

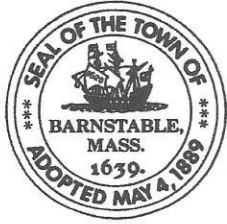
Town of Barnstable, Massachusetts

**Comprehensive Wastewater
Management Plan**

Special Review Procedures



November, 2020



The Town of Barnstable

Department of Public Works

382 Falmouth Road, Hyannis, MA 02601
508.790.6400



Daniel W. Santos, P.E.
Director

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Assistant Director

November 13, 2020

Secretary Kathleen A Theoharides
Executive Office of Energy and Environmental Affairs (EEA)
Attn: MEPA Office
100 Cambridge Street, Suite 900
Boston, MA 02114

RE: Town of Barnstable
Special Review Procedures for Comprehensive Wastewater Management Plan

Dear Secretary Theoharides:

On behalf of the Town of Barnstable we are pleased to submit the attached Special Review Procedures for the Town's Comprehensive Wastewater Management Plan (CWMP) for consideration MEPA.

The April 3, 2020 Certificate on the Expanded Environmental Notification Form (EENF), acknowledged the CWMP as a master planning document that warrants consideration of a Special Review Procedure (SRP). Town Staff agrees and has worked with MEPA Staff to develop the attached SRP. This SRP is being submitted simultaneously with the Single EIR submission. We feel that the attached SRP has been developed with sufficient detail to provide a framework to MEPA for the development of the final SRP.

Sincerely,

Daniel W. Santos, P.E.

6.2 SPECIAL REVIEW PROCEDURES

At an estimated cost greater than \$1 Billion, the Town's Comprehensive Wastewater Management Plan is likely to be the largest infrastructure project the Town will ever undertake. As a result, the program will be executed as dozens of smaller, more manageable projects. There are five different types of projects that have been identified as part of the program: sewer system expansion projects, treatment plant improvements, effluent disposal expansion, non-traditional solutions, and inter-municipal partnerships. The intent of this section is to outline how the Town will execute each type of project, and identify the regulatory review procedures required for each type of project.

6.2.1 SEWER SYSTEM EXPANSION PROJECTS

The sewer system expansion program is the core of the Town's Comprehensive Wastewater Management Plan and will consist of the installation of ± 190 miles of new sewer infrastructure, serving $\pm 11,816$ properties and collecting ± 2.1 MGD of new flow (± 4.6 MGD total including existing flow and buildout projections).

Due to the massive size of this program, it will be necessary to execute the program as dozens of smaller, more manageable projects over the course of 30 years, which are defined by logical project boundaries (i.e. topography/sewershed, neighborhoods, etc.). Per discussions with MEPA staff, additional MEPA review will not be necessary for these sewer expansion projects, unless the proposed sewer expansion areas expand outside of those identified in this document. It is acknowledged that each of these projects will have their own unique permitting requirements.

The following is the typical approach that the Town anticipates for the development, design, review, permitting (where necessary), bidding and construction of the sewer expansion projects. This section is more detailed than the other four project types as it is not anticipated that further MEPA review will be required, whereas the other four project types are anticipated to require additional MEPA review.

- Town staff defines the general project service area and develops a schematic design for the project based upon existing GIS data.
- Town staff requests funding for the preliminary design of the sewer expansion project from Town Council.
- When funding is appropriated, the Town will prepare an RFP for survey/detailed mapping of the project service areas.
- Upon receipt of the survey data, it is anticipated that Town staff will develop a preliminary design (30% design) of the sewer infrastructure. Alternatively, this phase

of work may be contracted, but at this time it is anticipated that Town staff will perform this phase of work. The following activities are part of preliminary design:

