



2018 Loan Forgiveness Project Descriptions

Clean Water Projects

Community	Loan Number	Loan Forgiveness Amount
Brockton	CWP-18-42	\$348,909

Wastewater Treatment Plant Upgrade. This biological nutrient removal project is necessary to enable Brockton's Advanced Water Reclamation Facility (AWRF) to comply with its National Pollution Discharge Elimination System permit requirement to achieve effluent total nitrogen (TN) of 450 lbs/day seasonally, equivalent to 3 mg/L on an 18-MGD average flow basis. The improvements anticipated are based on the demonstrated results and findings of a full-scale pilot process train that has been operational for almost two full nitrogen-removal seasons. This project will involve upgrading the AWRF's other six aeration basins and making other AWRF improvements as necessary to support the process upgrade.

Community	Loan Number	Loan Forgiveness Amount
Fall River	CWP-18-03	\$304,088

Combined Sewer Overflow Abatement Program for Middle Street. The City of Fall River is under federal court order (FCO) to control combined sewer overflow (CSO) to area receiving waters. The terms of the FCO require the City's CSOs to achieve a 3-month level of control by the end of 2025. While the CSOs to Mount Hope Bay outfalls have been mitigated by the CSO tunnel, additional CSO control is required to meet the FCO requirements. The FCO requires sewer separation with green infrastructure as the method of CSO control. Sanitary sewer overflows and street flooding will also be addressed, especially in the vicinity of St. Anne's Hospital. 2012 storms resulted in flooding/closure of the St. Anne's Hospital emergency room.

Community	Loan Number	Loan Forgiveness Amount
Fall River	CWP-18-07	\$404,587
Fall River	CWP-18-07-A	\$45,114

Cress Brook Drainage Improvements. The proposed project involves modifications of storm drain infrastructure, including enlargement and rerouting of storm drains to relieve public health risks and nuisance flooding; reactivation of abandoned drainage swale; sewer separation; and

water quality improvements with best management practices retrofitted where possible. The project will increase storm drain capacity for a future sewer separation project.

Community	Loan Number	Loan Forgiveness Amount
Fall River	CWP-18-35	\$72,597

Hyacinth Street Drainage Improvements. The proposed project involves conveyance improvements and capacity increase to the existing drainage infrastructure. The objective of this project is to mitigate flooding on Hyacinth Street, reduce inflow to the President Avenue Sewer System, improve the water quality of storm water discharge through the use of best management practices (BMPs), and protect the Watuppa Ponds (Fall River's water supply).

Community	Loan Number	Loan Forgiveness Amount
Fall River	CWP-18-36	\$186,941

President Avenue Sewer Pump Station Replacement. The purpose of this project is to fully replace a 1400 gallon per minute sewer pump station that serves a population of approximately 4,500 people. Constructed in the 1960's, the pump station is beyond its useful life. Existing piping, pumps, electrical equipment, instrumentation and standby power system are severely corroded due to age. The pump station is unable the consistently handle wet weather flows, resulting in Sanitary sewer overflows (SSOs). A new submersible pump station will be constructed with additional capacity, standby power generator, motor controls and supervisory control and data acquisition system. Operation of the new pump station will not require confined space entry. Force main isolation valves, bypass connection and flow meter will give the City flexibility in emergency operations and SSO control.

Community	Loan Number	Loan Forgiveness Amount
Fall River	CWP-18-38	\$1,354,817

Wastewater Treatment Facility Improvements. The City of Fall River's Wastewater Treatment Facility (WWTF) is aging and requires rehabilitation and upgrade to maintain reliable operation and performance. Additionally, the EPA has indicated its intent to include a nitrogen limit in the City's next National Pollution Discharge Elimination System permit. Mt. Hope Bay is listed as impaired. Fall River's wet weather discharges and operational Sanitary sewer overflows contribute to its impairment. Recent air quality regulations (Title V) necessitated shut down of the WWTF incinerator. Liquid sludge is trucked off site for disposal, dramatically increasing disposal costs. Administrative facilities are ineffective and undersized for current needs. Site electrical and security issues will also be addressed.

