

# MEETING OF THE MASSACHUSETTS CLEAN WATER TRUST BOARD OF TRUSTEES

September 5, 2018

## Project Descriptions

### Clean Water Commitments

#### **Goshen - CW-18-11**

This contract is for repairing erosion and slope failure-damaged areas of the landfill cap and installing drainage improvements including survey services before, during, and after the construction. It also includes unsuitable material removal and replacement, geosynthetic installation, drainage layer replacement, drainage pipe installation, and toe drain replacement (Alternate 1), drainage berm/swale replacement, and downslope swale installation. Vegetative layer placement, hydroseeding, and erosion control measures are also required.

#### **Greater Lawrence Sanitary District - CW-15-15**

Massachusetts DEP recently passed a ban on disposing of commercial organic waste material in landfills or at waste incineration facilities. In June 2013, GLSD and CDM Smith developed the Organics to Energy Feasibility Study outlining a three Phase program of Wastewater Treatment Facility upgrades recommended to achieve co-digestion of organic food waste with the facility's wastewater sludge. In October 2014, the GLSD began Phase 1 improvements intended to control digester foaming incidents, thereby allowing the anaerobic sludge digestion operation to be expanded to co-digestion in Phase 2. Phase 2 will include:

- Biogas metering system upgrade;
- Addition of a waste blending tank and mixing system to facilitate acceptance of organic material;
- Addition of high pressure digester feed pumps to handle organic material; and
- Four to five-month pilot testing program for operating co-digestion system.

Phase 3 will include the installation of additional digester gas storage and combined heat and power (CHP) processes. If successful, GLSD will have the potential to produce enough electricity to virtually remove its reliance on the electrical grid, and the additional gas storage included in Phase 3 will further reduce GLSD's reliance on natural gas.

#### **Haverhill - CW-17-14**

The major components of the project include: improvements to the WWTF's secondary treatment system (aeration blowers and sludge pumps/piping, as well as appurtenant electrical upgrades) which will improve the ability to meet the NPDES permit limits; upgrades to the City-wide Supervisory Control and Data Acquisition (SCADA) system, including WWTF and pump stations; upgrades at two significant pump stations to address repeated mechanical issues; and an odor control biofilter to mitigate impacts on abutting residents.

**Lowell - CW-16-15**

This project implements improvements to the wastewater treatment facility (WWTF) as part of an ongoing phased implementation program. The focus of the work includes equipment in the WWTF and six wastewater pumping stations, which have outlived their expected service life and are no longer reliable. The improvements to be implemented under this Capital Improvements Program will address equipment life-cycle and maintenance requirements and will improve overall reliability for treatment of sewage and wet weather flow.

**Clean Water Agreements****Billerica - CW-17-15**

Sewer Contract 36 is the third priority Needs Area from the Town's Comprehensive Wastewater Management Plan. The project consists of areas of sewer replacement, extension of new sewer, removal of failing and/or improperly operating septic systems and connection to sewer, and the construction of two new pump stations. The Project will aid in reducing degradation to the water resources in the Concord River Watershed and the Shawsheen River Basin, as well as protect the public health from the chronic septic failures documented in the area. The Project includes approximately 5.3 miles of new sewer, 2.8 miles of sewer replacement and construction of two new pump stations. The Project is designed and shovel ready once spring Town Meeting approves it and all SRF paperwork is complete.

**Billerica - CW-17-15-A**

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**Gardner - CWP-17-23**

Removal of two existing belt filter presses and replacement with two centrifuges. The project will include structural upgrades to the building, replacement of the polymer feed system and other ancillary support equipment including piping and pumps. These upgrades will provide operational efficiency leading to cost savings and better wastewater treatment.

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### **West Springfield - CWP-17-30**

The sewer pump station project implements CIP recommendations including replacement of outdated pumps, controls, emergency power generators, emergency lighting, ventilation and air quality monitoring system, dry well flood alarms, heating systems, and building foundation repairs. The I/I project implements SSES recommendations including 11 sewer disconnections, 128 manhole rehabilitations including grouting, wall rehabilitation and corbel repair, 250 ft of cured-in-place liners, 600 ft of CCTV inspection, 14 spot liner repairs, and 83 sewer lateral inspections. The flood control pump station improvements implement critical electrical improvements including upgrade of main load centers, light panels, exterior lights and emergency lighting. Improved efficiencies provide better, more efficient and more cost-effective treatment.

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**Drinking Water Agreement****New Bedford - DWP-17-02**

This project will perform needed rehabilitation and upgrades at New Bedford's 40-year old Quittacas Water Treatment Plant, which is the sole facility that treats water for the entire New Bedford water system. The Quittacas facility is the most critical element and backbone of the entire system. The upgrades will insure the continued safety and reliability of the city's drinking water supply.