

## **Project Descriptions for October 2, 2019**

### **Board of Trustees Meeting**

#### **Asset Management Program Grant Commitments**

##### **Ipswich CW-19-08**

The Town of Ipswich Water and Wastewater Departments will work collaboratively with W&C to prepare an AMP to inventory and assess the current state of the Town's water and wastewater system assets; evaluate the level of service in terms of quality, quantity, reliability and environmental standards; identify assets critical to sustaining system performance; quantify minimum life cycle costs for critical assets, operations and maintenance; and determine a long-term funding strategy to ensure high-level performance and pipe integrity. . Results from this assessment will be presented in both tabular and narrative forms.

##### **SWSC DW-19-09**

The purpose of this project is to develop an asset management plan that can be used to maintain and schedule capital replacements to the water distribution system. As part of this project, the utility's existing GIS and hydraulic model will be updated. Then, using updated information, an assessment of the distribution system will be made to identify areas of poor distribution (low pressure, high headloss, water quality issues, etc), areas vulnerable to failure based upon pipe age, condition, maintenance history, and break history. An Asset Management and Capital Improvements Plan will then be developed to identify the highest priority water distribution pipeline replacement needs and the effect on the water user rates for the next 20 years.

### **Clean Water Commitments**

##### **Revere CW-16-17**

The Phase VII Construction Project will include the removal of inflow/infiltration (I/I) from the City's system. Construction will include the redirection of public and private inflow sources discovered during the Phase VI investigations, Illicit Discharge Detection and Elimination (IDDE) source removal, and drainage improvements. Construction will also include pump station improvements (both wastewater and stormwater), cured in place pipe lining, sewer spot repairs, new sewer lines, sewer cleaning and additional wastewater metering.

##### **Winthrop CW-19-05**

This project includes upgrading existing sanitary sewer and stormwater infrastructure in the Centre Business District that are failing and need to be replaced to increase capacity. Sewer backups and inflow/infiltration related to broken and failing sewer mains occur. This project will replace existing sewer main and laterals with new pipe sized for current and future flows. The design will improve hydraulics by increasing slope, promoting self-cleansing velocities and correcting inverse sloped pipe. Drainage system improvements include increasing the capacity of undersized pipe to reduce flooding concerns and convey stormwater flows. Drainage design includes tree box filter treatment. Drains have been sized to account for additional runoff.

## **Drinking Water Commitments**

### **Franklin DW-19-02**

The project includes the construction of a new water treatment facility and water mains to comply with the 2014 corrective action order by MassDEP. The new water treatment facility will include GreensandPlus filtration systems, centralized chemical feed equipment for each well station, new emergency back-up power, and replacement of the existing Well Station No. 6 vacuum suction system with submersible pumps in each well head. The completed project will improve drinking water quality by reducing high manganese and iron concentrations, improve existing facilities, and provide better overall operations of Well Stations No. 3 & 6.

### **Pepperell DW-19-10**

This project includes the construction of a new water treatment facility (WTF) and water mains to connect to the existing distribution system. The new WTF will include a GreensandPlus<sup>TM</sup> filtration system, two backwash waste basins, and replacement of existing well pumps. The completed project will improve drinking water quality by reducing high manganese and iron concentrations.

## **Clean Water Agreements**

### **Chatham CW-18-24**

The Collection System Extension Project allows the Town of Chatham to continue moving forward in addressing the nitrogen loading concerns by further extending the wastewater collection system (Phase 1D - Chatham/Harwich Regionalization Connection). The Towns of Chatham and Harwich have successfully executed an Intermunicipal Agreement (IMA) for Wastewater Collection and Treatment. The purpose of this project is to provide the infrastructure in Chatham to support the connection to Harwich for collection and treatment of their wastewater. The Town of Harwich is submitting a separate PEF for their portion of this important regional project to address nitrogen TMDLs.

### **Fitchburg CWP-16-10-B**

The Fitchburg Easterly Wastewater Treatment Facility (WWTF) is a secondary treatment facility with current average annual flows of about 9.8 MGD. This project includes a number of elements intended to significantly improve discharge permit compliance. These include: upgrades to secondary treatment system with a biological selector zone to increase peak flow capacity, provide biological nutrient removal and improve permit compliance; replacement of existing primary and secondary sludge pumps, aeration blowers, pipes, valves, fine bubble diffuser, clarifier mechanisms, surface repairs to existing concrete aeration and clarifier tanks; installation of two new emergency generators; and instrumentation and electrical improvements; and modifications to the existing flood protection berm.

**Revere CWP-16-17-A**

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**Drinking Water Agreement****Franklin DW-19-02**

The project includes the construction of a new water treatment facility and water mains to comply with the 2014 corrective action order by MassDEP. The new water treatment facility will include Greensand Plus filtration systems, centralized chemical feed equipment for each well station, new emergency back-up power, and replacement of the existing Well Station No. 6 vacuum suction system with submersible pumps in each well head. The completed project will improve drinking water quality by reducing high manganese and iron concentrations, improve existing facilities, and provide better overall operations of Well Stations No. 3 & 6.