

Lake Champlain Steering Committee Meeting
Tuesday & Wednesday, April 14-15, 2020
CONFERENCE CALL/WEBINAR DUE TO COVID-19 STAY-AT-HOME ORDER

Meeting Minutes – Day 1: Tuesday April 14, 2020

SC Member Attendance: Joseph Zalewski (CHAIR, NYSDEC), Nathalie Provost (QC MELCC), Julie Moore (VT ANR), Pete LaFlamme (VT ANR), Mel Cote (EPA R1), Mario Paula (EPA R2), Christina Marts (NPS), Tom Berry (Senator Leahy's Office), Vicky Drew (USDA-NRCS), Andrew Milliken (USFWS), Daria Mazey (USACE), Mame Keinde (USACE), Breck Bowden (Lake Champlain Sea Grant), Pierre Leduc (QC CAC Chair), Mark Naud (VT CAC Chair), Vic Putman (NY CAC Chair), Buzz Hoerr (E&O Committee Chair), John Krueger (HAPAC Chair), Neil Kamman (TAC Chair), Laura Trieschmann (VT ACCD), Craig DiGiammarino (VTRANS), Ryan Patch (VT AAFM), Renée Rouleau (QC Municipal - Clarenceville), Lauren Townley (NYSDEC), Julie Berlinski (NYS Department of Agriculture & Markets),

Guests: Stephanie Mikesell (NYS Empire Development), Beth Gilles (LC-LGRP)

LCBP Staff: Eric Howe, Matt Vaughan, Colleen Hickey, Ryan Mitchell, Elizabeth Lee, Kathy Jarvis, Meg Modley, Jim Brangan, Lauren Jenness, Mae Kate Campbell, Koon Tang (NYSDEC), MaryJo Feuerbach (EPA R1), Bryan Dore (EPA R1), Stéfanos Bitzakidis (QC MELCC), Fred Dunlap (NYSDEC), Sarah Coleman (VT ANR), Heather Radcliffe (NEIWPC)

9:45 AM: Connect to Cisco/WebEx webinar, networking

10:00 AM: Meeting Begins Joe Zalewski, NYS DEC Chair: Welcome and Introductions, Draft Meeting Agenda review, ACTION ITEM: December 2019 Steering Committee meeting minutes approval

- Joe Zalewski welcomed all participants and stated regrets that the meeting cannot be held in Lake Placid as planned, but thanked everyone for being flexible and doing their part to reduce the spread of COVID-19.
- In reviewing the minutes from the December 2019 Steering Committee meeting, Neil Kamman noted that the comment that he made on the sinking of the ferry Adirondack was information he had from Vermont Fish and Wildlife, not personal knowledge, and asked that the minutes be updated to reflect this.
 - **Motion:** to approve the December 2019 Steering Committee meeting minutes with the revision request from Neil Kamman.
 - Motion to Approve: Buzz Hoerr
 - Second by:
 - Discussion: none
 - All in favor; motion is carried. Daria Mazey abstained as she was not present at the meeting.

10:05 AM: Public Comments

- John Krueger made a comment on behalf of the public, noting that 245 years ago on this date, General Gauge received orders to take action against the Patriots, an event that ultimately led to the Battles of Lexington and Concord.

10:10 AM: Legislative Updates

- Tom Berry stated that the legislature has been focused on responding to COVID-19. He stated that congressional representatives are gathering ideas at the staff level for the next response bill, which will be focused on emergency measures to help stabilize the economy and workforce. The focus is not yet on infrastructure or recovery, the goal is still to create legislation like the CARES Act to distribute funds that will allow businesses to keep running. He invited Steering Committee members to reach out to him with any ideas. Tom stated that the appropriations process is proceeding and is more or less on schedule, the hope is to keep it that way.
 - Joe Zalewski asked if the Senate rules for voting have changed during this crisis. Tom responded that the rules have not changed yet. The Senate was already on a pre-scheduled recess for Easter, but when they re-convene, they will need to address the rules for voting.

10:30 AM: LCBP COVID-19 Support for watershed organizations – *Eric Howe*, Discussion to provide emergency support for watershed groups by re-directing existing funding

Eric Howe informed the members of the Steering Committee that LCBP had hosted a call with watershed groups to discuss the challenges these groups are facing in light of COVID-19 and the Stay-at-Home order. During the call, LCBP gathered suggestions for how the Basin Program could support these organizations during this crisis. Eric noted that NEIWPCC has relaxed some grant management procedures during this time. He stated that many of the watershed groups on the call have grants with LCBP already, but are now unable to complete the billable work on these grants as planned. LCBP has unobligated funds that could be used to support these groups by issuing an RFP for emergency organizational support grants. Eric stated that in order to be eligible for these funds, groups would be asked to demonstrate financial need and provide details in the application regarding if they have applied for support through the CARES Act, describe how Basin Program funds would be used to help keep the organization running, and what deliverables could be. During the call, \$10,000 was suggested as a maximum award amount, and LCBP would consider partial award funding when reviewing these applications. There is about \$150,000 in unobligated funds from the Great Lakes Fisheries Commission (GLFC), Eric has already consulted with GLFC about redirecting the funds and they will approve the redirection if the Steering Committee approves.

- Several Steering Committee members voiced their support for helping watershed groups during this crisis, noting the value of their work and partnership.
- Mel Cote asked if it's possible that the amount of funding would be insufficient, for instance if 10 organizations applied for \$10,000 each?
 - Eric responded that making the maximum award amount \$5,000-6,000 had been considered, but that the watershed groups suggested \$10,000. He noted however that these awards would be an entirely new program, so there's no expectation and the Steering Committee can adjust as they see fit. Eric added that LCBP will make it clear that this is a one-time award due to coronavirus complications.
- John Krueger asked if groups north of the border would be eligible to apply for these funds, and Eric responded that they would be eligible since these are GLFC funds.
- Koon Tang asked if the Executive Committee would make the final award decisions.
- Julie Moore agreed that it would be important for the Executive Committee to have a role in the decision-making process and in developing the award criteria. She expressed a desire to make

sure the funding is distributed evenly, not just in Vermont and potentially not just in the Lake Champlain Basin, perhaps into the Connecticut River Valley watershed groups.

- Eric Howe noted that GLFC funds cannot be spent outside of the Lake Champlain Basin, and that there are not enough funds to open the award up to all organizations in Vermont.
- Tom Berry stated that Lake Memphremagog received GLFC funding through Vermont ANR, and suggested that this could be a potential way to distribute funds outside of the Lake Champlain Basin, depending on ANR's discretion.
- Vicky Drew asked if Conservation Districts are eligible to apply for these funds. Eric responded that in the past, organizational support grants have been open to groups that are mission-focused on water quality in the Basin, and suggested that the eligibility criteria be kept the same.
- Joe Zalewski asked if funding would be limited to groups that have or have recently received LCBP grants? Eric replied that the funding would be open to any groups that meets the eligibility requirements.
- Tom Berry noted that private non-profits are eligible for economic injury disaster loans through the Small Business Administration (SBA), but that the funding is prorated by the number of employees an organization has. He noted that there has been discussion about changes to this program that would make it more helpful to businesses with fewer employees, and that this change could be made soon.
- Breck asked how competitive the process might be. Kathy stated that LCBP normally receive 15-20 applications for organizational support. Eric said there could be 40-50 organizations that are eligible. Eric would anticipate ~30 applications but noted that this is uncertain.
- Julie said given that potential number of applications, she would suggest a lower max award.
- Neil noted that Vicky wrote in the chat window that conservation districts aren't eligible for SBA support. Neil suggested adding this eligibility as a criterion for funding, groups that are not eligible for SBA funding could receive a larger award.
- Pierre suggested making sure we emphasize the eligibility criteria for this award of reduction in funding due to COVID-19, that this award is specifically for COVID relief. Organizations that were already in need before the virus crisis should not be applying, since there are other grants targeting that need. He asked what the Basin Program is doing in response to current grants being held up.
 - Eric noted that the Basin Program is already extending new agreements and that LCBP will process extensions for existing projects.
- Joe asked how organizations would demonstrate financial need due to COVID?
 - Eric stated that organizations would need to demonstrate a reduction in cash flow or potential cash flow, such as a loss of donations, or showing work that they cannot complete currently and therefore cannot invoice for. He noted the applications could ask how much funding the organization has lost, what the minimum amount of funding they need to keep going for the next three months is, and what the organization would do with the funding.
- Pierre asked if it would be too restrictive to limit this award to organizations that cannot get the cash flow from existing sources?
 - Eric said that criteria would not be in the evaluation. The grant will be for all organizations with cash flow problems due to the virus, not just organizations who are already receiving LCBP funding.
- Joe asked what next steps and timeframes are for making this award?
 - Eric stated that if the Steering Committee supports making these awards, Lauren Jenness has already drafted an RFP that could be posted by Friday this week. The RFP would be open for a week, and a call with the Executive Committee would be scheduled to make award decisions by May 1st. Eric would like to include the Education and

Outreach Committee on the call. A ROD would be prepared by the end of the week following the call.

- Julie asked if the RFP could be circulated, and then the Steering Committee could discuss this further. She recommended capping the maximum award at \$5,000.
 - Koon expressed reservations that \$5,000 would not be enough for some groups and noted that partial awards can be made.
- Breck asked if the RFP will have criteria for making the funding decisions in case it becomes competitive?
 - Eric agreed that determining those criteria is the goal. Organizations will need to state how much funding they are getting from other sources and what the minimum amount of funding needed to keep the organization running would be.
 - **Motion:** to redirect funding towards an emergency grant category that would provide funding up to 5K for local watershed organizations.
 - Motion to Approve: Buzz Hoerr
 - Second by: Mark Naud
 - Discussion: none
 - All in favor; motion is carried.

11:00 AM: FFY20 LCBP Budget Presentation, LCBP FY19 Annual report, Key Functions – Eric Howe, Technical Budget – Neil Kamman, Matthew Vaughan, Meg Modley Gilbertson, FY19 Project highlights, Core Projects

Eric Howe presented the LCBP FY19 Annual Report and described how it can be viewed online. All LCBP staff contributed, however Elizabeth Lee put in a tremendous amount of work completing the layout and finalizing the 260+ page document.

- Buzz Hoerr commented that the report is a remarkable body of work. It is a very dense report so it is unfortunate that everyone who picks it up can't understand the amount of work that it contains; hats off to everyone involved!

Eric Howe described the LCBP FY20 Key Functions Budget by reviewing the budget spreadsheet and associated word document, found in the meeting files.

- Koon Tang asked about the amount of indirect costs going to NEIWPC, as described in the key functions budget.
- Heather Radcliffe replied that the 'NEIWPC Administration staff' line item in the key functions budget covers NEIWPC's Lowell staff, including Heather's work related to LCBP as well as staff involved in drafting LCBP grant contracts and reviewing LCBP QAPPs. NEIWPC's indirect cost rates are approved annually by EPA headquarters. This is a budgeting rate. This year's indirect rate is 19.25%, last year it was 18%. NEIWPC does not charge indirect for individual contractual projects and subawards over \$100,000, participant support costs, or equipment. Awarding individual "grants" (as LCBP often refers to them) in dollar amounts under \$100,000 means that, per NEIWPC's negotiated indirect rate with EPA, the indirect rate will be charged.
- John Kreuger reminded the group that under this arrangement, the heritage area grants suffer. Andrew Milliken led the charge of this conversation last year. We have to award small grants for CVNHP because that is all we have in our budget.
- Eric Howe responded that there isn't a lot LCBP can do. The indirect rate is approved by EPA Headquarters for NEIWPC and he doesn't believe they can change for a specific program.

- Heather Radcliffe confirmed that NEIWPCC's indirect rate applies across all programs that NEIWPCC administers. She added that it may be helpful to note that the budget is just a budget. For example, the EPA-approved indirect rate for FY19 was 16.75%, but only 14.5% of LCBP's annual expenditures supported Lowell offices (including both direct 3% and indirect 11.5% costs).
- Koon Tang added that in his experience, NEIWPCC's costs are very reasonable.

Eric Howe described the CAC Coordination Position Key Functions budget line item and requested a discussion.

- Koon Tang stated that he generally supports the idea and that SC members can talk more about the exact details. State programs are growing, and the two coordinator positions are getting pulled in more and more directions and their time is being diluted. A CAC Coordinator could help each CAC do their programs right and help them evolve from what they've been doing and make better connections. He hopes that in the long run the CACs can have a better connection to each other and support from their respective legislatures who could help obtain more resources and funding for the program.
- MaryJo Feuerbach added that the SC and EC have had a lot of discussion about this position. She supports it and thinks it's a good idea. The position could help address local watershed group needs on how to write good proposals and how to be more effective. She sees the position as more than just coordinating the CACs and as a way to help to provide technical assistance to local partners. She would want to be clear that support for the coordinator position is dependent on our VT and NY Coordinators continuing to be fully active in the CACs themselves. It is critical to have agency staff at these meetings. We want to make sure that that doesn't change.
 - Eric Howe agreed. LCBP and State staff would work to make sure that our state partners attend the CAC meetings.
- Julie Moore flagged that she has some significant concerns regarding VT ANR's much larger fiscal and budgetary concerns due to COVID-19. She is not sure if it is prudent to move forward with a new position at this time as VT ANR wants to maintain flexibility until 6-18 months' time.
 - Eric Howe understands and it has been discussed. He can offer that if the SC decides to move forward with this position the SC can revisit at the September SC meeting when we have a better understanding of the fiscal outlook. LCBP won't receive funds from EPA until late September and wouldn't be able to hire until October/November. That being said, LCBP staff have been assisting with the VTCAC and we have to decide if that will move forward as is or if the new VT DEC staff person would take over.
 - Julie noted her appreciation of LCBP staff support during the transition.
- Buzz Hoerr said he was interested in hearing what the CAC chairs have to say.
- Mark Naud answered that he has had a lot of conversations about this. Eric has done a great job assessing the current coordinator workloads and experience. He feels like this is an opportunity to expand and enhance the efficacy of the CACs to coordinate and provide a unified voice across the lake. This has been a goal and topic of our discussions. While he understands the concerns and uncertainties of budgets, he wouldn't want to lose out on the opportunity. He recommends having at least a ½ time person to fill the role. This would be a good evolution to evolve what CACs should do under statutory legislation and their LCBP CAC functions. He feels like the 80% staffing level is right. He doesn't want to abandon the position, but reconsidering/re-evaluating at the fall SC makes sense.
- Vic Putman - has had discussions and support for this from NYCAC members. Some have offered space to help house a new coordinator. Continuing to plan this position is paramount in order for us to do our jobs as representatives of the public especially with changes in staff. We really need to broaden our horizons so all three CACs can get together and discuss issues that affect us all. He does support the position, and if we need to revisit in the fall that is okay.

- Pierre Leduc- all SC members are aware that the QCCAC operates differently as a watershed organization. It would be nice to have this new person attend our meetings and we would welcome improved communications between the CACs. It would make his job easier.

Lauren Jenness and Mae Kate Campbell presented four project highlights from the Technical realm of the LCBP.

Matt Vaughan described the FY20 Technical Core Projects.

- Koon Tang asked if the Enhanced BMP grant category required a local match.
 - Matt Vaughan answered that no local match is required, but it helps with a proposal's competitiveness. Match is one of the criteria in how reviewers score the proposals.
- Pierre Leduc asked about the status of the boat launch steward program in light of the pandemic.
 - Meg Modley responded that LCBP has proceeded with interviews, is working with NEIWPC, and is ready with intent to hire letters. We are waiting to see how the situation may develop. We may see a delayed season. Our plan is to do the training remotely with the Adirondack Watershed Institute at Paul Smith's College, which is usually done in person. Right now, we are seeing if we can get people ready to go when we are ready to get on the launches.
- Buzz Hoerr mentioned that he forwarded a link to an article about satellite monitoring of cyanobacteria. The ESA is selling as a contracted service. It would be fascinating to see how blooms are moving.
 - Matt Vaughan replied that it is something we are actively working on to see how it can be used complementary to what we are already doing. It's free data through NOAA and it's powerful to see seasonal and long-term effects. It's a bit different than what we are monitoring, satellites don't work as well along edges which is what we are concerned with.
- Julie Moore commented that previously LCBP had assisted VT with funding some testing of cyanotoxins in drinking water and creating a book of work. Over the past 5 years, they have collected data from public drinking water sources from July to September. This is important work that builds on the Lake Champlain Committee's work and is essential to provide good information to all those that rely on Lake Champlain as a drinking source.
 - Matt Vaughan replied that that work was in the last approved budget. It was coordinated by primarily Bridget O'Brien at the VT Dept of Health who is a TAC member. Everything is up in the air right now due to the Dept of Health being overloaded by COVID-19 work.
- After lunch, Matt added information on the AIS rapid response plan.
 - Heather added that GLFC funds for this program (from last fiscal year) would be used for COVID response. Matt noted that under normal circumstances when these funds are not spent, they go to the Boat Launch Steward program.

12:00: LUNCH – 15-minute break

12:15 PM: Continue FFY20 LCBP Budget Presentation, LTMP upgrade (10 minutes)
Matthew Vaughan, Line-item projects (15 minutes) NY and VT state staff, TMDL projects (30 minutes) VT state staff

Matt Vaughan presented on proposed upgrades to the LTMP.

- Neil Kamman noted that there has been discussion of augmenting the existing long-term monitoring program for some time among the TAC. He said that the monitoring program as it

exists currently is excellent, and that upgrading the LTMP would provide a lot more information and would keep the program cutting edge. Neil would view these proposed upgrades as experimental for a year or two. He stated that he would appreciate Steering Committee support of this proposal.

- Mel Cote asked since option 1 is supporting existing buoys, if you go with the other options would the existing buoys continue to operate?
 - Matt replied that this is the final season for those existing buoys that they have funding for. If LCBP bought new buoys LCRI would still operate these new buoys. There's a possibility the other buoys could continue with other funds.
 - Breck Bowden noted that the LCRI was originally funded as a research project by Sea Grant, so Sea Grant cannot support that project any further.
- Breck noted that the LCRI buoy data were live streamed and available to the public within a couple of hours after collection. The fisherman community was super interested in that, there was a public outreach component that was unexpected for this project. Breck supported having real time data transmission for future buoys.
 - Matt noted that that cost is already in the budget for the buoys and tributary data.
- Koon Tang asked if we move to real time data collection, would the long-term monitoring database be upgraded to have the capacity for all of the data?
 - Matt stated that data management/coding is built into labor time.
- Pierre Leduc asked about tributary monitoring: would it be possible to have real time measurements of phosphorus concentrations?
 - Matt said probably not anytime soon. The proposed buoys would not have that capability, but could measure suspended sediment, which can be related to phosphorus concentration. He stated that measuring phosphorus can be tricky and the current technology has a lot of limitations, maybe technology will improve in a few years.
- Andrew Milliken asked if the cost is for a single buoy + tributary monitoring station, and if so, would the upgrade proposed be expanded to other tributaries?
 - Matt clarified that yes, the costs outlined are for 1 buoy and 1 tributary monitoring station. He stated that the current thinking is the buoy and the tributary monitoring station would be paired but that they do not have to be. If the Steering Committee thinks this is a good program, we can talk about expanding it later.
- Joe Zalewski asked about the in-lake buoy, would it measure at multiple depths?
 - Matt answered most water quality parameters would be measured at a single depth. The buoy quoted in the proposal does not have a winch to lower the sensor, but would measure water temperature at several depths (1-2 m intervals down to the bottom of the Lake).

Koon Tang and Sarah Coleman presented the proposed line-item projects.

- Pierre Leduc asked if Koon has information on results from the WWTF optimization to reduce phosphorus project yet?
 - Koon responded that an RFP went on the New York side, and the plan is to begin optimization in summer/fall, so there are no data yet. Pete LaFlamme added that the VT side can report out at the next Steering Committee meeting.
- Buzz Hoerr asked if phosphorus loads coming from forested land are mostly logging road runoff?
 - Neil stated that legacy roads in forests have essentially become streams, so there is a big opportunity to reduce the phosphorus load coming from forests in some areas. Pete added that the idea is to figure out methods to identify these areas and then pilot those methods, perhaps in the south Lake.

- Breck Bowden commented about the forest load allocation project: Sea Grant has partnered with UVM Extension for a forest management coordinator, it would be great to connect those projects.

Executive Session to discuss FY20 Technical Proposals, TAC membership nomination, (30 minutes)

- **ACTION ITEM:** Technical Advisory Committee membership appointment
 - **Motion:** to approve the TAC membership nomination, Ryan Waldron, to TAC.
 - Motion to Approve: Neil Kamman
 - Second by: Vic Putnam
 - Discussion: none
 - All in favor; motion is carried. Joe Zalewski abstained as he was not present at the meeting.

1:45 PM: Discussion on budget presentations -- Not covered on this call, moved to day 2

2:00: Adjourn for the day

Lake Champlain Steering Committee Meeting
Tuesday & Wednesday, April 14-15, 2020
CONFERENCE CALL/WEBINAR DUE TO COVID-19 STAY-AT-HOME ORDER

Meeting Minutes – Day 2: Wednesday April 15, 2020

SC Member Attendance: Joe Zalewski (CHAIR, NYSDEC), Julie Moore (VT ANR), Mario Paula (EPA R2), Mel Cote (EPA R1), Christina Marts (NPS), Tom Berry (Sen. Leahy), Andrew Milliken (USFWS), Laura Pierre Leduc (Quebec CAC), Mark Naud (VT CAC), Vic Putnam (NY CAC), John Krueger (HAPAC Chair), Neil Kamman (TAC Chair), Buzz Hoer (E&O Committee Chair), Ryan Patch (VT AAFM), Laura Trieschmann (VT AACD), Steve Garceau (QC MNRF), Renée Rouleau (QC Municipal - Clarenceville), , Pete LaFlamme (VT ANR), Julie Berlinski (NYS Dept of Agriculture & Markets), Breck Bowden (Lake Champlain Sea Grant), Daria Mazey (USACE- joined in the afternoon), Vicky Drew (NRCS – joined in the afternoon)

LCBP Staff: Eric Howe, Matt Vaughan, Colleen Hickey, Ryan Mitchell, Elizabeth Lee, Kathy Jarvis, Meg Modley, Jim Brangan, Lauren Jenness, Mae Kate Campbell, Koon Tang (NYSDEC), MaryJo Feuerbach (EPA R1), Bryan Dore (EPA R1), Stéfanos Bitzakidis (QC MELCC), Fred Dunlap (NYSDEC), Sarah Coleman (VT ANR), Heather Radcliffe (NEIWPCC)

Guests: Beth Gilles (LC-LG RPB), Brendan Wiltse (AsRA)

9:30: Connect to webinar

10:00 AM: Meeting re-convenes in Public Session: brief summary of previous day's work

- Joe Zalewski welcomed the group.

9:45 AM: TMDL Projects, Neil Kamman

Neil Kamman reviewed the proposed VT TMDL projects via PowerPoint presentation.

- Mel Cote asked for clarification about the term 'unwind' that Neil has used the past few days. Neil replied that in a geomorphic assessment the stream would be highly incised with gully erosion.
- Clarification from SC members was asked about the gully stabilization projects and their phosphorus impact. Tom Berry stated that it is important to keep phosphorus reduction values at the front of our minds as we evaluate this list of projects as that is what the funding is for.
- Mel Cote noted a dollar figure error in the 1-pager for the Lake Carmi project. Neil responded that the EC identified an opportunity to support the culvert work piece of the project with other funds and decided to invest them into the green schools initiative project. This explains the discrepancy.
- Andrew Milliken voiced the USFWS support of the riparian area conservation project. Great coordination has been happening with USFWS, Vermont Land Trust and NRCS to achieve multiple benefits with these projects.
 - Neil added that the conservation landscape of partners is robust and funding for projects is providing sparks.
- Koon Tang followed up on Andrew's comments by stating that it sounds like Vermont is engaging in comprehensive planning for specific projects, with most of the money going toward

implementation. He wondered if the NY Technical project approved for funding yesterday would lay a similar foundation for comprehensive planning in New York.

- Neil answered that yes, the project would. Vermont has a Water Quality Blueprint. If he pulled that up, this project area would be brightly lit up as a high conservation area for multiple benefits. However, he would defer to Andrew about the level of planning that takes place before these funds are used.
- Andrew Milliken stated that the decision is a combination of information going into the blueprint, an intersection of involved organization's values, and an ongoing process to identify areas from a fish and wildlife perspective.
- Julie Moore added that her direction for looking at these projects is to make water quality at the top of the values list. Projects that are chosen are within top tier of habitat and have high water quality impact. Having a blueprint tool is the key to planning.
- Ryan Patch added that the project began as part of the CREP program. The farm needed to make investments for RAP, but the costs to achieve compliance were higher than the cost of the farm. This began the process of building partnerships and developing BMP funds through VT State legislature. Challenging sites like this are able to save money through this creative approach through leveraging partnerships.
- Pierre Leduc questioned the effectiveness of each of the proposed investments in terms of \$1/Kg of phosphorus. He wonders if there is a summary that can be made available.
 - Neil answered that the 1-pager provided does have estimates for projects that are available. For ones that don't have estimates its either because we haven't been able to calculate it yet for the practice or don't know because engineering is needed first. The Clean Water Investment report has a good figure that would have what you are looking for. In general, agricultural practices are most cost effective then forestry practices than road practices then stormwater. Gully restoration projects are hugely cost effective.

10:10 AM: Public Comments – None provided.

10:15 AM: FFY20 LCBP budget Presentation: Champlain Valley National Heritage Partnership FY20 budget tasks, opening remarks, "As Bad as the Situation is Now, the Situation was Worse in 1776: Smallpox in the CVNHP", *John Krueger*, FY19 CVNHP project highlights, *Jim Brangan*, CVNHP/Heritage budget and presentations – *John Krueger and Jim Brangan*

John Krueger shared the story of the effects of smallpox on American soldiers in the Champlain Valley in 1776. He stated that social isolation was also put in practice for smallpox but soldiers were not able to be isolated so they were ordered to be inoculated (exposed to the smallpox in a controlled manner so they contract a mild version of the disease). Smallpox ravaged the American Army during this time, with an estimated 93% infection rate. Finally, in the spring of 1796, the first smallpox vaccine was administered.

- Breck Bowden asked how knowledge of inoculating came about before germ theory?
 - John was unsure but knew it had been advocated for even before this instance of smallpox.

Jim Brangan presented on the CVNHP work that occurred last year, including the International Year of the Salmon and internships. 2020's theme is Women's Suffrage. In 2021 the theme will be Prohibition, Temperance, & Smuggling and in 2022 the recommended Theme is the 50th Anniversary of the 1972 Clean Water Act.

- Several Steering Committee members expressed approval of the recommended 2022 Theme.

Executive Session to discuss CVNHP competitive grant proposals

- John motioned to move into executive session, Mark seconded. No opposed.
- Enter Executive Session.
- Exit Executive Session.

12:00 PM: LUNCH – 15-minute break

Several SC members asked for an update on the planned sinking of the Ferry Adirondack. Laura Trieschmann provided an update.

- Due to COVID-19, the work has been stopped. There is a possibility that the boat could fall apart when it is sank.
- There was a public meeting held in March. About 70 people were in attendance. Many of them were divers and all voted in favor of sinking the ferry. In addition, so far there have been 287 responses from online survey with 88% in favor.
- The current road block is the VT Legislature, which has within the VT ACCD funding allocation that the VT Historic Preserve can't add anymore underwater historic preserves or else they would lose funding. The funding for maintaining underwater preserves is located in the Capital Construction budget.
- The DEC Commissioner has agreed to put the permit on hold and continue talking with legislature until after COVID-19.
 - Buzz asked if Laura has concerns with this sinking setting a precedent.
 - Laura answered yes. VT AACD has been working on criteria to determine how this wouldn't happen in the future whenever a group is ready to retire a vessel. Funding is needed to maintain the signage, anchor and buoys. Once the ferry is sunk it won't need any maintenance besides public signage and safety. It would require two buoys and is contracted with LCMM.