Community	Loan Number	Loan Forgiveness Amount
Goshen	CWP-18-11	\$39,664

Goshen Landfill Cap Repair. This project intends to repair erosion and slope failure-damaged areas of the landfill cap, installing drainage improvements, and includes survey services before, during, and after the construction. Additional project activities include 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 will also be implemented as part of this project.

Community	Loan Number	Loan Forgiveness Amount
Harwich	CWP-18-23	\$568,522

Harwich Sewer Collection System - Phase 2. The Town of Harwich will be implementing Phase 2 of their Comprehensive Wastewater Management Plan and will be installing a sewer collection system in the Pleasant Bay Watershed. After a 400% population increase since 1951, the Town has seen water quality issues due to septic systems releasing nutrients which infiltrate into the ground and overfertilize water bodies, resulting in degraded water quality. Wastewater collected in Pleasant Bay in Harwich will be treated at the existing Chatham Water Pollution Control Facility. The Towns of Harwich and Chatham have signed an intermunicipal agreement to work together to meet their shared goals of the Pleasant Bay total maximum daily load and to protect their resources, which include drinking water supply wells.

Community	Loan Number	Loan Forgiveness Amount
Hull	CWP-18-29	\$168,109

Fiscal Sustainability Plan and Capacity, Management, Operations & Maintenance Upgrades. Hull is completing a capacity, management, operations, and maintenance project under an AOC (Docket CWA-01-AO-16-09), which identified a number of upgrades that are in order. In addition, the Town completed a Fiscal Sustainability Plan in June 2017, which prioritized facility and wastewater system upgrades. This project addresses the Year One Upgrades that include three construction contracts. These Year One contracts were deemed an extreme risk to the system and a priority for immediate attention due to age, historic failure histories, impacts to the wastewater operations and cost benefit analyses of repair and replacement. The construction project includes Contract No. 1 (Sewer Interceptor Pipeline Renewal), Contract No. 2 (Atlantic Avenue/Gunrock Area Sewer Infrastructure Renewal), and Contract No. 3 (Critical Replacements at Publicly Owned Treatment Works).

Community	Loan Number	Loan Forgiveness Amount
Lawrence	CWP-18-09	\$553,360
Lawrence	CWP-18-09-A	\$261,312

Sewer and Drainage Improvements. This project will rehabilitate and replace sewer system defects along with the operational and maintenance issues that are identified in the sewer system evaluation survey report. The sewer and drainage system improvements will address structural pipe failures, reduce infiltration and inflow sources, and abate illicit cross connectors to the municipal separate storm sewer system areas.

Community	Loan Number	Loan Forgiveness Amount
Lowell	CWP-16-13	\$363,910

West St. Flood Protection, Storage and Stations. This project is for flood protection upgrades at the West Street Pump Station, in-line storage of wet weather flows in the Read Street interceptor and remote station improvements. The West Street flood pump station improvements will address the potential for neighborhood flooding upstream of the station, while the in-line storage and remote station upgrades will address combined sewer overflow (CSO) mitigation in the overall system as identified in the CSO Long-Term Control Plan.

Community	Loan Number	Loan Forgiveness Amount
Lowell	CWP-16-15	\$824,952

Critical Infrastructure Protection Phase for Wastewater Treatment Facility and Infrastructure Upgrades. 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.

Community	Loan Number	Loan Forgiveness Amount
Norton	CWP-18-43	\$106,769

West Main Street Sewer Extension Project. This project involves providing new sanitary sewers to reduce pollution caused from the failed and malfunctioning private onsite sewage disposal systems, and more specifically the already failed systems at the Woodland Meadows elderly housing development. The new system will also provide the ability to connect Norton High School and the Yelle School to the sewer and bring the sewer closer to Norton Middle School for future connection and decommissioning of their wastewater treatment facility (WWTF), which is currently experiencing problems meeting Groundwater Discharge Permit requirements. This

project will connect the properties to the MFN Regional WWTF. Failures of these onsite systems direct affect the quality of groundwater and surface water in the project area.

