

Minutes of the Water Quality Management Committee, June 6, 2019

Members Present: Ron Zweig, Steve Leighton, Virginia Valiela, Eric Turkington, John Waterbury, Matt Charette, Tom Duncan. Also present: Jeff Gregg, GHD; Selectman Doug Brown and Michael Davis, concerned citizen

1. Draft Scenario for Achieving TMDL-Compliance in Bournes Pond Watershed

Kristen Rathjen presented an overview on the Bournes Pond watershed and the sources of nitrogen entering the watershed. She reviewed how the target for nitrogen removal was developed through the Massachusetts Estuaries Project (MEP) report and emphasized that the data where the target numbers were derived from was compiled in 2005. She then presented three non-traditional options for nitrogen removal in Bournes Pond: the State-approved nitrogen credits for fertilizer and stormwater, inlet widening and shellfish propagation. Ms. Rathjen indicated that the status of permitting for the inlet widening has almost been completed but did not have an updated timeline for construction to begin. She also indicated that the use of shellfish in Bournes Pond was more challenging than other estuaries due to the presences of eelgrass and that the current recommendation of suitable area for shellfish activities from Falmouth Marine and Environmental Services would only be achievable through a combination of shellfish and gear types. A summary of the potential nitrogen removal for each of the options was totaled to indicate that using the current draft scenario as presented, the projected nitrogen removal is within the range of the nitrogen removal target as calculated in the MEP to meet the TMDL for Bournes Pond.

Several members indicated that they would like to see the shellfish nitrogen removal number presented as a consistent range across the estuaries. There were additional concerns that as currently presented shellfish are responsible for approximately half of the removal for the entire watershed when several uncertainties in the available acreage and nitrogen removal potential of shellfish were presented.

The members commented that they would like to see additional secondary options (i.e., a 'back-up plan') presented in case the primary plan is not as effective as predicted. Virginia Valiela reminded the members that the strategy for each watershed is going to be an adaptive management approach with modifications made as needed. She also indicated that during the development of the targeted plan is when all options will be more closely examined including a cost analysis for each strategy.

Several additional comments and suggestions were made for modifications to the presentation. The draft scenario will be edited to incorporate the suggestions and will be on the June 20th agenda for a vote to recommend to the Selectmen.

2. Draft Scenario for Achieving TMDL-Compliance in Waquoit Bay Watershed

Kristen Rathjen informed the members that the presentation for Waquoit Bay watershed was different from the previous watersheds due to the complex nature of the system itself and its sub-watersheds crossing town boundaries. An overview of the entire watershed was presented including the sources of nitrogen entering the system and a list of challenges unique to the Waquoit Bay watershed including the need for Falmouth to meet three separate TMDLs in different locations. For the draft scenario, the Waquoit Bay watershed was presented in three parts: Eel Pond, Childs River and the shared sub-embayments. The non-traditional options for nitrogen removal were presented for Eel Pond and Childs River as: the State-approved nitrogen credits for fertilizer and stormwater and shellfish propagation. An additional option of wetland restoration of the Farley Bogs was presented for Childs River. The traditional option of sewerage was presented for both Eel Pond and Childs River. It was cautioned that due to the nature of Childs River discharging into Eel Pond, it is unclear how improvements made in Eel Pond may affect Childs River and vice versa. For several of the options, it is also unclear what area (i.e., Eel River or Childs River) the predicted nitrogen removal amounts should be applied to based on the locations of the sub-watershed lines and the monitoring stations as defined in the MEP. A summary of the potential nitrogen removal for each of the options was totaled for each area independently. Using the current draft scenario as presented, the projected nitrogen removal for Eel Pond is within the range of the nitrogen removal target as calculated in the MEP to meet the TMDL but is not within the removal target range for Childs River.

The areas for the shared sub-watersheds that fall within Falmouth borders were identified but no draft scenario can be developed until a formal allocation of the nitrogen removal responsibilities between Falmouth, Mashpee and Sandwich has been established. The Towns have initiated this allocation process.

Virginia Valiela re-emphasized the complexities faced with the Waquoit Bay watershed and suggested that when the targeted plan is developed that Eel River and Childs River be considered together.

Several additional comments and suggestions were made for modifications to the presentation. The draft scenario will be edited to incorporate the suggestions and will be on the June 20th agenda for a vote to recommend to the Selectmen.

At the end of the presentation, community member Michael Davis expressed questions and concerns over the planned sewerage in Great Pond and whether sea level rise was being taken into consideration for that plan. He also inquired whether more immediate solutions for nitrogen removal were going to be implemented ahead of sewerage such as shellfish or the dredging of Perch Pond. Chairman Turkington informed Mr. Davis that these concerns have been covered during prior meetings and that even using all of the alternatives, Great Pond would not meet the TMDL without sewerage. Chairman Turkington offered to meet independently with Mr. Davis to address other specific concerns.

3. Revisions to Draft Scenario for Achieving TMDL-Compliance in Green Pond Watershed – discussion and vote

In response to comments made by the members to the Bournes Pond and Waquoit Bay scenarios that affect the presentation of the Green Pond and Great Pond draft scenarios, the vote on the revised scenarios was delayed until June 20th so further modifications could be incorporated.

4. Alternative approach to Great Pond TMDL

Ron Zweig presented an alternative approach to nitrogen removal by considering a seasonal TMDL. He emphasized that the critical impairment period is during the summer months and suggested a strategy to put efforts into allocating the total nitrogen removal target on a seasonal (~5 month) basis and factoring in pond turnover. Zweig's approach suggested that the entirety of the Teaticket / Acapesket Sewer Area might not need to be sewered using increased shellfish efforts during the summer months. Virginia Valiela expressed that the committee has been following the MEP which is a State-approved document and acting to comply with the State-approved methods of meeting the TMDL. She did not feel that it was the charge of the committee to challenge the State methodology with an alternative approach such as a seasonal TMDL. Chairman Turkington suggested that Zweig send the presentation to be reviewed by Science Wares, GHD and SMAST to get additional opinions on the seasonal TMDL approach. The Committee members all agreed.

5. Revisions to Draft Scenario for Achieving TMDL-Compliance in Great Pond Watershed – discussion and vote

In response to comments made by the members to the Bournes Pond and Waquoit Bay scenarios that affect the presentation of the Green Pond and Great Pond draft scenarios, the vote on the revised scenarios was delayed until June 20th so further modifications could be incorporated.

6. Reports of members and staff

John Waterbury reported that he turned in his application for another term on the committee and reminded anyone else that if they needed to do so it needed to be completed within the next 24 hours. Tom Duncan remarked that he already filed his paperwork to also continue on the committee.

Ron Zweig informed the members that the OneCape conference is being held July 29-30th in Harwich with the focus of the conference on water quality and wastewater management issues.

7. Vote minutes of prior meetings (05.16.19)

Matt Charette moved to accept the minutes as presented. Tom Duncan seconded.
Unanimously approved.

8. Motion to Adjourn – 5:35pm. Unanimous.

Minutes submitted by Kristen Rathjen.

List of Documents

- Draft Scenario for Achieving TMDL-Compliance in the Bourne Pond Watershed
- Draft Scenario for Achieving TMDL-Compliance in the Waquoit Bay Watershed
- Revised Draft Scenario for Achieving TMDL-Compliance in the Green Pond Watershed
- Draft Great Pond FW Inflows and Turnover
- Great Pond Alternative TMDL Presentation
- Draft Meeting Seasonal N TMDL - Great Pond
- Revised Draft Scenario for Achieving TMDL-Compliance in the Great Pond Watershed
- Draft minutes of the 05-16-2019 WQMC meeting