

Clean Water Projects

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
Brockton	CWP-16-29	\$3,120,242	\$144,520

Project Description

The Taunton River Watershed currently has water quality impairments during both wet and dry weather conditions due to bacteria pollution. The probable sources of bacteria include sewerage exfiltration, stormwater discharges, illicit connections to the drainage system, and failing septic systems. The Sewer Rehabilitation Project includes repair of prioritized areas in the City's wastewater collection system to address sources of exfiltration, infiltration and inflow, and sections of undersized pipe. The work will include open cut repairs, cured-in-place (CIP) sewer pipe lining, and rehabilitation of manholes. Reaches selected for this project were identified based on the Illicit Discharge Detection and Elimination program, the existing Sewer System Evaluation Study and capacity evaluations.

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
Chicopee	CWP-16-25	\$3,611,695	\$167,282

Project Description

This project is a part of a long term control plan created by the City to address the environmental and public health impacts caused by combined sewer overflows into the Connecticut and Chicopee Rivers. The Phase 58 project includes approximately 100 acres of the City, which encompasses a total of 20,530 linear feet of combined sewer. Sewer separation will be achieved by providing a new storm drain pipe and catch basins, and utilizing the existing combined sewer pipe for the conveyance of sewage, in order to significantly relieve the capacity problem in the existing sewer. The separation of the combined sewer systems in Phase 58 will eliminate sewage backups as well as eliminate the mixing of sanitary sewage with stormwater resulting in a much cleaner stormwater release to receiving waters.

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
Dartmouth	CWP-16-32	\$1,260,000	\$19,453

Project Description

This project consists of providing treatment upgrades to the existing Water Pollution Control Facility. The scope includes upgrading the existing low pressure, low intensity ultraviolet (UV) disinfection system to a low pressure, high intensity UV system to improve bacterial kill. Upgrading the existing UV system will allow the facility to meet current NPDES permit requirements. In addition, it will improve and consistently provide a high quality effluent to Buzzards Bay.

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
Fall River	CWP-16-03	\$4,304,547	\$199,373

Project Description

The Globe Street Sewer Improvements includes upsizing approximately 720 linear feet of combined sewer from 33-inches to 66-inches. The work will stretch from Globe Four Corners to the Globe Street CSO Tunnel Junction Chamber. Upsizing the sewer to the CSO Tunnel Junction chamber will allow combined sewage to flow unobstructed to the CSO Tunnel Drop Shaft, eliminating the conveyance restriction that causes flooding, surcharging and combined sewer backups at Globe Four Corners.

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
Fitchburg	CWP-16-05	\$2,169,164	\$100,469

Project Description

This project consists of separating approximately 5,200 linear feet of combined sewers in the Beech Street and Hazel Street areas. This will be achieved by installing new storm drains and catch basins; repairing and rehabilitating existing sewers and manholes, removing illicit connections; and general street improvements. The work must be completed by December 31, 2016 to meet the requirements of EPA's Consent Decree.

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
Fitchburg	CWP-16-10	\$21,214,360	\$982,582

Project Description

The Fitchburg Easterly Wastewater Treatment Facility (WWTF) is a secondary treatment facility with current average annual flows of about 9.8 million gallons per day. 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.

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
Hopedale	CWP-16-34	\$5,043,179	\$77,861

Project Description

Hopedale's National Pollutant Discharge Elimination System (NPDES) permit for the town's Wastewater Treatment Facility (WWTF) was re-issued by the US EPA and became effective on November 1, 2013. The permit has a number of new requirements, including more stringent effluent discharge limitations for Aluminum and Phosphorous. Planned improvements include the addition of preliminary screening, new secondary clarifiers, improvements to ultraviolet (UV) disinfection and sludge management improvements, which will assist in the ability to meet current NPDES permit limits and improve effluent quality from the WWTF.

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
Lowell	CWP-16-13	\$6,839,570	\$316,787

Project Description

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 Combined Sewer Overflow (CSO) diversion stations and pump stations 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 CSO mitigation in the overall system as identified in the CSO Long-Term Control Plan.

