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CAPE COD COMMISSION

DATE:	February 27, 2014
TO:	Town of Falmouth
FROM:	Cape Cod Commission
Re:	Development of Regional Impact Cape Cod Commission Act, Sections 12 & 13
APPLICANT:	Town of Falmouth c/o Julian M. Suso, Town Manager Town Hall 59 Town Hall Square Falmouth, MA 02540
PROJECT #:	MEPA/EEA Project Number 14154 DRI Project Number JR07014
PROJECT:	Town of Falmouth Comprehensive Wastewater Management Plan/ Targeted Wastewater Management Plan

DECISION OF THE CAPE COD COMMISSION

The Cape Cod Commission (Commission) hereby approves with conditions the Application of the Town of Falmouth (Applicant) for the Falmouth Comprehensive Wastewater Management Plan (CWMP)/Targeted Wastewater Management Plan (TWMP) as a Development of Regional Impact (DRI) in accordance with Sections 12 and 13 of the Cape Cod Commission Act (Act). This decision is rendered pursuant to a vote of the Cape Cod Commission on February 27, 2014.

PROCEDURAL HISTORY

The Applicant requested Joint MEPA/Commission Review pursuant to the Memorandum of Understanding between the Commission and the Executive Office of Energy and Environmental Affairs – MEPA Unit. Joint Review was initiated in December 2007, with the review of the Environmental Notification Form (ENF) for the Town of Falmouth Comprehensive Wastewater Management Planning Project for the South Coast Watersheds including the Needs Assessment Report and Alternatives Screening Report for Little Pond, Great Pond, Green Pond, and Bournes Pond. A Subcommittee of the Commission reviewed that ENF and submitted comments to MEPA on January 22, 2008. The Secretary of the Executive Office of Energy and Environmental Affairs (Secretary) issued a Certificate on that ENF requiring the preparation of an Environmental Impact Report (EIR) on January 30, 2008.

The Commission received the application for Joint Review of the CWMP/Draft EIR on September 4, 2012 from the Applicant's representative, Nathan C. Weeks, P.E., BCEE, of GHD. A Joint MEPA/DRI scoping session/public hearing was held on October 4, 2012 and was continued to October 29, 2012 at 10:00 AM at the Cape Cod Commission. However, the October 29, 2012 public hearing was cancelled due to Hurricane Sandy. The purpose of the October 4, 2012 scoping session/public hearing was to gather information for the Joint MEPA/DRI Review of the project and to recommend a scope for the Final EIR.

The Commission received a Comprehensive Wastewater Management Plan/Targeted Watershed Management Plan (CWMP/TWMP) Final Environmental Impact Report (FEIR) from the Town of Falmouth in November 2013. A Commission Subcommittee held a joint hearing with MEPA on the FEIR on December 4, 2013. The Commission sent a comment letter on the FEIR to the MEPA office in January 2014. The Secretary issued a Final Certificate on January 10, 2014 stating that the FEIR adequately and properly complies with MEPA and its implementing regulations.

The Secretary conditioned the Certificate upon *"the Town's agreement to file a Notice of Project Change (NPC) for the purpose of evaluating progress, presenting the results of data and employing this information to re-examine alternatives for each sub-watershed and, as necessary, revise the CWMP."*

The Certificate also requires that the Town file individual Notices of Project Change for Pilot Projects proposed in the Plan that individually meet or exceed MEPA thresholds.

Finally, the Secretary's January 10, 2014 Certificate recognizes that the Plan *"shifts the focus to development of a TWMP for Little Pond, Bournes Pond* [inlet widening project] *and the West Falmouth Harbor watersheds..."*

Section 7(c)(vi) of the Commission's *Enabling Regulations* (revised March 2013) states in part that *"[t]he Commission shall hold a public hearing to review the project within 45 days of the Secretary's certification of the adequacy of the final EIR..."* The Commission's Chief Regulatory Officer, Jonathon Idman, held a public hearing on the Comprehensive Wastewater Management Plan/Targeted Watershed Management Plan as a Development of Regional Impact on February 11, 2014. He continued the hearing to the February 27, 2014 Commission meeting.

PUBLIC HEARING TESTIMONY

At the 2/11/14 hearing, the Commission, Town and general public presented information and oral testimony, as follows:

Mr. Eric Turkington, Chair of Falmouth's Water Quality Management Committee (WQMC), using a Power Point presentation, described the proposed project. He said the Town of Falmouth had worked hard to develop a comprehensive plan. He said the goal was to have parallel paths of alternative nitrogen removal methods and limited sewering. He noted that the Secretary of the Executive Office of Energy and Environment had issued a Certificate on 1/10/14 stating that the Final Environmental Impact Report was adequate. He described the CWMP's five major goals. He noted a key component of the CWMP was to use an Adaptive Management Program (AMP) to inform decisions going forward. He described each of the CWMP alternative nitrogen management strategies, such as shellfish cultivation, inlet widening, and Falmouth's Fertilizer Control By-law.

Mr. Turkington described the project's proposed financing mechanism. He said the intent is to utilize revenues from prior municipal bonds being paid off, and use these funds to pay for the anticipated new debt. He said the Town was scheduled to bring the CWMP and funding mechanism to Town Meeting in April, 2014. He noted that the amount of any betterments would be determined by the Selectmen, and ultimately a Town ballot measure.

Ms. Patricia Daley, a Commission Deputy Director, touched on a few points in the Commission staff report. She said the staff report generally tracks the Secretary's Certificate. She noted several benefits of the proposed CWMP. In the Regional Policy Plan (RPP) issue area of Land Use, she highlighted Falmouth's Flow Neutral Bylaw as consistent with the RPP requirements. In the RPP issue areas of Natural Resources and Coastal Resources, Ms. Daley said the Commission staff suggest that the CWMP development avoid resources impacts, and mitigate those impacts. In Economic Development, Ms. Daley noted that the proposed CWMP is consistent with applicable RPP requirements. In terms of waste management issues, she noted Commission staff suggests that the Town take steps to properly manage construction and demolition wastes, and to follow state Hazardous Waste Regulations, particularly with respect to the proposed upgrades to the existing Wastewater Treatment Facility (WWTF). Ms. Daley also noted that Commission staff suggested the Town look at any new exterior lighting for the WWTF and ensure that it is down-directed and fully shielded. In the RPP issue area of Transportation, Ms. Daley noted that Commission staff suggests that new trips from the WWTF will be minimal, but also suggest the Town undertake vegetation trimming at the WWTF site drive to improve the sight distance for vehicles entering and exiting the facility. Ms. Daley noted that the pilot projects described in the CWMP would be the subject of Notice of Project Change under the MEPA process. She said these would likely also be the subject of modifications to the Commission's decision on the proposed CWMP. She said the proposed AMP would also be influenced by the status of the pilot projects.

Mr. Thomas Cambareri, Water Resources Office Program Manager, summarized staff comments in the RPP issues area of Water Resources. He noted that Commission staff suggests that Falmouth's CMWP is consistent with the applicable Water Resources goals and standards in the Regional Policy Plan. Mr. Cambareri noted that Commission staff's recommendations for conditions on the Commission's possible approval of the CWMP as a Development of Regional Impact were outlined in the staff report. He noted that development of an Adaptive Management Program (AMP) should be a central feature of the CWMP going forward.

Mr. David Dow said he was at the hearing as a representative of the Sierra Club. He noted that sewering generally runs counter to the Sierra Club's principles. He said the Sierra Club has submitted written comments during the MEPA review. He said his comments at this hearing would focus on the issue of environmental justice. He noted the cost of the proposed sewering was estimated to be $47 million. Mr. Dow said the Town needs to address the question of affordability when considering how to reduce and remove nitrogen. Mr. Dow said people in Falmouth on fixed incomes won't be able to afford the proposed betterment fees. He also noted a concern about constituents of environmental concern (CECs) such as endocrine disrupting chemicals found in wastewater.

Mr. Ed Jalowicz said he had concerns about capacity allocation in the Little Pond sewer service area. He said it was important to look at water consumption in this area. He expressed concern and doubt that residences in this area are the main contributors to nitrogen in Little Pond. Mr. Jalowicz also suggested that the roads in this area are in disrepair, and may need to be upgraded

before sewer line installation can occur. He said he supported exploring the option of an ocean outfall, noting that the MWRA pipes secondary treated wastewater to its outfall pipe. He also therefore questioned the need for Falmouth to consider tertiary treatment of wastewater for an ocean outfall. Mr. Jalowicz said the Town also needs to better understand the capacity and treatment efficiency of the existing WWTF before expansion. He applauded the Town for the Fertilizer Bylaw, but noted that enforcement was problematic, in that there were no penalties for non-compliance. He also said Falmouth had to address its fresh water ponds, and questioned the wisdom of proceeding with sewering while other alternatives to sewers are being tried.

Dr. Rachel Jakuba, Science Director, Buzzards Bay Coalition, said the Coalition had submitted written comments on the Town's FEIR. She applauded the Town for its work to reduce nitrogen loading to the South Coast ponds. At the same time, Dr. Jakuba said the Coalition was concerned about impacts to other water bodies, particularly fresh water ponds and West Falmouth Harbor. She noted that there should be a concrete management plan for West Falmouth Harbor as part of a Settlement Agreement with the Coalition, so as to bring West Falmouth Harbor into compliance with the amended Groundwater Discharge Permit and the Total Maximum Daily Load for the water body.

Dr. Jakuba said the Town should fully investigate the impacts of using Site #7 for effluent disposal. She said there should be monitoring in place, to ensure the effluent is not reaching West Falmouth Harbor. She also urged the Town to develop a phosphorous monitoring program relative to Crocker Pond. Dr. Jakuba said the Town needed to develop a system of specific triggers for action should indicators show that pond health was being impacted. She said the Town also needed to establish a monitoring program to ensure offsets for Herring Brook.

Dr. Jakuba said the Coalition supports Falmouth's efforts at finding an ocean outfall as a way to mitigate possible impacts to groundwater and sensitive onshore waters.

