

The logo for ACEC (Association of Clean Water Engineers and Scientists), consisting of a yellow arc above the letters "ACEC" in a blue serif font, with a reflection effect below.

ACEC

## *MWRA's Response to COVID*

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Executive Director

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## Immediate Actions

- On Saturday, March 14, Senior Staff convened to develop a list of “core functions”
- The next week, all office staff were sent home to telework, if possible
- Maintenance crews were put on standby rotations
- Treatment plant and other critical staff continued to report to work, under CDC safety guidelines





# Utilized Existing Pandemic Response Plan

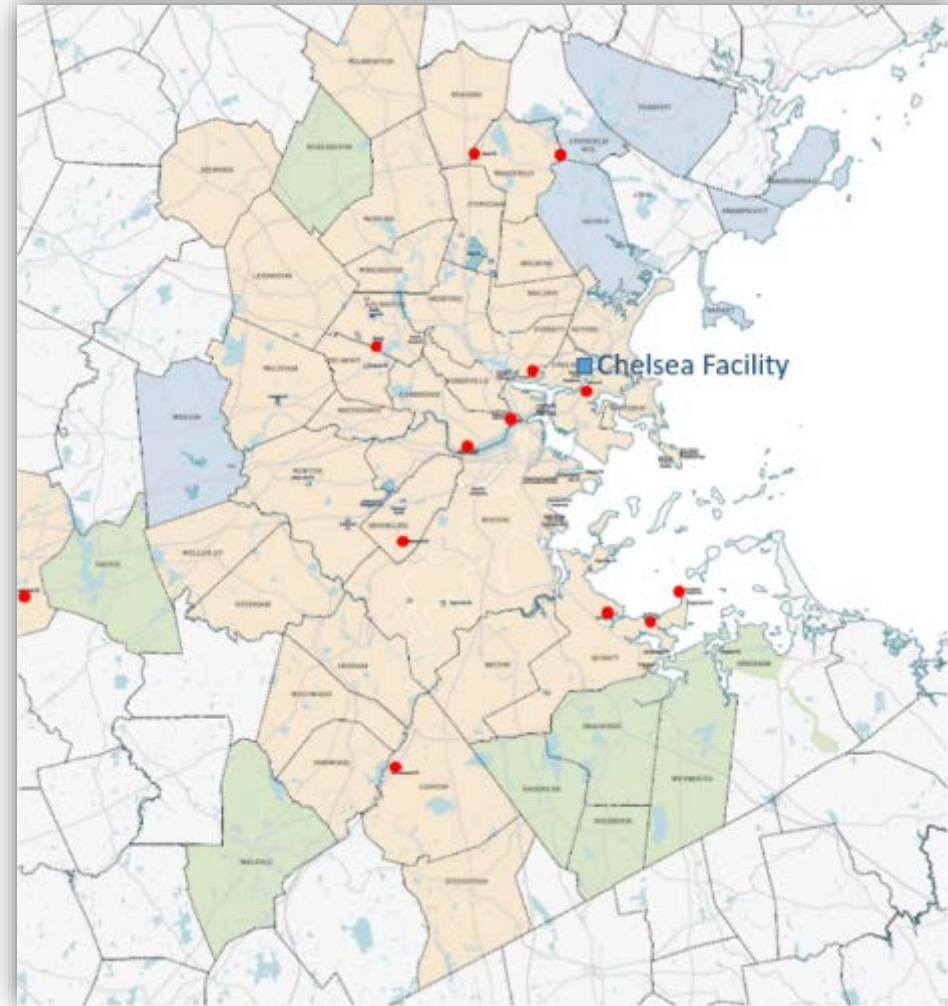
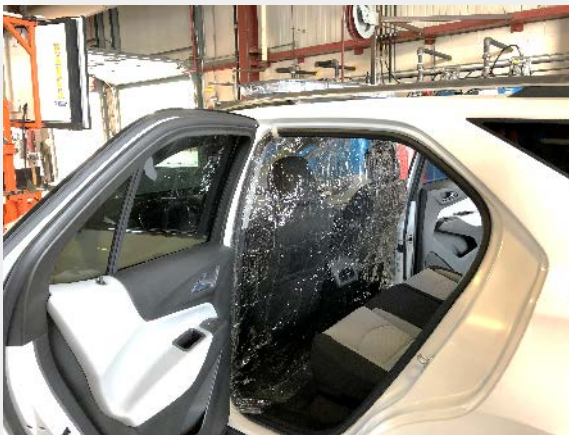
- MWRA developed a Pandemic Response Plan in 2003 to ensure the continuity of operations and safety of staff
- The Plan was used as a starting point when COVID hit and is updated on an ongoing basis applying lessons learned
- Part of the Plan included a stockpile of PPE, which was regularly rotated, putting us in a good position at the start of the pandemic

