Quarter 3 & 4 Update: July – December 2025

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From: Joshua Schimmel, Executive Director, Springfield Water and Sewer Commission

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The Springfield Water and Sewer Commission (Commission) has embarked on several large-scale projects to replace 50- to 100-year-old drinking water infrastructure needed to maintain a consistent supply of safe drinking water and to achieve compliance with regulatory limits for disinfection by-products (DBPs). This is a quarterly update on the progress made on those projects.

- **New Water Treatment Plant** – Walsh completed work to reroute the existing treated water transmission mains away from the new WTP project site over Quarter 3, marking a significant milestone for project progress. This work included installing and connecting an HDPE pipeline as well as completing a new connection between the existing hydraulic control structure and an existing slow sand filter effluent line to maintain two separate transmission main flow paths. In July, previously unidentified caulking and mastic materials containing PCBs were discovered on four of the eight slow sand filters and were tested for hazardous materials. The project team is currently conducting additional testing and coordinating with EPA Region 1 and MassDEP in accordance with the applicable regulations. Over Quarter 4, Walsh began installation of the 60-inch and 72-inch raw water conveyance pipelines for the new WTP, constructed an outlet headwall, and made modifications to the existing Backwash Facility.

- **42-inch Raw Water Transmission Main / Energy Dissipating Valve (EDV) and Equalization Tank Facility** – On the pipeline, Northern Construction (Northern) repaired and replaced sections of pipe and completed modifications to manholes and vent structures. The work on the pipeline is nearing completion, with next steps including testing the line, installing final joint seals and other miscellaneous repairs, and completing the final connection to the piping at the EDV. At the EDV facility, Northern completed construction, waterproofing, and leakage testing of the concrete structure. Inside the concrete structure the piping, header manifold, isolation valves, energy dissipating valves, basket strainers, and related appurtenances were installed. Exterior pipe work was completed, and backfilling around the structure is in progress. Construction of the spillway concrete was completed and the retaining wall is in progress. Electrical work to complete wiring and lighting, is in progress. The contractor is projecting a substantial completion date of March 2026, which is a three-month delay.

- **Cobble Mountain Hydroelectric Station Improvements for Primary Raw Water Conveyance** – HDR continued to design the rehabilitation of the Unit #3 turbine and generator, which includes electrical updates, replacement of the inlet butterfly valves and actuators, lining the penstock to Unit #3, structural assessments and improvements, and rehabilitating the existing bridge crane. The majority of the design is now at 90% design completion phase, with the exception of the turbine/generator and plant electrical which are at 30% design. Holyoke Gas & Electric, the contracted plant operator, is managing the work. Improvements are projected to be completed in 2028 but schedule is subject to change.

We have included additional information for each project on the following project update pages.

Please contact us if you would like more information about these projects. More information is also available at https://waterandsewer.org/projects/ and at https://www.newwestparish.com/.

DBP Compliance

MassDEP & EPA Quarterly Update

New West Parish Water Treatment Plant

Project Purpose: This project is for design and construction of a new water treatment plant (WTP) to meet system demand while providing a higher level of treatment to achieve long-term, consistent compliance with the Disinfection By-Product (DBP) Rule. The new WTP will replace the existing direct filtration and slow sand filtration plants, which were not designed to remove adequate dissolved natural organic matter (NOM) to meet current regulatory limits for HAA5s and THMs.

The Commission has been in periodic non-compliance for HAA5s since 2018. To address this issue, after completing several studies, the Commission identified that modifications to the existing plant processes would not be sufficient to achieve compliance, and that the addition of clarification was needed to reliably remove NOM and maintain compliance. Based on the results of a three-season pilot plant operation, Dissolved Air Flotation (DAF) with a polyaluminum chloride coagulant was selected as the clarification process for the new conventional plant.

Delivery Approach: Design-Bid-Build with Hazen (Engineer) and Walsh Construction (Contractor). Planned financing using WIFIA and SRF.