- Review and identify the sewer alignments necessary to serve the target parcels. Identify locations of sewerage infrastructure. Review and select appropriate climate adaptation measures and appropriate greenhouse gas (GHG) emission reduction measures for the infrastructure.
- Town staff will review and identify any project specific regulatory requirements and develop a permit matrix. Town staff may arrange a pre-application meeting with certain regulatory agencies in order to confirm the regulatory requirements. Document all regulatory meetings with meeting minutes.
- It is anticipated that the following regulatory agencies may have jurisdiction over certain portions of the sewer expansion program which will require regulatory review and potentially permits:
 - Conservation Commission: For construction within buffer zones, riverfront areas, and flood zones.
 - Wetland resource areas will be identified during the survey/mapping phase and a wetland resources report will be prepared. Town staff will review these findings with Conservation staff to determine if a Notice of Intent will be necessary for the project.
 - Division of Fisheries & Wildlife: For construction within mapped Priority Habitats for state-listed rare species.
 - The majority of the infrastructure installed during the sewer expansion program will be within roadways and thus will be exempt from MESA review pursuant to 321 CMR 10.14 (6) and (10).
 - Certain components of the program may not meet the exemption as they will be outside of roadways and thus may require review, such as pump stations, cross country sewers (not anticipated at this time), etc.
 - MassDOT: For construction within State Highways.
 - A pre-application meeting will be held with MassDOT staff for projects that involve work within a State Highway layout.
 - Massachusetts Historical Commission
 - As per page 16 of the EENF Certificate, the Town will submit a US Geological Survey topographical map that clearly locates the proposed project area, as well as the preliminary designs, for review by MHC to determine if the project will have any “adverse effects” on historic or archaeological resources.

- If MHC determines that the project may have “adverse effects”, the Town will begin discussions with MHC on mitigation measures that the Town will undertake to address the adverse effects and secure necessary permits.
 - Local Historic Commissions
 - Town Staff will review if the project area is within any local historic commission jurisdictions.
- Town staff will identify any roadways or properties that may require easements, takings, purchases, etc. for sewers, force mains, pump stations and appurtenant work.
 - There are over 200 miles of private roadways in the Town of Barnstable. The sewer expansion program proposed sewer within approximately 75 miles of private roadways. It is anticipated that easements and/or takings will be necessary to complete construction within the private roads.
 - Proposed pump station sites will be identified during this phase. Some sites may require easements, purchases, etc.
- Cost estimating (construction, contingency, technical services, fiscal/legal, etc.) and preliminary cost allocation to sewer users.
- Evaluate grant funding opportunities
- Identify construction schedule and work hours appropriate for the project
- Public consultation
- Document the results of the preliminary design in a standardized Preliminary Design Report, including each of the items listed above.
- Town Staff will prepare and submit Performance Evaluation Forms (PEFs) to seek State Revolving Fund (SRF) funding for the project. All other potential funding sources will be evaluated/applied for at this time.
- Town staff requests funding for the final design and permitting of the sewer expansion project from Town Council.
- The Town will prepare an RFP to retain an engineering consultant to complete the final design/permitting services. It is anticipated that the sequence of work will be as follows:
 - Consultant reviews the Town’s PEF and Preliminary Design Report. Consultant to confirm permitting requirements and advise the Town accordingly.
 - Consultant will prepare a 75% design submission.
 - This submission will be used for submission to regulatory agencies if permits are required for the project. The following is a summary of the expected submissions to regulatory agencies, when applicable:
 - Conservation Commission: Notice of Intent Application

- Division of Fisheries & Wildlife: MESA Review
- MassDOT: State Highway Access Permit
- Massachusetts Historical Commission: Project Notification Form
- Local Historic Commissions: Varies by Commission
- It is also expected that a publicly noticed informational session will be held at this time to present project details with the community and stakeholders.
- This submission will include the preparation of documentation for any necessary property purchase, easements, takings, etc.
- Town Staff requests funding for the construction of the sewer expansion project from Town Council.
- Consultant will prepare a 90% design submission (plans, specifications, and cost estimate) which will address comments from Town Staff and regulatory agencies.
 - This submission will be used for the SRF Application for projects that are listed on the SRF Intended Use Plan.
 - It is expected that a second publicly noticed informational session will be held at this time.
- Consultant will prepare a 100% design submission (plans, specifications and cost estimate) which will address comments from Town Staff and SRF review, when applicable.
 - For SRF eligible projects, all necessary documentation is submitted to SRF. SRF issues a Project Approval Certificate (PAC), allowing the Town to advertise the construction bid.
- Bid for construction of the project is advertised.
- Bids are opened and reviewed by Town Staff. A recommendation to award will be prepared for the Town Manager's approval.
 - For SRF eligible projects, the recommendation to award will be submitted to SRF. SRF issues an Approval to Award, allowing the Town to award the project.
- Construction commences.
- Construction is completed. Permit closeout documents are prepared and submitted. SRF closeout documents are prepared and submitted.

