIWPCC		\$ 230,000	\$ 3,873,206	\$0
Lake Champlain Maritime Museum	\$ 50,599	\$ -	\$ 3,923,805	\$0
Lake Champlain Maritime Museum	\$ 24,220	\$ -	\$ 3,948,025	\$0
Winooski NRCD	\$ 43,004	\$ -	\$ 3,991,029	\$0
Lake George Association	\$ 34,123	\$ -	\$ 4,025,152	\$0
SUNY Plattsburgh	\$ 39,057	\$ -	\$ 4,064,209	\$0
Lewis Creek Association	\$ 45,583	\$ -	\$ 4,109,792	\$0
Champlain College	\$ 52,963	\$ -	\$ 4,162,755	\$0
Winooski Valley Park District	\$ 47,343	\$ -	\$ 4,210,098	\$0
			\$ 4,210,098	\$0
			\$ 4,210,098	\$0
E&O Total	\$ 922,708	\$662,000	Category Sum	\$0

Task Management	2021 TASK Request	FY2020 Approved Budget	DRAFT TASK Cumulative Total	NPS Allocation
NEIWPCC	\$ 222,000	\$ 138,050	\$ 4,432,098	\$0
NEIWPCC	\$ 162,000	\$ 154,000	\$ 4,594,098	\$0
VERMONT	\$ 259,502	\$ 267,629	\$ 4,853,600	\$0
NEIWPCC - SUNY Plattsburgh	\$ 194,250	\$ 185,000	\$ 5,047,850	\$0
NEIWPCC	\$ 19,000	\$ 71,033	\$ 5,066,850	\$0
NEIWPCC-Lake Champlain Committee	\$ 100,500	\$ 105,000	\$ 5,167,350	\$0
VERMONT	\$ 90,000	\$ 150,000	\$ 5,257,350	\$0

NEIWPCC	\$ 996,000	\$ 633,347	\$ 6,253,350	\$0
NEIWPCC	\$ 90,000	\$ 69,900	\$ 6,343,350	\$0
NEIWPCC	\$ 160,000	\$ 160,000	\$ 6,503,350	\$0
NEW YORK	\$ -	\$ 110,000	\$ 6,503,350	\$0
VERMONT	\$ -	\$ 150,000	\$ 6,503,350	\$0
VERMONT	\$ 200,000	\$ -	\$ 6,703,350	\$0
NEW YORK	\$ 100,000	\$ -	\$ 6,803,350	\$0
NEW YORK	\$ 200,000	\$ -	\$ 6,903,350	\$0
NEW YORK	\$ 100,000	\$ -	\$ 6,903,350	\$0
VERMONT	\$ 100,000	\$ -	\$ 7,003,350	\$0
NEIWPCC	\$ 100,000	\$ -	\$ 7,103,350	\$0
NEW YORK	\$ 200,000	\$ -	\$ 7,303,350	\$0
VERMONT	\$ 200,000	\$ -	\$ 7,503,350	\$0
NEIWPCC-Lake Champlain Sea Grant	\$ 60,000	\$ -	\$ 7,563,350	\$0
NEIWPCC	\$ 12,000	\$ 8,000	\$ 7,575,350	\$0
		\$ 1,125,729	\$ 7,575,350	\$0
Dartmouth College	\$ 297,500	\$ -	\$ 7,872,850	\$0
Winooski NRCD	\$ 47,505	\$ -	\$ 7,920,355	\$0
Paul Smith's College - AWI	\$ 198,995	\$ -	\$ 8,119,350	\$0
Poultney Mettowee NRCD	\$ 67,436	\$ -	\$ 8,186,786	\$0
Friends of Northern Lake Champlain	\$ 29,378	\$ -	\$ 8,216,164	\$0
Orleans County NRCD	\$ 58,037	\$ -	\$ 8,274,201	\$0
Washington County SWCD	\$ 132,000	\$ -	\$ 8,406,201	\$0
Vermont Natural Resources Council	\$ 285,000	\$ -	\$ 7,848,350	\$0
MRC Brome-Missisquoi	\$ 160,000	\$ -	\$ 7,735,350	\$0
Lake St. Catherine Association	\$ 45,583	\$ -	\$ 7,620,933	\$0
Milone & MacBroom	\$ 154,035	\$ -	\$ 8,026,885	\$0
Grand Isle County NRCD	\$ 46,052	\$ -	\$ 7,966,407	\$0
Stone Environmental	\$ 299,966	\$ -	\$ 8,419,316	\$0
Stone Environmental	\$ 147,962	\$ -	\$ 8,334,748	\$0
Vermont State Natural Resources Conservation Council	\$ 245,334	\$ -	\$ 8,461,498	\$0
Poultney Mettowee NRCD	\$ 29,217	\$ -	\$ 8,303,418	\$0

		\$ -	\$ 8,406,201	\$0
VERMONT	\$ 2,000,000	\$ 2,161,000	\$ 10,406,201	\$0
VERMONT	\$ 2,000,000	\$ 1,650,000	\$ 12,406,201	\$0
VERMONT	\$ 2,000,000	\$ 1,150,000	\$ 14,406,201	\$0
VERMONT	\$ -	\$ 400,000	\$ 14,406,201	\$0
VERMONT	\$ -	\$ 825,000	\$ 14,406,201	\$0
VERMONT	\$ -	\$ 200,000	\$ 14,406,201	\$0
		\$ -	\$ 14,406,201	\$0
Tech Total \$ 11,809,252			Category Sum	\$0

Budget		Allocated	Remaining
\$ 9,000,000		\$9,000,000	\$ -
\$ 6,000,000	\$	6,000,000	\$ -
\$ 400,000	\$	400,000	\$ -
\$ 619,500	\$	619,350	\$ 150
\$ 16,019,500	\$	16,019,350	\$ 150

EPA Allocation	GLFC Allocation
\$162,604	\$0
\$156,000	\$0
\$199,500	\$0
\$261,250	\$0
\$108,000	\$12,000
\$279,300	\$5,700
\$225,400	\$4,600
\$117,600	\$0
\$163,200	\$0
\$36,500	\$0
\$195,000	\$0
\$190,080	\$3,960
\$0	\$10,000
\$18,500	\$0
\$522,500	\$27,500
\$0	\$15,000
\$50,000	\$0
\$10,000	\$0
\$0	\$22,486
\$0	\$0
\$2,695,434	\$101,246

EPA Allocation	GLFC Allocation
\$0	
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$45,940
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$4,770
\$0	\$40,000
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$90,710

EPA Allocation	GLFC Allocation
----------------	-----------------



\$258,863	\$20,453
\$0	\$40,000
\$18,000	\$0
\$24,000	\$0
\$0	\$40,000
\$9,500	\$0
\$75,000	\$0
\$40,000	\$0
\$60,000	\$0
\$0	\$0
\$50,599	\$0
\$24,220	\$0
\$43,004	\$0
\$34,123	\$0
\$39,057	\$0
\$45,583	\$0
\$52,963	\$0
\$47,343	\$0
\$0	\$0
\$0	\$0
\$822,255	\$100,453

EPA Allocation	GLFC Allocation
\$200,000	\$22,000
\$162,000	\$0
\$259,502	\$0
\$194,250	\$0
\$19,000	\$0
\$100,500	\$0
\$90,000	\$0

\$941,059	\$54,941
\$0	\$90,000
\$160,000	\$0
\$0	\$0
\$0	\$0
\$200,000	\$0
\$100,000	\$0
\$200,000	\$0
\$100,000	\$0
\$100,000	\$0
\$100,000	\$0
\$200,000	\$0
\$200,000	\$0
\$60,000	\$0
\$12,000	\$0
\$0	\$0
\$297,500	\$0
\$47,505	\$0
\$198,995	\$0
\$67,436	\$0
\$29,378	\$0
\$58,037	\$0
\$132,000	\$0
\$285,000	\$0
\$0	\$160,000
\$45,583	\$0
\$154,035	\$0
\$46,052	\$0
\$299,966	\$0
\$147,962	\$0
\$245,334	\$0
\$29,217	\$0

\$0	\$0
\$2,000,000	\$0
\$2,000,000	\$0
\$2,000,000	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$11,482,311	\$326,941

## Vermont Citizens Advisory Committee on Lake Champlain's Future

Whereas, the Vermont Citizens Advisory Committee on Lake Champlain's Future (VTCAC) meets regularly to gather information and scientific data concerning activities and factors that affect the water quality of Lake Champlain; and

Whereas, the VTCAC has been presented with information that demonstrates significant concerns related to consistency, frequency, quality, and public accessibility to data derived from limited water quality monitoring for the presence of increased herbicide and pesticide compounds or their derivatives in Lake Champlain streams, tributaries, and segments; and

Whereas, the VTCAC 2021 Action Plan report to the Vermont Legislature includes recommendations that include "[t]he State must fund increased screening of next generation contaminants to enable Vermont to recognize and respond to emerging pollutant issues before they become greater and more expensive problems" and [t]he State must initiate robust improvements in collecting and analyzing herbicide and pesticide use information, with rigorous quality assurance and control, and transparent public reporting;"and

Therefore, the VTCAC has unanimously approved the following request to the Lake Champlain Basin Program Executive and Steering Committees:

Resolved, that the VTCAC hereby requests that the Lake Champlain Basin Program Steering Committee, in conjunction with the Technical Advisory Committee, formalize a routine monitoring and sampling program for the presence of herbicides, pesticides, and perhaps other toxins within the existing Long Term Monitoring Program or another programmatic sampling program within the Basin, while providing broad public access to the analysis and data from the sampling program.

Approved February 8, 2021

Submitted by Mark Naud, Chair



## **Summit 2021 Proposed Approach (Working Version)**

### **Purpose: To inform budget and OFA planning for 2021/2022**

- Collect ideas/themes/priorities from various stakeholders and committees in order for Summit attendees to prioritize, and ultimately Steering Committee to vote on budget/OFA recommendations.
- Facilitate and enable the open flow of conversation across disciplines and interest areas by a deliberate integrated meeting structure.
- Give an equitable and inclusive opportunity to all participants, especially those reticent and quiet voices, staffers, etc.

### **1. Pre-Summit Homework**

- ✓ Briefing packets and instructions to be send out to prospective participants including:  
Information on 1) high level thoughts from leadership, 2) budget/management insights from staff/committees, and 3) most recent best practices.
- ✓ Provide homework instructions-to consider putting forward 2-4 ideas/themes/priorities they feel strongly about within the context of the OFA Goals.
- ✓ Send results back/ahead to facilitator prior to the Pre-Summit Roundtables so they can be summarized and presented for discussion and preliminary prioritizing/clarification at the summit.
- ✓ Register for June 2<sup>nd</sup> Summit so that organizers can form Cohorts from registrees for the AM cafes.

**Ann Ruzow Holland, PhD. AICP WBE Consultant,**  
**135 Sabousin Drive, Willsboro Point, New York 12996**  
**P. 518-569-7115 Email: [aholland@grantplanact.com](mailto:aholland@grantplanact.com)**  
**Web: [www.grantplanact.com](http://www.grantplanact.com)**

## 2. Pre-Summit Goal-Driven Roundtables (#2)

Schedule and host two, 90-minute, independent, zoom Roundtables for the respective OFA goals (I-IV) in Mid/Late May.

Thursday May 20th - 10:00-11:30am

- ✓ Goal I: Clean Water **and** Goal III: Thriving Communities
- ✓ Wednesday May 19th - 10:00-11:30am
- ✓ Goal II: Healthy Ecosystems **and** Goal IV: Informed and Involved Public
- ✓ Thursday May 20th - 10:00-11:30am
- ✓ In order to have “rich” conversation, attendance targeted<sup>1</sup> to 20+/- individuals for each session.
- ✓ Recommend these be specific invitations so that diverse and equitable attendance can be choreographed.
- ✓ Key representation by delegates from respective committees, staffers, and other key informants. Emphasize those voices infrequently heard and those less empowered to share their ideas.
- ✓ Information collected from the two roundtables will be summarized and presented as a Strawman for the June 2<sup>nd</sup> AM Rapid Café' Rounds.

## 3. Summit June 2<sup>nd</sup> becomes a two-part event.

### Morning Rapid Café-style Rounds (#4)

8:30 AM-11:30 AM

- ✓ June 2<sup>nd</sup> Registrants are randomly assigned to one of four cohorts with approximately 20 participants in each cohort. The Cohorts would move through the morning Café's and the Facilitators/Note Takers would stay put. This would require some form of concurrent virtual breakout groups and a platform manager to choreograph the technical/logistics.
- ✓ The purpose of the morning café rounds would be to vet the Strawman developed by the Pre-Summit Roundtables, articulate gaps, ideas, themes, and provide emphasis to areas of consensus and concerns.

---

<sup>1</sup> Interested folks will not be turned away if they wish to attend.

**Ann Ruzow Holland, PhD. AICP WBE Consultant,**  
**135 Sabousin Drive, Willsboro Point, New York 12996**  
**P. 518-569-7115 Email: [aholland@grantplanact.com](mailto:aholland@grantplanact.com)**  
**Web: [www.grantplanact.com](http://www.grantplanact.com)**

9-9:30	Goal I: Clean Water	Cohort A	Cohort D	Cohort C	Cohort B
9:35-10:05	Goal II: Healthy Ecosystems	Cohort B	Cohort A	Cohort D	Cohort C
10:10-10:40	Goal III: Thriving Communities	Cohort C	Cohort B	Cohort A	Cohort D
10:45-11:15	Goal IV: Informed and Involved Public	Cohort D	Cohort C	Cohort B	Cohort A

### 11:30 AM-1:30 PM MID DAY BREAK

- ✓ Café Facilitators/Note Takers would summarize the gaps, priorities, and recommendations they heard over the mid-day break and forward them to the Consulting Facilitator.
- ✓ If we could contrive to have a popular-based poll in place by 1:45 for voting purposes that would be great. If not, a post-Summit survey/poll would work just as well if the recommendations could be refined during the plenary and then ranked through a post-survey instrument.
- ✓ Participants would be free and rejoin the plenary at 1:30 PM.

### Summit Plenary

- 1:30 PM-4:00 PM
- 1:30-1:45 Welcome/Convening/Orientation/Charting by Leadership
- 1:45-2:30 Presentation of *Preliminary Results for each Goal* from AM Café within context of Strawman.
- 2:30-2:45 Health Break
- 2:45-3:30 Reflection/Reaction/Discussion-Prioritization/Emphasis
  - Prioritization
- 3:30-4:00 Next Steps, Closure

**Ann Ruzow Holland, PhD. AICP WBE Consultant,**  
**135 Sabousin Drive, Willsboro Point, New York 12996**  
**P. 518-569-7115 Email: [aholland@grantplanact.com](mailto:aholland@grantplanact.com)**  
**Web: [www.grantplanact.com](http://www.grantplanact.com)**

- Adjourn

#### 4. Post Summit Survey

Page | 4

- ✓ Prioritize/Rank the list generated from the roundtables and Summit, so all stakeholders (and anyone else you provide the survey link to) have an opportunity to vote on the prioritization of recommendations to go to the Steering Committee.
- ✓ This would also provide an opportunity to late arriving ideas, issues, or concerns to be voiced by folks who could not attend any of the events.

#### 5. Final Report for the Steering Committee.

- ✓ Strawman from Pre-Summit Roundtables
- ✓ Results from Cohort Café's
- ✓ Comments from Plenary
- ✓ Final ranking via survey results.

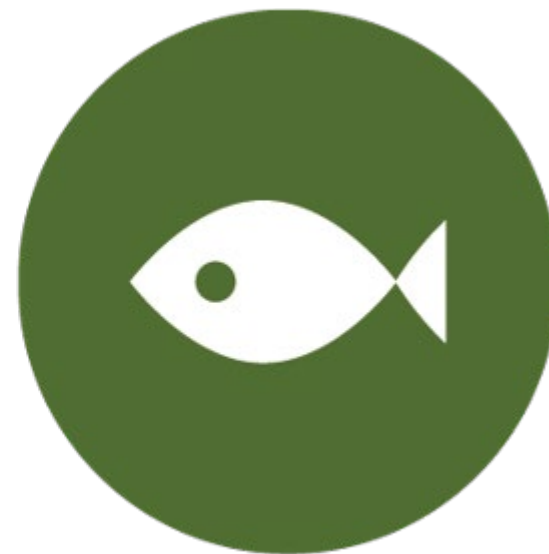
**Ann Ruzow Holland, PhD. AICP WBE Consultant,**  
**135 Sabousin Drive, Willsboro Point, New York 12996**  
**P. 518-569-7115 Email: [aholland@grantplanact.com](mailto:aholland@grantplanact.com)**  
**Web: [www.grantplanact.com](http://www.grantplanact.com)**



