

September 9, 2019

Randolph Town Council
Town Hall
41 South Main St.
Randolph, MA 02368

RE: Joint Water Board Water Treatment Plant Emergency Upgrades

Dear Council President and Members of the Council,

On June 10, 2019, I appeared in front of the council to update you on the emergency upgrades required at the WTP due to pump failures at the plant in April 2019. At that time, I presented a multi-phased emergency approach to replace the aged and faulty electrical system and failing finished water pumps. Today I am here to update you on the progress of the project.

Phase 1 of the work, installation of a new soft starter and rebuilt motor for Finished Water Pump #4 began on June 14, 2019 with the contractor mobilizing on site. The work progressed from June 14, 2019 completing late morning July 10, 2019.

During this time, the WTP was pumping finished water to the Randolph/Holbrook distribution systems utilizing a temporary rental pump/motor skid mounted system. Two operational emergencies occurred during the Phase 1 work, one on June 23, 2019 and another in the early hours of July 10, 2019.

On June 23, 2019 a Level 1 Emergency occurred. The rental finished water pump failed. It was determined that the motor belt broke. The defective pump was removed and another backup rental pump at the WTP was installed within 2 hours and treated water was again flowing from the WTP.

On July 10, 2019, the rental finished water pump failed to restart after completion of a routing sedimentation basin washing and installation of a new gate valve. It was determined that air entrainment had occurred in the system and the operators worked to expel the air to regain operation of the rental pump. The rental pump did not operate from midnight to approximately 3:30 am on Wednesday, July 10, 2019. The rental pump was successfully restarted at 3:30 AM.

Typically, this is considered a Level I Emergency, minor disruption with an anticipation of correction within 24 hours or less. However, due to the prolonged nature of the restart of the rental pump it became a Level III Major Emergency when the higher elevations of the Randolph and Holbrook distribution system began experiencing pressures lower than 20 psi. This resulted in a precautionary boiled water order for both communities on July 10, 2019. Water quality results during this time indicated that appropriate disinfection was occurring and MassDEP lifted the boil water order on July 12, 2019 after two rounds of sampling.

Finished Water Pump #4 was tested and the rental pump was turned off on July 11, 2019 completing Phase 1 of the emergency repairs. The rental pump remains on site as an emergency backup for the WTP.

Phase 2 through 4 include replacement of the main electrical service, automatic transfer switches and distribution panel, demolition and replacement of Finished Water Pump No. 3, and connection of all equipment to the new main electrical system began on August 26, 2019.

A summary of the schedule is provided below.

**Water Treatment Plant Emergency Repairs
Electrical and Finished Water Pump #3
Schedule
(Updated September 9, 2019)**

Milestone/Task Item	Status	Start Date	Completion Date
Finished Water Pump No. 4 – Rebuilt Motor Installed and operational	Completed		July 10, 2019
Electrical Equipment Replacement New Finished Water Pump No. 3			
<i>Award and Notice to Award</i>	Completed		July 5, 2019
<i>Submittals</i>	Completed		August 23, 2019
<i>Equipment Lead Time:</i>			
Electrical Equipment Fiberglass Enclosure	On Order	August 16, 2019	October 4, 2019
Finished Water Pump #3	On Order	August 16, 2019	December 19, 2019
<i>Construction:</i>	Underway	August 26, 2019	December 31, 2019
Electrical Equipment Pad and enclosure			
Electrical Equipment Installation and interior electrical connection demolition of existing FWP#3, transfer of FWP#4 to new electrical system	Ongoing	September, 3 2019	October 2019
FWP#3 Demolition, Installation and Startup		November 2019	December 31, 2019

Upon project completion, the WTP will have:

- a new main electrical system,
- a new Finished Water Pump No. 3,
- Finished Water Pump No. 2 and Finished Water Pump No. 4 will have rebuilt motors
- all equipment will be connected to the new electrical system and
- A permanent bypass piping connection for emergency backup system will be in place.

Sincerely,

A handwritten signature in blue ink, appearing to read "Helen T. Gordon".

Environmental Partners Group, Inc.
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