6.2.2 TREATMENT PLANT IMPROVEMENTS

Section 5.3.1 identifies the anticipated treatment plant improvements that will be necessary at the Barnstable WPCF in order to accommodate the increase in flow from the sewer expansion program. Treatment plant improvement projects fall into two different sub-categories: rehabilitation or capacity expansion. The following is the typical approach that the Town anticipates for the review of the two sub-categories of treatment plant improvements. Please note that the anticipated approach for effluent disposal expansion projects are addressed in Section 6.2.3.

6.2.2.1 Treatment Plant Rehabilitation Projects

The projects that fall into the rehabilitation sub-category will improve existing facilities that need rehabilitation due to age of the infrastructure and include the following projects: Solids Handling Facility, Headworks Facilities, and Backup Power. The main goal of these projects are to rehabilitate existing aging infrastructure. These projects will consider the increased flow as a result of the sewer expansion program, but will not result in an application to increase the permitted treatment capacity of the Barnstable WPCF Groundwater Discharge Permit and therefore will not trigger any MEPA review thresholds. As a result, it is anticipated that these projects will not require further MEPA review or a Notice of Project change to this project. These projects will require a Treatment Works Plan Approval by MassDEP. The WPCF is not within a mapped priority habitat so MESA review will not be required. There are no wetland resource areas near the treatment processes at the WPCF, so Conservation Commission review will not be required. The Town anticipates seeking SRF funding for these projects, which will trigger additional review.

6.2.2.2 Treatment Plant Capacity Expansion Projects

The projects that fall into the treatment plant capacity expansion sub-category are projects required to increase the permitted expansion of the treatment capacity at the WPCF in order to accommodate the increase in flow from the sewer expansion program. The treatment plant capacity expansion projects include: Aeration Tanks/System, Nutrient Removal Technologies, and Secondary Clarifiers. As these projects are intended to increase the treatment capacity of the WPCF, they may require MEPA review due to exceeding the following review threshold: *11.03(5)(b)(2) Expansion of an existing wastewater treatment and/or disposal facility by the greater of 100,000 gpd or 10% of existing capacity.* Since MEPA review may be required for these projects and because these projects have not been designed at the time of the preparation of this report, the Town will hold a pre-application meeting with MEPA staff to review if the project requires the submission of a Notice of Project Change to this project.

6.2.3 EFFLUENT DISPOSAL EXPANSION

As discussed in Section 5.3.2, the sewer expansion program will require an expansion of the effluent disposal capacity for the WPCF. The Town is actively evaluating options for effluent disposal expansion. The expansion of the effluent disposal capacity will require MEPA review as one of the following review thresholds will be exceeded (depending upon the design capacity and location of the effluent disposal expansion facility):

- *11.03(5)(a)(1) Construction of a new wastewater treatment and/or disposal facility with a capacity of 2,500,000 or more gpd;*
- *11.03(5)(b)(1) Construction of a new wastewater treatment and/or disposal facility by the greater of 100,000 or more gpd;*
- *11.03(5)(b)(2) Expansion of an existing wastewater treatment and/or disposal facility by the greater of 100,000 gpd or 10% of existing capacity.*

Since MEPA review will be required for any effluent disposal expansion project(s) and because these project(s) have not been designed at the time of the preparation of this report, effluent disposal expansion projects will be submitted as a Notice of Project Change to this project.