12:30 PM: Education and Outreach, FY19 E&O Project Highlights, *Colleen Hickey*, FY20 E&O Proposed Budget Tasks, *Buzz Hoerr, Colleen Hickey, Ryan Mitchell*

Ryan Mitchell began the presentation with project highlights. Colleen Hickey continued the presentation.

- Breck Bowden voiced his support for the SUNY Plattsburgh New York Watershed Alliance Program.

Colleen reviewed the FY20 E&O Proposed Budget Tasks.

- Buzz Hoer commented that some local papers have good readership. For example, the Seven Days issue about COVID-19 caught his attention.
- Breck Bowden asked Colleen about the possibility of supporting a steward at the bike ferry on the causeway. There is some signage there already.
 - Colleen answered that construction continues on the Colchester side and may be delayed due to COVID. LCBP may be able to support on busy days. It's a good idea.
- Koon asked if the unified stormwater assistance project would have partners from New York as well as Vermont.
 - Colleen answered that the proposal was submitted by several VT groups that have come together already to discuss more cooperation. The project will go out to RFP and hopefully NY groups will participate as well. QC is also welcome.

1:00 PM: Project presentation: *A reduction in spring mixing due to road salt runoff entering Mirror Lake (Lake Placid, NY)*, Brendan Wiltse, Ausable River Association

Brendan Wiltse presented.

- Buzz asked what drives increases in the application of road salt?
 - Brendan replied that the NY DOT states public expectations of road quality have caused the increase in road salt application.
- Buzz also asked how the food web is affected by water temperatures and oxygen concentrations squeezing fish towards the middle of the water column during the summer?
 - Brendan responded that this is a missing component of their current research project that the researchers would like to examine in more detail. He stated that there has been some interesting research on this topic completed by Canadian researchers studying zooplankton that has challenged the research team's ideas of what thresholds of chlorine concentrations should be set.
- Mel asked if there is broad support among the public and businesses for his team's research?
 - Brenden answered yes and stated that the team meets with large business owners often, and that public outreach events are always well-attended.
- Neil wondered about the lake geometry preventing wind from breaking the stratification in the spring, and asked if the team would contemplate using aeration to break this stratification?
 - Brendan responded that the lake drops off steeply on both of its longer sides, and that the winds coming towards the lake are mostly from the west (perpendicular to its steep drop off). The winds are not very strong, and all of these factors make the lake more susceptible to its turnover being interrupted. Brendan thinks that in most years, the lake would mix in the spring if it was not for the high salt concentrations.
- Vic asked if the retention time/flushing rate of the lake has been calculated?
 - Brendan stated that based on preliminary calculations, the retention time is 2 years. He said that the research team hopes to gain a better sense of the water balance in order to refine that number in the near future, using data from the weather station. He said that the lake would respond immediately during the following spring if there was a significant reduction in salt entering the lake.
- Breck wondered about the fact that even though the lake mixes in the fall, there's not the capacity to move salt out?
 - Brendan stated that even with the 2-year retention time, it would take years to suppress chloride concentrations.
 - Neil added that the groundwater influence on chloride concentrations is a key piece as well.
 - Brendan responded that the researchers are aware that there is widespread chlorine groundwater contamination in the Adirondacks, and that it will be interesting to see how the groundwater around the lake interacts with the lake.

12:15 PM: FFY20 Budget: Final Discussion and approval, **ACTION ITEM: FY20 LCBP, CVNHP Budget Approval of Prioritized Task List and TMDL Implementation Projects**

- Eric reviewed the budget spreadsheet. He noted that in the key functions section, the CAC coordination item was included, and summarized that the majority of Steering Committee members felt comfortable leaving this item in the budget, with the acknowledgement that the Steering Committee will revisit this position in September in case the budget is affected by COVID-19.

- Buzz commented that he has reservations about the position being designated as 80% full time. Eric responded that most people he spoke with felt comfortable making this 80% for now with the knowledge that it may need to be changed to full time in the future.
- **ACTION ITEM:** Budget approval
 - **Motion:** to approve the budget as described by Eric Howe
 - Motion to Approve: John Krueger
 - Second by: Buzz
 - Discussion: no additional discussion
 - All in favor; motion is carried. None abstained.

1:30: Updates & Other business, Jurisdictional Updates NY, QC, VT, Federal Partners, Advisory Committee Updates (2 min each) CAC: QC, NY, VT; TAC, E&O, HAPAC, Other business

- Daria Mazey outlined the Army Corps updates detailed in the written updates document. They have a request pertaining to Lake St. Catherine that Daria would welcome input on.
 - Eric suggested that this topic could be addressed during the upcoming federal partners call.
 - Mel noted that there was an update to the updates he had already sent. The TMDL Implementation Report Card for the Lamoille and Missisquoi was submitted yesterday and commended the State on the progress they are making.
 - Eric will send another round of updates out when he receives them.

2:00 ADJOURN

- Eric Howe and Joe Zalewski thanked everyone who participated in the meetings and expressed hope that the next meeting could be held in person.

Meeting Outcomes:

1. *Approval of December 12, 2019 Meeting Minutes*
2. *Approval to re-direct FY19 funds for COVID-19 emergency support to watershed organizations*
3. *Appointment of Advisory Committee membership*
4. *Approval of LCBP/CVNHP FY2020 budget and FY20 TMDL Implementation Funds*

LCBP COVID-19 Support to Lake Champlain Watershed Groups

LCBP hosted a conference call on April 3 to give watershed groups from across the Lake Champlain basin an opportunity to share their financial challenges their organizations are facing during this time. Many expressed gratitude toward LCBP and NEIWPC for flexibility on invoicing and extensions for project timelines. Several groups noted that while these changes help with their projects that have been funded by LCBP and will help with budgets and project management in the future when field work can resume, this does not cover losses in operating expenses they are experiencing now, during the COVID crisis. Many organizations are losing indirect costs that help to offset day-to-day operational expenses. Their request to LCBP for emergency support is that LCBP offer a round of “emergency” organizational support grants that includes eligibility for basic operating expenses during the COVID-19 pandemic.

Funding availability: LCBP currently has approximately \$150,000 available from projects that have not expended funding. This includes funding for the High School Stewardship program, Professional development mini-grants, and the AIS Rapid Response fund. All funds are GLFC-sourced from Fy18 and Fy19 appropriations.

COVID-19 Emergency Organizational Support Grants: LCBP will issue, within 5 business days of Steering Committee approval, an opportunity for Lake Champlain-focused watershed organizations to request organizational support funds for up to 90 days (initiated at formal date of agreement, likely by end of April 2020). Applications will be due to LCBP within 7 business days.

Demonstration of need and application details: Applicants will need to demonstrate the need and justification for the request, including a budget highlighting how the operational support funds will be used. Application form will be 2-pages maximum, to be reviewed by staff for eligibility and expediency. Maximum award amount will be \$10,000 for the 90-day period. LCBP may consider partial award funding as needed based on availability of funds and description of funding need in applications.

Steering Committee decision points:

1. Is there support among Steering Committee members for redirection of existing funds for this grant opportunity?
2. Is the grant program appropriate as proposed? This includes eligibility and evaluation criteria, and total award amount.
3. If Yes to above, does the Steering Committee support LCBP staff review for eligibility and awards? The NY and VT State Champlain Coordinators would be included in this review. Typically, LCBP application reviews are completed by a team of external reviewers.
4. If Yes to above, Award decision process: Typically, the Steering or Executive Committees will make formal award decisions for distribution of LCBP funds.
 - a. Shall the LCBP Director schedule an Executive Committee meeting to make award decisions?
 - b. Alternatively, the Steering Committee can decide to allow the LCBP Director to make these award decisions on behalf of the Steering Committee.

January 2020 **Draft FY2020 LCBP Budget**

TASK #	Key Functions	Task Management	Draft 2020 TASK Request	FY2019 Approved Budget	DRAFT TASK Cumulative Total	NPS Allocation	EPA Allocation	GLFC Allocation
KF-1	VT Coordination	VERMONT	\$ 161,412	\$ 161,427	\$161,412	\$0	\$161,412	\$0
KF-2	NY Coordination	NEIWPCC/ NEW YORK	\$ 156,000	\$ 195,850	\$317,412	\$0	\$156,000	\$0
KF-3	E&O Coordination	NEIWPCC	\$ 210,000	\$ 180,000	\$527,412	\$0	\$199,500	\$10,500
KF-4	Communication and Publications	NEIWPCC	\$ 275,000	\$ 275,000	\$802,412	\$0	\$261,250	\$13,750
KF-5	Technical Coordination	NEIWPCC	\$ 285,000	\$ 245,000	\$1,087,412	\$0	\$279,300	\$5,700
KF-6	ANS Coordination	NEIWPCC	\$ 230,000	\$ 190,000	\$1,317,412	\$0	\$225,400	\$4,600
KF-7	LCBP Administrative Assistance	NEIWPCC	\$ 120,000	\$ 122,000	\$1,437,412	\$2,400	\$117,600	\$0
KF-8	Program Direction	NEIWPCC	\$ 170,000	\$ 160,000	\$1,607,412	\$3,400	\$163,200	\$3,400
KF-9	Office Operations	NEIWPCC	\$ 72,000	\$ 80,000	\$1,679,412	\$1,440	\$52,560	\$18,000
KF-10	Resource Room	NEIWPCC	\$ 195,000	\$ 185,000	\$1,874,412	\$0	\$195,000	\$0
KF-11	NEI Administration	NEIWPCC	\$ 198,000	\$ 195,000	\$2,072,412	\$3,960	\$190,080	\$3,960
KF-12	CVNHP Coordination	NEIWPCC	\$ 185,000	\$ 165,000	\$2,257,412	\$185,000	\$0	\$0
KF-13	Gordon Center House rent	VERMONT	\$ 18,500	\$ 18,500	\$2,275,912	\$0	\$18,500	\$0
KF-14	State of the Lake 2021: Printing, copy-editing, full translation for website	NEIWPCC	\$ 20,000	\$ -	\$2,295,912	\$0	\$20,000	\$0
KF-15	Local Implementation Grants PP (292k) / AIS (200k) / OS (50k)	NEIWPCC	\$ 550,000	\$ 550,000	\$2,845,912	\$0	\$514,500	\$27,500
KF-16	LCBP CAC Coordination	NEIWPCC	\$ 120,000	\$ -	\$2,965,912	\$0	\$120,000	\$0
-	Additional LCBP office space	NEIWPCC	\$ -	\$ 15,000	\$2,965,912	\$0	\$0	\$0
Funding Scenario FY2020		EPA FY20 base	\$7,000,000	Category Sum		\$196,200	\$2,674,302	\$87,410
		EPA-2016 TMDL	\$6,386,000					
		NPS (CVNHP)	\$336,388					

January 2020 **Draft FY2020 LCBP Budget**

GLFC	\$664,500
Total	\$14,386,888

TASK #	Heritage Area Tasks	Task Management	Draft 2020 TASK Request	FY2019 Approved Budget	DRAFT TASK Cumulative Total	NPS Allocation	EPA Allocation	GLFC Allocation
H-1	CVNHP Proposals	NEIWPC	\$ 240,586	\$ -	\$3,206,498	\$122,188	\$0	\$151,520
H-2	Local Heritage Grants*	NEIWPC	\$ -	\$ 36,000	\$3,206,498	\$0	\$0	\$0
H-3	Interpretive Theme Grants*	NEIWPC	\$ -	\$ 36,000	\$3,206,498	\$0	\$0	\$0
H-4	Quebec Regional Stakeholder Coordination*	NEIWPC	\$ 2,200	\$ 2,200	\$3,208,698	\$0	\$0	\$2,200
H-5	Wayside Exhibit Program Continuation*	NEIWPC	\$ 10,000	\$ 12,000	\$3,218,698	\$10,000	\$0	\$0
H-6	Annual International Heritage Summit*	NEIWPC	\$ 8,000	\$ 7,200	\$3,226,698	\$8,000	\$0	\$0
NHA Totals			\$260,786		Category Sum	\$140,188	\$0	\$153,720

TASK #	Education & Outreach	Task Management	Draft 2020 TASK Request	FY2019 Approved Budget	DRAFT TASK Cumulative Total	NPS Allocation	EPA Allocation	GLFC Allocation
EO-1	E&O Grant Programs (Annual EO local grants (220k), Professional Development (14k), Enhanced Outreach Grants (230k), Boots-n-Bugs 24k)	NEIWPC	\$ 488,000	\$550,500	\$3,714,698	\$0	\$463,600	\$24,400
EO-2	StreamWise Stewardship, Phase 2	NEIWPC	\$ 47,200	\$61,000	\$3,761,898	\$0	\$0	\$47,200
EO-3	Outreach Professional Development Trainings for Watershed Managers	NEIWPC	\$ 20,000	\$0	\$3,781,898	\$0	\$0	\$20,000
EO-4	Unifying stormwater technical assistance on private properties basin-wide	NEIWPC	\$ 126,000	\$0	\$3,907,898	\$0	\$126,000	\$0
EO-5	TMDL Tool Video Dissemination	NEIWPC	\$ 23,600	\$35,000	\$3,931,498	\$0	\$23,600	\$0
EO-6	State of the Lake Newspaper Insert	NEIWPC	\$ 7,080	\$0	\$3,938,578	\$0	\$0	\$7,080
EO-7	Vermont LakeWise	VERMONT	\$ 62,000	\$62,000	\$3,993,498	\$0	\$62,000	\$0
EO-7a	New York LakeWise	NEW YORK	\$ 10,000	\$0	\$3,948,578	\$0	\$10,000	\$0
EO-8	Education & Outreach Stewards	NEIWPC	\$ 70,800	\$60,000	\$4,019,378	\$0	\$0	\$70,800
EO-9	TMDL Tool Website	NEIWPC	\$ 23,600	\$0	\$4,042,978	\$0	\$0	\$23,600
E&O Total			\$ 878,280	\$768,500	Category Sum	\$0	\$685,200	\$193,080

January 2020 Draft FY2020 LCBP Budget

	Technical Tasks	Task Management	Draft 2020 TASK Request	FY2019 Approved Budget	DRAFT TASK Cumulative Total	NPS Allocation	EPA Allocation	GLFC Allocation
T-1	CORE PROJECT: Lake Champlain Boat Launch Steward Program 2021	NEIWPCC	\$ 205,324	\$ 138,050	\$205,324	\$0	\$184,792	\$20,532
T-2	CORE PROJECT: NEIWPCC-- Lake Champlain Long-Term Water Quality and Biological Monitoring (LTMP)	NEIWPCC	\$ 154,000	\$ 150,000	\$359,324	\$0	\$154,000	\$0
T-3	CORE PROJECT: VERMONT DEC - LTMP	VERMONT	\$ 249,989	\$ 267,629	\$609,313	\$0	\$249,989	\$0
T-4	CORE PROJECT: New York DEC/SUNY Plattsburgh LTMP	NEW YORK & SUNY-Plattsburgh	\$ 185,000	\$ 185,000	\$794,313	\$0	\$185,000	\$0
	LTMP UPGRADE	TBD - NY/VT	\$ 71,000	\$ -	\$865,313	\$0	\$71,000	\$0
T-5	CORE PROJECT: Cyanobacteria Monitoring	NEIWPCC-LCC	\$ 105,000	\$ 100,000	\$899,313	\$0	\$105,000	\$0
T-6	CORE PROJECT: Water Chestnut Management	VERMONT	\$ 150,000	\$ 90,000	\$1,049,313	\$0	\$150,000	\$0
T-7	CORE PROJECT: LCBP Enhanced BMP Grants	NEIWPCC	\$ 615,717	\$ 633,347	\$1,665,030	\$0	\$615,717	\$0
T-8	CORE PROJECT: AIS Rapid Response Fund	NEIWPCC	\$ 59,758	\$ 69,900	\$1,724,788	\$0	\$0	\$59,758
T-9	CORE PROJECT: NY Lake Champlain Basin Agronomy Support and Agriculture BMP Implementation	NEIWPCC	\$ 160,000	\$ 160,000	\$1,884,788	\$0	\$160,000	\$0
T-10	LINE ITEM: WWTF Optimization in Lake Champlain Basin - NEW YORK: YEAR 2 of 3	NEW YORK	\$ 110,000	\$ 110,000	\$1,994,788	\$0	\$110,000	\$0
T-11	LINE ITEM: WWTF Optimization in Lake Champlain Basin - VERMONT: YEAR 2 of 3	VERMONT	\$ 150,000	\$ 150,000	\$2,144,788	\$0	\$150,000	\$0
T-12	LINE ITEM: NY/VT Forest P Load Allocation	VT/NY	\$ 200,000	\$ -	\$2,344,788	\$0	\$200,000	\$0
T-13	LINE ITEM: Rural Roads General Permit & BMP Implementation: New York	New York	\$ 100,000	\$ -	\$2,444,788	\$0	\$100,000	\$0
T-14	LINE ITEM: Rural Roads General Permit & BMP Implementation: Vermont	VERMONT	\$ 100,000	\$ -	\$2,544,788	\$0	\$100,000	\$0
T-15	LINE ITEM: VAWQP Coordination Support	NEIWPCC	\$ 100,000	\$ -	\$2,644,788	\$0	\$0	\$100,000
T-16	LINE ITEM: NY Agricultural Engineering Capacity Building	New York	\$ 25,000	\$ -	\$2,669,788	\$0	\$25,000	\$0
T-16a	LINE ITEM: Vermont DOH Cyanobacteria laboratory costs	VERMONT	\$ 8,000	\$ -	\$2,677,788	\$0	\$8,000	\$0
T-17	Technical Tasks via Competitive Grant Program	NEIWPCC	\$ 1,122,000	\$ -	\$3,791,788	\$0	\$1,072,000	\$50,000
T-23	TMDL Project: Deer Brook Restoration Project	VERMONT	\$ 400,000	\$ -	\$4,191,788	\$0	\$400,000	\$0
T-24	TMDL Project: Winooski Headwaters Targeted Intervention	VERMONT	\$ 825,000	\$ -	\$5,016,788	\$0	\$825,000	\$0
T-25	TMDL Project: Lake Carmi Watershed Restoration	VERMONT	\$ 200,000	\$ -	\$4,391,788	\$0	\$200,000	\$0

January 2020 **Draft FY2020 LCBP Budget**

T-26	TMDL Project: Green Schools Initiative to Support Stormwater Compliance	VERMONT	\$ 2,161,000	\$ -	\$6,552,788	\$0	\$2,161,000	\$0	
T-27	TMDL Project: Priority Wetland Acquisition, Restoration, and Conservation to Improve Water Quality in Vermont's Lake Champlain Basin	VERMONT	\$ 1,650,000	\$ -	\$8,202,788	\$0	\$1,650,000	\$0	
T-28	TMDL Project: Enhanced Agricultural Practice Implementation	VERMONT	\$ 1,150,000	\$ -	\$9,352,788	\$0	\$1,150,000	\$0	
T-29				\$ -	\$9,352,788	\$0	\$0	\$0	
T-30				\$ -	\$9,352,788	\$0	\$0	\$0	
Tech Total			\$ 10,256,788			Category Sum	\$0	\$10,026,498	\$230,290

	Budget	Allocated	Remaining
EPA FY20 base	\$ 7,000,000	\$7,000,000	\$ 0
EPA-2016 TMDL	\$ 6,386,000	\$ 6,386,000	\$ -
NPS (CVNHP)	\$ 336,388	\$ 336,388	\$ 0
GLFC	\$ 664,500	\$ 664,500	\$ (0)
	\$ 14,386,888	\$ 14,386,888	\$ 0

Draft LCBP FY2020 Budget:

Key Functions

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, provide operational support for the VT Citizens Advisory Committee concerning LCBP activities in Vermont, and assist the Program Director in coordinating Basin Program activities involving Vermont.

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 Team, including coordination of and collaboration with educational and outreach activities. Funding includes staff support for an additional part-time position to provide assistance with management of grants associated with addressing the VT phosphorus TMDL for Lake Champlain. Duties of the Vermont Lake Champlain Coordinator include:

- Coordination with other State entities, including agriculture, transportation agencies and departments of Fish and Wildlife and Forest & Parks
- Review and management of VT ANR-funded Clean Water Fund grants and other grant programs
- Engagement with upper-level VT ANR staff and policy formulation,
- WWTF permitting and point sources P management strategy.
- New/recent efforts that require additional effort and time of the Coordinator include working on a detailed watershed implementation plan for the VT basin.
- Increasing workload in upcoming year(s) with new VT Clean Water Service Provider program management responsibilities
- Supervise the VT DEC Lake Champlain Grants Manager staff position
- Coordination of VT CAC – includes agenda development, meeting logistics, meeting summaries and meeting promotion

Estimated Direct and Indirect Cost: \$161,463 (1.3 FTE);

Changes from previous fiscal year (\$161,427 for 1.3 FTE): New personnel executing this task, no other major changes.

2. New York Coordination EPA to NEIWPC

Status: Historically, the Steering Committee has directed funds to NYS DEC for this position. In FY20, NY DEC requested NEIWPC host this position on their behalf. The position will remain located in the NYS DEC Ray Brook office, supervised by the NYS DEC Region 5 Regional Director. 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 works with the Program Manager, Vermont Lake Champlain Basin Coordinator, EPA staff, and other staff to facilitate the smooth operations of the Program.

Description: This task supports the implementation of *Opportunities for Action* in New York DEC Region 5 with a staff member assigned to the LCBP Staff Team, including provision of

grant and contract oversight as needed. Duties of the New York Lake Champlain Coordinator include:

- Coordination with other State entities, including lands and forests, fish & wildlife bureaus
- Oversight of LCBP-funded NY agronomist
- Review and management of NYS-funded WQIP and other grant programs
- Managing South Lake water chestnut harvesting program,
- Coordinating the Long-Term Monitoring Program with SUNY Plattsburgh and annual workplan/contract with SUNY,
- Engagement with NYS DEC staff in Albany and policy formulation,
- WWTF permitting and point sources P management strategy.
- New/recent efforts that require additional effort and time of the Coordinator include working on a detailed watershed implementation plan for the NY basin, including highlight of non-point source projects.
- Coordination of NY CAC – includes agenda development, meeting logistics, meeting summaries and meeting promotion

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

Changes from previous fiscal year (\$195,850 for 1 FTE): Position will be routed through NEIWPC; supervised by NYS DEC staff. Reduction in budget for this task due to anticipation of earlier-career staff executing this work.

3. Education and Outreach Coordination

Status: 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. Funding includes support for a part-time Education and Outreach internship position to assist the E&O Coordinator with outreach programming to develop new E&O programming.

Description: This task is carried out by the Education and Outreach (E&O) Coordinator and support staff. It includes:

- 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
- sharing responsibilities for the *Champlain Connection* program development.
- Other duties as assigned
- This task line also includes 33% time (~6 hours weekly) for an E&O intern to provide assistance to E&O Coordinator position

Estimated Direct and Indirect Cost: \$210,000; (1.6 FTE + Fringe, Indirect, Travel, Professional development)

Changes from previous fiscal year (\$180,000 for 1.3 FTE): Increased costs for this task reflect multiple factors, notably the addition of one FTE staff support position that was added in March 2019, to execute tasks split between E&O and the Technical teams. Increase also reflects augmented E&O-related workload due to increased budget tasks in recent years. Part-time E&O staff are recording additional hours to support the increased workloads. Additional costs also reflect increasing salary for FTE and PTE staff, including fringe costs associated with an increase in health care costs for employees. E&O staff are traveling to more events and meetings across the LCB; these costs also factor into the increase for FY20.

4. Communication and Publications Coordination

Status: The Communication and Publications Coordinator and Associate are responsible for most communications programs and publication of the LCBP, working under supervision of the LCBP Director and in coordination with other LCBP staff. Funding includes support for a part-time Education and Outreach internship position to assist the Communications and Publications Coordinator with outreach content development.

Description: 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.

- (a) Technical web maintenance and web presentation of technical and scientific concepts:
- maintaining LCBP website; 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 E&O 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.
- This task line also includes 33% time (~6 hours weekly) for an E&O intern to provide assistance to the Communication and Publications Coordinators

Estimated Direct and Indirect Cost: \$275,000; (2.3 FTE + Fringe, Indirect, Travel, Professional development)

Changes from previous fiscal year (\$275,000 for 1.3 FTE): No changes from previous fiscal year.

5. Coordination of Technical Tasks

Description: Activities in this task are carried out by the Technical Coordinator and Technical Associate. The Technical Coordinator provides staff support for the Chair of the Technical Advisory Committee, facilitates the work of the TAC and subcommittees, assists the Program Manager 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 supervises the Technical Associate, whom also serves as the LCBP Quality Assurance Officer.

Duties of the Coordinator and technical staff include:

- Work with technical and other LCBP 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 Program, Climate Change and Flood Resilience, Toxic substances workgroup, AOP workgroups
- Assist local groups and agencies to design local implementation projects and proposals.
- Develop requests for proposals for grant programs, and coordinate the review and evaluation of technical grant proposals.
- 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.
- Track local grants, provide technical assistance and assess products.
- Support all LCBP committees on technical issues as needed.

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

Changes from previous fiscal year (\$245,000 for 2 FTE): Increased costs for this task reflect multiple factors, notably the addition of one FTE staff support position that was added in March 2019, to execute tasks split between E&O and the Technical teams. Additional costs also reflect increasing salary staff, including fringe costs associated with an increase in health care costs for employees. Technical staff are traveling to more events and meetings across the LCB; these costs also factor into the increase for FY20.

6. Aquatic Nuisance Species Management Coordination

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. Supervises LCBP associate staff on AIS and related technical projects.

Estimated Direct and Indirect Cost: \$230,000; (1.5 FTE + Fringe, Indirect, Travel, Professional development)

Changes from previous fiscal year (\$245,000 for 1.2 FTE): Increased costs for this task reflect multiple factors, notably the addition of one FTE staff support position that was added in March 2019, to execute tasks split between E&O and the Technical teams. Additional costs also reflect increasing salary staff, including fringe costs associated with an increase in health care costs for employees. Technical staff are traveling to more events and meetings across the LCB; these costs also factor into the increase for FY20.

7. Administrative Assistance

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 NEIWPC cooperative agreements and contracts.
- Manage the LCBP office operations in Grand Isle.
- Prepare NEIWPC 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 NEIWPC 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 NEIWPC 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)

Changes from previous fiscal year (\$122,000 for 1 FTE): Nominal decrease from previous year, primarily due to decreased travel costs for this position, offset by increasing fringe benefit costs for all LCBP/NEIWPC staff.

8. Lake Champlain Basin Program Direction

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 NEIWPC employee and reports to the Steering Committee and its Executive Committee on programmatic matters and to the Executive Director of NEIWPC on administrative matters. The Director provides effective coordination with the Lowell office of NEIWPC 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 NEIWPC 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, NEIWPC, 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 NEIWPC'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 NEIWPC 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 FTE + Fringe, Indirect, Travel, Professional development)

Changes from previous fiscal year (\$160,000 for 1 FTE): Increased costs for this task reflect increasing salary and fringe benefits, and travel support. Travel costs for the LCBP Director

have increased substantially over the past year, due to increasing requests for meetings across the LCB and regionally.

9. LCBP Office Operations

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: \$72,000

Changes from previous fiscal year (\$80,000): The reduction from the previous year reflects efficiencies put in place to reduce general office and meeting expenses.

10. Resource Room Staffing

Description: This task supports regular and part-time 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 (usually 362 days a year plus for special events) with few exceptions. 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. Historically, up to 25% of all ECHO guests visit the Resource Room. Also supports 33% of an E&O intern to provide assistance to Resource Room-related activities.

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

Changes from previous fiscal year (\$185,000 for 1 FTE + 3 PTE): Increased costs for this task reflect increasing salary costs, with corresponding increases in fringe benefits, and support for new displays and materials for the exhibits in the public space of the Resource Room.

11. NEIWPCC Administration

Description: This task supports the direct NEIWPCC costs for the Water Resource Protection Division Director and support staff in the Lowell office responsible for grant applications, tracking disbursements, quality assurance review, reviewing and issuing task contracts and ensuring compliance, and providing general oversight of LCBP operations. The Division Director is considered a member of the LCBP staff.

