



*Established*

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## SPRINGFIELD WATER AND SEWER COMMISSION

POST OFFICE BOX 995  
SPRINGFIELD, MASSACHUSETTS 01101-0995  
413-452-1300

January 5, 2022

**RE:** HAA5 Water Quality Violation and Public Notification

Dear Town of Ludlow Officials and Staff:

On January 6, 2022, the Springfield Water and Sewer Commission (Commission) will be issuing notices to all its customers in Springfield and Ludlow regarding a violation of the maximum contaminant level (MCL) for haloacetic acids (HAA5). Below please find an updated briefing on the exceedance.

### January 2022 Update

- Sample results taken on December 2, 2021 showed an exceedance of the MCL for HAA5 in the drinking water.
- HAA5 forms when chlorine reacts with dissolved natural organic matter (NOM) found in surface water supplies such as Cobble Mountain Reservoir, the main source of the drinking water supply.
- NOM levels in the reservoir fluctuate in response to weather patterns, and legacy treatment processes at West Parish Filters Water Treatment Plant are limited in their ability to reduce all NOM.
- Due in part to the significant rainfall in summer 2021, and annual reservoir turnover in fall 2021, HAA5 levels in the drinking water have since increased.

### Public Notification

- As before, this type of violation is not an immediate health hazard. The Commission and Massachusetts Department of Environmental Protection (MassDEP) advise that the public can continue to drink and use the water as normal. HAA5 is regulated based on the potential health impacts from drinking elevated levels *over many years* (i.e. a lifetime).
- Per MassDEP regulations, the Commission is including public notification letters in the bills of all retail customers. Customers should receive their bills on or after January 6, 2022.
- *Exceedances of the HAA5 MCL may re-occur throughout 2022.* This is in part because the regulatory limit for HAA5 is a running annual average, and the elevated results from September and December 2021 may impact future compliance calculations. In addition, future weather patterns may impact raw water quality.

### Background

- The Commission first experienced elevated HAA5 in September 2018, which led to the violation of the drinking water standard in successive quarters until December 2020.
- Public notification was not issued for the fourth quarter of 2020 (December 2020 – March 2021), as at the time the Commission was in compliance with all drinking water regulations.

- In April 2021, