

Minutes of the Water Quality Management Committee, February 20, 2020

Members Present: Steve Leighton, Virginia Valiela, Eric Turkington, John Waterbury, Tom Duncan. Also present: Brian Howes, Amber Unruh and Nick Uline, University of Massachusetts -SMAST; Paul Dreyer, Planning Board; Selectman Doug Brown, Chuck Martinsen and Will Bohnenburger, Falmouth Marine and Environmental Services; Eric Karplus, Science Wares

1. MA secretary of Environmental Affairs Certificate of approval received for Falmouth's update to the Comprehensive Wastewater Management Plan for the South Coast Embayments and West Falmouth Harbor - discussion

Chairman Turkington reported that the secretary of Environmental Affairs approved a certificate for the five-year plan as presented by the Town of Falmouth in the Comprehensive Wastewater Management Plan (CWMP) for the south coast estuaries and West Falmouth Harbor. He indicated that the certificate has come back from the secretary endorsing the efforts that Falmouth has undertaken to date. He stated that the certificate gave some guidance for the next five years but not many mandates. Virginia Valiela stated that the certificate does cite a lot of the comments that the MA Department of Environmental Protection (DEP) had submitted about the specifics on the types of data the DEP needs in order to give credit for the alternative efforts. Valiela also informed the members that the certificate indicates the next anticipated document will be the targeted watershed management plan (TWMP) for Great Pond which will include a section that responds to the general comments received on the CWMP. One outstanding request from the DEP is that they would like the Town to present a more detailed timeline and cost projections for all proposed efforts in the remaining south coast estuaries. Chairman Turkington stated that this is not a new request and that the Town has had prior success in not committing to huge expenditures without knowing that it can be done and without raising taxes.

Chairman Turkington reviewed the original mandate for the Water Quality Management Committee (WQMC) from 2011 to update the members on the progress of the projects listed in that mandate. He indicated that of the projects; shellfish, inlet widening, permeable reactive barriers, composting toilets, monitoring and baseline data acquisition, developing a plan for Oyster Pond, and completing the TMDL (Total Maximum Daily Load) for Quissett Harbor, Falmouth Harbor and Salt Pond have all been explored, completed or are in progress. He said that it can be reported to Town Meeting that the WQMC has fulfilled its mission. Virginia Valiela stated that the Town still needs to make a decision on the discharge option for both short-term and long-term planning. Tom Duncan emphasized that that current wastewater treatment plant has capacity to treat more but additional wastewater cannot be discharged into the West Falmouth Harbor watershed.

2. Bournes Pond Aquaculture study - annual update by UMass Dartmouth School of Marine Science and Technology - Brian Howes

Brian Howes presented an update on the status of the Bournes Pond oyster project. He described issues and challenges that were encountered in the first two years of the project and how this year differed. Howes reported that approximately 32,000 oysters went into Bournes Pond in May and came out in mid-December with 91% survival rate. He reported that the project is progressing according to the timeline with several of the specific tasks having been

completed. Data collection on water quality, tidal cycle flow assessments and measurements on oyster growth and biodeposition were collected. There are several analyses to be completed in the coming months, but Howes is confident that the scope will be completed in its entirety and on time. Overall, Howes is pleased with the project to date. He indicated that the objective of the project is to determine where the biodeposits from the oysters fall and whether and where enhanced denitrification is occurring as a result of the presence of the oyster aquaculture. In addition, they are investigating the spring release of nitrogen that occurs as a result of recycling within the sediment.

Tom Duncan commented that there is so much noise in the denitrification data and asked Howes whether he felt this was being clarified. Howes indicated that they have a clearer understanding that the growing density of oysters plays a role in the level of noise. Howes indicated there needs to be a balance on the deployment density and the existing conditions of the pond in order to maintain dissolved oxygen levels in a range to allow denitrification to continue and reduce the noise level in the data.

3. WQMC recommendation on Ron Zweig petitioner's article in spring town meeting - discussion and vote

Chairman Turkington reviewed the history of funding for oyster projects in Bournes Pond since 2016 that have been made on behalf on Ron Zweig. He reviewed the decisions of the WQMC and town meeting for each of the articles over the last three years. He indicated that Article 35 for 2020 is before the committee for its recommendation.

Chairman Turkington stated that Brian Howes indicated in his update that he does not feel that the project needs to be extended. Turkington also stated that Marine and Environmental Services has indicated that there are other priorities and has not planned for this project for the upcoming year and may not be able to help facilitate it.

Tom Duncan asked what the time frame of the funding would be and if there was an end date on when funds would need to be expended. Virginia Valiela indicated that if it is approved the funds become available on July 1st and can be spent over several years if needed. Tom Duncan asked Brian Howes if the funds could be spread out, what kind of study could be planned. Howes responded with a question of what present knowledge could be enhanced beyond what they have now with an additional study. Howes reminded the committee that this is a proposed municipal project and funds should be used to explore unknowns that the town benefits from knowing but more importantly pursuing other projects that may benefit greater from town funds such as Mill Pond. Howes feels satisfied with the quantity and quality of the data they have accumulated from this past season and the prior years of the project and stated if another project were to be funded, he would not recommend that it occur in Bournes Pond.

Chuck Martinsen commented that the Department of Marine and Environmental Services (MES) was not made aware of Article 35 and only heard about it in January. He stated that MES did not consider a project of this nature in their planning and do not have additional resources (seed, gear, etc.) that can be allocated to this project to meet the timeline for this year. He also reminded the committee that there were formal complaints made by the neighbors on the project at the start of the 2019 season and that he and the WQMC had assure those neighbors that this was the last year of the project. Martinsen also emphasized that because of the site challenges in the other years of the project (since 2016) that this past season was really only the first year of the project in these specific sites and the project would need an additional two years of data to complete a three year project. Brian Howes commented that he doesn't feel

that Bournes Pond is the pond to invest in and Article 35 is specifically for work in Bournes Pond.

Steve Leighton commented that it has been established that small oyster implants create unquantifiable results because there is a lot of background noise. He stated that the results from the small plantings cannot be extrapolated to the larger growing efforts. He commented that the larger farms are moving forward and now it is in the hands of the commercial growers and the oysters themselves to be able to see benefits at the sentinel station eventually if it is going to work.

Tom Duncan made the motion to endorse Article 35 as presented. Virginia Valiela seconded it for discussion. Valiela commented that one key piece of the picture is the role of the DEP giving credit for denitrification. She feels that any further studies on denitrification need to be coordinated with the DEP in advance and does not feel that any more town funds should be spent on the issue at this point in time.

Brian Howes and several committee members agreed that the sentinel stations will be the ultimate measure of the impacts from the aquaculture but that for planning purposes it is okay to project the potential nitrogen taken out by the denitrification based on the information that is currently available. Howes stated that the DEP is willing to accept the non-traditional approaches only if the data supports it. Howes stated that he has not yet made a presentation to the DEP on the data from Falmouth and other towns to support denitrification. He will continue to process the data from Falmouth and other towns to make such a presentation to assist DEP in their decision on whether to approve denitrification.

Chairman Turkington called for a vote. No votes in favor, all members opposed to supporting Article 35.

4. Reports of members and staff

Kristen Rathjen reported on the current progress for nutrient management planning on Mill Pond. She indicated that the Order of Conditions was received from the Falmouth Conservation Commission and the project was given no special conditions on the macrophyte harvesting or the aeration as proposed in the Notice of Intent. The working group met and discussed the next steps moving forward including putting together a request for funding as well as beginning preparations to try to permit a tailwater recovery pond in the upstream cranberry bogs. She indicated they are hoping to deploy an aeration system in the spring while the macrophyte harvesting is still being explored as an option for the fall.

Kristen Rathjen reported that the underground injection control (UIC) permit application for the permeable reactive barrier was submitted to DEP and the decision should be made in about a month. She indicated that both the monitoring well installation and the injection timeline are still on schedule to be completed by the end of April.

Chairman Turkington reported that a draft document of the allocation load for Waquoit Bay was received from GHD. He indicated that the document has a lot of substance and will take further review internally with GHD.

The next meeting of the WQMC will be March 5th at 3:30pm. Zee Crocker of the Barnstable Clean Water Coalition will be presenting.

5. Vote minutes of prior meeting (01.23.20)

Tom Duncan recommended several minor edits to the minutes. Steve Leighton motioned to accept the minutes as edited. John Waterbury seconded. Unanimous in favor.

Motion to Adjourn-4:20pm. Unanimous.

Minutes submitted by Kristen Rathjen.

List of Documents

- Secretary's certificate for the CWMP Update
- Article 35 from April 2020 Town Meeting
- History of funding of Bournes Pond shellfish projects
- Bournes Pond 2019 Project Update
- Draft minutes of the 01-23-2020 WQMC meeting