



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



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GOVERNOR

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**ENVIRONMENTAL ASSESSMENT for
the Portland Water District
FALMOUTH MILL CREEK FORCE MAIN REPLACEMENT PROJECT**

A. PROJECT IDENTIFICATION

SRF Loanee: Portland Water District – SRF #C230185-05
Office Address: 225 Douglass Street, Portland, Maine 04104
Project Name: Falmouth Mill Creek Force Main Replacement Project
Project Location: Cumberland County, Falmouth (See attached Figure 1)

B. SUMMARY OF ENVIRONMENTAL REVIEW

The applicant's Environmental Information Document, all other supporting documentation, and associated comments submitted in regard to this project have been reviewed, and in accordance with EPA regulations, the findings of our environmental review are summarized below.

1. Project Description

The Town of Falmouth owns and operates a wastewater collection / conveyance system, thirty one pump stations, and a treatment plant to treat and dispose of wastewater flows from the towns of Falmouth and Cumberland. The wastewater collection system comprises of approximately forty-one miles of underground sanitary sewer gravity pipe and force mains. The Falmouth treatment plant is located at the end of Clearwater Drive (see Figure 2). The treated wastewater is discharged to the Presumpscot River estuary.

The proposed project is to replace the existing underground force main pipe which originates at the Mill Creek pump station. The Mill Creek pump station, which is currently being upgraded in a separate project, is the largest and most important pump station in the wastewater system. It is located on Route 88 adjacent to Mill Creek. The existing force main is 1.3 miles long and transports wastewater flows from the pump station to the treatment plant (see Figure 2). The proposed force main will be installed in a new location between the pump station and Depot Road. Beyond that point, the proposed pipe will follow the same route as the existing force main to the treatment plant (compare Figure 2 to Figure 3).

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The majority of the proposed work is located in public road right of ways. The remainder of the work is located within sewer easements obtained by the Town.

The work will be performed in a single construction contract beginning in 2016 and completing in 2017. The estimated cost of construction is approximately \$1,500,000.

2. Purpose and Need

The existing Mill Creek force main is a critical part to the wastewater infrastructure. The asbestos cement (AC) pipe was installed in 1969 and it is reaching the end of its useful life. More importantly, it is not designed for the increased wastewater flows and pressures that will be delivered by the Mill Creek pump station once the upgrade project is completed. The aging force main must be replaced in order to reliably serve the needs of the community for future years.

3. Discussion of Alternatives

The Town did not consider a “do nothing” alternative. This alternative could result in force main pipe failures, costly repairs, and sanitary sewer overflows causing public health hazards and adverse impacts to nearby Mill Creek, Webes Creek, and associated wetlands.

The Town considered eight alternatives for locating the replacement force main. Many factors were taken into consideration when vetting the alternatives, including cost, ground elevations, hydraulic head, easements that would be needed, presence of ledge and other utilities, proximity to protected natural resources, total length of pipe, and accessibility. The factors for each alternative were compared and the proposed route was selected. This selected route relocates a significant part of the replacement force main (from the Mill Creek pump station to Depot Road) away from environmentally sensitive areas (Mill Creek and Webes Creek) and into the public roadways. For the remainder of the route, the proposed replacement force main will follow the same route as the existing force main which will require passing through a wetland area.

4. Impact of Proposed Project on the Environment

- A. Air Quality – The proposed project will have no long term impact on air quality. The contractor will be required to provide dust control for the duration of construction.
- B. Surface and / or Groundwater Quality - The Department does not anticipate that the proposed project will create any adverse temporary or permanent impacts to water quality.
- C. Environmentally Sensitive Areas
 - a. Floodplains - No part of the proposed work occurs adjacent to or within the floodplain. Therefore, there will be no temporary or permanent impacts to the floodplain.

b. Wetlands - A section of the proposed project is located within a scrub shrub wetland area located between Route One and Depot Road (see Figure 3). In this area, the underground replacement force main pipe will be installed using a horizontal directional drilling method, meaning there will be no soil or vegetation disturbance during construction within the wetland area. Excavated areas (pits) are required where the pipe will be drilled and pulled through the wetland area. Due to the existing site constraints, one of the pits must be located adjacent to the wetland, within the twenty five foot setback. This action was determined to be unavoidable to meet the overall goal of the project. A State of Maine Natural Resources Protection Act Permit by Rule (NRPA PBR) was obtained from this Department, by the Town of Falmouth, for this activity. The contractor will be required to adhere to the standards of the NRPA Permit By Rule and a strict erosion and sedimentation control plan during construction to minimize the potential for adverse temporary impacts to the wetland.