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

Changes from previous fiscal year (\$195,000 for 0.75 FTE): Increased costs for this task from previous year are nominal, and reflect additional NEIWPCC administrative support to manage increasing numbers of grants managed on behalf of the LCBP.

12. CVNHP Administration

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 400th 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; (1.2 FTE + Fringe, Indirect, Travel, Professional development)

Changes from previous fiscal year (\$165,000 for 1 FTE): Increased costs for this task reflect increases in salary, associated fringe, and indirect costs. Several part-time LCBP staff also providing support to CVNHP and those costs are reflected here. CVNHP staff are traveling to more events and meetings across the Heritage area; these costs also factor into the increase for FY20.

13. Gordon Center House Rent EPA to VT

Description: This task covers the cost of the annual rental agreement between NEIWPC/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

Changes from previous fiscal year (\$18,500): None. Current agreement with VT FWD is locked in at this rate through March 31, 2022.

14. State of the Lake 2021

Description: The LCBP publishes the State of the Lake and Ecosystem Indicators Report every three years; 2021 will be the next publication date for this report. Funding from this task will support printing costs (12-15,000 hardcopies), copy-editing and other publication expenses, and full translation of the text into French for the State of the Lake website.

Estimated Direct and Indirect Cost: \$20,000;

Changes from previous fiscal year (\$16,800): This task was last supported in the FY17 budget. Increase is due to expanded scope of the task, including full translation into French (this cost was absorbed through other LCBP task lines in FY17).

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

Status: 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.

Description: These funding lines 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** Projects approx. \$300,000
- **Local Grants 2: Aquatic Invasive Species Prevention** Projects approx. \$200,000
- **Local Grants 3: Organizational Support** Projects approx. \$50,000

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

Changes from previous fiscal year (\$00): None; this task is level-funded.

LCBP Citizen Advisory Committee Coordinator Position

Background:

The mission of the Citizen Advisory Committees is to provide recommendations on the condition and management of Lake Champlain to the Steering Committee. 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 Québec CAC has 13 members appointed by their respective municipal, agricultural, economic, environmental, or community organizations. The CACs serve the following roles in implementing Opportunities for Action:

- provide a forum for citizens, interest groups, and local governments to discuss Lake issues;
- distribute funds to community-based projects through LCBP Partnership Program grants;
- advise the Steering Committee about public concerns;
- link the Steering Committee to state legislative bodies and local groups;
- make recommendations to the Steering Committee about Plan priorities;
- encourage agencies to follow through with their commitments to the Plan.

The role of the State Coordinators

LCBP has historically provided funding to the New York DEC and Vermont ANR to support a position within each entity to serve as a liaison, grant manager, and CAC coordinator. General workloads for these positions include management of Lake Champlain-related State grants, including EPA-sourced funds from the LCBP authorization, coordination of Lake Champlain-related work across their jurisdiction and the LCBP, and coordination of the CAC for that jurisdiction. Grant funding workloads have increased in both States in recent years as Federal- and State-level funding sources have been increased for Lake Champlain-related water quality work. This increasing demand for grant management has reduced the capacity of both State Coordinators to support their CACs. A summary of the current workplan/responsibilities for each State Coordinator is provided here, and complete 2019/2020 workplans for both positions are appended to this document.

Summary of NY State Coordinator responsibilities:

- Coordination with other State entities, including lands and forests, fish & wildlife bureaus
- Oversight of LCBP-funded NY agronomist
- Review and management of NYS-funded WQIP and other grant programs
- Managing South Lake water chestnut harvesting program,
- Coordinating the Long-Term Monitoring Program with SUNY Plattsburgh and annual workplan/contract with SUNY,
- Engagement with NYS DEC staff in Albany and policy formulation,
- WWTF permitting and point sources P management strategy.
- New/recent efforts that require additional effort and time of the Coordinator include working on a detailed watershed implementation plan for the NY basin, including highlight of non-point source projects.

- Coordination of NY CAC – includes agenda development, meeting logistics, meeting summaries and meeting promotion

Summary of VT State Coordinator responsibilities:

- Coordination with other State entities, including agriculture, transportation agencies and departments of Fish and Wildlife and Forest & Parks
- Review and management of VT ANR-funded Clean Water Fund grants and other grant programs
- Engagement with upper-level VT ANR staff and policy formulation,
- WWTF permitting and point sources P management strategy.
- New/recent efforts that require additional effort and time of the Coordinator include working on a detailed watershed implementation plan for the VT basin.
- Increasing workload in upcoming year(s) with new VT Clean Water Service Provider program management responsibilities
- Coordination of VT CAC – includes agenda development, meeting logistics, meeting summaries and meeting promotion

Current CAC Coordination effort

The State Coordinators are responsible for coordination of the CACs for their jurisdiction. Coordination, at a minimum, includes membership development, agenda development, speaker recruitment, meeting logistics, and ideally development of CAC connections to policy and decision makers as well as stakeholder groups. Annual products typically include a 2-page annual CAC priorities document for both [New York](#) and [Vermont](#).

Increasing workload demands have limited the ability of the State coordinators to allocate the amount of time needed to adequately support the NY and VT CACs. Available time is now limited to basic CAC meeting coordination elements, production of the annual priorities documents, and, for Vermont, coordination of a day of meetings with committees of the VT State legislature.

Currently, there is very little coordination among the NY, QC, and VT Citizen Advisory Committees, primarily due to lack of resources and time. All three groups have expressed an interest in collaborative work across all three groups, including an annual in-person meeting with membership representation from all three advisory committees to network, identify common priorities and develop approaches to collaborative messaging. This level of coordination cannot be supported in the current coordination model simply due to overburdened workloads of the State coordinator staff.

Proposed LCBP CAC Coordination

An LCBP CAC Coordinator dedicated to the work of the CACs will increase the efficacy of the CACs in their mission to promote the priorities of citizen groups at the Steering Committee level, while allowing the State Coordinators to continue to engage with the CACs at a higher level than they currently have the capacity to do, and continue to share information about State programs with the CACs.

The LCBP CAC Coordinator will not engage in advocacy or lobbying efforts.

The LCBP CAC Coordinator will do the following (incumbent on level of support provided for the position):

- Recruit speakers, secure meeting spaces, provide necessary meeting supplies, and develop and provide meeting documentation.
- 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.
- 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.

State Coordinator workload shifts with LCBP CAC Coordination

If an LCBP-hosted CAC Coordinator is supported, this will relieve the State Coordinators of the logistical responsibilities that come with coordination of CAC meetings and allow them to engage more in LCBP- and State-funded programs focused on Lake Champlain work. Demands for this effort continue to increase as funding support for Lake Champlain water quality efforts increases.

Cost options for LCBP CAC Coordination:

Option A: Part-Time (less than 1,000 hours annually or 15-20 hours per week) \$66,000

- General responsibilities would include coordination of NY and VT CACs, including working with Committee chairs to develop agendas, recruit speakers, and handle meeting logistics for each CAC and an annual joint CAC meeting for all three CACs. Arrange legislative days and coordinate development of annual priorities documents for NY and VT CACs. Attend LCBP Committee meetings as needed. Represent LCBP at additional watershed group meetings across the Basin and participate in outreach events as time allows.

Option B: 80% of Full-time (1664 hours annually or 32 hours per week) \$120,000

- General responsibilities include all of Option A, increasing expectations for watershed group meeting attendance and participation in outreach events to average at least 4 per month outside of the CAC meetings, with office work to include follow-up work as outputs from those meetings. Anticipate additional publications and outreach to communities on behalf of the CACs.

Option C: Full time position (2080 hours annually, 40 hours per week) \$145,000.

- General responsibilities include all of Options A and B, increasing expectations for watershed group meeting attendance and outreach work. May include some grant management work or additional coordination support for LCBP-driven workgroups (e.g. Healthy soils, CBEI, others).

All options include:

- Salary, fringe, and indirect scaled to position level and number of work hours
- Travel support (mileage reimbursement, etc., also scaled to work hours)
- Supplies (publication/printing costs for CAC publications, meeting support supplies, computer support, etc.)

Alternative Approaches to the LCBP CAC Coordination:

- Plan B: Steering Committee creates CAC task line in LCBP Key Functions budget to provide additional support to CACs at lower funding level than needed for staff position. Funds could support printing of fliers, social media boosting, travel support for members and speakers, other CAC-driven activities and products. Funds would not support CAC coordination effort.
- Plan C: LCBP finds another partner that works across the Basin to share cost of this position and leverage funds. Position may or may not be hosted at LCBP.
- Plan D: Develop as a new grant opportunity and sub-contract out the position to a suitable organization under annual or multi-year agreement.
- Plan E: other alternatives not presented here?

Cautions, Caveats, and Opportunities to consider for this this new LCBP position:

- This position will not be recruited until EPA FFY20 funds are available after October 1, 2020. If approved now, the Steering Committee will have the opportunity to reconsider support for this task in September if there are changes in priorities or anticipated appropriations.
- VT ANR and NYS DEC both may be facing budget shortfalls due to COVID-19 pandemic; unclear how this will affect LCBP FY21 budget at this time
- Creates new position for LCBP that will obligate resources away from projects
- The LCBP CAC Coordinator presents several opportunities to build and strengthen
 - connections between CACs and their stakeholder communities
 - the voice and presence of CACs among decision and policy makers at State and local levels
 - connections across the three CACs of the Lake Champlain Basin
 - CAC membership in VT and NY
 - Provide the Steering Committee with a stronger, more informed voice from citizen stakeholders when considering priorities
 - Release State coordinators from CAC coordination obligations and allow to focus on building State grant programs

TITLE: ENVIRONMENTAL ANALYST I (CAC Coordinator)

EMPLOYER: NEIWPC, Wannalancit Mills, 650 Suffolk Street, Suite 410, Lowell, MA 01854

LOCATION: Lake Champlain Basin Program office, 54 West Shore Road, Grand Isle, VT 05458

SALARY: Grade and Step dependent upon level of experience and qualifications

ADDITIONAL INFORMATION: Full-time benefits provided, but not included in salary range: vacation, personal and sick leave, health, life, disability, dental insurance, and retirement plan. This position requires the incumbent to work five days a week, 8 hours per day, except for approved compensatory time. [NOTE: This is written for a 100% time position. If approved at 80% time, this information will change slightly and the position description will remain more or less the same but with reduced expectations for workload outputs.]

BACKGROUND INFORMATION: NEIWPC serves as a forum for interstate communication and coordination on water related pollution control efforts among all the New England States and New York State.

The Lake Champlain Basin Program (LCBP) coordinates and funds activities that protect and improve the natural and human resources of the Lake Champlain Basin. Partners in the program include the States of New York and Vermont, the Province of Quebec, NEIWPC, the U.S. EPA, the U.S. National Park Service, and the International Great Lakes Fishery Commission. LCBP also collaborates with several other agencies and organizations at the federal, state, and local levels, including private firms and academic institutions.

JOB SUMMARY: The LCBP Citizen Advisory Committee Coordinator (CAC Coordinator) is responsible for coordination of the New York and Vermont Citizen Advisory Committees. Coordination includes working with Committees to establish meeting schedules, agendas, and annual goals for each committee. Incumbent will work with LCBP, New York DEC, and Vermont ANR to develop and fulfill committee membership for each jurisdiction. Incumbent will recruit speakers, secure meeting spaces, provide necessary meeting supplies, and meeting documentation. Incumbent will conduct outreach to communities to promote CAC meetings, activities, and annual goals or priorities. Incumbent will work closely with New York and Vermont State staff to ensure coordinated messaging and communication between the States, LCBP, and the CAC membership. Incumbent will arrange legislative days for CAC committee members to engage in discourse with State legislators and other officials. Incumbent will not engage in advocacy or lobbying efforts. Incumbent will attend the Quebec CAC (OBVBM) meetings on a regular basis. Incumbent will coordinate one joint meeting among the three CACs annually to foster collaborative work, communication, and messaging across the jurisdictions of the Lake Champlain basin. Incumbent will attend LCBP Committee meetings as appropriate.

DUTIES AND RESPONSIBILITIES:

- **Citizen Advisory Committee Coordination.** The New York and Vermont Citizen Advisory Committees meet monthly, approximately 7-10 times per year. Work with Chairs of the New York and Vermont Citizen Advisory Committees to coordinate monthly meetings and ad-hoc meetings. Includes drafting agendas, recruitment of speakers, meeting facilitation, securing meeting space, provision of meeting documentation. Produces annual deliverables such as priorities fliers or action plans for each CAC. Work to build membership across both groups to represent diversity of interests

related to Lake Champlain basin. Arrange legislative days for CAC committee members to engage in discourse with State legislators and other officials. Attend the Quebec CAC meetings on a regular basis; serve as a liaison among the three jurisdictional CACs, the LCBP, and State Departments and Agencies. Build and improve connection between CACs and stakeholder groups within their respective jurisdictions. Meet regularly with staff from State environmental departments or agencies to build and strengthen connections and communication channels with the CACs. Organize annual meeting with membership from all three CAC groups to network and identify common annual priorities.

- **Community and Stakeholder Outreach.** Attend regular meetings for Champlain basin-focused watershed groups and other organizations. Share messaging and priorities from CACs to stakeholders, and bring key points and concerns back to CACs for discussion. Work with other LCBP outreach staff to develop outreach materials in digital and print form to promote work of CACs to stakeholder groups.
- **Workgroups.** In collaboration with the Education and Outreach Coordinator, provide support for LCBP-driven workgroups, including Healthy Soils, Champlain Basin Education Initiative, and others as needed. Support may include coordination of meeting logistics, agenda development, speaker recruitment, and follow-up work as outcomes from meetings.
- **Programmatic topics.** Provide regular updates on CAC activities to LCBP staff, and to LCBP committees as needed. Develop CAC-driven materials for outreach work. Assist the LCBP Education and Outreach Coordinator and LCBP E&O team in the implementation of LCBP outreach tasks and oversight of selected contracts, including evaluating deliverables, budgets, and workplans. Organize outreach workshops in coordination with the CACs to address water quality challenges in the Lake Champlain Basin. Develop and deliver effective presentations at stakeholder forums and other LCBP meetings. Serve on professional and advisory committees on behalf of LCBP.
- **Website.** Support development and content management of the LCBP website, including content for the CACs on www.lcbp.org. Provide data interpretation and assist with the development of infographics and other content for the State of the Lake Report and related LCBP outreach documents.
- Other duties as assigned.

The satisfactory performance of the above duties and responsibilities requires the incumbent to have a thorough understanding of NEIWPC's and LCBP's programs, organization, and policies, to exercise initiative and resourcefulness in complicated situations, and to be able to work effectively with state and federal contacts at both staff top management levels, and with varied professional backgrounds. The ability to organize workload and perform tasks in an accurate, conclusive, and timely manner is required.

SUPERVISORY CONTROLS: Incumbent operates with substantial independence of action subject to the supervision of the LCBP Education and Outreach Coordinator who provides instruction on work, guidance and review of completed work to assure accuracy and adherence to established policy and requirements. Independently performs tasks in an efficient and effective manner, using good judgment. LCBP Education and Outreach Coordinator evaluates job performance in consultation with NEIWPC

Lowell, Mass. staff.

The incumbent will rely on their ability, expertise, and commitment to excellence. The incumbent also will build NEIWPCC's culture which focuses on honesty, ethical behavior, personal integrity, respect for others, transparency, hard work, and collaborative teamwork.

RECOMMENDED QUALIFICATIONS:

Education

A bachelor's degree, in natural science, physical geography, or natural resource management is preferred.

Experience

Applicants must have at least (A) three years of full-time or equivalent part-time, technical or professional experience in the above-mentioned fields, of which (B) at least one year must have been in a professional capacity and (C) any equivalent combination of the required experience and the following substitutions.

Substitutions

- I. An associate's degree with a major in any of the field listed above may be substituted for a maximum of one year of the required (A) experience.*
- II. A bachelor's degree with a major in any of the fields above may be substituted for a maximum of one year of the required (A) experience.*
- III. A graduate degree with a major in any of the fields above may be substituted for a maximum of three years of the required (A) experience and one year of the required (B) experience.*

*Education towards such a degree will be prorated on the basis of proportion of the requirements actually completed.

Personal Characteristics

- Think and act in a broad collaborative style. Care deeply about the health and impact of all of NEIWPCC and the Lake Champlain Basin Program
- Comfortable in group settings and welcomes collaboration
- Naturally prone to action with a focus toward continuous improvement
- Diplomatic and welcoming in their approach to others
- Able to manage change and articulate the need for that change
- Comfortable working in a very collaborative environment and oriented toward getting things done; able to bring perspectives and ideas to the table while remaining open to perspectives and ideas from others. Open to lively debates
- Inclusive and interested in helping others
- Capable of fostering and deserving of trust
- Accept responsibility and is accountable for results
- Ability to write concisely, to express thoughts clearly and to develop ideas in logical sequence

Special Knowledge and Skills

- Excellent verbal and written communication skills
- Excellent grammar and editing skills
- Knowledge of or experience with Lake Champlain Basin resource issues

- Experience working with communities or stakeholder groups, coordinating meetings and event planning
- Familiarity with technical data and systematic approaches to quality assurance and quality control
- Ability to work both independently and as part of a team
- Ability to establish and maintain effective working relationships within diverse groups
- Excellent computer skills, particularly word processing, spreadsheet and data analysis software, and geographic information systems
- Ability to exercise considerable tact and diplomacy
- Experience with or interest in technical data communication and infographic design
- Fluency or proficiency in French is desirable but not necessary

Requirements

Duties will be performed largely in an office setting, but may include outdoor field assignments, and will require travel to various meetings locations in Vermont, New York and Quebec, for which a private means of transportation and a valid passport or smart-license is required.

Attendance in the NEIWPC Lowell office for a one-day orientation during the first two weeks of employment and at the annual All-Staff Meeting is mandatory.

**2019 New York EPA Grant Application
Lake Champlain Basin Program
Workplan Narrative**

**New York Coordination Program
and
Long-Term Water Quality & Biological Monitoring Project**

LCBP Task Area Framework for Implementing the Plan

1. OBJECTIVE: *Describe the principal and subordinate objectives of the program/project. This should include relevant physical, economic, social, financial, institutional, or other problems requiring solution. Supporting documents from concerned interests other than the applicant may be used. Any relevant data based on planning studies should be included and footnoted.*

The New York Lake Champlain Coordinator provides coordination among New York State Agency staff and watershed partners to implement the Lake Champlain Basin Management Plan, *Opportunities for Action* as well as, the NY Lake Champlain Phosphorus TMDL. The coordinator works with the Program Manager, the Vermont Lake Champlain Basin Coordinator, EPA staff, other Agency staff, and local interest groups to facilitate the smooth operation of the Program. This position works as a member of the LCBP Staff Team.

2. RESULTS OR THE BENEFITS EXPECTED: *Identify results and/or benefits accruing from the program/project. [Important: include all primary and secondary benefits accruing to the Recipient, the population served, the public served, the public and the environment in general]; for example: compliance with water quality standards or ambient air quality standards, advancements in the state of the art of pollution abatement, etc.*

Sustain and improve the effectiveness and efficiency of the Lake Champlain Basin Program by facilitating communication and the sharing of information and resources among the many partners working on implementing *Opportunities for Action*. Collaboration and coordination among the many environmental organizations working across the Basin is essential toward achieving the *Opportunities for Action* objectives of reducing phosphorus loadings, reducing toxic and other contaminants, preventing introduction and spread of non-native species, protecting native fish and wildlife, protecting and enhancing habitat, preserving and interpreting cultural and historic resources, and restoring and preserving ecosystem health.

3. APPROACH: *A detailed work plan must be provided which includes:*

a) How the program/project will be accomplished. Factors should be cited which might accelerate or decelerate the work activities. Describe why the approach has been taken rather than alternatives. Include a description of any unusual features of the project such as design or technological innovations, reductions in cost or time or extraordinary social and community involvement.

The New York Coordinator will perform the following:

- Provide ongoing support to the NYSDEC Region 5 Director and other Regional Senior staff (Environmental Quality, and Natural Resources), for ongoing and emerging LCBP issues. Develop regional updates, briefings, and other materials as needed for the Regional Director in preparation for Executive Committee and Steering Committee meetings. Prepare briefing materials for the Regional Director, Central Office Executive Staff, and the Governor's Office on key Lake Champlain Basin Program current and emerging issues and initiatives as necessary. Participate in routine and spontaneous conference calls and meetings with Central Office staff to provide updates and status of LCBP activities and issues. Attend LCBP Executive Committee and Steering Committee meetings and provide logistical support to the Regional Director as necessary. Provide direct input to the Executive and Steering Committees as requested.
- Provide ongoing coordination and collaboration with all NYSDEC program areas including Water, Fisheries, Wildlife, Lands & Forests, and Operations on issues of mutual or program specific importance within the framework of the LCBP and the management plan *Opportunities for Action*.
- Coordinate collection and compilation of materials and data from all NYSDEC program areas, as well as, partner organizations throughout the NY basin that feed into updates and tasks associated with the LCBP management plan, *Opportunities for Action* and periodic releases of the *State of the Lake*.
- Supervise and direct the activities of a LCBP funded agronomy conservation specialist staff position assigned to the DEC with funding approved in the LCBP budget through December 2019. This position is a New England Interstate Water Pollution Control Commission staff position established with LCBP grant funds managed through NEIWPC. The objectives of the position are to directly engage the agricultural community and associated partners in developing and implementing BMPs intended to reduce phosphorus export while sustaining farm viability. The focus continues to be on demonstrating under-utilized practices having potential to be effective in the Lake Champlain Basin.
- Serve as a DEC primary contact for communication, review, and input on the feasibility study for a physical separation barrier on the Champlain Canal to prevent spread of aquatic invasive species between the Lake Champlain and

Hudson River Basins. This effort is underway via a contract between NEIWPCC and the USACOE along with a workplan agreement with NYS Canals.

- Continue to stay abreast of policy, programs, and regulations being developed in Vermont intended to facilitate implementation of the 2016 Vermont TMDL. Prepare briefing materials for NY Executive as questions or needs arise and coordinate NY participation in discussions concerning the interaction of the Vermont and New York TMDLs.
- Provide education and outreach to local partners and municipalities on the NY TMDL and its requirements/expectations for the various contributing land sectors (point sources, agricultural lands, developed lands, and forested lands) within each of the phosphorus management lake segments. Seek opportunities for phosphorus reduction initiatives and assist partners and municipalities with logistics of implementation.
- Coordinate activities of the NY Citizens Advisory Committee. Support the mission of the CAC in informing and involving the public on issues concerning the lake and the basin, providing a forum for interest groups and local governments, and maintaining a link to state legislative bodies and local groups. Guide the CAC with updates to its Strategic Plan and the development of annual priorities summaries suitable for public distribution.
- Actively participate as a member of the Lake Champlain Basin Program Technical Advisory Committee. Monthly meetings, as well as, special workgroup meetings are routinely conducted by the TAC. The TAC is responsible for reviewing current and emerging technical issues, advising the Steering and Executive Committees on technical priorities, and developing technical priorities for annual budget consideration. The TAC oversees and facilitates technical projects.
 - Actively participate on TAC sub-committees and workgroups. Includes participation and NY partner coordination on:
 - Aquatic Invasive Species Spread Prevention Workgroup
 - Rapid Response Task Force
 - Adaptive Management / Structured Decision Making Workgroup
 - Water Chestnut Workgroup
 - Toxics Workgroup
 - Grant Review sub-committees
- Actively participate with inter-basin efforts on aquatic invasive species spread prevention:

- Participate with Adirondack Park partners in supporting boat launch steward programs, and monitoring for aquatic invasive species
 - Participate in the on-going development and implementation of a Park-wide boat inspection and decontamination program effort,
 - Coordinate aquatic invasive species spread prevention training for DEC campground staff
-
- Remain engaged with the LCBP Education and Outreach Advisory Committee and relay information on emerging educational and outreach opportunities and issues among the LCBP and key constituent groups throughout the NY portion of the basin. Identify programmatic actions necessary to address E&O issues and participate in drafting task descriptions and funding recommendations. Participate on Education and Outreach local grants review committees.
 - Remain engaged with the Heritage Area Partnership Advisory Committee and the implementation of the Champlain Valley National Heritage Partnership Management Plan approved in 2011 by the National Park Service. Provide linkages to local groups in areas of history, interpretation, archeology, cultural heritage, recreation, and tourism. Understand and relay information on emerging heritage resource management issues and the necessary actions to address issues. Participate in drafting task descriptions and funding recommendations. Seek opportunities to expand the wayside exhibit trail across the NY Basin.
 - Participate in various capacities in the LCBP local implementation grants programs. May include participating in the preparation of Requests for Proposals for LCBP local grants and participating on review and scoring committees for various LCBP local grant programs including Pollution Prevention, Habitat protection, Aquatic Invasive Species Management, Education and Outreach, Organization Support, and Enhanced BMP grants.
 - Participate in LCBP development of Technical projects concepts and priorities and the development of Request for Pre-Proposals soliciting project ideas for possible consideration for funding. Review and score pre-proposals received and concur on a sub-set to submit full proposals. Review and score full proposals received as part of the TAC process to recommend technical projects to the Steering Committee for funding and inclusion in the annual budget.
 - Develop annual workplans and agreements and approve payment packages for NY water chestnut harvesting efforts in South Lake Champlain. Through a DEC contract utilizing Environmental Protection Funds, the Town of Dresden conducts mechanical harvesting utilizing NYS Canal Corporation owned harvesting equipment. The Project involves field surveys to identify harvesting locations, developing a workplan with the Town of Dresden, tracking progress, documenting harvested areas, reviewing and approving requests for

reimbursement. Project also involves securing necessary permits from DEC and the Adirondack Park Agency for harvesting and land disposal of water chestnut. Coordinate with the State of Vermont and the Lake Champlain Basin Program Aquatic Invasive Species Coordinator in scoping out an annual plan of work. Funding for the NY portion of this effort has been secured through the 2019 field season.

