

**Lake Champlain Basin Program**  
*Approved Executive Committee Meeting Summary*  
February 19, 2020 10:00 AM – 3:00 PM  
LCBP Office, Gordon Center House, Grand Isle, VT

**Attendance:** Bob Stegemann (NYS DEC; Chair), Stéfanos Bitzakidis (QC MELCC), John Krueger (HAPAC Chair), Neil Kamman (TAC Chair), Mark Naud (VT CAC Chair), Vic Putman (NY CAC Chair), MaryJo Feuerbach (EPA R1) **Phone:** Tom Berry (Sen. Leahy's Office), Mario Paula (EPA R2), Pete LaFlamme (VT ANR), Pierre Leduc (Quebec CAC Chair), Buzz Hoerr (E&O Committee Chair), Stephanie Mikesell (NYS Empire Development), Christina Marts (National Park Service), Bethany Sargent (VT ANR)

**Guests:** **Phone:** Amy Picotte (VTDEC) and Lauren Townley (NYSDEC)

**Staff:** LCBP: Eric Howe, Jim Brangan, Meg Modley, Lauren Jenness, Mae Kate Campbell, Matt Vaughan, Colleen Hickey, Ryan Mitchell, Elizabeth Lee; Fred Dunlap (NYS DEC), **Phone:** Heather Radcliffe (NEIWPC)

**9:30 AM Arrival, Networking**

**10:00 AM Meeting begins**

- **Introductions** around the room, conference call participants. *Bob Stegemann, NYS DEC Chaired this meeting.*
- **Public Comment** – none offered.
- **Approval of minutes from previous meeting**  
**ACTION ITEM:** Approve Meeting Minutes from January 23, 2020 Executive Committee
  - Motion to approve by: Neil Kamman
  - Second by: Vic Putman
  - Discussion on the motion: Mary Jo provided brief written updates to Eric Howe
  - Vote: All
  - Abstentions: None

**10:15 AM FY20 Budget development**

**Key Functions – Eric Howe**

- Eric informed the group that the GLFC appropriation for LCBP has been finalized at \$619,500. This has been reflected in the new budget reviewed today. John Krueger expressed this was a good thing for CVNHP.
- MaryJo noted the EPA allocation has been finalized at \$13,386,000; this will be updated in the budget.
- Eric noted that the National Park Service appropriation for the CVNHP increased over FY19 because one of the existing Heritage Areas sunsetted, thus relieving some of the burden across the rest of the NHAs.
- Tom Berry added that the GLFC and EPA accounts each increased by \$2M, and GLFC provided \$4M of that to UVM for a new research vessel. LCBP funding should be level-funded or slightly increased overall from FY19. The FY20 funds are fully approved by Congress and should be in place with the respective funding agencies.

**Education & Outreach – Buzz Hoerr, Colleen Hickey**

- Colleen presented the ranked E&O budget task descriptions, which remained largely unchanged from the previous meeting, but are now provided in ranked order from the E&O committee.
- **[Task 2]**
  - John Krueger asked if the outreach training in Task 2 included NY. Colleen said that it should be by the time the RFP is released as the partnerships are building.
  - Neil wants to see emphasis on outreach to groups who will be clean water service providers in Vermont
  - Bob questioned if the outreach training is connected to any grant programs that help implement projects on the ground.
    - Colleen – no, the task focuses more on Water Words That Work training, though all who participate in the training will have ready access to understand the current funding landscape
- **[Task 1]**
  - Bob asked how LCBP plans to disseminate this information on the website. Ryan said it would go out to RFP to see how others would recommend. We are currently looking at Rethink Runoff campaign as an example and are also targeted networking. Bob asked if the target audience is the public or specific groups already in the know. Ryan said this aspect is still to be determined.
  - Current funding TMDL video update: 3 30-sec animations and 10 short videos have already been developed from last year's funding, LCBP staff are currently reviewing to finalize. Bob asked if they are pursuing advertising in NY with PBS. Ryan – we tried to keep the project's focus basin-wide recognizing that there are TMDLS on both sides of the lake. Collen said she thinks this committee will like the videos when they see them as they are very school friendly and cover a breadth of issues.
- **[Task 5]**
  - Amy Picotte (VT DEC) and Lauren Townley (NYS DEC) reviewed the Lake Wise Program task description. Amy used the LakeSmart program in Maine as the example when developing Vermont's program which began around 2013-2014 when the VT Shoreland Protection Act was put into place. They continue to work with shoreland homeowners to protect lake water quality with 'solutions', with the goal to get 15% of participation. 15% is a marketing figure which leads to a cultural trend in managing shorelands. The EPA National Lake Assessments stated that there are over 50% of cleared shoreland across US, in VT the % is higher. The Lake Wise goal is to start with a few properties to call out as exemplary and gain traction from there in each lake community. They are currently working with PMNRCD at Lake St Catherine/Lake Bomoseen, where 86% of the land is owned privately. If that community wants to see better water quality, it is in the landowners' hands.
  - MaryJo asked what percent of the Lake Wise program has been used to protect shoreland around Lake Champlain and are there particular lakes that the program focuses on through funding. What success have you seen so far in those areas?
    - Amy- Half of VT drains to Lake Champlain. This includes 126 inland lakes. What we, through the Lake Wise Program, can do around the shores of these smaller inland lakes has a direct influence on their water quality, which leads to the improved water quality of Lake Champlain. Lake Wise is focusing on working on hydrologically connected lakes to Lake Champlain which has more of an impact. There is some work that takes place right on the shores of Lake Champlain, but Lake Wise currently doesn't have the staff to be everywhere at once. With the limited staff resources, if the program can work on smaller lakes and ponds, that's going to be more effective. The Lake Wise program has a google map with all of the lakes worked on and participation rates on the website. In some of the lakes the community is really close to the 15% threshold. We do feel like the concept behind lake friendly development through Lake Wise has taken off. Shoreland homeowners weren't doing shoreland BMPs five years ago. We feel like the program is effective and gaining traction.
  - Bob asked if Lauren is finding that the Lake Wise information can be plugged into NY uses.

- Lauren – Yes absolutely. NYDEC wants to leverage what has already been done in VT, and work to implement a similar program. As NY is five years behind where VT is, NYDEC hopes to start with basic guidance and documents.
  - Fred- one thing that would help a Lake Wise Program in NY is that most of the basin is within the Adirondack Parks, which would augment protections.
  - Neil – at the last TAC meeting Leigh Walrath from APA gave a presentation about protections and regulations in the Adirondack Park. Neil is happy to see Lake Wise in Vermont work with resource districts because these organizations are going to be receiving funds to do this work.
  - Tom – was there mention of the Northwest Regional Planning Commission’s Natural Shoreland book funded by LCBP in a previous year?
    - Amy – that has been a great document. Since it was released restoring living shorelands has taken off, especially for homeowners who wanted to restore their shorelands after Hurricane Irene. However, Lake Wise is currently working on a revision that is more instructional and includes 3-5 years of case studies to provide more of a ‘how-to’ for contractors to install the BMPs.
- **[Task 7]**
  - Bob asked if the E&O stewards task was for one or two position.
    - It will be for one new person and one person who started at LCBP last year.
  - John asked how does lake steward funding compare?
    - It’s the same as last year.
  - Stéfanos asked if the steward could work in Quebec.
    - Colleen– we can see if there are opportunities. Sue, our current E&O steward is bilingual.
    - Pierre – it would be a good start to share LCBP E&O materials with OBVBM’s new communications person.