Community	Loan Number	Loan Forgiveness Amount
Pepperell	CWP-18-08	\$94,573

Pepperell Wastewater Treatment Facility Upgrade. This project involves a new, smaller, force main and influent pump with a variable frequency drive (VFD) to allow more efficient pumping at low and average flows. An existing dewatering feed (with grinder) and grit pump will be replaced with new pumps on VFDs and premium motors. New heating, ventilation and air conditioning (HVAC) in the Process Building will bring the building up to current codes and improve overall HVAC efficiency. Process Building improvements also include new windows, a high efficiency natural gas boiler, and lighting upgrades. A new aeration main, distribution piping and new dissolved oxygen and blower on/off controls are planned. This will allow the facility to reduce the load of the blowers, saving energy. Finally, the supervisory control and data acquisition system will be upgraded.

Community	Loan Number	Loan Forgiveness Amount
Pittsfield	CWP-18-12	\$3,269,691
Pittsfield	CWP-18-12-A	\$452,010

Wastewater Treatment Plant Nutrient Removal. This project is to upgrade the wastewater treatment plant (WWTP) to achieve compliance with National Pollution Discharge Elimination System permit limits and an Administrative Order (CWA-01-15-014) issued by the EPA. The project will optimize the nitrogen removal process and result in reductions of phosphorus and aluminum discharges to the Upper Housatonic River Area of Critical Environmental Concern and remediate documented nutrient enrichment in the downstream Wood’s Pond impoundment. Four major component projects are necessary to achieve compliance: Tertiary Treatment Upgrade, Sludge Dewatering Upgrade, Nitrogen Removal Upgrade (Phase I) and Secondary Clarifiers Upgrade. The project components are consistent with the plant needs and energy efficiency improvements identified in the recently updated WWTP Facilities Plan.

Community	Loan Number	Loan Forgiveness Amount
Revere	CWP-16-17	\$568,619

Phase VII Construction - Inflow/Infiltration, Illicit Discharge Detection and Elimination, Pump Station and Drainage. The Phase VII construction project included the removal of inflow/infiltration from the City’s system. Construction included the redirection of public and private inflow sources discovered during the Phase VI investigations, Illicit Discharge Detection and Elimination source removal, and drainage improvements. This project also included pump station improvements (both wastewater and stormwater), cured in place pipe lining, sewer spot repairs, new sewer lines, sewer cleaning and additional wastewater metering.

Community	Loan Number	Loan Forgiveness Amount
Revere	CWP-16-18	\$314,436

Illicit Connection & Sump Pump Removal Program. This Illicit Connection & Sump Pump Removal Program is essential for the City to meet their goals and comply with the EPA Consent Decree. There are a significant number of illicit sump pump, roof drain, roof leader, driveway drain and yard drain connections from private homes and businesses that must be removed from the sanitary sewer system in order to remove inflow and increase the wastewater capacity of the City’s sewer system.

Community	Loan Number	Loan Forgiveness Amount
Revere	CWP-18-27	\$121,112

Illicit Connection & Sump Pump Removal Program. The continuation of the implementation through construction contracts of the Illicit Connection and Sump Pump Removal Program is essential for the City of Revere to meet their goals and comply with the EPA Consent Decree. There is a significant amount of illicit sump pump, roof drain, roof leader, driveway drain and yard drain connections from private homes and businesses that must be removed from the sewer in order to remove inflow and increase the wastewater capacity of the City's sewer system. These contracts become the mechanism to remove the illicit inflow.

Community	Loan Number	Loan Forgiveness Amount
Revere	CWP-18-28	\$284,613

Phase IX Construction - Inflow/Infiltration, Illicit Discharge Detection and Elimination, Pump Station and Drainage. The Phase IX Construction Project will include the removal of inflow/infiltration from the City's sewer system. Construction will include the redirection of public and private inflow sources discovered during the Phase IX Field Investigations, illicit discharge detection and elimination source removal, and drainage improvements. Construction will also include pump station improvements (both stormwater and wastewater), cured in place pipe lining, sewer spot repairs, replacements, new sewer lines, cleaning, and additional wastewater metering.

