

Lake Carmi Coordination Team Virtual Meeting
Thursday May 20, 2021 at 4:00 PM – Meeting Notes

AGENDA

1. Process to update “Critical Path Projects” Section of the [Lake Carmi Crisis Response Plan](#): Oliver Pierson, with support from DEC staff - Staci Pomeroy (rivers), Jon Kim (groundwater), Karen Bates(roads) & Marli Rupe (agriculture)
 - Tasked with updating critical path part of plan in 2021– update projects by category that can be implemented in future. See response plan to see example of what information will be included in this section.
 - DEC staff will each take a specific sector and lead the updating effort
 - An example of new projects would be the work that NRPC is doing to assess private roads for needed stormwater management.
 - Anyone who has ideas for projects, please reach out to us.
 - Rob – just to ensure we have responsibility and transparency, the update should be shared with community. We are all accountable to get projects done.
 - Oliver – goal is to meet TMDL targets, so will look at projects proposed to see if on track. If not, we will know that we may need additional funding or resources .
 - Pete B. – Rob, Tucker and he have pulled together list of projects. Should we have central bulletin projects to allow for others to review and think about similar projects. Make people aware of what we are all thinking.
 - Oliver – good suggestion, can use Lake Carmi webpage but should think of ways to make it more interactive.

2. Summer Lake and Tributary Monitoring Plans and Current Lake Conditions (In-Lake Platform: Andrew Schroth; Tributaries: Tucker Wehner; Lay Monitoring Program: Pete Benevento)
 - Lake water quality sampling – Long term supported by DEC - Observations from DEC staff, Pete Stengel - Last week: DO ranged from 11 at top to-10 at bottom; this week bottom down to 3.9, so dropped quite a bit. Temperatures also increased; clarity – looks pretty good.
 - Data can be accessed from the platform [at this website](#). Values shows low factors associated with algae growth, although DO going down.
 - Goal is to balance start of aeration to not disturb walleye spawning activity based on temperature and need to aerate to reduce P release from sediment based on oxygen levels.
 - Lee Simard – spring spawning did start early, so looks like aeration start is acceptable
 - Tributaries – 17 sampling sites around like to look at dissolved P (not from erosion) & Total P – eroded sediments part of source. Tucker of FWC is sampling – saw higher P after first rain events, but reduced now, as expected because of lack of precipitation or surface runoff contributing P
 - UVM study 2019-2021- Andrew S. – remember UVM data on website, chemistry, oxygen, updated every several hours from the platform in middle of lake.

- 2019, 2020 compared to now – temperature same as middle of May and June respectively, so in 2021, currently more advanced regarding temperature, which controls oxygen levels. Reading of oxygen levels – he guesses that could be within week of getting to 0 oxygen level. Important to start aeration soon then to reduce P being released from sediment. From last year, we saw a spike of higher P concentrations at bottom when oxygen is low. Aeration then started, and P was just mixed throughout water column, which allows algal to benefit from P as well as light at lake surface. Our goal would then be to start system before reaching 0 oxygen level at bottom. They will have report for last year's data soon.
- Ashton – (graduate student) – Platform out for 2 weeks, so will also have earlier data to report (pre-aeration data about sediment)-
- Rob – had meeting with state delegation, would like to have them tour lake with Andrew to understand project.
 - Oliver – could combine it with ANR leadership and lake Carmi community to continue to shed light on project and continue financial support. Capital funds that have supported projects are used up now. Need to continue to advocate for funding.
- Pete B. – would it be of interest to collect sediment at mouth of sediment?
 - Ashton – taking it from deep trough in lake, will be area where oxygen is reduced. The shallow areas should be able to maintain oxygen levels to reduce p legacy release to water column.
 - Andrew – looking at sediment from river mouth is different study to see P from watershed, but really need a comprehensive study to answer that question.

3. Summer Lake Aeration Update: John Tucci

- 2 compressors turned on yesterday. Not expecting problems but prepared to keep system up and running without any supply chain issues for necessary spare parts. Only issue they cannot control is power outages but prepared to ensure system starts up again. Goal is to have operation perfect from day one by covering all the contingency that may happen
 - Learned a lot last two seasons to improve operation: upgrades of control panels to address the higher energy loads. Compressors have worked well. To prepare for this season – have additional parts to be prepared for any problems. Will also have maintenance supplies to repair in shed at Evans property.
 - Oliver – Tucci's contract extended for 2 years to support system maintenance, will ensure town crew is ready to take over in summer of 2022.
 - Rob asked that Tucker be included in maintenance training

4. Tree cutting on Hammond Shore Road: Oliver Pierson

- DEC is aware of removal. DEC environmental officer visited site and reviewed work with shoreline protection statue by measuring distance to lakes. Most was ok, but some should have been done after permit received. It does look like a permit would have been obtained because trees were in danger of falling over on power lines. The EO decided not to pursue investigation.
 - Oliver agrees that it does look messy and could be seen as an eyesore.