**Technical Budget: 2016 TMDL Implementation projects – Neil Kamman**

- Bob Stegemann asked if there was a phosphorus reduction number for each project.
  - Neil – yes, for the projects where it can be calculated.
- **[Green Schools Initiative to Support Stormwater Compliance]**
  - Mary Jo asked how they are planning to choose the 12 schools for the ‘green school initiative’.
    - Neil – think they would lean towards schools that have already started stormwater planning, and rank based on the school’s calculated phosphorus reduction vales. When the State invests in this work, it will keep the cost from going to local towns. The investment will help schools gain 3-acre permit compliance.
- **[Priority Wetland Acquisition, Restoration, and Conservation...]**
  - Eric Howe asked the difference between restorable acres and total acres.
    - Neil- difference is total acres of land purchased versus the restorable acres where the focus will be. Recommend to have Jane coming in for presentation.
- **[Enhanced Agricultural Practice Implementation]**
  - Bob asked how manure injection works.
    - Neil pointed out the dragline which is connected to satellite manure pits. The injection pipe spikes each go into the ground about 6-8in deep and inject manure into the ground.
  - Bob asked if Vermont has a sense of the phosphorus reduction numbers for this practice.
    - Neil – would have to defer to Agency of Ag. The good thing about manure injection is that even if there is a rain event the manure doesn’t runoff.
  - Stéfanos asked if the practice is expected to use less manure.
    - Neil – the manure will be used more accurately.
    - Matt -- know there is pushback to implement this practice from farmers because they will have more trouble with storing manure. That makes you think that they will be using less manure.
  - Bob asked if there is any research on different uses of manure

- Neil – several projects about this received funding from Vermont’s phosphorus innovation challenge.
  - MaryJo – would love to hear update in future meeting.
  - Neil – for farms operating digesters, they can bolt on a dissolved air floatation unit on back of the digester. As the liquid goes out, it enters into a unit where iron is injected in and mixes with phosphorus. This is skimmed off and harvested with much lower amount of nutrients left. There are more technologies as well.
- MaryJo stated that she doesn’t see any projects addressing roads within the list. She assumes VTRANS was a part of group deciding projects. How did Vermont decide on this list of projects?
  - Neil – The State looked for shovel ready projects that would be most impactful. MRGP funds are being switched to VTRANS. These funds will then be used for road projects funded through VTRANS. The team thought that these TMDL funds would be best used to help municipalities in a different way.
  - Tom – feel like the State took a good approach as his staff did independent review at Leahy’s office. Leahy’s office does try to keep the attention of the State on using these funds differently and to not displace state funds. VTRANS does have capital budget.
- MaryJo - there is a developed process for prioritizing projects which includes rules for the WIT that were bypassed this year. Want to emphasize that EPA gets LCBP funding, all projects need to go through the procedures that the SC approves. There are many ways EPA could work with LCBP to allocate funds. In the future we need to follow SC approved process or SC needs to entertain new process.
- Ryan – there was E&O grant that funded video series for FWA, one about precision agriculture.

*~Historical Break ~ by John Kruger*

- Its Monday March 5, 1770.
- Up until 1763 the CVNHP was warzone and more than ½ was controlled by the French. In 1763, in one of the decisive treaties in world history, the Treaty of Paris was signed. The French empire shrank to two islands. Voltaire reflects public sentiment when he said we can be happy without Canada, we prefer peace over Quebec. Great Britain emerges as the #1 power in world, but at a cost. Now that peace is restored they have enormous war debt. Britain passes laws in the US to retrieve more funds.
- By 1767 the Townsend Act puts duties on many things imported into the colonies. Britain also sends royal customs commissioners to MA because the area has a bad reputation for being the rotten apple in the colonial barrel. Custom commissioners are abused by citizens of MA. The Royal Governor, grandson of Ann Hutchinson requests royal troops.
- Its Monday March 5, 1770. Its Snowy and cold. A lone sentry stands at the custom house in downtown Boston. A crowd forms and the sentry calls for reinforcements. The captain and six soldiers march to the house to provide support. The crowd gets more worked up and the British respond with musket fire. 11 Bostonians fall. This is a big deal because a couple of Boston patriot leaders start generating propaganda. The Boston silversmith Paul Revere created a popular print of it.
- In steps John Adams, an attorney. He decides to defend Captain Prescott and the soldiers because he wants to show that the mob is not in control, this government is a government of laws, not of men. He wins the case and the Captain is released.
- This was 250 years ago and a fundamental event in the road to revolution. After, there is a lull in the revolution, cant single out event until 2022.
  - Jim – everyone should watch John Adams on HBO.

**11:45 Updates**

- **Congressional Updates**
  - **Tom Berry** – the FY20 spending bill has been in place as of last December. We are plugging away at the work in the bills.
  - Leahy has a verbal commitment from Army Corps to have funds for aquatic plant controls, on par with past years funding.
  - The Army Corps’ 542 program is not called out as usual in their work plan released last week. Leahy is looking to clarify.

- The President’s proposed budget came to the hill two weeks ago. It proposes to eliminate funding for Lake Champlain. This has been proposed since 2017. Leahy will push back again in FY21.
- Staff are currently working to put together priorities for Leahy.
- The Army Corps Waterbury Dam project is receiving \$20M in FY20 which includes a second \$2M with some other moves to ensure project will move forward. This expensive project is, more so at any other point, in good shape with most federal funding in place for the project.
  - Bob questioned what the project is doing.
  - Tom – significant repairs to the dam are required that will cost up to \$50M. The dam is owned by VT but put in by the Army Corps. Credit for securing funding is also due to Sanders for this project. No construction is planned for at least 2-3 years.
  - Bob – do the plans include fish passage?
  - Tom- have not heard it discussed.

