7. MEPA Draft Section 61 Findings and Mitigation

7.1. Introduction

This chapter identifies and presents proposed mitigation measures and Draft Section 61 Findings for each permit or other approval anticipated to be issued by State Agencies, as required by the Massachusetts Environmental Policy Act (MEPA) regulation 301 CMR 11.07. All mitigation measures will be funded and implemented by the Town of Falmouth, its agents, representatives, and/or contractors in addition to any required State agency actions.

7.2. Draft Section 61 Findings for State Agency Actions

Anticipated State agency permits and actions for the CWMP are summarized in Table 7.1. Permits anticipated as part of the Great Pond TWMP Preferred Alternative are indicated in **bold text**.

Table 7.1 Draft Section 61 Findings for State Agency Actions

State Agency	Agency Permits / Actions
US Environmental Protection Agency (USEPA)	– National Pollutant Discharge Elimination System (NPDES) Permitting Program (as applicable), under 40 CFR Chapter 1, Section 122.26 (15) for NPDES Stormwater Permit for Construction Activities and review of developed Stormwater Pollution Prevention Plan (SWPPP).
Department of the Army, New England District, Corps of Engineers	– Permit requirement under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403), as applicable. – Permit requirement under Section 404 of the Clean Water Act. – Massachusetts Programmatic General Permit (PGP) or Category II or III Individual Permit.
Massachusetts Executive Office of Energy and Environmental Affairs (EOEEA)	– **TWMP approval.** – **Notice of Project Change approval.**
Massachusetts Department of Environmental Protection (MassDEP)	– **Groundwater Discharge Permit Program (MGL c. 21 s. 43 and 314 CMR 5.00) BRP WP11 for facility modifications with plan approval and / or a new effluent discharge permit.** – **WP68: Treatment Works Plan Approval for New/Modified Facility associated with Groundwater Discharge Non-Industrial or Reclaimed Water Use Permits – for new lift stations proposed for the project.** – Sewer System Extension and Connection Permit Program (MGL c. 21 s. 43 and 314 CMR 7.00). – Chapter 91 License (MGL c. 91), as applicable. – **Notice of Intent (NOI) Wetland Protection Act (WPA) Form 3 (as applicable) and Falmouth Conservation Commission approvals (as applicable) for work within the 100-foot buffer to a wetlands (310 CMR 10.00).** – Air Quality Permits (as applicable). – BWP AQ 04 – Asbestos Removal Notification may be required for asbestos pipe removal. – BWP AQ 06 - Construction / Demolition Notification. – Emergency Engine and Emergency Turbine Compliance – required for all new emergency or standby engines with a rated power output equal to or greater than 37 kW or emergency turbine with a rated power output less than one megawatt constructed, substantially reconstructed, or altered after March 23, 2006.

State Agency	Agency Permits / Actions
	– Air Quality Permit BWP AQ 14, 15, 16, 17 Operating Permits - required for major sources of air pollution by the Clean Air Act Amendments of 1990 (as applicable if triggered by anticipated emission from the WWTF or proposed odor control systems). – Bureau of Waste Site Cleanup Filing of Utility Release Abatement Plan (as applicable), for excavation within known contaminated sites.
Massachusetts Office of Coastal Zone Management (CZM)	– Federal Consistency Review. – Pre-consultation to applicability.
Commonwealth of Massachusetts Department of Public Works	– **Permit for work within State Highway Layouts – required for any work on Route 28.**
Massachusetts Division of Fisheries & Wildlife	– **Natural Heritage & Endangered Species Program (NHESP), MESA (321 CMR 10.00) and/or WPA (310 CMR 10.00) for work below the mean high-water line, in a fish run, or in a priority or estimated habitat.**
Massachusetts Division of Marine Fisheries (DMF)	– Consultation on potential impacts to diadromous fish species and mitigations measures, as appropriate.
Massachusetts Historical Commission (MHC)	– **Consultation / review for any collection system components and pump stations to be constructed outside of road rights-of-way.**
Cape Cod Commission (CCC)	– **TWMP Approval as part of the 208 Plan compliance and approval process.**
Town of Falmouth	– **Building permits for the construction of structures recommended in the TWMP.** – **Wastewater Department sewer connection permitting.** – **Chapter 277 Stormwater Management Rules and Regulations.** – **Article III. Construction and Post-Construction Stormwater Management.**

7.3. Planned Mitigation Measures

The following mitigation measures have been identified to limit negative environmental impacts and/or create positive environmental impacts during development and operation of the Recommended Plan.