Overview - MWRA Pandemic Response Approach			
	MWRA Pandemic Response Level	Trigger Mechanism	General Response Measure
<p>Is this disease severe enough to disrupt MWRA operations?</p> <p>↓</p> <p>Is it spreading easily from person to person?</p>	MWRA Level 0	Normal risks - there are normally sporadic cases of novel disease occurring throughout the world <u>without</u> evidence of efficient human to human transmission	Update EAP as needed
<p>↓</p> <p>Are there outbreaks in multiple parts of the world?</p>	MWRA Level 1	Increased human to human transmission of a novel pathogen producing high clinical severity; OR a pandemic is declared for a low severity pathogen	<p>Review EAP triggers relative to the transmission and severity of the disease</p> <p>Review critical supply and staffing requirements</p> <p>Investigate the behavior of the pathogen relative to water and wastewater and enhance disinfection</p>
<p>↓</p> <p>Are there outbreaks in Massachusetts?</p>	MWRA Level 2	Sustained transmission of a high severity, high accessibility novel pathogen is confirmed in multiple areas somewhere in the world OR a pandemic for a low severity pathogen arrives in the U.S.	<p>Determine when to begin aggressive procurement of critical materials and prepare for reduced staff availability</p> <p>Review current information on water and wastewater as an exposure source</p>
<p>↓</p> <p>Are there impacts to MWRA operations?</p>	MWRA Level 3	Sustained transmission of a high severity, high accessibility novel pathogen is confirmed in the MWRA area and/or MA DPH declares a Pandemic related Public Health Emergency	<p>Manage operations to provide mission critical services</p> <p>Adjust staff protection guidelines as appropriate</p>
<p>↓</p> <p>Are things returning to normal?</p>	MWRA Level 4	Abatement rates and interdependency issues impact critical operations	Drop lower priority functions as necessary
<p>↓</p> <p>Prepare for another wave as needed</p>	MWRA Level 5	Workforce returns to lesser impact levels	Restores functions as possible



# Operations and Maintenance Staff

- Field crews and plant staff have staggered start times
- Chelsea crews are utilizing remote locations to muster
- One person per vehicle, but piloting multi-person vehicles with barriers



*Remote Mustering Locations*





# Operations and Maintenance Staff

- As staff returned to work, full compliance with the Commonwealth of Massachusetts Re-Opening Plan safety requirements and CDC COVID-19 guidance
- PPE required at all times and all employees self-certifying that they are healthy





# Operations and Maintenance Staff

- Procedures in place for community staff to drop off water quality samples safely





# Contract Tracing and Deep Cleaning

- In the event that an employee tests positive for COVID, contact tracing and notifications are done immediately
- Work area and common areas are deep cleaned by outside vendor







# Impact on Construction Projects

- MWRA and its contractors had to quickly adopt the Governor's mandates for safe construction sites, including training, hand washing stations and daily self health certifications

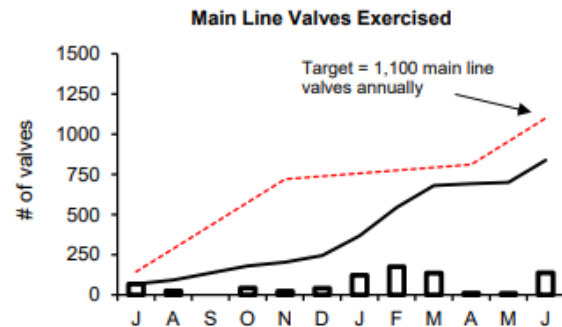
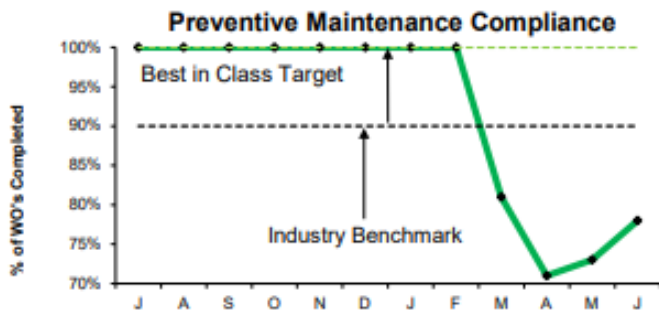
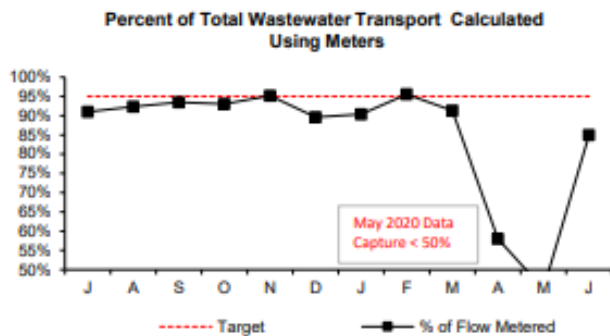