Progress: Walsh completed work to reroute the existing treated water transmission mains away from the new WTP project site over this last quarter, marking a significant milestone for project progress. This work included installing a 30-inch HDPE pipeline to reroute filtered water around the north and east extents of the WTP project site and relocating an existing system flow meter to the new line; as well as completing a new connection with chemical injection between the existing direct filtration plant's hydraulic control structure and an existing slow sand filter effluent line to maintain two separate transmission main flow paths, flow metering, and chemical treatment for the Commission's transmission mains.

In July, previously unidentified caulking and mastic materials containing PCBs were discovered on four of the eight slow sand filters. The project team is currently conducting additional testing and coordinating with EPA Region 1 and MassDEP in accordance with the applicable regulations.

Over Quarter 4, Walsh began installation of the 60-inch and 72-inch raw water conveyance pipelines for the new WTP, constructed an outlet headwall, and made modifications in the existing Backwash Facility.

The Commission is providing regular construction updates at https://www.newwestparish.com.

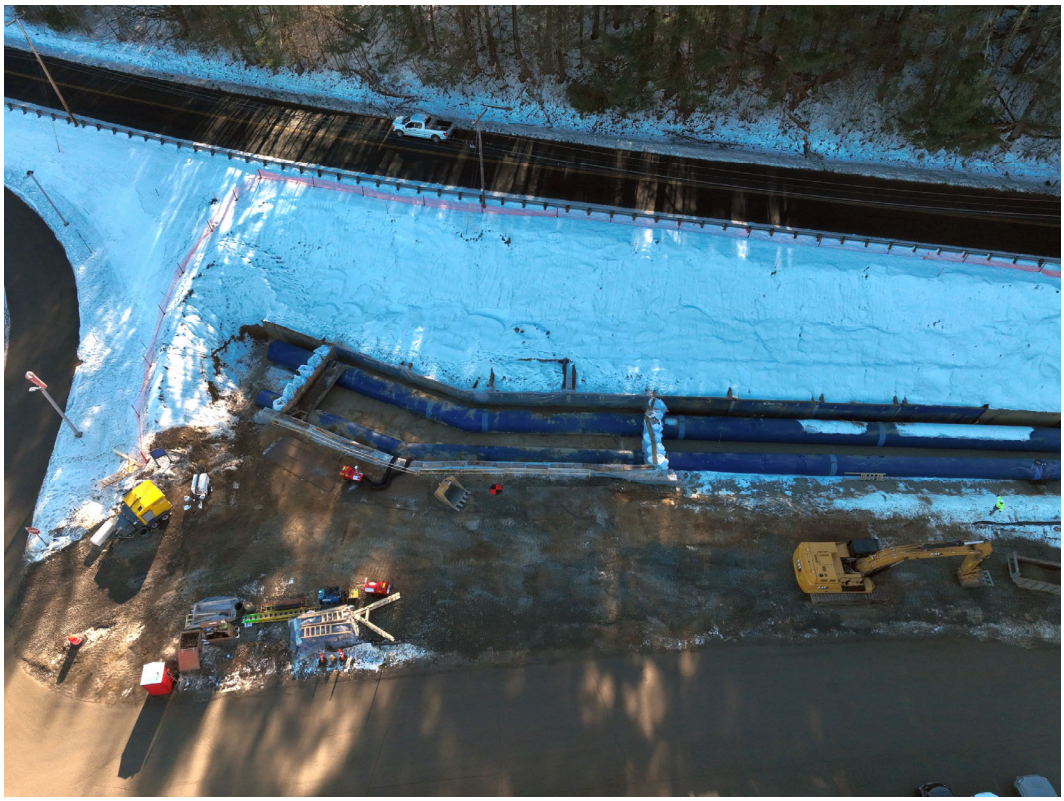
Supply Chain: Walsh provided a letter to the Commission in March 2025 indicating that new tariffs may result in price increases and extended material lead times.

Schedule: The MassDEP Administrative Consent Order dated April 22, 2024 requires the plant to be online by September 30, 2028. Substantial completion is projected for August 30, 2028 and final completion is projected for November 24, 2028. Hazen and Walsh are evaluating impacts that the management of PCB materials may have on the project schedule.