- **Updates from partners around the table**

- **Stéfanos**- \$30M program has been launched by the Quebec government to restore wetlands. The program requires a fee to fill or destroy wetlands, in law with the principal of no net loss. The \$30M in funds came from wetlands destroyed from 2017-2018. The money is available to conservation organizations and municipalities,
- **Bethany** – the report required by Act 21 regarding ambient water quality standards and PFAS was posted in early February. The report recommends against developing VT specific criteria for PFAS but does recommend actions to take.
- Today the State will be issuing a new construction general permit and wetlands non-reporting general permit.
- **Neil** – The Water Quality Performance Report, a requirement to give to the legislature was recently released. A headliner is that as of 2019, 3 years into implementation, VT has achieved 16.4 Metric tons of p reduction, (7% of what is needed) based on projects that we can take credit for. Which means all other projects added would lift the p-reduction higher. The report also provides Missisquoi and Lamoille TMDL updates. Encourages people to look at the report.
- Interviews are complete and the State is finalizing the new VT Coordinator position.
- VT is integrating the intended use of clean water revolving funds by proposing additional subsidies for out of state revolving funds to be directed toward long term control planning for CSOs and metering technologies. Up to \$1.5M in forgivable money would be available to any community investing in these. VT is putting loan forgiveness for \$1.2M toward non-MS4 3-acre permit compliance as VT begins to develop a funding mechanism. Loan forgiveness for village wastewater treatment will help prevent sprawl with increasing funding for wastewater treatment plants. \$1.75M will be for environmental review and construction. This information will be out for public review before the next Executive Committee meeting.
  - Tom – is the more creative use of funds for CWSRF an indication that the program is not oversubscribed?
    - Neil – it’s more like there is a healthy balance and some things are newly eligible. Two years ago, we received state authorization to fund more different projects.
  - Tom – hearing from the public that VT is fooling around with farm fields, schools, but why aren’t they helping to just fix CSOs. They want to hear projects in the pipeline.
    - Neil– the money talking about here is a small amount of larger grants received.
  - MaryJo added from EPA’s perspective, they recognize that a majority of funding goes to large infrastructure needs, but nonpoint sources is critical to address. EPA encourages the funds to be used this way.
  - Neil – Teresa Thomas could provide presentation.
- MaryJo asked about the 3-acre permit.
  - Bethany – VT is still working on comment response. Can follow up with Pete directly for more information.
- **Bob** – Governor’s \$3B “Restore Mother Nature” bond act is in this fiscal cycle and will need to be approved by voters this November. Part of the funding is a 5-year commitment to combat climate change with a focus on wetland restoration, floodplains, water quality, and flood control. Funds will

be available for land acquisition, drinking water, riparian buffers, culverts, dams, green infrastructure, and fish hatcheries to increase fish populations. As it is a bond act it will take some time to get in place, but it hits every point with serious money. The money will start to move in early 2022.

- NYSDEC is releasing final regulations for the plastic bag act which goes into effect March 1<sup>st</sup>. Exemptions include raw meat produce and premade food.
- NYSDEC is currently offering 3 levels of their Trees for Tribes program. 1) Full scale planting at large scale for conservation programs, 2) buffers in a bag program for landowners. 3) school seedlings program
- Every 10 years the State must update its State Forest Action Plan. The plan is available online in draft form. A public meeting will be held in late February.
- Bob is retiring at the end of March. His last meeting will be March 24<sup>th</sup>. It was a difficult decision. His successor will be Joe Zalewski and Koon Tang.
- **MaryJo** – EPA now has all funding in for Lake Champlain and is ready to go for grant season. Has new grant specialist assignments. Starting this coming year, the VT grant specialist will be Robert Smith. He is new and will be taking over for Julie Smith. The NEIWPCC grant specialist will be – Bryan T., Bryan Dore working on competitive... SRF staff working closely with VT. Also have reviewed annual report that Neil mentioned and will be issuing a report card on that soon.
- **Mario** – EPA Region 2 grants specialists are remaining the same. Know that our region is trying to get applications in earlier. Wishes Bob a well-earned retirement.
- **Matt TAC update:** provided in word doc.
  - Bob - For the proposed modernization of the long-term monitoring program, would sensors go onto existing buoys?
    - Matt- we're looking at partnering with SUNY Plattsburgh who have existing buoys that we could potentially modify, these buoys would be research specific.
  - Neil- There have been a range of estimates of what we might be talking about budget wise?
    - Matt- we will present 3 options, continue as normal and not modernize the long-term monitoring project, invest 10-20K for a test of the buoy option, or go all in for ~50K and see what we can do.
- **Colleen - E&O Committee Updates:** committee met to discuss budget, CBEI went through a formal evaluation process with peer organizations and ran 2 focus groups with WEC teachers, summary will be written up and provided by April.
- **Pierre** - Making great progress on erosion reduction projects including maintaining ditches, using 2-tier ditch approach in those projects. So far Wallbridge Brook has 21 of 32 farmers signed up to complete actions addressing 200 hectares of cover crops or crop transitions to hay, also widened stream bank protection in those watersheds. These projects are funded by the Ministry of Agriculture which covers 90% of cost.
- We just hired a 2<sup>nd</sup> agronomist to cover more ground, he started last week and has great experience in the area and is known by many farmers already.
- With the expansion of our staff, we are looking for new office space, we'll have 9 on board with students next summer including a French intern working on stormwater management.
- **Mark** - Eric will share the 2020 VTCAC Action Plan we presented to the legislature last week. Some of our priorities are improving public access particularly in the south lake region, continuing to keep legislators focused on AIS by highlighting the success of steward's program, continued investment in urban infrastructure for CSOs and investing in natural systems as infrastructure systems. The VTCAC's 2 big issues are concerns about voluntary ag enforcement that have been highlighted in the media recently with the violations in Addison county. We met with leadership at ag to discuss how things have shifted. There seems to be a lot of re-focus and prioritization. We'll meet with them in April because citizens are really concerned that these violations that go unaddressed. We are trying to be sure we don't lose focus on water quality monitoring and ensuring the money is being effectively spent to reflect our goals. A PDF of the action plan is available on basin program website.