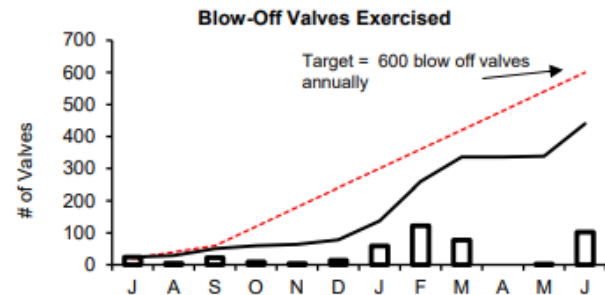


# Effects of COVID on Maintenance Metrics

- Routine maintenance dropped during the 4th quarter of FY20, but is starting to recover



During the month of June FY20, 137 main line valves were exercised. The total exercised for the fiscal year to date is 838. Below YTD target due to high priority CIP project (WASM 1) and Covid 19.

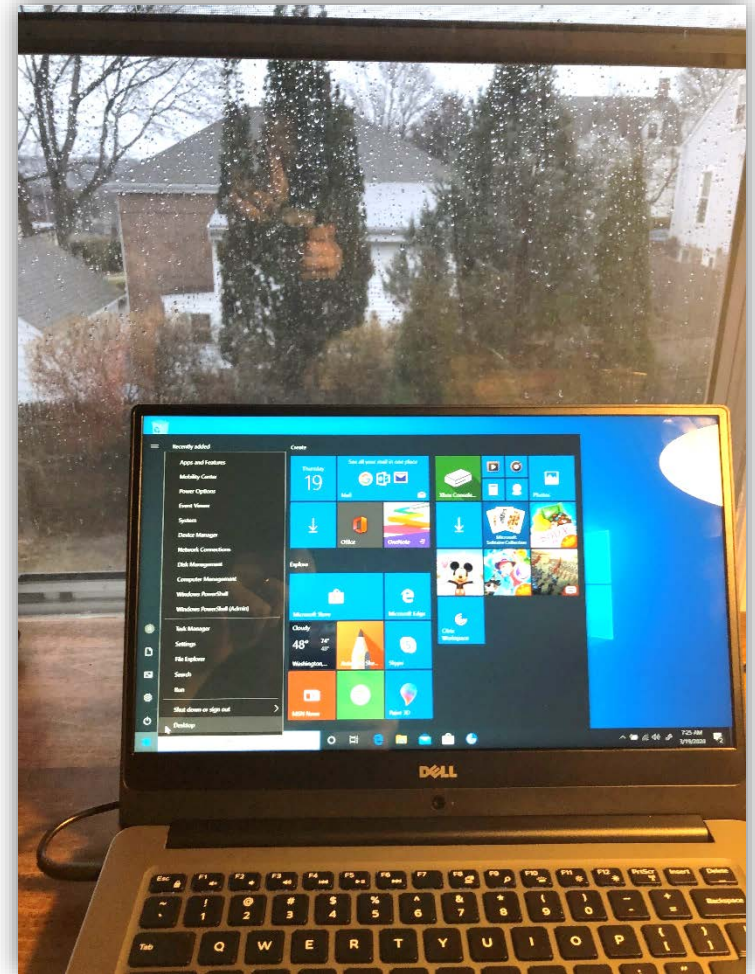


During the month of June FY20, 102 blow off valves were exercised. The total exercised for the fiscal year to date is 440. Below YTD target due to high priority CIP project (WASM 1) and Covid 19.



