

Lake Champlain Basin Program
Technical Advisory Committee meeting
Held remotely over Microsoft Teams due to COVID-19
Wednesday, September 2, 2020, 8:45 AM – 2:00 PM

Approved TAC Meeting Summary

Attendance: Leigh Walrath, Oliver Pierson, Lauren Townley, Bill Ardren, Ryan Cunningham, Mario Paula, Mark Malchoff, Angela Shambaugh, Margaret Murphy, Ryan Waldron, Bridget O'Brien, Andrew Schroth, Neil Kamman, Bryan Dore, James Jutras, Eric Perkins, Jamie Shanley, Steve Kramer, Curt Gervich, Ryan Davies, Jean-François Cloutier, Ryan Patch

LCBP Staff: Matthew Vaughan, Lauren Jenness, Mae Kate Campbell, Sarah Coleman, Meg Modley, Eric Howe, Jim Brangan

Guests: Kim Jensen, Tim Howard, Erin White, Amy Conley, Laura Shappell, Alice Halloran, Beth Gilles, Philip Smith, Shahid Shaikh, Tom Berry, Diana Butler, Daria Mazey, Ritaf Salim, Brendan Newell, Daniel Hofman, Koon Tang, Dag Madara, Dexter Lefavour, Steve Landry

Project workplan review: Using multi-metric modeling, field surveys, and online spatial tools to support conservation and management for flood resilience, water quality, and native species habitat (*Tim Howard, New York Natural Heritage Program, The Research Foundation for SUNY*)

- Tim Howard, Erin White, Amy Conley, and Laura Shappell presented.
- Bill Ardren asked how the sites for field sampling will be selected.
 - Tim: we welcome advice from TAC for the method. Workplan details a stratified range methodology where they will randomly choose a range of predicted sites based on their land use category.
 - Bill: sounds like a solid plan. It may make sense to do a few additional sites that are being sampled by other agencies. For example, USFWS is sampling sites on the Ausable and Bouquet rivers. We should stay in coordination to leverage sampling with ongoing projects.
- Neil Kamman asked what attributes are being used to model the biologic response.
 - Tim: workplan details using landscape metrics (% land use / land cover categories) stream reach metrics (soil type, amount of drop, etc.) and watershed level metrics (upstream of reach soils, LULC categories, etc.) based on the stream reach catchments derived within the NHD datasets.
 - Neil: are you planning to do statistical analysis to see the correlations between land uses?
 - Tim: we will use a regression analysis to complete a continuous score.
- Leigh Walrath: are you anticipating a sampling bias when you get into urban/exurban areas if you are unable to access areas due to lack of landowner consent?
 - Laura: Using our stratified random sampling method, we generate an initial sample draw of “base” points and if we are unable to access a random point (e.g., lack of permission, doesn’t meet our sampling criteria, or intermittent stream is dry when we try to survey) we pull from the “overdraw” [back up] points within the same stratification class. That is, we replace urban with urban.
 - Neil: Sounds like you are taking a page from EPA NRSA probability sampling framework. I support that approach.
 - Laura: exactly. We have used this approach for several EPA Wetland Program Development Grants

- Tim: NYNHP has had a fair number of EPA wetland program grants in which we've been able to get on private land. In this project we will try to get on as many properties as possible. We have had success in past projects, such as working in Rochester.
- Leigh: APA may have some additional wetland maps that we can provide that aren't out in the public sphere. We had a wetland biologist (now retired) who was working on a town-by-town delineation of wetland areas within the park using the LCBP-funded 2018 LiDAR and an APA tool.
 - Matt Vaughan provided this link: 2018 High resolution (1m) land cover data: <https://www.lcbp.org/publications/high-resolution-land-cover-mapping-of-the-lake-champlain-basin/>
 - Jaime Shanley provided this link: Another potential source (remotely sensed) for identifying wetlands. A new source that isn't as widely distributed yet. It may be relevant for identifying small wetlands: https://www.usgs.gov/center-news/new-landsat-level-3-science-product-uncovers-changes-surface-water?qt-news_science_products=1#qt-news_science_products
- Mario Paula: do you have any thoughts on including NYSDEC wetland maps (county maps, regulatory level) in addition to the NWI wetlands layer?
 - Tim: there are three options (four and maybe five if you count the maps Leigh and Jaime just mentioned) that the project team is aware of that map wetlands in the project area. (NYSDEC, NWI, APA) and the project watershed is not all within APA. The different types of wetland maps all vary a little in their precision and typically the DEC regulatory maps are a bit coarser in resolution. It will be an important part of the project to look at all 3-4 map types and choose the best representation for a given area.
- Neil Kamman added that VT has a new initiative called the Functioning Floodplain Initiative. They are conducting a robust analysis using LiDAR to model flood frequencies and attenuation. Neil is happy to connect if you want to know more information.
- **Motion to approve the workplan:** Leigh. Angela seconded.
- **Discussion:** none.
- **Vote:** all in favor. No abstentions.