Ms. Hilde Maingay said Falmouth must take the 208 Planning Process seriously, and that the CWMP is not consistent with this effort. She said the CWMP adopts sewers first, where the 208 Planning Process recommends Towns adopt the least cost option. She said sewering does not make ecological sense, in that it does not address the root problem of using clean water to transport waste. Ms. Maingay said sewering also creates development pressure and tends to lead to inflexible residential building design. She advocated use of alternative toilets, which she said were more cost-effective, and were designed to function regardless of the level of occupancy. She said the Town had to work to prevent CECs from entering the groundwater.

Mr. Ed DeWitt, Executive Director of APCC, said the Commission staff report identified potential problems with the Town's CWMP. He noted Site #7 had to be carefully monitored, so that wastewater effluent did not impact Crocker Pond or the West Falmouth Harbor. He said the work on the Town's fertilizer management bylaw was just beginning, in that it lacked an enforcement mechanism, and did not include strong enough Best Management Practices. He noted the proposed inlet widening was not a solution to the nitrogen problem, but rather transferred nitrogen from one water body to another. He also noted that inlet widening could cause increased salinity and habitat changes in the ponds, and just transferred nutrients from one place to another. Mr. DeWitt said that aquaculture was a tool with limits, and could not totally address the nitrogen problem because there was no plan for what to do with the nitrogen loaded shellfish after they had served their purpose. On stormwater management efforts, Mr. DeWitt noted that Falmouth had made great strides in this area, by developing a good

management plan, but lacked the financial resources to implement that plan. In conclusion, Mr. DeWitt also noted the effect climate change and sea level rise might have on individual Title 5 septic systems if groundwater levels were to rise accordingly, because these systems must be sufficiently separated from groundwater to function properly.

Mr. Dan Shearer said the Town must continue monitoring the existing WWTF, in that effluent from the facility had impacted West Falmouth Harbor. Given this, he questioned how the proposed monitoring programs in the CWMP could provide data to adjust the CMWP in time to prevent similar negative impacts to other resources in the future.

Mr. Jerry Potamis, Falmouth Wastewater Division/ DPW, said the Town has a Certificate of Adequacy from the Secretary relative to the Final Environmental Impact Report, not an approval of the TWMP/CWMP. He also noted that the CWMP used seasonal flows for the proposed Little Pond sewer service area, based on water use records. He said the construction design for sewers had not yet been finalized. Mr. Potamis said the Town was aware of constituents of emerging concern (CECs) such as pharmaceuticals in wastewater. He said the Town understood the concerns expressed about CECs and phosphorous, and may need to conduct CEC monitoring based on future state permitting conditions. He noted that the Town could not meet the Total Maximum Daily Load in the Little Pond watershed without sewering or other N reductions methods acceptable to DEP and the Town. Mr. Potamis said the Town also understood the concerns about enforcement of the Fertilizer By-law and expressed concern about water quality monitoring costs to establish nitrogen credit for both storm water and the Fertilizer By-law.

Ms. Daley acknowledged comments about the 208 Process and that it was taking a serious look at alternatives to sewering. Ms. Daley also noted that the 208 Process recognized the need to sewer in some cases.

PROJECT DESCRIPTION

The purpose of the Town of Falmouth's proposed Plan is to provide a comprehensive plan for wastewater management for the South Coast Watersheds and to provide recommendations for the West Falmouth Watershed where the existing Wastewater Treatment Facility (WWTF) is located. The Plan also identifies several demonstration projects for non-traditional wastewater and nitrogen management methods. The Plan proposes a 20-year planning period of 2015 to 2035 with a 40-year perspective to meet the Total Maximum Daily Loads (TMDLs).

The Plan includes a summary of the Town's identification and screening of alternative solutions to meet its wastewater needs and summaries of its detailed evaluations of scenarios for wastewater and nitrogen management. As indicated in the Plan, there are five basic components recommended. This scenario proposes a traditional wastewater management components including a sewer extension to the Lower Watershed of Little Pond (referred to as the Targeted Watershed Management portion of the Plan as Little Pond is a watershed located entirely in Falmouth), upgrading the treatment capacity at the existing WWTF on Blacksmith Shop Road, and recharge of additional treated water at Site 7 north of the existing WWTF site and outside the West Falmouth Harbor Watershed using sand infiltration beds.

The Plan also identifies proposed nontraditional, demonstration projects (Inlet widening of Bourne's Pond; Shellfish Aquaculture Nitrogen Attenuation Project in Little Pond; Eco-Toilet project; PRB project in Seacoast Shore, East Falmouth and the West Falmouth Harbor Watershed; and Little Pond Stormwater Control), non-wastewater management components (such as adaptive management and regulatory changes [Nitrogen Control and Flow Neutral By-

laws], Town wide study of denitrifying I/A septic system use, deferral of planned sewer construction in select areas, and a modular approach to the construction of treatment and recharge facilities.

The Plan also describes estimated costs, financing plans, and project milestones. The Town describes two strategies to fund the proposed wastewater and nitrogen management projects: 1) issuing "new" debt when an "old" debt is paid off, and 2) using the State Revolving Fund (SRF) loan program for project construction costs.

As Notices of Project Change for the demonstration/ pilot projects are brought through the MEPA process, as required in the Secretary's final certificate of adequacy, the Town shall seek to modify any DRI approval accordingly and as required.

JURISDICTION

This project comes under the jurisdiction of the Commission pursuant to Section 2(d)(i) of the Commission *Enabling Regulations Governing Review of Developments of Regional Impact*, which requires proposed development for which an EIR is required to be prepared under the provisions of MEPA to undergo DRI review.

TABLE 1: Materials Submitted for the Record

Materials from Cape Cod Commission	***Date Sent***
Email from Jessica Rempel (JR) to Nate Weeks (NW) re: Joint Review	9/4/12
Email from JR to Gerald Potamis (GP) re: Hearing Notice	9/18/12
Email from JR to NW re: meeting	9/18/12
Email from JR to GP re: MEPA comment deadline extension	9/20/12
Memo from JR to subcommittee with staff report attached	9/28/12
Email from JR to NW with staff report attached	9/28/12
Email from JR to GP re: subcommittee	9/28/12
Email from Tom Cambareri to NW re: staff report changes	10/2/12
Email from JR to Eric Turkington re: agenda	10/3/12
Email from JR to GP with staff report presentation attached	10/5/12
Email from JR to Earle Barnhart (EB) re: continued public hearing	10/17/12
Memo from JR to subcommittee with staff report attached	10/22/12
Email from JR to NW with staff report attached	10/22/12
Email from JR to NW re: staff report	10/22/12
Email from JR to GP re: hearing	10/22/12
Email from JR to GP re: hearing	10/23/12
Email from JR to GP re: Town comments	10/24/12
Email from JR to subcommittee w/ materials and draft minutes attached	10/26/12
Email from JR to subcommittee re: hearing cancellation	10/28/12
Email from JR to subcommittee re: hearing cancellation	10/29/12
Email from JR to GP re: hearing cancellation	10/29/12
Email from JR to Hilde Maingay (HM) re: hearing cancellation	10/29/12
Email from JR to Nicholas Zavolas (NZ) (MEPA) with comments attached	10/30/12
FEIR	
Email from Email from Jonathon Idman (JI) to Tom Cambareri: Andrea Adams is	7/30/13

project manager	
Email from Patty Daley (PD) to GP: Scheduling	7/30/13
Email from JI to Tom Cambareri: Use Subcommittee	10/9/13
Email from Andrea Adams (AA) to Commission staff: Please prepare staff report comments	10/10/13
Email from JI to Commission staff: How to structure staff comments	10/11/13
Email from JI to Tom Cambareri: Scheduling and filing with MEPA	10/11/13
Email from Ryan Bennett to AA: Staff comments	10/11/13
Email from Leslie Richardson to AA: Staff comments	10/11/13
Email from AA to GP: Scheduling	10/16/13
Email from JI to PD: Scheduling Joint review and staff report	10/18/13
Email from Paul Ruchinskas to AA: Staff comments	10/18/13
Email from Tabitha Harkin to AA: Staff comments	10/18/13
Email from AA to GP: Scheduling and DRI review process versus MEPA	10/22/13
Email from Sarah Korjeff to AA: Staff comments	10/22/13
Email from Ryan Bennett to AA: Staff comments	10/22/13
Email from PD to JI: Town desires earlier Joint hearing date	10/25/13
Email from AA to JI: DRI review cannot begin until MEPA process is complete. Anything else not in keeping with MOU	10/28/13
Email from JI to AA, Gail Hanley: Schedule for publishing notice	10/28/13
Email from JI to PD: Staff meeting to discuss draft staff report	10/28/13
Email from PD to AA, JI: Town has arranged use of Library	10/28/13
Email from AA to GP: Discussion of possible need for abutters list	10/30/13
Email from JI to GP: Difference between MEPA review and DRI review	10/30/13
Email from AA to Commission Subcommittee: Available for hearing on 12/4/13?	11/6/13
Email from AA to Commission staff: Comments needed for staff report	11/6/13
Email from AA to Tom Cambareri: Schedule for Joint hearing	11/6/13
Email from Tom Cambareri to AA: Comments will be ready late	11/6/13
Email from Sarah Korjeff to AA: Staff comments	11/7/13
Email from AA to Subcommittee Members: Scheduling	11/12/13
Email from Jonathon Idman (JI) to GP: Scheduling Joint hearing	11/12/13
Email from AA to Sarah Korjeff: Letters from MHC on project	11/13/13
Email from AA to GP: Copy of PAL report?	11/13/13
Email from AA to Commission staff: Comments due	11/13/13
Email from JI to GP: Hearing process and project description	11/13/13
Email from JI to GP: Revised project description	11/13/13
Email from Leslie Richardson to AA: Staff comments	11/13/13
Email from Sarah Korjeff to AA: Don't need PALs report	11/14/13
Email from JI to GP: Draft Hearing Notice	11/14/13
Hearing Notice for 12/4/13 Joint MEPA/Commission Hearing	11/14/13
Email from Andrea Adams (AA) to GP: Copy of FEIR/CWMP/TWMP on disk	11/20/13
Email from AA to GP: Discussion of disks included with paper copy of FEIR/CWMP/TWMP	11/20/13
Email from AA to Commission staff: Draft staff report	11/20/13
Email from AA to Gail Hanley: Updated Subcommittee membership	11/20/13