# State of the Lake Graphics Review

---

April 2021



# Clean Water

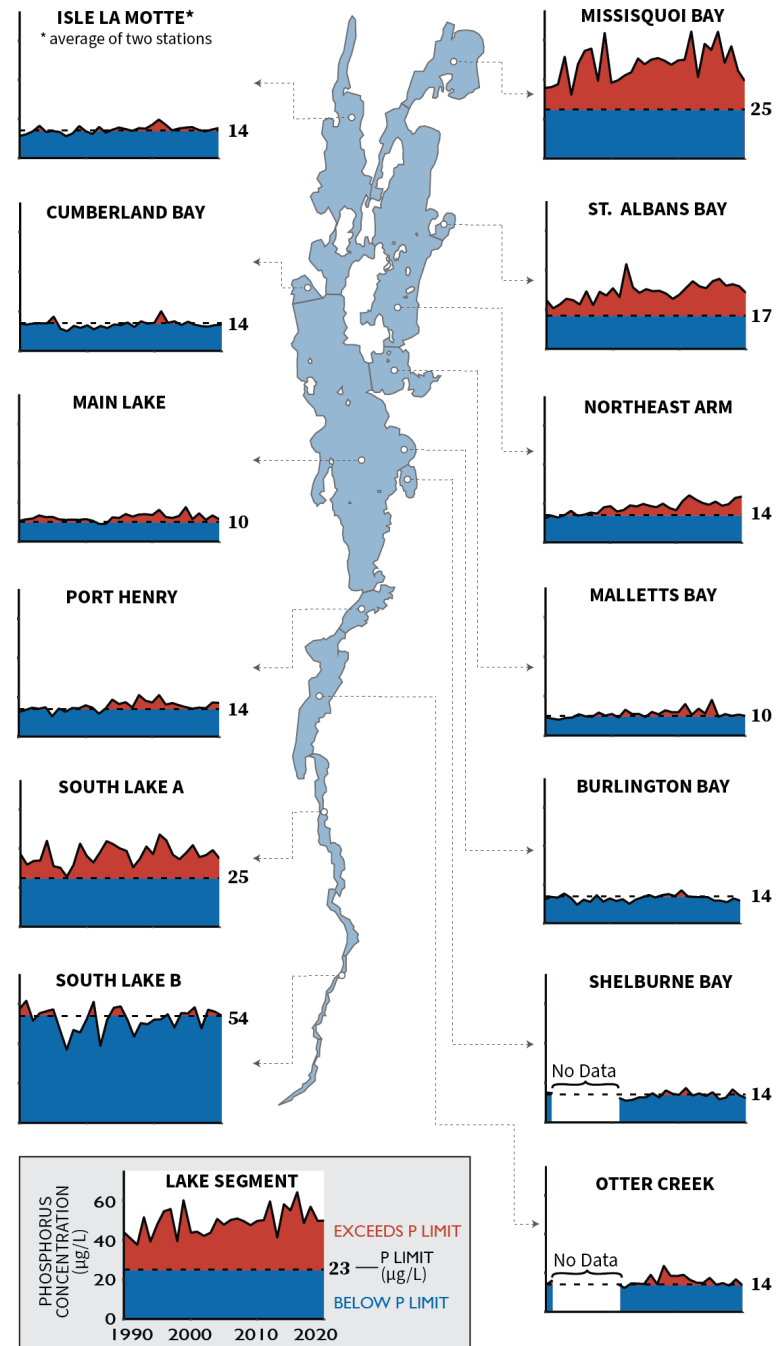
---





# Annual mean phosphorus concentration by lake segment

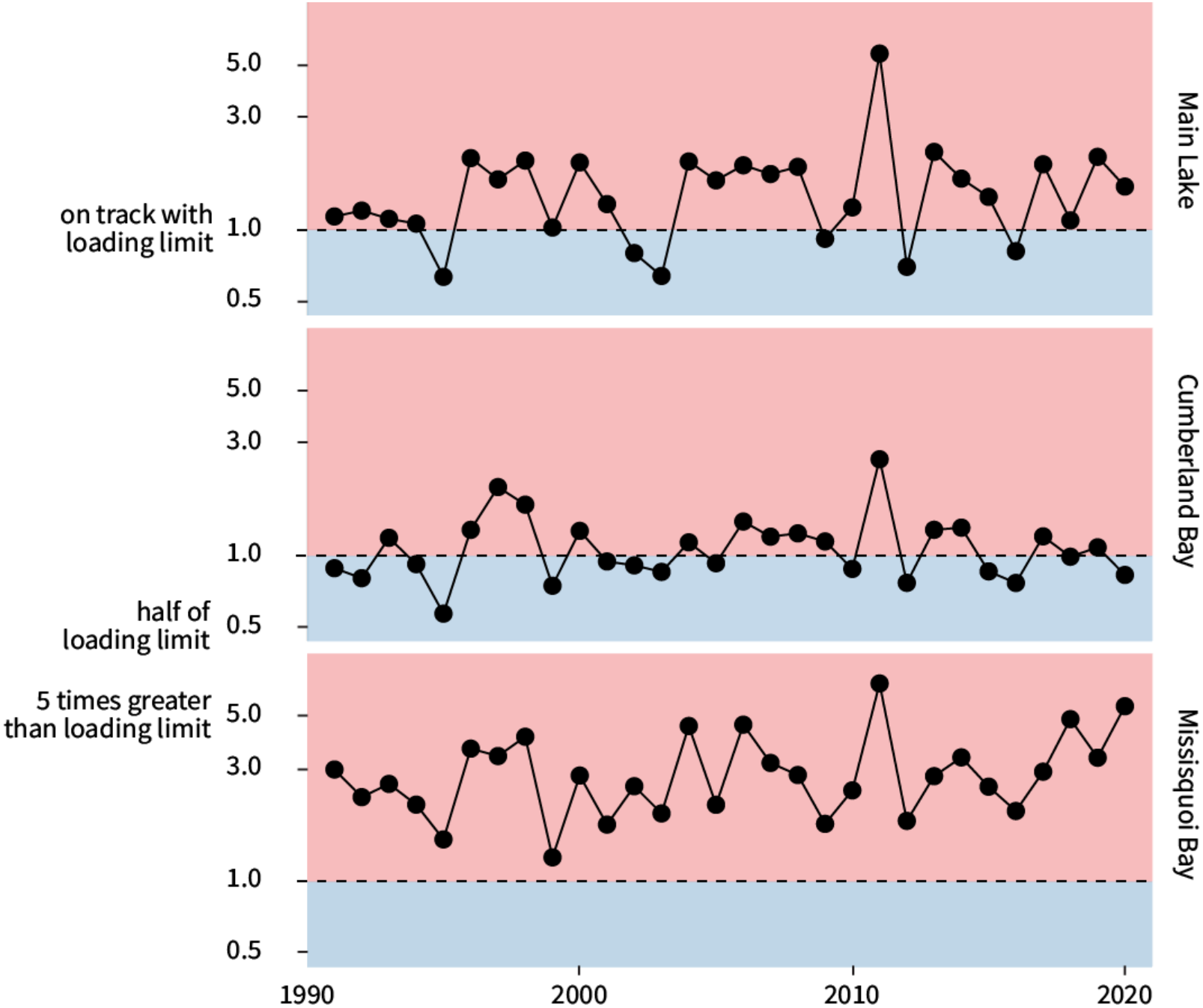
1990-2020





Phosphorus loading to lake segments compared to limits

1990 - 2020





## What You Can Do

---

### Phosphorus Stormwater

**Test your soil.** To reduce nutrient runoff from your property, test lawns and gardens to determine the nutrients they actually need. It may be possible to use less fertilizer than you think or none at all.

**Foster healthy soil.** Improve soil health in your lawn and garden rather than relying on lawn care products that import more nutrients into the Basin. Adding compost and increasing aeration can help build healthy soil.

**Raise the blade.** Set your lawn mower blade to 3" and leave grass clippings on the lawn. Tall grass is healthier and has deeper roots that hold more water, reducing stormwater runoff.

**Reduce runoff.** Try simple ways to reduce stormwater runoff around your home. Redirect your gutter downspouts to a lawn, plant a rain garden, or install a rain barrel.

**Wash your car on the lawn.** Wash your vehicle on a lawn instead of a driveway to prevent detergents from running into the Lake. Or use a carwash where the water is treated after use.

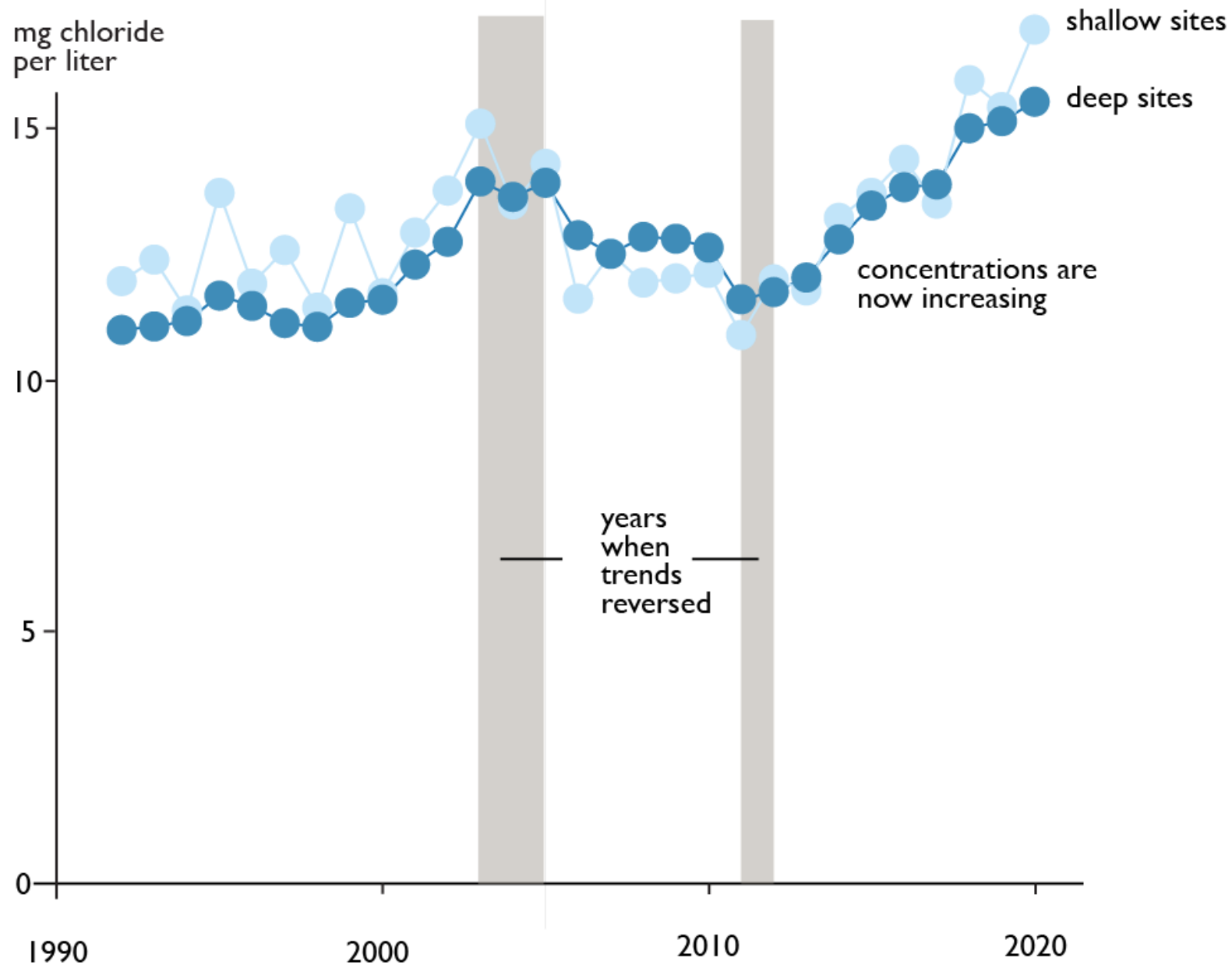
**Create natural buffers.** Protect and plant native vegetation, especially along shorelines and riverbanks to hold soil in place and reduce erosion.



Annual mean  
chloride  
concentration

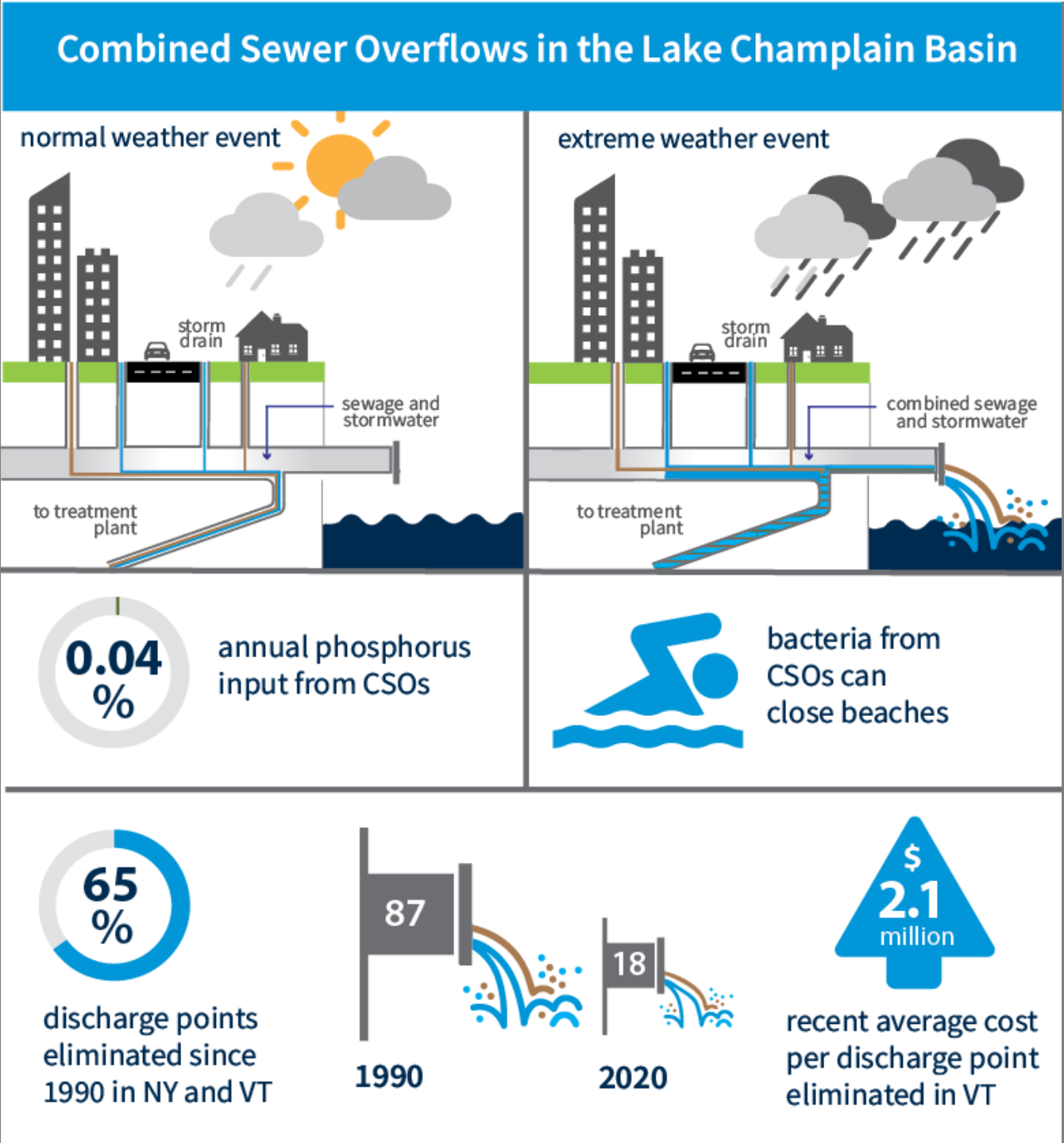
1990-2020

Eplimnion or unstratified only



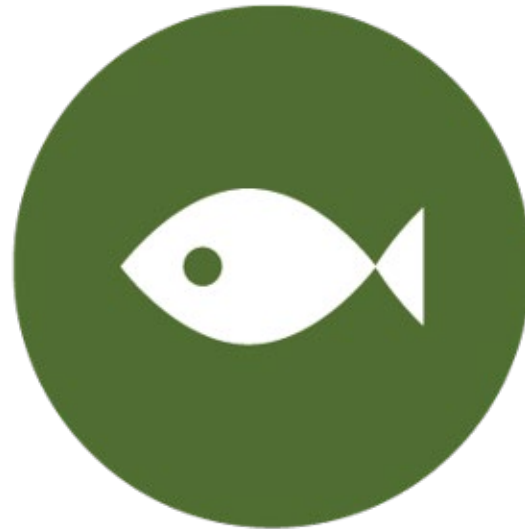


Combined  
sewer overflows  
in the Lake  
Champlain Basin



# Healthy Ecosystems

---

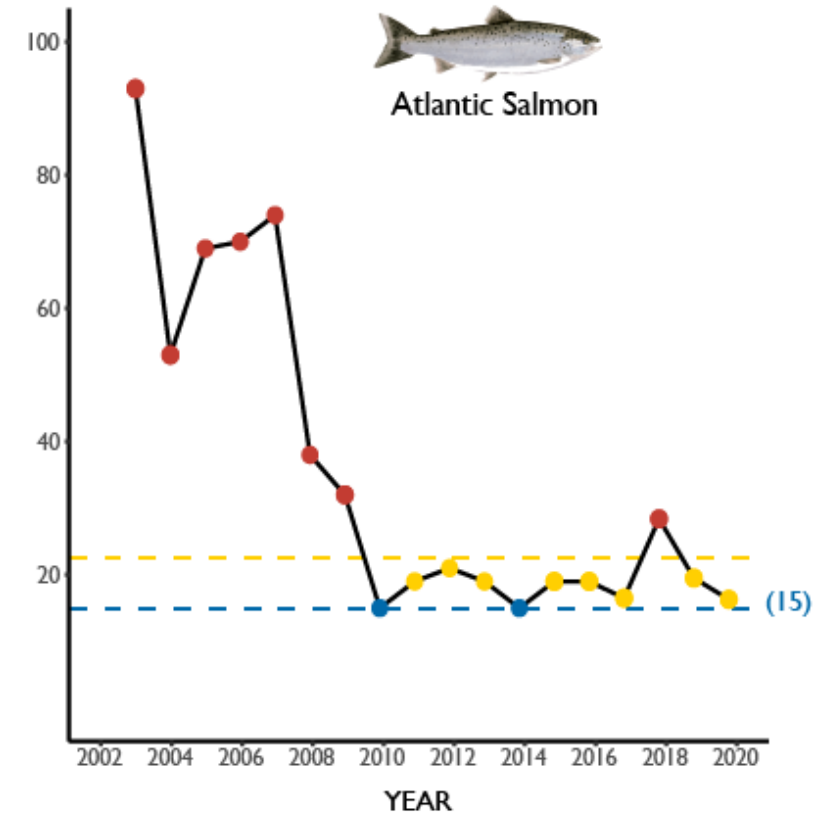
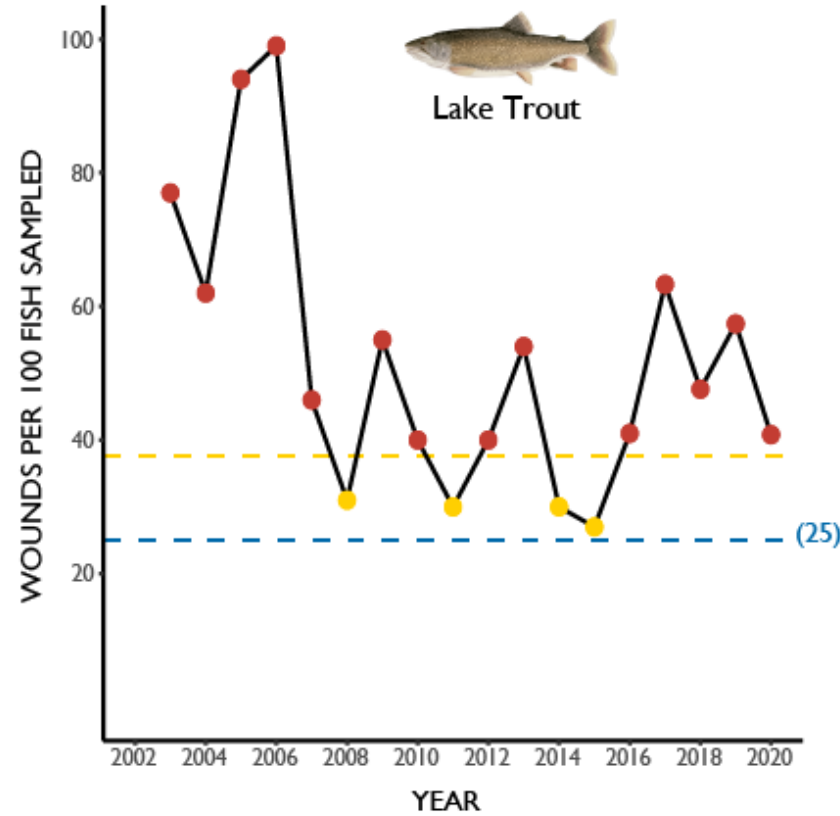






