

10-26-23 Lake Carmi Coordination Team Meeting

- Welcome from Karen Bates and Pete Benevento of LCCA and FWC 4:03 pm
 - Agenda shared
 - Happy to see so many people involved in cleaning up the lake
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- Alum Update – Keith Pilgrim 4:05 pm
 - Took sediment samples from lake bottom and analyze samples
 - Alum application depends on chemistry of sediment
 - Successful two days of sampling collecting cores
 - Sediment cores being incubated and analyzed in MN
 - 10 sampling sites within lake (took 5 extra)
 - Sites correspond to inflow points
 - Will eventually turn to map of phosphorus in sediment then alum dose map
 - Cost estimated accordingly
 - Data used for dosing and reaction to treatment (more samples taken after some years)
 - Data used to answer: How much phosphorus conc. will be reduced with alum treatment?
 - P release exp: tells how much phosphorus is released over time. Concentrations generally increase over time. There IS internal loading within Lake Carmi
 - Will be organized and ready to view over next couple weeks
 - Questions:
 - Q: Are you open to inform legislators on alum treatment? There is debate in CWB on funding
 - A: Happy to be involved in whatever parts of the process are necessary. Comfortable presenting in front of legislators
- Mark Mitchell Alum Permitting and Trib Data 4:18 pm
 - permitting will be through wastewater program
 - New aluminum standards from EPA
 - Start monitoring for hardness and pH from samples already being collected from lake
 - Keith's report will inform dosing; still in early stages of permitting process
 - Trib Data: collected by Julia Crocker
 - Results similar to last year (range, mean, max)
 - Some improvement in Dewing Brook, LC6; could be due to increased depths from high rain events
 - High flow events created spikes in DP and TP
 - Large amount of rain helped delay algae blooms
 - Still seeing high concentrations at Marsh Brook sites; may be reflecting some ag inputs
 - Lay Monitoring: collected by Pete Benevento, surface grab sampling

- Aeration system impacting mixing
 - Initial increase in chlorophyll conc. after flooding with delayed increase
 - Secchi: declines from high, then levels out around 2 m in July/August before decreasing again
 - Chart shows Marsh Brook consistently having the highest concentrations over the years
- Jeff Sanders Ag Update 4:30 pm
 - fields have been too wet to put out manure this summer so less phosphorus was added to the system this year, yet P concentrations did not significantly decrease with high flow events this year.
 - **Karen:** concentrations did not increase with high flows which is good to see
 - Some farms have been involved in program to improve grass stands without rotating corn and without plowing
 - Problems with manure injector this year but some folks found a private group to inject manure on fields
 - Overall less nutrients were spread in the watershed this year
 - Broken parts on injector have been replaced so they are in good shape for next year
 - Farming community is under stress right now
 - Pressed for time to use up manure stores before winter ban in a couple months (hope for dry weather!)
 - Farmers cannot apply manure in a way where it will runoff to water
- Andrew Schroth UVM Extension Data 5:01
 - Even when reconfigured, the aerators did not produce desired DO levels
 - Do not want to see levels approaching zero at 0.5 m mark
 - Levels decreasing since July
 - We saw more consistent fluctuations between mixed/not mixed during 2022
 - Thermal Stratification: water temps plummeted during August 2023 and warmed back up in September
 - In 2022 the water column was more sustained
 - Phycocyanin: measures bloom activity
 - Not much bloom activity in July. Didn't start until August. Peak was Late August/September
 - Aerator cannot keep sediment from going anoxic
- Jon Kim Groundwater Study 5:09 pm
 - Installed monitoring wells and sampled them for chemistry; finished sampling them this year in September/October
 - Hoping that Sept/Oct samples will reflect rain events of July onward
 - Might be able to share final report in January

- Mel Auffredou FCNRCD 5:11 pm
 - Lake Carmi BMP Updates: goal is to inventory BMPs that have been implemented in the past and those that may be implemented in the future
 - Lake Wise: talk about stormwater management on private properties
 - 14 evaluations done in 2023
 - Everyone eager to learn what they can do to help lake on their properties
 - 2 new awards given
 - Reach out to Mel at info@FranklinCountyNRCD.org if you would like to talk about Lake Wise/BMPs, or stormwater management
 - Common suggestions: no-mow zone, raise the blade, shoreline plantings, drip-line infiltration trenches, driveway water bars (diverting water from lake)
 - Watershed Workshops Series 2023
 - 4 workshops at Franklin Homestead
 - Each workshop was 2 hours and consisted of a presentation from an expert and a discussion
 - Received very positive feedback from folks; increased knowledge of water quality and BMPs
 - BMP assessment: still assessing
 - 7 stream walks on LC tribs
 - 14 Lake Wise Evaluations in 2022
 - 14 Lake Wise evals in 2023
 - BMP project implementation w/ FWC and VYCC
 - Infiltration trench installation, plantings, patio replacement
 - CWSP Project Development funds; working on Marsh Brook, Prouty Brook, Sandy Bay tributary
 - Future work
 - Continue BMP work
 - Continue outreach; stream walks with landowners, education events

- Private Road Work/Inventory Dean Pierce 5:24
 - NRPC has a grant for road projects at Lake Carmi to apply methods from municipal roads to private roads
 - Included creating inventory of private roads
 - Conclusion: do not think using system for municipal roads is best for private roads
 - They are built differently and require different approaches
 - Continuing work on private roads
 - Two constructed on LC that made a difference as far as phosphorus benefits (Sandy Bay/Black Woods Rd. and Patton Shore Rd.)
 - **Karen:** Mullen Shore Rd.: Not identified in inventory because of steepness
 - Working with Mr. Mullen this summer to plan improvements

- Design: Ditches to be deepened and lined, add cross culvert for stormwater to be dispersed into field
 - Hoping to find funding to continue to assist this work; would like to bundle under one contract
- Julia Crocker FWC update 5:35
 - Boat Greeters
 - Our two greeters were stationed during the weekends from mid June to late August. Between the issues receiving the grant contract from LCBP and the rainy weekends, we only used up a small fraction of the funds available to us. Fortunately, LCBP has offered to extend the grant for another year and roll over the funds to the 2024 season
 - Greeters collected a combined 383 inspections and decontaminated 32 watercrafts
 - <https://vtanr.maps.arcgis.com/apps/dashboards/3f9e9ff82d2f4bc7bdd8c90258501b1d>
 - Sampling
 - Continuing to sample this season (collected samples today)
 - Phosphorus levels certainly spiked after the rain events of July but have been decreasing since then
 - Waiting until all data is received to complete the final graphs and share them with the community (waste of time to keep creating the same graph over and over)
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 - Stream Wise
 - Still continuing to perform site visits. We have struggled to get folks interested and have only completed 4 out of the promised 8 evaluations.
 - Project Development
 - Still working on compiling a list of potential buffer planting and stormwater projects. We will choose two projects from each section to bring to specific development
 - FCNRCD Tree Sale: starts taking orders in January
 - Questions:
 - Is there info about the dam?
 - There was a construction project at the dam but the meeting to go over it was postponed. May have replaced some culverts

Corrections made:

John Costa: One other thing I think is very important to mention. It was the comment made by Paul Stanley regarding manure spreading going forward. He stated that no spreading would occur on “high-risk” fields.

Laura DiPietro, AAFM - To clarify, Jeff Sanders stated that comment in relation to restrictions that typically exist in a manure spreading exemption if issued during the winter spreading ban.