Email from Tom Cambareri to Commission staff: Possible Phase I waiver	11/20/13
Email from AA to Commission staff: Draft staff report and CWMP/FEIR/TWMP documents	11/25/13
Email from AA to Subcommittee: CWMP/FEIR/TWMP documents available on line	12/2/13
Copy of staff report	12/3/13
Email from AA to Commission staff: Copy of staff report	12/3/13
Email from AA to Subcommittee: Copy of staff report	12/3/13
Email from AA to GP, NW, Jeff Greg: Copy of Commission staff report	12/3/13
Hearing Outline	12/4/13
Handout on Where to Send Comments to MEPA	12/4/13
Sign In Sheets from 12/4/13 Joint Hearing	12/4/13
Email from AA to EB: Confirmation of receipt of his information	12/6/13
Meeting Notice for 1/2/14 Subcommittee Meeting	12/11/13
Email from JI to Subcommittee: Draft comment letter, cover letter	12/27/13
Copy of Comment Letter to MEPA, signed by Paul Niedwiecki *(Subcommittee Meeting to review draft cancelled due to snow storm)*	1/2/14
DEVELOPMENT OF REGIONAL IMPACT	
Email: Secretary to issue Certificate on 1/10/14	1/10/14
Email: JI to PD, AA, GH: Process for DRI review	1/13/14
Email: AA to Commission Staff: Please prepare DRI comments	1/13/14
Email: Booking a room at the Library for hearing	1/14/14
Email: JI to PD, GP and others: DRI review process	1/14/14
Email: AA to TC: Please send DRI comments by 1/30/14	1/23/14
Email: AA to JI, PD, HM, LR, RB: Staff comments missing	1/30/14
Email: PD to GP and others: Copy of draft staff report (2/10/14)	2/10/14
Staff Report	2/10/14
Email: JI to PD, GP and others: Steps after 2/11/14 Hearing and drafting a decision document	2/10/14
Email: JI to GP and others: Modification process	2/10/14
Hearing Notice *(Jonathon Idman as Hearing Officer)*	2/11/14
Sign In sheet from Hearing	2/11/14
Draft Hearing Minutes	2/11/14
Email, Gail Hanley to Michael Palmer, Town Clerk: Notice for Continued Hearing on 2/27/14	2/12/14
Email, AA to JI and JW: Comments on project relative to exterior lighting and possible hazardous waste generation from testing lab	2/13/14
Email, AA to GP: Forward of comment letter form Andrew Bunker	2/13/14
Email, AA to GP, JI, ET: Will make corrections to the draft 2/11/14 Hearing Minutes	2/18/14
Email, AA to JI, PD, TC: Copy of Email/comments from Buzzards Bay Coalition	2/21/14
Hearing Notice (Continued Hearing)	2/27/14
Materials from Applicant	***Date Received***
DCWMP/DEIR/NPC documents from NW	8/31/12
Email from NW to JR with joint review application cover sheet attached	9/4/12
Email from NW to JR re: extension	9/6/12
Email from NW to JR re: extension	9/7/12
Email from NW cc:ed to JR re: MEPA reviewer	9/7/12

Email from GP cc:ed to JR re: extension	9/18/12
Email from NW cc:ed to JR re: meeting	9/18/12
Email from GP to JR re: extension	9/19/12
Email from GP to JR re: extension	9/19/12
Email from GP to JR re: subcommittee	9/28/12
Email from NW to JR re: changes to staff report	10/2/12
Email from NW to TC re: MEP report	10/2/12
Email from GP to TC re: SMAST reports	10/2/12
Email from ET to JR re: agenda	10/3/12
Email from GP to JR re: staff presentation	10/5/12
Email from NW to JR re: staff report	10/22/12
Email from GP to JR re: hearing	10/22/12
Email from GP to JR re: hearing	10/22/12
Email from GP to JR re: Town comments	10/24/12
Email from NW to JR re: site evaluations	10/26/12
Email from NW to NZ re: site evaluations (with attachments)	10/31/12
FEIR	
Email from NW to AA: Abutters List requirements for CWMP projects	Dated 7/9/09
Copy of FEIR documents: Three volumes	10/9/13
Copy of FEIR on disk	10/9/13
Email from GP to Patty Daley (PD) with attachments: PowerPoint presentation on the CWMP/FEIR	7/30/13
Email from GP to PD with attachments: PowerPoint presentation on the CWMP/FEIR	7/30/13
Email from GP to Andrea Adams (AA): Discussion with Nicholas Zavolas of MEPA of the Joint review process and timeframes	10/15/13
Email from GP to AA: Discussion of Joint review process	10/16/13
Email from GP to AA: Desire by Town to submit more information as CWMP and FEIR process continues	10/22/13
Email from GP to AA: New information to clarify questions raised by the public after final submittal of CWMP/FEIR	10/22/13
Email from GP to AA: Scheduling Joint hearing with MEPA	10/30/13
Email from GP to AA: Discussion of DRI review after MEPA	10/30/13
Email from GP to Jonathon Idman (JI): Scheduling hearing for 12/4/13 at Falmouth Public Library	11/6/13
Email from GP to JI: Report from PAL to MHC is confidential	11/13/13
Email from GP to AA: Will check if CWMP has been provided electronically by the disks included with the paper copy	11/20/13
Email from GP to AA: Comments on the staff report	12/3/13
Email from GP to AA: Copy of Power Point given by Mr. Turkington at the 12/4/13 Joint hearing	12/5/13
Letter from Julian M. Suso, Town Manager, to Paul Niedzwiecki	12/6/13
Letter from Town of Falmouth to MEPA with copy of 12/16/13 letter from Paul Niedzwiecki attached	12/17/18
DEVELOPMENT OF REGIONAL IMPACT	
Email, GP to PD, JI, TC, AA: Not enough time to review staff report	2/10/14
Email, GP to PD, JI, TC, AA: Comments on staff report	2/10/14
Email, Brian Currie, Town Planner: Consistency comments	2/12/14

Power Point Presentation given by Town on 2/11/14 at Hearing	2/11/14
Email, GP to PD, JI, TC, AA: Items that need clarification	2/13/14
Email, GP to PD, JI, TC, AA: Corrections to draft 2/11/14 Minutes	2/18/14
Email, ET to AA: Corrections to draft 2/11/14 Minutes	2/18/14
Email, VV to PD, JI, TC, AA: Annotations on draft 2/11/14 Minutes	2/19/14
Email, GP to PD, JI, TC, AA: Statement that the wastewater sewage system is not a generator of hazardous waste under State regulations	2/19/14
Materials from Public Agencies/Towns/State/Federal other than Falmouth	***Date Received***
Letter from Massachusetts Historical Commission (HMC) to GP	9/20/12
FEIR	
Letter from HMC to GP	6/17/13
Letter from New England District of Army Corps of Engineers to GP	6/25/13
Letter from Public Archeology Laboratory to Brona Simon, MHC	9/13/13
Letter from MHC to GP	9/20/13
Letter from MHC to Secretary of Executive Office of Energy and Environmental Affairs (Secretary) commenting on the project	10/28/13
Letter from MHC to Secretary	10/31/13
DEVELOPMENT OF REGIONAL IMPACT	
Secretary's Certificate on the Final EIR	1/10/14
Materials from Members of the Public	***Date Received***
Written comments and illustrations from Earle Barnhart (EB)	10/4/12
Written comments and illustrations from Hilde Maingay (HM)	10/4/12
Letter from Robb Hoehlein re: Crockers Pond	10/4/12
Letter from Dennis Murphy re: Crockers Pond	10/4/12
Letter from Peter Lind re: Crockers Pond	10/4/12
Printed and CD copies of EB and HM comments on the project	10/16/12
Letter from Christina Rawley (CR)	10/16/12
Email from EB to JR re: continued public hearing	10/17/12
Letter from Christina Rawley	10/18/12
Email from David Brown to JR re: aquaculture	10/25/12
Email from Rachel Jakuba to MEPA with BBC comments attached	10/26/12
Email from HM re: hearing cancellation	10/29/12
FEIR	
Letter from Neal M. Price, Horsley Witten Group: Comments on sites 7 and 10	8/30/13
Letter from Rachael Jakuba (RJ)	9/16/13
Letter from RJ on FEIR	11/19/13
Written testimony from HM given at 12/4/13 Joint hearing	12/4/13
Information received from Patricia Handley at 12/4/13 Joint hearing	12/4/13
Written testimony from EB given at 12/4/13 Joint hearing	12/4/13
Email from EB/HM: Fact sheets on alternative wastewater systems	12/5/13
Email from David Dow: Presentations on alternative wastewater systems (2 Emails with attachments sent to Patty Daley)	12/5/13
Email from Alison Robb to Patty Daley	12/16/13
Fax, EB to Secretary Sullivan, MEPA: Comments (2 copies)	12/29/13
Fax, HM to Secretary Sullivan, MEPA: Comments (2 copies)	12/29/13

DEVELOPMENT OF REGIONAL IMPACT	
Email, Andrew P. Bunker, Association for Crocker Pond: Comments	2/13/14
Email, David Dow, to PD, AA: Comments on the project from the Cape Cod & Islands Sierra Club	2/18/14
Email, Ed DeWitt, Executive Director, APCC: Comments	2/20/14
Email, Rachel Jakuba, Science Director, Buzzards Bay Coalition	2/21/14
Letter, Rachel Jakuba, Science Director, Buzzards Bay Coalition (also by Email)	2/24/14
P. Handley letter & materials re: Site 7	2/27/14

FINDINGS

The Commission hereby finds as follows:

General

GF1. The project is the Comprehensive Wastewater Management Plan (CWMP)/ targeted Watershed management Plan (TWMP) for the Town of Falmouth, as described in the Final Environmental Impact Report (FEIR) of September 16, 2013 (collectively, the "Plan").

