MASSACHUSETTS CLEAN WATER TRUST
2017 Principal Forgiveness Projects

Project Descriptions

Clean Water Projects

Gardner - CWP-17-23 and CWP-17-23-A
The goal of this project is to remove two existing belt filter presses and replace them 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.

Gloucester - CWP-17-24
Gloucester is essentially an island community surrounded by ocean, marshes and beaches. Residents of Gloucester, as well as people from all over the North Shore, enjoy these everyday natural resources for walking, swimming and boating. The Gloucester Department of Public Works (DPW) and Goose Cove pumping stations are both located close to these important resources. An evaluation of wastewater pump stations in Gloucester was completed in 2010. The evaluation determined that the DPW and Goose Cove pump stations have the first and second highest priority rehabilitation needs of the 29 pump stations in the City. The reason being the large volume of daily flow as well as the age and condition of the stations. Rehabilitation of these two stations will ensure continued protection of Gloucester's important natural resources.

New Bedford - CWP-17-16 and CWP-17-16-A
Three pumping stations in the City of New Bedford that are high priority for the near future will be upgraded with this project. These recommendations are based on an integrated plan currently being developed. Upgrades are necessary to ensure adequate system capacity and effective wastewater treatment.

New Bedford - CWP-17-17
The Wastewater Collection System Improvements project involves several improvements to the City's infrastructure. Projects include an interceptor and collector sewer rehabilitation program, a lateral sewer rehabilitation program, an illicit discharge removal program, and an over-under access manhole program. The progression of these programs will further the City's progressive efforts to dramatically lessen or eliminate infiltration/inflow (I/I) issues, reduce combined sewer overflows (CSOs), reinforce the critical components of the City's sewer system, address capacity, management, operations and maintenance (CMOM) and regulatory requirements, and eliminate illicit discharges. These programs will address needs identified in the City's integrated plan.

Revere - CWP-17-26
Continuing the implementation of construction contracts for the Illicit Connection and Sump Pump Removal Program is essential for the City of Revere to meet its goals and comply with a consent decree. There is a significant number of illicit sump pumps, roof drains, roof leaders, driveway drains, yard drains, etc. connections from private homes and businesses that must be removed from the sewer to remove inflow and increase the wastewater capacity of the City's sewer system.

Revere - CWP-17-27
The Phase VIII Construction Project will include the removal of inflow/infiltration (I/I) from the City's sewer system. I/I causes excessive water volume in the sanitary sewer, which contributes to overflows and capacity issues. Construction will include the redirection of public and private inflow sources discovered during the Phase VIII Field Investigations project, illicit discharge detection and elimination (IDDE) source removal, and drainage improvements. Construction will also include pump station improvements (both stormwater and wastewater), cured in place pipe (CIPP) lining, sewer spot repairs, replacements, new sewer lines, cleaning, and additional wastewater metering.

West Springfield - CWP-17-30
The sewer pump station project implements cured in place pipe (CIPP) recommendations. These recommendations include replacing outdated pumps, controls, emergency power generators, emergency lighting, the ventilation and air quality monitoring system, dry well flood alarms, heating systems, and building foundation repairs. This inflow/infiltration (I/I) project will implement sewer system evaluation survey (SSES) recommendations for 11 sewer disconnections. This project will also involve 128 manhole rehabilitations including grouting, wall rehabilitation and corbel repair, 250 ft of CIPP liners, 600 ft of closed circuit television (CCTV) inspection, 14 spot liner repairs, and 83 sewer lateral inspections. The flood control pump station improvements involve 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.

Drinking Water Projects

Brockton - DWP-17-10
The City of Brockton has been working to locate, clean, and operate all crossover and mainline valves within the 24” transmission mains connecting Silver Lake Water Treatment Plant and the Brown’s Crossing Pump Station (East Bridgewater). This assessment was done in response to a pipe failure within this line. The crossover valves could not be operated to isolate the pipe break. This caused a shutdown of the plant for a day and great concern for the integrity of these pipes and their valves. Several crossing locations have been identified through an assessment and will be replaced to prevent these issues from occurring in the future.

Fall River - DWP-17-08
The Phase 17 Water Main Improvements project involves the rehabilitation or replacement of approximately 16,100 linear feet of cast iron water mains and 30 lead service lines. A priority of the Massachusetts State Revolving Fund (SRF) program is to prevent potential serious health threats to major water system components. The cast iron water mains are severely deteriorated and need to be replaced to ensure adequate flow and capacity for supply and fire protection. Replacing lead service line connections addresses the critical health threat presented when lead is in drinking water. The adverse health effects of lead exposure in children and adults are well documented and no safe blood level threshold in children has been established. Lead exposure causes neurological and cognitive impairments in children and fetuses. It can also cause high blood pressure and kidney problems in adults. This project will prevent a serious problem in the distribution system and provide safe and reliable drinking water to consumers in the City of Fall River.