Installing final connections to new HDPE bypass (SWSC photo 08/15/2025)

Construction of 36-inch HDPE bypass around the SSFs
(SWSC drone photo 07/03/2025)

Excavation for 60-inch and 72-inch steel raw water piping
(SWSC drone photo 11/05/2025)



Construction of 60-inch and 72-inch steel raw water piping
(SWSC drone photo 12/01/2025)

42-inch Raw Water Transmission Main, Energy Dissipating Valve, and Equalization Tank

Project Purpose: This project is for the repair of the 42-inch bypass raw water conveyance PCCP pipeline and construction of a new energy dissipating facility (EDV) at the outlet. The pipeline and EDV facility were damaged when a new EDV failed in 2019. The pipeline and EDV facility provide a critical route for raw water to bypass the Cobble Mountain Hydroelectric Station (CMHS), the Intake Reservoir, and the 72-inch Intake Tunnel. The EDV facility provides necessary energy dissipation for the 42-inch outlet, which conveys high pressure water (approximately 200 psi) directly from Cobble Mountain Reservoir. The project also includes a new raw water equalization (EQ) tank that will be used in the future to directly provide raw water to the new water treatment plant. The EQ tank will eventually replace the need to use the sedimentation basin for raw water storage.

With the 42-inch raw water transmission bypass out of service, the Commission currently relies on the Diversion Gates (the low-level dam outlet) to release water from the Cobble Mountain Reservoir when the CMHS is offline for routine maintenance. This outlet was not designed to operate as a regular intake and is not operable remotely, requiring staff to regularly perform a complicated confined space entry that would require assistance from a technical rescue team should an emergency evacuation be required. With the 42-inch bypass out of service, there is currently no bypass for the 72-inch Tunnel.

Returning this route to service will allow the Commission to take the CMHS and 72-inch Intake Tunnel offline for maintenance when needed while maintaining raw water supply to the current and future water treatment plants.

Delivery Approach: Design-Bid-Build with AECOM (Engineer).

Progress: On the pipeline, Northern Construction (Northern) repaired and replaced sections of pipe and completed modifications to manholes and vent structures. Structural Technologies, a subcontractor to Northern, completed core repairs, invert repairs, mortar joint repairs, joint seals, and joint testing, as well as GFRP and CFRP lining installations. Northern installed new manholes, including installing ventilation and insulation and completing preliminary restoration. The work on the pipeline is nearing completion, with next steps including testing the line, installing final joint seals and other miscellaneous repairs, and completing the final connection to the piping at the EDV.

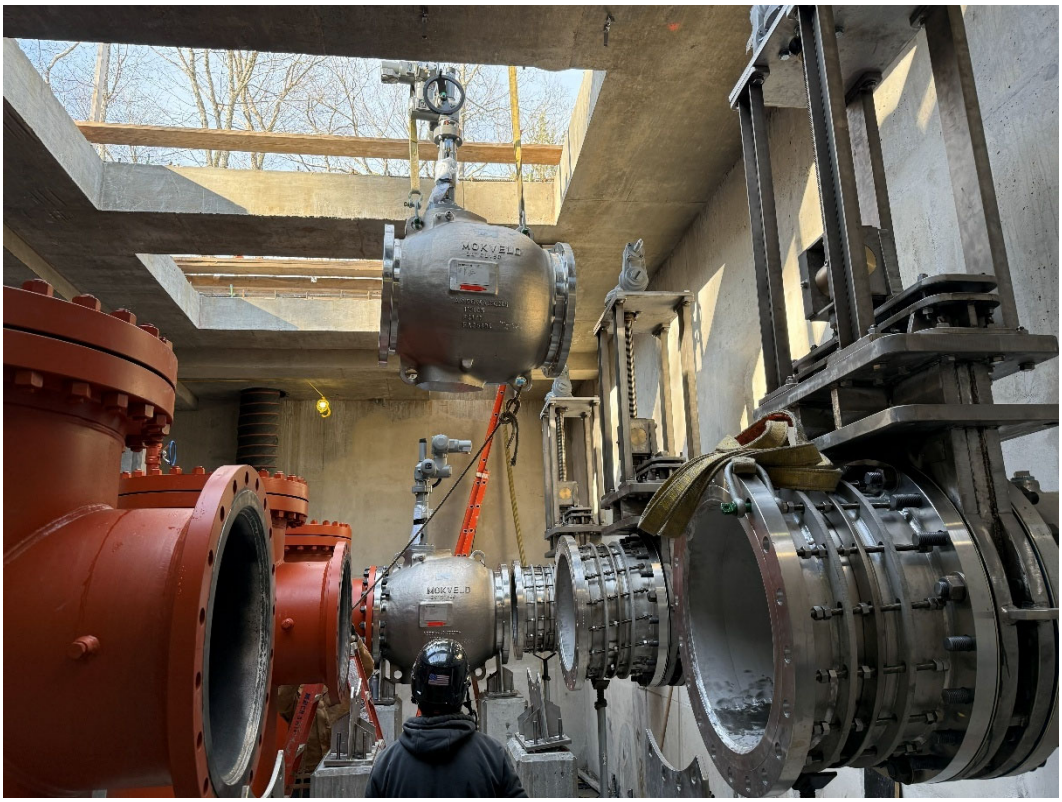
At the EDV facility, Northern completed construction, waterproofing, and leakage testing of the concrete structure. Inside the concrete structure, the piping, header manifold, isolation valves, energy dissipating valves, basket strainers, and related appurtenances were installed. Exterior pipe work was completed, and backfilling around the structure is in progress. Construction of the spillway concrete was completed and the retaining wall is in progress. Electrical work to complete wiring and lighting is in progress. The contractor is projecting a substantial completion date of March 2026, which is a three-month delay.