# Sea lamprey Wounding rates in Lake Champlain

2002 - 2020



## Lake-wide Status

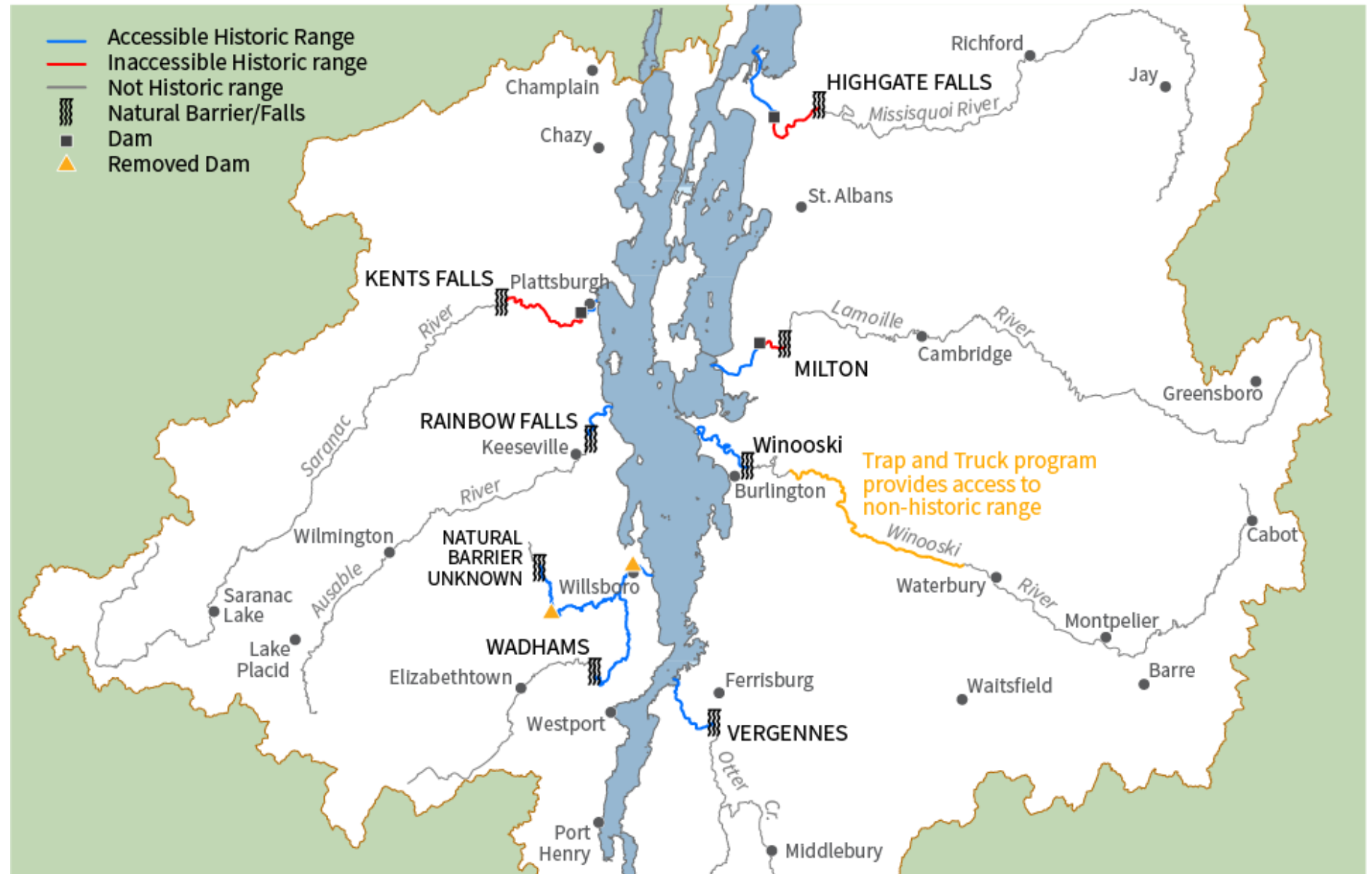
- GOOD At or below targeted wounding rate
- FAIR Above targeted wounding rate and at or below 150% of targeted wounding rate
- POOR Above 150% targeted wounding rate

## Lake-wide Trend



## Salmon habitat and dams

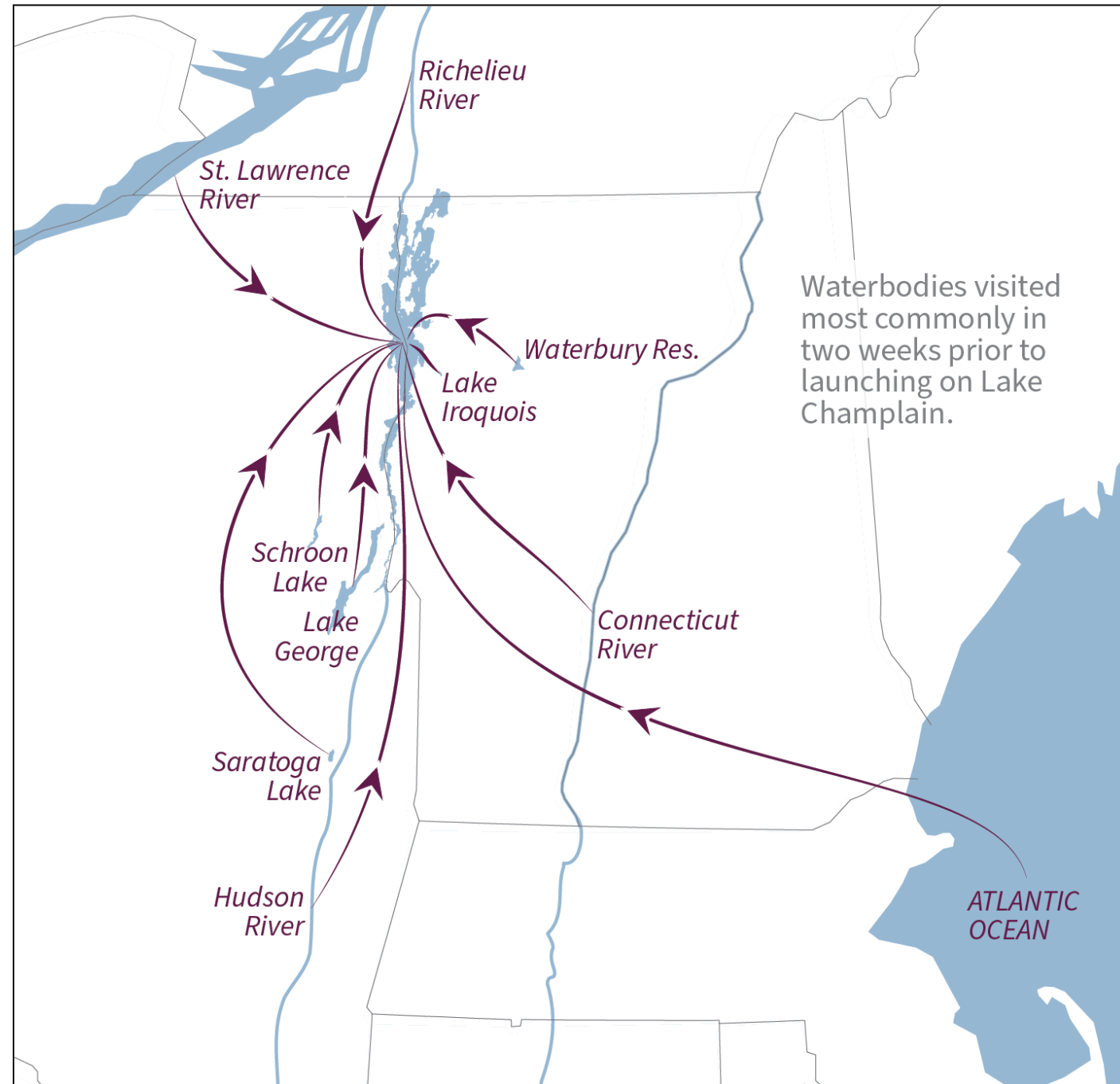
---





Most  
commonly  
visited  
waterbodies  
prior to  
launching on  
Lake  
Champlain

