Clean Water Trust Infrastructure Grant Project Descriptions

Boston CWP-14-02 Gardner Street Landfill Closure
Grant Award: $412,532

Phase II of this project includes construction of a solid waste landfill cap over the remaining portion of the former Gardner Street landfill that has not been closed. A post-closure use permit will be submitted for MassDEP approval to allow the site to be used by the West Roxbury Education Complex as an athletic field. The landfill cap will serve to reduce infiltration, which may lessen the generation of leachate under the site and may help reduce the exposure of groundwater to buried wastes. The project will also will also include landfill gas mitigation components to address existing site concerns.

Brockton CWP-14-30 Sewer System Rehabilitation
Grant Award: $45,756

The focus of the project is to address and remediate high bacteria concentrations during dry and wet weather, as identified in recent water quality studies in order to reduce and eliminate impacts to receiving waters for the City of Brockton. The city has completed nine sewer system rehabilitation projects and four waste water treatment facility upgrades to address the issues and mandates within the MassDEP Administrative Consent Order, which has recently been lifted. The project includes both trenchless rehabilitation and open cut repair of prioritized areas to address sources of exfiltration, infiltration and inflow and sections of undersized pipe to improve water quality in Salisbury Brook, Trout Brook, Salisbury Plain River and Beaver Brook.

Haverhill CWP-14-15 Combined Sewer Overflow Improvements, Waste Water Treatment Facility and Sewer System
Grant Award: $169,023

The City of Haverhill entered into two Administrative Orders with the United States Environmental Protection Agency in 2008 and 2009, requiring the city to address combined sewer overflow (CSO) discharges to the Merrimack and Little Rivers. As a result, the city submitted the Phase II CSO Long Term Control Plan (LTCP) in 2011 which included the implementation of system maximization improvements (i.e., eliminate some CSO outfalls and modification of some of the remaining CSO regulators) to increase the percent capture within the combined sewer system and to reduce the frequency and volume of overflow events. The 2014 project includes CSO improvements based on recommendations from the LTCP. Capital improvements include: closing and eliminating 9 existing CSO regulator/ outfalls to consolidate discharges to 14 remaining CSO outfalls, raising the regulator/ diversion weir elevations at 5 of the 14 remaining CSO regulator/ outfalls to minimize CSO discharges, constructing improvements to increase the size of the interceptor connector pipe capacity at the Bradford CSO regulators and reconfiguring the Middle Siphon CSO to direct more flow into the interceptors and to reduce the frequency and magnitude of the CSO discharges from these outfalls and replacing the existing centrifuges with new centrifuges for improved bio-solids handling at the

Haverhill Waste Water Treatment Facility to maximize the wet weather capacity during storm events.

Falmouth CWP-14-22 Waste Water Treatment Facility
Grant Award: $115,044

The project is to address the current effluent discharge requirements of the National Pollutant Discharge Elimination System permit, which the plant cannot currently meet. The facility upgrades and improvements are needed at the plant, primarily to meet the nitrogen limit, which requires an average annual total nitrogen effluent limit of 3.0 Milligrams/Liter. The Waste Water Treatment Plant underwent an upgrade and modifications from a Class III discharge to Class I through SRF # 1132, Fiscal Year 2002 in the amount of $13.5 million.

The design capacity of the plant is 1,200,000 gallons per day, but flow is currently restricted to 800,000 gallons per day.

Falmouth CWP-14-23 Sewer Extensions and New Recharge Site
Grant Award: $859,417

The Maravista/Little Pond area of Falmouth has been recommended for sewering since the town's 1981 Waste Water Facilities Plan (updated in 2001). The maximum extent practicable total maximum daily load (TMDL), completed in January, 2006 recommends 100% sewering of this watershed to achieve the TMDL. The area is densely developed, primarily with very small lots and high groundwater. The town's Comprehensive Water Management Plan cites 20% of the properties have septic systems newer than 1995 and a large percentage of those are cesspools. Sewering will be done in 3 multi-year contracts, encompassing approximately 1,500 parcels.

Additionally, a new treated water recharge site is proposed at Site 7 (north of the Waste Water Treatment Facility and outside of the West Falmouth Harbor watershed), specifically to accommodate the 260,000 gallons per day flow from the Little Pond watershed, as required by the new flow limitations to the Waste Water Treatment Facility from outside the West Falmouth Harbor watershed (800,000 gallons per day flow limit, with no more than 570,000 gallons per day from outside the West Falmouth watershed and 230,000 gallons per day from inside the West Falmouth Harbor watershed).