Supply Chain: The knife gate valves and Mokveld valves had long lead times and were critical path items for Northern. Unanticipated tariff charges were incurred for the Mokveld energy dissipating valves. The valves arrived on site this past quarter and a change order has been processed for $95,000 to cover the tariff charges.

Schedule: Over the last two quarters, 42-inch PCCP pipe manufacturing and quality control issues and well as 42-inch steel pipe quality assurance issues have caused additional delays. The contractor is currently projecting a substantial completion date of March 2026, a three-month delay from the established substantial completion date of December 2025.

Construction of the EDV facility (SWSC drone photo, 07/03/2025)

Roof slab reinforcement installation (SWSC drone photo, 09/08/2025)



Mokveld valve installation (AECOM photo, 12/03/2025)

Energy dissipating valve assembly (AECOM photo, 12/08/2025)

Cobble Mountain Hydroelectric Station Improvements for Primary Raw Water Conveyance

Project Purpose: The Cobble Mountain Hydroelectric Station (CMHS) is an essential component of the Commission's raw water conveyance system. As part of the primary raw water conveyance route, the CMHS delivers water from the Broome Gate Intake down to the Intake Reservoir while generating power by using the 450-foot elevation difference between the two reservoirs. This project will identify alternatives for upgrades to hydropower generation in response to failing infrastructure at the facility. The existing 1930 turbines are mostly beyond the end of their operational lives, with only one out of the original three turbines currently operational on a limited schedule to limit wear and reduce the risk of failure.

When the CMHS is offline for maintenance, the remaining routes for raw water conveyance are the 42-inch bypass (currently out of service) and the low-level Diversion Gates, which are not designed for regular operation. Restoring the CMHS conveyance route is vital to establishing reliable raw water conveyance for the Commission.

Delivery Approach: Design-Bid-Build with some Design-Build improvements for items such as the turbine and generator unit and associated structural foundation improvements.

Progress: HDR continued design for rehabilitation of the Unit #3 turbine and generator, which includes electrical updates, replacement of the inlet butterfly valve and actuator, lining the penstock to Unit #3, structural assessments and improvements, and rehabilitating the existing bridge crane. Holyoke Gas & Electric, the contracted plant operator, is managing the work. The majority of the design is now at 90% design completion phase, with the exception of the turbine/generator and plant electrical which are at 30% design. Improvements are projected to be completed in 2028 but the schedule may change as design progresses.

CMHS Existing Turbine #1

Supply Chain: Supply chain impacts on this project are currently unknown but long lead times are anticipated forp turbine manufacturers and valve manufacturers (estimated 2 year lead time).

Schedule: This project is currently projected to be completed in 2028, but this date is subject to change as design progresses.

Engineering Capital Projects Schedule

EPA Quarterly Update – December 2025