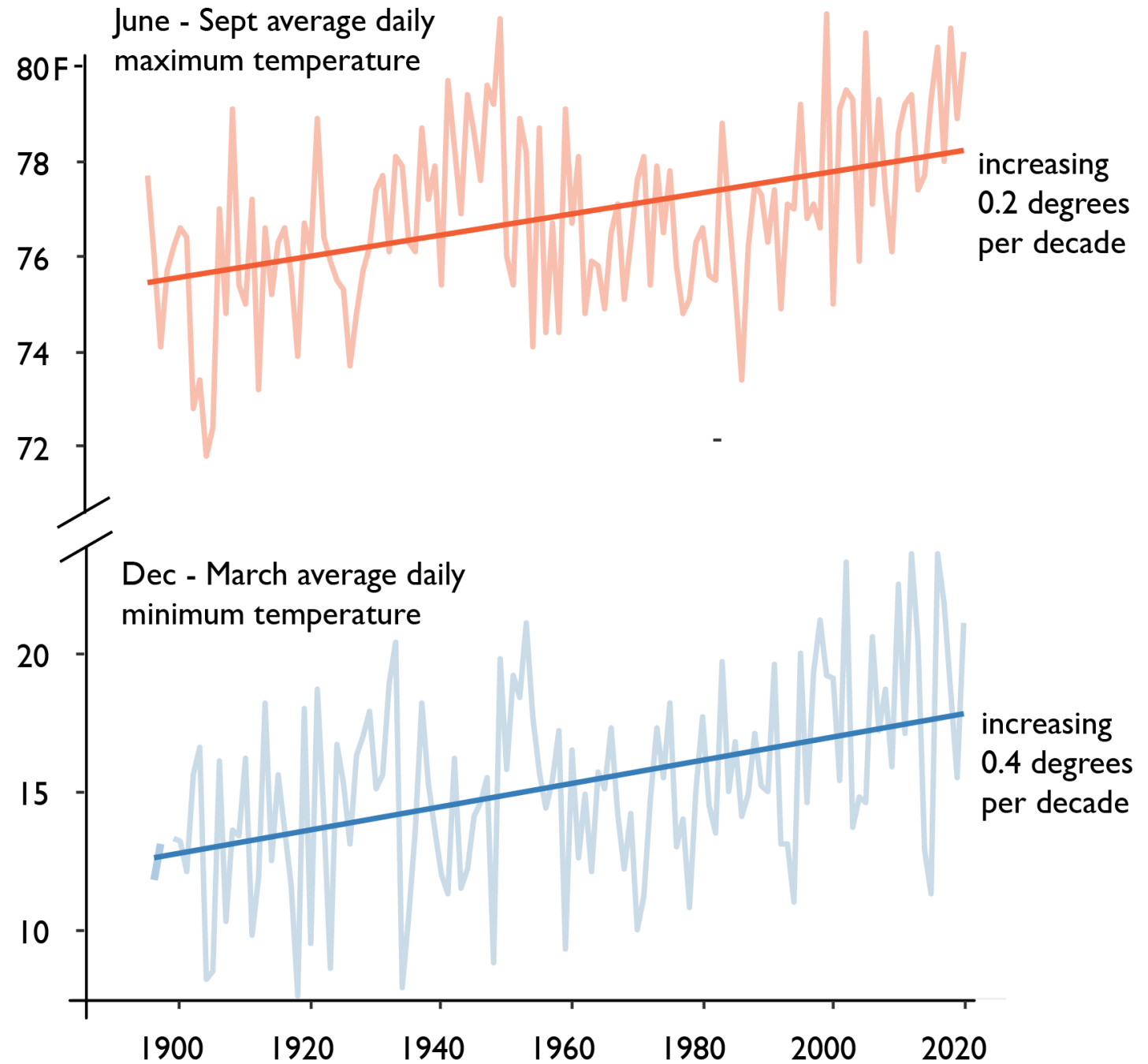
2018- 2020





# Air temperature

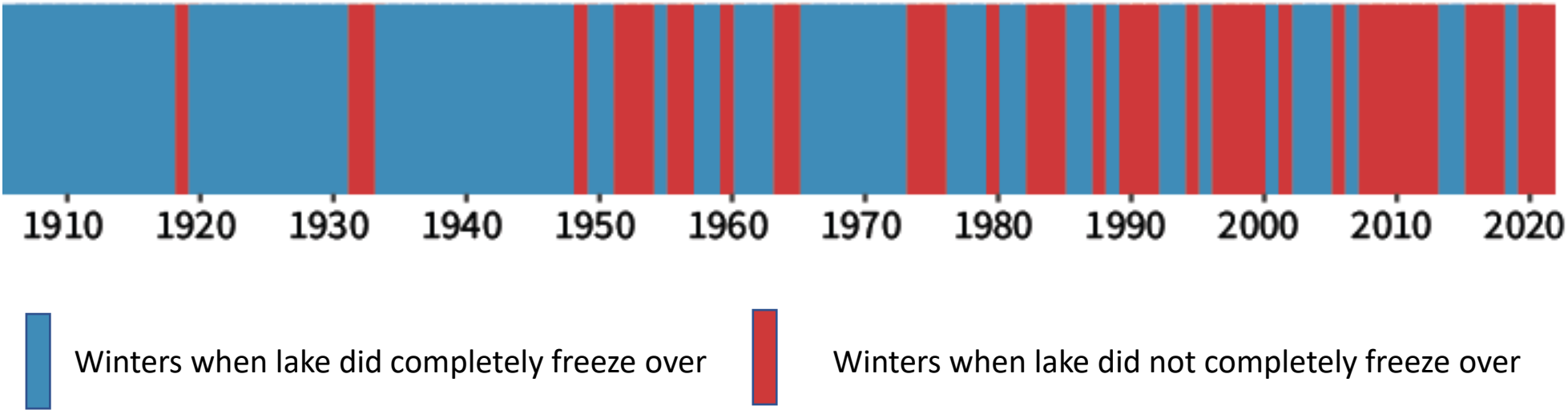
1900 - 2020





# Freeze-over of Lake Champlain

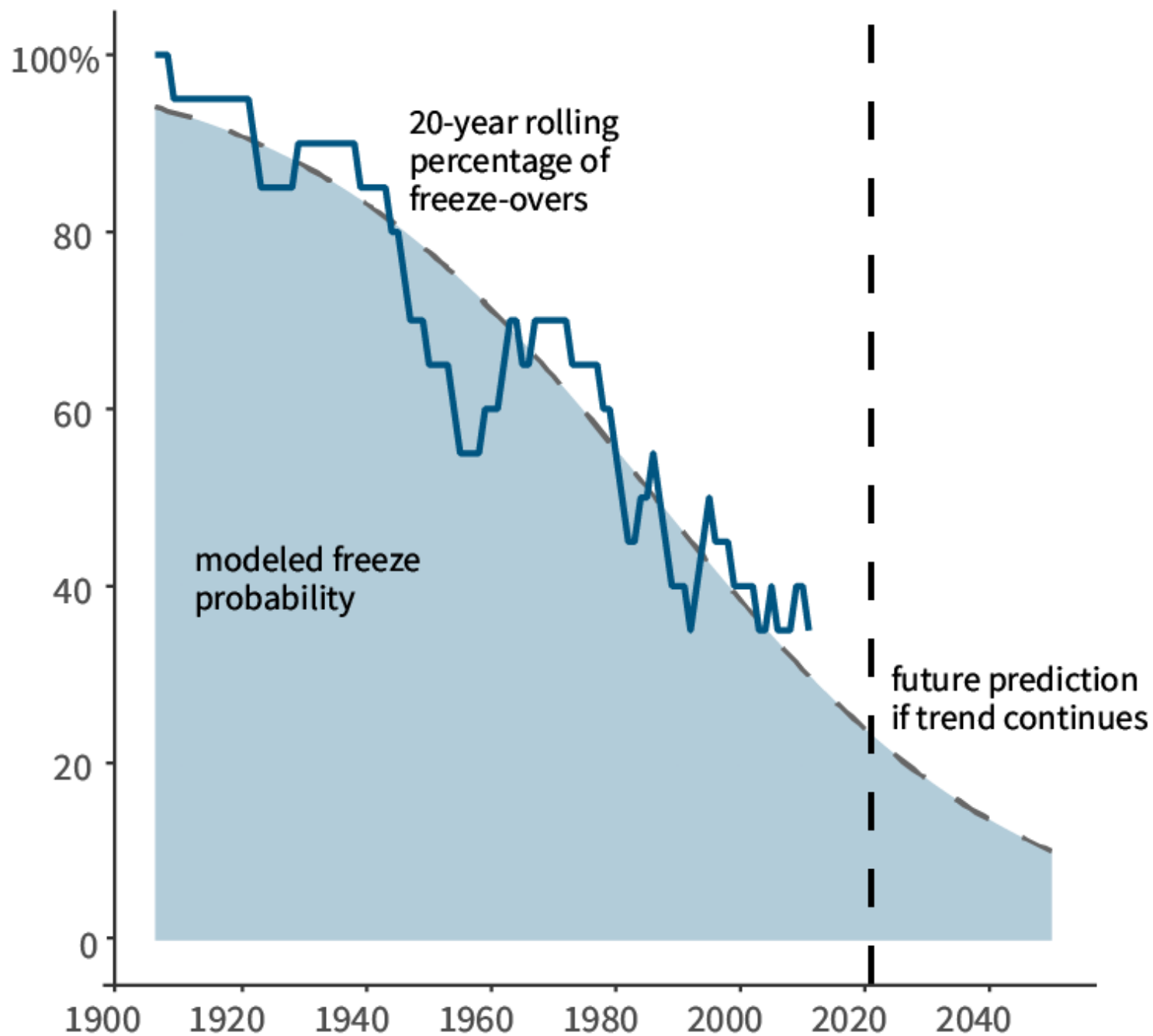
1906 - 2021





Freeze  
probability

1900 -2050



# Thriving Communities

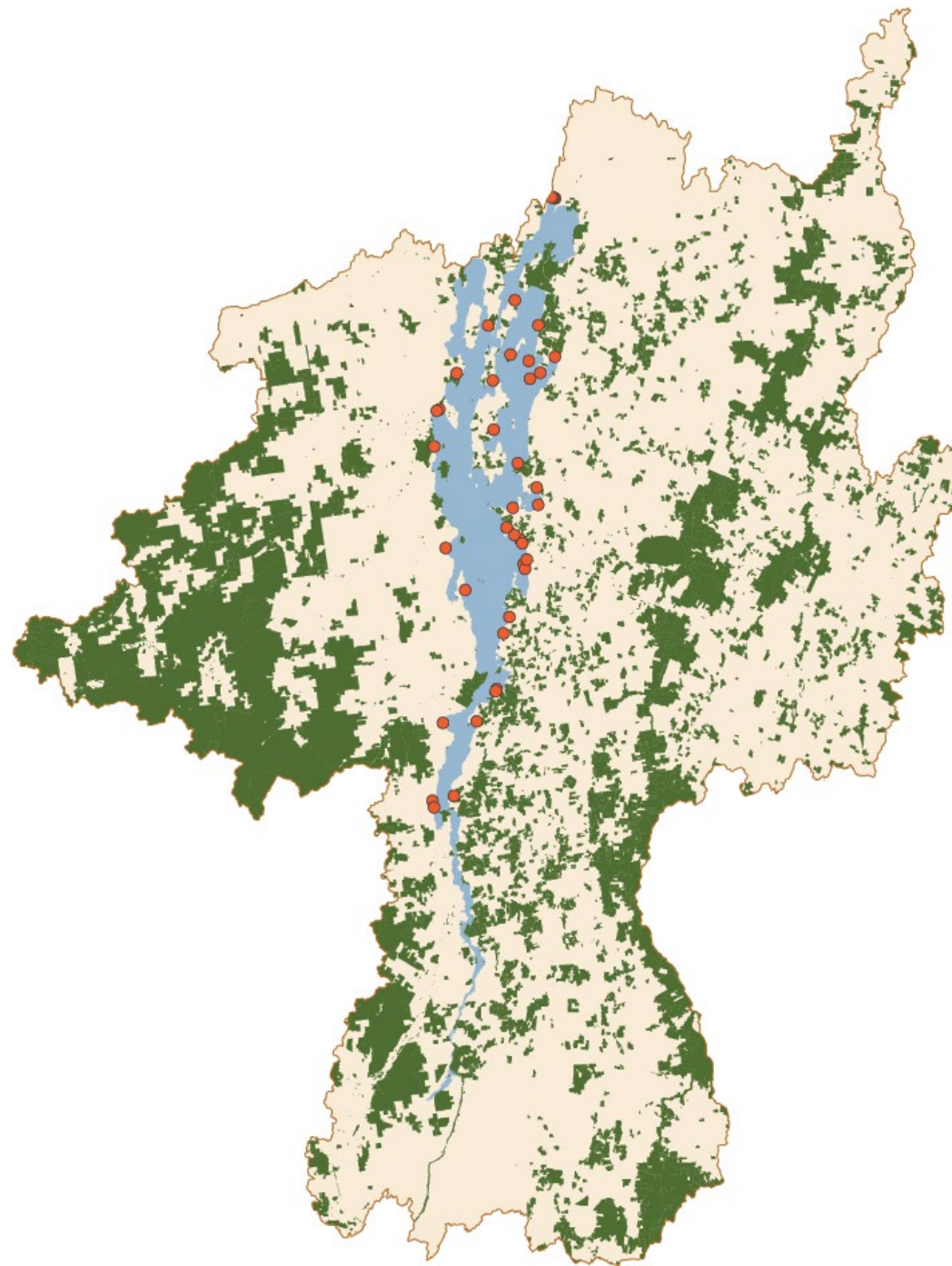
---





Conserved  
lands and  
public  
beaches

---





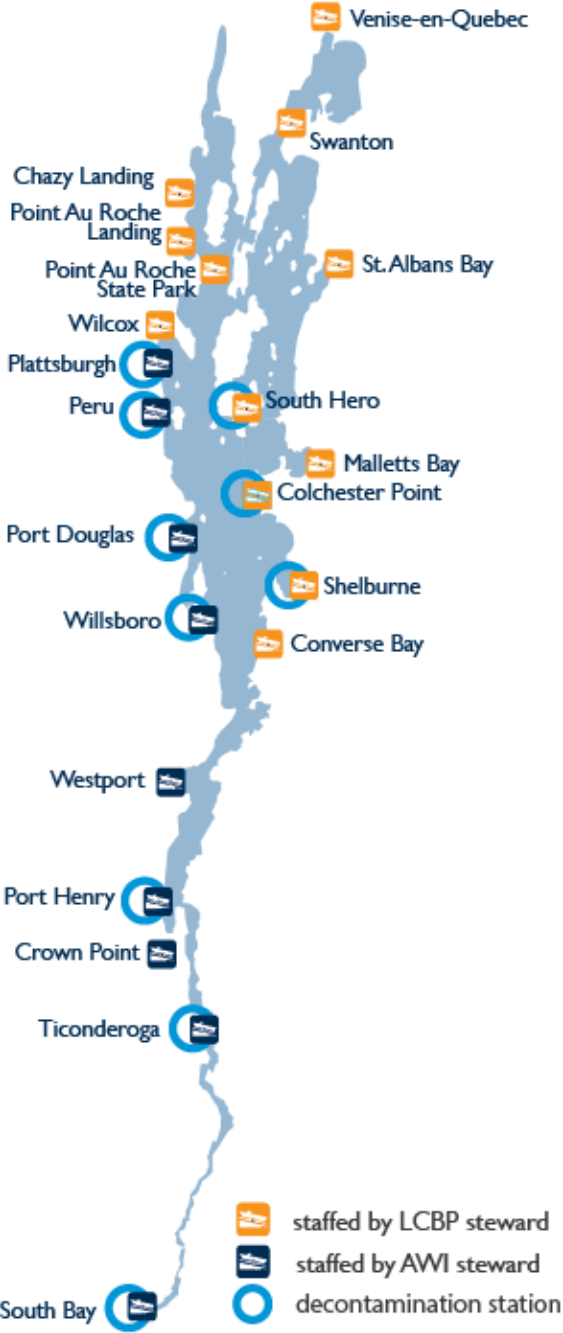
# Informed and Involved Public

---

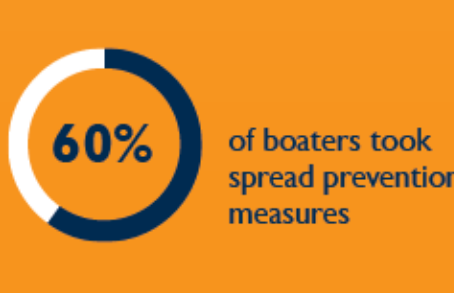
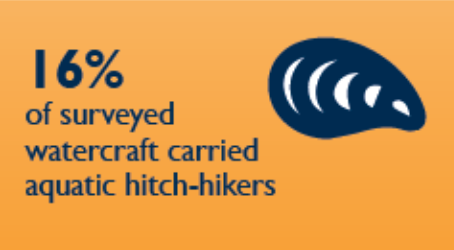




# Lake Champlain boat launch steward program summary



## BOAT LAUNCH STEWARD SURVEY DATA 2018 - 2020



## December 2020- April 2022

### LCBP Steering and Executive Committee Meeting Schedule

Meeting	Date	Location	Preliminary Agenda Include
Steering	<i>Tuesday, December 15, 2020</i>	New York Host (VIRTUAL)	<i>FY21 pre-proposal technical &amp; CVNHP review, grant award decisions</i>
Executive	<i>Thursday, January 21, 2021</i>	VIRTUAL	<i>FY21 Budget preparation (Key Function award decisions (E&amp;O, Organizational local grants)</i>
Executive	<i>Wednesday, February 17, 2021</i>	VIRTUAL	<i>FY21 Budget preparation (E&amp;O, HA</i>
Executive	<i>Tuesday, March 16, 2021</i>	VIRTUAL	<i>FY21 Budget preparation (Technical po full budget review)</i>
Steering	<i>Tuesday-Wednesday, April 13&amp;14, 2021</i>	Vermont Host (VIRTUAL)	<i>FY21 Budget review &amp; approval, June planning, State of the Lake graphics</i>
Executive	<i>Wednesday, May 12, 2021</i>	VIRTUAL	<i>Missisquoi Bay Phosphorus task fo Contaminants monitoring</i>
Steering	<i>Wednesday, June 2, 2021</i>	QUEBEC host (VIRTUAL)	<i>Steering Committee FY22 Budget Summit, planning</i>
Executive	<i>Wednesday, Sept 8, 2021</i>	Grand Isle/ Virtual	<i>FY22 budget high-level line item conce priorities. Committee membership nom</i>
Steering	<i>Wednesday, Sept 22, 2021</i>	New York Host (Location TBD)	<i>FY22 Budget priorities, Approve release RFPP for Technical Projects, Core pro Heritage Budgets. Informational prese</i>
Executive	<i>Monday, Oct 25, 2021</i>	Grand Isle/ Conference call	<i>Grant Award decisions - Enhanced BN 2022 update</i>
Executive	<i>Wednesday, Nov 17, 2021</i>	Grand Isle	<i>Grant Award decisions - PP/AIS local SOL Draft Graphics Review</i>
Steering	<i>Tuesday, Dec 14, 2021</i>	Vermont Host (Location TBD)	<i>FY22 pre-proposal technical &amp; CVNHP review, grant award decisions, OFA update</i>

<b>Executive</b>	<i>Thursday, Jan 20, 2022</i>	Grand Isle	<i>FY22 Budget preparation (Key Function award decisions (E&amp;O, Organizational local grants), OFA 2022 update</i>
<b>Executive</b>	<i>Wednesday, Feb 16, 2022</i>	Grand Isle	<i>FY22 Budget preparation (E&amp;O, HA</i>
<b>Executive</b>	<i>Tuesday, Mar15, 2022</i>	Grand Isle	<i>FY22 Budget preparation (Technical po full budget review)</i>
<b>Steering</b>	<i>Tuesday-Wednesday, April 12 &amp; 13, 2022</i>	Quebec Host (Location TBD)	<i>FY22 Budget review &amp; approval, OFA 20 Approval for release, June Summit plan FY23 budget</i>

S:
<b>budget</b>
s); Grant Support
PAC)
orposals,
<b>Summit review</b>
orce,
<b>OFA 2022</b>
pts, RFP inations.
e of FY21 jects, ntations
MP, OFA
grants,
<b>budget 2022</b>

s); Grant Support ?
PAC)
orposals,
022 Final nning for

# Lake Champlain Basin Program Updates

Lake Champlain Steering Committee meeting, April 13-14, 2021

- LCBP staff have been approved to continue to work remotely or in isolation due to COVID-19 until the first week of June 2021, although some staff do return to the office for scheduled time in Grand Isle as needed. All staff have been set up with necessary tools to complete their work remotely for the foreseeable future. LCBP staff will begin developing an office re-integration plan in the coming weeks for staff to begin safely returning to work the office in Grand Isle in June. Staff may be permitted to continue to telework for up to 3 days per week post-COVID.
- Staff and volunteers from the Executive Committee have been working on developing an approach to the first June Lake Champlain Steering Committee Summit. This Summit is scheduled for June 2, 2021, and will be a virtual event, with two pre-Summit workshops. The goal will be to develop themes around the four OFA goals that will serve as priorities for the upcoming FY22 budget. There will be presentations on recent work that has been supported, and small-group discussions about important topic areas to support in upcoming work. We may also build in some initial brainstorming/prioritizing for the next *Opportunities for Action*, to be issued in 2022. LCBP has recruited the services of Ann Ruzow Holland to help facilitate the Summit.
- Staff and Committee chairs have been developing an approach to membership recruitment for the LCBP Advisory Committees. The Committees will be looking at the spectrum of groups, skill sets, and fields of expertise that should be represented on the respective committees and determine an approach to address gaps.
- Work on the new State of the Lake report, to be issued in June 2021, is progressing. Graphics and indicators are nearly complete. Staff are now transitioning to design and text development.
- FY21 budget appropriations: LCBP EPA FY21 appropriation is \$15 million, with \$6 million dedicated to implementation of the 2016 (VT) TMDL, and the remaining \$9 million for general LCBP priorities. The FY21 GLFC appropriation for LCBP will be \$619,500. The National Park Service FY21 appropriation for the CVNHP will be \$400,000 (an increase over the \$330,000 in FY20).
- The next Lake Champlain Research Symposium is scheduled for January 10-11, 2022, to be held at the Davis Center at UVM in Burlington. Key partners for the symposium are Lake Champlain Sea Grant and the Lake Champlain Research Consortium. Themes will be centered on Lake Champlain-related research and management activities, including the CVNHP, with a focus on commemoration of the 50<sup>th</sup> anniversary of the Clean Water Act. This symposium is to be hosted as an in-person event, but we will make alternative arrangements if COVID-19 forecasts change. Mae Kate Campbell ([mkcampbell@lcbp.org](mailto:mkcampbell@lcbp.org)) and Lauren Jenness ([ljenness@lcbp.org](mailto:ljenness@lcbp.org)) are coordinating the planning committee. Please connect with them if you would like to be involved!

**UPCOMING MEETINGS:** <https://www.lcbp.org/about-us/meetings/>

- **MAY 12, 2021: LCBP EXECUTIVE COMMITTEE:** Webinar format anticipated. State of the Lake finalization, June Summit preparation, Informational presentations.
- **JUNE 2, 2021: LAKE CHAMPLAIN STEERING COMMITTEE SUMMIT:** The June meeting will be centered around a facilitated workshop to identify high-level priorities for the FFY22 budget process
- **JUNE 2021 (DATE TBD): STATE OF THE LAKE RELEASE ONLINE EVENT:** LCBP staff will present the new Lake Champlain State of the Lake and Ecosystem Indicators report in a digital public forum.

**EPA Region 1 Updates**  
**Lake Champlain Basin Program Steering Committee**  
**April 13-14, 2021**

**Mid-Cycle Review of Implementation Progress for South Lake Champlain Tactical Basin Plan**

The tactical basin plans (also referred to as Phase 2 plans) have a five-year implementation cycle. At the mid-way point, it is EPA's charge to issue interim report cards based on whether the state is on track (or not) toward completing the actions contained in the five-year implementation tables for each plan. To assess state progress in implementing the South Lake Champlain Tactical Basin Plan, EPA focused our review on Appendix B of the state's performance report.

Appendix B of the state's performance report describes progress on the South Lake Champlain plan. EPA is pleased to see that 88% of the actions have either been completed, are ongoing, or have a high or medium likelihood of completion by 2022. Of the 59 actions in the implementation table, 14 have been completed, 12 are in progress, 31 are ongoing, and two have not been started.

As a result of our review, EPA concluded that the state is on track toward accomplishing most of the five-year actions identified in the implementation table for the Phase 2 plan.

**Research on the Use of Drinking Water Treatment Residuals in Stormwater Practices**

EPA and UVM have now nearly completed the first phase of EPA's Regional Applied Research Effort (RARE) studying the effectiveness of enhancing bioretention media with drinking water residuals. A paper was recently published in the Journal of Environmental Science and Technology documenting results from the laboratory portion of the study. Both the lab and field monitoring portions of the study have found that the addition of drinking water treatment residuals can significantly increase phosphorus removal. The second phase of this project is now getting underway – the second phase will include development of a database on drinking water treatment residuals availability in New England, and analysis for certain substances of concern such as PFAS.

**Grant Application Deadline**

Grant applications are due to be submitted to EPA Region 1 by Monday, July 19. While this is the deadline, applicants are highly encouraged to submit as early as possible. EPA is transitioning to a new internal grant management system for this year's applications and growing pains can be expected. Earlier submissions will help to ensure timely award issuance!

**President's FY 2022 Discretionary Request of \$11.2 billion for the EPA**

The funding request, the largest ever for the agency, invests in the core foundations of our country's strength and advances key EPA priorities. "The FY 2022 discretionary request for EPA makes historic investments to tackle the climate crisis and to make sure that all communities, regardless of their zip code, have clean air, clean water, and safe places to live and work," said EPA Administrator Michael S. Regan. Some of the highlights include \$3.5 billion proposed for water infrastructure improvement efforts for community water systems, schools, and households; \$75 million proposed to address Per- and Polyfluoroalkyl Substances (PFAS) pollution by accelerating toxicity studies and research to inform the regulatory developments of designating PFAS as hazardous substances and to set enforceable limits, and for grants for technical assistance as State and local governments deal with PFAS contamination; and invests in restoring EPA's critical staff capacity and programmatic capabilities that focus on protecting clean air, land, and water. For more information, [click here](#).



# Lake Champlain Federal Partners Workgroup

## Update for 4/13-14/2021 Steering Committee Meeting

*This workgroup meets quarterly at the convenience of the members to review the status of their activities in the Lake Champlain Basin, to assess the future work that each agency may be conducting in the Basin, to coordinate with the LCBP budget process, and to identify opportunities for cooperative and/or collaborative work to implement priority actions in Opportunities for Action.*

### List of Partner Presentations since September 2019:

Topic	Presenter	Date
The inundation frequency and phosphorus retention capacity of floodplains: Development of a framework to support Lake Champlain Basin planning	Rebecca Diehl	December 2020
CVNHP 50th Anniversary of the Clean Water Act	Jim Brangan	September 2020
Overview of the Vermont Agricultural Water Quality Partnership	Alli Lewis	June 2020
Oil spill emergency response planning for Lake Champlain	Jason Scott	April 2020
Ongoing USGS projects within the Lake Champlain Basin	Ben Rau	April 2020
Current Intervale Center Programs and Initiatives	Mandy Fisher	December 2019
Preview of the "CEAP Watershed Project"	Vicky Drew	September 2019

### On-Going Workgroup Projects:

#### **1. Creation of a 2021 Lake Champlain Federal Partners Rack Card & Webpage**

- A rack card and associated webpage on the LCBP website will be created, updated from the [2017 Federal Partners Brochure](#), to highlight the current work of the Federal Partners and the collaborative efforts taking place in the basin. These materials are planned to be made publicly available at the same time as the 2021 State of the Lake Report. [Link to draft final rack card](#).

#### **2. Compilation of Resources: Hydrodynamic Modeling of Lake Champlain**

- The workgroup identified a need to better understand the state of hydrodynamic modeling in the Lake Champlain Basin, given the importance of hydrodynamic models to improving our understanding of lake dynamics. This white paper summarizes current models and identifies unmet information needs. [Link to the report](#).

#### **3. Environmental Sensitivity Index (ESI) Mapping for Lake Champlain**

- The workgroup recognized the importance of creating nationally consistent NOAA maps for the Lake Champlain shoreline so that incident responders from across the country are able to respond rapidly in the case of an oil or chemical spill. A full update on this work can be found [here](#).

**U.S. Fish and Wildlife Service**  
**Updates for Lake Champlain Basin Program Steering Committee**  
**April 13-14, 2021**

**State of the Lake Champlain Fisheries**

The Lake Champlain Fish and Wildlife Conservation Office along with the Vermont Fish and Wildlife Department, New York State Department of Environmental Conservation, Lake Champlain United and Trout Unlimited hosted a virtual meeting with anglers on the State of the Lake Champlain Fisheries on Saturday March 27. Topics included: Sea Lamprey Assessment & Control, River Run Salmon Planning and Assessment, Salmonid Assessment Results, Lake Trout Natural Reproduction and Forage Base Research and Lake Champlain Fish Production/Hatchery Operations. Over 150 anglers registered, 80 attended that day and participated in discussions on the fishery and many more have viewed the recording that can be found here: <https://www.youtube.com/watch?v=QPY1UaG6FVs>

**Salmon Restoration**

The U.S. Fish and Wildlife Service continues to work with partners on the restoration of river-run populations of landlocked Atlantic salmon in Lake Champlain tributaries including assessment in the field and production and applied research in National Fish Hatcheries in Vermont. In the Winooski River, an extensive radio telemetry project focused on evaluating downstream fish passage by salmon smolts and adults is underway this spring and will inform conditions of the FERC relicensing of the Essex 19 dam.

**National Fish Hatcheries**

Dwight D. Eisenhower National Fish Hatchery raised landlocked Atlantic salmon being stocked this spring with New York State Department of Environmental Conservation (DEC) in the Saranac River as part of an experimental pen-rearing project to improve post-stocking survival and imprinting. DEC is partnering with the Lake Champlain Chapter of Trout Unlimited, and the Plattsburgh Boat Basin on the Saranac River project. Pen-rearing is a process in which young salmon (smolts) are stocked into net pens and held at the stocking site. At this life stage, the salmon will imprint on the river water and prepare to out-migrate to the lake system. The Trout Unlimited chapter will feed and care for the fish for approximately three weeks prior to release. This experiment is part of a larger adaptive management program by the National Fish Hatcheries and the Lake Champlain Fish and Wildlife Conservation Office to enhance river returns, tributary fisheries and natural reproduction by landlocked Atlantic salmon in the Lake Champlain Basin.

**Sea Lamprey Control:**

- Trapping of spawning sea lamprey has resumed in 6 or 7 tributaries after being canceled due to Covid protocols in 2020. In New York: Beaver Brook and Mullen Brook (2); in Vermont: Malletts Creek, Pond Brook, Sunderland Brook, and Trout Brook (4). All traps are in except for the Morpion Barrier in Quebec. The first lamprey was collected this spring on last Friday.

- Significant progress was made over the winter in designing the Mallets Creek experimental floating weir. It is in place and currently being tested. So far, it is performing well.
- Other assessment field operations are scheduled to resume and proceed as planned in 2021
- No Lake Champlain lampricide treatments are scheduled for fall 2021. This is a planned “off-year” by design.
- We will be treating a tributary to Seneca Lake in New York in early June
- We will be treating 3-6 tributaries to Lake Ontario in July to assist the Great Lakes program while DFO Canada is unable to travel across the border.
- Plans for the lamprey barrier on the LaPlatte River have moved forward with all partners in agreement. Designs are in place and permits are being obtained currently. Construction is planned for fall 2021.
- Repairs to the dam on the Great Chazy River in NY are continuing to be planned following identification of leaks using Ground Penetrating Radar. Construction is planned for fall 2021.