- The 2<sup>nd</sup> issue we are addressing right now is we have renewing committee membership. David Mears is transitioning out of his appointment, so the governor will hopefully be renewing appointments to fill his seat and another seat that has been vacant. If anyone has thoughts for interested parties there's an online application to citizen advisory committee. We try to gather people from diverse backgrounds, primarily within the basin but that is not a prerequisite. North lake and south lake tend to be underrepresented on the committee.
  - Neil - What representation did David cover? Mark: just a general appointment, he's a member at large.
  - MaryJo – questioned the priorities. Mark: We all know agriculture in VT is in transition, we are 70% dairy and it's a tough portfolio to be so invested in so we're trying to get educated about what that transition could look like and what the impacts to land use change and water quality could be. We've been encouraging the legislature to think about this transition as farms continue to go out of business and consolidate, to consider role of large farms and whether they are good or not. Another big issue currently is the conversion to hemp—does it help or hurt? Is hemp a phosphorus extractor? We're trying to educate ourselves and others about what our countryside looks like with a necessary decline in dairy and what that means. It's a huge issue and there's a lot of people thinking about it and we're inviting them in to hear from them so we can be best informed.
- **Vic** – The NYCAC last met on 1/27. The Mayor joined us for a presentation by Trout Unlimited about removal of the Imperial Dam on the Saranac. The dam is ½ privately owned and the landowner thinks it is valuable. Removal of the dam would add 9 miles of spawning habitat for salmon and salmon have been observed congregating at that site. We discussed other dams taken out in the region: 3 on the West Branch, 4 dams in Washington, and 1 in Essex that we hope to bring up at the dam removal task force meeting. Also wondering about Army Corps funding for these dam removals. An issue that came up in our December meeting was about funding wastewater treatment projects in the Adirondack Park. The American Community Survey's Income Survey methodology prejudices small communities because it's a small sample of a small town that determines how much grant money you get. In Willsboro we have 400 people out of 2500, they can survey 3 people who have high incomes and not get a representative picture of the county. The survey is detrimental to these small towns, in Essex their user charges are >\$4,000 for 160 users after sewer improvement. In a lot of these small communities, the lower income population resides in the sewer district. They used to use census data but no longer—if the community disagrees, they can do their own survey but communities have opposition to that because they can't keep the info as confidential as the census. Just wanted to bring that to the EPA attention.
  - Bob agreed that he has seen this same impact in other communities.
  - Maryjo asked who does the survey? What agency?
  - Bob added that there's a lot more to the Imperial Dam story, the state has been trying to get a fish passage and there's safety/compliance issues as well.
    - John added that on the Saranac they used to manufacture wallpaper and that would cause the color of the river to change depending on production.
- **LCBP Updates: Eric**
  - **Heather** - NEIWPCC had a big retirement, we have a new comptroller Lucia Walker who has been working under Linda, so we don't anticipate any issues.
  - NEIWPCC is hosting the annual Nonpoint Source Conference; registration is now open.
  - NEIWPCC has gone through a rebranding and will be unveiling a new visual identity and branding starting in April.
  - We have a total of 121 agreements through Lake Champlain, staff and I work together to get those agreements going.
  - **Eric**- Boat launch and E&O steward job postings have been posted and are open until 3/13. We are looking to hire 12 boat launch stewards, mostly on VT side because NY side is staffed by others. Looking for 1 on NY side because 1 is returning.
  - LCBP staff went to DC to meet with our congressional delegations on the VT and NY sides. We shared Basin Program completed projects (documents were sent): grants, staff-driven projects, concepts for congressional delegation to consider including AIS barrier on Chambly canal, update

on CVNHP, legislation associated with heritage areas. This is our 4<sup>th</sup> time meeting with delegations in DC and the staff are getting to know us.

- Grant award notices were sent out since our last Executive Committee meeting, we'll be issuing a press release soon that details all grants awarded since the fall.
- There will be a public meeting to discuss the sinking of Lake Champlain Ferry on 3/5 from 7-8pm in the Burlington Police Department community room, will send notice around. Hosted by the Sailing Center and the ferry company. Jim will be there.
- Upcoming LCBP meeting dates on the schedule below.
- No updates on VIDA.
  - Tom wants to be looped in on updates, Mario- next phase is implementation plan but level of funding is unclear.
  - Bob- Did PFAS come up during congressional visit?
    - Eric: Both NY and VT delegation asked about it, Liz Royer had been down there the day before so I was able to defer to her. NY delegation was interested, we are letting the states take the lead on that. Bob- NY does have draft regulations that are probably the most stringent in the country. Neil asked if the regulations are for surface or drinking water. Bob - just surface, there will be a drinking water MCL, update next week.
- Colleen: Love the Lake starts tomorrow night.

### 12:15 PM Lunch

### 1:00 PM EXECUTIVE SESSION: Grant review and FY20 Heritage Proposal Review (LCBP staff) Motion: John Krueger, second Neil Kamman.

- Review grant pre-proposals for Artist-in-Residence and FY20 CVNHP Budget Proposals.
- FY20 CVNHP pre-proposals
- Exit Executive Session
- **ACTION ITEM:** Motion to approve Grant awards.
  - **Motion:** A Motion to approve the Record of Decision for the Artist in Residency pre-proposals to move to full proposals and a Motion to approve the CVNHP full proposal as recommendation to SC to review in April was moved by Vic Putnam. John Krueger seconded. All were in favor.

### Final Updates:

- Eric will provide an update at the March meeting about the concept of a new LCBP staffer to support the three CACs.
- LCBP Continuous Process Improvement (Lean) – Pete LaFlamme worked with Julie and others to identify Justin Kenney as a facilitator. Eric will be working on the details with Justin.
- Pierre Leduc asked if LCBP can give an update for the LCBP Office location. Eric said not today, maybe at the March meeting.

### 3:00 Adjourn

### Anticipated Outputs for this meeting include:

1. Recommendation to Lake Champlain Steering Committee for FY20 Education & Outreach, TMDL projects.
2. Approval of pre-proposals for Artist-in-Residence program
3. Recommendation to Lake Champlain Steering Committee for FY20 Heritage Budget proposals

### Upcoming Meetings:

March 24: LCBP Executive Committee (Grand Isle, VT)

April 14-15: Lake Champlain Steering Committee 2-day budget meeting ([Crowne Plaza Hotel](#), Lake Placid, NY)  
May 14: LCBP Executive Committee (Grand Isle, VT)  
June 11: Lake Champlain Steering Committee (Vermont)  
September 9: LCBP Executive Committee (Grand Isle, VT)  
September 23: Lake Champlain Steering Committee (Quebec)

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	NEW YORK	\$ 195,850	\$ 195,850	\$357,262	\$0	\$195,850	\$0			
KF-3	E&O Coordination	NEIWPC	\$ 210,000	\$ 180,000	\$567,262	\$0	\$199,500	\$10,500			
KF-4	Communication and Publications	NEIWPC	\$ 275,000	\$ 275,000	\$842,262	\$0	\$261,250	\$13,750			
KF-5	Technical Coordination	NEIWPC	\$ 285,000	\$ 245,000	\$1,127,262	\$0	\$279,300	\$5,700			
KF-6	ANS Coordination	NEIWPC	\$ 230,000	\$ 190,000	\$1,357,262	\$0	\$225,400	\$4,600			
KF-7	LCBP Administrative Assistance	NEIWPC	\$ 120,000	\$ 122,000	\$1,477,262	\$2,400	\$117,600	\$0			
KF-8	Program Direction	NEIWPC	\$ 170,000	\$ 160,000	\$1,647,262	\$3,400	\$163,200	\$3,400			
KF-9	Office Operations	NEIWPC	\$ 72,000	\$ 80,000	\$1,719,262	\$1,440	\$52,560	\$18,000			
KF-10	Resource Room	NEIWPC	\$ 195,000	\$ 185,000	\$1,914,262	\$0	\$195,000	\$0			
KF-11	NEI Administration	NEIWPC	\$ 198,000	\$ 195,000	\$2,112,262	\$3,960	\$190,080	\$3,960			
KF-12	CVNHP Coordination	NEIWPC	\$ 185,000	\$ 165,000	\$2,297,262	\$185,000	\$0	\$0			
KF-13	Gordon Center House rent	VERMONT	\$ 18,500	\$ 18,500	\$2,315,762	\$0	\$18,500	\$0			
KF-14	State of the Lake 2021: Printing, copy-editing, full translation for website	NEIWPC	\$ 20,000	\$ -	\$2,335,762	\$0	\$20,000	\$0			
KF-15	Local Implementation Grants PP (300k) / AIS (200k) / OS (50k)	NEIWPC	\$ 550,000	\$ 550,000	\$2,885,762	\$0	\$522,500	\$27,500			
-	Additional LCBP office space	NEIWPC	\$ -	\$ 15,000	\$2,885,762	\$0	\$0	\$0			
<b>Funding Scenario FY2020</b>		EPA FY20 base	\$7,000,000	Category Sum					\$196,200	\$2,602,152	\$87,410
		EPA-2016 TMDL	\$6,386,000								
		NPS (CVNHP)	\$336,388								
		GLFC	\$619,500								
		Total	\$14,341,888								