- Rob – did see need to cut, but understands that community concerned with education about trees, but this process worked the way it should: problem called in and ANR responded and made decision.
- Oliver – Matt Leonard, AMP forester, did review and see that cutting didn't follow all logging rules and perhaps this means more education to community
- If you would like to report a violation, we have a responsible enforcement officer, David Mersch, and the form to report violation is online here:
<https://dec.vermont.gov/content/environmental-violation-report>

5. Update on Franklin Watershed Committee Activities: Tucker Wehner

- LCBP – grant to fund two boat greeters to educate to stop spread aquatic
- LCBP – grant to support purchase of equipment
- Project Development Block grant – to develop a project to address road sediment entering lake
- Webpage update – cyanobacteria info and how to report; lake wise best management practices and project to spread information to lake shore owners – contact Tucker; will also distribute packet of BMPs to community around lake
- Did stream walk with Staci Pomeroy to add to Marsh Brook report based on fall assessment – see pictures on website.
 - Karen added that FWC will benefit from DEC funds to support Tucker's involvement in regional meetings with partners to keep up on available grants as well as technical assistance and interested partners to collaborate with.
 - Oliver – great to have Tucker willing to head out during storms to take water samples to provide us an idea of impact of stormwater runoff to streams.

6. Brief Cyanobacteria Update: Oliver Pierson

- Peter Isles, will take over Angela Shamburg. He has PhD in Champlain Limnology. He and other partners will work together to assess blooms and learn more about them: can help identify type of algae, and toxin presence. Feel free to collect water during blooms and send to us, see DEC Lakes and Ponds / Cyanobacteria website for info.
- Regarding Cyanobacteria and Health Risks: New research in MA showing that anatoxins from some cyanobacteria can become airborne in very low concentrations. This new info does not change State's current stance – stay away from swimming in water during blooms - and there does not appear to be any significant risk from breathing in air around blooms. State will have meeting on June 17 to talk about cyanobacteria trends and health risks, with VDH and Lake Champlain Committee. Will include a Questions and Answers. More info to follow on that point.

7. Update on UVM Extension Activities with agricultural partners: Marli Rupe

- 1 new barnyard was installed with funding from the Agency of Agriculture and USDA/Natural Resources Conservation Service.
- UVM is working with another farmer on feed imports and tracking to decrease phosphorus inputs through feed purchases

- Grassland injector was used on 575 acres – the operating costs have been high and have been covered by DEC Lakes in Crisis funds.
- UVM has been taking soil health samples on 10 hay/10 corn fields to assess baselines for quantifying improvements.
- Other projects include evaluating 3 potential wetland restoration sites and taking soil tests there to evaluate the soil phosphorus capacity.
- UVM is using the Farm Prep model tool which takes all the farm field information and provides options for decreasing any potential phosphorus runoff through the implementation of additional practices. There are some challenges with the model that UVM is working on with Stone Environmental (model developer) and AAFM.
- AAFM has announced funding for cover crop and grazing grants and precision ag technical assistance. The AAFM Dairy Business Innovation Center is also providing grants for grazing and dairy management.

8. Update on Groundwater Monitoring Project: Julia Boyles

- Request: Still need camp owners to volunteer for water well sampling. If folks have bedrock outcrop on property geology would like permission to map with non-invasive tools.
- Camp owners who have monitoring wells installed on their property: Geology will spray paint well head green if the yellow casing is an eyesore.
- Surficial mapping of area completed, now working on bedrock mapping
- Will commence surface and groundwater water sampling starting early June
- Agency of Ag has agreed to fund two more rounds of water sampling for half of the 25 surface water and 25 groundwater sites into 2022
- Groundwater P results in wells so far range from 6-46 ppb. Exploring possibility that groundwater acts as a “leaky faucet” to the lake (i.e., need to account for 6-46 ppb of P in groundwater entering the lake 24/7 all year long).

9. NRPC’s private and state park road assessment

- Will complete road erosion inventory by mid-June and expect to have completed one project with a willing landowner by end of year.

10. Any Other Business

- Possible VTrans Update on Projects in the Lake Carmi Watershed
 - Tyler spoke about rte 236 culvert replacement. Hope for construction this year. Also did paving and culvert replacement on rte 120.
- Funding - DEC is adding \$1.4M to each of 3 block grants with Watersheds United, the Regional Planning Comissions and the Conservation Districts. These groups will be issuing funding applications that could be used in the Carmi watershed.
- The VT Assoc. of Conservation Districts has just been awarded a \$1.5M grant from NRCS to fund implementation of river buffers – funding will be available later this fall or next spring.
- DEC’s Regional Conservation Partnership Program \$10M grant is focusing on agricultural improvements, forestry and easements over the next five years.