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
Lowell	CWP-16-15	\$1,877,061	\$86,939

Project Description

This project implements improvements to the wastewater treatment facility as part of an ongoing phased implementation program. The focus of the work includes equipment in the treatment facility 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.

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
Plymouth	CWP-16-07	\$48,200,000	\$744,157

Project Description

This project is for the emergency sewer forcemain repair and replacement in the Town of Plymouth, that is needed due to several breaks and resulting findings of excessive deterioration of the existing 30 inch ductile iron forcemain. The project will consist of three contracts; 1A Emergency Response and bypass systems, 1B Existing Forcemain- Slipline and replacement and 2 Redundant 24inch sewer forcemain.

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
Revere	CWP-16-17	\$2,910,045	\$134,784

Project Description

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.

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
Revere	CWP-16-18	\$857,552	\$39,719

Project Description

The continuation of this program is essential for the City to meet their goals and comply with the Consent Decree. There are a significant number of illicit sump pump, roof drain, roof leader, driveway drain, yard drain, etc. 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. These contracts become the mechanism to remove inflow.

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
Saugus	CWP-16-09	\$3,092,716	\$95,497

Project Description

This Subsystem 4B project includes the rehabilitation of pipelines, manholes, and the removal of private inflow sources to eliminate infiltration/inflow from the sewer system and significantly reduce or eliminate sewer system overflows from occurring at the Lincoln Avenue Pumping Station. Approximately 34,000 feet of 8-inch and 12-inch pipe and 1,500 feet of 15-inch pipe will be rehabilitated using cured in place pipe lining. Approximately 865 sewer services and 222 manholes will be lined as part of the project.

The Pump Station Upgrade and Replacement project involves the replacement of the existing Morris Place pump station and improvements to the Bristol Street pump station. The equipment within many of the town's wastewater pump stations has been operating beyond its design life and in some cases is exhibiting signs of failure. Replacement of the existing Morris Place Pump Station is required due to the poor structural condition of the structure, the need to restore useful life and as a result of the close proximity of the station to environmental receptors. Improvements to the Bristow Street Pump Station are required to restore useful life of the station, improve operator safety, alleviate flooding concerns and improve system reliability.

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
Southbridge	CWP-16-31	\$1,689,100	\$78,234

Project Description

The Town of Southbridge owns an advanced wastewater treatment facility (WWTF), which is operated by Veolia Water. Initial biological treatment is conducted through two bio-towers (also known as activated biological filters). The bio-towers have become less effective over time due to corrosion and failure of the internal structure and facility walls. In addition, the new National Pollutant Discharge Elimination System (NPDES) permit for the facility requires a higher degree of nitrification than the bio-towers were designed to achieve so that potential permit violations are a concern. The overall project objective is for the upgrade/replacement of the existing bio-towers to: improve biochemical oxygen demand removal and nitrification; ensure compliance with the new NPDES permit; eliminate the existing health hazard and aesthetics issue; and ensure proper long-term operation of the WWTF.

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
Taunton	CWP-16-38	\$4,117,776	\$190,722

Project Description

The project consists of installation of new drains to facilitate sump pump removal, and improvements and repairs to the existing sewer and Stormwater systems. The objective of this project is to further reduce wastewater-related water pollution to the Taunton River and other waterways by removing infiltration and inflow (I/I) from the sanitary collection system, with the ultimate goal of reducing and eliminating Combined Sewer Overflows. This project will focus primarily on installing drains necessary to re-route private inflow sources (sump pumps and roof leaders) away from sanitary sewers. In addition, work will continue to separate combination manholes, reducing the potential for infiltration to enter the sewer system.

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
Upper Blackstone Water Pollution Abatement District	CWP-16-39	\$25,000,000	\$1,157,921

Project Description

The UBWPAD is currently under Administrative Order on Consent (AOC) with the EPA to come into compliance with the 2012 permit limits for total nitrogen and total phosphorus. The construction project would upgrade the treatment facility in order to meet these nutrient limits including the construction of a tertiary phosphorus removal system, secondary system improvements, sludge handling and chemical system improvements as well as numerous ancillary systems and site improvements.