Community	Loan Number	Loan Forgiveness Amount
Springfield Water & Sewer Commission	CWP-18-18	\$4,892,418
Springfield Water & Sewer Commission	CWP-18-18-A	\$747,377

York St. Pump Station & Connecticut River Crossing. Consistent with the Commission's Integrated Wastewater Plan, the York Street Pump Station and Connecticut River Crossing Project will increase the wet weather flow to the Springfield Regional Wastewater Treatment Facility (SRWTF), substantially reducing the volume and frequency of combined sewer overflow events (CSO) from multiple regulators across the Connecticut River CSO system. The Project includes a

new 62 MGD wastewater pumping station and screening facility, three new pipes crossing under the Connecticut River to the SRWTF, and modification to the SRWTF Influent Structure.



Drinking Water Projects

Community	Loan Number	Loan Forgiveness Amount
Adams Fire District	DWP-18-04	\$183,206

Chemical Feed and Supervisory Control and Data Acquisition System Upgrades. This project includes the installation of sodium hypochlorite chemical feed systems to Wells 4, 2a, and 3 stations including day tanks, chemical metering pumps, chemical feed piping, instrumentation and controls. Additional activities include integrating the new chemical feed systems with the existing supervisory control and data acquisition system by installing a programmable logic controllers based control system at Wells 2a and 3 sites, adding a communication system to connect the three well sites, the Maple Street Storage Tank, provide an alarm dialer and a connection to a human machine interface at the District's office. This project is in accordance with two Administrative Consent Orders for unaccounted for water and for coliform hits. The completed project will install disinfection and provide for more accurate supply readings.

Community	Loan Number	Loan Forgiveness Amount
Barnstable	DWP-18-10	\$670,148

Maher Treatment Facility Upgrade. This project is for the Maher Water Treatment Facility Upgrade for mitigating the perfluorooctane acid (PFOS), 1,4-Dioxane and any other contaminants of emergency concern that may be found in Hyannis Supply System.

Community	Loan Number	Loan Forgiveness Amount
Brockton	DWP-18-11	\$712,521

Water Pump Well and Clearwell Rehabilitation. Cleanings and inspections of the finished water pump well have been conducted at the Silver Lake Water Treatment Plant. Several deficiencies have been discovered such as concrete loss as much as 3 inches in areas on the ceiling where reinforcement has been exposed among several other findings. The findings from these evaluations indicate a critical need to repair the backwash/finished water pump well ceiling and replace the concrete masonry unit baffle wall in the clear well to protect the treatment facility's finished water quality and to maintain proper operating conditions for the equipment in the pump room.

Community	Loan Number	Loan Forgiveness Amount
Dartmouth	DWP-18-05	\$83,432

Action Plan to Reduce Total Trihalomethane Levels. The project will include Contract 1 for the construction of in-tank aeration systems in both Allen Street water storage tanks. It also includes Contract 2 for the modification of all three, of the Town’s existing water treatment plants by changing the secondary disinfection from free chlorine to chloramines. The Town entered into an Administrative Consent Order with DEP to reduce trihalomethane (TTHM) levels in the distribution system. The completed project will improve drinking water quality by reducing TTHM concentration, which will also avoid potential future Stage 2 Disinfection Byproducts Rule for Locational Running Annual Average TTHM violations.

Community	Loan Number	Loan Forgiveness Amount
Fall River	DWP-18-15	\$271,370

Phase 18 - Water System Improvements. This project is the City of Fall River’s eighteenth year of its annual cast iron water main and lead service replacement program. The Phase 18 water main improvements include the rehabilitation or replacement of approximately 5,730 linear feet of cast iron water mains and lead service lines. This project’s goal is to prevent a serious problem in the distribution system and emphasizes the importance of providing safe and reliable drinking water to City of Fall River consumers.