### **Vermont Partners for Fish & Wildlife Riparian, Wetland, and Aquatic Connectivity Restoration**

#### *Riparian Restoration – Spring Tree Planting*

The Partners for Fish and Wildlife Program will work with landowners, contractors, volunteers, and host of other partners from across the State of Vermont to plan more than 40,000 native trees and shrubs in the next 6 weeks. The plantings are part of over 20 different riparian restoration projects focused on restoring fish and wildlife habitat, improving water quality and increasing watershed resilience. The Conservation Reserve Enhancement Program and the Trees for Streams Program work in concert with the Partners Program to deliver technical and financial resources to support the projects.

#### *Purple Loosestrife Beetle Propagation*

The Partners Program in Vermont plans to raise and release *Galerucella* beetles in an effort to control the invasive wetland plant, purple loosestrife. The *Galerucella* beetles (or purple loosestrife beetles) are a biological control agent first released in the U.S. many years ago. For this project, staff will dig purple loosestrife and raise them in a greenhouse setting to raise the beetles in captivity on the plants. Beetles will be released at wetland restoration sites and other sites managed for fish and wildlife habitat in the Lake Champlain Watershed. Approximately 40 purple loosestrife plants will propagate an estimated 30,000 beetles for release. We expect to treat approximately 30 acres of purple loosestrife impacted wetlands.

#### *Lake Champlain Fish and Wildlife Conservation Office Receives NFPP Funding*

On April 1, the National Fish Passage Program (NFPP) announced funding for the 2021 fiscal year. The Lake Champlain FWCO received \$174,000 to complete three dam removals projects and culvert assessments in three Vermont counties. The dam removal projects include the Cross Brothers Dam in the Winooski River watershed, the Guilford Dam in the Connecticut River watershed and the Dunklee Pond Dam in the Otter Creek watershed. Culvert assessments in

Essex, Caledonia, and Orange Counties were also part of the funding package. The NFPP works with local communities on a voluntary basis to restore rivers and conserve our nation's aquatic resources by removing or bypassing barriers. NFPP projects benefit both fish and people. at retrieving and moving water as well as saving fish.

The Cross Brothers and Dunklee Pond projects have received support from LCBP through the Vermont Natural Resources Council to assist with engineering for dam removals.

**Missisquoi National Wildlife Refuge:**

Contracts have been awarded for invasive species control in 140 acres of floodplain forest to treat yellow iris. This will be the third year of aggressive treatment for yellow iris on the refuge with positive results so far.

The refuge is working with New Hampshire Audubon to have a Motus tower installed this spring to track migratory birds as part of an international network.

The refuge has documented two at-risk native bumblebee species, and has contracted with Vermont Center for Ecostudies to conduct two years of native bee inventories on the refuge. Priority habitats will include refuge grasslands where the documentation of at-risk pollinators will likely change the habitat management plan for these areas on the refuge. To aid this process the refuge is working with the University of Vermont to bring an intern to the refuge, Jessica Cole. Jessica has conducted native bee inventories in the past and will be working on a specific old field habitat to evaluate its composition for native bees. Jessica will work on the refuge for 8 weeks starting in mid-May.

The refuge closed on 14.4 acres adjacent to the Maquam Bog after a 3+ year acquisition process. The habitat is mostly grassland and wet meadow with some forested areas.

We will be replacing the Louie's Landing boat ramp off Route 78 this summer. The ramp and parking area will be closed to the public during that time.

Surveys for native mussels will occur as permit clearance work for a project in 2022 to rehabilitate the refuge barge slip which was damaged and silted in during the "Halloween flood" of 2019.

The refuge will be releasing a draft Hunt Plan and Environmental Assessment for public review by mid-April. We are proposing to add coyote, fox, raccoon, opossum, skunk and weasel to the existing refuge upland/big game season which runs September through mid-March each year.

While the refuge Visitor's Center remains closed to the public, we anticipate opening the facility in by early June based on recent state guidance.

The refuge and the Friends of Missisquoi will be hosting a World Migratory Bird Day event including two evening Zoom presentations, guided socially distanced bird walks and paddle trips and a "Big Weekend" to document as many migratory birds on the refuge as we can. The event will start the evening of May 13th and run through May 16th.

## NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

### Regional Director, Region 5

1115 State Route 86, PO Box 296, Ray Brook, NY 12977

P: (518) 897-1211 | F: (518) 897-1394

[www.dec.ny.gov](http://www.dec.ny.gov)

### LCBP Steering Committee Update April 13, 2021

- DEC has \$650,000 in grant funding now available to support eligible dam repairs. Funding is provided through the Federal Emergency Management Agency's (FEMA) High Hazard Potential Dam (HHPD) grant program. DEC is accepting applications for grants to assist with technical, planning, design, and other pre-construction activities associated with the rehabilitation of eligible dams classified as High Hazard (or Class C) dams. Local governmental entities and municipalities, including but not limited to counties, cities, towns, and villages, and not-for-profit corporations with dam projects in New York State are eligible to apply. Projects must be in a county with an approved hazard mitigation plan. Awards up to \$100,000 per project. The deadline for applications is June 11, 2021. Requests for Applications (RFAs) are available online through the [NYS Grants Gateway](#).
- DEC is partnering with the Lake Champlain Chapter of Trout Unlimited, the U.S. Fish and Wildlife Service and the Plattsburgh Boat Basin on a new pen-rearing project for Atlantic salmon in Lake Champlain. To improve post-stocking survival and imprinting to the stocked water, experimental Atlantic salmon pen-rearing projects will be conducted in the Saranac River estuary. The project will compare two lots of Atlantic salmon smolts to evaluate the effectiveness of pen-rearing as a stocking method. One lot of Atlantic salmon will be stocked into net pens and held for approximately three weeks prior to release. A second lot will be directly stocked into the water at the same site when the smolts are released from the pens. A comparison of returns between the two stocking methods will determine if pen-rearing results in greater survival and homing than conventional, direct stocking. For more information about salmon in New York State, visit DEC's [Salmon](#) and [Atlantic salmon](#) websites.
- DEC is conducting an ice fishing creel survey on Lake Champlain starting January through March. The 2021 ice fishing survey took place at four access points: Plattsburgh Boat Launch on Cumberland Bay; Willsboro Bay Boat Launch; Bulwagga Bay Campground; and South Bay Boat Launch. This ice fishing survey is part of a larger, two-year effort to survey both ice and open water anglers. The open water creel survey started in early April and will end in October. Data gathered during these surveys will serve as a baseline to help DEC Fisheries biologists better understand angler use and expectations, while also informing management actions on Lake Champlain. A report summary of the survey results will be made available later in 2021.
- Starting April 1, new DEC trout stream regulations went into effect. The new regulations support the objectives of the five management categories of DEC's [Trout Stream Management Plan](#) and significantly increase trout stream angling opportunities by allowing fishing year-round. In addition, DEC launched a new interactive



Department of  
Environmental  
Conservation

[Fishing Map](#) to provide anglers with information about how and where to find their preferred type of trout angling opportunities.

- New York State's eighth annual Invasive Species Awareness Week (ISAW) will be held June 6-12, 2021. Organizations interested in hosting an event should visit the [New York Invasive Species Awareness Week website](#) for more information. All types of programming and events are encouraged, including removal projects, science trainings, film screenings, and more. Interested partners should provide local PRISM coordinators with information about proposed events by Monday, May 24, to ensure events can be added to the statewide list.
- New York State has \$15 million in funding available through the State Septic System Replacement Program to support homeowners. The grants are the second round from a total of \$75 million provided to improve water quality and protect public health through the targeted replacement of aging and sub-standard septic systems and removal of cesspools in communities statewide. The program is a collaboration between the DEC, Department of Health, Environmental Facilities Corporation, and participating counties to administer funding to qualifying homeowners. A list of eligible counties and priority geographic areas within those counties is available on EFC's website [here](#).
- The [SPDES Compliance and Enforcement annual report](#) for state fiscal year 2019/2020 is now available. This report details DEC's compliance and enforcement oversight of facilities permitted under the [State Pollutant Discharge Elimination System](#) (SPDES) and those activities relating to New York State's authorizations under the Clean Water Act. The report also provides a summary of sewage releases reported to DEC as required under the [Sewage Pollution Right to Know \(SPRTK\) Act](#).
- DEC released the DEC Harmful Algal Blooms Research Guide ([PDF](#)), which highlights topics to advance the study, management, and mitigation of harmful algal blooms (HABs) in New York. Four research focus areas--Prevention and Mitigation, Causes of HABs, Monitoring and Modeling, and Engagement--are intended to prioritize DEC research efforts and to lay the foundation for HABs research coordination.

## Vermont Agency of Natural Resources (VT ANR) Update

### Lake Champlain Basin Program Steering Committee Meeting

April 13-14, 2021

#### **Agency and Staff Updates**

- The majority of State of Vermont employees will continue to work remotely at least through May 31, 2021.

#### **State of Vermont Clean Water Budget Updates**

- The Clean Water Board made its State Fiscal Year (SFY) 2022 budget recommendation to the Governor during the December 2, 2020 Board meeting, after posting the budget for public comment October 1-30, 2020. The Board met again January 22, 2021 to update its SFY 2022 clean water budget recommendation, based on an upgraded Clean Water Fund revenue forecast (increased from \$18.44 million to \$20.25 million). Visit the Clean Water Board webpage for more information: <https://dec.vermont.gov/water-investment/cwi/board>. The State of Vermont continues to monitor COVID-19 impact on revenues and Clean Water Fund revenue updates will be available in July 2021 following the State of Vermont's Emergency Board meeting.
- Vermont is actively engaged in identifying opportunities for investment of American Rescue Plan Act (ARPA) funding to support four areas of need: broadband, climate, housing, and water infrastructure. Significant investments in drinking water, wastewater, stormwater, and related infrastructure are being considered by the Scott Administration.

#### **Clean Water Funding Programs**

- The VTDEC Clean Water Initiative Program (CWIP) State Fiscal Year (SFY) 2021 Funding Policy: The SFY 2021 Funding Policy was approved by the Commissioner on February 4, 2021. See the [CWIP Grants webpage](#) for:
  - The SFY 2021 Funding Policy;
  - A summary of changes to the Policy compared to SFY 2020;
  - A recording of the February 18, 2021 public presentation; and
  - The Funding Policy questions and answers document.
- Green Schools Initiative — Three-Acre General Permit Funding for Public Schools and State Colleges: The first Green Schools Initiative Request for Proposals (RFP) was posted Friday, February 19, 2021 for \$1.9 million to select a block grant recipient to oversee completion of Phase 1 projects (design and Three-Acre General Permit obtainment) in the Lake Champlain basin. This RFP under the Green School Initiative is funded through Lake Champlain Basin Program (LCBP) "Leahy TMDL Implementation Dollars." Proposals were due Friday, April 2, 2021 VTDEC partnered with Lake Champlain Sea Grant on this initiative to conduct high-level outreach to schools.
- SFY2021 Ecosystem Restoration Grant Round – Dam Removal Projects: VTDEC released its SFY 2021 Ecosystem Restoration Grants Request for Proposals (RFP) for dam removal projects on March 26, 2021. Proposals are due April 22, 2021. The goal of the program is to support dam removal projects that reduce sediment and nutrient pollution, including phosphorus and nitrogen, from runoff and soil erosion that discharge into the state's rivers,





## AGENCY OF NATURAL RESOURCES

streams, lakes, ponds, and wetlands. Funds are available dam removal preliminary design, final design, and implementation steps. For more information, visit:

<https://dec.vermont.gov/water-investment/cwi/grants/opportunities>.

### **Rule Updates**

- Clean Water Service Provider Rule Development: Vermont continues progress to designate watershed-based Clean Water Service Providers for the six major Lake Champlain basins, and the Lake Memphremagog basin. [The Clean Water Service Provider Rule](#) public comment period is closed, a responsiveness summary for the comments is under development, and it is expected that the Rule will advance for legislative approval in April. Development of start-up grants for CWSPs is underway to fund activities Spring 2021 through June 30, 2022.
- Vermont Water Quality Standards Rule Update: The Watershed Management Division Director, Monitoring and Assessment Program staff, and VTDEC legal staff shared proposed changes to the Vermont Water Quality Standards with municipal, environmental advocacy, and private sector stakeholders on Friday, March 5<sup>th</sup>. Staff are compiling and preparing responses to comments received. An additional stakeholder meeting including hydropower consultants and advocates is planned later this month.
- Vermont Wetland Rules: ANR continues to work on a draft rule update to improve the rule's clarity, efficiency, and protection. A draft will be distributed to stakeholders this spring.

### **Regulatory Program Updates**

- CAFO Virtual Stakeholder Meetings: The CAFO program met with the Champlain Valley Farmers Coalition, Connecticut River Watershed Farmers Alliance, Franklin/Grand Isle Farmer's Alliance, VT Dairy Producers Alliance, and other farmers on 3/10/21 to give an overview of the revised Medium CAFO General Permit. The program met with CLF, VNRC, and the Lake Champlain Committee on 3/11 and with partner organizations including AAFM, VNRC, conservation districts, and farm technical service providers on 3/12 to gather additional feedback on the draft permit.
- The Wastewater Management Program continues to issue permits under the Phase 1 TMDL implementation plan. The Winooski Basin is nearing completion and Otter Creek is up next.
  - All permits in the Winooski Basin are on public notice or issued except Essex Junction and Winooski WWTFs. These permits are in the final stages of preparation to be placed on public notice. Otter Creek Basin permits are in development now and we will be meeting with facilities to review draft permits in April.
  - Hoyle Tanner and Associates (HT&A) is currently working with Pittsford, Hardwick, Marshfield, Fair Haven, and Marshfield WWTFs to develop data-driven Phosphorus Optimization Plans (POPs) using FY18 funding. Due to COVID the study period was extended to accommodate sufficient facility sampling to tests process changes and quantify P removal. The FY18 project was amended to include FY19 funding and facility selection is underway for the second year of the project.
  - HT&A and the Vermont Rural Water Association are each supporting facilities to develop POPs as required by each municipal WWTF permit issued. They are also both funded to provide technical assistance to WWTFs throughout the basin and HT&A is currently organizing a kick-off meeting to discuss how the technical assistance can be coordinated between the two groups.



- The Lakes and Ponds (L&P) Program has recently completed a few regulatory actions of relevance to waters in the Lake Champlain Basin:
  - On March 25, the L&P Program issued a lake encroachment permit to the Vermont Division for Historic Preservation to, using strict EPA guidelines, sink the MV Adirondack ferry in Lake Champlain and create an underwater dive site. No date has been set yet for the sinking of the MV Adirondack, but permit conditions require the ferry to be sunk before Memorial Day weekend, when Lake Champlain gets busier due to summer boat traffic. A number of concerns about this permit were raised by LCC, CLF, and VNRC which VTDEC addressed in a formal “Responses to Comments” document that accompanied the permit.
  - On March 9, the L&P Program issued final permit denials for the Little Lake – Lake Encroachment Permit Application to perform whole lake aeration and the Little Lake - Aquatic Nuisance Control Permit Application to add enzymes and micronutrients into the lake. These applications were denied because the L&P Program was unable to affirmatively find that there was an acceptable risk to the non-target environment and because we determined that there are less intrusive feasible alternatives to address the issues of localized sedimentation and Eurasian watermilfoil growth.
  - In February, the L&P Program issued a permit to the Lake Iroquois Association to use an herbicide known as ProcellaCor to address the Eurasian Water Milfoil infestation in that lake. This permit generated a lot of interest, with a well-attended public hearing and 180 written comments, both for and against the project.

### **Planning Updates**

- On January 5, 2021 the Northern Lake Champlain Direct (Basin 5) Tactical Basin Plan was approved which included the latest iteration of the Champlain TMDL phase II implementation table and reviewed by EPA.
- VTDEC’s Watershed Planning Program presented on the “Past, Present, and future of Tactical Basin Planning” as part of the Clean Water Lecture series (see “Communications and Outreach” section below for more information on the Lecture Series).

### **Reporting and Accountability Updates**

- *Vermont Clean Water Initiative 2020 Performance Report*: The final report was submitted mid-January to the State Legislature (pursuant to statutory reporting requirements) and to EPA (pursuant to the Lake Champlain TMDL Accountability Framework). The report and its companion online tools – the Clean Water Projects Explorer and the NEW Clean Water Interactive Dashboard – are available on the [State of Vermont Clean Water Projects webpage](#). A public presentation on the Performance Report and its companion online tools was delivered February 8, 2021. A recording of the presentation and slides are available on the [Clean Water Lecture Series webpage](#).
- *Lake Champlain TMDL Interim Report Card for the South Lake Champlain Tactical Basin Plan*: EPA issued its interim report card for the South Lake Champlain Tactical Basin Plan, based on the State of Vermont’s *South Lake Champlain TMDL Implementation Interim Progress Report* (Appendix B of the *Vermont Clean Water Initiative 2020 Performance Report*). EPA recommends the inclusion of quantitative five-year milestones for all ongoing



## AGENCY OF NATURAL RESOURCES

actions in future Tactical Basin Plans, and considers the state to be making reasonable progress towards meeting the five-year implementation goals.

### **Communications and Outreach**

- Vermont Clean Water Lecture Series: CWIP Eco AmeriCorps member Rachel Wood has reinstated the monthly Clean Water Lecture Series, highlighting efforts to improve Vermont's water quality across land use sectors. Events are free and open to the public. For more information and recordings from past lectures visit the Clean Water Lecture Series webpage: <https://dec.vermont.gov/water-investment/cwi/outreach/lecture-series>.
- Riparian Buffer Practitioners Meeting March 9-10, 2021: Lake Champlain Sea Grant hosted a Practitioners meeting. VTDEC CWIP staff presented on riparian buffer current and future (Act 76 of 2019) funding, tracking and accounting methods, and operation, maintenance, and verification activities. Partners provided valuable input for consideration to inform funding, implementation, and operation and maintenance programs. Following the Practitioner's meeting, VTDEC CWIP, Lake Champlain Sea Grant, and American Forests discussed the role of riparian buffers in implementing the Lake Champlain TMDL; tracking buffers and accounting for estimated phosphorus reductions; phosphorus reduction targets; and opportunities to scale-up implementation and effectiveness.
- VTDEC Wetlands Program Trainings:
  - Wetlands Consultant and Stormwater Professional Training, April 5, 2021: VTDEC's Wetlands Program hosted a wetland consultant refresher webinar. Content included information about wetland boundary delineations, jurisdictional classifications, tips on avoiding wetlands, and how to write a better permit application.
  - Stormwater Professionals Wetlands Trainings, May 3, 2021 at 10:00 AM: VTDEC's Wetlands Program is hosting a webinar on how to navigate wetlands permitting for stormwater projects. The Wetlands Program will present on wetland identification tools, permitting, and tips on how to avoid wetland jurisdiction/impact. This training is relevant to grant recipients planning and constructing stormwater treatment practices. RSVP at: <https://forms.office.com/Pages/ResponsePage.aspx?id=O5O0IK26PEOcAnDtzHVZxq7oICY5adhCkpotz4O-iFVURENQOEhCWU1HTTRIQzk5V0dOVk5BVzBITC4u>.
- Municipal Day Dam Safety Video: Dam Safety created an approximately six-minute video on dam safety regulation in Vermont for Municipal Day
- Municipal Day Wetland Training Videos: The Wetlands Program created two videos on wetland protections. One video covered the importance of wetlands and how to receive a permit and the second video specifically covered allowed uses pertaining to municipal road work.
- VTDEC Response to Identification of Invasive Zebra Mussels in Moss Balls: Moss Balls are a commercial product sold at pet stores around the country, including in Vermont. On March 4, in response to a nationwide alert, VT
- DEC staff requested pet stores selling this product to remove it from their shelves. Additionally, visual inspections confirmed the presence of zebra mussels in at least one moss ball at a PETCO store in Williston. Shortly thereafter, the US Fish and Wildlife Service issued a directive under federal aquatic nuisance species statute informing vendors across the country about this issue and requesting them to discontinue sales. Vermont's pet stores have now



## **AGENCY OF NATURAL RESOURCES**

complied, and Lakes and Ponds is in the process of working with the ANR Communication office to issue a press release on the subject.