# Office Staff

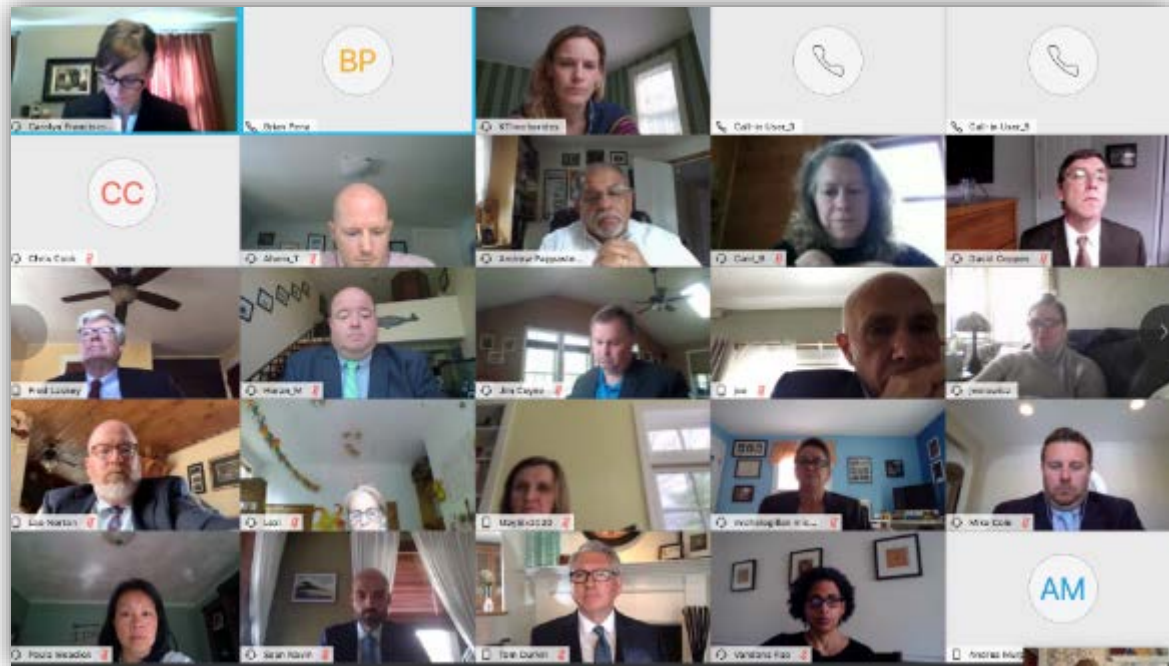
- Over 400 financial, administration, engineering, planning and support staff are teleworking under a new Telework Policy
- No face-to-face meetings
- Visitors to MWRA facilities very limited - and must self-certify that they are healthy





# Virtual Meetings

- Like everyone else, all MWRA meetings are being held virtually
- All hiring done remotely
- Since March, MWRA Board of Directors meetings have been held virtually







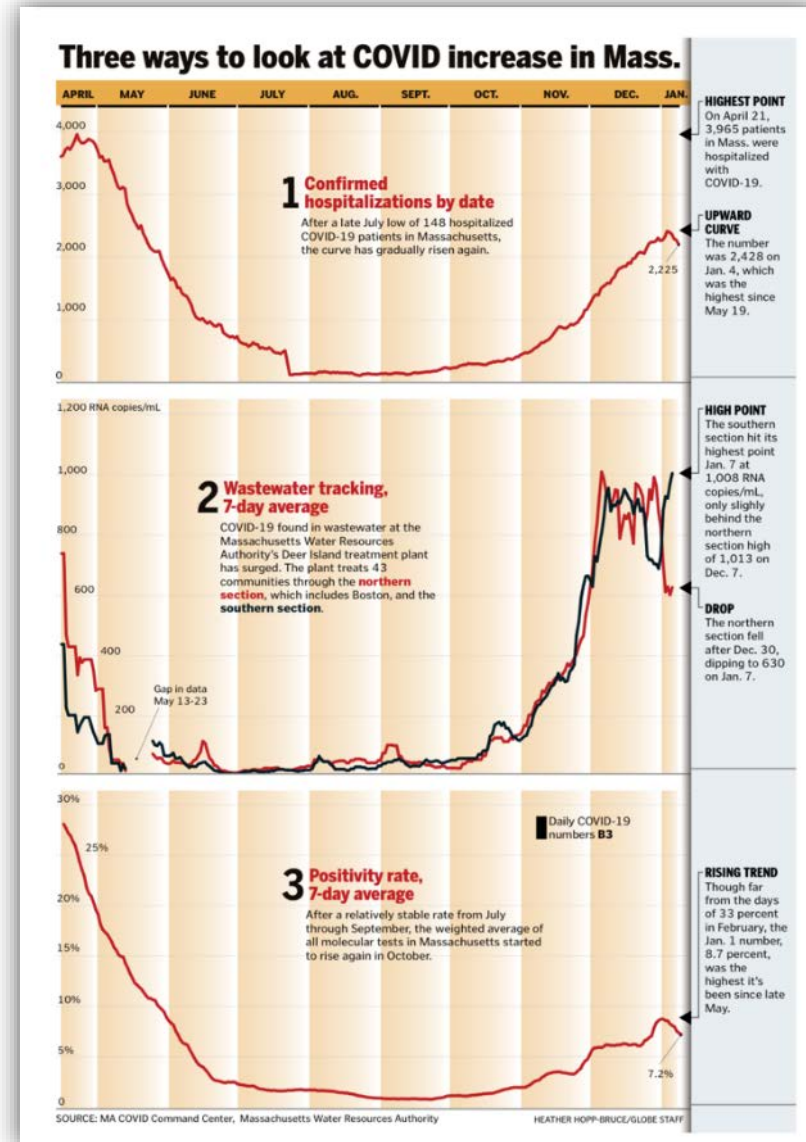
# Installed Protective Barriers and Signage (Lots of Signage)