GF2.The Plan includes five short-term components: 1) traditional wastewater management including a sewer extension to the Lower Watershed of Little Pond (referred to as the Targeted Watershed Management portion of the Plan as Little Pond is a watershed located entirely in Falmouth); 2) upgrading the treatment capacity at the existing WWTF on Blacksmith Shop Road; 3) recharge of additional treated water at Site 7 north of the existing WWTF site and outside the West Falmouth Harbor Watershed using sand infiltration beds; 4) proposed nontraditional, demonstration projects (Inlet widening of Bourne's Pond; Shellfish Aquaculture Nitrogen Attenuation Project in Little Pond; Eco-Toilet project; Permeable Reactive Barriers (PRB) projects in Seacoast Shore, East Falmouth and the West Falmouth Harbor Watershed; and Little Pond Stormwater Control); and 5) non-structural management components (such as an Adaptive Management Plan [AMP] and regulatory changes [Nitrogen Control and Flow Neutral By-laws], and stormwater management, deferral of planned sewer construction in select areas, and a modular approach to the construction of treatment and recharge facilities.

The Plan includes a commitment to developing a long term strategic plan to meet the water quality restoration goals that will incorporate the findings of the pilot projects and activities undertaken through a Notice of Project change by December 31, 2019.

GF3. This Plan comes under the jurisdiction of the Commission pursuant to Section 2(d)(i) of the Commission *Enabling Regulations Governing Review of Developments of Regional Impact*, which requires proposed development for which an EIR is required to be prepared under the provisions of MEPA to undergo mandatory DRI review.

GF4. The Secretary issued a Final Certificate on January 10, 2014 stating that the FEIR adequately and properly complies with MEPA and its implementing regulations.

GF5. The first substantive Development of Regional Impact public hearing on the CWMP was held on February 11, 2014, continued to February 27, 2014.

GF6. According to information provided by the Falmouth Town Planner, the project requires some local permitting, but is consistent with municipal development by-laws and the Town's Local Comprehensive Plan.

GF7. According to information provided by the Falmouth Town Planner, the Plan does not involve land within the Black Marsh/ Sippewissett District of Critical Planning Concern (DCPC) designation wholly contained within the Town of Falmouth.

GF8. The Fertilizer Management DCPC designation applies to all land within Barnstable County; however, the Town of Falmouth has not adopted any implementing regulations pursuant to this DCPC designation.

GF9. Benefits of the project include water quality and ecological protection and restoration; adaptive management to minimize and mitigate costs and natural resource impacts, as feasible; and a commitment to develop a long term plan to meet applicable TMDLs established under MEP.

Land Use Findings

LUF1. The build out conditions in the FEIR indicate the potential for development growth in the Little Pond sewer service area. The Commission encourages appropriate, anticipated growth that supports the economic vitality of the town and maintains and/or improves property values.

LUF2. The Commission finds that Falmouth's flow neutral by-law adequately manages growth, and supports compact forms of development, that could accompany the installation of sewers in the Little Pond sewer service area consistent with MPS LU2.1 (Connections to Existing Infrastructure).

LUF3. However, based on the potential for additional growth in the Little Pond service area occasioned by sewer installation, it is appropriate to require the Town to track and report as necessary additional growth as part of the Adaptive Management Plan, preparation and update of which is a condition of this DRI approval.

Economic Development Findings

EDF1. Minimum Performance Standard ED4.1 under Goal ED4, *Infrastructure Capacity*, requires that infrastructure development, such as sewer infrastructure, is proposed in response to existing demand, and will result in service improvements. The Commission encourages appropriate, anticipated growth that supports the economic vitality of the town and maintains and/or improves property values.

EDF3. Public sewer will improve the availability, reliability and quality of septage wastewater services in the proposed sewer service area.

EDF4.It is appropriate to require the Town to provide further information on how the proposed sewering of the Little Pond service area meets existing demand by reporting requests for connection in the proposed Adaptive Management Plan.

Energy Resources Findings

ERF1. Though WWTF projects are specifically exempt from review under the Minimum Performance Standards of the Regional Policy Plan's Energy section, The Commission recognizes that Falmouth is proposing or considering many energy efficiency measures associated with the WWTF upgrades, including possible solar arrays.

Water Resources Findings

WRF1. The overarching goal of the Water Resources Issue Area in the Regional Policy Plan involves "*the management and protection of Cape Cod's water resources.*" The Water Resources Issue Area is divided into sub- Issue Areas of General Aquifer Protection, Drinking Water Resources, Marine Water Resources, Fresh Water Resources, Wastewater Treatment Facilities, and Stormwater Quality.

WRF2. Marine Water Resources

The Comprehensive Wastewater Management Strategy/Targeted Watershed Management Plan is focused on restoring the ecological integrity of a selected number of South Coastal embayment systems and West Falmouth Harbor, consistent with RPP goals, practices and standards.

The Massachusetts Estuaries Project (MEP) has completed a series of Technical Reports indicating that the majority of Falmouth's embayments have degraded ecosystem conditions due to nitrogen loading in their respective marine water recharge areas that exceed the critical nitrogen loading limit, or Total Maximum Daily Loads (TMDLs). The following table shows those embayment systems for which a MEP report has been completed, where a TMDL has been established, those where a TMDL determination is still pending, those that are the subject of the Plan, and the percent of wastewater nitrogen removal required.

Embayments that have a completed MEP Report	TMDL Established based on MEP Report	Addressed as part of CWMP	Wastewater Nitrogen Removal Percentage
West Falmouth Harbor	Yes	Yes	43
Quissett Harbor		Not within Scope of CWMP	27
Rands Canal		"	29
Fiddlers Cove		"	37
Oyster Pond	Yes	"	77
Falmouth Inner Harbor		"	43
Great Pond	Yes	Yes	82
Green Pond	Yes	Yes	65
Little Pond	Yes	Yes	86-88
Bournes Pond	Yes	Yes	90
Waquoit Bay		Yes	76

The Plan describes a comprehensive strategy towards achieving the TMDLs for its selected marine surface water bodies and presents an initial Targeted Watershed Management Plan for Little Pond and the tidal inlet widening for Bournes Pond.

WRF3. Drinking Water Resources

The Drinking Water Resources Goal in the RPP is *"to maintain a sustainable supply of high quality drinking water and restore and protect the ecological integrity of fresh and marine waters,"* and the Plan is consistent with the RPP. Historic water quality data from the public water supply wells in the Plan area show that they have average nitrate-nitrogen concentrations well below the RPP limit of 5 ppm and the state drinking water standard of 10 ppm. In addition, none of the wells display any significant concentration trends; groundwater nitrate concentrations tend to fluctuate in a fairly constrained range below 1.5 ppm. Drinking water supplies in the Plan area do not have any significant impacts from wastewater-derived nitrogen

given the long range efforts of the Town in acquiring lands within the Zone IIs and to establish local regulatory means to protect them.

WRF4. Fresh Water Resources
The CWMP Needs Assessment Report indicates there are 19 freshwater ponds and three rivers in the Plan area and that 6 of the 7 freshwater ponds sampled during the 2001 Pond and Lake Stewardship (PALS) snapshot exceeded the regional phosphorus threshold.

The Town's WQMC has advised that it is aware of concerns about fresh water ponds that receive excess nutrients from their sub-watersheds just as salt water ponds do. The Town has advised that it will begin its fresh water pond program with Crocker Pond in West Falmouth.

It is appropriate that the DRI approval be conditioned on the Town developing a fresh water pond action plan as part of the overall Adaptive Management Plan.

WRF5. Stormwater Quality
The Regional Policy Plan requires management of stormwater related to development, primarily focused on nutrient treatment and removal. The Plan strategy is entirely focused on nutrient removal through a variety of measures, including a stormwater pilot project.

It is appropriate that DRI approval be conditioned so that the Adaptive Management Plan include status reporting on and require implementation of stormwater projects if the Town intends to seek nitrogen removal "credit" for them.

It is also appropriate that DRI approval be conditioned to require that the Town provide stormwater plans for sewer related construction and improvements consistent with the applicable standards in the RPP and this Decision for Commission staff review and approval.

WRF6. Wastewater Treatment Facilities

a. Little Pond Watershed
The Plan includes a Targeted Watershed Management Plan for Little Pond. The Little Pond sewer extension is estimated to have 16.5 miles of sewers to collect 0.26 million gallons per day (MGD) and also includes a portion within the Great Pond Watershed. The extent of sewering currently proposed is less than the full watershed, thus the project itself will result in less than the required amount of the nitrogen load to be removed from the Little Pond watershed in total to meet the applicable TMDLs. However, evaluation of the Little Pond Watershed project with Commission's Watershed/MVP indicates that effective stormwater management and effective fertilizer management could help approach the required nitrogen removal limit. In addition, the selection of Little Pond as a pilot project for aquaculture, if effective, could provide the necessary additional nitrogen removal to meet the TMDLs. The Town proposes to appropriate $49 million at its 2014 Annual Town meeting towards beginning the implementation of the Little Pond sewer extension and associated infrastructure.

According to information received from the Town, the town's Water Quality Management Committee (WQMC) has identified three financial programs that will help low income homeowners deal with sewer-related costs: Barnstable County Community Septic Management Loan Program for hook-up costs; MGL c.59, s.5, Clause 41A that allows for deferral of betterment payments for homeowners over 65 years; Mass Dept. of Revenue/Senior Circuit

Breaker Tax Credit for taxes including betterments + 50% of water/sewer costs that exceed 10% of homeowners' income.