- State of the Lake Salmonid Fishery Virtual Meeting. Fish and Wildlife Department staff provided updates on the salmonid fishery in Lake Champlain at this virtual meeting hosted by Sea Grant on March 27. Presentations included updates on sea lamprey control, a summary of the Vermont Angler Survey, overview of the salmonid assessment and indicators, and hatchery production updates. Several presentations were given about the lake trout fishery and the increasing numbers of wild lake trout now seen in the population. This increase has led to a proposal by the Lake Champlain Fisheries Technical Committee to reduce lake trout stocking in the lake by 33% starting in 2022, with the elimination of stocking from New York State DEC. Over 140 people registered for the meeting with just over 50 attending. The meeting was recorded and made available to all registrants via You Tube (<https://www.youtube.com/watch?v=QPY1UaG6FVs>)

### **Other Initiative Updates**

- Wetland Gains and Losses: VTDEC Wetlands Program has submitted their annual report to EPA on permitted wetland losses and gains for calendar year 2020. Most counties within the Basin had a net gain in wetlands, where Grand Isle and Orleans had a net loss. Statewide, there was a net gain of 4.5 acres of wetland due to wetland enhancement and restoration mitigation measures.
- Enhancement to Lake Champlain Long Term Monitoring Program: As part of a joint effort with NY DEC, the Lake Champlain Basin Program, and SUNY Plattsburgh, the Lakes and Ponds Program is working to acquire a new high-frequency monitoring buoy to be placed where the Lamoille River flows into Lake Champlain. This buoy will be paired with an in-lake buoy and will collect data on a variety of hydrological and ecological parameters at 15-minute intervals that will be available to the public on a near real-time basis.
- 2020 Lake Monitoring Data is now available: 2020 lake monitoring data for the Champlain Long Term Monitoring Project and the Lay Monitoring Program has been cleaned up and “migrated” to the relevant VTDEC websites for public access. Lakes and Ponds staff will use this information for assessment and outreach tasks. VTDEC, LCC and Vermont Department of Health are putting the finishing touches on reviewing the 2020 cyanobacteria monitoring datasets, and the annual report for 2020 will be available by the end of April.
- Lake Champlain Water Levels: On March 27, Lake Champlain’s current water level was at 95.87 feet, which is 1.2 feet below average for this time of year. With much of the spring snowmelt having already taken place in the Champlain Basin due to recent warm weather, the Lake is likely to fall even further below average levels over the month of April, which could lead to another summer of unusually low water levels and related recreational use issues in Lake Champlain and other inland lakes.
- Waterbury Dam project: VTDEC has reviewed the final draft US Army Corps of Engineers Risk Assessment of Waterbury Dam that was supported with WRDA Section 542 funding. VTDEC is now engaged with the Corps on the Dam Safety Modification Study (DSMS). This initiates the second of this three-phase project (phase III will be design/construction). The DSMS will perform a comprehensive analysis of five probable failure modes identified by the Risk Assessment, to establish a risk-based list of actions necessary to reduce risk while restoring downstream uses of the Little River.

# Agency of Agriculture Water Quality Partner Update April 2021

This update is meant to inform partners about the following items:

Required Agricultural Practice (RAP) Implementation .....	2
Technical Service Provider Certification .....	2
Certified Small Farm Operation (CSFO) Certification Status and Deadlines .....	2
Water Quality Grant Programs .....	3
BMP Grant Program .....	3
CEAP Grant Program .....	3
CREP Program .....	4
FAP Program .....	4
Agricultural Clean Water Initiative Program .....	5
Outreach and Events .....	5
Tactical Basin Planning .....	6
Subsurface Tile Drainage Research .....	6
Partner Database .....	6
Payment for Ecosystem Services Working Group .....	7
Vermont Pay-for-Phosphorus Program .....	7
<a href="#">Conservation Innovation Grant Call for Participants</a> .....	8
Vermont Phosphorus Innovation Challenge .....	8
DVO, Inc. ....	8
Green State Biochar .....	9
Digested Organics .....	9
Agrilab Technologies Inc. ....	9
University of Vermont .....	9
Vermont Environmental Stewardship Program .....	10
Reports .....	10

## Required Agricultural Practice (RAP) Implementation

### Technical Service Provider Certification

The Agency has been working to outline Technical Service Provider (TSP) certification requirements to be added into the Vermont RAPs to have a consistent baseline of requirements that all TSPs should be following regarding NMP and any consulting activities associated with NMPs. Recall that the Agency hosted the Nutrient Management Commission through 2019. Feedback from that process was incorporated into a draft Rule and AAFM recently held outreach meetings with stakeholders to receive feedback on that draft prior to the Agency engaging in the rule-making process in the early spring. As a reminder, the rule making process will include additional public outreach and comment opportunities, so there are still many months remaining in the process. The Agency encourages both management level and field level staff to participate in the review of the draft Rule so please reach out to obtain a copy of this draft rule. If you are interested in a copy of the draft rule, please send an e-mail to Brittany Cole at [Brittany.Cole@vermont.gov](mailto:Brittany.Cole@vermont.gov). A link to the statutory TSP certification program is here: [legislature.vermont.gov/statutes/section/06/215/04989](https://legislature.vermont.gov/statutes/section/06/215/04989)

### Certified Small Farm Operation (CSFO) Certification Status and Deadlines

The deadline for CSFO Certification each year is January 31<sup>st</sup>. All CSFOs are required to submit the CSFO Certification Form **annually** to the Agency. From the 2020 calendar, AAFM received 308 CSFO annual certification submission.

Messaging around the need to certify to meet regulatory requirements for operations meeting the threshold of a CSFO occurred in Agriview, in addition to being sent directly to farmers via email or post. Direct outreach was sent to any operation that completed a CSFO Certification last year. Additionally, AAFM coordinates with NOFA farms to receive the necessary information a farm provides NOFA to satisfy the VAAFM CSFO Certification Form.

Go to [agriculture.vermont.gov/csfo](https://agriculture.vermont.gov/csfo) for more information or to access the CSFO Annual Certification Form. As you are working with farmers, please remember to mention this requirement, it is a prerequisite for all grant program enrollment as well.

## Water Quality Grant Programs

As of January 15, 2021 the Agency released the State FY2020 [Annual Report on Agricultural Water Quality Financial and Technical Assistance](#) and the [Vermont Clean Water Initiative 2020 Performance Report](#) is also available through ANR DEC Clean Water Investment Division.

### BMP Grant Program

The priority deadline for applications to receive technical and financial assistance through the Agency of Agriculture's [Best Management \(BMP\) Program](#) is **April 1, 2021**.

While BMP applications can be submitted at any time, applications received prior to April 1 will be given priority consideration for financial assistance in 2021. Due to the increased demand for BMP assistance, submission of an application does not guarantee grant funding. Applicants will receive a response from the BMP Program regarding their application status prior to August 2021.

Information about our services and **a new application for Engineering TA & FA** (previously the BMP application) can now be found online at [this link](#).

Take note that there are three services that a farmer can apply for to address water quality concerns:

1. **EQIP-Assist** – Applications reviewed on a rolling basis, farmers / planners are encouraged to submit an application ***when a farmer has been approved for an EQIP contract***.
2. **Technical Assistance** – Application reviewed on a rolling basis, unless otherwise noted
  - a. Design Services for a Farmstead BMP Project – April 1st application deadline
  - b. Engineering Consultations
  - c. Water Quality Compliance Consultation
  - d. State Permitting Consultation
  - e. State Variance Consultation
3. **Financial Assistance** – ***Priority given to applications received by April 1st***, only Farmstead BMP projects that have a preliminary design and cost estimate prepared by a State engineer or by an independently hired design professional eligible to apply.

We highly recommend that farmers apply for technical assistance as soon as they are aware of a water quality concern that they would like to resolve. State Agricultural Engineers can assist in preparing a farmer to apply for design services before the next Farmstead BMP Program annual deadline of April 1.

Enrollment for design services and financial assistance in the Farmstead BMP Program is typically a two-year process including planning and design in year one, and granting and implementation in year two.

If you have any questions or concerns, please contact your regional State Ag Engineer. Contact information can be found on the [BMP webpage](#).

### CEAP Grant Program

The [Capital Equipment Assistance Program \(CEAP\)](#) was opened for applications in the Fall of 2020 for submission of applications by November 2, 2020. A total funding request of \$ **\$2.4** million across 78 applicants was received. Review committees have been meeting over the previous month to evaluate and confirm selected applications for funding under the FY2021 CEAP program, for equipment purchases in the spring.



The Agency anticipates offering this program in the fall of 2021, however, this will be dependent upon funding availability.

### CREP Program

The [Conservation Reserve Enhancement Program \(CREP\)](#) has dealt with land eligibility issues for the last two years, resulting in no new contracts. This very long process is finally coming to resolution as three new contracts have been successfully developed and signed covering 48.1 acres to be implemented in the Spring of 2021.

State CREP Coordinators have been given guidance on how to enroll new projects in the CREP program using a waiver process. Landowners in Vermont are now eligible for the program, however if deemed eligible, the annual rental payments from the Farm Service Agency (FSA) are reduced by 25% due to Vermont's buffer requirements under the RAP's. In order to determine eligibility, landowners in Vermont must petition their County Committee and the FSA State Committee to send a waiver request package to the Deputy Administrator for Farm Programs (DAFP) to ensure it is not contrary to the purposes of the program. In 2021, the Agency would like to assess whether a statewide generic waiver covering all projects could be accepted as opposed to individual projects as currently managed.

CREP not only can pay for 100% of the grazing infrastructure necessary to exclude livestock from the buffer but also has upfront and annual payments to producers which can make the program very attractive.

For additional information or to sign up for Vermont's CREP, contact your local Farm Service Agency, or contact Vermont Agency of Agriculture CREP Coordinators:

Ben Gabos  
802-461-3814  
[Ben.Gabos@Vermont.gov](mailto:Ben.Gabos@Vermont.gov)

Phillip Wilson  
802-505-5378  
[Phillip.Wilson@Vermont.gov](mailto:Phillip.Wilson@Vermont.gov)

### FAP Program

The [Farm Agronomic Practice \(FAP\) Program](#) has grown substantially in the past several years. Additional funding for financial assistance under this program has been secured through an agreement with Vermont Agency of Natural Resources Department of Environmental Conservation with funding through the Lake Champlain Basin Program. This additional funding has augmented the program's existing funding and enabled an increase in agronomic practice implementation.

The current FY21 program currently includes 157 farms receiving assistance towards conservation practice implementation including cover crop, rotational grazing, conservation tillage and more. Requests for funding exceeded 20,000 acres of practice implementation.

*Program Details and Deadlines 2021:*

Applicants are advised to apply online due to COVID-19: [agriculture.vermont.gov/fap](https://agriculture.vermont.gov/fap)

- Grants are limited to \$8,000 per farm operation per State fiscal year (July 1 – June 30).

- Activities that occur prior to FAP application approval cannot be compensated for **and all applications are due at least one month (30 days) prior to practice implementation.**
- **Rotational Grazing applications are due JUNE 15, 2021**
- **Cover Crop applications are due AUGUST 1, 2021**
- All other practices under FAP will be reviewed in order of receipt.

## Agricultural Clean Water Initiative Program

The AGCWIP program provides funding to partner organizations and businesses to provide education, outreach, and technical assistance. This program also provides funding for organizational capacity development projects. These key foundational grants support service providers statewide to assist Vermont Farms in meeting water quality goals. On site farm visits are an essential component of enabling the farming community with the information and resources available to implement effective conservation practices leading to improved water quality. Partner organizations working under VAAFM grants and contracts completed 539 water quality technical assistance visits to farms during the State FY 2020. Below is a list of the current active projects in this program:

- Natural Resources Conservation Council: Education, Outreach, Technical Assistance and Organizational Capacity Development
- Champlain Valley Farmer Coalition: Education, Outreach and Organizational Capacity Development
- VT Association of Conservation Districts: and Organizational Support for VACD and VAWQP, and Land Treatment Planning
- Farmers Watershed Alliance: Education, Outreach and Organizational Capacity Development
- Lewis Creek Association - Addison County Riverwatch Collaborative: Improved Collaboration with Agricultural Landowners and Partners
- VT Vegetable & Berry Growers Association: Education and Outreach & Organizational Capacity Development through a comprehensive VVBGA website
- University of Vermont – Northwest Crops and Soils Program: Development and Launch of Discovery Acres Research Site, Agricultural Conservation Equipment Program and GoCrop Modifications
- Scott Magnan's Custom Service: Technical Assistance for Precision Agriculture
- Poultney Mettowee Natural Resources Conservation District: Education & Outreach, Continuation of Technical Assistance in South Lake Basin with the Agronomy and Conservation Assistance Program, and Conservation Practice Surveys
- University of Vermont Extension: Comprehensive UVM Extension Programming for Education and Outreach, Technical Assistance with the Agricultural Business Team, Vegetable and Berry Team, Northwest Crops Soils Team as well as Champlain Valley Crop, Soil and Pasture Team – includes two-year continuation of Agronomy and Conservation Assistance Program. This project also includes Organizational Development support to hire a Grazing and Livestock Program Coordinator.

## Outreach and Events

If your organization is hosting an event and you would like to offer water quality educational credits for attendees, please apply at least 30 days in advance to receive approval for those WQ credits. The credit



requirements and directions can be found here: [agriculture.vermont.gov/water-quality-educational-credits](https://agriculture.vermont.gov/water-quality-educational-credits)

If there are events you wish to have advertised in Agriview, the Agency's Facebook, or online calendar, please email [AGR.WaterQuality@Vermont.gov](mailto:AGR.WaterQuality@Vermont.gov) with the details of your event (WQ credit applications will automatically be advertised).

If you have farmers willing to tell their water quality story, the Agency is always looking for folks to feature in Agriview! You can reach out to [Sonia.Howlett@Vermont.gov](mailto:Sonia.Howlett@Vermont.gov) to refer farmers, or if you have a story you have written - we would love to feature it!

## Tactical Basin Planning

The Agency collaborates with the Vermont Department of Environmental Conservation (DEC) Tactical Basin Planners in the development, tracking, and reporting on the agricultural sections of [tactical basin plans in Vermont](#).

Recent work includes a team effort between AAFM and DEC staff to create an agricultural section template and an agricultural section development process to improve coordination of data collection and analysis, as well as tracking of agricultural strategies and their implementation in each tactical basin plan across the State. As part of the process, AAFM staff attend agricultural workgroups to inform and provide feedback on the development and implementation of agricultural strategies outlined in each respective tactical basin plan.

Current Plans underway include:

- Upper Connecticut (Basin 16) is in the final stage of update.
- Northern Lake Champlain (Basin 5) The final [2020 Basin 5 Tactical Basin Plan](#) is now available for review. A [story map summarizing the plan](#) is also available.
- Ompompanoosuc, Stevens, Waits, Wells River (Basin 14) The [Final 2020 Basin 14 Tactical Basin Plan](#) is ready for action! A [story map summarizing the plan](#) is also available.
- The Battenkill, Walloomsac, Hoosic Rivers (Basin 1), Missisquoi Bay (Basin 6), Lamoille River (Basin 7), and the West, Williams, Saxtons (Basin 11) will update process is currently underway.

## Subsurface Tile Drainage Research

The multi-partner effort to research and evaluate nutrient content of effluent from tile drain outlets continues under the Agricultural Clean Water Initiative. Data collected to date includes more than 1,000 samples statewide. The Tile Drain Advisory Group provides recommendations and guidance towards this sampling effort. In 2021, the Agency intends on hiring a private contractor to review the data and provide an analysis report on the findings related to field management, conservation practice, field conditions and weather impacts on sampling results to date.

## Partner Database

The Partner Database is live and fully functional, in addition to a [Quality Assurance Project Plan \(QAPP\)](#) for reporting information into the database. The Agency has completed trainings for partners involved in providing technical assistance to farmers in Vermont. Over 2,500 practices covering over 35,000 acres statewide were tracked in the Partner Database in FY2020 alone, a 30% increase from the

previous year. This year's initiative has been for partners to start reporting farmer-funded (non-state or federally cost-shared) conservation practices through the Partner Database in order to capture estimated nutrient reductions occurring as a result of these practices. The process and documentation for this Conservation Practice Survey (CPS) work is actively underway with the Conservation Districts and UVM Extension and initial results will be available in the Clean Water Performance Report for State FY2021 to be released in January 2022.

Forms and documents for the Partner Database can be found on our webpage:

[agriculture.vermont.gov/agricultural-clean-water-initiative-program/partner-database](https://agriculture.vermont.gov/agricultural-clean-water-initiative-program/partner-database)

Any questions about the Partner Database, or requests for trainings can be forwarded to

[Judson.Peck@vermont.gov](mailto:Judson.Peck@vermont.gov).

## Payment for Ecosystem Services Working Group

Act 83 of 2019 directed the Secretary of Agriculture, Food and Markets to convene a Soil Conservation Practice and Payment for Ecosystem Services Working Group (PES Working Group). The purpose of this Working Group is to recommend financial incentives designed to encourage farmers in Vermont to implement agricultural practices that improve soil health, enhance crop resilience, increase carbon storage and stormwater storage capacity, and reduce agricultural runoff to waters.

The PES Working group met five times from September 2019 - January 2020. On January 15, 2020 the PES Working Group submitted the [Soil Conservation Practice and Payment for Ecosystem Services Working Group Report](#) to the Vermont Legislature outlining the results of their discussions up to this point. This report emphasized the Working Group's decision to focus a PES system in Vermont on soil health, outlined some of the key steps and decisions that would be necessary to implement such a system, highlighted the need for ongoing research, and requested funding and permission to continue meeting in 2020 and 2021.

The PES working group will reconvene in 2021 with funding assistance from the Agency. While this funding does not satisfy the recommendations of the Working Group, it will hopefully enable the continuation of stakeholder discussions on this topic.

Further information regarding the PES Working Group, including the report that the Working Group presented to the Legislature, is available at the following website: [agriculture.vermont.gov/pes](https://agriculture.vermont.gov/pes)

For any questions about PES Working Group, please email [AGR.WaterQuality@Vermont.gov](mailto:AGR.WaterQuality@Vermont.gov).

## Vermont Pay-for-Phosphorus Program

The Agency received a \$7 million grant award from the USDA Natural Resources Conservation Service (NRCS) through the Regional Conservation Partnership Program Alternate Funding Arrangement (RCPP AFA) that will enable the Agency to launch a statewide Vermont Pay-for-Phosphorus (VPFP) Program. The VPFP Program will use an innovative 'pay-for-performance' approach to compensate farmers for voluntary and verified phosphorus load reductions from agricultural crop fields that exceed phosphorus reductions required for agricultural nonpoint source loading according to the TMDL. This new and innovative program will build on the existing agricultural water quality clean-up framework and will

accelerate the pace of implementation in addition to the existing clean water work engaged in by farmers, partners, and the State.

The VPFP Program will compensate farmers for quantifiable phosphorus reduction performance from field-verifiable and voluntarily reported agronomic management evaluated through the Farm Phosphorus Reduction Planner (FarmPREP). To encourage participation in the VPFP Program, farmers who successfully enroll in the program will be eligible for a one-time data entry payment of up to \$4,000 per farm based on acreage enrolled in the program. FarmPREP will estimate the pounds of phosphorus running off each farm field each year under current management and will compare these runoff values to the estimated pounds of phosphorus runoff that would occur under historical baseline management assumptions. Enrolled farms will then receive payment per pound of phosphorus runoff they reduce across their whole farm above and beyond the threshold requirements. \$4.9 million in direct payments to farms for runoff reductions are planned over this 5-year project.