# COVID Wastewater Testing

- Since the pandemic began, MWRA has been working with Biobot Analytics on sampling wastewater at Deer Island to track the amount of COVID in the north and south systems as an additional tool for the public health community
- Testing results are posted on MWRA's website
- The program has garnered local and national media attention and the Boston Globe uses it as one of the key graphs to watch





## On-Site COVID Testing

- In December, MWRA began providing weekly on-site testing at three locations for employees
- The response has been excellent and has helped to stop the spread among staff







# Vaccines

- MWRA has been working to try to move critical water and wastewater workers up on the distribution list
- Currently exploring options for on-site staff vaccinations

**Facts about COVID-19 vaccines**


**Vaccines (shots) are one of the tools we have to fight the COVID-19 pandemic.**

To stop the pandemic, we need to use all of our prevention tools. Vaccines are one of the most effective tools to protect your health and prevent disease. Vaccines work with your body's natural defenses so **your body will be ready to fight the virus**, if you are exposed (also called immunity). Other steps, like wearing a mask that covers your nose and mouth and staying at least 6 feet away from other people you don't live with, also help stop the spread of COVID-19.

Studies show that **COVID-19 vaccines are very effective at keeping you from getting COVID-19**. Experts also think that getting a COVID-19 vaccine may help keep you from getting seriously ill even if you do get COVID-19. These vaccines cannot give you the disease itself.

**The vaccines are safe.** The U.S. vaccine safety system makes sure that all vaccines are as safe as possible. All the COVID-19 vaccines that are being used have gone through the same safety tests and meet the same standards as any other vaccines produced through the years. A system in place across the entire country that allows CDC to watch for safety issues and make sure the vaccines stay safe.

**Different types of COVID-19 vaccines will be available.** Most of these vaccines are given in two shots, one at a time and spaced apart. The first shot gets your body ready. The second shot is given at least three weeks later to make sure you have full protection. If you are told you need two shots, make sure that you get both of them. The vaccines may work in slightly different ways, but all types of the vaccines will help protect you.

 [www.cdc.gov/coronavirus/vaccines](http://www.cdc.gov/coronavirus/vaccines)



# Future Challenges: What Will The "New Normal" Look Like?

- Child and adult care issues
- Teleworking going forward
- In-person training vs on-line
- New technologies
- Staffing levels
- Future space needs



# Possible Stimulus Funding

- In anticipation of a possible post-COVID federal stimulus package, MWRA has been pulling together a list of potential water and wastewater projects that could be “shovel-ready”