January 2020 **Draft FY2020 LCBP Budget**

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	NEIW PCC	\$ -	\$ -	\$2,885,762	\$33,122	\$0	\$0
H-2	Local Heritage Grants*	NEIW PCC	\$ -	\$ 36,000	\$2,885,762	\$0	\$0	\$0
H-3	Interpretive Theme Grants*	NEIW PCC	\$ -	\$ 36,000	\$2,885,762	\$0	\$0	\$0
H-4	Quebec Regional Stakeholder Coordination*	NEIW PCC	\$ 2,200	\$ 2,200	\$2,887,962	\$0	\$0	\$2,200
H-5	Wayside Exhibit Program Continuation*	NEIW PCC	\$ 10,000	\$ 12,000	\$2,897,962	\$10,000	\$0	\$0
H-6	Annual International Heritage Summit*	NEIW PCC	\$ 8,000	\$ 7,200	\$2,905,962	\$8,000	\$0	\$0
<b>NHA Totals</b>			<b>\$20,200</b>		Category Sum	\$51,122	\$0	\$2,200

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 (240k), Professional Development (14k), Enhanced Outreach Grants (270k), Boots-n-Bugs 24k)	NEIW PCC	\$ 548,000	\$478,000	\$3,453,962	\$0	\$520,600	\$27,400
EO-2	Champlain Basin Education Initiative (CBEI) & Authentic Student Learning	NEIW PCC		\$24,500	\$3,453,962	\$0	\$0	\$0
EO-3	High School Watershed Steward Certification Program, Year 3	NEIW PCC		\$15,000	\$3,453,962	\$0	\$0	\$0
EO-4	Healthy Soils Phase 3	NEIW PCC		\$72,000	\$3,453,962	\$0	\$0	\$0
EO-5	Bioengineering and Shoreland Best Management Practices to Restore Living Shorelands and Protect Water Quality	VERMONT		\$62,000	\$3,453,962	\$0	\$0	\$0
EO-6	Production of Clean Water Videos	NEIW PCC		\$35,000	\$3,453,962	\$0	\$0	\$0
EO-7	Lake Champlain Education and Outreach Stewards	NEIW PCC		\$60,000	\$3,453,962	\$0	\$0	\$0
EO-8	StreamWise Stewardship	NEIW PCC		\$61,000	\$3,453,962	\$0	\$0	\$0
EO-9	Economic Valuation of Clean Water and Healthy Watersheds	NEIW PCC		\$5,000	\$3,453,962	\$0	\$0	\$0
EO-10	Artist in Residence Program	NEIW PCC		\$25,000	\$3,453,962	\$0	\$0	\$0
<b>E&amp;O Total</b>			<b>\$ 548,000</b>	<b>\$837,500</b>	Category Sum	\$0	\$520,600	\$27,400

**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	NEIWPPC	\$205,324	\$138,050	\$3,659,286	\$0	\$184,792	\$20,532
T-2	CORE PROJECT: NEIWPPC-- Lake Champlain Long-Term Water Quality and Biological Monitoring (LTMP)	NEIWPPC	\$154,000	\$150,000	\$3,813,286	\$0	\$154,000	\$0
T-3	CORE PROJECT: VERMONT DEC - LTMP	VERMONT	\$239,478	\$267,629	\$4,052,764	\$0	\$239,478	\$0
T-4	CORE PROJECT: New York DEC/SUNY Plattsburgh LTMP	NEW YORK & SUNY-Plattsburgh	\$185,000	\$185,000	\$4,237,764	\$0	\$185,000	\$0
T-5	CORE PROJECT: Cyanobacteria Monitoring	NEIWPPC-LCC	\$105,000	\$100,000	\$4,342,764	\$0	\$105,000	\$0
T-6	CORE PROJECT: Water Chestnut Management	VERMONT	\$150,000	\$90,000	\$4,492,764	\$0	\$150,000	\$0
T-7	CORE PROJECT: LCBP Enhanced BMP Grants	NEIWPPC	\$650,000	\$633,347	\$5,142,764	\$0	\$650,000	\$0
T-8	CORE PROJECT: AIS Rapid Response Fund	NEIWPPC	\$59,000	\$69,900	\$5,201,764	\$0	\$0	\$59,000
T-9	CORE PROJECT: NY Lake Champlain Basin Agronomy Support and Agriculture BMP Implementation	NEIWPPC	\$160,000	\$160,000	\$5,361,764	\$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	\$5,471,764	\$0	\$110,000	\$0
T-11	LINE ITEM: WWTF Optimization in Lake Champlain Basin - VERMONT: YEAR 2 of 3	VERMONT	\$150,000	\$150,000	\$5,621,764	\$0	\$150,000	\$0
T-12	LINE ITEM: NY/VT Forest P Load Allocation	VT/NY	\$200,000	\$0	\$5,821,764	\$0	\$200,000	\$0
T-13	LINE ITEM: Rural Roads General Permit & BMP Implementation: New York	New York	\$100,000	\$0	\$5,921,764	\$0	\$100,000	\$0
T-14	LINE ITEM: Rural Roads General Permit & BMP Implementation: Vermont	VERMONT	\$100,000	\$0	\$6,021,764	\$0	\$100,000	\$0
T-15	LINE ITEM: VAWQP Coordination Support	NEIWPPC	\$30,000	\$0	\$6,051,764	\$0	\$0	\$30,000
<b>Tech Total</b>			<b>\$ 2,597,802</b>		<b>Category Sum</b>	<b>\$0</b>	<b>\$2,488,270</b>	<b>\$109,532</b>

	Budget	Allocated	Remaining
EPA FY20 base	\$ 7,000,000	\$ 5,611,022	\$ 1,388,978
EPA-2016 TMDL	\$ 6,386,000	\$ -	\$ 6,386,000
NPS (CVNHP)	\$ 336,388	\$ 247,322	\$ 89,066
GLFC	\$ 619,500	\$ 226,542	\$ 392,958
	<b>\$ 14,341,888</b>	<b>\$ 6,084,886</b>	<b>\$ 8,257,002</b>

**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](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 30<sup>th</sup> 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**

1. **Task Title:** Capacity and Resources to Improve Shoreland Management Practices in Vermont and New York
  
2. **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.
  
3. **Submitted by:**  
Amy Picotte, VTDEC, Watershed Management Division  
1 National Life Drive, Main 2  
Montpelier, VT 05620  
[Amy.Picotte@vermont.gov](mailto:Amy.Picotte@vermont.gov)  
Lauren Townley, NY DEC, Bureau of Water Resource Management  
625 Broadway  
Albany, NY 12233  
[lauren.townley@ny.dec.gov](mailto:lauren.townley@ny.dec.gov)
  
4. **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.