Updates, announcements, review and approve summary of previous TAC meeting

Updates

- Curt: the IJC LCRR flood study public meetings are coming up Sept. 29th (French) and 30th (English). Following those meetings will be public technical webinars weekly. Link will be sent around in TAC follow-up email.
- Jamie: I mentioned previously that there were five USGS stream gauges that were potentially on the chopping block due to lack of VT State funding. State funding came through so those will continue running. Five groundwater monitoring wells in the Basin are funded by VT State, and the State has not been able to come up with their match. USGS will keep monitoring them through June in hopes State can come up with match; NY has three wells in the basin that are continuing. Wells are used in drought status updates.
- Oliver: VTDEC watershed management division stormwater program is on the cusp of putting out the new 3-acre permit, delayed a bit but should come out any day now. Vermont would have received a failing grade on the TMDL without this measure. Two permits are out on public notice for lampricide treatment in the Lamoille and Missisquoi, one amendment on the LaPlatte. There's an existing permit on the Winooski. Treatments begin in Oct. In collaboration with DOH, we're beginning to work on a cyanobacteria response plan for Lake Champlain and inland lakes. The plan documents existing procedures and identifies roles and responsibilities of state actors.
 - Neil added that the 3-acre permit came out yesterday.

- Neil: the VT general assembly is looking at recommendations of the clean water fund, thought they would be looking at a 30% loss due to COVID, final outcome is closer to 15%, about a level fund for FY20. Look forward to the legislature approving budget. The north Champlain direct tactical basin plan will be issued in the coming weeks, there's new information and technology on downscaled allocations for P reductions, which complements the 3-acre permit.
- Andrew: in partnership with Oliver we have a webpage with high frequency data on Lake Carmi, EPSCoR is doing the same in St. Albans and Missisquoi Bay. The state also has Carmi data on their webpage. Worked out well for stakeholders in Carmi.
 - Matt: are those public and ready to share? Andrew: Lake Carmi data are sharable, St. Alban's and Missisquoi are nearly ready.
 - <https://anrweb.vt.gov/DEC/DECWeb/carmi.aspx>
- Tom: On the federal appropriations front, we are likely going to go to a continuing resolution by the end of September. A government shutdown does not seem likely, however budget discussions aren't going too smoothly. We assume a continuing resolution will be passed by the end of September, and that we will be under it until after the election. Things can change but that's the best guess at this time. I would guess that the only piece of legislation to pass in September will be COVID recovery and the continuing resolution. The Water Resources Development Act bill is queued up but might need to wait until after the election.
- Jean-François: we are working with the town of Bedford at the water production facility, asking them to do more comprehensive testing of pesticides to coordinate with lampricide treatments in Missisquoi Bay.