7.3.1. General Construction Measures

During construction, the site(s) shall be secured to prevent unauthorized entry to the construction site, and to protect existing and adjacent facilities and properties. Supplemental lighting, signs, railings, and construction barriers shall be used as necessary to provide safety to employees, construction workers, visitors, and the general public during the construction process in accordance with Occupational Safety and Health Administration (OSHA) and other applicable regulations.

Water used during the construction process, and that generated from runoff on the site, will be controlled by proper site grading, and by providing temporary berms, drains, and other means to prevent soil erosion. These means will also be used to reduce puddling and runoff on the site. Existing and new catch basins will be protected from siltation using hay bales, siltation fence, and catch basin inserts. At no time will the pumping of silt-laden water to surface waters, stream corridors, or wetlands be allowed. Pollution controls will also be provided to prevent the contamination of soils, water, and the atmosphere from the discharge of noxious, toxic substances, and pollutants during the construction process.

Erosion control measures including hay bales, siltation fencing, and erosion control fabric will be used to provide sedimentation barriers where required. Temporary seeding and mulching may also be used to minimize soil erosion and provide soil stabilization on slopes. Diversion trenches may also be used on the uphill side of disturbed areas to divert surface runoff. Land disturbances will be kept to a minimum to reduce impacts and erosion. All erosion and stormwater control methods shall be in accordance with the USEPA National Pollution Discharge Elimination System (NPDES) General Permit requirements, Commonwealth of Massachusetts regulations, and the Town of Falmouth regulations. A Stormwater Pollution Prevention Plan (SWPPP) will be required as part of the NPDES General Permit.

The site will be maintained free of waste materials, debris, and trash following each day of work. Waste and other debris will be collected and disposed of off-site periodically. At no time during construction will the dumping of spoil material, waste, trees, brush, or other debris be allowed into any stream corridor, any wetland, any surface waters, or any unspecified location. The permanent or unspecified alteration of stream flow lines is not allowed during construction. Recycling of waste and construction debris will likely be mandated as well and should always be considered during construction.

Construction noise from heavy equipment will normally be limited to within normal operating hours of 7:00 a.m. to 5:00 p.m. Dust controls, including the use of street sweepers and/or watering trucks, will be used to minimize air-borne dust as necessary.

All general construction measures will be implemented by the Contractor during construction. Contractor will be required to follow the Massachusetts Diesel Retrofit Program for any and all diesel-powered non-road construction equipment and vehicles greater than 50 brake horsepower. Anticipated costs for the general construction measures are included in the overall project costs for the Preferred Alternative.

7.3.2. TASA Collection System Phases 1 and 2

In addition to the measures identified in the general construction section, police details and other traffic controls will be necessary to minimize traffic problems during sewer expansion construction. Detours and trucking routes will need to be identified prior to construction, and these routes will need to be designed to minimize impacts to surrounding residential areas not accustomed to heavy construction and increased vehicle traffic. Construction within the Teaticket Acapesket Sewer Service Area will have to allow for safe travel of both pedestrians and vehicle traffic. Traffic control plans will be developed by the Engineer through coordination with the Falmouth Police Department during design, and shown on the construction drawings. Traffic control will be implemented by the Falmouth Police Department. An allowance for anticipated police costs is included in the overall project costs for the Preferred Alternative.

Sewer extensions are planned in the road layouts to avoid impacts to animal habitats, wetlands, historic areas, or potential archaeological sites. Construction in these areas will impact traffic (vehicle, pedestrian, and bicycle) in the roadways during construction. Construction procedures for traffic control, erosion protection, dust control, noise prevention, and wetland protection will be outlined in the bid documents by the Engineer and implemented by the Contractor as appropriate. Use of trench boxes, bracing, and other shoring methods will be utilized to provide the necessary safety for workers and others at the construction site by the Contractor. To the extent practicable, any private property, including trees and vegetation, that is damaged during construction is to be repaired or replaced by the Contractor. All roads, both publicly and privately owned, impacted by construction associated with the implementation of the collection system shall be restored to a condition safe and appropriate for vehicular traffic by the Contractor. Any collection system components and lift stations to be constructed outside of road rights-of-way will be reviewed with the Massachusetts Historical Commission if located with an archeologically sensitive area and may also require Conservation Commission review or NHESP review depending on their location as well. These reviews will be coordinated by the Engineer during design.

