

Project Descriptions for June 13, 2018

Board of Trustees Meeting

Clean Water Commitments

Pepperell CW-18-08

This project involves a new, smaller, force main and influent pump with 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 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, high efficiency natural gas boiler, and lighting upgrades. A new aeration main and distribution piping and new DO and blower on/off controls are planned. This will allow the facility to reduce the load of the blowers, saving energy. Finally, the SCADA system will be upgraded.

Drinking Water Commitments

Wayland DW-18-01

The project consists of the replacement of 2,500 linear feet of existing 6" unlined cast iron water main with new 12" ductile iron water main on Boston Post Road in Wayland. This major transmission main provides service to Wayland Town Center. The water main is classified as being in poor condition due to its size, material, installation year, and corrosive soils. The project addresses a potential public health threat from water quality issues associated with corrosion of the water main. Replacement is required for a future interconnection with the Town of Sudbury.

Clean Water Agreements

MWRA CW-17-34

This project includes upgrades to the Deer Island Wastewater Treatment Plant automation and central control systems as well as improvements and upgrades to several existing interceptors and pump stations that are in need of replacement and/or modernization. The project is intended to extend current asset life and improve system operability.

MWRA CW-17-35

MWRA has three remote headworks - Chelsea Creek, Columbus Park, and Ward Street - which were built and placed into operation in the 1960's. All wastewater flows from the MWRA Northern Service Area is collected at the remote headworks before reaching the Deer Island Treatment Plant. Preliminary treatment and flow control are performed at the remote headworks facilities. This project addresses aging infrastructure and will improve operational reliability by replacing all mechanical, electrical, HVAC, plumbing, and appurtenant equipment at all three facilities.

MWRA CW-17-36

After extensive alternatives analysis and pilot testing, MWRA has determined that disk filter technology is the best feasible alternative for meeting the current and upcoming discharge phosphorous concentration limits at the Clinton wastewater treatment plant (WWTP). This project is for the installation of the full-scale disk filter phosphorous removal system at the WWTP. This will help ensure that NPDES discharge permit limits are met.

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

Drinking Water Agreements

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 and 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. Through their assessment, several crossing locations have been identified that will be replaced to prevent these issues.

Fall River DWP-17-08

The Phase 17 water main improvements include the rehabilitation or replacement of approximately 16,100 linear feet of cast iron water mains and 30 lead services. A priority of the SRF program is prevention of a potential serious health threat to a major system component. The cast iron mains are severely deteriorated and need to be replaced to ensure adequate flow and capacity for supply and fire protection. Replacement of lead service connections addresses the critical health threat presented by lead 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 and can cause high blood pressure and kidney problems in adults. This project will prevent a serious problem in the distribution system and will provide safe and reliable drinking water to customers of the City of Fall River.

MWRA DW-17-15

This project is the construction of an emergency pump station to pump water from the Wachusett Aqueduct to the Carroll Water Treatment Plant (CWTP). The pump station will provide redundancy in the event of failure at the Cosgrove Tunnel or Intake and for the inspection/rehabilitation of the Cosgrove Tunnel. The pump station will be able to deliver 240 million gallons per day of raw water to the CWTP during a planned or emergency shutdown of the Cosgrove Tunnel. This flow rate represents the full water demand from CWTP during the fall, winter, and spring low-flow seasons and mitigates potential disruption of service to Northborough, Southborough, Marlborough, and Westborough State Hospital.

West Springfield DWP-17-13

The project includes 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 for water. It will also ensure adequate water supply for drinking and fire protection.