**5. 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**

**6. Post-Project monitoring:** Success of the program will be measured through training evaluations, including an assessment of knowledge pre- and post-training; the number of

shoreland assessments conducted; the number of best management and bioengineering practices installed; and the use of publications, including fact sheets and manuals, through online analytics and printed copies distributed.

**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).**

Total request is \$40,000 as outlined below.

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.

## E&O FY2020 Budget Task Ranking

Please score all criteria from 0-10 (low to high) for each project. See criteria descriptions below.

Task ID	Task	Average Score	Cost	Cumulative Cost
8	E&O Grants	57.4	\$394,000	\$394,000
9	Streamwise, Phase 2	56.4	\$40,000	\$434,000
2	Outreach Professional Development Trainings for Watershed Managers	56	\$17,000	\$451,000
3	Unified basin-wide stormwater technical	55.2	\$126,284	\$577,284
1	TMDL Tool Video Dissemination	53.8	\$20,000	\$597,284
4	State of the Lake Newspaper Insert	53	\$6,000	\$603,284
5	Vermont Lakewise	51.8	\$72,000	\$675,284
7	E&O Stewards	51.6	\$60,000	\$735,284
6	TMDL Tool Website	49	\$20,000	\$755,284

### Scoring Criteria

(each scored 0-10, lowest to highest, no weighting)

- Compatibility with existing Plans
- Feasibility
- Measurable Outcome
- Cost Effectiveness
- Likelihood of Success
- Extent of Collaboration
- Environmental Impact

# VTDEC Proposed TMDL Projects FFY2020

VT DEC Innovations Team  
Water Investment Division  
Watershed Management Division

Presented by: VTDEC Interim LCBP Coordinator

# Purpose of funding

- ***Lake Champlain.—The Committee recommends \$13,390,000 for the Lake Champlain program, an increase of \$2,000,000 above the enacted level and the Agency’s fiscal year 2019 operating plan. From within the amount provided, \$7,000,000 shall be allocated through the Lake Champlain Basin Program Process. Funds appropriated above \$7,000,000 shall be directed to projects determined to make the most significant, achievable, and measurable progress towards meeting the phosphorus reduction targets of the EPA’s 2016 Phosphorus Total Maximum Daily Load Plan for Lake Champlain in the State implementation plan.***

FFY19  
Projects

Project	Projected Cost
Floodplain Restoration and Functional Assessment	\$ 600,000
Using GSI (Green Stormwater Infrastructure) and Other Technologies to Reduce Combined Sewer Overflows (CSOs)	\$ 1,100,000
Internal Loading Assessment and Modeling Study on Missisquoi Bay	\$ 250,000
Design and Construction of Green Stormwater Infrastructure at Public Schools in the Lake Champlain Basin in Vermont	\$ 1,100,000
Implementation Support Program for Forestry Accepted Management Practices	\$ 450,000
Nutrient Load Source Identification in the Lake Carmi Watershed	\$ 200,000
Farm Agronomic Practices (FAP) Program	\$ 475,000
Program to Expand and Accelerate Wetland Conservation and Restoration in Vermont's Champlain Basin	\$ 1,325,000
Municipal Grants-In-Aid Road-Runoff Reduction and Treatment Program	\$ 1,000,000
Enhanced Implementation of Vermont Environmental Stewardship Program	\$ 100,000
<b>TOTAL</b>	<b>\$ 6,600,000</b>

FFY2020

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

## Deer Brook

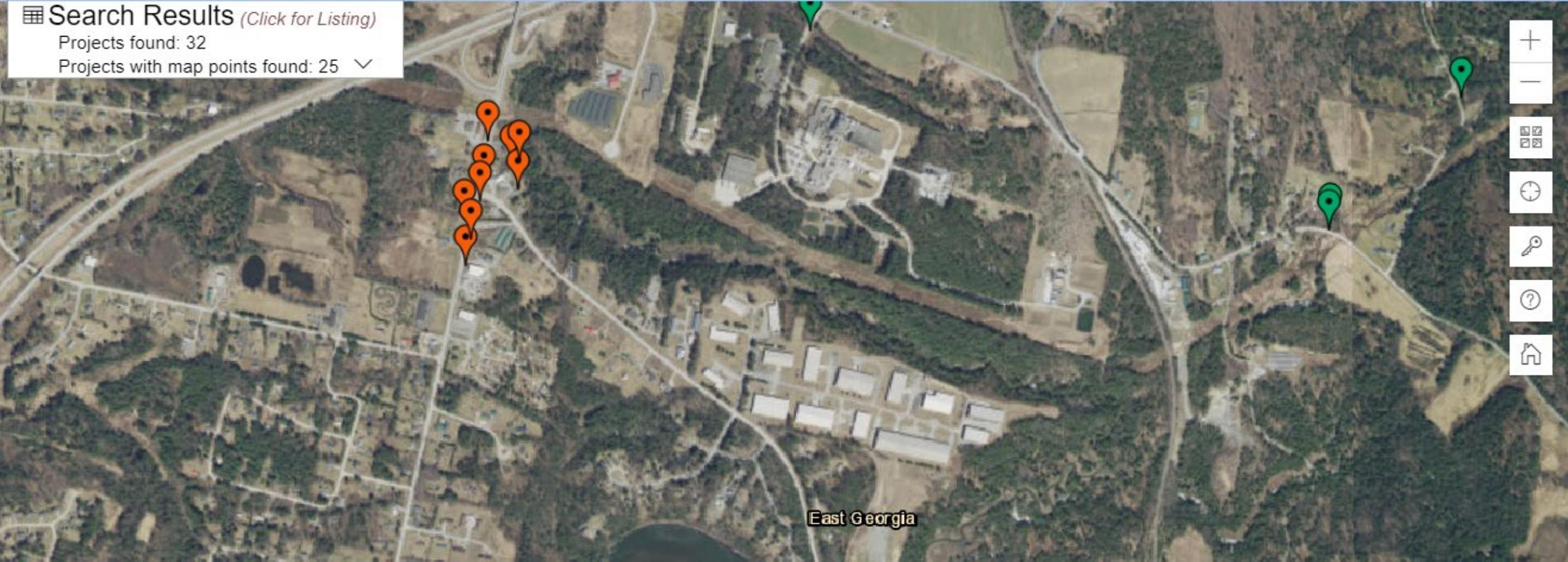
- Eroding gully in Georgia
- Priority for Basin 7 Tactical Plan
- Several SWTP, and restoration of the gully itself.
- TSS redux of 53,000 lbs/yr
- TP redux of 20 lbs/yr