LCBP Updates

- 2020-2021 TAC schedule
 - Matt shared the schedule (available on Dropbox). Matt will send out meeting invites for all the upcoming meetings.
 - Margaret was not on the email. Matt will check the new member email list and fix any problems.
- Membership updates
 - Breck stepped down due to obligations at UVM. Matt thanked him for his years of service and former TAC chairing.
 - Fred retired; Lauren Townley joined
 - Jean-Francois Cloutier is now the official QC designee to TAC; Stefanos has a new job with MELCC.
 - Ryan Waldron is still fairly new to TAC, appointed in April
 - Bernie Pientka has stepped down, Margaret Murphy appointed to the TAC in June
 - Several TAC members will be retiring soon.
 - Oliver Pierson will be stepping in for Angela Shambaugh in her role after her retirement.
 - Margaret introduced herself: she is the fish program manager for VT FWS. Masters and PhD from SUNY ESF on salmon research.
 - Lauren: research scientists DEC ALBANY. Oversees Chesapeake Bay and Mohawk River programs, been involved in Lake Champlain. Works to develop TMDLs.
- RFP release dates
 - PPHC/AIS: Release Sept 16, due late Oct.
 - Enhanced: Release Sept 16, due late Oct.
 - Technical RFPP: release late Sept, due early Nov
- DEI Update
 - Mae Kate provided an overview of LCBP's Diversity Equity and Inclusion (DEI) work. LCBP is in the process of identifying a DEI consultant group to work with, has been

working to identify public health and safety documents that would be beneficial to translate, and has initiated outreach through the Cultural Broker's program (group of liaisons to New American communities).

- Neil: Water investment division is looking to improve access to water quality funding to all communities.
- Curt: I applaud LCBP for taking on this DEI work. It's important work and I am glad to see LCBP leading the way.
- New TAC member recruitment and nomination explanation/update
 - Matt: we are thinking we will hold off on nominations until we are further along in DEI consultation process. Thinking about moving towards a request for qualifications process rather than nomination from current TAC members. Want the benefits of both models.
- Upcoming Executive Committee /Steering Committee Meetings
 - EC Sept 9
 - SC Sept 23
- Grant writing workshop
 - Lauren: LCBP will be hosting three sessions of grant writing workshops with consultant Anne Lezak and State partners next week on Tuesday September 8th and Thursday the 10th. The workshops are geared toward our local partners and will cover grant writing best practices for applying to any grant program as well as time to ask staff specific questions. The workshop sessions, with the exception of the break-out groups, will be recorded and made available on the LCBP website afterwards. Please reach out to me if you have any questions.
- ESI Mapping Project
 - Lauren: Over the summer LCBP hired an intern - Emily Ray - who just graduated from Middlebury College, to complete a draft resource inventory for the creation of Environmental Sensitivity Index (ESI) maps for Lake Champlain. As a reminder, ESI maps, a NOAA program, detail at risk shoreline, biological, and human use resources that would be at risk during an oil spill. The TAC heard from Jason Scott last May who presented this recommendation as part of his Master's thesis completed through UVM/Lake Champlain Sea Grant on Oil spill emergency response planning for Lake Champlain. Although her internship was short and ends this week, Emily was able to pull together a great list of the data requirements needed and the members of the ESI workgroup and Federal Partners Workgroup plan to keep the momentum going to complete the project over the next few years.
 - Separately, EPA is in the process of obligating funds to complete the shoreline classification portion of the ESI maps which will tie in with the completion of the Lake Champlain Geographic Response Plans that have been created.
- Boat launch steward program 2020 season status
 - Meg – this season we definitely had challenges. We were able to staff the program with 11 stewards from Memorial Day through Labor Day. Challenges included: using smaller decontamination units, refilling water barrels (dependent on other partners that couldn't participate this year, had to hire pool filling company), units are heavy and don't recycle water like larger units, stewards are being harassed about wearing masks, but they are doing a good job sticking with their PPE. We've seen an increase in boat traffic: inspected 15,000 (usually only 10,000 by this time). Boating is perceived as a pandemic-friendly activity. Seeing fewer out of state boats. Holding weekly Zoom staff meetings has been really helpful, usually we only meet in person 4-6 times a year. We will be more prepared than ever for whatever comes in 2021.
- Clean Water Act Anniversary Knowledge Cafe announcement
 - Jim Brangan: CVNHP is one of 55 national heritage areas in the country. The heritage area has 3 interpretive themes. This year the focus is on the making of nations

interpretive theme, centered on the centennial of women's suffrage. Next year we will be concentrating on the corridor of commerce interpretive theme, with a focus on prohibition and smuggling. In 2022 we go back to the conservation and community interpretive theme to celebrate the 50th anniversary of the Clean Water Act. We are looking for assistance from TAC to help with this focus. We are at the beginning of the budget cycle for 2022, and we start that with a summit. Due to COVID we will be holding virtual knowledge cafes: the 17th is about continuing the celebration of women's suffrage, the 20th is a discussion on prohibition and smuggling and temperance and how women's suffrage plays into that too, then on the 8th (10am) will be the clean water act. Can report back to TAC after that discussion, and TAC members can attend on the 8th.

- Neil: CVNHP does really good work! Great opportunity to intersect technical with cultural education.

Review and Approve Summary of Previous TAC Meeting

- **Motion to approve the summary:** Mark. Angela seconded.
- **Discussion:** Neil - page 5, in the conversation about the SOL under toxics section, under Leighs comments, there is a 3rd bullet that does not make sense. Should address.
- Jamie - scroll up 1 page there is a typo. Concert instead of comment. Matt fixed it.
- **Vote:** None opposed, none abstained.

Project workplan review: Port Henry Stream study (*Alice Halloran, Essex County SWCD*)

- Alice presented.
- Mark Malchoff mentioned that one "elephant in the room" for this study will be that a lot of the shoreline/near-shore sediment in Port Henry consists of mine tailings intentionally deposited by Republic Steel and its predecessors. It is likely beyond the scope of this project to study those effects as the project is focused on water quality, delta accretion, and HABs, but this history should at minimum be mentioned in the report.
 - Neil: while it is true that the mine tailings may be a cause for some of the HABs, it also makes me think that this study is a good opportunity to look at the upstream rivers to see what is there and identify projects for funding.
- Margaret Murphy asked how the NYS HAB Action Plan has been incorporated into this workplan. The project seems like a necessary study that could leverage NY funds to reduce HABs.
 - Alice: While funding is so uncertain right now, this project will help identify opportunities for action related to the NYS HAB funds that can be made ready when funding is available. The HAB Action Plan for Port Henry has some wastewater and agricultural lands pinpointed. Also, through their office we have funding that is specific to the SWCD to help farms with resource concerns.
 - Koon Tang: in my mind the NYS HAB Action Plans are fairly high-level. Through this study we can ID BMPs/implementation projects that can be utilized in a number of NYS grant programs.
- Angela Shambaugh: much of the high flow events for a given season will occur before the May-Oct schedule that's proposed in the workplan and therefore you may want to extend your sampling season into early spring to capture snowmelt. You also may want to look at the historical flow data for the streams you are sampling to help you plan better. For example, smaller streams are flashy so you would need to sample them very close to a rain event. The Long-Term Monitoring Program tries to get to a sampling site very quickly after a rain event. The NY team coordinated by NYDEC operating out of SUNY Plattsburgh that may be able to give you tips about this.

- Alice: thank you. Yes, the first goal is to reach out to those people to get advice on the sampling methodology and on the project as a whole.
- Leigh Walrath mentioned that the Mill Pond Dam was removed seven years ago from Mill Pond Brook and that paying attention to that stretch of stream will be important for understanding sediment loading/movement.
- Neil Kamman said that, as the project team translates the workplan into a QAPP, it may be worth considering how much effort (sampling and focus) should be placed in phase 2 versus phase 3 versus a River Corridor Plan which could set the stage for more projects. This can be talked about in coordination with the advisory committee and VT state staff would be willing to participate.
- **Motion to approve the workplan:** Angela. Second by Leigh.
- **Discussion:** none.
- **Vote:** None opposed. All in favor.

Review US Army Corps of Engineers project summaries

- Meg provided an overview of the 542 program and offered to provide a short, more in-depth explanation to new TAC members on a separate call. TAC reviews these projects in terms of technical feasibility and the degree to which they address basin priorities, as they are a collaboration with the Corps, State partners, and LCBP.
- Daria provided an explanation of the Corps role in this work and introduced the Corp partners.

Vergennes stormwater infrastructure development project (*Daniel Hofman, City of Vergennes, and Dexter Lafavour, Tata and Howard*)

- Daria introduced the project: wastewater facility improvement, proposed non-federal sponsor is the Vermont City of Vergennes with the potential for additional partnership with VTDEC. Corps have reviewed this project for applicability within the 542 program. The project objectives are: improve water quality, ecosystem health, and public health by eliminating/reducing sewage overflows and upgrading aging wastewater treatment facilities. Dexter continued the presentation.
- Neil: An opportunity to strengthen the application is the fact that the City is under an order from the State to fix the sanitary overflow. The receiving reach is a stressed water as well.
- **Move to recommend the project for review by the Executive Committee:** Angela. James Jutras seconded.
- **Discussion:** Neil said this is an interesting and healthy direction for the 542 program to move, leveraging Corp expertise in smaller communities that face significant barriers to large funding projects. Neil mentioned the possibility of State co-funding through the revolving loan fund. Koon added on the NY side there should be a grant program that can be leveraged, and highlighted the community benefits these projects would have. Jim noted both of these projects have taken all the proper planning steps. Mark felt all these projects address significant needs.
- **Vote:** All in favor, none opposed, Neil abstained.

Village of Whitehall, New York stormwater improvement project (*Koon Tang & Dag Madara*)

- Mayor Smith of Whitehall noted their situation in Whitehall is similar to Vergennes. Just this last week Whitehall was inundated with flood waters: 75 homes were impacted by the flash flood.
- Koon presented.
- Daria Mazey commented: Mayor Smith, we have floodplain risk management programs which may be able to help you figure out how to best address your flooding problem. The 542 program is focused on environmental assistance and water quality but we should see if we can further leverage federal technical assistance through a different program to find a more complete solution that also looks at flooding. She offered to follow up.

- **Move to recommend the project for review by the Executive Committee:** Mark. Leigh seconded.
- **Discussion:** none.
- **Vote:** All in favor, none opposed, no abstentions.

Review FY21 core project budget summaries

- Boat Launch Steward Program
 - Meg Modley of LCBP presented the FY21 core project budget summary. No questions were asked.
- Aquatic Invasive Species Rapid Response Fund
 - Meg Modley of LCBP presented the FY21 core project budget summary.
 - Neil Kamman asked why there is an indirect rate included in the budget as it is a contingency fund.
 - Meg: the indirect cost is there because we won't know if we need to subcontract out for this work and if that is the case the funds would be broken up into smaller projects. NEIWPC varies in their indirect rate. As a reminder, if the funds are not used, they are moved into the invasive species spread prevention grant program.
 - Mark Malchoff asked if the quagga mussel eDNA sampling project, that was on hold due to COVID, will restart soon.
 - Meg: The Rapid Response Task Force did use some funds for early detection of quagga mussels using eDNA. However, they don't currently have funds set aside to do the work. We don't know if the project would be under these funds or other funds. There is a USACE Section 542 project from the Lake Champlain Maritime Museum on this.
- Long-term Monitoring Program
 - Angela Shambaugh of VTDEC presented the FY21 core project budget summary.
 - Neil Kamman asked how the equipment is holding up and if the TAC should be thinking about this, especially with Angela's retirement.
 - Angela: We have invested recently in equipment. The motor is in good shape and the boat and trailer are a couple of years old. We usually do have some extra funds available for a flat tire fix, etc.
- Long-term Monitoring Program sensor array
 - Matt Vaughan of LCBP presented the FY21 core project budget summary.
 - Neil Kamman stated he is glad to see a replacement cost built-in and asked if the idea for this part of the funding is to build up funds to do ongoing maintenance.
 - Matt: Yes. Also, because the sensor array is not up and running yet, we don't know what the staff commitment will be like.
- Cyanobacteria Monitoring Program
 - Lori Fisher of Lake Champlain Committee presented the FY21 core project budget summary.
 - Mark Malchoff asked Lori to clarify the public's use of the online map.

- Lori: the map viewing numbers have increased dramatically. The Vermont Health Department did a great job of updating the tracker this year with photos and other features.
- Bridget O'Brien: between June-Dec I believe we had 20,000 unique page views. Part of the messaging to the public is the tracker but we also always have to state that the tracker does get out of date quickly.
- Lori: LCC encourages public education of what blooms look like.
- Andrew Schroth asked Lori to talk about the challenges of citizen monitoring post Labor Day as this has been discussed in recent years.
 - Lori: we do have monitors that go through November, though the numbers do decrease at State sites. We are continuously working with partners to create plans for coverage gaps.
- Leigh Walrath wondered if Lori's program can piggyback with the LCBP Boat Launch Steward program.
 - Meg: Our Boat Launch Stewards usually participate in LCC's cyanobacteria monitoring program, but not this year due to COVID logistics.
 - Lori: I can share flyers to the stewards about the cyanobacteria monitoring program.