<u>E&amp;C Design Projects</u>		
	<u>NTP</u>	<u>Total Contract Amount</u>
<b>Metropolitan Tunnel Redundancy</b> - Preliminary Design & MEPA Review - Preliminary design, permitting and MEPA environmental review of the Northern and Southern Tunnel Loops.	May-20	\$16,000,000
<b>Wachusett Bastion Rehabilitation Design</b> - Structural improvements to the Bastion including a new roof, repairs of the concrete walls, and drainage systems.	May-20	\$768,000
<b>Facility Asset Protection</b> - Interceptor Renewal 7 Study/Design/CA - Rehabilitation of Sections 41, 42, 49, 54 and 65 (26,400 ft.) of sewer through CIPP Lining and Rehabilitation of 120 Manholes in Malden and Melrose.	July-20	\$2,600,000
<b>Metropolitan Redundancy Interim Improvements</b> - Shaft 5 Building Improvements Design/CA - Electrical and architectural improvements at Shaft 5 building in Weston. Including improvements to the dewatering system inside the shaft, Building Code and Hazardous Material Evaluations at the site.	Sep-20	\$750,000
<b>Hayes Pump Station Rehabilitation Design</b> - Replacement or rehabilitation of sluice/slide gates, climber screen and grinder system, pumps, valves, instrumentation, motor control center, odor control system and emergency generator as well as improvement of the site drainage system due to the age of the pump station.	Sep-20	\$2,605,000
<b>NEH Improvements Design/ESDC and REI</b> - Design, bidding and engineering services during construction and REI Services for CP-1 and CP-2.	Nov-20	\$8,853,000
<b>Steel Tanks Improvements Design/CA</b> - Design and construction to repaint/replace cathodic protection systems and make necessary improvements to 3 steel water storage tanks (Bellevue 1, Park Circle, and Walnut Hill). Design and construction for improvements to the recently painted Bellevue 2, Turkey Hill and Deer Island storage tanks.	Nov-20	\$3,600,000
<b>Water System Hydraulic Model</b> - Upgrade and calibrate the water system hydraulic model, reduce model maintenance and data storage redundancy by developing improved data transfer links (integration) between its modeling software and the various data systems, and create a 1:1 match with the MWRA's GIS System.	Nov-20	\$860,000
<b>System Relief &amp; Contingency Planning</b> - Project designed to create increased capacity within the collection system in order to decrease SSO discharges as well as specific plans for a failure at MWRA facilities hence preventing or dealing with flooding issues.	Dec-20	\$500,000





# Impact of COVID-19 on Project Design Schedules

- During the first half of FY2021, 21 design projects were scheduled to be awarded
  - 7 were awarded
  - 3 are in process
  - 4 have been advertised
  - 7 are scheduled to be awarded by June 30th
- Projects are now starting to proceed at a normal pace



# Upcoming Design Projects

Project	RFP Advertisement Date	Estimated Contract Amount (\$000s)
Deer Island Clarifier Rehabilitation Phase 2 - Resident Engineering Inspection	Mar-21	\$3.0
Deer Island Digester and Storage Tank Rehab Design/Engineering Services During Construction	Apr-21	\$4.1
Wachusett Lower Gatehouse Pipe Replacement Resident Engineering Inspection	Apr-21	\$0.5
Masonry/Structural Repairs Design/Engineering Services During Construction	Apr-21	\$1.6
Deer Island Odor Control Rehabilitation - Design/Engineering Services During Construction	Apr-21	\$5.1
Deer Island Cryogenics Plant Equipment Replacement-Design	Apr-21	\$3.3
Braintree/Weymouth Improvements - Resident Engineering Inspection	Apr-21	\$0.6
Cottage Farm Rehabilitation - Design/Construction Administration/Resident Engineering Inspection	Apr-21	\$2.5
Somville-Marginal CSO Facility Rehabilitation Design/Construction Administration	May-21	\$1.5
Section 80 Rehabilitation Design/Construction Administration	May-21	\$2.5
Deer Island Fire System Replacement - Resident Engineering Inspection	May-21	\$2.1



# Upcoming Design Projects

Project	RFP Advertisement Date	Estimated Contract Amount (\$'000s)
Hingham Pump Station Rehabilitation Design	Jul-21	\$0.9
Removal of Quinapoxet Dam Resident Engineering Inspection	Aug-21	\$0.1
Cathodic Protection Metropolitan System Design/Construction Administration	Sep-21	\$9.2
Clinton Wastewater Treatment Plant Rehab Design/Engineering Services During Construction/Resident Engineering Services	Oct-21	\$1.5
Sect 25, 75, 59, & 60 Resident Engineering Inspection	Jan-22	\$3.7
Northern Extra High Improvements Resident Engineering Inspection	Jan-22	\$2.6
Design/Engineering Services DI Old Administration Building Demolition	Feb-22	\$0.7
Residuals Facility Upgrades - Design	Feb-22	\$1.2
Pumping Stations Rehabilitation-Design/Construction Administration	Feb-22	\$3.9
Beacon Street Line Design/Engineering Services During Construction	Apr-22	\$0.9
Deer Island Combined Heat and Power Design/Engineering Services During Construction/Resident Engineering Inspection	Feb-22	\$5.6