The WQMC has also advised that the Town will monitor for CEC's at the WWTF when the DEP determines what parameters should be monitored; sewering of Maravista and Falmouth Heights will remove any CEC's from Little Pond to a central location where they can be treated.

It is appropriate that DRI approval be conditioned to allow Commission staff to review the status and effectiveness of the Targeted Watershed Management Plan for Little Pond in meeting applicable TMDLs at identified milestones in the Adaptive Management Plan.

b. West Falmouth Wastewater Treatment Plant
Wastewater from the Little Pond watershed will be conveyed to the Town's existing WWTF in the West Falmouth watershed. According to the 2001 Commission Development of Regional Impact (DRI) Decision for the Town of Falmouth's Wastewater Facilities Plan and EIR (Commission project #EIR99001), the WWTF at Blacksmith Shop Road is limited to a flow of 600,000 gallons per day (gpd) with a total nitrogen discharge concentration of 3 mg/l. At the time of the 2001 Development of Regional Impact decision, this was acknowledged as the loading rate that will attain 0.35 mg/l at the sentinel station for West Falmouth Harbor. Any allowances above those rates are subject to review by the Commission. The 2001 DRI decision also required the Town to submit the wastewater treatment and landfill monitoring data to the Commission annually. This information has been used to evaluate and quantify downgradient groundwater quality improvements from the plant upgrade and assess changes of nitrogen flux to West Falmouth Harbor.

The 2001 DRI decision allows an increase of treated discharge at the facility to the watershed up to 1.0 MGD, if the Town were to sewer the "West of Route 28" portion of the West Falmouth Watershed, thereby reducing the watershed nitrogen load. The Plan estimates the wastewater flow from the West Falmouth Harbor area at 0.23 MGD with a present sewering cost of $22-26 million. The Town's WQMC recommended and decided not to sewer the West Falmouth Watershed area as part of this Plan.

The 2001 DRI review was conducted prior to the MEP and subsequent work has come to light through negotiations and a Settlement Agreement between the Town, the Department of Environmental Protection, and the Coalition for Buzzards Bay as described in the 2013 FEIR. These discussions culminated in a modified Groundwater Discharge Permit (GWDP) for the WWTF and West Falmouth Harbor watershed allowing up to 0.8 MGD with 0.23 MGD coming from the watershed. If the West Falmouth Harbor watershed is not sewered, the 2013 GWDP permitted amount is 570,000 gpd, with a number of conditions that specify other nitrogen reduction strategies. These conditions of the modified GWDP and Settlement Agreement are consistent with the DRI decision of 2001 and its outside/inside watershed split limitation of 600,000/230,000 gpd, The Town has advised that it is committed to comply with all Settlement Agreement requirements.

According to information received from the Town, the Town has reviewed the capacity and treatment process of the existing WWTF, and there is significant excess capacity. Water records from the Little Pond area show that 260,000 gallons per day can be processed at the existing plant. The DEP Discharge Permit requires tertiary treatment to 3 mg/L total nitrogen. Any future ocean outfall, proposed pursuant to the AMP, would likely also require treatment to that level.

c. Disposal Site
The increased flow from the Little Pond Watershed (0.26 MGD) will be discharged at Site 7 which is outside of the West Falmouth Harbor Watershed in compliance with the modified GWDP and Settlement Agreement. The FEIR has addressed, in detail, the Commission's recommendation for a diagnostic assessment and identification of potential mitigation measures associated with Site 7. The Plan provides a review of water quality data, bathymetric mapping, characterizes the proposed sand beds and conducted soil testing to evaluate the degree of attenuation. Crocker Pond is 1,860 feet downgradient of Site 7, which is approximately 70ft above the watertable. Modeling indicates that up to 42% of the project effluent path in groundwater could be towards the Pond. The assessment estimates phosphorous attenuation in the vadose zone and groundwater will retard its arrival and potential impacts at the pond, to between 100 to 1,400 years. The information provided indicates that the Site 7 disposal site poses a low risk to worsening the current water quality of Crocker Pond (though Crocker Pond is impaired today), provided that a Pond Action Plan for Crocker Pond is established. Based on information from the Town, Crocker Pond is already the subject of monitoring for the effectiveness of phosphorus sequestration project associated with a storm drain that contributes to the pond. The Town has advised that as part of the DEP process to issue a Discharge Permit for Site #7, the Town will set up a monitoring plan for Site #7 that tracks the impact, including phosphorus loading that may occur to sub-watersheds in the area: Little Harbor, Mashapaquit Creek, Crocker Pond, Herring River.

Site #7 will be monitored in accordance with the Discharge Permit to be issued by DEP. The Town advises that it has already done additional studies of groundwater flow and fate & transport of phosphorus [EcoLogic, LLL 8/8/13] in preparation for this permit.

Staff suggests that conditions of approval on Site 7 wastewater disposal consist of the establishment of a Technical Review Committee, development of a monitoring plan scope of work and regular reporting of progress as part of the overall Adaptive Management Plan reports.

d. Wastewater Disposal
The Plan is required to address overall wastewater management, treatment and effluent discharge. According to the DEIR, the estimated amount of wastewater that would be collected under a "conventional sewering" approach is 1.2 MGD for the Phase 1 and 2 areas at a cost of $590 million. The ultimate strategy for Falmouth and the region to attain the TMDLs for its coastal waters will be developed over the next number of years. Although the WWTF can likely be upgraded to handle a centralized treatment for that amount, the discharge of that volume is otherwise constrained. The Plan indicates that the Town will continue to pursue further wastewater effluent disposal options, as it develops its plan for meeting TMDLs in the other watersheds, including conventional, non-traditional and regional approaches, under the regional 208 planning effort, including ocean outfall.

It is appropriate that efforts to develop a comprehensive approach to wastewater disposal options be included as a part of the Adaptive Management Plan.

WRF7. Pilot Projects and Other Efforts
The Plan proposes to implement nine (9) different pilot projects, as listed below, over the next several years to 2020. Certain of these projects are required to file Notices of Project Change (NPCs) when more specifically developed, pursuant to the Secretary's Certificate of Adequacy issued for the Plan.

a. "Fertilizer" By-law – The Town's nitrogen control by-law was approved by Falmouth town meeting and is effective pursuant to an exception carved out of Chapter 262 of the Acts of 2012, as amended. The By-law is consistent with the purposes set out in the Cape-wide Fertilizer Management District of Critical Planning Concern designation, and those underpinning the Regional Policy Plan's turf management MPS. It is appropriate that DRI approval be conditioned to require the Town to develop a procedure for the same within the Adaptive Management Plan if the Town desires to take regulatory "credit" for nitrogen reduction associated with the by-law, which may include monitoring and implementation provisions.

b. Flow Neutral By-law – Falmouth Town meeting has approved a Flow Neutral By-law for consistency with the Zero Percent State Revolving Fund loan requirements. A major concern identified under the Environmental Bond Bill authorizing zero percent loans was that sewer projects should not allow unbridled growth. The Falmouth by-law allows up to a 4 bedroom maximum for residential properties that are sewered and appears to be consistent with existing town zoning and other development by-laws. It is appropriate that DRI Approval be conditioned to require that the by-law, its implementation and progress be a subject of the AMP.

c. Baseline and Compliance Water Quality Monitoring –It is appropriate that DRI approval be conditioned to require that the AMP establish protocols for baseline and compliance monitoring for TMDLs.

d. Shellfish Aquaculture Project – The Town proposes to implement a shellfish aquaculture pilot project in Little Pond as part of the Plan, funded by a 2013 Town Meeting appropriation, to achieve nutrient reduction. It is appropriate that DRI approval be conditioned to require that the aquaculture project be a subject of the AMP, including associated monitoring and reporting.

e. Inlet Widening –The Plan includes an inlet widening project for Bournes Pond. A preliminary design for the project has been developed including appropriate water quality modeling. The Town advises that regarding the proposed inlet widening, nutrients are always being 'transferred' out of the estuary with each tide; widening simply reduces residence time in the estuary. The nitrogen load to Nantucket Sound is the same. MEP reports show that there will be little change in salinity; these concerns will be addressed during the environmental studies required for inlet widening as part of an NPC to MEPA. It is appropriate to condition DRI approval to require that a scope for monitoring and reporting will be developed for the proposed inlet widening in the AMP.

f. Eco, Composting and Urine Diversion Toilets –It is appropriate that DRI approval be conditioned to require that this alternative toilet pilot project be a subject of the AMP, including associated reporting and monitoring.

g. On-Site Denitrifying Septic Systems – The Commission has provided the Barnstable County Septic System Test Center, partnering with the Town, with funds associated with the 208 Planning process for town wide evaluation of Innovative Alternative (I/A) septic systems. It is appropriate that DRI approval be conditioned to require that this I/A system project be a subject of the AMP.

h. Permeable Reactive Barrier (PRB) – The Town has presently provided essential hydrogeologic characterization of the Seacoast Shores peninsula. The Town's use of an inter-agency technical-regulatory committee for the portion of this pilot that has already begun has proved to be useful.

It is appropriate that DRI approval be conditioned to require that this PRB project and its implementation be a subject of the AMP, including associated reporting and monitoring.

WRF8. Adaptive Management Plan (AMP)
The Town's Plan includes a series of pilot projects and a targeted watershed management project that under an adaptive management approach will evolve into a definitive strategic plan to achieve TMDLs. However, it is in the nature of an AMP that this adaptive management planning approach is not well defined; final and subsequent actions required are largely dependent on the relative efficacy of constituent projects at earlier stages in the process. Similar to the Plan at hand, AMPs developed under other town's CWMP/ DRI approvals have allowed drafting of the AMP after DRI approval, delayed to a point just prior to the Plans' sewer construction component to allow a town to focus on its filing, bidding and contracting obligations. That said, the Falmouth Plan is different and more complex than other CWMPs reviewed in certain respects. First, there are pilot projects underway, in addition to future pilot projects proposed, that need to be held to certain reporting requirements for review and performance evaluation. Second, there is the TWMP component for which an Adaptive Management Plan will consist of performance and compliance reporting and coordination in a similar but more comprehensive way than a Groundwater Discharge Permit. Third, there is a milepost identified in the FEIR Certificate five years from its issuance to evaluate the implementation and results of those projects contemplated therein relative to regional water quality plan consistency, in an attempt to develop a comprehensive and affordable solution for TMDL compliance involving multiple watersheds.