AAFM anticipates providing the first phosphorus payments under the VPFP Program based on the 2022 growing season. You can learn more at [agriculture.vermont.gov/VPFP](https://agriculture.vermont.gov/VPFP).

## Conservation Innovation Grant Call for Participants

VAAFM is looking for 10-12 farm operations willing to participate in a Conservation Innovation Grant (CIG) research initiative 'Linking Farm Phosphorus Reduction Planner (FarmPREP) to Total Maximum Daily Load (TMDL)' funded by the United States Department of Agriculture Natural Resources Conservation Service (UDSA NRCS). This CIG research initiative will lay the groundwork for a new program, the Vermont Pay-for-Phosphorus (VPFP) Program.

For more information about the expectations and benefits for producers, read [this article](#) on our webpage. If you work with a farm who may be interested in participating in this research initiative, please reach out to Sonia Howlett at 802-522-4655, or complete this [intent to participate form](#) and AAFM staff will be in touch by March 1st, 2021.

## Vermont Phosphorus Innovation Challenge

The Vermont Phosphorus Innovation Challenge (VPIC) was announced in February 2018 as an X-Prize style competition to harness creative solutions to address phosphorus pollution in Vermont. VPIC complements ongoing, essential work to install conservation measures and best management practices to reduce phosphorus losses from farms and in stormwater runoff from developed lands.

Of the 27 initial VPIC applicants, five projects were selected in November of 2019 to move on to Stage Three for full scale implementation of their innovative technology or design. Each awarded project is unique and proposes an effective and innovative solution to address the phosphorus pollution that impacts water quality statewide.

### DVO, Inc.

During Stage Three, DVO has engaged in two different studies to explore methods of drying materials produced from anaerobic digesters at dairy farms which are then enhanced using a Dissolved Air

Floatation Device (DAF) process, capturing valuable nutrients for advanced solids control. The goal of the project is to develop a 'P-Cake' product that is high in phosphorus and other nutrients. This product can then be processed, bagged and/or bottled as a marketable retail product, in addition to being used to create, sell, and distribute bulk fertilizer and soil amendment materials from a facility established in Vermont.

### **Green State Biochar**

Green State Biochar (GSB), a producer of enriched biochar, has been actively working on honing in their biochar filter design prototypes to meet reduction efficiencies that would indicate the effectiveness of the prototypes, such that these practices might be used more broadly as a solution to varying water quality or nutrient management concerns located on farm operations. Simultaneously, GSB contracted with Atlantic Corporation of Waterville, Maine to explore the market demand for GSB's enriched biochar products.

### **Digested Organics**

Digested Organics has been engaged in the fabrication and construction of a mobile manure screening and ultrafiltration system to be used on a Vermont dairy farm to remove phosphorus and suspended solids. The design for the UF System is complete, as is the fabrication of the UF modules. The 20' trailer transporting this equipment has been completed. The next component to be fabricated will be the steel frame that holds the modules and other components. The unit is expected to be complete and in Vermont before the end of the year.

### **Agrilab Technologies Inc.**

Agrilab Technologies Inc.'s (AGT) Stage Three VPIC proposal includes the establishment of a hub and spoke network of five on-farm composting and phosphorus processing sites. AGT has been engaged in establishing the market demand for composted materials created from cow manure, with various combinations of nutrient additives. AGT worked closely with the Vermont Sustainable Jobs Fund (VSJF) to document the demand for bulk and bagged products, as well as willingness to pay for locally produced fertilized for use by Vermont farmers, in home gardens, specialty crop growers, etc. AGT has been working on equipment fabrication, site development tasks, and additional business planning.

### **University of Vermont**

The University of Vermont and the Village of Essex Junction, along with several other partners have developed and been testing *Pe* –Phlo (pronounced P Flow). A mobile, flexible, and scalable solution for Phosphorus capture and removal. *Pe* –Phlo applications focus on reduced installation and operational costs without the investment needed for conventional Phosphorus removal approaches. This technology may well prove cost effective for Phosphorus removal in Vermont sized wastewater applications. Construction of the *Pe* –Phlo reactor designed during the capstone project remains in process. The research on branding, market niche, as well as competitive equipment and process identification will serve well for further work on a business plan as pilot work continues.

For more information on VPIC please visit:

[agriculture.vermont.gov/Vermont\\_Phosphorus\\_Innovation\\_Challenge](http://agriculture.vermont.gov/Vermont_Phosphorus_Innovation_Challenge) or contact Kaitlin Hayes at (802) 622-4112 or [Kaitlin.hayes@vermont.gov](mailto:Kaitlin.hayes@vermont.gov)

## Vermont Environmental Stewardship Program

The Vermont Environmental Stewardship Program (VESP) is currently under a pilot program, in which 8 farms of diverse types, sizes and locations are involved. VACD planners conducted field work, soil sampling and gathered the necessary information to evaluate a variety of crop and pasture fields using NRCS's Resource Stewardship Evaluation Tool (RSET). This web-based tool integrates multiple NRCS planning tools into one—evaluating management practices across five natural resource concerns (soil management, water quality, water quantity, air quality and wildlife habitat). VAAFM is currently assessing the results from RSET to determine if the national stewardship standards are appropriate for Vermont's landscape. The pilot program will also evaluate other assessment tools, data collection methods and workload assessment to fine-tune the full program before launching.

This year the Agency subcontracted the comparison of the RSET tool with another USDA tool, the Agricultural Policy Environmental Extender (APEX) model. Results from both tools for the same VESP pilot fields will be compared across five key areas of phosphorus loss, nitrogen loss, sediment loss, soil carbon, and organic matter. This work will provide insight into the accuracy of results, appropriate thresholds for Vermont, and the tool best-suited for VESP moving forward.

[Learn more about the 2020 VESP Pilot Program on our website.](#)

## Reports

On January 15, 2021 the Agency released the State FY2020 [Annual Report on Agricultural Water Quality Financial and Technical Assistance](#) and the [Annual Report Regarding Performance Measures for the Memorandum of Understanding Between the Agency of Natural Resources and Agency of Agriculture, Food and Markets.](#)

The [Vermont Clean Water Initiative 2020 Performance Report](#) is also available through ANR DEC Clean Water Investment Division.

**Any questions or concerns? Don't hesitate to reach out to any of us here at the agency, 802-828-2431 or [AGR.WaterQuality@Vermont.gov](mailto:AGR.WaterQuality@Vermont.gov)**

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

## Update for 04/13/2021 Steering Committee Meeting

The NYCAC has met three times since the last Steering Committee meeting.

- **January 25<sup>th</sup>** – The agenda featured two presentations followed by a committee membership discussion. Dana Allen and Holly Greenleaf of the Stream Wise Project Team and Lauren Jenness provided an introduction and **update on the development of the new Stream Wise Award Program for the Lake Champlain Basin**. The program, part awareness campaign and part property assessment and award program, is designed to inform and incentivize communities to engage in activities that enhance and protect water quality, aquatic/riparian habitat, and increase flood resiliency. Rob Breault, Director of the USGS New York Water Science Center, supported by Andrew Waite, provided an **overview of the NY-Lake Champlain Basin stream gauge network**. Vic Putman, Lauren Jenness, and Erin Vennie-Vollrath led the NYCAC members on the call through a **CAC membership exercise and discussion** in preparation for when the new LCBP CAC Coordinator, Katie Darr starts work.
- **February 22<sup>nd</sup>** – The agenda featured three presentations followed by a committee membership discussion. Eric Howe provided a high-level **overview of the LCBP** including the goals for Opportunities for Action (OFA), structure, and programming. Matthew Vaughan presented an **overview of the Technical Advisory Committee's mission, purpose, and structure and highlighted recent research**. Chris Fuller, Chief of Operations for Research, Applied Technology, Education, Services, Inc. (RATES) was invited to speak about RATES' work as a follow-up to the previous meeting's discussion about the USGS stream gauge network in New York. Chris presented about **RATES' work to develop and implement lower cost monitoring technologies, including the installation of 40 monitoring stations on the Hudson River watershed**. Vic Putman, Lauren Jenness, Katie Darr, and Erin Vennie-Vollrath continued the **discussion about NYCAC membership, next steps, and focus areas**.
- **March 29<sup>th</sup>** – The agenda featured two presentations and a discussion. Meg Modley presented an **overview of LCBP AIS 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). Matthew Vaughan presented **lessons learned from the LCBP Long-Term Monitoring Program**. Mark Naud, chair of the Vermont CAC, presented the **VTCAC's Contaminants Monitoring Resolution**. 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.

Past approved **meeting summaries and materials** are posted at <https://www.lcbp.org/about-us/committees/citizen-advisory-committees/new-york-cac/>



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

## Update for 4/13/2020 Steering Committee Meeting

The VTCAC has met four times since the last Steering Committee meeting and presented the annual Legislative Action Plan to the Vermont Legislature.

- **January 11<sup>th</sup>** – The agenda featured two presentations that focused on ***Vermont's pesticide, herbicide, and fertilizer usage, trends, tracking and reporting efforts, and management and regulation recommendations***. Speakers included Cary Giguere, Patti Casey, and Kanika Gandhi from VTAAFM and Nat Shambaugh who is a retired VTAAFM pesticide chemist and member of the Vermont Pesticide Advisory Council. The Committee was especially interested in learning more about glyphosate use trends in the State given the reports of increased cover crops and increased herbicide use with those practices. The CAC members also discussed the creation of their annual Legislative Action Plan.
- **February 8<sup>th</sup>** – The agenda featured one presentation followed by discussion on the creation of the annual VTCAC Legislative Action Plan. Oliver Pierson, the VTDEC Lakes and Ponds Program Manager, presented an ***update and report on the assessment of Lake Champlain water quality and tributary loading trends***. It was noted that some of the data presented is preliminary and has not yet gone through all the quality control procedures. A draft motion for the VTCAC to make a request to the LCBP Executive Committee to formalize the incorporation of pesticide analysis into routine water quality data collection was approved unanimously. A motion for the VTCAC to record future meetings and make those recordings publicly available was approved unanimously.
- **March 8<sup>th</sup>** – The agenda featured updates on legislative activity delivered by Sen. Lyons and Rep. Ode, one presentation, a planning discussion about the legislative committee presentations, and a review of the print-ready proof of the annual VTCAC Legislative Action Plan. Ellen Kahler, Executive Director of the Vermont Sustainable Jobs Fund, provided an ***overview of the 2030 Farm to Plate VT Agriculture and Food System Strategic Plan***. Her presentation highlighted the synergies between the new strategic plan and the goals of the VTCAC and LCBP, particularly investment in natural and developed infrastructure and investment in the agricultural transition to sustainability. The Vermont CAC 2021 Lake Champlain Action Plan can be viewed [here](#).
- **March 23<sup>rd</sup>- 26<sup>th</sup>** – VTCAC members met with several committees of the Vermont Legislature to present the Action Plan and review the CAC perspectives and recommendations on several lake issues. The VTCAC met with the [House Committee on Natural Resources, Fish, and Wildlife](#); [House Committee on Agriculture and Forestry](#); [House Committee on Commerce and Economic Development](#); [Senate Committee on Natural Resources and Energy](#); [Senate Committee on Agriculture and Appropriations](#); Speaker Krowinski; Agency of Natural Resources Secretary Moore on behalf of Governor Scott & Commissioner Walke; and Lieutenant Governor Gray.

- **April 12<sup>th</sup>** – The agenda featured an update on the status of the Payment for Ecosystem Services and Soil Health Working Group from VTAAFM Deputy Director Ryan Patch, report and discussion of the VTCAC Legislative presentations and relevant legislative initiatives, and a discussion on committee membership and governance.

Past approved **meeting summaries and materials** are posted at

<https://www.lcbp.org/about-us/committees/citizen-advisory-committees/vermont-cac/>



## TAC Updates for the Steering Committee, April 13<sup>th</sup> and 14<sup>th</sup>, 2021

TAC held four meetings since the December Steering Committee meeting.

### Reviews and Recommendations

- TAC reviewed and provided input on ecosystem indicators and numerous graphics and messages for the *State of the Lake 2021* report:
  - Mercury in fish tissue
  - Sea lamprey wounding rates
  - Non-native and invasive species
  - Aquatic invasive species (AIS) threats
  - Water chestnut coverage
  - Boat launch steward program data summary
  - Tributary phosphorus loading
  - Infographic on combined sewer overflows
  - Chloride concentrations
  - Wastewater treatment facility phosphorus loading
  - Cyanobacteria reports
  - Beach closures
  - Conserved lands and beach access map
  - Air temperature
  - Lake freeze over
- TAC reviewed an RFP for “unifying stormwater technical assistance programs for private properties in the Lake Champlain Basin”. This program will aggregate, share, and align existing tools and messages to implement a unified and coordinated non-regulatory stormwater property assessment and homeowner education initiative in the New York and Vermont portions of the Lake Champlain Basin
- TAC reviewed and approved the final report for the *Evaluating Floodplain Potential for Sediment and Phosphorus Deposition: Development of a Framework to Assist in Lake Champlain Basin Planning* project.
- TAC reviewed project concepts for FY21 Lake Champlain Phosphorus TMDL Implementation proposed by VTDEC. They propose to continue 3 past initiatives: 1) priority wetland acquisition, restoration, and conservation, 2) enhanced agricultural practice implementation, and 3) Green schools initiative and public private partnerships to support stormwater compliance.
- TAC reviewed and approved the interim report for the *Tile Drain Base-Flow Phosphorus Removal using St. George Black* project. This project will be extended for a second field season.
- TAC reviewed the technical full proposals and formed a recommendation on which projects should be prioritized for FY21 funding.
- TAC reviewed the interim report and workplan for the upcoming field season of the Water Chestnut Management Program.
- TAC reviewed the interim report and workplan for the upcoming field season of the Boat Launch Steward Program

### Discussions/Presentations

- TAC received an update on the Vessel Incidental Discharge Act (VIDA) Great Lakes and Lake Champlain Invasive Species Program.
- TAC received an overview of the Vermont Citizen Advisory Committee's resolution concerning agrochemical monitoring.
- TAC received an update on the sea lamprey control program.
- TAC reviewed its current membership and identified gaps in the areas of expertise represented by current TAC members, to inform future member recruitment efforts.

#### Upcoming Work

In May, TAC will continue to review interim reports and workplans for core projects, including cyanobacteria monitoring, the long-term monitoring program, and NY agronomy. TAC also plans to have a more detailed conversation about the Vermont Citizen Advisory Committee's resolution concerning pesticide monitoring following direction from the Steering Committee.

Work to develop the LTMP upgrade continues. We are working with partners in NY and VT to finalize the purchasing plan for in-lake and tributary monitoring buoys.

## **E&O Committee Report to the Steering Committee April 13-14, 2021**

### **E&O ADVISORY COMMITTEE**

The Committee met on January 19<sup>th</sup> and February 16<sup>th</sup> to review staff and committee budget proposals, hear updates on current projects, and review recommendations results of the larger enhanced grants which was a new process for E&O this year.

**2020 ANNUAL REPORT and ANNUAL REPORT SUMMARY.** Elizabeth and Ryan serve as the lead staff for gathering and drafting the copy, completing the layout design, and either posting or facilitating the printing of these reports. 262 pages later, the report is DONE!

**STATE OF THE LAKE...** yes, its underway! Full LCBP team effort working on interpretation, graphics, writing, and design. The technical and E&O teams paired up to test the graphics with several middle school classrooms. Thank you to all of our partners who are helping to provide data and reviewing our interpretive graphics.

**RESOURCE ROOM** The Resource Room remains open five days/week. Resource Room staff assembled new “Getting Around” themed Discovery Boxes including migration, invasive species and birds of prey boxes. The staff greeted 1515 guests days while maintaining the COVID distancing. Staff is also assisting with the State of the Lake report. All E&O staff continues to field questions from the public.



**HEALTHY SOILS INITIATIVE-RAISE THE BLADE.** Committee members continue to meet monthly. Sea Grant produced a weekly blog through the growing season that is also posted on the Lawn to Lake website. *The Other Paper* is promoting *Raise the Blade* and our team provides a weekly column for dissemination. The group is gearing up for the spring. Elizabeth is updating our banners and graphics from printed pieces to match the website work from last fall. New business partners are being sought.



### **E&O STEWARDS AND OUTREACH**

Hannah edited the closed captioning for our videos so that they will be in better shape to convert into different languages. Sue is assisting with grants, a NY CBEI workshop that's on the horizon, and attending the CWICNY meetings.

**PUBLIC AWARENESS SURVEY RFP** The contract was awarded to the University of Vermont a few months ago. The project advisory committee continues to meet to finalize the survey instrument which is nearing completion.

**STREAMWISE RFP** The Project Advisory Committee continues to meet with the contractors who are now developing materials for the messaging and marketing campaign. Community partners have also been participating in the process including representatives from NY, VT and Quebec. The first product, a resource document about exiting riparian programs, guidelines and outreach materials from the region is now complete. Lauren is managing this project.

**CBEI** The CBEI partners have released their fourth monthly e-news to Watershed for Every Classroom teachers. The CBEI virtual WORLD WATER DAY on Tuesday, March 23rd featured Neil Patterson Jr. from SUNY ESF Center for Native People and the Environment. This year's theme was about *why we value water*. Five schools and 16 classes submitted entries. Sue and Colleen are finishing the distribution of awards this week and Steph is hosting a popsicle party for 330 at Champlain Elementary on Friday to recognize their numerous entries about the large watershed map project!

[http://watershedmatters.lcbp.org/PDFs/WWD\\_2021/WWD2021%20ProgramFlyer.pdf](http://watershedmatters.lcbp.org/PDFs/WWD_2021/WWD2021%20ProgramFlyer.pdf)



#### UPCOMING:

- **Love the Lake:** To be determined for April and May programming. “Bird Diva” Bridget Butler hosted our series Thursday, March 25<sup>th</sup>. ***Birding & Wellness: Loving the Lake is Good for You***
- Continuing our review of **26 new education and outreach grant workplans** this spring.



# Champlain Valley National Heritage Partnership



## Heritage Area Program Advisory Committee Report

April 13, 2021

### **HAPAC Meeting**

The Heritage Area Program Advisory Committee (HAPAC) met on to learn about the efforts to teach the history of suffrage and civics in Vermont, the upcoming release of the African American Heritage Trail, and an update on the gunboat *Spitfire*, and the planning activities for the upcoming 250<sup>th</sup> anniversary of the American Revolution. The committee also discussed the September 18-19 CVNHP International Summit in Saranac Lake, the Clean Water Act 50<sup>th</sup> anniversary, the theme of focus for 2023, and the makeup of the committee itself. Staff has developed a member-skills matrix to determine knowledge shortfalls on the HAPAC.

### **CVNHP FY2021 Workplan Development**

The HAPAC and staff have submitted the FY2021 CVNHP Workplan and Budget to the National Park Service for contract. The HAPAC Grants Subcommittee's findings were reported to the LCBP Executive Committee on February 17, 2021. Twenty-four projects totaling \$279,774 have been ranked in priority order. The LCBP Steering Committee will review and approve the grants budget on April 14, 2021. Staff has procured \$400,000 in match from the Lake Champlain Maritime Museum, Vermont Division of Historic Preservation, Essex County Regional Office of Sustainable Tourism (ROOST), and the Great Lakes Fishery Commission for the National Park Service allocation.

