Minutes of the Water Quality Management Committee, June 19, 2019

Members Present:  Ron Zweig, Steve Leighton, Virginia Valiela, Eric Turkington, John Waterbury, Matt Charette, Tom Duncan. Also present:  Jeff Gregg and Anastasia Rudenko, GHD; Women’s League observer; Maureen Thomas, Buzzards Bay Coalition; Brian Howes, UMASS-SMAST

1. Draft Scenario for Achieving TMDL-Compliance in West Falmouth Harbor Watershed – discussion and vote

Kristen Rathjen presented an overview on the West Falmouth Harbor watershed and the sources of nitrogen historically entering the watershed. Ms. Rathjen highlighted that the main source of nitrogen in the West Falmouth Harbor watershed was from the wastewater treatment facility. She presented a brief history of the timeline of the West Falmouth wastewater treatment plant and the changes and upgrades that have occurred over the last ~40 years. She indicated that based on the 2016 SMAST model on the necessary treatment plant parameters to achieve the TMDL in the system, that the current discharge permit limits and the most recent average effluent concentration from the upgraded facility should allow the system to reach the TMDL once the remaining plume washes out. Several comments were made that it has taken longer for the plume to wash out than originally projected. Brian Howes (UMASS-SMAST) indicated that there were several potential reasons for this delay and that the accurate prediction of the complete washout of the plume is complex. Chairman Turkington emphasized that this is the first watershed where the steps Falmouth has taken should bring it to meeting the TMDL. Brian Howes indicated that West Falmouth Harbor is the first impaired estuary in the state that is on the road to recovery and being listed as set to meet its TMDL.

Several additional comments and suggestions were made for modifications to the presentation. Steve Leighton moved to accept the draft scenario with the suggested edits. Tom Duncan seconded. Unanimously approved. The draft scenario will now be recommended to the Selectmen as part of the CWMP Update.

2. Evaluating the Zweig Proposed Alternative Approach to Great Pond TMDL – presentation by Matt Charette/response by GHD, SMAST and Science Wares

Matt Charette presented groundwater flux data from Waquoit Bay showing the aquifer levels and flux over the course of approximately three years. He indicated that the peaks in the groundwater vary annually but often occur outside of the ‘critical impairment period’ (summer months). Mr. Charette emphasized that the concentration of nitrate in the groundwater does not change, but the flow rate does. He suggested that if a seasonal approach was to be considered, it would be more appropriate to plan on removing at least two times as much nitrogen in the summer than in the winter months.

Brian Howes made several comments in response to the proposed seasonal TMDL approach. He indicated that the State was not in favor of such an approach. Mr. Howes reiterated that the TMDL is a daily load and that while shellfish would be removed from the system in November, the impacts from the biodeposition sediment nitrogen release would be seen in the spring and not accounted for in the seasonal approach.
Ron Zweig commented that there are many assumptions in all of the available TMDL compliance approaches. He confirmed that this is why Falmouth is taking an adaptive management approach, monitoring each project and adjusting the plans as necessary.

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

The major updates presented for the four remaining draft scenario presentations (Great Pond, Green Pond, Bournes Pond and Waquoit Bay) included a potential range for shellfish nitrogen removal benefits, a range for the nitrogen removal per parcel as a result of sewering and further options for each estuary if needed. Chairman Turkington indicated that Falmouth Marine and Environmental Services has committed to surveying the areas on each of the estuaries to present a more realistic number of available acreages for potential municipal shellfish activities. There is still uncertainty in whether the State will grant credit for shellfish denitrification. Virginia Valiela postulated that the State will give the credit. She emphasized that it is important that the Town indicates that they made a reasonable estimation for each estuary for this Update. The time to put heavy focus on the numbers will be when the Targeted Watershed Management Plan is written for each estuary.

Several additional comments and suggestions were made for modifications to the presentation. Tom Duncan moved to accept the draft scenario with the suggested edits. Steve Leighton seconded. Unanimously voted. The draft scenario will now be recommended to the Selectmen as part of the CWMP Update.

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

There was some discussion about Mill Pond and its associated watershed and what the effects of sewering north of Route 28 would be for Mill Pond and Green Pond if that option needed to be explored at a later date. Brian Howes commented that there could be some benefit but stated that Mill Pond already removes 64% of the nitrogen in its watershed so sewering would be more beneficial done outside of the Mill Pond watershed.

Several additional comments and suggestions were made for modifications to the presentation. Virginia Valiela moved to accept the draft scenario with the suggested edits. Steve Leighton seconded. Unanimously voted. The draft scenario will now be recommended to the Selectmen as part of the CWMP Update.