In recognition of this complexity, the Adaptive Management Plan shall be developed incorporating the general framework outlined for Pilot Projects, Targeted Watershed Plans and overall Strategic Plan aspects set out in Exhibit A to this Decision, and updated accordingly. Falmouth has already implemented components of this AMP framework into their pilot projects and comprehensive planning through the local water quality review committee.

WRF9. The relevant findings and conditions of the 2001 DRI decision are hereby modified, or superseded, to reflect the present limitations of the 2013 modified GWDP and the Settlement Agreement, in accordance with WRF6(b), including an adjusted outside 570,000 gpd /inside 230,000 gpd watershed split.

Natural Resources Findings
NRF1. The Plan presents natural resource analysis of the following: 1) upgrade of WWTF at the existing Blacksmith Shop Road site, 2) addition of two infiltration beds to the north of this site, outside of the WFH watershed (Site 7 sand beds #14 and 15); 3) sewer installations within existing road layouts, and 4) alternative nitrogen-reduction strategies (non-wastewater management components).

NRF2. The proposed upgrade of the existing WWTF will not have any additional impacts on natural resources, which upgrades are contained within the existing development footprint.

NRF3. Site 7 is located within an area mapped by the Commission as Significant Natural Resources Area (SNRA) due to the presence of state listed rare species habitat. Information provided in the DEIR indicated that the Natural Heritage and Endangered Species Program (NHESP) has mapped this site for Eastern Box Turtle habitat. In addition, this site is located in the midst of a large forested woodland. Regional Policy Plan Minimum Performance Standards discourage the fragmentation of wildlife habitat, and require the protection of rare species

habitat. The FEIR indicates that Site 7 contains no wetlands or vernal pools. (No vernal pools are mapped within the WWTF property, as well). The FEIR also notes that the Plan reflects the Town's removal from consideration of the more sensitive site, Site 10.

NRF4. As the Town moves forward with more detailed plans and permitting the disposal area at Site 7, it is appropriate the DRI approval be conditioned to require the Town to work closely with the NHESP to avoid, minimize and mitigate impacts to box turtle habitat, and minimize fragmentation of general plant and wildlife habitat at this location, and that any Commission DRI approval be modified as necessary to reflect NHESP requirements, including as referenced in its written determination/s to the Town.

NRF4. Sewer Installations
Commission staff does not anticipate natural resources impacts associated with the installation of sewers within existing built road layouts. The Town should work with the NHESP and the Falmouth Conservation Commission to avoid impacts to rare species habitat and wetland resources to the greatest extent feasible.

NRF5. Nontraditional Plan Approaches
The Plan makes reference to several specific efforts to manage nitrogen through alternative approaches. Many of these approaches, including fertilizer management, improved stormwater management and the eco-toilet project, will likely have beneficial effects on wetlands, and wildlife and plant habitat. In addition, other non-traditional approaches will likely have beneficial effects on natural resources, but will require careful design and review to ensure that potential impacts are avoided, minimized, or mitigated. The FEIR states that individual non-traditional management approaches will proceed independently through the necessary permitting. Of particular note are efforts to improve nitrogen attenuation within Bournes Pond. The Commission encourages investigation of opportunities to attenuate nitrogen through increased tidal flushing within this water body, but also requests a thorough investigation of the potential positive and negative impacts that may be associated with inlet widening or dredging, including the potential for flooding of upstream rare species habitats. Projects designed to improve nitrogen attenuation through increased tidal exchange should consider the range of potential natural resource impacts associated with a given design, and incorporate an avoid/minimize/mitigate approach to designs selected. The Plan also attempts to avoid wetland resource areas when siting permeable reactive barriers (PRBs): consideration should be given also to avoiding rare species habitat, and siting PRBs within existing disturbed areas to the greatest extent feasible (e.g. within built road layouts).

Coastal Resources Findings
CRF1. Minimum Performance Standards under RPP Coastal Resources Goals intend to protect and enhance public and traditional maritime interests and public trust rights, to limit development in known coastal hazard areas in order to protect the natural beneficial functions of Coastal Resources, and to mitigate pollution sources and minimize negative impacts to Coastal Resources. The Plan proposes a combination of traditional (sewer installations) and non-traditional (demonstration projects) techniques in Coastal Resource areas.

CRF2. Pilot/Demonstration Projects
a. Appendix 3-6 of the FEIR details considerations for permeable reactive barrier (PRB) construction as a demonstration project at two locations, identified as Site 5 and Site 4b. According to the filing, both of these sites are located within existing, built road layouts and

detrimental impacts to coastal or wetlands resources from the PRB installation are thus not anticipated.

The FEIR includes evaluation of potential coastal pond inlet widening of Bournes Pond to increase tidal flushing in this pond. (Though previously considered, it does not appear that the Town is currently considering inlet widening at Little Pond). The intent of the proposed inlet widening is to restore the pond to a more unrestricted tidal regime, allow for greater tidal flushing, and to reduce concentrations of nutrients and other contaminants retained in the pond. Since the time of the DEIR filing, the Town has engaged consultants to study the benefits of opening this inlet, and has identified an optimal opening size and inlet-span crossing (bridge). In general, the Commission supports the Town's proposal to demonstrate the effectiveness of inlet widening as a component of its Plan, provided that all associated impacts, including impacts to wetland resources, coastal sediment transport, and local beaches are identified and mitigated. As construction plans develop, those plans should consider, evaluate and incorporate 1) coastal sediment transport changes anticipated from the proposed structure, 2) changes to flood extent within the pond and possible changes in habitat as well as threats to existing structures, 3) salinity changes and resulting anticipated changes in habitat, 4) impacts to rare species habitat.

b. The FEIR proposes shellfish cultivation to harvest nitrogen and algae from the estuaries as a non-traditional nitrogen management method and a component of the Plan. The Regional Policy Plan allows for coastal aquaculture provided it is designed to have no significant adverse impacts to water quality or marine habitat.

CRF3. Sewer Installations
The existing WWTF and proposed infiltration beds (Site 7) are not located in any FEMA-designated flood zones. However, portions of proposed sewer areas for Little Pond may fall within FEMA-designated flood zones. According to the Regional Policy Plan, new non-water dependent public infrastructure in Land Subject to Coastal Storm Flowage (LSCSF) is prohibited unless there is an overriding public benefit. Providing sewer infrastructure will improve water quality, and in the scope and configuration currently proposed, will result in a public benefit. Activities such as underground utility crossings may nonetheless be considered in LSCSF and similar resource areas, provided that best available measures are used to minimize impacts on the critical characteristics of LSCSF and provided that all other standards for underlying resource areas are met. Such measures should be incorporated into the project plans for Commission review and approval as they become more detailed.

CRF4. Migration of Coastal Resources
To the extent feasible, the landward migration of coastal resources should be considered during the planning and design phases of any proposed development. Section 6.6.1 of the DEIR considered climate change and its impacts to Coastal Resources, and shoreline residential and commercial development. The DEIR noted that *"given the extent of development or otherwise restrictive natural features adjacent to many coastal wetlands in the Town, progression* [of coastal wetlands] *inland may not be a viable option."* The DEIR also highlighted the importance of coastal wetlands, in particular salt marshes, in the sequestration of carbon toward mitigating the impacts of greenhouse gases on climate change. It also acknowledged that wastewater pumping stations and treatment facilities need to be sited high enough to avoid being exposed to damaging wave action in large storm events and protected from expected flood elevations anticipated with climate change. The FEIR recommended that *"future wastewater facilities for flood prone areas should be designed for climate change to have as long a design life as*

possible." The Commission recognizes the Town for considering climate change impacts in its Plan, and recommends that future design and engineering be reviewed and approved by Commission staff and carry forward these considerations for the effects of sea level rise and possible resource migration.

Heritage Preservation/Community Character Findings

HPCCF1. The Commission finds that Falmouth's CWMP includes numerous elements that could impact Community Character, including construction and installation of various treatment facilities. Based on the FEIR, the Commission finds that the primary infrastructure elements involve an upgrade of the existing WWTF on Blacksmith Shop Road in West Falmouth, wastewater recharge beds at Site #7 north of the treatment plant, and a sewer extension to the lower watershed of Little Pond, including pump stations near the Teaticket Elementary School and the Falmouth Mall.

HPCCF2. The Commission finds that while these infrastructure elements are not expected to impact historic resources and community character, numerous historic structures are located within the Little Pond watershed and some areas have been identified as potential future historic districts.

HPCCF3. The Commission finds that in order for the proposed CWMP to be consistent with MPS HPCC1.1 (Historic Resources) and HPCC1.2 (Cultural Landscapes), the Town will need to work with Massachusetts Historical Commission (MHC) and local historic boards as final design plans are developed to insure that new infrastructure is carefully sited and designed to avoid impacts to these resources.

HPCCF4. The Commission therefore also finds that it is appropriate to condition DRI approval to require that when design plans for the proposed new infrastructure are finalized, that the Town submit to the Commission and MHC for review and approval a map of resource areas, including historic resources that would be impacted by any proposed infrastructure elements.

HPCCF5. The Commission finds that an archaeological survey was conducted at Site #7 where the recharge beds are proposed, and MHC determined that there are no significant archaeological resources on that site.

HPCCF6. The Commission finds that as the final design of other project elements is completed, however, MHC review is needed to assess areas where ground disturbance is proposed and to determine whether additional archaeological survey work is needed, consistent with MPS HPCC1.3 (Archaeological Sites). As such, the Commission also finds that it is appropriate to require the Town of Falmouth to submit the findings of MHC to the Commission for review.