Middleborough CWP-14-32 Waste Water Treatment Facility Upgrades
Grant Award: $653,659

The project is to upgrade the Waste Water Treatment Facility to address the more stringent National Pollution Discharge Elimination System permit limit, reduce nutrient discharges and protect the impaired receiving waters downstream. The discharges impact the Taunton River estuary, as well as Mt. Hope Bay and Narragansett Bay waters in Rhode Island. The current treatment process cannot meet the Total Nitrogen limit and unlikely to be able to meet the Total Phosphorus limit on a consistent basis with the existing unit processes. The current plant was constructed in 1977 and has not undergone a major upgrade since that time. The plant is

designed for an average flow of 2.16 million gallons per day and maximum flow of 7.1 million gallons per day.

Montague CWP-14-28 Pump Station Replacements
Grant Award: $51,013

The main objective of the Montague Pumping Station replacement project is to mitigate potential environmental impacts and restore reliability and safety to the town's waste water infrastructure by replacing all eight waste water pumping stations, some of which date back to 1962. With mechanical components of the pumping stations well beyond their intended service life, replacement is the only option. Replacement of the pumping stations will improve operator safety through elimination of confined space entry, improve electrical efficiency through the use of variable frequency drives, efficient motors and smart controls, improve monitoring through connection to the supervisory control and data acquisition system at the waste water plant and reduce operating costs.

New Bedford CWP-14-19 Combined Sewer Overflow Abatement
Grant Award: $216,481

This project consists of installing new valves, blow offs, air release assemblies, hydrants and temporary piping. The work was included in a 2003 DWSRF project but was not constructed at the time due to discovering service feeds directly off the transmission mains. Twin 36 inch cast iron transmission mains convey potable water from the city's 75 million gallon High Hill finished water reservoir to the eastern and center sections of New Bedford. The 103 year old mains cannot be isolated or shut down as the valves are inoperable and in significant disrepair. The mains are also interconnected in many places. The mains are within 7 feet of each other, so a prolonged failure of one would likely cause failure to each other. Those transmission mains are critical components which would cause catastrophic consequences to the city should they fail.

Revere CWP-14-12 Collection System Improvements
Grant Award: $287,143

The City of Revere entered into a Consent Decree with the US EPA and MassDEP in 2010, requiring the city to address sanitary sewer overflows, excessive infiltration and inflow (I/I), illicit discharges; capacity, management, operation and maintenance requirements, develop a hydraulic model and GIS system. As a result, the City of Revere has completed several years of I/I removal projects. The 2014 construction project is based on the recommendations of the reports titled, "Comprehensives Waste Water and Storm Water Managements Plans" dated December 2013 and "Citywide Supplemental Field Investigations and Supplemental CWMP/CSMP," a planning project on the 2014 IUP. The project is divided into two contracts: Construction Project 1: Comprehensive Infrastructure Improvements and Construction Project 2: Illicit Connection and Sump Pump Removal Program. Construction Project 1 includes cured-in-place pipe lining, sewer spot repairs, replacements, new sewer lines, cleaning, pump station improvements and rehabilitation, drainage improvements, and additional waste water metering.

Construction Project 2 includes removing illegal sump pumps and other illegal connections connected to the sewer system detected during inspections.

Saugus CWP-14-08 Sanitary Sewer Overflow Reduction- Subsystem 5
Grant Award: $55,159

The Town of Saugus entered into an Administrative Consent Order (ACO) with the MassDEP in 2005, requiring the town to address sanitary sewer overflows and excessive infiltration and inflow (I/I). The Town of Saugus has completed several years of (I/I) removal projects based on the requirements of the ACO and the report titled, "Sewer System Facilities and Private Inflow Source Removal Plan" dated October 2006. Previous projects include the pilot program study and rehabilitation in subsystems 5B, PS5, 6A, 4C, and 6B. The 2014 project includes I/I removal in subsystem 5. Rehabilitation will include manhole rehabilitation, cast-in-place-pipe lining of sewer main and lateral connections, spot repairs, and private inflow removal.