- Collaborate with partners across the Basin with Harmful Algae Bloom monitoring and reporting. Key partners include LCBP, NY and VT Departments of Health, NY and VT Departments of Environmental Conservation, NYS Office of Parks, Recreation, and Historic Preservation, Local Health Departments, and Lake Champlain Committee.
- Engage partners in both NY and VT with continued efforts to improve South Lake Champlain. Efforts include developing plans and actions to address issues of specific concern to the southern end of Lake Champlain. Priority areas include phosphorus loading and aquatic invasive species.
- Actively engage LCB partners and stakeholders in developing and implementing nonpoint source pollution reduction projects that fit within the framework, and work toward the goals, of a recently completed Non-Point Source Pollution Subwatershed Assessment and Management Plan (2018) that was funded with a NY Department of State grant. Prioritized rankings of reduction opportunities outlined in this plan will help guide NY TMDL implementation efforts.
- Collaborate with DEC Central Office staff and other Basin partners in advancing a preliminary Phosphorus Reduction Plan developed for the NY Basin toward a full Watershed Implementation Plan for the NY portion of the Lake Champlain Basin. This plan will further describe strategies and implementation opportunities and actions necessary to meet phosphorus loading criteria established in the Lake Champlain TMDL. **Note that this activity may be supplanted with a full TMDL revision to be initiated by 2026 per Bi-State/EPA MOU.**
- Work with local partners and municipalities to identify watershed restoration projects that may be eligible for consideration under the WRDA Section 542 Program. Identify project partners, provide guidance on process and submitting letters of request, and facilitate interaction with USACOE and LCBP.
- Seek opportunities to align LCBP tasks and objectives with NYSDEC pollutant reduction programs and funding opportunities such as the Water Quality Improvement Project Program and the newly released Harmful Algae Bloom Action Plans for Lake Champlain and Lake George. Assist local municipalities and watershed groups and other eligible partners with funding opportunities and grant applications. Review/score applications, review/approve workplans,

- conduct field visits, review/approve project reports and payment requests. as appropriate. Coordinate with LCBP on accounting for projects within the context of *Opportunities for Action*.
- Actively participate (as time allows) in meetings and activities of local watershed groups throughout the NY portion of the Basin.
 - Participate in meetings of the Champlain Watershed Improvement Coalition of NY; this group, made up of the 5 county Soil & Water Conservation Districts, the 5 county Water Quality Coordinating Committees and the Lake Champlain-Lake George Regional Planning Board, is actively engaged in on-the-ground implementation efforts that help to deliver on the goals and objectives of *Opportunities for Action*.
 - Participate in meetings of the County Water Quality Coordinating Committees, local county wide groups involving county, municipal, agency, and academic personnel, lake and river groups, and lay citizens working together to discuss problems and identify solutions to local water quality problems. Assist with seeking out grant opportunities for nonpoint source pollution abatement projects.
 - Participate in meetings of various lake and river associations as invited to discuss issues of mutual interest and provide linkages to opportunities for collaboration with the LCBP.
 - Continue to be engaged with the Technical Advisory Committees for the Ausable River and Boquet River Associations on developing and implementing Watershed Management Plans funded through NYS Department of State grants. Seek opportunities for start-up groups in other river basins.
 - Assist local municipalities and watershed groups on opportunities for nonpoint source pollution abatement grants through the NYSDEC water quality improvement grants program. Review and rank applications, review and approve project workplans, inspect on-going projects, and review payment packages.
 - Coordinate NY Basin efforts in a new initiative involving wastewater treatment facility optimization. This project will provide professional technical assistance to operators of municipal wastewater treatment plants to seek opportunities to optimize existing infrastructure and operation processes. The goal is to improve treatment efficiencies, reduce the occurrence of problems, save money, and improve effluent quality without the need for large capital investments. A primary anticipated outcome is improved phosphorus removal by making

adjustments to process control and facility operation. Work elements associated with this task will include:

- Assist with development of an RFP seeking professional services in wastewater treatment facility operations.
 - Identify wastewater treatment facilities that would most likely benefit from this outreach and coordinate with facility operators to gauge interest and engage their participation. Provide input to the contractor on potential facility candidates for this work.
 - Provide pertinent background information and data on wastewater facilities that may support the contractor's work.
 - Participate in on-site visits with wastewater facility operators and the contractor as needed.
 - Review and comment on interim and final reports developed by the contractor. Identify opportunities to expand this effort to additional facilities. Track operational data as a measure of project benefit.
- Coordinate the NY activities associated with the joint NY-VT Long Term Water Quality and Biological Monitoring Project:
 - Collaborate with Vermont DEC staff on necessary updates to the 5-year workplan and quality assurance project plan (expires 3/31/2023) for the LTM project. Inform the TAC of any changes to the project. Minor changes that do not alter the project design, objectives, intended uses of the data, nor the statistical continuity of the data generally will not require a full examination of the workplan/QAPP. All changes are noted in a cover memo provided to the project distribution list, including EPA project coordinators.
 - Collaborate with Vermont DEC staff on preparation of annual project accomplishments. Conduct joint annual presentations of LTM project accomplishments to the TAC for approval. Provide QAQC oversight of LTM field operations and data generated in NY to ensure project validity and to ensure data is formatted for integration into a joint NY-VT database. Ensure cumulative project data is accessible to the public via a Vermont DEC website.
 - Develop, implement, and oversee an MOU between DEC and SUNY Plattsburgh for work associated with the LTM project. Develop annual workplans for work conducted under the MOU. The Lake Champlain Research Institute at SUNY Plattsburgh conducts the field work associated with the lake monitoring activities at the 15 LTM lake stations and 9 tributary

stations. The LTM zooplankton samples are analyzed at the LCRI-SUNY facility. Zooplankton are identified to species, density information is developed, and samples are screened for invasive species. With the confirmation of spiny water flea, *Bythotrephes longimanus*, in 2014 and fishhook water flea, *Cercopagis pengoi*, in 2018 in the Lake, additional zooplankton sampling is continued as part of the program to determine dispersal and density information and assess ecological impacts. Beginning with the 2017 field season, analyses of phytoplankton samples collected as part of the program was switched from Vermont to the LCRI-SUNY facility. This will continue into the future. The workplan and MOU have been amended to reflect this additional work. Water chemistry samples are delivered to Vermont DEC staff for analyses at the VT Agriculture and Environmental Laboratory.

- Review monthly operating data from NY TMDL wastewater treatment facilities for flow and effluent total phosphorus. Input data into a master tracking database designed to develop loading data for each facility and lake segment. Prepare annual summary reports on NY wastewater treatment facility phosphorus loadings as a component of the LTM project and for TMDL tracking purposes. All data is incorporated into a joint NY-VT-Quebec database of wastewater treatment plant phosphorus loadings throughout the Champlain Basin.
- Update and maintain NYSDEC Standard Operating Procedure manual for conducting lake and tributary sample collection specific to the Lake Champlain LTM project.
- Update and maintain the NY Lake Champlain Basin Standard Operating Procedure manual for small watercraft operation, including towing, launching/retrieving, operation, safety, and maintenance. This is specific to DEC trailered boat assigned to the LCB, but could be easily adapted to additional watercraft.
- Coordinate any special sampling activities in the Champlain Canal System for screening and early detection of aquatic invasive species.
- Present summaries on the activities associated with the LTM program to various constituent groups as requested including the Champlain Watershed Improvement Coalition of NY, and the NYCAC.

b) Describe all facilities presently available for use in carrying out the project.

Office space, vehicles, program support and all other necessary facilities and materials are provided by the NYS DEC.

c) List, by name, all non-Federal sources of funds and facilities to be utilized in the performance of the proposed program/project.

See the attached budget.

d) List, in chronological order, a schedule of accomplishments, progress, or milestones that are anticipated over the length of the program/project.

LCBP Staff meetings - Monthly
Technical Advisory Committee - Monthly
Executive Committee – Bi-monthly or as needed
NY Citizens Advisory Committee - Quarterly
Champlain Watershed Coalition of NY - Monthly
Track NY tasks/activities associated with goals and objectives of LCBP Management Plans and the P TMDL – Monthly
Manage NY water chestnut harvesting operations (monthly: spring through fall)
Steering Committee – Quarterly (or more as necessary)
Participation with the 5 County Water Quality Coordinating Committees – Quarterly.
Oversight of contracts associated with Local Implementation Grants - Quarterly
Oversight of NYDEC Water Quality Improvement Program grants/contracts – Quarterly
Oversight of LCLGRP 604b grant - Quarterly
Aquatic Invasive Species subcommittee, including the Rapid Response Task Force and Spread Prevention groups – Quarterly (Additional tasks dependent on new AIS discoveries.)
Adaptive Management/Structured Decision Making – Quarterly (irregular scheduling)
State of the Lake Report Development – Latest release summer 2018.
Opportunities for Action – Latest release 2017.
NY Watershed Implementation Plan, Transition from Phosphorus Reduction Plan Final Draft completed in summer 2014. Progress on Phase II WIP ongoing and/or impending TMDL revision by 2026 per Bi-State/EPA MOU.
Oversight of the Long-term monitoring project – Monthly (more frequent as necessary)

e) Indicate by whom each element of the work plan will be carried out including supporting agencies, consultants and contractors.

The New York Lake Champlain Coordinator will perform and/or oversee all the various elements of the work plan.

SUNY Plattsburgh, working through an MOU with the DEC will perform the field sampling elements associated with the Long-Term Water Quality and Biological Monitoring Project. A scope of work for this project is included.

f) Describe sampling and data collections procedures analytical methods, and methods for evaluating the results and successes of the project.

The New York Coordinator participates in regular staff meetings with the LCBP Program Manager where coordination work is a regular topic of discussion. Additionally, the New York coordinator is subject to regular program evaluations by the regional director of NYSDEC.

Collaboration with SUNY Plattsburgh, Vermont DEC, and the Technical Advisory Committee will be conducted to assess results and successes of the Long-Term Water Quality and Biological Monitoring component.

Collaboration with the LCBP Program Manager and Technical Coordinator and NEIWPC will be conducted to assess results and successes of the Agronomist position.

4. GENERAL PROGRAM/PROJECT INFORMATION:

a) Identify the kinds of data to be collected (and maintained) and discuss the criteria to be used to evaluate the results and successes of the project.

The position is heavily focused on maintaining coordination and collaboration among organizations and does not generally include the direct responsibility for data collection or analysis except for the Long-Term Water Quality and Biological Monitoring Project discussed below. The New York Coordinator participates in regular staff meetings with the LCBP Program Manager where coordination work is a regular topic of discussion. Additionally, the New York coordinator is subject to regular program evaluations by the regional director of NYS DEC.

Oversight of the Long-Term Water Quality and Biological Monitoring Project will follow the procedures outlined in the Workplan/Quality Assurance Project Plan and Standard Operating Procedures specifically developed for the project.

5. QUALITY ASSURANCE REQUIREMENT: *If your program/project involves environmentally related measurements or data generation, you...*

QAPP for the Long-Term Water Quality and Biological Monitoring Project is included with this workplan.

**Vermont Department of Environmental Conservation (VTDEC) Workplan
for Lake Champlain Basin Program (LCBP) Vermont Coordination (VTC, 1 FTE)
and Grant Management (GM, 1 FTE) and Grant Administration (GA, 0.8 FTE)
October 1, 2019 – September 30, 2020**

Staff Responsible: Bethany Sargent

Problem Definition: Phosphorus levels in Lake Champlain and major tributaries exceed US Environmental Protection Agency (USEPA) defined phosphorus criteria

The VTC activities implements the LCBP 2017 management plan “Opportunities for Action” (OFA) by carrying out activities to achieve Goal III (Thriving Communities) and Goal IV (Informed and Involved Public), and by coordinating state and USEPA funded projects that address Task Areas I.A.1.a, I.A.1.c, I.A.2.a, I.A.2.b, I.A.2.c, I.B.1.b, I.B.1.c, I.C., I.C.2.d., I.C.3.b, I.C.3.c, II.A.1.b, II.A.1.d, II.B.1.a., II.B.1.c., II.C.1.a, and II.C.3.a.

Goal #1: Provide effective coordination between VTDEC, LCBP, and USEPA

OBJECTIVES	STRATEGY	OUTCOMES	TARGET TIMEFRAME (matches outputs)	OUTPUTS
<p>1-1. In close cooperation with the VTDEC business office, assist with the management of VTDEC grant application processes to federal partners for LCBP targeted funds (through New England Interstate Water Pollution Control Commission or NEIWPCCC)</p>	<p>Guide development of relevant FFY20 VTDEC/LCBP task descriptions and workplans, in coordination with the LCBP Director and Technical Coordinator, Clean Water Initiative Program (CWIP), USEPA, and NEIWPCCC</p>	<p>USEPA award of LCBP funds to VTDEC for projects received</p>	<p>July – Sept. 2020</p>	<p>FFY20 Grant Application</p>
<p>1-2. Prepare and track grant agreements and contracts for relevant LCBP projects with the VTDEC business office and LCBP, including approving invoices, deliverables and semi-annual reports</p>	<p>Guide and synchronize development of relevant FFY19 project scopes of work, QAPPs, peer reviews, and RFPs in coordination with LCBP, VTDEC, USEPA, and NEIWPCCC staff</p>	<p>Technical Advisory Committee approval of VTDEC workplans and final reports for LCBP/USEPA funded technical projects; and USEPA approval of QAPPs for LCBP/USEPA funded projects</p> <p>LCBP and USEPA informed on key accomplishments and progress made during workplan timeframe</p>	<p>As needed, per project timelines</p> <p>Semiannual, ongoing</p>	<p>Grant agreements, contracts, workplans, and/or QAPPs (as needed) for VTDEC-managed projects using LCBP funds</p> <p>Semiannual progress reports for USEPA/LCBP funded State of Vermont projects</p>

1-3. Support DEC grant administration, management and agreement execution for federal and state funded Lake Champlain TMDL implementation projects	Coordinate and/or serve on grant review committees and as a project manager, assisting grantees through the grant process, tracking deliverables, and approving invoices	Projects implemented according to grants or contracts, including meeting performance measures and deliverables	Ongoing	Final performance reports for projects managed
	Manage requests for proposals process; assist with the grant review process; approve, issue, and manage grants and contracts, including processing invoices	Grants and contracts comply with state and federal policies	Ongoing	Grant agreements and/or contracts for VTDEC-managed projects using LCBP funds
Goal #1 DELIVERABLE: Semiannual progress reports (January and July 2020), Vermont Clean Water Initiative 2019 Performance Report				

Goal #2: Provide effective coordination among Vermont Citizens Advisory Committee (VTCAC), VTDEC and LCBP				
OBJECTIVES	STRATEGY	OUTCOMES	TARGET TIMEFRAME (matches outputs)	OUTPUTS
2-1. Prepare annual Lake Champlain Action Plan on behalf of VTCAC for the Vermont Legislature, Governor, VTDEC, Vermont Agency of Agriculture, Food and Markets, and LCBP	Plan annual legislative day to release action plan to Vermont Legislature, including arranging meetings and/or testimony with multiple legislative committees and leaders	Governor, legislative committees, LCBP, and VTDEC are informed of VTCAC Lake Champlain Action Plan	January – March 2020	Annual Action Plan online and in print
			January – March 2020	Legislative Day agenda
2-2. Develop annual priority themes and then coordinate targeted meetings	Speakers, minutes, agendas, notices organized around priority themes for up to 6 meetings each year	VTCAC and the public are informed on Lake Champlain issues	Ongoing	4 – 6 public meetings annually, including annual VTCAC summer retreat
Goal #2 DELIVERABLE: 2020 Lake Champlain Annual Action Plan (February 2020)				

Goal #3: Increase knowledge of Lake Champlain TMDL Phase 1 and Phase 2 Implementation Plans and Restoration Progress

OBJECTIVES	STRATEGY	OUTCOMES	TARGET TIMEFRAME (matches outputs)	OUTPUTS
<p>3-1. Clean Water Performance Report and supporting materials are accessible and effective at communicating progress toward meeting TMDL implementation milestones and phosphorus targets</p>	<p>Report on progress in state, federal and partner activities associated with the restoration of Lake Champlain</p>	<p>Targeted audiences are informed about Lake Champlain’s restoration plan and the progress made in its implementation</p>	<p>January 2020</p>	<p>Vermont Clean Water Initiative 2019 Performance Report</p>
<p>Goal #3 DELIVERABLE: Vermont Clean Water Initiative 2019 Performance Report (January 2020)</p>				

Budget Summary

	EPA Grant	State Match
Personnel ¹	\$ 71,760	
Fringe ²	\$ 50,034	
Travel		
Equipment		
Supplies	\$ 2,306	
Contractual		
Other		
DEC CAP ³	\$ 20,051	
BGS Property Mgmt	\$ 1,506	
Fleet Lease Payments & Gas	\$ 2,109	
Telephone & Computer	\$ 1,404	
Other Services (printing, insurance, postage, etc.)	\$ 15	
DEC Lake Champlain Pollution Control Grants		\$ 53,809
Indirect ⁴	\$ 12,242	
Total	\$ 161,427	\$ 53,809

¹ The VTC budget Includes costs associated with 0.1 FTE that will manage and administer federal and state-funded Lake Champlain TMDL implementation projects, including supporting grant processes and providing technical project oversight, tracking, and accounting. The personnel costs for the 1.7 FTEs executing portions of the workplan above are included in the Using GSI (Green Stormwater Infrastructure) and Other Technologies to Reduce Combined Sewer Overflows (CSOs) project budget.

² Our past fringe calculations were based on a fixed average across all staff. Our current SF424 budget template uses actual fringe that is charged by DEC employees.

³ The DEC CAP is a department wide cost allocation plan that includes the proportionate share of the following costs: Commissioner’s office, Compliance and Enforcement, Legal division, Environmental Assistance office, Geology and Administration and Innovation services. The calculation is \$27,752 per FTE and is allocated based on the proportionate share of salary dollars charged to each program.

⁴ Indirect rate dropped from 24.51% to 17.06%

State Match for USEPA Award

DEC will be using State-funded Pollution Control Grants as state match for this award. Projects eligible for Pollution Control Grants include combined sewer overflow elimination/separation, removal of direct sewer connections to waters of the state, sludge handling and septage receiving facilities, and reduction of phosphorus discharges. Specific projects included as match will be in the Lake Champlain Basin of Vermont, and funds will be expended during the award period.

FFY2020 Technical Core Projects

Task ID	Project	Requested Support
Core 1	Enhanced BMP	\$ 1,000,000
Core 2	AIS Rapid Response	\$ 59,000
Core 3	Boat Launch Stewards	\$ 209,324
Core 4	NY Agronomy	\$ 160,000
Core 5	Water Chestnut management	\$ 150,000
Core 6	Cyanobacteria monitoring	\$ 105,000
Core 7	Long-Term Monitoring Program	\$ 544,478
	Total	\$ 2,227,802

**Lake Champlain Basin Program
FY20 Conceptual Technical Task Description**

TITLE: FY20 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 FY19 budget for \$633,349.

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

Total requested funds in 2017: \$994,878

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

2019 RFP released on August 15, closes October 3.

**Lake Champlain Basin Program
FY20 Conceptual Technical Task Description**

TITLE: FY20 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

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.

REQUEST AMOUNT: \$50,000 US dollars

TOTAL COST WITH NEIWPCC INDIRECT: \$59,000

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 FY20 Conceptual Technical Task Description

TITLE: FY20 Lake Champlain Boat Launch Steward (Watercraft Inspection and Decontamination) Program

ONE SENTENCE ABSTRACT: LCBP/NEIWPCC will hire 15 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; 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 fourteenth season in 2020 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*. 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 2020. 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: \$189,324 US dollars

An additional amount of \$16k for OBVBM to support boat launch stewards = \$205,324

TOTAL COST WITH NEIWPCC INDIRECT: \$209,324 (with indirect on OBVBM contract)

*other if NEI charges indirect on the \$189,324

BRIEF BUDGET EXPLANATION: Program funding supports up to 17 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 from four days a week to 5 days a week, and increasing the number of stewards to 15. 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.

DRAFT

Lake Champlain Basin Program FY20 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, Fred Dunlap

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 NEIWPC 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:

Lake Champlain Basin Program FY20 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:

Vermont Department of Environmental Conservation (VTDEC)
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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 2020, 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 2020. 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 and in 2019 we have attempted to better define these methods. In the future and in areas that have access, drones will be used to survey sporadic water chestnut populations in several large, complex sites to focus the efforts of hand harvesters prior to in-the-water efforts. We will also set up a variety of sites with varying degrees of harvesting efforts to monitor long-term impacts of harvesting and to track yearly differences in areas that are harvested as well as those that are currently not harvested. 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 2020 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:

2020 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 \$150,000 from the Lake Champlain Basin Program. We also anticipate receiving \$450,000 from the U.S. Army Corps of Engineers and \$30,000 from the U.S. Fish and Wildlife Service to assist in funding this initiative.

TOTAL COST WITH NEIWPC INDIRECT: Total Project Cost = \$150,000 (No NEIWPC Indirect costs)

BRIEF BUDGET EXPLANATION: The request for \$150,000 for FFY20 will also provide funds for the field season of 2021 so that VTDEC can align the work with the funding appropriation (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), composting of collected spoils (~\$7,000), access to southern Lake Champlain (~\$20,000), 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.

Workplan Timeline	FFY18	FFY19	FFY20	FFY21	Total
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
Total		\$90,000	\$150,000	\$90,000	

FY2020 LCBP Updated Conceptual Budget Technical Task Description

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 2021 year and field season.

POINT OF CONTACT:

Lake Champlain Committee
Lori Fisher, Executive Director
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DESCRIPTION OF PROJECT SCOPE, OUTPUTS, OUTCOMES, METHODS, AND TIMEFRAME:

Project Scope and Methods - The Lake Champlain Watershed Cyanobacteria Monitoring Program is focused on addressing Opportunity for Action (OFA) tasks 5.4 and 5.5 to “implement actions to monitor, investigate the causes of, and reduce the frequency of blue-green algae toxins in the Lake” and to “identify public health risks associated with toxic substances (including blue-green algae toxins) and communicate risk to the public through advisories from the three jurisdictions”

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 are also made publicly available via the online cyanobacteria data tracker map housed at VDH, through social media postings 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 outreach materials to help people identify, report and avoid blooms.

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:

Items highlighted in grey are additions to the budget

- Online and hard copy training and educational materials about cyanobacteria.
- Database of monitor information with user names, passwords, site numbers, site locations and other

reporting details.

- 20 - 30 training sessions for volunteer monitors, recreational and health personnel throughout the watershed held during the spring, early summer and fall.
- Monitor “tool kit” package to include T-shirt and/or hat, gloves, thermometers, jars for water testing, a detailed monitor manual to aid in their reporting which will include written protocols and guidance for assessing conditions with color photo examples of cyanobacteria and cyanobacteria look-alikes. While we will also provide online materials, the expanded toolkit will provide visuals and guidance in print to aid monitors in the field and serve as a reference manual when they’re not online.
- Vetting of cyanobacteria monitoring reports.
- Weekend vetting of cyanobacteria monitoring reports.
- Data for the cyanobacteria tracker map.
- Contribute to the database outlining conditions, toxin concentrations and cyanobacteria composition.
- Cyanobacteria fliers and display caddies for lakeshore communities with tips on how to recognize, avoid and report cyanobacteria. The fliers will be tailored to New York and Vermont audiences.
- Informational mailings about cyanobacteria to residents in select NY and VT communities. We will endeavor to mail to several thousand households and rotate through different communities over the years.
- Six community information sessions hosted during bloom season (three in NY, three in VT). While our spring and early summer training sessions will be open to the public we will organize special information sessions to capitalize on increased interest when blooms start showing up in the area and will endeavor to schedule them within a week or so of bloom outbreaks when public interest is high.
- Weekly email updates to monitors during the training and monitoring season and an end of season follow-up survey to help inform the upcoming season and retain monitors. The weekly emails will include photos of conditions monitors are encountering during the week, along with tips to improve reporting accuracy. We will endeavor to reiterate a lot of the material covered in training throughout the season in these weekly emails with clear visuals. The weekly emails will also include user names, passwords, site numbers and detailed reporting instructions and guidance.
- Ongoing weekly contact with monitors via email, phone, and/or in person to support monitors and ensure reporting accuracy.
- Cyanobacteria primer for media. We will produce an email primer for media providing background on cyanobacteria to help guide their reporting during the season.
- Weekly email 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 and reporting 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.

REQUEST AMOUNT: \$105,000

TOTAL COST WITH NEIWPC INDIRECT: \$105,000

BRIEF BUDGET EXPLANATION:

The budget has been increased from the 2020 levels to better offset higher staffing and program expenses due to a longer season and the need for weekend coverage, produce a hard copy detailed toolkit for monitors, provide ongoing support to monitors, host community information sessions and distribute cyanobacteria educational materials more broadly.

Budget Expense	Task 1 Monitoring program development, coordination	Task 2 Implement monitoring program	Task 3 Project assessment, reporting and future planning	LCBP Request Total & Budget Percentage
Personnel	\$16,000	\$40,000	\$14,000	\$ 70,000 (67%)
Total fringe	\$ 1,600	\$ 4,000	\$ 1,400	\$ 7,000 (7%)
Supplies	\$ 5,000	\$ 4,800	\$ 0	\$ 9,800 (9%)
Communications	\$ 800	\$ 4,000	\$ 400	\$ 5,200 (5%)
Insurance	\$ 3,500	\$ 0	\$ 0	\$ 3,500 (3%)
Travel	\$ 350	\$ 2,000	\$ 150	\$ 2,500 (2%)
Indirect	\$ 1,600	\$ 4,000	\$ 1,400	\$ 7,000 (7%)
Totals:	\$28,850	\$58,800	\$17,350	\$105,000

Personnel includes staffing to review previous seasons, gain monitor feedback, review research techniques and information; develop and update program hard copy and online materials; produce and distribute monitor toolkit; produce monitor and user names and passwords for the tracker prior to the monitoring season; produce and distribute informational fliers and mailings for communities; produce separate weekly emails for monitors and interested citizens; produce a cyanobacteria primer for media; recruit, train and support the monitors; run cyanobacteria information sessions and “pop-up” information sessions for the general public; produce related education and outreach materials; and analyze and assess results with partners.

The increased budget will help offset personnel costs for preparing for and delivering the monitoring program to cover a greater portion of LCC’s staffing expenses. It will also allow us to provide coverage during the weekends when partner agencies don’t have anyone on call. In the 2018 season, 9.3% of the cyanobacteria monitoring reports came in on the weekend. In 2019, it’s been running at about 11%. During the Labor Day weekend 25 reports were received over the weekend all vetted by LCC staff. An increased personnel budget will help us offset this expense.

Supplies includes gloves, thermometers, jars, printed documents, monitor guidance documents, and other monitor toolkit materials; informational fliers and flier holders for lakeshore communities; along with training venue expenses, monitor T-shirts or hats, and Abraxis strips and materials to support field staff.

Communications include database, phone, email, website and mailing 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

Lake Champlain Basin Program FFY20 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:

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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 - database that will serve to establish and interpret the relationship between water quality, the biological community, and lake environmental health; data to support the Champlain TMDL;
 - Outcomes – documentation of successes of OFA strategies/goals, identification of areas requiring additional effort to achieve goals, 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 – 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, support early detection efforts around Vermont, 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,
 - 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

REQUEST AMOUNT: \$249,989

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		\$115,969		0	
Travel		0		0	
Supplies		\$3000		0	
Equipment		0		0	
Contractual		\$6000		185,000	
Laboratory Services		\$75,489		0	
Administrative Direct		\$33,771		0	
Indirect Charges		\$15,760		0	
TOTAL	\$ 154,000	\$249,989	\$359,478	\$185,000	\$544,478

Lake Champlain Basin Program FY20 Conceptual Technical Task Description

TITLE: Upgrades for the Long-term Monitoring Program

ONE SENTENCE ABSTRACT: This project would provide 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 current 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.

This draft task description describes options for the Executive Committee to consider on March 24, 2020.

Upgrades would have two main components:

1. in-lake monitoring on one or more equipped buoy(s), and
2. paired tributary monitoring using an in-stream sensor array.

Buoy option 1: Support SUNY Plattsburgh data buoys (physical parameters only)

SUNY Plattsburgh currently owns and maintains two data buoys that measure water temperature at several depths, and weather parameters (wind speed, wind direction, air temperature, atmospheric pressure, and solar radiation). They are currently located near Valcour Island and in the South Main Lake region. Funding for these data buoys expires at the end of the 2020 field season, and there is an opportunity to support these operations and incorporate them into the LTMP. The LTMP team and TAC would decide on future buoy locations, with a preference for existing LTMP sites. The South Main Lake data buoy could be relocated to Mallett's Bay to be paired with a tributary monitoring station. This option would provide data for physical parameters only, not water quality parameters.