HPCCF7. The Commission finds that to be consistent with MPS HPCC2.4 (Consistency with Regional Context or Surrounding Distinctive Area), it is appropriate to condition the decision to require that any above-ground structures that are proposed as part of this project should acknowledge design features in the surrounding neighborhood and evidence consistency with the RPP and architectural design technical bulletin.

HPCCF8. To the extent that any new infrastructure requires screening, the Commission finds that to be consistent with MPS HPCC2.10 (Landscape Plan Requirements), it is appropriate to require vegetative buffers and retention of existing vegetation to limit visual impacts from new development.

Exterior Lighting Findings
EXLF1. The Commission finds that based on the information submitted to date, the only features of the project that may result in exterior lighting impacts are the proposed extension of sewer service to the Lower Watershed of Little Pond, the development of a new recharge site (Site 7) and the upgrade of the existing Blacksmith Shop Road WWTF.

EXLF2. In the case of the sewer line extension and the construction of a new recharge site, the Commission finds that any exterior lighting would likely be limited to temporary work lights needed to install the sewer line, pump stations, and construct the proposed infiltration beds. In the case of the existing WWTF, the Commission finds that exterior lighting could include temporary work lights or permanent fixtures to illuminate new infrastructure at the treatment plant site.

EXLF3. The Commission finds that it is appropriate to condition the project approval that any permanent exterior fixtures for any new or expanded WWTF or recharge site(s) be consistent with MPS HPCC2.11 and Technical Bulletin 95-001 (as amended).

Solid and Hazardous Waste Management Findings
SHWMF1. Based on the information provided to date, the Commission finds that MPS WM2.1 and MPS WM2.2 are applicable to certain parts of the CWMP that involve construction and land clearing activities. These actions could include the installation of the sewer line to the Little Pond Watershed, the development of the recharge site, and the upgrade to the existing WWTF.

SHWMF2. The Commission finds that it is appropriate to condition DRI approval to require that the Town submit to the Commission information on the amount and types of land clearing and construction waste produced, and the methods to appropriately manage and dispose of those wastes.

SHWMF3. Based on the information presented by the Town of Falmouth, the Falmouth WWTF is not currently a generator of hazardous under 310 CMR 30.00 and will not become a hazardous waste generator pursuant to the TWMP/CWMP.

Transportation Findings
TF1. The Commission finds that the proposed project is not anticipated to generate additional traffic other than trips relating to construction activities, does not propose to modify site access, and will not permanently impact public rights-of-way, all associated with sewer construction.

TF2. MPS TR1.1 (No Degradation of Public Safety) states that "*regardless of project traffic generation, DRIs shall not degrade safety for pedestrians, bicyclists, or motor vehicle operators or passengers.*" MPS TR1.8 (Sight Distance Requirements) further requires that "*acceptable sight distances shall be met and maintained at all access and/or egress locations for DRIs regardless of project traffic generation.*" Commission Transportation staff conducted a site visit to the Blacksmith Shop Road WWTF and reviewed the safety of and the site distance available at the intersection of the site access road with Service Road and Blacksmith Shop Road.

TF3. Based on the site visit to the WWTF conducted by Commission Transportation staff, the Commission finds that approaching from the east, (Service Road) while there is a sharp curve in

the roadway, sufficient sight distance is available given that the vegetation is currently well managed.

TF4. The Commission finds that it is appropriate to condition DRI approval on continued maintenance of sight lines by appropriately maintaining the vegetation on the curve on Service Road approaching the site access road.

TF5. Based on the site visit conducted by Commission Transportation staff, the Commission finds that approaching from the west, (Blacksmith Shop Road) sight distance is limited by the curvature of the roadway, the change in elevation of the roadway, and vegetation along the roadway.

TF6. The Commission finds that it is appropriate to condition DRI approval on additional trimming on the north side of the Blacksmith Shop roadway to improve available sight lines, and placement of warning signs to alert drivers to the presence of the WWTF access drive ahead.

CONCLUSION

Based on the Findings above, the Commission hereby concludes and finds further that:

1. Subject to and upon satisfaction of the conditions identified in this decision, the Plan is consistent with the Act and 2009 Regional Policy Plan (as amended).

2. the Plan is consistent with Falmouth's Local Comprehensive Plan

3. the Plan is consistent with municipal development by-laws, subject to the Town obtaining all required local approvals, licenses and permits for the constituent projects therein, including but not limited to an Order of Conditions from the Falmouth Conservation Commission and a road opening permit;

4. the Plan is consistent with applicable DCPC designations;

5. the probable project benefit outweighs the probable project detriment.

The Commission hereby approves the application of the Town of Falmouth for its CWMP/ TWMP as a DRI, subject to the following conditions:

General Conditions

GC1. This DRI decision is valid, and local permits may be issued pursuant to this Decision, for a period of 7 years from approval. The Town may seek to extend the term of this DRI decision prior to its 7 year expiration pursuant to the extension provisions in the *DRI Enabling Regulations*.

GC2. Failure to comply or remain in compliance with Commission regulations and this Decision, including all conditions stated herein, shall be deemed cause to revoke this Decision.

GC3. The Applicant shall obtain all necessary federal, state, and local permits for the proposed project.

GC4. No development work, as the term "development" is defined in the Cape Cod Commission Act and approved herein, shall be undertaken until all appeal periods have elapsed or, if such an appeal has been filed, until the appeal has been dismissed or decided in favor of the Commission and Applicant.

GC5. The Plan shall be constructed and implemented in accordance with the findings and conditions in this decision, the Final Comprehensive Wastewater Management Plan/Final Environmental Impact Report, dated September 2013, prepared by GHD, and the Secretary's Certificate of Adequacy on the FEIR.

GC6. Prior to issuance of a Certificate of Compliance for any development work, including sewer related road layout, building or site construction proposed in the Plan and approved herein, the Town shall submit the final sit and layout plans, for review and approval by Commission staff to determine their consistency with the Decision, the RPP and other applicable Commission regulations or technical bulletins. Submission, review and approval of architectural plans shall also be required for proposed above ground structures; and drainage and erosion control plans for Site 7 work.

GC8. The Town must seek a modification of this Decision in accordance with the Modification section of the Commission's DRI Enabling Regulations in effect at the time the modification is sought whenever it must request an NPC to the FEIR. Consistent with the FEIR Certificate the Town shall file a Notice of Project Change/ DRI Modification within five (5) years on its overall strategic plan to attain TMDL compliance for its coastal waters, and file NPCs for demonstration/ pilot projects.

GC9. Prior to commencement of any development work or the issuance of any Building Permit or road opening permit, including for sewer related construction (wastewater collection systems, facility siting, treatment and disposal), the Applicant shall obtain a Certificate of Compliance from the Commission that states that all conditions in this decision that are required to be addressed prior to issuance of a Certificate of Compliance have been met, including providing written proof to the Commission that a copy of this decision has been provided to the general contractor(s) at least thirty (30) calendar days prior to commencement of construction.

GC10. The Applicant shall notify Commission staff in writing at least thirty (30) calendar days prior to its intent to seek a Certificate of Compliance. Such notification shall include a list of key contact(s), along with their telephone numbers, mailing addresses, and email addresses, for questions that may arise during the Commission's compliance review. Commission staff shall complete an inspection under this condition, if needed, and inform the Applicant in writing of any deficiencies and corrections needed.

GC11. The Applicant shall construct and implement the project in accordance with the Adaptive Management Plan (AMP). The AMP, including its subsequent revisions contemplated in this Decision, shall be consistent with the regional Section 208 Water Quality Plan as and when it is completed and updated. A preliminary scope of the Adaptive Management Plan Components *(Exhibit A)* is attached to and incorporated into this decision by reference. A draft AMP shall be provided for Commission staff review and approval by September 2014. Thereafter, the town shall meet with Commission staff and provide an updated AMP for Commission staff review and approval every six months thereafter for a period of five years (through 2019). During this five year period, there shall be at least one public meeting a year before the regulatory committee of the Commission at which AMP updates, and status, progress and implementation reports are presented on the AMP. The annual meeting of the regulatory committee can satisfy one of the

two required six month meetings during this five year period. After this five year period, the Town and Commission staff will determine the frequency of AMP meetings, updates and submissions for Commission Staff review.

GC12. The Applicant agrees to allow Commission staff to enter onto the Blacksmith Shop Road Wastewater Treatment plant site or other Town property which is the subject of this decision, after reasonable notice to the Applicant, for the purpose of determining whether the conditions contained in this decision, including those linked to the Certificate of Compliance have been met.

Land Use Conditions

LUC1. The Town shall, as part of the Adaptive Management Plan, analyze how much additional growth is occurring in the Little Pond Watershed sewer service area, and determine whether additional steps to mediate this growth or accommodate the wastewater it generates is appropriate. The Town shall track, and report, additional growth as part of the Adaptive Management Plan.

Economic Development Conditions

EDC1. The Town shall, as part of the Adaptive Management Plan, analyze how much additional growth is occurring in the Little Pond Watershed sewer service area, and what kinds of additional growth are occurring in terms of density, or sprawl and strip development. The Town shall also analyze steps to mediate sprawl and/or strip development in the sewer service area, and to restrict or accommodate the wastewater it generates. The Town shall provide further information on how the proposed sewering of the Little Pond service area meets existing demand by reporting demand for sewer connections in the Adaptive Management Plan.

Water Resources Conditions

WR1. The Town shall provide a stormwater report and O&M plans, including BMPs, for sewer related construction and improvements consistent with the applicable standards in the RPP and this Decision for Commission staff review and approval.

WRC2. Discharge limitations for the WWTF shall be pursuant to the 2013 modified GWDP and the related Settlement Agreement, including an adjusted outside 570,000/inside 230,000 gpd watershed split.