Springfield Water and Sewer Commission CWP-14-27 Dickinson Siphon/Main Interceptor Rehabilitation
Grant Award: $526,813

The overall objective of the project is to rehabilitate and extend the lifespan of existing infrastructure and to improve hydraulic capacity which allows for mitigation of structural failure leading to sanitary sewer overflow (SSO) events. Approximately half the City of Springfield and the surrounding towns of Ludlow and Wilbraham are served by the Main Interceptor (MI) which runs for approximately 27,200 feet. The MI was built in 1972 and is constructed of 60 inch and 66 inch Reinforced Concrete Pipe. Based on recent inspection, the MI is considered to be in structural distress. The Dickinson Street Siphon feeds a large catchment of flow into the MI. SSOs into the Mill River and neighborhoods have occurred at the siphon during heavy rainfall events. As part of the project, the siphon will be replaced with a large diameter gravity sewer.

Taunton CWP-14-26 Sewer System Evaluation Survey Phases 10-12
Grant Award: $107,960

The Phase 10-12 Sewer System Evaluation Survey (SSES) is a continuation of work begun during previous phases. The objectives of the SSES is to remove infiltration and inflow (I/I) from the sanitary collection system, with the ultimate goal of reducing and eliminating combined sewer overflows (CSOs) in the city. Implementation of this project is in partial compliance with the requirements of a MassDEP Administrative Consent Order. In addition, the work done under this project will help the city stay in compliance with the US EPA Order for Compliance (Docket 08-042).

Under the order, the city is required to submit a plan and schedule by June 2013 for elimination of the CSO outfall. Previous SSES Phases and investigations have revealed that there are widespread problems within the city's waste water collection system. Previous construction phases have focused on the older sections of the city, known as the "core area". Phases 10-12 will entail both investigation and rehabilitation efforts in the eastern portion of the city's system, which has not been focused on during previous investigations due to its younger age and lower flows than the core area. This project is part of a cost effective, targeted plan to assess operations and remove sources of I/I in the city's collection system. It is expected to greatly reduce or eliminate the public health problem of combined and sanitary sewer overflows to the Taunton River.

Barnstable DWP-14-09 Pipe Replacement and Maher Water Treatment Plant Upgrade
Grant Award: $89,000

The Town of Barnstable purchased the Hyannis Water Supply System in 2005. This project includes installing 2,000 feet of 8 inch ductile iron cement line (DICL) to loop dead ends, replacing 6 inch and 8 inch pipes some of which is a vinyl-lined asbestos cement main with 12 inch DICL and installing a main to replace an old main. The new main will tie into Straightway Treatment Plant.

Fall River DWP-14-08 Water Main Improvements and Water Treatment Plant Residual Handling
Grant Award: $192,219

The project includes the replacement of up to approximately 19,000 linear feet of cast iron water mains and 19 lead services. The project also includes installation of a new sanitary grinder pump station for discharge of domestic sewage from the city's Water Treatment Plant and the replacement of the residuals pump station and associated electrical and control systems.

Falmouth DWP-14-04 Long Pond Water Treatment Facility
Grant Award: $2,473,793

The Town of Falmouth currently relies on Long Pond for 50 to 60% of its water supply needs. The Long Pond Treatment Facility operates under a filtration waiver and only provides chlorination and pH adjustment. Increasing algae blooms in Long Pond and organic loading from the surrounding forest are resulting in degraded water quality. The town also has an extension to install a second disinfection method to comply with the EPA's Long Term 2 of the Enhanced Surface Water Treatment Rule (LT2). As of September 2013, the town has exceeded a trihalomethane Locational Running Annual Average under Stage 2 of the Disinfection By-Products Rule. The town needs to invest significant money to comply with the LT2 rule which will not solve its trihalomethane problems. A proper surface water treatment facility is required to provide a long term solution to the Town's water quality problems.

New Bedford DWP-14-05 Transmission Main Improvements
Grant Award: $533,188

This project consists of installing new valves, blow offs, air release assemblies, hydrants and temporary piping. The work was included in a 2003 DWSRF project but was not constructed at the time due to discovering service feeds directly off the transmission mains. Twin 36 inch cast iron transmission mains convey potable water from the city's 75 million gallon High Hill finished water reservoir to the eastern and center sections of New Bedford. The 103 year old mains cannot be isolated or shut down as the valves are inoperable and in significant disrepair. The mains are also interconnected in many places. The mains are within 7 feet of each other, so a prolonged failure of one would likely cause failure to each other. Those transmission mains are critical components which would cause catastrophic consequences to the city should they fail.