Note: Matt Charette left the meeting.
5. Revisions to Draft Scenario for Achieving TMDL-Compliance in Bournes Pond Watershed – discussion and vote

Several additional comments and suggestions were made for modifications to the presentation. Virginia Valiela moved to accept the draft scenario with the suggested edits. Tom Duncan seconded. 6 votes in favor, motion passes. The draft scenario will now be recommended to the Selectmen as part of the CWMP Update.

6. Revisions to Draft Scenario for Achieving TMDL-Compliance in Waquoit Bay Watershed – discussion and vote

There were several comments reinforcing the complexity of the Waquoit Bay system and how to handle apparent ‘overages’ in nitrogen removal in Eel Pond watershed and ‘deficits’ in Childs River watershed. Brian Howes and several members reiterated the complex dynamics of the system and that while there appear to be overages due to the way the draft scenario presentation was laid out, those overages serve to ultimately benefit Childs River due to the flow dynamics and interchange between all of the areas within the Waquoit Bay system.

Several additional comments and suggestions were made for modifications to the presentation. Virginia Valiela moved to accept the draft scenario with the suggested edits. Tom Duncan seconded. 6 votes in favor, motion passes. The draft scenario will now be recommended to the Selectmen as part of the CWMP Update.

7. Review and vote on edits on draft Chapters 1, 2, 3, 4 and 10 of the Comprehensive Wastewater Management Plan (CWMP) Update

Kristen Rathjen presented the most current version of each chapter of the CWMP from GHD with their corresponding comments from Amy Lowell (wastewater superintendent) and the committee members.

Several minor comments were made for Chapter 1. Virginia Valiela moved to accept Chapter 1 with the suggested changes, Steve Leighton seconded. 6 votes in favor, motion passes.

Comments on Chapter 2 made by Amy Lowell were discussed. Virginia Valiela moved to accept Chapter 2 with current suggested revisions. Tom Duncan seconded. 6 votes in favor, motion passes.

Several minor comments were made for Chapter 3. Tom Duncan moved to accept Chapter 3 with the suggested changes, Steve Leighton seconded. 6 votes in favor, motion passes.

Several comments were raised about I/A systems and how they are presented in Chapter 4. Further discussions and materials need to be communicated to GHD to make appropriate updates to the chapter. No vote on Chapter 4.
8. Reports of members and staff

Steve Leighton reported that he referred to a NOAA website to make a general assessment of the proposed shellfish activities in Falmouth and whether they could potentially impact the US market. He reported that based on the current US market, it is unlikely that even the extreme shellfish aquaculture proposals by Falmouth would have any impact in flooding the market.

Tom Duncan questioned whether any of the members were attending the OneCape conference or whether someone should be. Chairman Turkington indicated that anyone who wanted to was welcome to attend but there was no representative from the committee being formally sent.

Chairmain Turkington indicated that the next meeting would be July 18th at 9:00am. Virginia Valiela indicated that the agenda would include the review of the remaining chapters of the CWMP Update which have not previously been seen by the committee.

Chairman Turkington informed the members that the approval funding for GHD to begin developing the allocation of Waquoit Bay was to be on the next Selectmen’s agenda.

Kristen Rathjen reported on a meeting with the East Falmouth Village Association representative (Mary Ellen Alwardt) and Selectman Doug Brown about current efforts in Mill Pond. Ms. Rathjen has begun exploring the regulatory pathway for proposed activities in the pond and determined that Mill Pond is a ‘great pond’ owned by the State and that for any efforts in the pond a Notice of Intent (NOI) will need to be filed with the Conservation Commission. She will begin working on the NOI.

9. Vote minutes of prior meetings (06.06.19)

Tom Duncan moved to accept the minutes as presented. John Waterbury seconded. 5 votes in favor, motion passes.

10. Motion to Adjourn –5:28pm. Unanimous.

Minutes submitted by Kristen Rathjen.
List of Documents
- Draft Scenario for Achieving TMDL-Compliance in the West Falmouth Harbor Watershed
- Seasonal TMDL Idea
- GHD Seasonal TMDL Response
- Revised Draft Scenario for Achieving TMDL-Compliance in the Great Pond Watershed
- Revised Draft Scenario for Achieving TMDL-Compliance in the Green Pond Watershed
- Revised Draft Scenario for Achieving TMDL-Compliance in the Bournes Pond Watershed
- Revised Draft Scenario for Achieving TMDL-Compliance in the Waquoit Bay Watershed
- Draft minutes of the 06-06-2019 WQMC meeting