The collection system lift stations need to be located in lower-elevation areas to be able to utilize gravity pipes for collection and subsequent pumping. Where required, wetland regulations and permitting will be followed to minimize impacts to any adjacent wetlands. Permitting will be coordinated by the Engineer during design.

Stormwater and construction runoff will be managed by the Contractor through the implementation of construction SWPPPs established prior to construction and regulated under USEPA NPDES General Permits for Construction.

Areas requiring sewers located within parts of town identified as barrier beach will have to be designed and constructed to meet specific State requirements for work within these areas (Executive Order 181), and will have the following stringent requirements for the construction of sewers on a barrier beach:

1. All infrastructure must be protected from coastal flood hazards.
2. The sewers cannot promote additional growth on the barrier beach that would not have otherwise been allowed.

Previous discussions held with Massachusetts Coastal Zone Management (CZM), the agency that upholds Executive Order 181, have identified that the water quality benefits provided by the collection system extensions will greatly outweigh the slight risk that a catastrophic coastal hazard could damage some of the infrastructure. Collection system extensions will be designed to withstand reasonably expected coastal flood hazards in accordance with ASCE-24; lift stations will be designed to withstand a 100-year storm, and all pipes and equipment suitably protected from wave action. Lift stations will be located outside of flood zones when possible and protected with a system of check valves in critical areas, and generally protected from floods and natural hazards to the extent reasonable.

The Town's existing Flow Neutral bylaw adopted in January of 2014, applies to existing and future sewer areas, including the TASA sewer expansion area. Anticipated costs for the planned mitigations measures during sewer expansion to the Teaticket Acapesket Peninsula are included in the overall project costs for the Preferred Alternative.

7.3.3. TASA Improvements Falmouth WWTF Upgrade and Recharge Facilities for TASA / ESRA Flows

In addition to those mitigation measures identified previously, the following measures will be provided at the existing Blacksmith Shop Road WWTF and effluent recharge site. The wastewater treatment system will be upgraded to provide capacity to process the wastewater collected from the Teaticket Acapesket Study Area (TASA). Removal of this local source of nitrogen will significantly reduce the amount of nitrogen entering Great Pond to make substantial progress towards achievement of the TMDLs during the 20-year planning period.

The upgrade will increase the production of biosolids (sludge) and increase the volume of treated water recharged to the water table at the WWTF site. The sludge will be disposed of or reused at an approved off-site facility in accordance with MassDEP guidelines. The treated effluent recharge will be monitored by the Town as part of an approved groundwater discharge permit. Odor and noise mitigation measures will also be considered as part of the final design to minimize the impacts to adjacent properties during construction and operation. These mitigation measures will be included in the bid documents for the project and implemented by the Contractor during construction.

Energy efficient design features to minimize GHG release from the WWTF will be considered during preliminary and detailed design by the Engineer. GHG evaluations were completed as summarized in this report and these evaluations should be considered by the Engineer during design of any expansions of the WWTF.

The following mitigation measures will be observed to avoid or minimize adverse environmental impacts:

– The WWTF improvements will take place on a previously developed parcel (existing Blacksmith Shop Road WWTF) and in existing structures.
– New lift stations will have exterior façades which will complement and be consistent with neighborhood aesthetics.
– Vegetative screens will be employed if it is determined that they are necessary for aesthetic reasons.
– Consultation with expert agencies during the design phase and continued contact during construction if there is a resource that may be affected.
– Work will be halted if archaeological resources are uncovered during construction.
– The contractor will be required to thoroughly clean up the site before the contract is considered complete.
– Proper handling and storage of possible contaminants and hazardous substances will be required of the contractor, in addition to proper notifications.
– Access roads will be dampened to minimize construction dust if required.
– Debris will not be burned as a means of disposal.
– No construction work will normally be performed during evening, holiday, or weekend hours.
– A Resident Project Representative will be employed to ensure that the project area is kept clean and that mitigation measures are met.

Anticipated costs for the planned mitigation measures during the wastewater treatment facility and effluent recharge site improvements are included in the overall project costs for the Preferred Alternative.

7.3.4. Planned Mitigation Measures: Adaptive Management and Monitoring

Adaptive management provides a significant mitigation measure mechanism for the Recommended Plan. The Recommended Plan includes the implementation of an Adaptive Management process, in which the Town will monitor the results of implementation over time and adjust next steps/future implementation accordingly. The Town will monitor Great Pond surface water quality to observe the timeframe and scale of improvement accomplished by the implementation of the Recommended Plan, and to evaluate the need for additional future implementation. The Town will continue to monitor performance of the demonstration/pilot projects and may expand or contract the role of various non-traditional methods into the plan as they demonstrate feasibility and effectiveness. This Adaptive Management approach will enable the Recommended Plan to be adjusted based on the monitoring results of the environmental and economic impacts associated with construction of new sewers in Falmouth. Coordination with MassDEP and CCC will occur through the Adaptive Management process.