### **Champlain-Adirondack Biosphere Network**

The LCBP staff continues to work in revitalizing the Champlain-Adirondack Biosphere Network (CABN). Documentary footage taken by the National Park Service last spring is being incorporated into a story map, which will be unveiled this spring (hopefully for the April LCBP Steering Committee meeting). The CABN team is developing a sustainable youth leadership board that will have representation on the CABN Steering Committee.

### **Recent Grant Projects**

Staff approved final reports for the following CVNHP projects: 2020 Collections Grant, Clinton County Historical Association—Window Replacement; 2020 Collections Grant Fort Ticonderoga Association—Pavilion Collections Project; 2020 Collections Grant, Samuel de Champlain History Center—Digitizing and Preserving Champlain's Photographic Heritage; and 2020 *Making of Nations* Interpretive Theme Grant, Shelburne Historical Society—Women of Shelburne: Community Builders, Past to Present. Reports on these projects are attached.



## Champlain Valley National Heritage Partnership



### 2020 CVNHP Collections Grant

#### Project to Replace Windows

##### Project Summary

The Clinton County Historical Association (CCHA) received a \$4,400 2021 CVNHP Collections Grant for the replacement of four disintegrating windows at the museum located at 98 Ohio Avenue in Plattsburgh, New York, with energy-efficient, UV-blocking windows. The CCHA provided matching funds for two of the four windows. Staff and volunteer hours to manage the project were also used to match the CVNHP funds.

**Organization:** Clinton Co. Historical Assc.  
**Contact:** Helen Nerska  
**Mailing Address:** 98 Ohio Avenue, Plattsburgh, NY 12903  
**Phone:** 518-561-0340  
**E-mail:** [Director@ClintonCountyHistorical.org](mailto:Director@ClintonCountyHistorical.org)  
**Website:** [www.clintoncountyhistorical.org](http://www.clintoncountyhistorical.org)



**Output:** Four deteriorating windows were replaced with New York State Historic Preservation Office- and City of Plattsburgh-approved energy efficient and advanced low-e protection windows.

**Outcome:** Tasks addressed in the 2011 CVNHP Management Plan:

**Task 9.19.3.** Support the installation of energy-saving devices and materials in cultural heritage facilities.



The museum's southwest corner windows, before and after replacement.

NEIWPCC Code	PO100137
Date Complete:	1/4/2021
Grant Amount:	\$4,500.00
Non-federal Match:	\$5,063.60
Total Amount:	\$9,563.60





# Champlain Valley National Heritage Partnership



## 2020 CVNHP Internship Grant

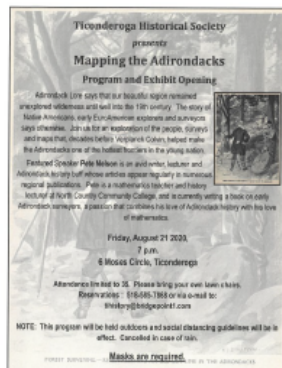
### Graduate Internship for the Ticonderoga Historical Society

#### Project Summary

The Ticonderoga Historical Society utilized a 2020 CVNHP Internship Grant to hire Bridget O'Keefe who developed and constructed the Mapping the Adirondacks interpretive exhibit from initial planning to completion. O'Keefe also spent time learning the grant-writing process, as well as budget preparation and regulatory oversight for non-profit organizations. The museum opened to the public on August 1, 2020, and the intern was able to complete duties as a docent and interpreter. Conservation and accessioning duties were continuing projects for the intern, who successfully completed all duties outlined in her workplan.

Organization: Ticonderoga Historical Society  
Contact: Bill Dolback  
Address: 6 Moses Circle  
Ticonderoga, NY 12883  
Phone: 518-585-6662  
E-mail: [thistory@bridgepoint1.com](mailto:thistory@bridgepoint1.com)  
Website: [ticonderogahistoricalsociety.org](http://ticonderogahistoricalsociety.org)

**Output:** The intern was able to complete an exhibit and accompanying program from concept to installation; update critical databases, enabling access for researchers; and gained an understanding of daily operations of a museum.



Intern Bridget O'Keefe learned the ins-and-outs of a historical museum, including developing an exhibit and presentation.



#### Outcome: Tasks addressed in the 2011 CVNHP Management Plan:

Task 9.1.1: Support historical and archaeological research and documentation;  
Task 9.1.3: Utilize new and existing research and documentation to support the evaluation, conservation, and interpretation of natural and cultural heritage resources.

<b>NEIWPCC Code</b>	LS-2019-092
<b>Date Complete:</b>	11/20/2020
<b>Grant Amount:</b>	\$5,000.00
<b>Non-federal Match:</b>	\$10,000.25
<b>Total Amount:</b>	\$15,000.25



## Champlain Valley National Heritage Partnership

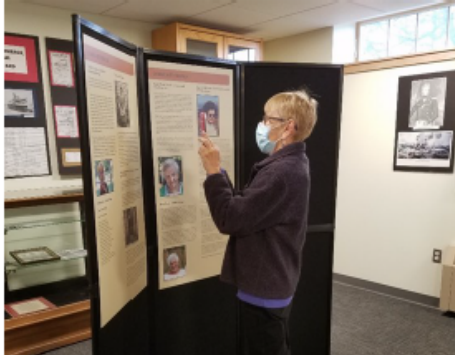


### 2020 Interpretive Theme Grant

#### Women of Shelburne: Community Builders, Past to Present

##### **Project Summary**

To celebrate the 100<sup>th</sup> anniversary of the 19<sup>th</sup> Amendment that gave women the vote, the Shelburne Historical Society (SHS) created an exhibit and a companion guide for teachers to honor the contributions women have made to build community in the Town of Shelburne, from the past to the present. Local histories are often dominated by stories of the European settlers, and men who fought in the wars or served in the government. The SHS uncovered stories of the women who also served the community with courage, fortitude, and creativity. These stories of the unsung heroes of Shelburne offer a more expansive view of the town's history.



The eight interpretive panels are located in the Shelburne Historical Society's new exhibit area in Town Hall, adjacent to the library

Organization: Shelburne Historical Society  
Contact Person: Dorothea Penar  
Mailing Address: P.O. Box 101  
Shelburne, VT 05482  
Phone: 802-985-3761  
E-mail: Shelburne1763@gmail.com

**Output:** The Shelburne Historical Society created eight panels and a middle school curriculum describing the contribution women made to build community in Shelburne and the State of Vermont.

##### **Outcome:** Tasks addressed in the 2011

###### **CVNHP Management Plan:**

Task 9.1.1: Support historical and archeological research and documentation.

Task 9.1.3: Utilize new and existing research and documentation to support the evaluation, conservation, and interpretation of natural and cultural heritage

Task 9.10.4: Support initiatives that highlight the relationships among stakeholder sites and programs through interpretation, while maintaining the individual character of those sites.

Task 9.12.2: Develop a comprehensive CVNHP Resource Guide for educators to use in developing teaching units focused on the natural and cultural heritage of the region with an emphasis on conserving and protecting those resources.

Task 9.12.7: Provide CVNHP-related presentations to schools.

NEIWPCC Code	PO100038
Date Complete:	1/15/21
Grant Amount:	\$1,150
Non-federal Match:	\$3,201
Total Amount:	\$4,351





## Champlain Valley National Heritage Partnership



### 2020 CVNHP Collections Grant

#### Digitizing and Preserving Champlain's Photographic Heritage

##### Project Summary

A 2020 CVNHP Collections grant enabled the Samuel de Champlain History Center to inventory, catalogue, digitize and rehouse its photograph collection, resulting in a more stably preserved collection of artifacts with the capacity, through digital image sharing, of reaching a wider audience and increasing access to the richness of Champlain's heritage.

**Organization:** Samuel de Champlain History Center

**Contact:** Celine Paquette

**Mailing:** PO Box 3333

**Address:** Champlain, NY 12919

**Phone:** (518) 298-1609

**E-mail:** [director@champlainhistory.org](mailto:director@champlainhistory.org)



The photograph collection includes industrial, commercial, religious and cultural scenes as well as individual and family portraiture depicting area families with local roots and connections that range across the Champlain Valley region. A large component of the collection traces the personnel and physical plant of the Sheridan Iron Works, a major industrial and economic center of the village for more than a century.

**Output:** The History Center now has a catalogued, safely stored photograph collection and comprehensive digital access to those same images.

**Outcome:** Tasks addressed in the 2011 CVNHP Management Plan:

**Task 9.1.1:** Support historical and archeological research and documentation.

**Task 9.8.3:** Support the use of new information technology to provide quality information on heritage and recreation resources.

NEIWPCC Code	PO100053
Date Complete:	1/4/2021
Grant Amount:	\$3,500.00
Non-federal Match:	\$2,403.00
Total Amount:	\$5,903.00



**Lake Champlain Sea Grant** develops and shares science-based knowledge through education, outreach, and research to benefit the environment and economies of the Lake Champlain basin.

## Education

- The [Zoom-a-Scientist webpage](#) now hosts 29 presentations and the spring 2021 program, and additional education programs are available on our [Virtual Learning webpage](#).
- The [Watershed Explorer Challenge](#) is a learning program to be used by households, given COVID-19 school closures. The booklets are now freely distributed in 43 libraries in New York and Vermont.
- Three professional development programs for teachers were conducted online in 2020, and registration for [Champlain Research Experience for Secondary Teachers \(CREST\)](#) is now open.

## Outreach

- Founded in 2020, the [Watershed Forestry Partnership](#) facilitates research, communication, collaboration, and implementation of forest restoration and management practices that protect water resources in the LCB. The collaborative hosted the Vermont Riparian Buffer Working Group annual meeting March 9–10.
- LCSG published a succinct description of the [science of road salt](#) efficacy and environmental impact and suggested actions to reduce road salt use by municipalities, businesses, and homeowners.
- As we ready for summer 2021, the [boating and marinas webpage](#) contains guidance on local sources of cleaning solutions and PPE and printable signs and other educational materials to ensure the health and safety of marina operators and recreational boaters on the docks, in marina stores, and while fueling.
- LCSG's [Aquaculture Education Specialist](#) is conducting a survey of existing aquaculture businesses in the basin and exploring new technologies and potential markets.
- LCSG continues to host a series of [courses for real estate professionals](#) that qualify for Continuing Education Credits in Vermont, and, most recently, New York.
- **A coastal tourism video series** will be used to train VT & NY State Parks seasonal and permanent personnel for the 2021 summer season.

## Research

- **Peer-reviewed, scientific publications on research conducted in the Lake Champlain basin** region are collected and searchable in the LCSG [Zotero Library](#), which is also accessible from the [Resources section](#) of our website. New or missed publications can be sent to [seagrant@uvm.edu](mailto:seagrant@uvm.edu).
- New publication in *ACS ES&T Water* from the research project "Application of drinking water treatment residuals in green stormwater infrastructure for enhanced phosphorus removal," funded by the US EPA through an interagency agreement with NOAA: [Balancing Hydraulic Control and Phosphorus Removal in Bioretention Media Amended with Drinking Water Treatment Residuals](#)
- Research documenting the effectiveness of a [woodchip bioreactor in Bolton, NY](#) (near Lake George) to reduce nitrates from effluent wastewater has prompted the Town of Bolton to install two additional bioreactor cells, with approval from the NYS DEC.

## Staff and fellowships

- In partnership with the **VT DEC Lakes and Ponds Program**, LCSG will hire a [Lake Monitoring and Community Outreach Coordinator](#) in 2021.
- **Audubon VT** and LCSG have partnered to co-fund a [Conservation Research Fellow](#) for two years. The application period has closed, and the selection process is underway.
- **Vermont Youth Conservation Corps** will continue to co-host the LCSG [Water Quality and Careers Fellow](#) through 2021.
- LCSG staff committed to weaving **anti-racist activities** into our workplans. We defined and agreed to a [framework for action](#) to which we are accountable.



The Vermont Water Resources and Lake Studies Center funds research projects that address critical water resources science and management needs in Vermont, including the Connecticut River Basin and the Lake Champlain Basin.

## Research competitions

**Four research projects** awarded in March 2020 have been extended to the end of 2021 due to delays related to COVID-19 shutdowns. A **2021 research competition** has been completed in anticipation that funding from USGS/Department of Interior will be made available in spring 2021. The PIs have been notified, and a public announcement will be issued once the proposals have been submitted to and approved by USGS. Projects must meet state science and technology needs and ensure dissemination to water managers and the public.

## Recent publications

- Giddings LA, Chlipala G, Driscoll H, et al. 2020. [Seasonal Ely Rock Copper Mine Superfund Site Shotgun Metagenomic and Metatranscriptomic Data Analysis](#). *Data Brief*.
- Giddings LA, Chlipala G, Kunstman K, et al. 2020. [Characterization of an Acid Rock Drainage Microbiome and Transcriptome at the Ely Copper Mine Superfund Site](#). *PLoS ONE*.
- Hammond Wagner CR, Greenhalgh S, Niles M, et al. 2020. [Evaluating water quality regulation as a driver of farmer behavior: a social-ecological systems approach](#). *Ecology and Society*.
- Millarhouse A, Vatovec C, Niles M, et al. 2020. [What's in your body of water? Reducing the psychological distance of pharmaceutical pollution through metaphoric framing in risk communication](#). *Environmental Management*.
- Stockwell JD, Doubek JP, Adrian R, et al. 2020. [Storm impacts on phytoplankton community dynamics in lakes](#). *Global Change Biology*.



The **Northeastern States Research Cooperative** supports forest research that will benefit the people who live within the Northern Forest, work with its resources, use its products, visit it, and care about it.

## Research competition

In 2021, NSRC will fund ≈\$1.5 million in research on topics related to invasive pests and diseases; climate change and energy; land use, sustainable forestry, and forest fragmentation; forest products industry and innovative technologies; rural community and economic development; recreation and tourism; environmental justice, equity, and inclusion; or biodiversity and connectivity. NSRC received 83 pre-proposals requesting \$10.7 million and then 50 full proposals requesting \$6.3 million. Funding decisions will be announced in April on the [NSRC website](#). If annual appropriations continue, the NSRC expects to run annual research competitions and announce awards in late spring of each year.

## Indigenous Forest Knowledge Fund

The NSRC established an Indigenous Forest Knowledge Fund to support: education, mentorship, and training of Indigenous youth in applied forest research and/or Traditional Ecological Knowledge about forest systems; new applied forest research that advances Tribal priorities; and synthesis and translation of forest research and/or Traditional Ecological Knowledge to advance communications, outreach, and economic programs for Tribal Nations and Indigenous communities. Proposals are due April 2, and \$100,000 will be awarded April 30.

## Recent research results

- PI Laura Kenefic, USDA Forest Service Northern Research Station in Maine, and team published a 26-minute video "[Forestry for the Future](#)" for landowners and other stakeholders, an output from the project ***Sustainable Northern Conifer Forest Management: New Findings and Outreach Tools***.
- PI Linda Pardo, USDA Forest Service Northern Research Station and UVM, and team developed the online geographic information system (GIS) [Nitrogen Critical Loads Assessment by Site \(N-CLAS\) Tool](#) to predict effects of air pollution and climate on tree species of management concern in the northeastern United States.
- Ross DS, Knowles ME, Juillerat JI, et al. 2021. [Interaction of land use history, earthworms, soil chemistry and tree species on soil carbon distribution in managed forests in Vermont, USA](#). *Forest Ecology and Management*.



Wannalancit Mills  
650 Suffolk Street  
Suite 410  
Lowell, MA 01854

mail@neiwpcc.org  
www.neiwpcc.org  
p: 978-323-7929  
f: 978-323-7919

## April 2021 Update for Lake Champlain Steering Committee Meeting

### General Updates

- NEIWPCC held our annual All-Staff meeting on March 25 & 26. Some highlights of the virtual meeting included a NEIWPCC Commissioner Session, bringing perspectives on the water workforce and their career experiences to staff, “Info Slam” presentations by staff, and a focused session to engage staff on the topics of Diversity, Equity, and Inclusion, which harnessed the group’s collective acumen for input on how to advance NEIWPCC’s Critical Objectives and Strategic Goals with specific DE&I-focused actions.
- Headquarters staffing
  - It’s a boy! Congratulations to Heather Radcliffe and her family, who welcomed a new member, Lincoln Wilder Radcliffe, on Monday, 3/8. Heather will be on leave until mid-July. [Peter Zaykoski](#) is the LCBP point of contact at NEIWPCC’s headquarters while she is on leave.
  - NEIWPCC welcomed Julie Burns to our Communications Division as an Information Officer/Communications Specialist. Julie joined us in the Lowell office in February.
  - NEIWPCC Training Coordinator Don Kennedy, who retired in January after more than 21 years with NEIWPCC, was honored by US EPA with a 2020 Lifetime Achievement Award for outstanding service throughout his career.
- NEIWPCC recently completed a major update to our [water quality standards matrix](#), designed to make it easy to compare how the states in the Northeast regulate different water quality parameters.
- After a competitive selection process, NEIWPCC has contracted leading experts in environmental economics, from IFC Incorporated L.L.C., to conduct an analysis of the economic benefits of having clean water in the New York-New Jersey Harbor Estuary. This study, estimated to be completed in 2023, will be the first of its kind in the region and could serve as a stepping stone for further work by governmental, non-governmental, and academic researchers.
- New York State Department of Environmental Conservation (DEC) and the New York – New Jersey Harbor & Estuary Program have released the “[2020 State of the Hudson](#).” This report was produced with major contributions from NEIWPCC staff and production was supported through a NEIWPCC contract with the Hudson River Foundation.

### Upcoming Events include

- May 6-7, 2021, Virtual: NEIWPCC Executive Committee & Commission Meeting
- May 20, 25, and 27, 2021, Virtual: [31st Nonpoint Source Pollution Conference](#)
- July 2021, Virtual: [National SRF Workshop](#)
- September 13-15, 2022, Pittsburgh, PA: [National Tanks Conference](#)

### NEIWPCC [Current Openings](#) include

- Environmental Analyst – Water Quality Liaison, Water Quality (Lowell, MA): assists our Director of Water Quality Programs with various program issues and grants and develop information on which NEIWPCC policy decisions are based. Work closely with the EPA Long Island Sound Office, Connecticut Department of Energy and Environmental Protection and





Wannalancit Mills  
650 Suffolk Street  
Suite 410  
Lowell, MA 01854

mail@neiwpcc.org  
www.neiwpcc.org  
p: 978-323-7929  
f: 978-323-7919

New York State Department of Environmental Conservation to plan and manage the work of the Long Island Sound Study. Supervise NEIWPCC staff located in Connecticut and New York in order to implement the Long Island Sound Study program. Coordinate NEIWPCC workgroups, including, wetlands, and the New England Biological Assessment of Wetlands Work Group (NEBAWWG). Address regional priorities for better coordination of the Navigable Waters Protection Rule/Waters of the United States and Clean Water Act activities. Closes April 23, 2021.

### **NEIWPCC staff training**

- Some upcoming NEIWPCC staff training includes:
  - Avoiding retaliation (April)
  - Bystander intervention (June)
  - Creating a positive work environment (August)
  - Dealing with difficult employees (October)
  - Microaggressions (December)

### **Some of NEIWPCC's LCBP-specific work**

- Hiring Processes
  - 2021 boat launch stewards hiring:
    - 5 rehires processed
    - 9 new hires processed
- Contractual Processes
  - 41 agreements executed since January 1, 2021 for a total of \$1,463,592 (as of 4/8/2020)
  - Staff submitted subaward reports to EPA in fulfillment of the federal funding accountability and transparency act (FFATA).
- Quality Assurance
  - 3 QAPPs approved (1 by Lowell staff, 2 by delegated review) since January 1, 2021 (as of 4/9/2020)

