

Draft Minutes of the Cyanobacteria Mitigation Steering Committee (CMSC)

Held on January 17,2019

Alton Town Hall , second floor meeting room, 6:30PM

Alton, New Hampshire

Present: Fred Quimby*, David Neils*, Jason Smith*, Ray Howard*, Gene Young*, Bill Mannion*, Elizabeth Dionne, Ken Roberts , David “Swens” Swenson*, Bob Craycraft*, Warren Muir

Absent: Mark Sullivan*, William Meyer*, Phil Whittmann*.

*=voting members of the CMSC

Documents previously sent by email: CMSC Minutes of September 13,2018, Minutes of the United States Environmental Protection Agency (USEPA) meeting in New Durham on October 25,2018, Minutes of the Watershed Survey with Town Administrators and Road Agents in New Durham December 12,2018, Letter from Jason Smith to the Town of New Durham dated November 30,2018 listing several interim measures which the New Hampshire Fish and Game department(NH F&G)would like to institute.

Documents handed out at the meeting: Watershed Management Plan Budget 2018, email from Laura Diemer requesting an amendment to the current budget dated 11-18-18, Revised Top Ten Watershed Survey Sites, Excel Spread sheets for the 78 erosion sites sorted by most pounds of phosphorus reduced for the dollar, the same spread sheet based on the highest to lowest total phosphorus per year produced at each site, Laura Diemer and Renee Bourdeau’s email outlining the engineer’s selection of the best remediation sites for a full engineering design and specification dated 12-27-18, A summary entitled water quality of the Merrymeeting River Watershed in 2018, Table 1 to accompany the summary, Culverts emptying into Mill Pond from Rt.11 Alton (a map of the subwatershed of Mill Pond).

New Business:

1. Quimby opened the meeting at 6:30PM and briefly discussed the Minutes of September 13, 2018. Ray Howard moved and David Swenson seconded a motion to accept the minutes as written. The vote in favor was unanimous.
2. Fred Quimby reviewed the watershed survey meeting of December 12,2018 and briefly discussed several important take-aways from this meeting including: that grants can be submitted to the New Hampshire Department of Environmental Services (NH DES) from the Towns of Alton and New Durham for funds up to \$100,000 to remediate erosion sites identified in the Survey; that the Town has a 40% commitment to match these federal dollars but this can largely be based on town employees salary while working on the project; that the grant work must be completed within 2 years from the time the grant is approved; that there is also a commitment by the town to maintain the remediated site after completion; these grants can be submitted every 2 years until the most pressing sites are remediated; when submitting a grant to the NH DES the town can include money for engineering design and specifications for the sites to be remediated; towns should not request funds for engineering of projects which are on State owned land because the State will require their own engineers to be involved, however, the towns should include the proposed fix identified in the Watershed Survey for the State-owned land projects; and finally that simple fixes such as re-enforcing ditches and developing turnouts and settling

basins can be done by the towns without engineering designs but these do require either a wetland or a shoreland permit from the NH DES before the work begins. Many of the remediations listed in the spread sheets are in fact turnouts and settling basins (12 of the top 20 listings). Quimby then read the letter from our engineers on their selection of the best sites for engineering design in Alton and New Durham. They include Site 1 South Shore Rd and Powder Mill Road in New Durham, Pine Street and Letter S Road in Alton. New Durham believes Site 1 is the best site for New Durham's selection and Fred asked that Elizabeth, Ken and Phil meet and decide whether or not to go with the engineer's suggestions for Alton and get back to him in 1 week. Ken Roberts handed Fred pictures showing the difficulty of remediating Pine Street and Fred recommended they get in touch with Renee Bourdeau to discuss this further. Although Fred provided the CMSC with printed copies of specifications on the 78 erosion sites anyone who wishes to have an electronic copy sent, so they can manipulate the data themselves on their computer, can simply request it from Fred (fwq1@cornell.edu).

3. Quimby briefly reviewed the EPA meeting held in New Durham on October 25,2018 and the correspondence and meetings which followed this meeting as a result of the NH DES and US EPA both stating that our Watershed Management Plan (WMP) would serve as the scientific basis for calculating the phosphorus limit from the Powder Mill Sate Fish Hatchery (PMSFH). FB Environmental Associates (FBE) contacted the NH DES for answers to questions which arose during the October 25,2018 meeting, this led to a conference call involving FBE , the NH DES and the USEPA on October 30,2018, a letter and minutes of this conference call sent to Fred in early November, a meeting between Fred and NH DES on November 9, 2018 and an agreement between all parties on exactly what aspects of the WMP and subsequent calculations were to be conducted by FBE, NH DES and USEPA was determined. There was a recommendation by the NH DES to extend our current WMP contract by \$3356 to cover cost incurred by FBE up until November 9,2018 as well as another meeting in Concord where FBE shares it's raw data and the methods for calculating subwatershed loads and phosphorus reduction estimates. Gene Young asked for specific details about these discussions between NH DES and FBE and David Neils provided the details which answered Gene's questions. Gene Young asked Fred what the residual \$10,000 is being saved for and Fred answered that this money would be used to publish the WMP at two web sites- Lake Winnepesaukee Association (LWA) and Merrymeeting Lake Association(MMLA)- and allow FBE to aid the towns in getting the first grant proposal approved. Gene replied that this proposed use of the remaining \$10K seemed consistent with the NH DES meeting proposed in this \$3356 request and Fred answered that it could be looked upon that way. Gene Young moved and Bill Mannion seconded a motion to extend the WMP contract by \$3356 to cover the costs incurred thus far and to include funding for one final meeting with the NH DES to go over the details on phosphorus loads and reductions. The vote in favor was unanimous. David Neils also explained the process moving forward in which a public meeting involving the Water Quality Goals Working Group (WQGWG) of the CMSC would establish the water quality goals for each subwatershed but more importantly the subwatershed immediately

below the PMSFH (Marsh and Jones Ponds subwatershed). The WQGWG is the Watershed Management Plan Working Group plus David Neils who agreed to serve on this committee.