7.4. Summary

Table 7.2 summarizes the mitigation measures outlined in this Chapter. Funding of these projects and mitigation measures is all anticipated to come from Town Funding and to be supported by various grant and loan opportunities including Natural Resources Conservation Service (NRCS), the Massachusetts State Revolving Fund (SRF) program, Southeast New England Program (SNEP) Grants, Cape and Islands Water Protection Trust, CZM grants and additional funding sources.

Table 7.2 Mitigation Measures Summary Table

Category	Proposed Mitigation Measure	Implementation	Preliminary Schedule
General Construction – Site Access / Public Safety Impact	The site(s) shall be secured to prevent unauthorized entry to the construction site, and to protect existing and adjacent facilities and properties. Supplemental lighting, signs, railings, and construction barriers shall be used as necessary to provide safety to employees, construction workers, visitors, and the general public during the construction process in accordance with OSHA and other applicable regulations. Police details and detours will be implemented in accordance with Traffic Control Plans included with the Project Contract Documents.	Contractor	During Construction
General Construction – Stormwater	Provisions for stormwater management and erosion control shall be managed in accordance with the approved SWPPP and NPDES General Permit.	Contractor	During Construction
General Construction – Construction Debris	The site(s) will be maintained free of waste materials, debris, and trash following each day of work. Waste and other debris will be collected and disposed of off-site periodically. At no time during construction will the dumping of spoil material, waste, trees, brush, or other debris be allowed into any stream corridor, any wetland, any surface waters, or any unspecified location. The permanent of unspecified alteration of stream flow lines is not allowed during construction. Recycling of waste and construction debris will likely be mandated as well and should always be considered during construction.	Contractor	During Construction

Category	Proposed Mitigation Measure	Implementation	Preliminary Schedule
General Construction – Noise and Dust Control	Normal construction hours will be between 7 a.m. and 5 p.m. during normal business days. No work will be allowed on Holidays and the Contractor will be required to provide adequate dust control measures during construction.	Contractor	During Construction
Wastewater Facilities Construction Mitigation – Resource Areas	As necessary, appropriate Notice of Intent documents and Request for Determinations will be filed relative to work proposed with buffer areas or resource areas. Orders of Conditions, as received, will be incorporated into the Construction Documents.	Town / Contractor	Permitting Prior to Construction / Mitigation during Construction through compliance with Order of Conditions.
Wastewater Facilities Construction Mitigation – Flooding	To the extent practicable, facilities will be located out of flood hazard zones. Because lift stations are typically located in low lying areas to maximize gravity sewer service, additional provisions for coastal resiliency and flood protection will need to be made to mitigate impacts. During construction, management of dewatering and protection from storms will be required.	Town / Contractor	During design and construction
Wastewater Facilities Construction Mitigation – Site Impacts	The WWTF improvements will take place on a previously developed parcel (existing Falmouth WWTF).	Town / Contractor	During construction
Wastewater Facilities Construction Mitigation – Aesthetics	New lift stations will have exterior facades which will compliment and be consistent with neighborhood aesthetics as appropriate. Vegetative screens will be employed, if determined necessary, for aesthetic reasons.	Town / Contractor	During design and implemented during construction
Wastewater Facilities Construction Mitigation – Archeological	Development of a Post Discoveries Review Plan (if necessary). Work will be halted if archaeological resources are uncovered during construction.	Town / Contractor	Plan development prior to Bidding, implementation during construction
Wastewater Facilities Construction Mitigation – General	A Resident Representative will be employed to ensure that the project area is kept clean and that mitigation measures are met.	Town	During construction
Adaptive Management – TMDL Compliance	Implementation of an Adaptive Management process which will consider the performance of the demonstration projects and incorporate cost-effective non-traditional methods into the plan once they demonstrate feasibility. The adaptive management process will involve ongoing water quality monitoring to monitor and respond to the results of the implementation of the preferred compliance plan.	Town	Pre and post construction/ implementation
Climate Change Mitigation	The Town of Falmouth participates on regional committees to assist with planning for and mitigation of potential impacts due to climate change in response to their projects.	Town	Pre and post construction / implementation