Search Results *(Click for Listing)*

Projects found: 32

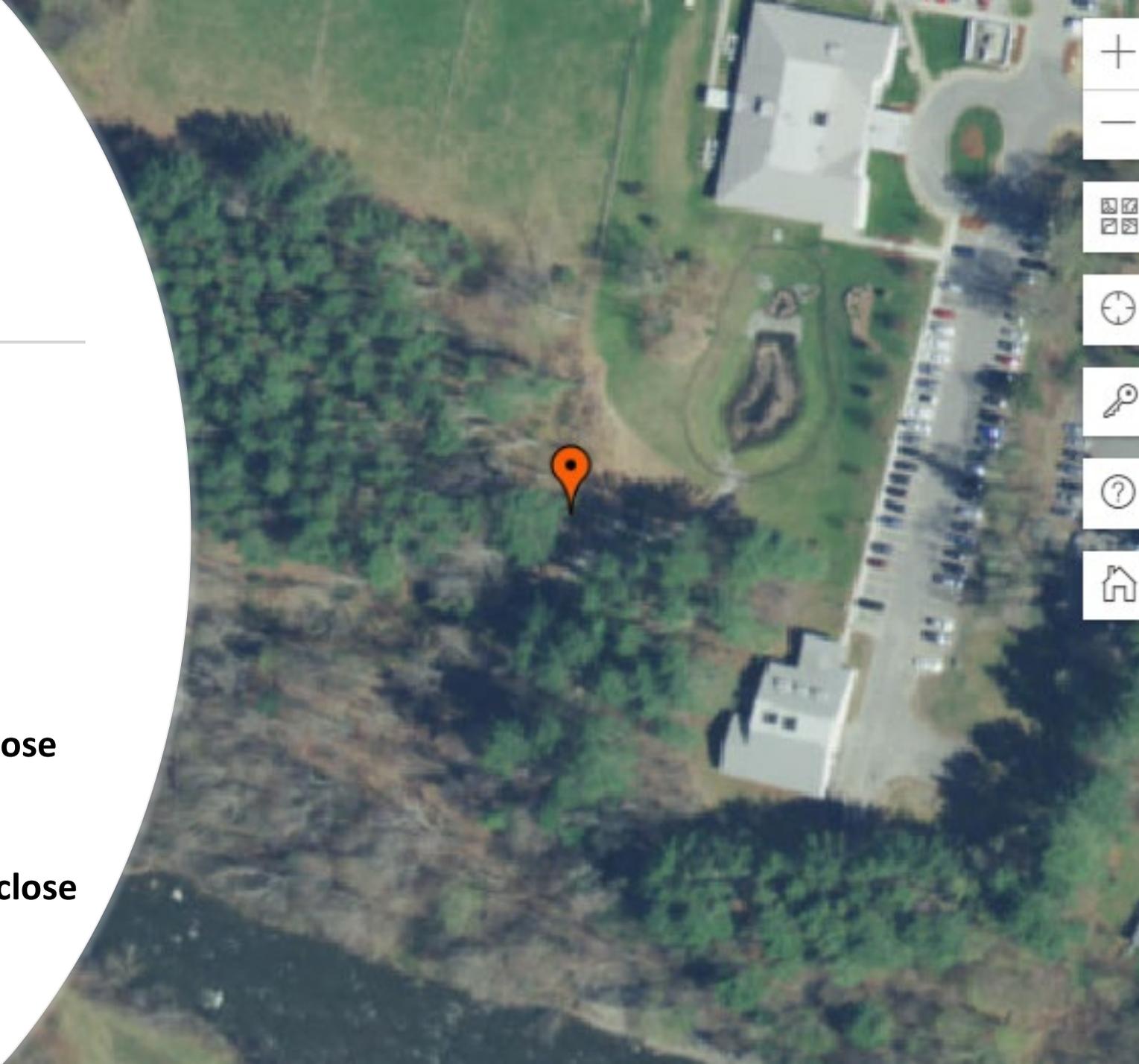
Projects with map points found: 25



# Deer Brook SWTPs and locator

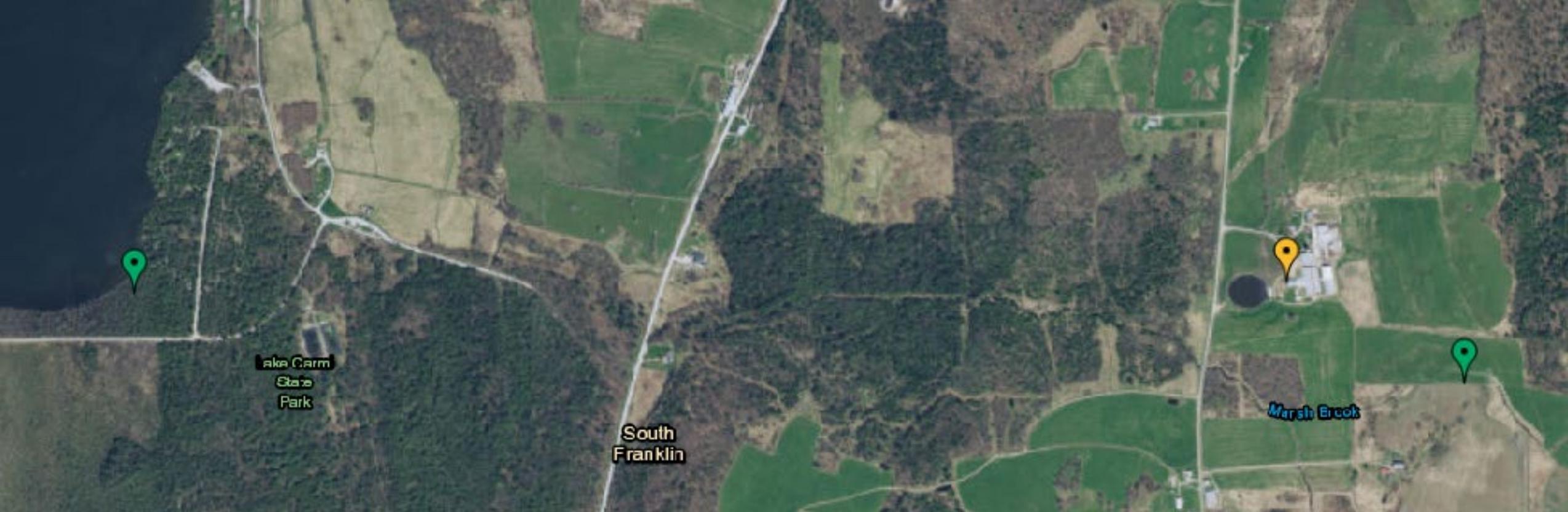
# Winooski Headwaters Targeted Intervention

- **The Plainfield Gully**
  - Infiltrations and Step Pool SWTP
  - Gully restoration
- **Moscow Woods Gully Restoration**
  - Subsurface chamber SWTP
  - Gully restoration
- **Woodbury combined SWTP - GSI**
  - Four specific projects from SWMP in close proximity
- **Berlin combined SWTP**
  - Three specific projects from SWMP in close proximity
- **Total Pollution redux**
  - 293 lbs/yr for 20+ years





Detail of Gully below new SWTP



## Lake Carmi Targeted Restoration

- **Marsh Brook stream restoration and culvert remediation**
  - \$400K
- **Augmented funding for private roads implementation to complement FY19 Carmi roads project.**
  - \$200K

# Green Schools Initiative to Support Stormwater Compliance



Continues FY19 Program



Will result in 12 schools being fully permitted under the three-acre permit (\$250K EFA/design/engineering).