Deploy and maintain two data buoys as presently equipped: \$5,000
Labor, data management, and associated costs: \$5,000 (could be less in future years)
Total to support existing two data buoys for one year: \$10,000

Buoy option 2: Purchase a data buoy and supporting sensors (physical and chemical parameters)

This option would support purchasing one larger 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
- Phycoyanin (and/or Chlorophyll as options)

Capital investment: \$36,000

Annual costs:

Labor: \$5,000

Ten-year replacement, cell plan, incidentals: \$5,740

Total cost: \$46,755 (See attached spreadsheet for more budget details)

Tributary monitoring:

A monitoring station could be installed on any Lake Champlain tributary, and could 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

Capital investment: \$16,450

Annual costs:

Labor: \$5,000

Ten-year replacement, cell plan, incidentals: \$2,828

Total cost: \$24,278 (See attached spreadsheet for more budget details)

REQUEST AMOUNT: \$71,000 (includes deploying a new equipped buoy and tributary monitoring system. Expected annual cost in future years: \$18,600)

LCBP FFY20 Line Item Requests

Project #	Requesting Organization(s)	Short Project Title	Funding Request
1	NY/VT DEC	Forest P Load Allocation	\$200,000
2	NY/VT DEC	Private & Forest Roads	\$200,000
3	NY/VT DEC	WWTF Optimization – Year 2	\$260,000
4	VT Assoc. Cons. Districts/NRCS-VT	VT Agricultural Water Quality Coordination	\$45,000
5	NY DEC	Ag Engineering Capacity in NY	\$25,000

Lake Champlain Basin Program FY20 Conceptual Technical Task Description

TITLE: Developing Assessment and Planning Tools, and Piloting Implementation for the Forest Load Allocation of the Lake Champlain TMDLs

ONE SENTENCE ABSTRACT: This project would assist Vermont and New York 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:

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New York State Department of Environmental Conservation (NYSDEC)
Lauren Townley, Chief, Watershed Section A
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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. On the New York side of the watershed, forested land contributes 15% of the total phosphorus loading to Lake Champlain and the Ausable River watershed in New York has the highest amount of forest cover (92%) and contributes the greatest mean annual phosphorus load to the New York Portion of Lake Champlain (41 mt/year). Similarly, in Vermont, the Missisquoi Bay lake segment is 62% forested land use and contributes the greatest mean annual phosphorus load in from the Vermont portion of the Lake Champlain Basin (170 mt/year). Because the TMDL calls for the greatest phosphorus load reductions from forestland in the South Lake and Missisquoi sub-basins, these would be prioritized for piloting implementation in New York, and targeted implementation in Vermont that complements water quality protections conferred by the Accepted Management Practices for Logging Jobs in Vermont (VT AMPs).

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

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 managed¹ 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 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.

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.
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. Design and implementation of forestland BMPs 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: October 1, 2020 – September 30, 2022

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

TOTAL COST WITH NEIWPC INDIRECT: \$200,000

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 SFY20, but additional resources will be required for further assessment, piloting methodology, and implementation. Once Phase 1 tasks are complete, funds will be directed to Phase 2, design and implementation of forestland BMPs.

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

Lake Champlain Basin Program FY20 Conceptual Technical Task Description

TITLE: Adapting Municipal Roads General Permit (MRGP) Tools and Methods to Map, Inventory and Assess Rural, Private, and Forest Roads in Vermont and New York, and Pilot BMP Implementation at Priority Sites

ONE SENTENCE ABSTRACT: The methods and tools developed to map, assess and inventory Vermont's Municipal Roads would be adapted and piloted for Rural, Private, and State Forest Roads and access infrastructure in Vermont and New York, to prioritize implementation of road best management practices outside of municipal roads to improve water quality.

POINTS OF CONTACT:

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New York State Department of Environmental Conservation (NYSDEC)
Lauren Townley, Chief, Watershed Section A
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DESCRIPTION OF PROJECT SCOPE, OUTPUTS, OUTCOMES, METHODS, AND TIMEFRAME:

VTDEC's Municipal Roads General Permit (MRGP) program is a streamlined process for inventorying municipal roads and prioritizing road improvement projects that simultaneously meet MRGP road standards and improve water quality. This relatively simple framework can be adopted to incentivize road best management practices (BMPs) outside of the MRGP in New York and Vermont. New York state would adopt this framework in partnership with Soil and Water Conservation Districts and municipalities, building upon the existing Rural Road Active Management Program (RRAMP). Vermont would adopt this framework on roads not covered by the MRGP, which represent 30% of Vermont road miles, including state forest roads and private roads. 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 lands¹. In addition, road best management practices improve road resilience to large storm events.

In Vermont, work is underway to adapt the MRGP inventory methodology and tools, including developing a field application and companion database to gather and store inventory data, for additional road networks not under state regulatory jurisdiction. In New York, the Champlain Watershed Improvement Coalition of New York has been working with local municipalities to implement the RRAMP on municipal owned roadways. Through a competitive bid process in each state, this project would support adapting and piloting these methods and tools for inventorying state forest roads and access areas and secondarily, private roads, especially along lake shorelands². Funds will also support implementation of road BMPs at priority sites in the Lake Champlain Basin.

¹ Based on State of Vermont data, the mean cost effectiveness (funding amount in dollars/(total phosphorus reduction in kilograms per year/anticipated lifespan in years)) for implementation of roads projects is \$38,916 compared to \$92,304 for implementation of stormwater projects.

² Work would only be conducted on private roads if there is a responsible party identified for operations and maintenance. See related FY20 TMDL project proposal regarding Lake Carmi private road network.

Once piloted, Vermont anticipates making these methods, tools, and inventory data available to Clean Water Service Providers to incentivize the implementation of road improvement practices on state forest and priority private road networks. New York would leverage on the state's nonpoint source planning grant and the Water Quality Improvement Non-Agricultural Nonpoint Source grant programs to incentivize adoption of these standards and practices by local governments and non-profit organizations.

Project outputs include use of a mobile application and related database to support private, rural and forest road erosion inventories, piloting of those inventories in one or more pilot watersheds, and 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.

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.

Timeframe: October 1, 2020 – September 30, 2022

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

TOTAL COST WITH NEIWPCC INDIRECT: \$200,000

BRIEF BUDGET EXPLANATION: Funds will be utilized first for application and database development, as needed, then directed to mapping, inventory and assessment of the rural, private and forest roads network in the Basin. Any remaining funding will be directed to piloting tools and implementation. The cost effectiveness of roads BMPs on hydrologically connected road miles to fully comply³ with the MRGP:

- Cost of road inventories per mile: \$287⁴
- Cost of improvements per linear mile: \$68,490⁵
- Cost per TP load reduction unit (kg/yr): \$2,000⁶

³ Includes both change from not meeting to fully meeting standards and partially meeting to fully meeting standards.

⁴ Based on VTrans-funded inventories and performance measures reported voluntarily by Regional Planning Commissions.

⁵ Based on SFY 2018 Municipal Roads Grants-In-Aid results

⁶ Based on Vermont Clean Water Initiative 2019 Performance Report

**Lake Champlain Basin Program
FY20 Conceptual Technical Task Description**

TITLE: Municipal Wastewater Treatment Facility (WWTF) Optimization to Reduce Effluent Phosphorus

ONE SENTENCE ABSTRACT: Optimization of internal process control, operations, and practices at municipal wastewater treatment facilities can help to improve facility efficiencies, lower phosphorus loads, and reduce costs associated with other phosphorus control strategies.

POINTS OF CONTACT:

Vermont Department of Environmental Conservation (VTDEC)

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New York State Department of Environmental Conservation (NYSDEC)

Lauren Townley, Chief, Watershed Section A

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

Phosphorus reduction at wastewater treatment facilities is an integral component of the phosphorus TMDLs for both New York and Vermont. Currently, most phosphorus reduction at WWTFs in the Basin is achieved through some means of chemical addition, settling, and solids removal. In some instances, chemical addition alone may not provide sufficient reduction to meet lower permit limits resulting from new TMDL requirements. In other facilities, phosphorus treatment infrastructure may be inadequate or the capacity to employ chemical addition may be limited. Moreover, aging infrastructure challenges the ability of wastewater treatment facilities to adequately and consistently treat to levels required to meet effluent limits. The ability to meet either lower permit limits or existing limits may require capital improvements at WWTFs which can be prohibitively expensive, especially for small rural communities. With the high costs associated with capital upgrades coupled with reductions in available funding, it is increasingly important that wastewater treatment facility operators look toward improving internal efficiencies and innovative solutions to help them achieve treatment necessary to meet permit limits. Wastewater treatment facility optimization offers the potential for innovative solutions to reduce effluent phosphorus loads by adjusting internal operations and process control within the existing treatment works with the added benefit in the potential for reduced operation and maintenance costs.

In addition to WWTF optimization, there is a significant need for ongoing technical assistance in such areas as operator certification renewal, treatment, biological process control, laboratory procedures, collection systems, infiltration and inflow identification, and industrial pretreatment. This technical assistance is important for many of the WWTFs in the rural communities to maintain the gain achieved through optimization in both Vermont and New York.

With the 2016 Vermont Lake Champlain Phosphorus TMDL Phase 1 Implementation Plan taking effect and Vermont WWTFs being issued new National Pollutant Discharge Elimination System (NPDES) permits with decreased phosphorus limits (Table 1a. Vermont Phase 1 TMDL Plan Summary of Point Source Commitments, Section A., WWTFs), Vermont contracted Vermont Rural Water Association (VRWA) in 2017 to assist WWTFs with technical support. VRWA has very successfully provided both one-on-one and collaborative technical support including innovative approaches to phosphorus reductions and helping municipalities draft phosphorus optimization plans.

They have conducted numerous training sessions and roundtable events promoting collaboration and shared knowledge between municipalities.

New York has initiated the process to modify the WWTFs' SPDES permits to add a phosphorus concentration limitation to further reduce phosphorus discharge from these facilities. In the outreach to these WWTFs, NYSDEC has informed these facilities about the anticipated availability of WWTF treatment process optimization and technical support.

This is the second of three years that Vermont and New York propose this project be added to line item technical tasks. In 2018, the Steering Committee approved this project for three years of funding. At the end of the third year, the project will be evaluated to determine if it should be included as an on-going task for future funding.

This project will be contracted through separate Requests for Proposals facilitated by each state. Tasks will include working directly with wastewater treatment facility operators to evaluate existing treatment processes, examine individual components and determine phosphorus handling efficiencies, implement process control adjustments, and evaluate results. There are approximately 60 WWTFs in VT and approximately 30 WWTFs in NY in the Lake Champlain basin. Funding will be utilized to work with these facilities in a prioritized fashion on optimization plans and assessment of those plans. Technical assistance will be available to facilities on an as needed basis.

This proposal is aligned with Lake Champlain Basin Program's *Opportunities for Action* (OFA) through the following objectives, strategies and task areas:

- I. Objective I.A: Improve scientific knowledge and understanding of water quality conditions and trends in Lake Champlain and the effectiveness of management approaches
 - a. Strategy I.A.1: Fund and Interpret Management-oriented Research
 - i. Task Area I.A.1.b: Support innovative management approaches likely to achieve results.
 - ii. Task Area I.A.1.c: Increase understanding of factors affecting BMP performance and efficiency.
- II. 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.a: Support training programs to WWTFs for Asset Management.

Expected outputs include informing managers of innovative phosphorus reduction opportunities and demonstrating tools and techniques to reduce phosphorus loading from wastewater treatment facilities. Outcomes will include acceptance of new management approaches as well as utilization of improved optimization strategies to further reduce phosphorus loadings from wastewater treatment facilities. An annual report will be provided to document project activities, outputs, and outcomes, including the estimated phosphorus reductions achieved through implementation of the optimization plans.

Timeframe: October 1, 2020 – September 30, 2021

REQUEST AMOUNT: \$260,000 (\$150,000 – VT, \$110,000 – NY)

TOTAL COST WITH NEIWPCC INDIRECT: \$260,000

BRIEF BUDGET EXPLANATION:

It is expected the largest share of the budget will be for direct professional engineering services. Other costs will include those associated with collecting data necessary to recommend and evaluate process adjustments, developing written operating procedures to assist the operator with optimization,

conducting education and outreach to the governing boards and wastewater treatment facility staff, and preparing guidance documents that may be shared with other similar facilities in the basin.

TECHNICAL REFERENCES CITED:

Case Studies on Implementing Low-Cost Modifications to Improve Nutrient Reduction at Wastewater Treatment Plants. August 2015. USEPA

https://www.epa.gov/sites/production/files/2015-08/documents/case_studies_on_implementing_low-cost_modification_to_improve_potw_nutrient_reduction-combined_508_-_august.pdf

Aging Wastewater Treatment Infrastructure – NYS Dept of Environmental Conservation

<http://www.dec.ny.gov/chemical/69446.html>

WWTF Optimization for Phosphorus Removal – Minnesota Pollution Control Agency

<https://www.pca.state.mn.us/sites/default/files/wq-wwtp9-03.pdf>

Weaver, Grant PE. Implementing & Optimizing Phosphorus Removal at Activated Sludge Wastewater Treatment Plants

<http://www.cleanwaterops.com/wp-content/uploads/2014/03/TechWebinar02-P-Removal-at-AS-wwtps-Feb-2014.pdf>

Lake Champlain Basin Program FY20 Conceptual Technical Task Description

TITLE: Accelerating Agricultural Phosphorus Reduction in the Vermont Lake Champlain Basin through Strengthened Inter-Agency Collaboration

ONE SENTENCE ABSTRACT: The Vermont Agricultural Water Quality Partnership (VAWQP) will accelerate agricultural phosphorus reduction in the Vermont Lake Champlain Basin through facilitated inter-agency collaboration and coordination of research, learning, planning, outreach, education, training, innovation, technical assistance, best management practice implementation and communications at the state and local levels.

POINT OF CONTACT: State Natural Resources Conservation Council (NRCC)
Jill Arace, Executive Director, Vermont Association of Conservation Districts (VACD, acting a fiscal agent for NRCC), PO Box 566, Waitsfield, VT 05673, (802) 495-5162, jill.arace@vacd.org

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

The Vermont Agricultural Water Quality Partnership (VAWQP) is a group of nine governmental and quasi-governmental agencies in Vermont that have committed to information-sharing, coordination and collaboration in order to accelerate implementation of programs to protect and improve Vermont's water quality and wildlife habitats. The members of the VAWQP have signed a Memorandum of Understanding and include: USDA Natural Resources Conservation Service (NRCS), USDA Farm Service Agency (FSA), US Fish and Wildlife Service (USFWS), Lake Champlain Basin Program (LCBP), VT Agency of Agriculture, Food and Markets (VAAF), VT Agency of Natural Resources Department of Environmental Conservation (VANR-DEC), University of Vermont Extension (UVM), Vermont Housing and Conservation Board (VHCB), and VT Natural Resources Conservation Districts through the VT Association of Conservation Districts (VACD).

The VAWQP has existed since 2012 and grew out of the recognized need for inter-agency information-sharing, coordination and collaboration in order to accelerate water quality project implementation, increase the efficiency and effectiveness of technical and financial assistance efforts, and provide the best service experience possible for farmers and landowners. In recent years, the VAWQP has met every month or two in meetings hosted by VAAF, held an annual training for all partner staff with logistical support from VACD, and periodically held regional meetings among partner staff at the local and regional levels with coordination support from VAAF, VANR-DEC, VACD and the State Natural Resources Conservation Council (NRCC). To date, VAWQP agencies have contributed mostly their own staff time, plus a small amount of funding, to support these activities.

As a result of the new Lake Champlain TMDL, the passage of the Vermont Clean Water Act, the creation of the Vermont Clean Water Fund, and USDA's and EPA's investment of significant additional funding to address Vermont's water quality concerns, the VAWQP identified the need to ramp up and strengthen its efforts. In 2019, with support from VAAF, the VAWQP undertook an in-depth strategic planning process and identified the following goals for the next five years. (A full copy of the VAWQP Strategic Plan is available.)

1. Build a stronger collaboration among VAWQP agencies and organizations (Champions: NRCC, VACD);
2. Identify, connect, share and coordinate research and learning happening across VAWQP partners and others (Champions: UVM Extension, LCBP);

3. Utilize research and learning to evaluate, adjust, and innovate on specific practices and tools across the partners (Champion: NRCS);
4. Ensure training of staff across partner organizations (Champion: VAAF);
5. Create consistent, coherent, meaningful messages for partner staff, farmers, and the public (Champion: NRCS); and
6. Align Basin planning and prioritization efforts and ensure effectiveness of jointly targeted watershed strategies (Champion: VANR-DEC).

While VAWQP leaders committed their organizations and staff to be the “champions” of specific goals, it was also determined during the strategic planning process that dedicated VAWQP staff resources will be essential the success of this effort. Leaders identified the need for a central coordinator who will promote and support implementation of the VAWQP strategic plan, identify and catalyze opportunities for synergies among agencies, assist partners in addressing concerns that are hindrances to collaboration or bottlenecks to water quality program technical assistance and implementation, organize meetings and trainings, facilitate information flow among partner agencies at the central and regional levels, and represent the partnership to external audiences. A position description for the coordinator was developed (also available) and, after some discussion, it was decided to house the position with the State Natural Resources Conservation Council (NRCC), the oversight agency of Vermont’s Natural Resources Conservation Districts.

Each VAWQP partner has been asked to contribute towards the costs of this coordination facilitation effort, and some are able to contribute more than others. This is the purpose of this request.

The outcome of this effort will be improved water quality, reduced phosphorus loading, and improved wildlife habitats in the Vermont Lake Champlain Basin and beyond. Other results will include increased efficiency and cost effectiveness of technical and financial assistance services, improved VAWQP staff understanding of available water quality assistance programs, improved farmer understanding of and access to these programs, and improved public understanding of the efforts of farmers, landowners, and VAWQP partners to improve water quality and wildlife habitats.

REQUEST AMOUNT: \$45,000 (\$15,000 per year for three years)

TOTAL COST WITH NEIWPC INDIRECT (19.5%): \$53,775

BRIEF BUDGET EXPLANATION: The total budget for this activity is \$375,00 -- \$125,000 per year for three years starting October 1, 2019 as summarized below.

VAWQP Annual Budget Summary	
Personnel	58,656
Fringe	20,678
Travel	1,500
Supplies/Printing	1,000
Contractual	25,000
Other	5,779
Subtotal	112,613
Indirect Costs	12,387
Total	125,000

The VAWQP is asking each member partner organization to contribute towards the expense of this effort. To date (9/6/2019), USDA NRCS has committed \$150,000 and VACD has committed \$15,000. NRCC has a proposal pending with VAAF to support the regional coordination portion of this activity. Personnel, fringe, travel, supplies and office expense will support VAWQP coordination at the state level. Contractual will support facilitation of coordination at the local and regional levels. Indirect costs are calculated at 11%.

**Lake Champlain Basin Program
FY20 Conceptual Technical Task Description**

TITLE: Increases Agricultural Engineering Capacity for BMP Implementation in New York Lake Champlain Basin

ONE SENTENCE ABSTRACT: This project will increase the private sector agricultural engineering capacity in the New York Lake Champlain Basin (LCBP) by providing two one-day training sessions, power point presentations, and design reviews for private sector engineering designs. The presentation will be available as PDF download on the Cornell Pro-Dairy website.

POINTS OF CONTACT:

Koon Tang, New York State Department of Environmental Conservation
(518) 402-8238
Koon.tang@dec.ny.gov

Brain SteinMuller, New York State Department of Agriculture and Markets
(518) 457-3738
brian.steinmuller@agriculture.ny.gov.

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

Excess phosphorous nonpoint runoff is negatively impacting Lake Champlain. One source of this runoff comes from animal agriculture within the New York Lake Champlain watershed. To reduce the potential pollution farms are encouraged to accelerate the installation and maintenance of Best Management Practices (BMPs). These BMPs should be installed and maintained according to the NY-NRCS Standards. The planning, design, and construction oversight of these BMPs requires additional personnel who have both the engineering skills, but also knowledge of the agricultural impact of the BMPs. In the past the demand for these services has been met by public agencies at no cost to the farm. Private sector engineering firms are now needed to provide these services to more quickly impact the water quality goals. The objective of this project is to help the private sector to effectively and efficiently deliver the engineering services to the agricultural community.

While New York continues its efforts to reduce nutrient runoff from farms. One of the major challenges echoed by all the Soil & Water Conservation Districts in the Lake Champlain Basin is the lack of agricultural engineering capacity to timely advance many agricultural best management practices that need engineering design and certification. Many agricultural best management practices that have obtained state funding are slow to be implemented due to the lack of agricultural engineering services. There are many instances that state and federal NRCS funds are returned due to the length of time to acquire the needed engineering services to complete the project.

To facilitate the private sector engineering services for BMP implementation this project proposes to offer two one-day training sessions divided into class time in the morning and farm visits in the afternoon. The BMP topics presented will focus primarily on manure storage, manure transfer, barnyard runoff control and milking center waste management. Program opportunities from NRCS and NYS DAM as well as practical private agricultural engineering operations will be included. The farm visits focused on the priority BMPs on farms that have successfully installed and maintained them as well as farms that yet need to install them.

An identical project was selected by the Lake Champlain Basin Program Steering Committee in 2016 for two (2) training sessions in Vermont Lake Champlain Basin. It was well received and participants rated both in class and in field sessions highly and requested more information on both the programs for cost sharing and specific engineering practices. The private sector engineers in Vermont are now better prepared to help farms implement BMPs to help reduce nutrient loading to the Lake Champlain

Timeframe: October 1, 2020 – September 30, 2021

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.2: Fund Programs to Reduce Nutrient Inputs from Agriculture

Task Area I.C.2.d: Help farmers meet Clean Water regulations with targeted cost-share support for small farms

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 Provide financial and technical assistance to support practices that help protect water quality.

REQUEST AMOUNT: \$25,00

TOTAL COST WITH NEIWPC INDIRECT: \$25,000

BRIEF BUDGET EXPLANATION: New York will work with the LCBP and NEIWPC to procure a contract with Cornell Pro-Dairy to deliver one training session (in class and in field) for the engineering firms in New York Lake Champlain Basin. New York State Department of Environmental Conservation and Department of Agriculture and Markets will be an integral part of the training and outreach to the engineering firms in New York. New York NRCS will also be part of the effort to ensure the training meets NRCS standards.

TECHNICAL REFERENCES CITED:

PRO-DAIRY Increases Agricultural Engineering Capacity for BMP Implementation Final Project Report, July 10, 2017 By C.A. Gooch1 and P.E. Wright

FFY20 Vermont TMDL IMPLEMENTATION PROJECT PRIORITY LIST

Project #	Project	Cost
1	Deer Brook Restoration Project	\$ 400,000
2	Winooski Headwaters Targeted Intervention	\$ 825,000
3	Lake Carmi Watershed Restoration	\$ 600,000
4	Green Schools Initiative to Support Stormwater Compliance	\$ 1,765,000
5	Priority Wetland Acquisition, Restoration, and Conservation to Improve Water Quality in Vermont's Lake Champlain Basin	\$ 1,650,000
6	Enhanced Agricultural Practice Implementation	\$ 1,150,000
TOTAL		\$ 6,390,000

**Lake Champlain Basin Program
FY20 Conceptual Technical Task Description**

TITLE: Deer Brook Restoration Project

ONE SENTENCE ABSTRACT: Implementation of stormwater practices and gully stabilization to restore Deer Brook.

POINT OF CONTACT:

Vermont Department of Environmental Conservation (VTDEC)
Danielle Owczarski,
Watershed Coordinator
danielle.owczarski@vermont.gov
802-490-6176

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

The Deer Brook, in Milton and Georgia, is impaired due to sediment and is a significant source of phosphorus to Lake Champlain within the Lamoille River basin. There are numerous project opportunities in South Georgia Village, chief among which are the restoration of the Deer Brook Gully and related stormwater practices. In this location, stormwater flows collect together and discharge to a severely eroding gully, causing substantial amounts of sediment and phosphorus to be delivered each year to the Deer Brook. The brook is on the 2018 federal 303d list of impaired waters for sediment pollution. This project will fully address the most significant sources of sediment pollution to the brook by treating all remaining untreated stormwater sources located in the VTrans right-of-way discharging to the gully, as well as restoring the gully itself. The project elements, all in the VTrans road right-of-way will include construction of 3 gravel wetlands, construction of 2 catch basin risers, one deep sump catch basin installation and a closed drainage system upgrade; and the gully stabilization. This project is located near I-89 Exit 18 in Georgia just northeast of the intersection of Rte. 7 and Rte. 104, and is one of the highest priority projects in the Lamoille Tactical Basin Plan.

This proposal supports the Lake Champlain Basin Program *Opportunities for Action* (OFA) objective 1.C. to reduce nutrient loading through strategies:

I.c.1: *Fund Research and Watershed Interventions to Reduce Streambank Nutrient Inputs*

- I.C.1.a: Fund projects to improve bank stability in critical areas of the watershed.
- ** I.C.1.b: Fund programs to protect or enhance river corridors for nutrient reduction and flood resilience; and

I.C.3. *Fund Programs to Reduce Nutrient Inputs from Developed Lands under the following task areas:*

- 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.
- 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.

Outputs:

- Construction of 3 gravel wetlands, 2 catch basin risers, one deep sump catch basin installation and a closed drainage system upgrade; and the gully stabilization.
- Over the projected 50-year project lifespan, Deer Brook gully stabilization alone will result in an estimated reduction of total suspended solids load of more than 53,000 lbs./year and a reduction of the total phosphorus load by nearly 20 lbs./year.

Outcomes:

- Reduced phosphorus and sediment loading to Lamoille River and Lake Champlain Basin through restoration to Deer Brook.
- High visibility of improved stormwater and erosion practices.

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: \$400,000

TOTAL COST WITH NEIWPC INDIRECT: \$400,000 (No Indirect Cost to NEIWPC)

BRIEF BUDGET EXPLANATION:

The total LCBP TMDL implementation budget for this project is \$400,000 to support construction of stormwater practices to reduce sediment pollution including 3 gravel wetlands, 2 catch basin risers, one deep sump catch basin installation and a closed drainage system upgrade; and the gully stabilization. This compliments an additional \$800K in prior and ongoing State investment, and will complete this very high priority project.

Lake Champlain Basin Program FY20 Conceptual Technical Task Description

TITLE: Winooski Headwaters Targeted Intervention

ONE SENTENCE ABSTRACT: This project will eliminate phosphorus and sediment loading to the Winooski River and tributaries by addressing severe gully erosion, which includes direct gully remediation, and putting in place the stormwater infrastructure necessary to preclude further erosion within those gullies.

POINT OF CONTACT:

Vermont Department of Environmental Conservation (VTDEC)
Karen Bates, Watershed Coordinator
111 West Street
Essex Junction, VT 05452
802-490-6144
Karen.bates@vermont.gov

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

This Project will construct several erosion control and stormwater management projects in a headwaters of the Winooski River, including a particular high priority, longstanding, and problematic erosion site to implement a shovel-ready stormwater remediation opportunities identified in the Winooski Tactical Basin Plan; the so-called "Plainfield Gully." For the Plainfield Gully project, the Plainfield Health Center will create a step pool system for a small stream to arrest longstanding gully erosion and headcutting. This step pool system will be coupled with in-gully restoration. A second similar project in the Kingsbury Branch will implement the Moscow Woods Road Post Office Stormwater Detention and related Gully Restoration project.

In addition, funding is proposed to implement the following non-regulatory stormwater infiltration and retention projects in this same general geographic vicinity. These are highest-priority projects identified by the relevant stormwater master plan for this area: Berlin Chimney Sweep Subsurface Chamber; Berlin Fire Department Bioretention; Woodbury Elementary School and Fire Department Gravel Wetland and Subsurface Chamber; Woodbury Fire Station and Post Office Subsurface Chambers.

Opportunities for Action.

This proposal supports the Lake Champlain Basin Program *Opportunities for Action* (OFA) objective 1.C. to reduce nutrient loading through strategies:

I.c.1: *Fund Research and Watershed Interventions to Reduce Streambank Nutrient Inputs*

- I.C.1.a: Fund projects to improve bank stability in critical areas of the watershed.
- ** I.C.1.b: Fund programs to protect or enhance river corridors for nutrient reduction and flood resilience; and

I.C.3. *Fund Programs to Reduce Nutrient Inputs from Developed Lands under the following task areas:*

- 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.
- 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.

Outputs

- Construction of step pool system and in gully restoration of “Plainfield Gully”
- Construction of stormwater infrastructure and Moscow Woods gully restoration
- Implementation of additional stormwater projects including 3 subsurface chambers, bioretention, gravel wetlands, and stormwater detention/gully restoration.

Outcomes

- Anticipated outcome of 163 lbs per year total phosphorus load reduction achieved by stormwater infrastructure and in-gully restoration for the Plainfield project. Addressing the Plainfield Gully can reasonably be considered a flagship project in this town, owing to the longstanding nature of this problem.
- The remaining projects will yield up to 830 lbs/year of phosphorus, and these estimates will be improved once construction is complete.
- Improved surface water quality from reduced phosphorus and sediment loading to Winooski River and Lake Champlain Basin.

