

Lake Carmi Coordination Team Meeting #3 of 2023

July 27, 2023 @ 4:00 PM

AGENDA

- Update from Lake – Pete B
 - Update: Diagnostic Feasibility Study for a Phosphorus Inactivation Treatment (Alum) in Lake Carmi – Oliver P
 - Update on Aeration System reconfiguration – John T
 - Update on BMP Contract Implementation – Julia C
 - Update on Road Improvements around Lake Carmi – Karen B
 - Update on Lake Monitoring Data for 2023 to date – Andrew S
 - Any Other Business
 - Update on Clean Water Service Provider Work - Dean Pierce
 - Update on Groundwater Sampling – Oliver P for Jon Kim
 - Next Meeting Date
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Pete Benevento – LCCA/FWC Update 4:05 pm

- Water has been relatively clear; almost through July w/out a major bloom
- Has been very rainy; lake is about a foot higher than normal
- some trib samples have come back; pre-storm only so P levels are decent so far

Oliver Pierson- Feasibility Study 4:08 pm

- Funding from CWIP for study of best in-lake treatment
- Alum is at top of list for treatment
- RFI was sent out last year and got a couple responses – confirmed alum as best treatment.
- Funding for study became available July 1st
- Awarded contract to Barr engineering on July 15 – based in MN; experts on in-lake treatments to reduce cyanobacteria blooms
- Which parts of lake have most phosphorus in sediment – collect sediment cores and analyze in lab
- Study areas:
 - How deep is P concentrations?
 - How much alum prevents P from releasing?
 - What is cost?
 - Permitting concerns?
 - Any alternatives? (Dredging, other chemicals, etc)

- Kickoff meeting w/ Barr Engineering tomorrow (7/28/23)
 - o Scope
 - o Timeline
- Potential funding source for treatment: DEC Clean Water Fund
 - o Approval process takes 8-9 months
 - o Won't have complete deliverables of study before CWIP fall funding cycle
 - o Funding not available until July 1, 2024 at the earliest
 - o Carmi stakeholders should reach out to CWIP, ANR Leadership, and Legislative Representatives now to inform them of progress with alum study and likely need for funding in SFY2025 for a treatment
 - o Permitting the treatment will also be an important step in the process

John Tucci – Aeration System 4:28 pm

- Aerators were reconfigured in June
- Increased diffuser concentration in deepest part of lake due to mixing
 - o Less natural wind mixing this year on average than previous years – more consistent pattern of higher oxygen from 8m to 5m
 - o Seems that changes have made an impact but there are many factors
 - o Mixing seemed to be better after configuration – fewer “deep crashes” of oxygen
- Execution of change went very well
 - o If data shows positive impact from reconfiguration then it may be useful to consider further changes if possible
- No plans to end aeration despite possible alum treatment

Julia Crocker - Franklin County NRCD Update – 4:37 pm

- BMP project is underway; budget has been reconfigured and Lake Wise visits have been happening
- In June VYCC installed 4 drip-line trenches, planted native species along shorelines, and replaced one concrete patio w/ pervious pavers
- Watershed Workshops: 4 total throughout July, August, and September to teach flocks about various clean water topics

Karen Bates- Road Improvement Work 4:45 pm

- Money from EPA to address private roads
- Waiting for NRPC to finish projects based on inventory they did
- Addressing road that had not been addressed based on Town Road Manual
- RFP to do the work is out and will close August 7th
- Projects to be done on Mullen Shore and Westcott Shore Roads
- Road owner is involved and making sure projects are efficient and easily maintained

Andrew Schroth – UVM Buoy Data 4:48 pm

- High Frequency Monitoring Platform installed in mid-May
- Target bottom DO conc. is 2.5 mg/L
- Recently getting low readings in bottom water
- Reconfigured aerator is not keeping bottom from anoxia
- Early summer showed strong thermal stratification – harder for wind to mix
- Large mixing event on July 23rd – isothermal conditions
- More frequent mixing in 2022
- Buoy has unfortunately been cutting out intermittently possibly due to system reconfiguration during off-season
- Phycocyanin and Chlorophyll are starting to increase but have been relatively low this year
 - o Unclear whether this is due to weather or aeration reconfiguration

Dean Pierce – NRPC 5:20 PM

- Work is not quite complete on Carmi private road project + report
- Report will summarize what happened in last 3 years and will include barriers to road projects in watershed
 - o How do we define successful project?

Oliver Pierson – VT DEC 5:30 PM

- Lake Carmi monitoring wells will be sampled by Jon Kim (VT DEC) during the last part of August 2023
- Next Meeting Date is early November, details to follow