Fund a SWMP for three VSC campuses (\$75K)



Implementation (\$1.44M)

Three already-designed VSC SWTPs  
Installation of required practices at schools  
32-48 acres treated depending on practices needed.



Project	Town	Restorable acres	Total acres	% restored
Derosia-Rock River	Highgate	21	124	17%
Connor-Dead Creek	Addison	88	93	95%
Plouffe-Malletts Creek	Colchester	20	80	25%
Padvaiskas-East Creek	Orwell	10	38	26%
Senesac-Intervale	Colchester	104	142	73%
Roorda-Dead Creek	Addison	194	214	91%
Jackson-Dead Creek	Panton	119	124	96%
Fitzgerald - Intervale	Colchester	100	124	81%
<b>Grand Total</b>		<b>656</b>	<b>939</b>	<b>70%</b>

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

- Continues FY19 Program
- Continued investment in highest priority wetland restorations
- \$1,650,000





Fitzgerald / Senesac Property

1 inch = 3,333 feet



## Enhanced Agricultural Practice Implementation

- **\$1,150,000**
- **Farm Agronomic Practices**
  - **Manure Injection Operation in Lake Carmi Watershed**
  - **Development of Manure Injection Capacity for another targeted watershed (Rock?)**
  - **Continuation of practice implementation**
- **Two-tier Ditches (\$250K)**
- **Innovative Silage Leachate Treatment**
- **Tile Drainage Management Structures (\$50K...20-40 structures)**

# The Addison County Injection/Dragline Rig



FFY20 Vermont TMDL IMPLEMENTATION PROJECT PRIORITY LIST - 02/01/2020			
Project #	Project	Cost	Project Summary
1	Deer Brook Restoration Project	\$ 400,000	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 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. 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. 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.
2	Winooski Headwaters Targeted Intervention	\$ 825,000	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 small stream to arrest long-standing gully erosion and headcutting. Coupled with in-gully restoration, this project will yield an estimated 163 lbs/year reduction in phosphorus delivered directly to the Winooski River, costing \$225,000. In addition, the following projects in this same general geographic vicinity are also proposed: 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; and the Kingsbury Branch Moscow Woods Road Post Office Stormwater Detention/Gully Restoration project. On top of the Plainfield gully work, these additional efforts will yield 830 lbs/year of phosphorus at a cost of \$600,000.
3	Lake Carmi Watershed Restoration	\$ 600,000	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 Mississippi 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 implement the highest priority shovel-ready remediation opportunities, focusing on stream corridor projects and mitigating runoff from private roads, to reduce phosphorus and sediment loading to Lake Carmi and the Pike River, addressing phosphorus impairment in Lake Carmi and the Mississippi Bay Section of Lake Champlain. In addition, this project will also build upon an FY2019 TMDL project in the Lake Carmi Watershed which has funded a complete private and park road erosion inventory, and will construct a small number of road erosion projects later in 2020. We propose to add an additional \$200K into this project to implement high-priority road remediation projects in support of Lake Carmi improvement for 2021, reducing phosphorus runoff to the Pike River and Lake Champlain. 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.
6	Green Schools Initiative to Support Stormwater Compliance	\$ 1,765,000	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 phosphorus 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-CCV campus, Castleton University and 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. Of the estimated total \$1.77M cost, \$75,000 will support State Colleges stormwater master plans, \$250,000 will support bringing up to 12 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 additional substantial pressure to local school budgets, at a time where local school financing in Vermont is particularly challenging.
7	Priority Wetland Acquisition, Restoration, and Conservation to Improve Water Quality in Vermont's Lake Champlain Basin	\$ 1,650,000	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 a 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 2/3s restorable wetlands, which is expected to yield roughly 600 acres of restored wetlands within these acquisitions.
8	Enhanced Agricultural Practice Implementation	\$ 1,150,000	Federal NRCS support for agronomic and conservation practices will be lower in FFY20 than in prior years, due to the expiry of the so-called "Vilsak funding," which provided an additional \$8 million/year to the Lake Champlain Basin for the past five years. These Vilsak funds complemented annually appropriated NRCS funding, and Regional Conservation Partnership Program support, both of which are on-going. This proposed \$1.15 million funding will provide a combination of support for the following: 1. \$750,000 to Vermont Agency of Agriculture, Food and Markets (AAFM) Farm Agronomic Practices Program between 2020 and 2022: The AAFM Farm Agronomic Practices (FAP) Program utilizes state funding to help Vermont farms implement soil-based agronomic practices that improve soil quality, increase crop production, and reduce erosion and agricultural waste discharges. Eligible practices include cover cropping, crop rotation, strip cropping, cross-slope tillage, conservation tillage, and manure injection; some of the most cost-effective phosphorus reduction practices available. 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. \$250,000 for installation of field ditch floodplains (i.e., 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. With this funding, approximately 10 ditches, covering nearly 20 miles of streambank will be installed, extending the visibility and demonstration value of the first pilot two-tiered ditch project installed in Franklin County in 2018. 3. \$50,000 for tile drain management, specifically, drainage control structures. 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. The cost of the structures can range from \$300 to \$1,000 each, depending on installation locations and current status of tile. Funding of \$50,000 would enable the installation of 20-40 structures. 4. \$100,000 for barnyard/production area silage leachate system: Development and implementation of several low-cost 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.
<b>TOTAL</b>		<b>\$ 6,390,000</b>	

## **TAC updates for Executive Committee, February 19, 2020**

TAC met once since the January Executive Committee meeting with three main agenda items:

- Reviewed and approved proposals for FY20 Vermont TMDL implementation projects. The Executive Committee will consider these today.
- TAC member Andrew Schroth presented his team's work on the drivers of internal and external phosphorus loading in Lake Champlain.
- TAC member Leigh Walrath presented on his team's work using BioBase and drones to inform presence of wetlands in the Adirondack Park.

The TAC has three busy meetings coming up:

### March

- Workplan/QAPP review: Research to quantify groundwater phosphorus sources to Lake Carmi (Jon Kim, VTDEC)
- Technical full proposal review. Request closed on Friday, TAC will be reviewing these over the next few weeks.

### April

- Workplan: Lake Carmi road assessment and improvement project
- Workplan: Missisquoi Bay legacy phosphorus management study
- Review core project interim reports and workplans
- Review: Buoy / sensor proposal for the Long-term Monitoring Program. Executive Committee will review recommendation in March.
- Review: FarmPREP and Newtrient APEX modeling final reports

### May

- Review core project interim reports and workplans
- Presentations: Lake Champlain oil spill risk (Jason Scott, LC Sea Grant), lake trout growth and distribution (Ellen Marsden, Pascal Wilkins)

### Other updates:

- Rock River Geomorphic Assessment project phase 1 is complete for Quebec. Report is almost finalized, will be available soon.
- Technical feasibility (phase 2) for Jewett Brook treatment train project has had delays but is moving forward.