Drinking Water Projects

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
Barnstable	DWP-16-17	\$2,448,262	\$40,343

Project Description

The Hyannis Water System provides drinking water to 7,500 customers. In 2013, the chemicals 1,4 dioxane and perfluorooctane sulfonate were detected in several wells. A number of short term measures were taken to reduce the contamination below the required standards, but these are not considered permanent solutions. This project is for the construction of permanent interconnections between the Hyannis system and the Barnstable Fire District, Town of Yarmouth Water, and the Centerville, Osterville and Marstons Mills Fire District as identified in the planning study.

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
Chicopee	DWP-16-04	\$11,762,351	\$581,470

Project Description

The City of Chicopee's source of drinking water is the Chicopee Aqueduct, which is owned and maintained by the Massachusetts Water Resources Authority. The City's transmission main from this source is a single 36-inch diameter cast iron main. With no redundant transmission main, a majority of the City is at risk of losing water, if the single transmission line goes down. Depending on where the damage to the existing main occurs, service could be lost for an extended period of time. Construction of the second main also allows repairs and upgrades to be made to the-existing 36-inch main, without interruption in service. The project will also replace the existing gaseous chlorine system with a sodium or calcium hypochlorite system to improve safety and performance of the transmission main.

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
Fall River	DWP-16-09	\$3,695,000	\$182,662

Project Description

The City is entering the sixteenth year of its annual cast iron water main and lead service replacement program. The Phase 16 water main improvements include the rehabilitation or replacement of approximately 16,500 linear feet of cast iron water mains and 106 lead services. The project goal is to eliminate a potentially serious and preventable health threat – lead contamination – thus providing safe and reliable drinking water to customers of the City of Fall River.

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
Hadley	DWP-16-03	\$249,971	\$4,119

Project Description

In an ongoing effort to improve water system reliability, the Town plans to address existing system deficiencies. The north side of the Russell Street includes a water main that is approximately 100 years old. Failures within the project area average two per year and have created loss of water service and traffic disruptions. Remnants of pipe removed during repairs show severe tuberculation and customers connected to the main report low pressure. The proposed project will address ongoing service interruptions, low pressure complaints, and may help to reduce the system unaccounted water, which exceeds the Water Management Act limit of 10%.

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
Haverhill	DWP-16-05	\$41,094,762	\$1,354,341

Project Description

The Haverhill Water Treatment Plant has provided the city with service far in excess of its planned useful life. Critical components are aging and approaching obsolescence, with acquisition of replacement parts difficult or impossible. This project includes an upgrade to treatment capacity from approximately 10-million gallons per day (MGD) to 12.1 MGD to provide much needed redundancy of primary treatment components and to replace outdated systems. The updated plant will meet the needs of the City under a variety of existing and future conditions.

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
Haverhill	DWP-16-07	\$2,636,000	\$86,873

Project Description

This project includes constructing improvements at the Kenoza Lake Water Treatment Plant (WTP) and within the distribution system to provide redundancy to the Gale Hill Storage Tank and the distribution system. The project also includes rehabilitating an existing 20-inch transmission main to increase capacity, re-establish isolation control and provide redundancy in the distribution system. Water systems that lack redundancy are at risk of prolonged loss of service, if a single critical system element falls out of service.

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
Leominster	DWP-16-13	\$1,500,000	\$49,435

Project Description

The proposed project consists of rehabilitation of the City of Leominster’s Pond Street Pump Station and Wachusett Reservoir Pump Station. The Pond Street Pump Station is located at a hub of the City’s three pressure zones and through this station, the City can transfer water between all three pressure zones as needed to meet demands, both domestic and emergency. The City’s Wachusett Reservoir Pump Station has the ability to withdraw about 5 million gallons per day of water from the Wachusett Reservoir on an emergency basis. Equipment within both pump stations is original and since each station was constructed in the 1960s, these facilities and the equipment is approximately 50 years old and well beyond its useful life. Rehabilitation of these facilities will make these facilities readily available for routine or emergency use and increase the overall reliability of the water system when needed.

<u>Borrower</u>	<u>Loan Number</u>	<u>Loan Amount</u>	<u>Amount Forgiven</u>
New Bedford	DWP-16-14	\$16,000,000	\$790,957

Project Description

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.