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: \$825,000

TOTAL COST WITH NEIWPC INDIRECT: \$825,000 (No Indirect Cost to NEIWPC)

BRIEF BUDGET EXPLANATION:

\$225,000 Construction of step pool system and in gully restoration of “Plainfield Gully”

\$800,000 Implementation of additional stormwater projects including subsurface chambers, bioretention, gravel wetlands, and gully restoration.

Lake Champlain Basin Program FY20 Conceptual Technical Task Description

TITLE: Lake Carmi Watershed Restoration

ONE SENTENCE ABSTRACT: This project prioritizes the reduction of phosphorus runoff to Lake Carmi from private and park road sources by leveraging an on-going FY19-funded road erosion inventory and remediation project.

POINT OF CONTACT:

Vermont Department of Environmental Conservation (VTDEC)
Karen Bates, Watershed Coordinator
111 West Street
Essex Junction, VT 05452
802-490-6144
Karen.bates@vermont.gov

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

This initiative focuses on Lake Carmi, including its largest tributary, Marsh Brook. Lake Carmi is itself impaired for phosphorus, and also feeds the headwaters of the Pike River, which drains into the heavily impaired Missisquoi Bay. A coarse calculation for data collected 2010 to 2018 indicates that Lake Carmi's outlet could deliver up to 4000 lbs / year phosphorus to the Pike River.

This initiative would build upon an FY19 LCBP-TMDL funded project to mitigate runoff from private roads; a significant source of phosphorus to Lake Carmi and the Pike River. This will aid in addressing phosphorus impairment in Lake Carmi and the Missisquoi Bay Section of Lake Champlain. The FY2019 TMDL project in the Lake Carmi Watershed funded a complete private and park road erosion inventory identifying priorities for remediation projects. That FY19 project will invest approximately ½ of its \$100K budget to construct road erosion improvements during 2020-2022. We propose to add an additional \$200K into this project to implement high-priority road remediation projects in support of Lake Carmi improvement beginning in calendar 2021, substantially reducing phosphorus runoff to the Pike River and Lake Champlain.

This proposal supports the Lake Champlain Basin Program *Opportunities for Action* (OFA) objective 1.C. to reduce nutrient loading through strategy I.C.3. to fund programs to reduce nutrient inputs from developed lands under the following task areas:

- 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.
- 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.

Outputs

Remediate priority road erosion from private and park roads within Lake Carmi watershed.

Outcomes

The Clean Water Performance Report for 2019 documents a median cost of ~\$900/lb phosphorus reduced from road erosion remediation. Using this figure, a \$200K investment could result in over

200lbs/year phosphorus reduction to the Pike River and the Missisquoi Bay Section of Lake Champlain.

Continued demonstration of the use of Private Road Erosion Inventory app as tool to prioritize mitigation efforts for eventual wider use by watershed associations across Lake Champlain Basin (see FY20 State Line Item proposal for adapting MRGP planning and implementation approaches to private and forest roads).

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: \$200,000

TOTAL COST WITH NEIWPC INDIRECT: \$200,000 (With No Indirect Cost to NEIWPC)

BRIEF BUDGET EXPLANATION:

\$200,000 Implementation of erosion mitigation measures from private and park roads.

Lake Champlain Basin Program FY20 Conceptual Technical Task Description

TITLE: Stormwater Planning, Design, and Construction of Green Stormwater Infrastructure at Public Schools and Vermont State Colleges in the Lake Champlain Basin in Vermont (Green Schools Initiative)

ONE SENTENCE ABSTRACT: This project encourages public schools and Vermont State colleges to meet the requirements of the State of Vermont's draft Stormwater General Permit 3-9050 through funding assistance for design and construction as well as integrating educational opportunities with green stormwater infrastructure implementation.

POINT OF CONTACT:

Vermont Department of Environmental Conservation (VTDEC)
Sarah Coleman
Vermont Coordinator to the Lake Champlain Basin Program
1 National Life Drive, Main 2
Montpelier, VT 05620-3522
(802) 272-1491
Sarah.coleman@vermont.gov

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

The State of Vermont's draft Stormwater General Permit 3-9050 requires sites with three or more acres of impervious surfaces to reduce phosphorus and sediment discharges from developed lands. Over 80 K-12 public schools may be affected and therefore would need to start complying with the permit requirements no later than 2023.

The objectives of this initiative are threefold: 1) to encourage early adoption of Stormwater General Permit 3-9050, 2) to provide schools and Vermont State Colleges with funding assistance for the associated regulatory requirements and 3) to encourage green stormwater practices and educational opportunities, such as an outdoor classroom.

This project would provide additional funding to the Green Schools Initiative to assist public school compliance with the state's 3-acre impervious surface stormwater general permit, by supporting design and construction of green stormwater infrastructure (GSI), which will result in reduced phosphorous loading to Lake Champlain. Federal Fiscal Year 2020 funding would expand the initiative to include the Vermont State College System, which has three college campuses in the Lake Champlain Basin: Blair Park-Community College of Vermont (CCV) campus, Castleton University, and Northern Vermont University (NVU)-Johnson State College. Three stormwater master plans are needed for these campuses, which will comprehensively identify opportunities to improve stormwater management on the campuses and include preliminary designs suitable for future funding opportunities. Already, NVU-JSC has identified a proposed modification to their existing stormwater pond to improve its performance and treat runoff from additional areas of the campus. The NVU-JSC Bentley parking lot pond has a design and cost estimate and could provide treatment for as much as half the campus and be modified to meet modern treatment standards. This project will also support design, permitting, and construction of stormwater practices for public schools in the Lake Champlain Basin.

This proposal supports the Lake Champlain Basin Program *Opportunities for Action* (OFA) objective 1.C. to reduce nutrient loading through strategy I.C.3. to fund programs to reduce nutrient inputs from developed lands under the following task areas:

- 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.
- 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.

Outputs

- Development of stormwater master plans for 3 Vermont State Colleges in the Lake Champlain Basin.
- Up to 10 public schools assessed with site plans and engineering feasibility analyses for obtainment of General Permit 3-9050.
- Construction of stormwater treatment practices to comply with General Permit 3-9050 at as many schools as practicable given the funding.

Outcomes

- Anticipated outcome of 64 kilograms per year total phosphorus load reduction achieved by stormwater best management practices, resulting in improved surface water quality. ¹ This includes the reductions from designs once they are constructed as required to comply with General Permit 3-9050, which is not anticipated in the timeframe of this workplan.
- Increased knowledge of GSI as a means to address stormwater runoff for students, teachers, and administrators.

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: \$2,161,000

TOTAL COST WITH NEIWPC INDIRECT: Total Project Cost = \$2,161,000 (No NEIWPC Indirect Cost)

BRIEF BUDGET EXPLANATION: \$1,951,154 million would be available through the RFP, with the remaining \$209,846 for personnel to support Lake Champlain TMDL implementation project management and administration. Of funds available through the RFP, estimated ~\$75,000 will support State Colleges stormwater master plans, ~\$250,000 will support bringing up to 10 public schools to 100% design and permit coverage, and the remainder will support construction of stormwater practices to comply with the permit. For the public schools, the investment of federal funds will support compliance of school districts with new stormwater requirements without adding substantial pressure to local school budgets, at a time where local school financing in Vermont is particularly challenging.

¹ Anticipated outcome of total phosphorus load reduction achieved, once all projects are constructed, treating an estimated 115 impervious acres (conservative) is estimated at 128 kg/year baseload (based on Main Lake direct drainage loading rate for developed impervious), assuming a minimum phosphorus reduction efficiency of 50% (conservative) would result in an estimated 64 kg/yr total phosphorus reduction once all projects are constructed.

Lake Champlain Basin Program FY20 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)
Jane Lazorchak
Land Acquisition Coordinator
802-505-0561
jane.lazorchak@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 (expected in late-2020). 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 FFY20 funding, FWD anticipates acquiring as much as 900 additional acres of marginal farmland whose acreage, on

average, is more than two-thirds restorable wetlands, which is expected to yield roughly 600 acres of restored wetlands within these acquisitions.

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

- Wetland acquisition projects restoring roughly 600 acres of wetlands through acquisition of 900 acres of marginal farmland comprised of 2/3 restorable wetlands completed in the Lake Champlain Basin.
- 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: \$1,650,000

TOTAL COST WITH NEIWPC INDIRECT: \$1,650,000 (No Indirect Cost to NEIWPC)

BRIEF BUDGET EXPLANATION: The total LCBP TMDL implementation budget for this project is \$1.65 million.

- VFWD Staff Capacity – \$100,000
- Contractual Services to Administer Land Acquisition Projects – \$100,000
- Land Acquisition of sites by the FWD, including, restoration design and implementation of Sites – \$1.45M

**Lake Champlain Basin Program
FFY20 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; increase implementation of field ditch floodplains; increase tile drain management implementation; and the development and implementation of innovative silage leachate treatment practices.

POINT OF CONTACT:

Mary Montour, Vermont Agency of Agriculture,
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802-461-6087

Marli Rupe, Vermont Department of
Environmental Conservation (VTDEC)

Marli.Rupe@vermont.gov

802-490-617

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

Federal NRCS support for agronomic and conservation practices will be lower in FFY20 than in prior years, due to the expiry of funding from USDA Secretary Vilsak which provided an additional \$8 million/year to the Lake Champlain Basin for the past five years. These funds complemented annually appropriated NRCS funding, and Regional Conservation Partnership Program support, both of which are on-going.

This proposed \$1.15 million funding provides the following objectives:

Increased implementation of Farm Agronomic Practices (FAP) such as, but not limited to, cover crops, reduced tillage, alternative manure incorporation, and crop rotation; and

1. Increased implementation of practices that address agricultural field drainage;
2. Development and implementation of low-cost and/or innovative barnyard/production area water quality practices

This funding will be directed to the following priorities (note: at this time, outputs will be based on **assumptions** however exact outputs will be reported as projects are completed).

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.

Agricultural Field Drainage

- Field ditch floodplains (Two-tier ditch): Two-tier ditches are agricultural field ditches that have been modified by adding benches that serve as floodplains within the channel. The vegetated benches allow for high water to rise, slow, and deposit sediment and nutrients, improving water quality and creating a more stable system that can reduce erosion and increase flood resilience.
- Tile drain water management: Tile drain water management is achieved through the use of water control structures installed at the end of tile drains, allowing for "closing off" the flow during key time periods (e.g., while spreading manure, during drought) and opening to increase field drainage during wet periods. With tile drains estimated as being a high contributor of phosphorus, especially soluble phosphorus, methods to manage this drainage are critical.

Tile drain filter implementation: As tile drainage filtration solutions research continues and as credible methods are developed, these funds would support small scale field design and implementation of systems not specifically designed for a water quality monitoring purpose.

Barnyard/production area water quality treatment practices

Examples in this category include development and implementation of several low-cost and/or innovative silage leachate systems. Silage leachate can be extremely high in phosphorus, with some tests revealing total phosphorus concentrations in excess of 20 milligrams/liter, or 100 times the concentration of modern wastewater treatment effluent. Examples are working to design alternative drainage systems that allow a better separation of groundwater from silage leachate for the life of a concrete bunker. Often the drainage system to these bunks is what becomes the point of discharge as the systems fail over time due to cracks in the bunk floors. This funding is limited to innovative projects where there is currently insufficient funding available to cover the design and implementation.

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. Estimated target outputs are indicated below but will vary based on priorities and needs, and will be reported as projects are completed:

- An additional 6,000 acres of conservation practices on agricultural fields. Conservation practices will include cover crops, reduced tillage, crop rotations, grazing management, grassed waterways, and alternative manure incorporation, all of which have proven effective in reducing phosphorus from entering Lake Champlain, and for which interest exceeds available resources.
- Installation of up to 6 ditches, covering up to 20 miles of streambank
- Installation of up to 30 water control structures in tile drain systems.
- Development and implementation of production area water quality improvement systems.

The phosphorus load reduction achieved through these activities will be estimated.

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: \$ 1,150,000

BRIEF BUDGET EXPLANATION:

1. Estimated \$750,000 to Vermont Agency of Agriculture, Food and Markets (AAFV) Farm Agronomic Practices Program between 2020 and 2022: A minimum of \$75,000 will specifically support implementation of the UVM Extension grassland manure injectors in the Lake Carmi watershed. We further propose up to \$300K to augment manure injection capacity in another high-priority watershed, such as the Rock River.
2. Estimated \$250,000 for installation of field ditch floodplains (i.e., two-tier ditch)
3. Estimated \$50,000 for tile drain management, specifically, drainage control structures. Cost of structures can range from \$300 to \$1,000 each, depending on installation locations and current status of tile.
4. Estimated \$100,000 for barnyard/production area innovative water quality system practices.

FY2019 in Review



Lake Champlain
Basin Program

**Champlain Valley
National Heritage Partnership**





INTERNATIONAL YEAR OF THE SALMON



Champlain Valley
National Heritage Partnership



FREE EVENT

October 5 | Volunteers Green
286 Bridge Street
Richmond, VT
9:30 - 3:30

Salmon Festival 2019

Celebrate the return of the salmon!

RICHMOND LIBRARY	VOLUNTEERS GREEN	AUDUBON CENTER
<p>10:30am Salmon Conservation in the Champlain River presentation</p> <p>1:00pm Free lunch Attendance of International Year of the Salmon presentation</p>	<p>9:30am - 10:30am Salmon 1 mile walk Free lunch lunch on Champlain River at Volunteers Green Limited number of spaces available - please register at volunteersgreen.com</p> <p>10:00am - 1:00pm Community and parent lunch</p> <p>12:00pm - 1:00pm Fly fishing lessons at the library</p>	<p>1:00pm Meeting of the Audubon Center Executive Council</p> <p>POST OFFICE</p> <p>1:30pm - 3:00pm 10th International Day of the Salmon being celebrated</p> <p>For more information www.internationalyearofthesalmon.org</p> <p>"Salmon is a gift"</p>

food · activities · exhibits · demonstrations

IYS Grants



LCMM: Exploring the Natural History of Lake Champlain's Salmonid Species



Kinley Gaudette

Adasyn Maskell

Darakh Mathieu

Amelia Benoit

Tickets on Sale Now!

The Year of the Salmon

a Community-Generated Movie

Monday, September 16, 2019

at the **WELDEN THEATRE**

104 North Main Street, St. Albans City, VT 05478

Seating opens at 5:30pm. Show starts at 6PM.

TICKETS \$5 EACH

After-party at Mill River Brewing directly after showing with Stars Reception and "Salmmy" Awards!

Champlain Valley National Heritage Partnership

This project would not be possible without the support of the Lake Champlain Basin Program, the Champlain Valley National Heritage Partnership, Northern Access TV, the Missisquoi National Wildlife Refuge and the talented writers, actors and videographers in the Swanton Community



Canton De Potton



La rivière Missisquoi est une rivière supracolée, elle existait avant le soulèvement des Montagnes Vertes il y a 175 millions d'années. La rivière Missisquoi à long terme est une zone de pêche productive. Pendant des milliers de siècles, la saison de pêche a été en hausse en amont du lac Champlain vers les rapides en aval des rapides Highgate au Vermont. En amont et dans les affluents l'ombre de forêts riches en ombrage, a permis de maintenir les populations de saumon. Au début des années 1800 ont décliné les populations indiennes. La truite brune, introduite d'Europe dans les années 1800 pour reconstruire la rivière déclinée, est toujours présente aujourd'hui. Grâce à des initiatives comme le programme du bassin du lac Champlain, des efforts sont faits pour restaurer la qualité de l'eau de cette rivière, les forêts riveraines, les écosystèmes et les espaces indigènes.

Soyez préparés

- Choisissez un parcours qui correspond à vos capacités et au temps de l'année.
- Portez un vêtement de flottaison individuel (VFI).
- Maitiez vous du froid, du vent et des courants.
- Apportez nourriture, eau et vêtements supplémentaires en cas de changements de température.
- Attention aux risques qui peuvent représenter les hautes eaux, les arbres tombés et les batardeaux dans le défilé. Descendez la votre embarcation et allez en reconnaissance.
- Évitez de partir seul : pagayer en petits groupes.
- Informez les autres de votre itinéraire.

Be a Responsible Paddler

- Choose an appropriate river or lake for your skill and the time of year.
- Wear a life jacket.
- Be wary of cold, wind and lightning.
- Avoid flood water and ditches for changing weather.
- Avoid hazards such as high waters, fallen trees, dams, if it doubt, get out and avoid.
- Don't paddle alone, keep your group small and together.
- Inform others of your trip plan.

Northern Forest Canoe Trail



Ce sentier fluvial relie majestueusement, les étendus et intérieux au défilé rapide tout en traversant de vastes forêts, des terres cultivées et des villages. Partez à la découverte du Nord-Est.

The Northern Forest Canoe Trail connects quiet meadows, expansive lakes and swiftly flowing rivers while traversing deep forests, working farms and village centers. Discover by water the diverse landscapes and communities of the Northeast.

Le sentier canotable Northern Forest Canoe Trail emprunte la rivière Missisquoi le long de la frontière Canado-Américaine. Pendant des milliers d'années, cette rivière a servi de moyen de transport, donnant accès aux territoires de chasse et de pêche des hautes terres tout en offrant une connexion au lac Memphrémagog via le Grand Portage. Aujourd'hui, les pagayeurs qui parcourent de cette voie navigable historique y trouvent des eaux paisibles parfaites pour les pagayeurs débutants et expérimentés. Le trajet entre Mansonville et le débarcadere de Glen Sutton est une agréable demi-journée soit environ 15km. Les pagayeurs intrépides peuvent continuer vers l'ouest, passer la frontière internationale et continuer jusqu'au lac Champlain: un voyage de 4-5 jours soit 114 km (71 mile) à travers les montagnes vertes. Des paysages magnifiques et variés vous y attendent. Certains pagayeurs appelé (through paddlers) choisissent de remonter la rivière Missisquoi dans le cadre d'une expédition de plus de 1300 km à travers la forêt du nord-est des Etats-Unis. Partez à l'aventure, grande ou petite!

The Northern Forest Canoe Trail follows the Missisquoi River in its journey along the international border. For thousands of years, the river has served as a means of travel, providing access to upland hunting grounds, productive fishing holes, and, via the "Grand Portage", a connection to Lake Memphrémagog.

Today, paddlers journeying along this historic waterway will find peaceful waters that can be enjoyed by both beginner and experienced paddlers. It is a pleasant half-day, 12-15 km trip from Mansonville to take-out points near Glen Sutton. Intrepid paddlers can continue west across the international border all the way to Lake Champlain: a 4-5 day, 114 km (71 mile) journey through the Northern Green Mountains – a beautiful and varied landscape. Other "thru-paddlers" chose to paddle and pole upstream, as part of a 700+ mile expedition across the Northern Forest. Enjoy your adventure, big or small!

www.NorthernForestCanoeTrail.org

Known as a superimposed river, the Missisquoi existed prior to the uplift of the Green Mountains 375 million years ago. The river has long been a productive habitat. For millennia, historic salmon used journey upstream from Lake Champlain to spawning grounds below Highgate Falls, Upperbury, and in the river's tributaries, where brook trout thrived. The arrival of dams and the clearing of the valley's forests in the late 1800s decimated these native populations. Brown trout, introduced from Europe in the 1800s to reconstruct a diminished river, are still stocked today. Thanks to partnerships with organizations like the Lake Champlain Basin Program, efforts are underway to restore the river's water quality, riparian forests, ecological health, and native species.



La Rivière Missisquoi traverse le Nord des Montagnes Vertes, qui est l'équivalent de la chaîne Cold Hollow du Vermont jusqu'au nord des monts Sutton au Québec. Ces montagnes font partie de la forêt expérimentale. L'une des forêts de feuilles les plus écologiquement intactes de la planète. En plus d'une grande diversité d'oiseaux et de mammifères, notamment des migrateurs indigènes tels que le Parula à gorge noire, la Tourterelle du Canada, la Grive des bois et la Grive de Bicknell. Les montagnes abritent une vaste variété de mammifères, et ont permis à des espèces telles que l'ours noir, l'orignal et le lynx et le bobcat d'habiter.

Des organisations telles que la Réseau naturelle des Montagnes Vertes (la plus grande zone écologique protégée au Québec) et Cold Hollow au Canada travaillent pour assurer que ces forêts soit exploitées selon une économie forestière résiliente et qu'elles demeurent intactes pour les générations à venir.

The Missisquoi cuts through the Northern Green Mountains, which stretch from Vermont's Cold Hollow range south to Quebec's Sutton Mountains. These mountains are part of the Northern Forest, one of the most ecologically intact, broadleaf forests on the planet. In the summer, a diverse assemblage of birds breed here, including neotropical migrants such as the Black-throated Blue Warbler, Canada Warbler, Wood Thrush, and Black-throated Thrush. The mountains are home to a variety of mammals, providing room for species such as black bear, moose, bobcat, and fisher to roam.

Organizations such as the Water Valley Land and Trust, Nature Conservancy of Canada, and Cold Hollow in Canada are working to ensure these forests and a resilient forest base economy remains intact for generations to come.

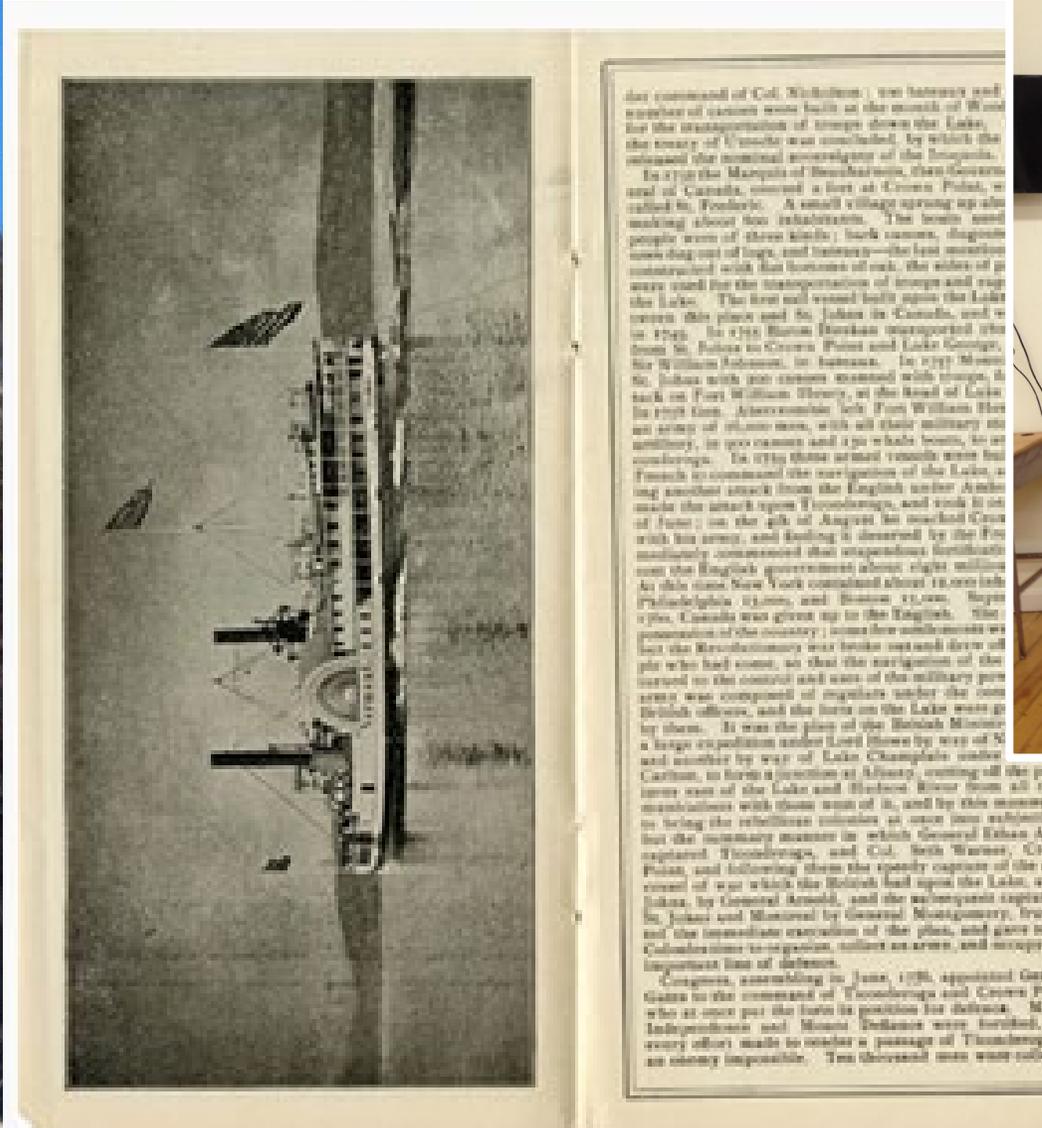
Northern Forest Canoe Trail: Gateway to the Missisquoi

Swanton Arts Council: "Year of the Salmon" – A Community Generated Movie

2019 Internships



Champlain Valley
National Heritage Partnership



2020 Women's Suffrage

1920 - 2020

- 2018 CVNHP International Summit, Burlington
- April 2019 LCBP awards seven CVNHP Interpretive Theme Grants
- May 17, 2019 Women's Suffrage Meeting at the LCMM
- 2019 CVNHP International Summit, Venise-en-Quebec
- Champlain Valley Partnership Committee and five geographic subcommittees are collaborating to mark 2020 commemoration

Québec's Extended Fight



During the First World War was a controversial issue in Canada, as shown in this 1917 Memorial poster. By granting federal suffrage to women, the Canadian and their men's wives and mothers might support the war effort.

was one of the more progressive territories for women under British rule. The Constitutional Act of 1791 allowed propertyed women to constitutional oversight" granting limited suffrage to women: not King. Some historians believe this was in response to the 1848 Seneca tion that started the women's rights movement in the United States.

Women were part of a global movement toward suffrage in the early used their important roles in World War I, held hospitals and on the in leverage to attain federal suffrage in 1918. In Québec, however, it could vote for members of the Canadian parliament, they couldn't provincial or local elections until 1960.

entity of the public, most politicians, and the powerful Catholic Church, principal and provincial suffrage for women. Leaders like Thérèse Casgrain women perceived against this opposition. They led annual marches the Parliament Building. Missa Saint-Jean ran in the 1910 federal election "the cause". In 1916, activists collected 50,000 signatures in favor of age and sent the petition to King George V. From 1912 to 1919, 13 were supported in the Québec legislature.

In 1916, American map shows, suffrage was an unmet need for women in the right to vote and to be eligible as candidates. It was the last province to grant full voting rights to women.



A woman's suffrage in Canada was allowing women voting in the military, or had their in the "Civil War" to participate in federal elections. Here, women vote near the war in 1917.

Fort Ticonderoga Association	Pavilion Collections Project
League of Women Voters of VT	<i>Because of Women Like Her...</i>
Friends of Crown Point	Voting for our Voices: stories of women's suffrage & civil rights
LCMM	Ladies of the Lake – Women Captains on Lake Champlain
Shelburne Historical Society	Women of Shelburne: Community Builders, Past to Present
Chapman Historical Museum	Champlain Valley Suffrage Centennial Motorcade
LCMM	Planning and Preparation for the 2020 Season of <i>Lois McClure</i>



Upcoming Interpretive Themes

2021: Prohibition, Temperance & Smuggling

2022: 50th Anniversary of the 1972 Clean Water Act



  Champlain Valley National Heritage Partnership

Lake Champlain Basin Program
Conceptual Education and Outreach Task Description
FY2020 Budget
Task #1

1. **Task Title:** Developing and Implementing an Outreach Plan to Disseminate TMDL Outreach Films

2. **One-sentence abstract of task:** Short films to build knowledge of TMDLs and phosphorus will have broader impact through dissemination via a planned communications effort.