- Water Chestnut Management Program

- Kim Jensen of VT DEC presented the FY21 core project budget summary.
- VTDEC Water Chestnut Program 2020 Drone Survey Locations (Green)
<https://aevt.maps.arcgis.com/apps/webappviewer/index.html?id=8244e06b060647b5a50c3440a577dd76>
- **Motion to approve: FY21 core project budget summaries as presented:** Mark Malchoff. Bill Ardren seconded.
- **Discussion:** Mark Malchoff commented - these projects have been the subject of a lot of hard work over the years and the sensor project is the new one. All are appropriate projects for the core list. Leigh Walrath added: These are all great projects and I support them all.
- **Vote:** All in favor. Angela, Oliver, and Lauren Townley abstained.

Form recommendation for FY21 technical budget priorities

- Matt thanked TAC participants for taking the survey and provided an overview of the technical RFP and pre-proposal process.
- Andrew: are we envisioning that we would have an RFP to form a committee to continue to address IJC Missisquoi Bay phosphorus loading and cyanobacteria recommendations?
 - Neil proposed to carefully consider that idea and suggested forming a strong committee before arming them with implementation dollars.
 - Angela suggested removing the reference to a task force as it doesn't make sense as an RFP.
- Matt reviewed the responses to the survey.
- Neil noted that he had a vague recollection about social acceptability discussion.
 - Matt: discussion led to an agreement that that topic would be covered by an ongoing project that LCBP already has funding for. E&O looking at public support of water quality initiatives.
- Neil: the phosphorus mass balance project garners majority support based on survey. Seeing that, unless there are countervailing voices, I would think that would be at the top of our priorities list. We discussed this with our Canadian colleagues at our last TAC meeting.
 - Matt: we need to clarify if that would be for US or full Bay. Might depend on funding source.

- Angela: it would be best to cover the whole Bay since nothing like that exists at this point.
- Andrew: Do we know anything about the Rock river project? Matt: not yet, if this were to move forward, we'd keep that in consideration. Is there something we need to do to refine this wording?
- Neil: I would turn this into its own RFP. Matt: the idea here is that this would be a priority not a stand-alone RFP. Neil: if we endorse it as a priority the Steering Committee may elect to move it forward into its own RFP process. Matt: the Steering Committee can make those decisions.
- Matt: Staff will write something up that encapsulates this idea.
- Eric: I'd suggest making more use of the wording in the IJC report, reference to import and export analysis would be useful to add.
- Angela: it can be presented to the Steering Committee as a good opportunity for a stand-alone RFP, if they choose not to go with that you could change the wording to research that contributes to the phosphorus mass balance for Missisquoi Bay.
- Matt: the next priority is research that combines new data sources with existing data sources. Thinking about new LTMP data.
 - Andrew: yes, I would like to encourage people to take advantage of those data sources. I like to push research that leverages investments we are already making. Matt: I think this would benefit from examples of these data sources. Andrew: maybe this is a year too early? Matt: true, the proposal would need to be written before the new array is in the water.
 - Angela: could continue research on Carmi. Andrew: also, satellite data.
 - Angela: we've been talking about this idea for several years; I think we can put this forward as a priority and like Matt said include examples of data sources.
 - Matt: the first year we ran this program there was a priority for projects using existing publicly available data sources. We could re-use that phrasing and emphasize new sources of data, which could open it up a bit.
 - Neil: could be nice to be more specific, that could get more Steering Committee support and more of what we want.
 - Sarah: is the idea behind this priority to fund research behind these data sources or building capacity for communication? Matt: research.
 - Neil: the outreach-y piece of that is how valuable these sources are, maybe we want to add that as a piece of this.
 - Sarah: this morning there were lots of data sources being shared that would support these projects, it could be valuable to think about this in terms of capacity building.
 - Andrew: it could be useful to help think about how to present the data and get it out there to stakeholders.
 - Andrew: effectively communicating new data sets to the public.
 - Neil: keep the wording as it is now but add communicating to the public.
 - Angela: it might not be research, could be initiatives. Would give a project a bonus point for including that.
 - Neil: we are putting this new stuff in the water; we should describe in the RFP and solicit ideas of how that could be used. I think it's a very fair priority and could demonstrate to the Steering Committee the value of the real-time monitoring data and what can be done with it.
 - Leigh: you have these new technologies and historic data, want to incorporate it and move it forward, but perhaps one of the things we want to know is if the new data sources will help us assess what the LTMP should be or if it shows if there should be improvements, analyze these technologies with an eye towards the future.
- Matt - Research and or a task force on Missisquoi Bay.