Community	Loan Number	Loan Forgiveness Amount
Gloucester	DWP-18-03	\$269,988

Babson Water Treatment Plant Raw Water Systems Improvements. The Babson Water Treatment Plant (WTP) Emergency Project is designed to address issues that were leading to unacceptable WTP shutdowns. These include problems with the generator transfer switch, the actuated WTP intake valve and meter vaults, eels clogging the pumps and sedimentation basin blow down valves. The scope of work encompasses the installation of a new generator automatic transfer switch, a new accessible vault containing a new battery backed-up intake valve and inflow meter, and a new eel control vault with accessible screens and instrumentation. Ancillary work considered appropriate to complete in this project included new meters and vaults for the Goose Cove-Babson Reservoir Connector and for the Babson Waste Line, rehabilitation of the low lift pumps, and provision of a spare low lift pump.

Community	Loan Number	Loan Forgiveness Amount
Haverhill	DWP-18-06	\$1,098,936

Phase 2 - Transmission Main Improvements. This project involves the replacement of approximately 14,150 linear feet of water mains and associated lead service lines along with installing valves for isolation. This project is necessary to provide redundancy, isolation control,

and fire flow. The improvements will allow the City to continue to supply water and fire protection to the entire distribution system in the event of a break in either the 20-inch mains from the Gale Hill Storage Tank to the downtown area. This project continues the work currently being conducted under Phase I of water main improvements currently being constructed.

Community	Loan Number	Loan Forgiveness Amount
Revere	DWP-18-09	\$559,260

Oak Island Water Main Improvements. The Oak Island neighborhood of Revere has shown significant deficiencies including low pressure, water main breaks, and a lack of redundancy. The aging 6-inch unlined cast iron water main that is the sole source of water to this neighborhood runs under the MBTA railroad tracks, making it susceptible to failure due to its age and exposure to vibration from the trains. The hydrant flow tests conducted in this neighborhood produced results of 175 gallons per minute with the residual pressure dropping to 5 psi, which is well below the MassDEP and International Organization for Standardization (ISO) standards. Additionally, a similar neighborhood in the city of Revere recently experienced a 4-alarm fire, where water system issues affected the ability to fight the fire.

Community	Loan Number	Loan Forgiveness Amount
Southampton	DWP-18-12	\$109,281

Southampton Water System Improvement Project. Southampton’s public water system (PWS) needs a backup water source as identified on page 9 of MassDEP’s January 14, 2015 Sanitary Survey Report. Southampton presently has only one active water source, the Glendale Well. This project provides the required backup water source by constructing a Booster Pump Station in Southampton, near the Southampton-Easthampton town line, to convey water from the Easthampton PWS to and throughout the Southampton PWS. It also includes rehabilitation of the Glendale Well to regain its approved pumping capacity and piping and controls to connect the booster pump station effectively to the Southampton distribution system.

Community	Loan Number	Loan Forgiveness Amount
Spencer	DWP-18-13	\$425,264

Main Street Looping Water Main. The project consists of 7,275 linear feet of 12-inch diameter main to be installed through Moose Hill Tank, Greenville Street, Main Street and Cherry Street. This project eliminates the dead end on Greenville Street. It replaces a main that has a high risk of failure based on its asset management scoring. A hydraulic deficiency along Greenville Street and at the intersection of Main Street and North Street will be eliminated., The Town will also take the 14-inch diameter main off-line since it is identified as a critical component in need of replacement, rehabilitation and repairs. Fire protection will continue to be provided to the service area though.

Community	Loan Number	Loan Forgiveness Amount
Taunton	DWP-18-07	\$771,394

2018 Water Main Improvements Project. The project consists of removing lead goosenecks and installing new ductile iron water mains. City records indicate no known lead service connections, but lead goosenecks were used for connections from the water main to service connections in the early part of the 20th Century. Lead goosenecks could leach lead into the water. Replacing them will lower potential lead exposure and protect public health. The water mains to which the lead goosenecks are connected will also be replaced. The water mains are old, unlined cast iron pipes with substantial tuberculation, which can cause dirty water and reduce the hydraulic capacity. These upgrades will improve water quality and increase the available fire flow.