Fall River - DWP-17-12
This project will allow the City to implement an "Advanced Meter Infrastructure" (AMI) system. An AMI system will allow the City to remove meter reading vehicles from the street, along with vehicle overhead, emissions and safety issues. Personnel costs and meter reading errors can be controlled with precise daily and hourly meter reads. Combined with the replacement of commercial and industrial meters, the project will enhance the water department's revenue, streamline office procedures and provide the means for continuous investment. An AMI system offers leak detection notification, which in turn leads to water conservation and less pumping costs. Rate payers will receive better service. At the same time, the City's water department will operate more efficiently.

New Bedford - DWP-17-03
Phase I of the City of New Bedford's lead service line replacement program is the beginning of an aggressive, multi-year program to replace all remaining lead service lines (LSLs) in the City. The first phase of this program will replace approximately 1,000 to 1,500 LSLs in a two-year period throughout the City's water distribution system. The adverse health effects of lead exposure in children and adults are well documented. No safe blood level threshold in children has been established. Lead exposure causes neurological and cognitive impairments in children and fetuses. It can also cause high blood pressure and kidney problems in adults. The City is committed to protecting public health and continuing to provide safe drinking water to all its consumers. This aggressive lead service line replacement program also shows the City is committed to complying with the EPA's Lead and Copper Rule.

New Bedford - DWP-17-06
This large meter and advanced metering infrastructure (AMI) upgrade program includes two distinct but related elements: (1) The City will conduct testing, repair, and/or replacement of some of its largest consumer meters. These meters are older and are under-registering. This is leading to increased unaccounted water and decreased revenue. (2) The City will upgrade its meter reading equipment for the entire water system., This will allow the use of the latest technology and eliminate estimated meter reads (and therefore reduce unaccounted for water and lost revenues) due to failing meter transmission units (MTUs).

New Bedford - DWP-17-07
The High Hill Reservoir Rehabilitation project will involve much needed and required structural repairs to the reservoir and its roof, replacing inoperable inlet and outlet valves, cleaning the entire reservoir, removing accumulated sediment on the reservoir floor, installing a new mixing system in the reservoir to improve circulation and water age, and performing other needed repairs and upgrades. Recent inspections identified serious deficiencies with the reservoir's roof and support system. Deficiencies include failed beam connections, broken anchor bolts, and beams that have moved on their supports. The roof is in danger of failure and collapse and there are inoperable inlet and outlet valves that need to be replaced. This work will improve water quality and ensure reliability and flow capacity in the distribution system.

Revere - DWP-17-14
This project involves the replacement of approximately 600 lead service lines (LSLs) throughout the City of Revere. The City has identified 250 active LSLs to date throughout an ongoing automatic meter replacement program. Based on the number of properties in the City that have been inspected and the estimated value of the identified LSLs found to date, it is believed that approximately 600 LSLs will need to be replaced. The adverse health effects of lead exposure in children and adults are well documented. No safe blood level threshold in children has been established. Lead exposure causes neurological and cognitive impairments in children and fetuses. It can also cause high blood pressure and kidney problems in adults. Removing LSLs addresses a critical public health risk.

Wareham Fire District - DWP-17-09
This project includes the construction of a 3 million gallons per day (MGD) ground water treatment plant with the capacity to expand to 4.5 MGD. This project will need to include iron and manganese removal to comply with secondary standards. Disinfection with ultraviolet light and/or free chlorine is needed to address the groundwater rule or the possible reclassification as groundwater under the influence of surface water. Corrosion control is also needed. This work will remove the public health threats posed by various contaminants and ensure excellent drinking water quality.

Webster - DWP-17-04
This project involves the construction of a water treatment plant (WTP) and associated appurtenances. The Memorial Beach Wells WTP project corrects serious existing problems within the Webster water supply. This project returns compromised drinking water sources to operation and mitigates potential long-term public health threats by reducing elevated levels of manganese and ensuring corrosion control at the new entry point into the distribution system. In addition, this project will address elevated levels of iron above the secondary maximum contaminant limit (SMCL), provide 4-log disinfection, and provide additional system redundancy to ensure availability and flow capacity.

West Springfield - DWP-17-13 and DWP-17-13-A

This project involves a new 300,000-gallon elevated water storage tank, a transmission main from the existing high-pressure service area to supply the new pressure zone, and improvements to the existing pumping station serving the high-pressure zone to meet increased demand. Work also involves replacing approximately 2,200 existing meters and a town-wide leakage testing plan and implementation. This will enable the Town to recover costs of under-registering meters and significantly reduce the amount of unaccounted water. It will also ensure adequate water supply for drinking and fire protection.