- Angela: looking at this as something that will give someone a bonus in the proposal, doesn't seem to me that it would fall to a proposal respondent to develop a task force. We could simply take that reference out and have it refer to research on Missisquoi Bay rather than having the task force.
- Neil: that becomes phase 2 of MQ bay project happening right now. Think that's wise.
- Matt: the challenge there is we don't have results or findings of phase 1 yet, would make writing a proposal challenging.
- Eric: could be a year too early.
- Neil: would it make sense for the TAC to indicate support for an independent task force?
 - Matt - yes that could be something TAC voices support for and LCBP could coordinate.
- Angela: we had been trying to renew the agreement between Vermont and Québec, a joint task force was a high priority for that agreement but not sure where that stands at that point.
 - Jean-François: I am working on that right now with Pete Laflamme.
 - Angela: does that language include the establishment of a task force? Jean-François: no, only agrees on concentration of phosphorus and information sharing.
- Angela: the group that got together to discuss renewal felt that a task force that had regular meetings and interactions was critical to keeping the agreement strong and moving forward. Think it would be great for LCBP to support that effort.
- Neil: it does seem like the TAC could indicate its support, that may garner some different conversation at the Steering Committee level but that's okay.
- Jean-François: we are going through international affairs, the language of the agreement is pretty finalized, we've been wanting to renew this thing for quite a while.
- Matt: the next priority is research on drivers of P concentrations in oligotrophic lakes.
 - Neil: I know that the research that we saw was about Vermont lakes but I would want the focus to be on the entire watershed. It would be super cool to get someone looking at that, though I am not sure if the Steering Committee would find it as compelling. Matt: the whole Basin is also within our mission. Angela: also, the lakes all flow downstream. Andrew: also, I would argue that the Adirondack lakes would be a better place to research this question.
 - Neil: this could draw folks from other research institutes.
- Matt: it might make sense to present these priorities in somewhat of a ranked list and let the Steering Committee pull any up that they might like.
 - Andrew: would there be pushback with the focus on phosphorus? Neil: it's my job to present the TAC feelings to the Steering Committee and let them know our thoughts behind these priorities. Matt: the Steering Committee will review the recommendations holistically.
- Matt: the next priority is Conservation and restoration research and implementation to support water quality, flood resilience, native species and their habitats.
 - Neil: we've got some nice work coming in this year along this theme, but I still think this objective has not received enough funding over the years.
- Matt: the next priority is reviewing Payment for Ecosystem Services (PES) tools
 - Neil: should this be engaged in the LCBP space or are there other investigators looking at this? Ryan: the PES working group asked independent researchers to assess non-point pollution from ag fields. Currently there's not a budget within state to put out an RFP to do that work. The ag community is really pushing for this alternative and how to quantify environmental improvements from agriculture for which more research into modeling tools and measurement systems and methodologies that they want to have vetted, and we would like a novel approach to that. Farmer groups are articulating support for this

approach and I think there's a lot of information to be gained, also while looking at phosphorus reduction opportunities for Vermont. Could have a lot of synergistic benefits.

- Matt: is everyone comfortable going with ranking these priorities based on the survey results and bolding the top 3-4 that were ranked highest?
 - Neil when you take the #3 task force and turn it into its own recommendation then you've got the top priorities as the phosphorus mass balance, research with new data sources, etc.
 - Matt: the staff can try to revise the wording of these priorities based on feedback from today.