4. Jason Smith reported on the interim measures that the PMSFH plan to institute beginning 2019 while final plans and construction of the treatment facility are established at the PMSFH. These plans include: providing new fish feed in 2019 which drops the percentage of phosphorus from 1.2% to 0.9%, raising all the 50,000 salmon at the Nashua Federal Hatchery until the final treatment facility is in operation, contract HDR Inc. engineers to develop a 15% engineering design and cost estimate for a facility which will reduce the phosphorus in the discharge to 20 ug/L, and developing on-site a system of interim tanks and leach field to accommodate all the vacuumed waste water from the hatchery until the new treatment facility is in operation. The latter to be done in collaboration with the NH DES waste management group. Warren Muir asked if each of the four species of fish raised at PMSFH require the same level of phosphorus in their diets. Jason answered that Atlantic Landlocked Salmon require a slightly higher amount of phosphorus than the trout species do. Warren then mentioned the National Academy of Science's authoritative guidelines on animal nutrition including nutritional requirements for fish. Swens remarked that he felt the final phosphorus limit from the hatchery would be less than 20ug/L and thought it best to wait until more was known about this final number. Quimby remarked that if the process of contracting HDR Inc. began now they would be lucky to have a contract before the expected date of September 30,2019 when the EPA suggests it will have the final phosphorus limit. Fred Quimby though it best to inform HDR to remain flexible about the final limit for phosphorus in their design. David Neils responded that he thought the number would be closer to 12ug/L which is consistent with Marsh Pond being mesotrophic before the hatchery was built. Neils also though it was a good idea to continue pursuing a plan with HDR so funding for construction can be requested for the next biennial budget. Jason Smith reminded everyone that in all likelihood the limit would include monthly loads or annual load limitations in addition to a daily concentration. Monthly and annual loads were more flexible when addressing the seasonal fluctuations in phosphorus discharge seen at fish hatcheries.
5. Next Quimby reviewed the 2018 Water Quality Report for the Merrymeeting River Watershed with special attention on a newly discovered problem at Mill Pond. Mill Pond has high levels of phosphorus and high levels of cyanobacteria with 4 species involved and they are producing high water concentrations of cyanobacteria toxins. There appears to be multiple causes for this problem. In 1979 the NH DES closed a commercial laundromat in Main Street which was spilling raw sewerage into Mill Pond from a failed septic system. The State measured the concentration of phosphorus in the sewerage and it was in the hundreds of milligrams per liter. Much of this may still be in the sediment today. Bill Mannion questioned if this was correct that the sediment would still have phosphorus from a source 30 years old. David Neils confirmed that this is possible. Quimby also mentioned that 25 years ago the State Department of Transportation (NH DOT) rebuilt all the

stormwater drains on Rt.11 in Alton and many empty directly into Mill Pond by dumping water at the top of the bank along the side of the Pond. Finally, there was an abandoned town dump which was covered and it 's original location was on the bank of the Pond. Ken Roberts mentioned that during storms, water drains over this area and comes out from under the landfill into Mill pond. Fred mentioned that FBE is paying special attention to this area in the WMP. Quimby went to discuss the water flows and phosphorus loads emptying into Lake Winnepesaukee this year, which was the 6th most rainy year in the State's history. Fred noted that in the Fall the amount of phosphorus emptying into Lake Winnepesaukee was 7.88 lbs. per day but during the rainy month of August the load was 12.23 lbs. per day which is a tremendous load for any fresh waterbody. Also, during that period there was 9.76 lbs. per day coming into the Merrymeeting Marsh Wildlife Management Area (WMA) from the Merrymeeting River and 8.14 lbs. per day entering the WMA from Coffin Brook this nearly 18 pounds per day are reduced to 12 lbs. per day at Rt.28 Alton; so the WMA is assimilating high amounts of phosphorus (nearly 6 lbs. per day) and preventing that from entering Lake Winnepesaukee. How much longer this WMA will assimilate phosphorus and act as a buffer to the Lake is unknown but FBE will try to estimate it. One attendee asked if there were any cyanobacteria blooms in Alton Bay this year and David Neils said there were not. He also went on to explain that the NH DES post advisories for both cyanobacteria and fecal bacteria but the characteristics of each of these advisories were different. Generally advisories for fecal bacteria are over in a few days while cyanobacteria blooms can last months. He also mentioned that each Fall ,around Labor day, Lake Winnepesaukee has elevated levels of the cyanobacteria Gloeotrichia and while an advisory may alarm people it usually is not a major problem.

6. Finally, Quimby mentioned that Pat Tarpey has two interns working with her this summer and they may be able to visit some of our resident shoreline land owners and provide free advice to them on protecting their land from stormwater runoff into the river. As we get closer to May 2019, Fred will solicit the names of interested landowners.
7. Fred Quimby closed the meeting at 7:40PM.