3. **Submitted by:** [Include name(s) and organization(s). *Note: the proposed task should not be specific to any one organization.*] Kris Stepenuck, UVM, Lake Champlain Sea Grant

4. **Describe the task and the specific work-product(s) or output that might result.** [Identify specific Task Areas in [Opportunities for Action](#) that this task will address. Include a brief explanation of how this project will address the OFA Task Area, what outputs might be delivered (e.g. for a summer watershed program, anticipated outputs might be delivery of 30 watershed model demonstrations and 30 field trips/citizen action opportunities with summer camp kids at XYZ locations), and what the big-picture outcome will be (e.g. a better understanding of water quality and ecosystem concepts with an opportunity for hands-on citizen action).]

A series of short films is currently being developed to help improve understanding by a targeted segment of the general public of the actions they can take to minimize the movement of phosphorus across the landscape, and the influence such action will have in their lives. Behavior change outcomes that will result are that people will make different choices in their day to day actions that result in implementation of recommended best practices to minimize P runoff. However, for these films to be most effective, an outreach plan must be developed that will allow specific targeted audiences to see these films. Passive release of the films may limit their effectiveness. Funds should be dedicated to share these films in a targeted and repeated manner to reach intended audiences (e.g., at gas station pumps, in movie theaters, at farm industry meetings, in the Legislature). An outreach plan might also include presenting the films and supporting those with a community discussion about issues raised or concepts introduced in the films to help improve people's understanding of phosphorus, its movement across the landscape, and their role in minimizing that.

5. **Please provide the estimated cost of this task, and a timeframe (# months or years).** [Please note that funding for this task will likely not be available until at least 12 months from now.] \$20,000 estimated

6. **Post-Project monitoring:** [Please provide a brief description of how the success of this program could be monitored/measured after the project is complete.]

If films are shown at events, evaluations of those could be carried out. A larger evaluation that compares general public to those audiences targeted with the outreach could be carried out at additional cost.

Lake Champlain Basin Program
Conceptual Education and Outreach Task Description
FY2020 Budget
Task #2

1. **Task Title:** Professional Development Trainings for Watershed Managers

2. **One-sentence abstract of task:** Watershed Professionals will engage in professional development trainings, increasing their ability to share scientific information and effect behavior changes.

3. **Submitted by:** [Include name(s) and organization(s). *Note: the proposed task should not be specific to any one organization.*] Kris Stepenuck, UVM, Lake Champlain Sea Grant

4. **Describe the task and the specific work-product(s) or output that might result.** [Identify specific Task Areas in [Opportunities for Action](#) that this task will address. Include a brief explanation of how this project will address the OFA Task Area, what outputs might be delivered (e.g. for a summer watershed program, anticipated outputs might be delivery of 30 watershed model demonstrations and 30 field trips/citizen action opportunities with summer camp kids at XYZ locations), and what the big-picture outcome will be (e.g. a better understanding of water quality and ecosystem concepts with an opportunity for hands-on citizen action).]

This project will ultimately address OFA objective IV.B, to build awareness through informal learning of Lake Champlain Basin issues, and objective IV.C, to facilitate changes in behavior and actions of citizens. The project will engage a cohort of approximately 25-30 watershed professionals. They will attend three professional development trainings: a one-day training focused on best practices in watershed science communications (*Water Words That Work*), a 2-day training focused on designing and implementing social marketing campaigns, and a 1.5 day training focused on designing and implementing evaluations of educational programs and social marketing efforts. As a result, watershed professionals will be better able to share technical science information with targeted audiences, design social marketing campaigns that result in behavior changes that benefit the environment, and evaluate social, environmental and economic outcomes. Each participant in the professional development series will be asked to provide a minimum of three outreach programs in which they use communications skills learned in the *Water Words That Work* training, to plan and implement one social marketing campaign, and to conduct short and longer term evaluations following guidance learned through the evaluation training. The evaluation training may be focused on development, use, and evaluation of Logic Models and/or most significant change technique (https://www.betterevaluation.org/en/plan/approach/most_significant_change).

5. **Please provide the estimated cost of this task, and a timeframe (# months or years).** [Please note that funding for this task will likely not be available until at least 12 months from now.]

Estimated costs:

Water Words That Work: \$4000

Community-based Social Marketing Training: \$8000

Evaluation Training: \$5000

Total: \$17,000

Timeframe: This series of professional development trainings, ideally for the same cohort of ~30 people, would be scheduled to take place between fall and spring, estimated to take place between November 2020 and March 2021.

6. **Post-Project monitoring:** [Please provide a brief description of how the success of this program could be monitored/measured after the project is complete.]

The project will be able to be monitored by asking participants in the trainings to complete both post training and post series of trainings evaluations, as well as by having them evaluate programs they offer as a result of having received these professional development trainings. Specifically, each participant would be asked to conduct at least three outreach events during which they utilize information learned in the Water Words That Work training, and evaluate these events as well. In addition, groups of participants would be asked to plan and carry out a social marketing campaign. It is estimated that six campaigns would be planned and carried out as a result of having offered this training to watershed professionals here in the Lake Champlain Watershed. Each social marketing campaign would be required to be evaluated by those implementing it. (Note that some longer-term outcomes may take a few years to be known based on how the campaigns are implemented and to allow time for results to take place.) In addition, each participant will be asked to plan and carry out an evaluation of a separate educational event they implement using skills learned in the evaluation training.

Lake Champlain Basin Program
Conceptual Education and Outreach Task Description
FY2020 Budget
Task #3

1. **Task Title:** Unifying stormwater technical assistance on private properties basin-wide.
2. **One-sentence abstract of task:** [Please include a brief description (20 words or less) of the anticipated outputs or deliverable for this task. This is extremely helpful for the final budget review phase in the process.]

Capitalizing on recent efforts to aggregate and share existing stormwater education and outreach tools and materials, this proposal suggests taking the next step in aligning tools and messaging and implementing an intentional and coordinated property assessment and homeowner education initiative.

3. **Submitted by:** [Include name(s) and organization(s). *Note: the proposed task should not be specific to any one organization.*]
 - Gianna Petito - Winooski Natural Resources Conservation District
 - Hilary Solomon - Poultney Mettowee Natural Resources Conservation District
 - Amanda Holland - Northwest Regional Planning Commission
 - Corrie Miller - Friends of the Mad River
 - Michele Braun - Friends of the Winooski River
 - Lyn Munno - Watersheds United Vermont
4. **Describe the task and the specific work-product(s) or output that might result.** [Identify specific Task Areas in [Opportunities for Action](#) that this task will address. Include a brief explanation of how this project will address the OFA Task Area, what outputs might be delivered (e.g. for a summer watershed program, anticipated outputs might be delivery of 30 watershed model demonstrations and 30 field trips/citizen action opportunities with summer camp kids at XYZ locations), and what the big-picture outcome will be (e.g. a better understanding of water quality and ecosystem concepts with an opportunity for hands-on citizen action).]

Numerous partners across the Lake Champlain Basin on the VT side currently perform some variance of stormwater outreach to private homeowners which has led to a diversity of messaging, site assessment tools, recommendations, and incentive structures. A recent Stormwater Outreach and Education collaborative supported by the Lake Champlain Sea Grant has identified opportunities to better strategize and coordinate stormwater technical assistance on private lands to stretch resources and amplify messaging for stronger impact. This collaborative proposes a LCBP E&O grant that would support up to 8 partners in the following tasks:

- Up to six meetings to evaluate and develop shared assessment tools, messaging, certification, monitoring and incentive structures. To be facilitated by consultant.
- Trial implementation: Each partner will reach up to 20 properties through this initiative, leading to 160 private properties assessed and educated on better practices and structures to alleviate stormwater flow and pollutant loading into Lake Champlain.

Expected outputs are as follows:

Outputs from collaborative meetings:

- Regional partnership buttressed by MOUs and shared work-plans to deliver stormwater education and technical assistance on homeowner properties.
- Consistent assessment tool and homeowner recommendations with space for respective partner logos
- Consistent messaging to minimize confusion for the lay audience
- Consistent public outreach to solicit participation → shared press release on partnership and new assistance provided to homeowners
- Shared certification plaque and follow-up monitoring/recertification so that the same contributions from different homeowners face the same accountability.
- Roadmap for other basins/regions or the state to imitate initiative
- Case studies of success

Outputs from property assessments:

- At least 160 parcels and 160 acres of private lands and roads assessed for SW impact
- 160 homeowners receiving direct technical assistance in property assessment and project design/implementation
- 50 BMPs funded/installed → 20 acres of SW run-off treated/retained on-site

Expected outcomes from this collaboration are as follows:

- Consistent messaging, certification, and follow-up will amplify the voice of stormwater work and the value to homeowners for participating. When their efforts are recognized more regionally there is a stronger social incentive to participate. Using the same terminology across partners will help with education and minimize confusion as well.
- Shared work plans, MOUs, and funding source for this assessment work will cut back on competition and allow partners to focus on respective geographies collaboratively. Leveraging a regional partnership will help incentive payments and cost-shares trickle down to smaller scale BMPs that typically get overlooked in existing funding opportunities.
- It will also ensure private homeowners across the basin receive an equivalent level of technical assistance, consistent recommendations for implementation, and consistent incentives to participate.

The proposed scope of work will address the following LCBP OFA tasks:

I.A.1.b: Support innovative management approaches likely to achieve results. Solicit new management-oriented research projects that address clean water priorities, including nutrient issues, toxic substance issues, and monitoring programs that will directly inform management or policy decisions.

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. → Green stormwater Infrastructure (GSI) projects implemented → Improved understanding of efficacy of interventions that reduce stormflows and associated nutrient loading from urban areas and increase resiliency to flood damage.

**I.C.3.c: Fund design and implementation of GSI/LID projects in critical areas. Support a grant program targeting design and installation of green stormwater infrastructure (GSI) projects in critical watersheds. → Twenty new GSI projects installed or designed (shovel-ready) in critical watersheds and twenty new projects in remaining watersheds in the Basin. → Reduced stormflows from urban areas in critical watersheds.

I.C.4.b: Support Projects to Restore and Protect Riparian Forests & Corridors. Support forestry projects that reduce nutrient loading and increase stream bank stability along riparian corridors, with priority to projects that also can manage riparian invasive species spread or protect wildlife habitat. → Five conservation easements or BMPs on riparian forest corridors that reduce nutrient loading to waterways. → Improved riparian corridor stability.

I.C.4.c: Educate and Assist Landowners to Promote Clean Water Regulations on Forested Lands. Support water quality BMP training programs associated with forested lands. → Five training workshops for water quality in forested lands targeting forest managers or landowners. → Increased implementation of best management practices and reduced pollutant load from forested lands.

5. **Please provide the estimated cost of this task, and a timeframe (# months or years).** [Please note that funding for this task will likely not be available until at least 12 months from now.]

Timeframe

Total timeframe for the project is roughly 2.5 years. We expect to spend half a year (or six months) working on the framework for the initiative, aligning messaging, tools, and executing MOUs. We would then execute property assessments and BMP installations over two field seasons.

Estimated costs

A. *Consultant-led coordination meetings* = **\$16,100**

- Six months of coordination meetings = 6 meetings X 4 hours each X 8 partners X \$50/hr billable = \$9,600
- 1 partner working in between meetings with consultant * 10 hrs of extra work * \$50/hr billable = \$500
- Consultant assistance = \$6,000

B. *Property assessments and BMP cost-sharing* = **\$93,712**

- Two years of implementation (including outreach, property assessments)= 8 partners each reach X 10 properties per year X 2 years X 2 hours per assessment + 3 hours follow up prescription x \$50/hr writing/implementation assistance = \$40,000
- Mileage = .58 X 40 miles (avg round trip) * 8 partners * 10 properties/yr * 2 yrs = \$3,712
- Cost-share/incentive payments to implement BMPs - assume \$1000 per BMP X 50 BMPs = \$50,000

C. *Grant Administration* = **\$16,472**

- Grant administration = 15% (reporting to LCBP, paying out to partners for assessments and implementation) = 0.15 * (16,100 + 93,712) = \$16,472

TOTAL = **\$126,284**

6. **Post-Project monitoring:** [Please provide a brief description of how the success of this program could be monitored/measured after the project is complete.]

Stormsmart has existing homeowner follow-up surveys to gauge effectiveness of technical assistance and whether it led to stormwater diversion. This is one of the tools that will be incorporated into a regional-based approach that can inform how we will monitor the impact of homeowner technical

assistance, BMP cost-share assistance, and certifications. Blue VT similarly has a monitoring program that affects recertification of properties and could be used as a model in these efforts.

Lake Champlain Basin Program
Conceptual Education and Outreach Task Description
FY2020 Budget
Task #4

1. **Task Title:** SOL Newspaper Insert

2. **One-sentence abstract of task:** The task will pay for the printing and distribution of a summary of the 2021 State of the Lake report to be inserted into local newspapers.

3. **Submitted by:** LCBP

4. **Describe the task and the specific work-product(s) or output that might result.**
LCBP staff will develop a four-page summary of the highlights of the 2021 State of the Lake (which will be the LCBP 30th anniversary) report. The summary will be inserted into local newspapers [once?]. The information included in the summary will be easily understood and digested by readers, and will reach thousands of people that do not receive copies of the full report. This will address Task Area IV.B.1.a of [Opportunities for Action](#). It will result in greater understanding of Lake issues.

5. **Please provide the estimated cost of this task, and a timeframe (# months or years).** \$6,000 for newspaper inserts to be distributed in summer 2021.

6. **Post-Project monitoring:** [Please provide a brief description of how the success of this program could be monitored/measured after the project is complete.]

Lake Champlain Basin Program
Conceptual Education and Outreach Task
Description FY2020 Budget
Task #5

Task Title: Increasing Capacity and Resources to Improve Shoreland Management Practices in Vermont and New York

One-sentence abstract of task: This project would increase capacity and resources offered by Vermont and New York Departments of Environmental Conservation through training and supporting Vermont Lake Wise Evaluators and updating printed and online shoreland management resources that promote nature-based practices for protecting and restoring living shorelands, which are essential for clean lakes and wildlife.

Submitted by:

Amy Picotte, VTDEC, Watershed Management Division
1 National Life Drive, Main 2
Montpelier, VT 05620
Amy.Picotte@vermont.gov

Lauren Townley, NY DEC, Bureau of Water Resource Management
625 Broadway
Albany, NY 12233
lauren.townley@ny.dec.gov

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

The Vermont Lake Wise Program offers science solutions for restoring and protecting shorelands, the most important line of defense for protecting a lake. The Lake Wise Program represents lake-friendly development practices and serves and connects hundreds of shoreland owners, contractors, native plant suppliers, and projects to improve shoreland conditions for the sake of water quality and lake ecology. The Program needs support to expand from concentrating on a dozen lake communities in the Lake Champlain Basin to better serve more lakes and shoreland clients (towns, state parks, private residences, businesses, lake associations, designers, engineers and contractors) as there is growing interest and requests for shoreland technical help. Hydrologically connected lakes in the Lake Champlain Basin will be prioritized for Lake Wise assessment.

This proposal is to train more Lake Wise Evaluators and grow voluntary Lake Wise participation along the shore while continuing to meet the needs of project logistics, such as working with trained contractors in erosion control methods or developing and updating fact sheets with biodegradable supplies. Currently, there are only two active Lake Wise Evaluators, staff from Natural Resource Conservation Districts (NRCD), who are able to work locally and respond more readily to requests for Lake Wise shoreland assistance. Training more NRCD and Regional Planning Commission staff in the Lake Champlain Basin and other water resource specialist as local Lake Wise Evaluators is an important step in maintaining and growing the Vermont Lake Wise Program and ultimately protecting water quality.

Cultural shifts from lawn to restored natural areas along the shore can happen when information and communication is provided from multiple levels, such as the state level, the town level and the

lake association level. Lake Wise Evaluators help distribute information about lake friendly practices and work directly with shoreland owners to make improvements that protect the lake and ecology, addressing the priorities listed in the Clean Water and Healthy Ecosystems Sections of the *Opportunities for Action*.

Building upon the resources developed to support Vermont's Lake Wise Program, New York is proposing to develop a shoreline best management practice (BMP) guidance document to be utilized by local implementors. Currently, New York only has minimum information on the New York State Department of Environmental Conservation (NYSDEC) website regarding shoreline management and has not developed any informational guides or factsheets. Using existing BMP factsheets and information developed for Vermont's program, New York is proposing to create a comprehensive BMP guide that can be used as a reference document for project managers when planning or designing potential shoreline projects. The newly developed guide will assist with grant applications for project funding through NYSDEC's existing Water Quality Improvement Project (WQIP) program.

Outputs

- Two Lake Wise Evaluator Trainings
- Two new Lake Wise Evaluators trained and active in the Lake Wise Program
- Two Classroom Natural Shoreland Erosion Control Trainings
- One Field Erosion Control Training
- Ten new Lake Wise participants and shoreland sites assessed
- Ten project sites identified
- One Comprehensive BMP guidance document

Outcomes

Additional outreach resources on water quality and shoreland habitat protection practices and the promotion, demonstration, and normalization of those practices will result in improved lake water quality and shoreland habitat.

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

Vermont: \$62,000

This includes 0.9 FTE personnel support for fieldwork, analysis and design, communication and coordination, instructional training, implementation and reporting; costs for printing fact sheets, bioengineering manuals, best management practice materials and supplies.

New York: \$10,000

Total Cost: \$72,000

Timeline: October 1, 2020 – December 31, 2021

Post-Project monitoring: Success of this proposal will be measured by expanded resources and participation in improved shoreland practices, specifically through an increase in the number of Vermont Lake Wise Evaluators and shoreland sites visited and the number of trained NSECC professionals as well as the number of new fact sheets and supporting shoreland informational sheets for NY's work growing their resources for promoting shoreland Best Management Practices.

Lake Champlain Basin Program
Conceptual Education and Outreach Task Description
FY2020 Budget
Task #6

1. **Task Title:** TMDL Tool Website

2. **One-sentence abstract of task:** The task will pay for the development of a website to serve as the outreach and marketing home of the TMDL tool outreach initiative.

3. **Submitted by:** LCBP

4. **Describe the task and the specific work-product(s) or output that might result.** The LCBP will contract with a website developer to build a site that serves as the home of the TMDL Tools outreach initiative, including the videos and animations produced under the initial TMDL Tools contract. The site will be modeled closely on the Danish Future Water City website (futurewatercity.com). The site will provide additional information about Phosphorus TMDLs on Lake Champlain, with links to other relevant sites and materials. It will serve as a distinct and cohesive, branded destination for potential advertising of the initiative. This task could be combined with the separately developed TMDL video outreach task.

5. **Please provide the estimated cost of this task, and a timeframe (# months or years).** \$20,000 for development of the site over a three- to six-month period.

6. **Post-Project monitoring:** The reach of the website will be tracked with Google analytics.

Lake Champlain Basin Program
(7) Conceptual Education and Outreach Task Description
FY2019 Budget
Task #7

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 4 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: \$60,000

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.

Lake Champlain Basin Program
(8) Conceptual Education and Outreach Task Description
FY2020 Budget
Task #8

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. **Submitted by:**

LCBP Staff

4. **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*
- iv) Enhanced E&O Grants: Larger grant awards for \$20,000-\$75,000, for areas where larger sums of funding would help build better watershed connections and offer outreach opportunities for the public. Total: \$120,000.*

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

\$394,000

6. **Post-Project monitoring:** [Please provide a brief description of how the success of this program could be monitored/measured after the project is complete.]

Success of projects will be measured using a variety of methods, depending on specific programs. The ability of grant recipients to assess the effectiveness of their outreach efforts will be enhanced through implementation of proposed Task K: Outreach Evaluation Workshop for Outreach Partners.

Lake Champlain Basin Program
Conceptual Education and Outreach Task Description
FY2020 Budget
Task #9

1. **Task Title:** Stream Wise Phase 2: Pilot project to deliver coordinated outreach to private landowners
2. **One-sentence abstract of task:** Pilot a community based social marketing campaign developed during phase 1 to educate and incentivize private landowners to adopt BMPs to protect and restore forested riparian buffers.
3. **Submitted by:** Will Eldridge, VFWD
4. **Describe the task and the specific work-product(s) or output that might result.**

Similar to the successful Lake Wise program administered by the VDEC, the goal of Stream Wise is to establish a new normal of riparian landscaping that is proven to help protect streams and rivers. Despite many efforts by State, Federal, and non-profit partners to engage private landowners in riparian buffer plantings, landowner outreach and engagement is far from saturated. In addition, messaging is not coordinate and therefore partners may be diluting rather than enhancing each other's efforts. Social science research has shown that people are most influenced by their neighbors. A property that earns the Stream Wise certificate will represent a "model" property that will in turn inspire others to make improvements so they too can earn the certificate and help protect their shared rivers and streams.

Phase 1, which is in progress, will produce coordinated messaging around riparian buffers that can be applied throughout the Basin, and develop a marketing cookbook that can be used by partners to engage landowners at a local scale. The program itself will be run by local organizations (e.g., watershed groups or conservation districts) 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 of swimming holes. Phase 2 will pilot the marketing campaign in 2 watersheds within each state or province, and provide trainings for additional partners outside of the pilot watersheds.

This program most closely aligns with OFA Task Area IV.C.3.a: Social Marketing - Implement social marketing techniques to foster sharing of information and stewardship ethic, and IV.C.2.a: Outreach materials - Produce web content and print materials that describe lake-friendly products and practices. Because this program would cross developed, agricultural and forestry lands, it would also touch on a number of other OFA task areas: II.A.1.a Support programs to expand protection of river corridors; I.C.1.b fund programs to protect or enhance river corridors for nutrient reduction and flood resilience; IC4c Educate and Assist Landowners to Promote Clean Water Regulations on Forested Lands; III.A.1.b: Technical Resources Provide technical assistance through meetings, workshops, and presentation; III.A.3.a: Outreach - Support and advise municipalities' efforts to educate residents about sound river/ floodplain management; III.B.2.a: Economic analysis: Conduct valuation of clean water and healthy watershed.

Tasks and work products:

1. Identify partner organizations in Vermont, New York and Quebec to pilot the marketing campaign developed during Phase 1, and train in the marketing campaign.
2. Identify audience and needed behavior change for the pilot. The community as a whole will be one audience, while riparian landowners would be the second.
3. Record feedback and document pros and cons that come up with the selected partners
4. Update marketing material based upon feedback from pilot campaigns.
5. Provide 3 trainings for partner organizations in NY, VT and Quebec. The deliverable would be a report documenting feedback on the trainings.

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

1. Continue to coordinate and facilitate meetings of self-selected committee of volunteers to include scientists, environmental interests, fisheries related businesses to oversee marketing campaign - \$5,000 (3 meetings over 12 months)
2. Oversee pilot campaigns by watershed partners (6 months)
 - i) Print of marketing materials, \$2,000
 - ii) Trainings for partners - \$3,000
 - iii) Work with partners to identify audience, deliver marketing campaign
3. Update marketing materials based upon feedback - \$15,000 (3 months)
 - i) Revise draft materials
 - ii) Print updated materials
4. Train partner organizations in NY, VT, Quebec \$15,000 – (3 trainings over 6 months)

5. **Post-Project monitoring:**

Success of the program would include:

1. Engagement of partner organizations to pilot the program, and successful delivery of campaign in the identified pilot watersheds
2. Number of people reached through the direct marketing campaigns.
3. Number of private landowners who express interest in increased forested riparian buffer and miles of riparian buffer increased in focus communities.
4. Number of landowners who have participated in certification program, and number who have received certification
5. Number of municipalities who recognize certification program in some way (to be determined)
6. Number of partner organization participating in the trainings.
7. Number of partner organizations that adopt marketing slogans, etc.

Lake Champlain Basin Program Updates

Lake Champlain Steering Committee meeting, April 14-15, 2020

- LCBP staff have been working remotely or in isolation since March 16 due to COVID-19. All staff have been set up with necessary tools to complete their work remotely for the foreseeable future. LCBP and NEIWPC continue to move forward with execution of grant agreements awarded from the FY19 appropriations. Timelines for all new grant agreements executed after late March have automatically been extended by 12-18 months in the likely event that the 2020 timelines are delayed due to COVID-19 stay at home orders.
- Mae Kate Campbell joined the LCBP team on January 13, 2020. Mae Kate is working with the LCBP technical team on related projects, and providing support to the International Joint Commission's Lake Champlain-Richelieu River flood mitigation study.
- The International Joint Commission Lake Champlain/Missisquoi Bay – Memphremagog water quality study wrapped up at the end of March. The final report will be available on the LCBP and IJC websites in the next few weeks.
- The draft report for the Vessel Incident Discharge Act was completed in late December and is still undergoing review at EPA Headquarters. The report focuses projects and programs in both the Great Lakes and Champlain geographies that address the eight purposes identified in the authorizing legislation. The report will be circulated to the Steering Committee once approved by EPA in January. FY20 appropriations related to VIDA summed to \$5 million for research and development of ballast water treatment systems in the Great Lakes
- Eric Howe and Jim Brangan traveled to Washington, DC in early February to meet with our congressional delegation from New York and Vermont. We shared the LCBP 2019 annual summary of activities, GLFC-funded work, concepts for members of the congressional delegation to consider including an AIS barrier on the Chambly canal, an update on the CVNHP, and legislation associated with heritage areas.
- Boat Launch and Outreach Stewards have been interviewed for the 2020 field season, pending the end of the COVID-19 Stay at Home orders. Suitable applicants interviewed will be issued "intent to hire" notices, instead of the standard offer.
- Additional staff updates are provided in the Technical, Heritage, and E&O written updates appended to this document.
- Upcoming LCBP Committee meetings (all meetings are at LCBP office in Grand Isle unless otherwise noted):
 - [2020 meetings](#)
 - May 6: LCBP Technical Advisory Committee
 - May 14: LCBP Executive Committee (GoToMeeting platform)
 - June 3: LCBP Technical Advisory Committee
 - June 11: Lake Champlain Steering Committee (Doubletree Hotel, Burlington VT (likely to switch to GoToMeeting webconference))

Technical Advisory Committee Update for Steering Committee

April 14 - 15, 2020

This report outlines TAC activities accomplished in February, March, and April 2020.

Reviews and Recommendations

- TAC reviewed proposals for FY20 Vermont TMDL Implementation Projects, submitted by the Watershed Innovation Team.
- TAC reviewed the FY19 TMDL implementation project outline *How Does Groundwater from the Fractured Bedrock and Surficial Aquifers Affect Nutrient Levels in Surface Waters from the Lake Carmi Watershed?* A project workplan will be submitted for review later this spring.
- TAC reviewed and ranked FY20 technical task proposals and formed a recommendation for the Lake Champlain Steering Committee. In response to an invitation to submit a full proposal following the pre-proposal selection process, LCBP received 17 proposals totaling \$2.5 million in request.
- Workplan (approved): *Using a 3-Dimensional Coupled Hydrodynamic-Aquatic Ecosystem Model to Evaluate Alternatives for Controlling Internal Phosphorus Loading in Missisquoi Bay*, Dave Braun (Stone Environmental), Andrew Schroth, and Clelia Marti (UVM).
- Final report (approved): *Refinement of Critically Needed Assessment Tools for Tile Drainage Phosphorus Loading in the Lake Champlain Basin*, Chris Kopman (Newtrient) and Mike Winchell (Stone Environmental).
- Final report (approved): *Volunteer Cyanobacteria Monitoring Program*, Lori Fisher (Lake Champlain Committee) and Angela Shambaugh (VTDEC).
- Workplan (approved): *Identifying and Fixing Erosion Issues on Private and Park Roads in the Lake Carmi Watershed*, Linda Blasch (Northwest Regional Planning Commission).
- Interim Report (approved): *2019 Long-term Monitoring Program*, Pete Stangel and Angela Shambaugh (VTDEC).
- TAC formed a subcommittee to make recommendations on potential upgrades to the Long-Term Monitoring Program. The subcommittee developed a package that was reviewed by the Executive Committee on March 24 and will be considered by the Steering Committee at this meeting.

Presentations

- *Drivers of Internal and External Loading of Phosphorus in the Lake Champlain and its Watershed*, Andrew Schroth (UVM): Dr. Schroth provided an overview of ongoing phosphorus monitoring research using a variety of analytical methods.