c. River, Stream, or Brooks - The proposed project will require that the replacement force main pipe cross a wetland stream in the scrub shrub wetland area between Route One and Depot Road. The underground pipe will be installed a minimum of ten feet below the stream bed using a horizontal directional drilling method, and will result in no disturbance to the stream caused by construction. The project is not expected to create any adverse temporary impact to the stream.

d. Classified Lands - There are no Prime Farmlands or Forestland or Formally Classified Lands in or near the project area.

e. Fish and Wildlife Habitat or Endangered or Threatened Species - The portion of the project passing through the scrub shrub wetland was identified by the Department of Inland Fisheries and Wildlife to be a potential habitat for the New England Cottontail (a state endangered species). A state wildlife biologist performed a snow tracking survey of the area in January 2016. There were no signs of cottontail observed, therefore, it was determined that the project will have no impact on the species. There are no other known fish and / or wildlife habitats or endangered or threatened species adjacent to or in the project area.

f. Botanical Features - There are no rare or unique botanical features documented in the vicinity of the project site.

g. Historical / Archaeological Sites - There are no known historic, archeological, or other cultural resources know to be present in the project area.

h. Scenic, Aesthetic, Recreational or Navigational Uses - The project will have no impact to, and will not unreasonably interfere with, existing scenic, aesthetic, recreational or navigational uses of the protected natural resource.

D. Socio-Economic Impacts / Environmental Justice - There will be no disproportionately high or adverse effects to low income or minority populations.

E. Indirect Impacts - There are no known indirect impacts. The project will not displace population or alter the characteristics of the surrounding area and the existing residential areas.

F. Cumulative Impacts - There are no known cumulative impacts in the project area that would result in further environmental impact as a result of this project.

5. Summary of Mitigation of Environmental Impacts

Two significant wetland and stream mitigation measures were incorporated into the project during the design process. They were:

- The proposed force main replacement pipe will not be installed within the existing sewer easement which runs along the Mill Creek and Webes Creek. Instead, the replacement pipe will be located in the Route 88 and Mussel Cove Lane public roadways. This design decision avoided approximately 3,450 linear feet of open cut trench pipe installation adjacent to a stream and in some locations, within wetland area. Avoidance of these areas eliminated the possibility of any adverse temporary impacts from this construction project as well as any adverse long term impacts caused by the need to access these areas for operations and maintenance activities.
- The portion of the proposed force main located in the scrub shrub wetland area will be installed using a horizontal directional drilling method instead of the traditional open cut trench method. The design decision to require the contractor to use this method of construction will completely eliminate the need to disturb the soil or vegetation within the wetland area. This action greatly reduces the concern for adverse temporary impacts caused by this project.

The overall, long term goal of the project is to improve the Town's Mill Creek force main in order to ensure a more reliable wastewater treatment infrastructure. By implementing the mitigation measures that were specified by design and the mitigation measures as required by the NRPA permit, the Department finds that the applicant has avoided and minimized impacts to the greatest extent practicable and that the proposed construction represents the least environmentally damaging alternative that meets the overall long term goal of the project.

6. Summary of Agency & Public Consultation

The proposed project was discussed at Town Council meeting on February 9, 2015 which was broadcast live via cable access and hosted on the Town's website. The meeting agenda was made available publicly beforehand on the Town's website. On August 4, 2015, the project received local approval at the Town's Planning Board meeting. Ten days prior to that meeting, the meeting agenda was advertised in the newspaper and all direct abutters were notified by mail. There were no public comments or significant objections raised as a result of these public meetings and notifications.

As the project was being designed, the City worked with applicable federal and state agencies to address their concerns and comments and to incorporate them into the design where necessary. No federal or state agencies objected to the project.

7. List of Agencies and Groups Consulted

Maine Department of Environmental Protection
Maine Historic Preservation Commission
Maine Department of Agriculture, Conservation, and Forestry
Maine Department in Inland Fisheries and Wildlife

C. SIGNATURE



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Division of Water Quality Management
Bureau of Water Quality

Date 4/22/16