SPRINGFIELD WATER AND SEWER COMMISSION
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FOR IMMEDIATE RELEASE

Public Notification About Drinking Water Test Results from the Springfield Water and Sewer Commission

The Springfield Water and Sewer Commission (Commission) is notifying its customers of an exceedance of the maximum contaminant level (MCL) for the disinfection byproducts (DBPs) haloacetic acids (HAA5) and total trihalomethanes (TTHM) in drinking water. Sample results taken on June 2, 2022, indicated that our system exceeded the standard or maximum contaminant level (MCL) established by drinking water regulations for HAA5 at 8 sample locations and for TTHM at 4 sample locations.

The MCL for HAA5 is 60 parts per billion (ppb) and for TTHM is 80 ppb, with both respectively calculated as the average of the results from the past four quarters at an individual sample site. The Commission has experienced elevated levels of HAA5 in the finished drinking water since Fall 2018, when it first reported an exceedance. This quarter is the second exceedance of the MCL for TTHM, which is another category of DBP regulated by the Stage 2 Disinfection Byproduct Rule.

The exceedance was not an immediate health hazard and customers may continue consuming and using their water as normal. If this had been a public health emergency, customers would have been notified within 24 hours.

According to the Massachusetts Executive Office of Health and Human Services, "The risk of illness from DBPs is much lower than the risk of illness from drinking most surface water…that [has] not been disinfected. The major health risks from DBPs are from long-term exposures." (https://matracking.ehs.state.ma.us/index.html)

DBP Formation

DBPs form when chlorine reacts with dissolved natural organic matter (NOM) found in surface water bodies such as the Commission's Cobble Mountain Reservoir, the main source of the drinking water supply. The amount of chlorine necessary to maintain safe disinfection is determined by the amount and types of dissolved NOM in the raw water.

Changes in weather patterns (including the increased frequency of severe events) can impact raw water quality and the amount and types of NOM in Cobble Mountain Reservoir. The higher-than-average rainfall in summer 2021, and annual reservoir turnover in fall 2021, resulted in an increase in the amount of dissolved NOM in the raw water through the winter and spring. June 2022 sampling indicated that the amount of NOM has decreased from its previously unprecedently high levels, but remains elevated.

In addition, the Commission's West Parish Filters Water Treatment Plant was last modernized in 1974 and is not capable of removing the current levels of NOM to the extent necessary to meet DBP regulations. Recent repairs to two 1970s-era filters have also required a temporary reliance on older secondary filters that do not remove as much NOM. The amount of NOM in the raw water and necessary chlorine dosages contributed to elevated DBP levels in the distribution system.

DBP Regulation

Regulations related to DBPs were first adopted in 1998 and revised in 2012. DBPs are regulated because some studies suggest that consumption of water with HAA5 and/or TTHM in excess of the MCL *over many years* (i.e. decades or a lifetime) may result in potential health risks. The MCL set for DBPs provides a wide margin of protection against health effects.

The regulatory limit for DBPs is a running annual average, and elevated results from past quarters may impact future compliance calculations. The next sampling will take place in September 2022.

Solutions

To address regulatory compliance for disinfection byproducts and replace end-of-life infrastructure the Commission is designing a new West Parish Filters Water Treatment Plant. Design of the treatment plant is currently underway and construction is expected to be complete by 2027.

Design and construction of a new treatment plant that will meet 21st century standards is a complex process. Until the new treatment plant comes online the Commission expects there will continue to be exceedances of the MCL for DBPs, especially as the region experiences more severe weather patterns and events. Customers will receive notification anytime there is an exceedance.

Complete: Planning

- West Parish Filters Water Treatment Plant was constructed in 1909 and last modernized in 1974.
- The West Parish Filters Facility Improvements Plan, initiated in 2015, was completed in 2021 and determined a multi-phase approach to replace the water treatment plant.

Underway: Design, and Phase 1 Construction

- Design of the new treatment plant is currently underway and on schedule.
- Phase 1 construction of plant upgrades, the new Clearwell and Backwash Pump Station Project, got underway in 2021 and is expected to be complete by 2023.

Upcoming: Design Approval and Construction

- Final designs of the new treatment plant must be approved by MassDEP before construction can begin.
- Construction of the new treatment plant is expected to start in 2024 at an estimated cost of $238 million.

Strategic Financing and Accelerated Project Schedule

- In 2021 the Commission secured a highly competitive $250 million low-interest loan from the U.S. Environmental Protection Agency's (EPA) Water Infrastructure Finance and Innovation Act (WIFIA) Program to help finance the new treatment plant and other critical capital projects.
- Financing from the Massachusetts Clean Water Trust State Revolving Fund (SRF) will also be utilized as part of the Commission's innovative financing strategy to advance critical capital upgrades, including the new treatment plant.

Strategic and competitive financing through WIFIA and SRF will allow most of the West Parish Filters Water Treatment Plant construction to occur over an accelerated six-year schedule and will save ratepayers approximately $60 million in borrowing costs.

More information on the West Parish Filters Water Treatment Plant Facilities Improvements and other project updates are available on the Commission's website https://waterandsewer.org/projects/drinking-water-projects-2/west-parish-filters-facilities-plan/.

Additional Information

Customers with questions about the public notification or DBPs should contact the Commission by calling 413-310-3501, or by emailing info@waterandsewer.org.

More information can be found on the Commission's website at:
https://waterandsewer.org/dbps-faqs/

MassDEP also provides information on DBPs:

- HAA5 information - https://www.mass.gov/service-details/haa5-in-drinking-water-information-for-consumers
- TTHM information - https://www.mass.gov/service-details/tthm-in-drinking-water-information-for-consumers

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