Natural Resources Conditions

NRC1. The Town shall utilize existing disturbed areas within road rights-of-way and utility easements to the greatest extent feasible for the sewer line installation. Where sewer lines are proposed within mapped rare species habitat, the Town shall submit the proposal to the Natural Heritage and Endangered Species Program (NHESP). If the NHESP determines that the project will result in a take of state listed species and requires preparation of a Conservation and Management permit, the Town shall submit the project plans and proposed mitigation plan to NHESP, with a copy to the Commission.

NRC2. As the Town moves forward with more detailed plans and permitting for sewer construction, the Town shall work closely with the NHESP to avoid, minimize and mitigate impacts to box turtle habitat, and minimize fragmentation of general plant and wildlife habitat at locations disturbed due to development of new infrastructure, and DRI approval shall be modified as necessary to reflect NHESP requirements, including as referenced in its written determination/s to the Town.

Coastal Resources Conditions

CRC1. Development plans in coastal areas, including for Bournes Pond inlet widening, shall be provided for Commission staff review and approval prior to commencement of development and consider, evaluate and incorporate 1) coastal sediment transport changes anticipated from the proposed development, 2) changes to flood extent and possible changes in habitat as well as threats to existing structures, 3) salinity changes and resulting anticipated changes in habitat, 4) impacts to rare species habitat, 5) best available measures used to minimize impacts on the critical characteristics of LSCSF, 6) climate change impacts including sea level rise and possible resource migration.

Heritage Preservation/Community Character Conditions

HPCC/C1. The Town shall work with Massachusetts Historical Commission (MHC) and local historic boards as final design plans are developed to insure that new infrastructure is carefully sited and designed to avoid impacts to these archaeological or historical resources, and community character.

HPCC/C2. As the final construction design plans are completed, the Town shall request MHC input to assess areas where ground disturbance is proposed and to determine whether additional archaeological survey work is needed; the Town of Falmouth shall submit the findings of MHC to the Commission for review.

HPCC/C3. Prior to issuance by the Commission of a Certificate of Compliance the Town shall submit to the Cape Cod Commission for review and approval plans for any proposed above-ground structures. These plans shall also be accompanied by a map of historic resource areas. Any above ground structures shall be designed consistent with Commission design standards in the RPP and architectural design technical bulletin, and acknowledge design features in the surrounding neighborhood.

HPCC/C4. The Town shall retain existing vegetation and provide vegetated buffers to limit visual impacts from new above-ground structures, including but not limited to pump stations and additional development at the Blacksmith Shop Road WWTF. The Town shall provide for Commission staff review and approval prior to issuance of a Certificate of Compliance a landscape plan showing proposed existing vegetation and provided vegetated buffers to limit visual impacts from new above-ground development including but not limited to pump stations and additional development at the Blacksmith Shop Road WWTF.

HPCC/C5. If deemed necessary by MHC, prior to issuance of a Certificate of Compliance by the Commission, the Town shall conduct an archaeological survey during the preliminary design phase of the Plan where ground disturbance is proposed, with a permit from the office of the State Archaeologist/Massachusetts Historical Commission (MHC), at any sites where MHC staff identifies archaeological sensitivity. If any archaeological sites are identified during survey work, the Applicant shall meet with MHC staff and Commission staff to demonstrate how the proposed development has been configured to maintain and/or enhance such resources. In addition, any archaeological sites determined eligible for listing on the National Register of Historic Places shall be preserved and protected from disturbance through a conservation restriction or similar means to be approved by Commission staff and MHC staff prior to issuance of a Certificate of Compliance by the Commission.

Exterior Lighting Conditions
EXLC1. All permanent new or replacement/upgraded exterior lighting for any part of the proposed project, including but not limited to site, building and sign lighting shall be in conformance with MPS HPCC2.11 and Technical Bulletin 95-001 (as amended).

EXLC2. Prior to issuance by the Commission of a Certificate of Compliance, the Town shall submit for Commission staff review and approval information on exterior lighting to confirm that the exterior lighting selected is consistent with MPS HPCC2.11 and Technical Bulletin 95-001 (as amended).

EXLC3. If changes are made to the exterior lighting design referenced in Condition EXLC2 as construction proceeds, prior to selection and installation of the revised exterior lighting fixtures, the Town shall submit for Commission staff review and approval additional exterior lighting design information sufficient to allow Commission staff to determine if the proposed alternate fixtures are consistent with conditions relating to exterior lighting. Alternate exterior light fixtures found to be consistent with conditions related to exterior lighting then may be utilized upon written Commission staff approval.

EXLC4. Commission staff shall conduct a site visit to verify that new exterior lighting is installed consistent with these exterior lighting conditions, the applicable MPS of the RPP , and the exterior lighting technical bulletin. If this inspection finds that the installed exterior lighting design is inconsistent with the exterior lighting conditions of this decision, the Town shall make amendments and changes necessary to bring the lighting design into compliance with the exterior lighting conditions. If such adjustments are required, Commission staff must conduct a follow-up site inspection to verify the adjusted design is consistent with the exterior lighting conditions.

Solid and Hazardous Waste Management Conditions
SHWMC1. Prior to issuance of a Certificate of Compliance by the Commission, the Town shall provide for Commission staff review and approval a written plan that describes:

1. The amount and types of construction and demolition debris and land clearing waste to be generated
2. Methods to handle materials classified as Waste Ban materials
3. Methods for separating, sorting, transporting and disposing of any gypsum wall board separate from the rest of the solid waste stream
4. Methods for separating, sorting, transporting and recycling or disposing of the remainder of the construction and demolition and land clearing wastes

Transportation Conditions
TC1. On the north side of the Blacksmith Shop Road and on the curve of Service Road approaching the WWTF access drive, the Town shall undertake and maintain additional trimming to improve available sight lines, and maintain and place warning signs to alert drivers to the presence of the WWTF access drive road ahead.

ISSUANCE OF DECISION

The Cape Cod Commission hereby approves with conditions the application of the Town of Falmouth for the Development of Regional Impact as outlined in this decision pursuant to Sections 12 and 13 of the Act, c 716 of the Acts of 1989, as amended for the Town of Falmouth Comprehensive Wastewater Management Plan/ Targeted Watershed Management Plan.

Executed this 27th day of February 2014.

Signature

JOHN H McCORMACK JR CHAIRMAN

Print Name and Title

COMMONWEALTH OF MASSACHUSETTS

Barnstable, ss February 27, 2014

Before me, the undersigned notary public, personally appeared John H. McCormack, JR

in his/her capacity as Chairman of the Cape Cod Commission, whose name is signed on the preceding document, and such person acknowledged to me that he/she signed such document voluntarily for its stated purpose. The identity of such person was proved to me through satisfactory evidence of identification, which was [ ] photographic identification with signature issued by a federal or state governmental agency, [ ] oath or affirmation of a credible witness, or [✓] personal knowledge of the undersigned.

Gail P. Hanley

Notary Public

My Commission Expires:

9-28-18

GAIL P. HANLEY
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
September 28, 2018

Exhibit A
Falmouth CWMP/ TWMP DRI Decision

_____, ____ 2014

Adaptive Management Plan Components

1. Pilot Projects – for each project
    a. Implementation
    b. Establish regular reporting frequencies
    c. Establish a multi-agency technical review panel
    d. Background monitoring
    e. Project Design
        i. Performance monitoring
        ii. Design and Monitoring modifications as needed
        iii. Recommend options for full scale deployment
    f. Scope for monitoring and reporting for the proposed Bournes Pond inlet widening.
    g. Scope of aquaculture project, including associated monitoring and reporting.
    h. Scope of alternative toilet pilot project, including reporting and monitoring.
    i. Scope and Reporting on town wide I/A system evaluation project
    j. Scope, reporting and implementation of PRB project/s.

2. Targeted Watershed Projects
    a. Implementation
    b. Capital expenditures
    c. Compliance with the Groundwater Discharge Permit
        i. Treatment plant performance
        ii. Monitoring wells
    d. Baseline water quality and habitat monitoring for Estuaries
        i. Stations
        ii. Parameters
        iii. Methods
        iv. Frequency
        v. Effectiveness in Little Pond Watershed in meeting applicable TMDLs
        vi.
    e. Establishment of a multi-agency technical review panel (see 1.c. above)
        i. Development of monitoring scopes
        ii. Assessment of downgradient resources
        iii. Review of monitoring reports
        iv. Assess Compliance with TMDLs
        v. Interpretations for modifications

Exhibit A
Falmouth CWMP/ TWMP DRI Decision

_____, ____ 2014

Adaptive Management Plan Components

3. Strategic Plan
    a. Implementation
    b. Notice of Project Change Filing
    c. Establish a multi-agency technical review panel (see 1.c. above)
    d. Multi-watershed needs and approaches
        i. Pilot project applications
        ii. Treatment efficiencies
        iii. Effluent disposal on land
        iv. Ocean outfall
        v. Identify need for new tools and assessments
    e. Regional opportunities
    f. Institutional Regulatory and Management Opportunities
    g. Comprehensive approach to wastewater disposal options

4. Other non-structural required components pursuant to the DRI approval (includes long term and adaptive requirements)

    a. Assess and update growth potential and monitor build-out in accordance with the flow neutral by-law.

    b. Town development of a fresh water pond action plan, including further pond assessment and scope of work for implementation, as applicable; and specifically beginning with Crocker Pond

        i. Monitoring program combined with an assessment of land uses surrounding the pond that are sources of phosphorus to identify potential watershed remedies such as storm water management that can provide assurances that the pond's ecological integrity can be retained and improved

    c. Status reporting on and implementation of stormwater projects if the Town intends to seek nitrogen removal "credit" for them.

    d. Credit procedure if the Town desires to take regulatory "credit" for nitrogen reduction associated with the nitrogen control (fertilizer) by-law, which may include monitoring and implementation provisions.

    e. Town advises that CEC monitoring shall be established when DEP establishes guidance for monitoring CECs.

    f. Report demand for sewer connections.