6.2.4 NON-TRADITIONAL SOLUTIONS

As discussed in earlier sections of the SEIR, the Town's CWMP includes the implementation of non-traditional solutions to supplement the sewer expansion program. The sewer expansion program has been designed, and confirmed by SMAST, to meet the nitrogen TMDLs in the estuaries, thus achieving the regulatory requirement without the use of non-traditional projects. The non-traditional projects are intended to be implemented in the first phase of the Project and then, monitored, and reported to MassDEP, with the goal of potentially reducing the need for Phase 3 sewer expansion projects in certain areas. As the non-traditional projects are supplementary to the sewer expansion program, and are not necessary to achieve the regulatory TMDL requirements, it is not intended that these projects would be "permitted" via this application. Each non-traditional solution will require unique regulatory review, which will be further understood through discussions with regulatory agencies, as the projects are developed. It is unclear at this time whether any of the non-traditional solutions will exceed any MEPA thresholds. If a non-traditional project exceeds a MEPA review threshold, they will be reviewed as a Notice of Project Change to this project.

Below is a summary of the non-traditional solutions, that have been identified to date, that are anticipated to be further investigated within the Three Bays Watershed, including potential environmental impacts, mitigation measures, and permitting requirements to the extent they are understood at the time of the preparation of this report:

- Improving nutrient attenuation in the cranberry bogs in the upper end of the Marston's Mills River.
 - Potential environmental impacts, mitigation measures and potential MEPA triggers are unknown at this time and will be dependent upon the recommended nutrient attenuation technique to be implemented in the bogs.

- The Town anticipates that this project will be submitted to MEPA as a Notice of Project Change to the CWMP and will require review/permits from numerous regulatory agencies.
- Dredging of Mill Pond.
 - Environmental impacts, mitigation measures and potential MEPA triggers will be further studied and evaluated during design development and permitting of the project.
 - Of particular interest, and requiring further vetting, will be ecological impacts of the project, including impacts on a mapped priority habit and maintaining/improving fish passage (herring).
 - The Town anticipates that this project will be submitted to MEPA as a Notice of Project Change to the CWMP and will require review/permits from numerous regulatory agencies.
- Innovative/alternative (I/A) septic system technologies focused on nutrient removal.
 - Negative environmental impacts from I/A septic system technologies are not anticipated.
 - No permitting is anticipated to be required for the installation of I/A systems (other than local approvals) as it is assumed that the I/A septic systems that would be utilized will be approved for general use by MassDEP.
- Nutrient reduction BMPs at horse farms.
 - Potential environmental impacts, mitigation measures and potential MEPA triggers are unknown at this time and will be dependent upon the recommended nutrient reduction technology that is implemented.
 - Permitting requirements are unknown at this time.
- Dredging and establishment of an aquaculture nursery in Warren's Cove.
 - Environmental impacts, mitigation measures and potential MEPA triggers will be further studied and evaluated during design development and permitting of the project.
 - The Town anticipates that this project will be submitted to MEPA as a Notice of Project Change to the CWMP and will require review/permits from numerous regulatory agencies.
- Dredging and inlet widening of Sampson's Island to improve flushing within the Three Bays.
 - This project was subject to a prior MEPA review which studied and identified the environmental impacts and mitigation measures. Implementation of the project began in 2018 and will be completed in the winter of 2020.
 - No further permitting is required and the Town is currently working with MassDEP to develop a monitoring plan for the project.
- Installation of Stormwater BMPs focused on nutrient reduction.

- Negative environmental impacts from the installation of stormwater BMPs focused on nutrient reduction are not anticipated. These BMPs will generally be replacing and/or supplementing existing traditional stormwater infrastructure which is less effective at removing nutrients from stormwater runoff.
- No permitting is anticipated to be necessary for the installation of Stormwater BMPs, except when the BMPs are within areas subject to the Wetlands Protection Act which will require Conservation Commission approval.

6.2.5 INTER-MUNICIPAL PARTNERSHIPS

As discussed in Sections 2.3.1 and Section 6.3, the Town has been actively engaging with neighboring communities to explore the potential of inter-municipal partnerships to address wastewater needs. The Town anticipates that these discussions will continue. Should an inter-municipal wastewater partnership materialize in the future, it would require MEPA review due to exceeding the following review threshold: *11.03(5)(a)(4) Provided that the Project is undertaken by an Agency, New sewer service to a municipality or sewer district across a municipal boundary through new or existing pipelines, unless an emergency is declared in accordance with applicable statutes and regulations.* If an inter-municipal wastewater partnership is proposed to move forward, the Town will submit a Notice of Project Change to this project.