E&O Committee Report to the Steering Committee December 17, 2019

E&O ADVISORY COMMITTEE

The Committee met by teleconference on February 14 to review conceptual tasks and suggestions from the Executive Committee. The budget recommendations were presented to the Executive Committee on February 19.



ANNUAL REPORT Elizabeth developed the 2019 annual report over the past couple of months (available on Meetings Materials page of the LCBP website). BRAVO Elizabeth!

TMDL OUTREACH TOOLS

The videographer has completed the 11 videos and the production of three 30-second animations is complete. They are posted to the website and press release was distributed last week. The *Williston Observer* gave it a nice shout out this week!

RESOURCE ROOM

In addition to hosting more than a thousand visitors during each of the December and February vacation weeks, Laura, Cynthia and Steph provided daily 4PM Resource Room programs. A new LCBP exhibit on the ECHO floor focuses on *Vote for Women* activities in NY, Quebec and Vermont. A Winter Adaptations Discovery Cabinet and an exhibit about pollinator plants in the winter, linking to ECHO's butterfly exhibit were installed in January. Resource Room staff members are creating new exhibits to utilize when ECHO reopens. They have created an updated list of really good on-line resources and citizen science opportunities for families teaching at home during COVID-19. We hope classrooms take advantage of phone interview time with LCBP staff in the coming months.

HEALTHY SOILS INITIATIVE-RAISE THE BLADE The new *Lawn to Lake* website was launched with updated content. Ryan and Elizabeth have been instrumental with a redesign of all products related to marketing and web design which include a new logo for *Raise the Blade*. Marketing materials are ready for placement on Plattsburgh busses once they begin running later this spring. A mailing insert is tentatively planned for the City of Plattsburgh. Sue and Lauren have been helpful in planning and organizing materials. Monthly committee member work continues.

E&O STEWARDS AND OUTREACH

While outreach activities are currently on hold, staff was kept busy through March 13th with programs including a Stowe 55+ Salmon program in February with LCBP and US FWS. Sue is trying to secure a mailing opportunity about *Raise the Blade* with the City of Plattsburgh for later this spring or early summer. Interviews were conducted last week for the potential hiring of Vermont based steward later this spring or summer.

HIGH SCHOOL STEWARDSHIP PROGRAM In early March, Stephanie organized a successful field trip to Catamount Outdoor Center led by LCBP, Sea Grant and LCMM staff. About 20 South Burlington students participated in the winter tracking event which received positive feedback from the teachers. The May activity with South Burlington and Plattsburgh High School is unfortunately postponed. LCBP and Sea Grant are re-evaluating the format for next year

LOVE THE LAKE: On February 20th, February 27th and March 5th our crowds were good and hungry!

WORLD WATER DAY Though the public event was cancelled on Wed March 25th, CBEI partners made awards to participating schools. Creative partners including the Community Sailing Center are providing paddling experiences when the school is ready while Bird Diva Bridget Butler and the Wild Center in Tupper Lake are creating on-line opportunities for winning classrooms.

UPCOMING:

- **ARTISTS in RESIDENCE PROGRAM** The review committee reviewed all of the proposals received. Several candidates were invited to submit full proposals which are due later this spring.
- **Art Sail A contra**
- **E&O GRANT REVIEW** Twenty-four small E and O grants under \$10,000 and 7 large grants up to \$40,000 were funded. Workplans are still coming in and being reviewed. The contract end dates will be extended one year due to COVID-19.
- **CBEI PROFESSIONAL DEVELOPMENT** CBEI partners are still taking reservations for the course which is scheduled to begin in July. However, both SUNY and UVM have chosen to offer on-line only courses for the summer, so this is subject to change.
- **LCBP MAIN WEBSITE:** Ryan is leading this revision with the contractor and is targeted for completion this summer.
- **CVNHP WEBSITE** Ryan is currently working on this update which should be completed in late April.
- **PUBLIC AWARENESS SURVEY** The RFP for this project closed April 13th. Ryan to facilitate the review panel.
- **STREAMWISE** The RFP for the Streamwise program closed April 13th. Lauren to facilitate the review panel.



Champlain Valley National Heritage Partnership



Heritage Area Program Advisory Committee Report April 14-15, 2020

FY2020 CVNHP Workplan and Budget

At the LCBP Steering Committee meeting on December 17, 2019, John Krueger reported on the HAPAC's Grant Review Sub-committee recommendations on advancing the 41 pre-proposals (totaling \$372,820) for the FY2020 Workplan and budget funding. The LCBP Steering Committee directed staff to invite 18 organizations to submit 29 full proposals. The HAPAC Grant Review Sub-committee met on February 18, 2020 to rank the full proposals and John reported on their recommendations in an executive session of the LCBP Executive Committee the following day. These ranked projects will be discussed by the LCBP Steering Committee at its April 2020 meeting for inclusion in the FY2020 Workplan and Budget.

Artist-in-Residence Program

The Lake Champlain Basin Program (LCBP) issued a Request for Pre-Proposals for Artist-in-Residence (AiR) programs in the Lake Champlain Basin on October 2, 2019, to support development of sustainable AiR programs that will recruit artists to obtain and use scientific data, cultural trends, or historical facts to increase interpretation of natural resources within the Lake Champlain basin.

Six reviewers with backgrounds in the arts assessed the eight pre-proposals, which totaled \$287,000. They recommend four pre-proposals, which total \$87,000, be developed into full proposals. The LCBP Executive Committee reviewed the AiR Record of Decision (ROD) at its February meeting and directed staff to request full proposals from four organizations: two from Vermont; two from New York. AiR full proposals are due on May 4 and the LCBP steering committee will review a ROD at its June meeting to select the best project.

COVID-19 in the CVNHP

CVNHP Grants

The LCBP staff has processed two contract extension requests from partners who were to finish work from the FY2018 Budget and Workplan due to delays associated with the Coronavirus stay-at-home orders. Staff has reached out to the partner organizations working on the additional 24 CVNHP projects. A few have indicated that they will request contract amendments to modify their workplans for the "new normal."

Federal Facilities

- **Saratoga National Historic Park** is temporary closed to the public.

- **Missisquoi National Wildlife Refuge** is open to outdoor recreation.
- **Green Mountain National Forest** headquarters and ranger stations are closed, but the forest is open to the public.
- **Parks Canada** sites are closed to vehicle traffic until further notice.

New York State Resources

- **Adirondack Park** trails are open, but NYSDEC is encouraging New Yorkers to “#RecreateLocal,” follow social-distancing protocols, and avoid crowded trailheads.
- **New York State Campgrounds** have suspended all new camping, cabin and cottage reservations for the 2020 season. All early season reservations before May 15 have been canceled and the state is monitoring reservations made after May 15.
- **New York State Parks** remain open to outdoor recreation, but measures (limiting parking) may be taken to reduce crowding.
- **New York State Historic Sites** grounds are open to the public, but facilities are closed.

Vermont State Resources

- **Vermont State Historic Sites** grounds are open to the public and facilities are tentatively scheduled to open on June 19.
- **Vermont State Parks and Forests** are maintaining their annual “mud season” policies and ask Vermonters to consult with [Trailfinder.info](https://www.trailfinder.info) before heading to a trailhead.

Major Cultural and Natural Heritage Attractions in the CVNHP

- **Adirondack Experience: The Museum on Blue Mountain Lake** is closed for the 2020 season.
- **Fort Ticonderoga** is closed indefinitely, but is directing people to their [Center for Digital History](https://www.fortticonderoga.org/center-for-digital-history) for special online events.
- **Lake Champlain Maritime Museum** is scheduled to open on July 1, but their Lake Adventure Camps and Teen Expeditions will start in mid-June as planned.
- **Mont-Saint-Hilaire/Gault Nature Reserve** is closed to the public. No hiking allowed until further notice.
- **Shelburne Museum** is closed until further notice with all events, activities, educational programming, and rental events cancelled or postponed.

EPA Region 1

April 14-15, 2020

Lake Champlain Steering Committee

Region 1 Continues in COOP Status

Due to COVID-19 and Massachusetts' State of Emergency, EPA Region 1 remains in the Continuity of Operations (COOP) status. All employees are currently teleworking, though there remain some essential monitoring, testing, and enforcement activities ongoing in the field. COOP is currently in place through May 4. The Region is working diligently to respond to needs where possible and realizes there may be impacts to work funded by the agency. Please work with your Project Officer to make the necessary adjustments where needed.

Lake Champlain Competition Exemption

One strength of Lake Champlain EPA funding is that the three main recipients – New York, Vermont, and NEIWPCC/LCBP – have been exempt from competing for EPA funds for the past 10 years. That exemption is due to sunset at the end of FY20. EPA Regions 1 and 2 are working with the National Grants Advocate for EPA to finalize a new exemption that would be in place until 2030. This is expected to be finalized this spring.

Lake Champlain TMDL Implementation Interim Report Card for the Lamoille and Missisquoi Tactical Basin Plans

EPA will shortly release its evaluation of Vermont's progress on the Lamoille and Missisquoi Tactical Basin Plans. The tactical basin plans (also referred to as Phase 2 plans) have a five-year implementation cycle, and the 2016 TMDL Accountability Framework indicates that at the mid-way point of the five-year cycle, EPA will provide an interim assessment of state progress toward implementation goals for each plan. This is the mid-cycle review of Phase 2 milestones. EPA's final report card for Phase 1 milestones will be issued under separate cover.

Grants Season is Upon Us

The time for preparing workplans and submitting through Grants.gov is nearly here. EPA has asked that all applications for FY20 be received by July 17 at the latest, however Project Officers will gladly assist recipients where possible through the process as early as possible to ensure a timely turn-around and disbursement of funds. THANK YOU!

U.S. Fish and Wildlife Service
Updates for Lake Champlain Basin Program Steering Committee
April 14-15, 2020

Salmon Restoration

- Spring field work on hold or canceled because of Covid 19.
- Two recent papers on restoration of landlocked Atlantic salmon in Lake Champlain have been highlighted in high profile journals.
 - The *Canadian Journal of Fisheries and Aquatic Sciences* has selected a study by Lake Champlain Fish and Wildlife Conservation Office (FWCO) and Concordia University biologists for the Spotlight from the Editor. This study was done with landlocked Atlantic salmon from Eisenhower NFH stocked into Lake Champlain tributaries. A summary of the paper: Rearing salmonids above-seasonal temperatures in ground water is a standard hatchery method to accelerate growth rates and produce one year old smolts. We examined modifications to this method in Atlantic salmon and observed a 286% increase in adult return rates following a 2.5 month exposure to seasonal rearing temperatures in surface water prior to release. Conversely, a decrease of 89% in adult return rates was observed when release dates were simply advanced by two months. These results demonstrate short-term shifts towards natural conditions in the hatchery can improve adult returns for salmonids that may not be achieved by simply advancing release date. You can read the paper here: Harbicht, A.B., Fraser, D.J. and Ardren, W.R., 2020. Minor shifts towards more natural conditions in captivity improve long-term survival among reintroduced Atlantic salmon. *Canadian Journal of Fisheries and Aquatic Sciences*. <https://doi.org/10.1139/cjfas-2019-0201>.
 - The April issue of *Molecular Ecology* has a cover photo of landlocked Atlantic salmon from Lake Champlain! This paper was authored by researchers from Purdue University and the Lake Champlain FWCO. The paper estimates the adaptive genetic potential of landlocked Atlantic salmon to respond to thiamine deficiency. This is a great example of how we are using adaptive management at our White River NFH and Eisenhower NFH to help with the restoration of salmon in Lake Champlain. We are moving on to next steps of evaluating the survival and reproductive success of smolts stocked into Lake Champlain from the Low Thiamine Tolerant and Maximum Genetic Diversity broodstocks at White River National Fish Hatchery developed in parallel with this study. The first smolts will be stocked into the Winooski River and Boquet River in spring of 2021. Hopefully, we will see increased survival and reproductive success of smolts stocked from the Low Thiamine Tolerant broodstock! You can read the paper here: Harder, A.M., Willoughby, J.R., Ardren, W.R. and Christie, M.R., 2019. Among-family variation in survival and gene expression uncovers adaptive genetic variation in a threatened fish. *Molecular Ecology*. 29:1035–1049. <https://onlinelibrary.wiley.com/doi/10.1111/mec.15334>. You can read the perspective on the article here <https://onlinelibrary.wiley.com/doi/10.1111/mec.15389>. You can see the cover <https://onlinelibrary.wiley.com/doi/10.1111/mec.14313>. Note that the cover photo is from Vince Franke, taken as part of International Year of the Salmon efforts with LCBP, CVNHP and USFWS.

Hatcheries:

- The Dwight D. Eisenhower NFH (DDENFH) began its stocking season on April 1st by releasing 42,000 landlocked Atlantic salmon (LAS) to the New York side of Lake Champlain. An additional 55,000 (LAS) will be released later in April. Brook trout and lake trout stocking throughout Vermont has also started and will continue through late May-early June. Approximately 71,000 trout will be released in Vermont supporting recreational and put, grow and take fishing opportunities. Restoration efforts on Lake Ontario continue in mid May when 80,000 lake trout will be released with the help of New York State Department of Environmental Conservation. The hatchery will be installing a new water filtration and UV disinfection system this spring and the old system will serve as a backup. The DDENFH was selected as one of five National Fish Hatcheries across the country to be evaluated under a Hatchery Modernization Review.
- Staff at the White River NFH continue to develop landlocked Atlantic salmon and lake trout broodstocks. This season the hatchery delivered salmon eggs to the Dwight D. Eisenhower NFH for subsequent grow out. The eggs are from two salmon brood lines at White River. (1) A maximum genetically diverse group and a (2) thiamine deficiency resistant group. The two groups performance will be compared side by side when stocked into the Winooski River, VT and Boquet River, NY

Sea Lamprey control:

Perhaps just mention that

- we are not trapping 7 rivers that we would normally trap this year: 1 QC, 2 NY, 4 VT.
- The impact of these untrapped rivers will be observable when we measure fall 2025 wounding rates.
- Plans for treatments in the fall are still in place and expected. These are considered mission critical by the state and will take place.

Riparian/Wetland Restoration/Aquatic Connectivity:

- Internal USFWS purple loosestrife *galerucella* beetle propagation and release program has been cancelled for 2020. Under current telework orders LCFWCO staff cannot work with partners to complete the needed field component of the project. Field activities include digging loosestrife plants for beetle propagation, growing plants in a greenhouse setting, collecting beetle larvae, and distributing beetles for control.
- Wetland restoration staff continue to work on environmental compliance (Federal, state and local permits) for projects scheduled for construction in 2020 (approximately 5 project totaling 300 acres). Staff continues to coordinate with NRCS and other partners on project delivery.
- Riparian restoration staff are currently working remotely with planting contractors, state and Federal planners and landowners to implement riparian buffer tree planting projects. Some projects have been cancelled due to impacts of the COVID-19 on volunteers. Many of our local partners such as watershed groups and conservation districts are very concerned about financial implications associated with state and Federal grants.
- All direct seeding trials are still on schedule with the majority of work taking place in late May and June. We will wait as long as possible to make the call to proceed, cancelling the work will have implications for all seeds currently in storage (viability becomes an issue if we need to store longer than June).
- Aquatic Connectivity staff continue to work with project partners on culvert replacement and dam removal projects slated for 2020. No projects have been cancelled or postponed at this point. Delays/cancellation of financial awards and funding agreement may cause project timelines to be adjusted.
- All current Service funding agreements (cooperative agreements) have not been affected. Partners can make draws accordingly.

Missisquoi National Wildlife Refuge:

- The refuge has hired Herpetologist, Jim Andrews, to begin surveys for spotted turtles on Missisquoi NWR. One site survey was conducted in early April with follow up trapping being planned as water temperatures increase.
- Emergency road repairs to Mac's Bend Road were required following two winter flooding events. Equipment Operator Joe Bertrand spent approximately 60 hours re-graveling the road and parking lots.
- All field work has been postponed due to COVID-19 which includes early surveys for nesting herons and eagles as well as establishment of nests for osprey. Waterfowl are arriving in good numbers and wood ducks, mallards and Canada geese are paring up.
- The refuge has released contracts for conducting invasive species control of upland and wetland habitats for the summer. Thanks to the Lake Champlain Basin Program and the Friends of Missisquoi NWR, an \$8,000.00 grant will aid the refuge this year to help control aggressive invasive species such as Japanese knotweed, Phragmites and yellow iris.
- The Refuge in collaboration with the Friends of Missisquoi NWR have cancelled many spring public events including woodcock and vernal pool walks and our popular wildlife art show and World Migratory Bird Day celebration.
- Refuge trails are getting well used during this COVID-19 outbreak with many individuals and families taking advantage of the refuge to get outdoors and enjoy nature.

Lake Champlain Basin Citizens Advisory Committee of New York State

Report to
Steering Committee April 14-15, 2020



- The CAC meeting in January in Plattsburgh featured members from Lake Champlain Trout Unlimited who gave an excellent presentation on the Imperial Dam and then led a group discussion afterward. They started by highlighting some of the more recent successful dam removals including the Willsboro Dam on the Boquet River and the Quarry and Rome Dams on the West Branch of the Ausable River.

They made a compelling argument for the removal of the Imperial Dam. Located about 3 miles upstream on the Saranac River, removal would open up an additional 9 miles of prime salmon habitat. This would eliminate the pool of water from behind the existing dam which contributes to summer warming of the water temperature. This would also eliminate the need for construction of and then continued operation and maintenance of a fish ladder at the dam.

The CAC would be very interested to hear the State position on this. With an understanding that removal may be more costly and extend the time frame, the CAC wonders if this might be a suitable candidate for a Section 542 project?

- The March meeting was changed to a virtual meeting due to the ongoing COVID-19 public health crisis. The meeting featured discussions with Eric Howe, Basin Program Director and were focused on potential coordination enhancements for the NY and VT CACs through a LCBP CAC coordinator position. The CAC was generally supportive of the concept of a full or part-time LCBP coordinator dedicated to the CACs. It was felt that dedicated coordination has the potential to help to take the CAC to the next level with enhancements to our education and outreach capacity. Increasing our ability to get the LCBP mission and priorities out to the general public and, in turn, getting feedback from the citizens will help to have a better informed and involved public. A “neutral” coordinator may also facilitate the CAC’s interaction with NY local, state, and federal legislators. The group looks forward to continuing discussions on this at the SC level.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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NYSDEC Regional Director updates to the LCBP Steering Committee April 14-15, 2020

1. NY Outdoors is open. During the COVID-19 public health crisis, getting outdoors locally and connecting with nature (while social distancing) is a way to help maintain mental and physical health. DEC and State Parks recommendations incorporate guidance from the Centers for Disease Control and Prevention and the New York State Department of Health for reducing the spread of infectious diseases and encourage New Yorkers to recreate locally, practice physical distancing, and use common sense to protect themselves and others. In addition, DEC and State Parks launched a new hashtag - #RecreateLocal - and encouraged New Yorkers to get outside and discover open spaces and parks close to home. Both the [DEC webpage](#) and [Parks and Recreation webpage](#) are continually updated to provide guidance on outdoor recreation.
2. The NYS Budget was signed by Governor Cuomo at the beginning of the month. It contains several noteworthy environmental initiatives including:
 - a. Authorizes the creation of a \$3 Billion Bond Act to fund critical environmental restoration and climate mitigation projects in every corner of the state to ensure New York is able to adapt to the intensifying impacts of climate change, and reduce emissions, while creating jobs and local economic development. As part of a larger Restore Mother Nature Initiative, the Bond Act will be a key source of funding for projects focused on reducing flood risk, investing in resilient infrastructure, restoring freshwater and tidal wetlands, preserving open space, conserving forest areas, and reducing pollution from agricultural and storm water runoff. It will also fund up to \$700 million in projects to fight climate change, including green buildings.
 - b. Codifies DEC's ban on the use of high-volume hydraulic fracturing to complete or re-complete wells. This includes drilling, deepening, plug-back or well conversion. In addition, it places a moratorium on future gelled propane hydrofracking applications until DEC can conduct an analysis of the impacts of this completion method. This makes permanent the ban that has been in place for the last five (5) years. This will protect the health of New Yorkers and ensure permanently that our environment is not harmed by this practice.
 - c. Accelerated Renewable Energy Growth and Community Benefit Act, which will dramatically speed up the permitting and construction of renewable energy projects, combat climate change and grow the state's green economy. The State will also accelerate renewable transmission delivery. The Act will create a new Office of Renewable Energy Permitting to improve and



streamline the process for environmentally responsible and cost-effective siting of large-scale renewable energy projects across New York while

- d. delivering significant benefits to local communities. "Build Ready" sites will be preapproved, permitted and auctioned to developers to prioritize the reuse of abandoned commercial sites, brownfields, landfills, former industrial sites, and otherwise underutilized sites. These actions will accelerate progress towards Governor Cuomo's nation-leading clean energy and climate goals - including the mandate to obtain 70 percent of the state's electricity from renewable sources.
 - e. Prohibits the distribution and use of expanded polystyrene, commonly known as Styrofoam, single-use food containers. It also bans the sale of expanded polystyrene packaging materials known as packing peanuts. This is anticipated to be fully implemented by January 1, 2022.
 - f. The NYS Environmental Protection Fund will be sustained at \$300 million again this year. This fund supports many environmental initiatives including grants for water and wastewater infrastructure, both agricultural and non-agricultural nonpoint source pollution abatement projects, invasive species initiatives, solid waste programs, climate change initiatives and open space/land conservation to name a few.
3. New York will provide an additional \$9.4 million in grants to the Village of Lake George in Warren County to repair and upgrade its wastewater collection infrastructure and preserve the water quality and natural beauty of Lake George. The \$9.4 million will be provided by the State in addition to a \$3 million Water Infrastructure Improvement Act grant and a DEC-funded \$2.5 million Water Quality Improvement Project grant, filling a budget gap in the project and bringing total state investment to \$14.9 million. The remaining cost of the project will be covered by a zero-interest loan from the Environmental Facilities Corporation.
 4. NYSDEC released final regulations earlier this spring to implement the NYS Plastic Bag Waste Reduction Act, which went into effect March 1. The ban applies to nearly all plastic carry-out bags. Exemptions include plastic bags used to protect meats and raw produce, bags used to protect prepared foods from food service establishments, and bags sold in bulk to consumers for in-home uses such as trash bags and food storage bags. Consumers may bring their own reusable bags when shopping or stores may offer them. Stores must provide a receptacle for consumers to return clean plastic bags and other film plastics for recycling. Enforcement of the ban has been delayed until May 15 due to COVID-19.
 5. DEC will celebrate Earth Week without events that involve gatherings. A series of press announcements will be made in addition to social media and Facebook live demonstrations to connect people to the environment.
 6. The State Departments of Environmental Conservation (DEC) and Agriculture and Markets recently announced that New York State's seventh annual Invasive Species Awareness Week (ISAW) will be held June 7-13. ISAW is an annual educational

campaign featuring numerous statewide events focused on invasive species. During the ongoing COVID-19 public health crisis, organizations are encouraged to plan virtual experiences and events that incorporate social distancing guidelines and give New Yorkers the opportunity to participate from the safety of their homes.

7. DEC recently launched its annual 'Look for the Zero' campaign urging homeowners to purchase phosphorus-free Lawn fertilizer and to practice sustainable lawn care to protect state waterbodies. New York's nutrient runoff law prohibits the use of phosphorus lawn fertilizers unless a new lawn is being established or a soil test shows that the lawn does not have enough phosphorus. Retailers are required to post signs notifying customers of the terms of the law and to display phosphorus fertilizer separately from phosphorus-free fertilizer.
8. There is currently a grant round open for agricultural nonpoint source pollution abatement and control grants. Administered by the New York State Soil and Water Conservation Committee, in coordination with the Department of Agriculture and Markets, the goal of this program is to reduce and or prevent the nonpoint source contribution from agricultural activities in watersheds across the state. The program utilizes the Agricultural Environmental Management framework and provides cost-share funds through Soil and Water Conservation Districts for activities, plans, and the implementation of Best Management Practices systems. Interested producers should work through their local Soil & Water Conservation District. Proposals are due by May 18. Additional details can be found on the NYS Ag & Markets website: <https://agriculture.ny.gov/soil-and-water/rfp-0211-agricultural-non-point-source-pollution-abatement-and-control-program-round>
9. NYS Office of Parks, Recreation, and Historic Preservation are once again offering their Connect-Kids-to-Parks Field Trip Grant Program (Connect Kids) which is designed to connect students in New York State with nature and history. Each grant provides reimbursement of up to \$40 per student (and \$80 for Special Education students) for field trips to state and federal parks, forests, historic sites, fish hatcheries and other outdoor recreation areas. There are numerous opportunities throughout our region for educators to take advantage of this program. Application information is on the Parks website at: <https://parks.ny.gov/environment/connect-kids/grant-program.aspx>
10. In 2020, the State will undertake a multi-part initiative to bend the curve on fossil fuel consumption in buildings. NYSERDA will launch a \$30 million Empire Building Retrofit Challenge to demonstrate scalable and replicable solutions for high-profile commercial and multi-family buildings across the State. The Challenge will solicit proposals from property owners, developers, equipment manufacturers and energy efficiency providers to demonstrate innovative and integrated solutions that can reduce energy consumption and greenhouse gas emissions from commercial and multi-family buildings, and that can be scaled and replicated across the State.

Army Corps of Engineers Update
Lake Champlain Steering Committee Meeting
April 14, 2020

The Lake Champlain Section 542 Environmental Assistance Program is very active, with two active projects (Canal Barrier, St Albans Bay, and Waterbury Dam), and a number of emerging projects/requests.

For the Canal Barrier Study, the Draft Report is complete and out to PDT for review. The Alternatives meeting is moving to a virtual format. The District met with the AE and ERDC yesterday to begin planning (will be updating Meg with details on this today). Target date is May. Stakeholder outreach is happening now (Meg is lead).

The St Albans Bay team is currently working to finalize the scope of work for sampling and modeling support for the phase II feasibility study. Sampling and modeling is going to be performed by an AE.

For the Waterbury Dam, New England District is the lead on this. An Initial Risk Assessment will be performed under Section 542. The team is about to sign the PPA package for this effort. When enough information is gathered on how to do the dam safety report, an 1177 project will be initiated.

The Moon and Mussey Brooks study in Rutland, VT is moving forward after being reviewed and approved by the TAC and the Steering Committee. USACE is currently working on the PPA packages and will coordinate with partners when the PMP is drafted.

USACE and partners are currently working with the Lake Champlain Maritime Museum to finalize the Scope of Work for a Quagga Mussel Risk Assessment, Monitoring, and Development of a Decision Management Protocol that managers can use to protect resources in the face of Quagga Mussel invasion. ERDC has submitted a draft SOW and we are working to finalize the coordination/management roles/costs for each party involved. Once the Project Summary is finalized, we will submit and brief, hopefully at the next TAC meeting. If approved, we will prepare the PPA package.

For the Whitehall wastewater treatment facility study, we need to develop a Project Summary. A site visit was planned for about now, but need to assess whether we can move forward without one now and conduct instead once travel restrictions are lifted. The study is a sewer system plant upgrades with a combined sewer overflow. There are four phases in this project. While the first is completed, assistance is needed with the second phase.

We are preparing to respond to a request from the Lake St. Catherine Conservation Fund for a project on Little Lake St. Catherine which proposes the study and/or implementation of a bubble aeration system, with addition of enzymes to address the infilling of the lake with sediment and aquatic vegetation. Welcome input from the Executive Committee on this request when we move to closed session (or at another appropriate time).

We have received two more letters of requests from the Town of Moriah and the Town of Westport. They are both to address stormwater pollution and sediment loading. The Corps is reviewing them and will work with the requestors to develop Project Summaries.

We also had a call with the City of Vergennes, VT on a potential proposal for a sewer treatment plant and collection system to address frequent combined sewer overflows. Awaiting a letter of request.

The Section 542 Program currently has more requests for services than our current appropriations can meet. We will need to begin ranking projects for the upcoming Project Summaries, a process we have not yet had to undertake for this program. This should be taken as a sign of renewed success of the program with so many good proposals and interest.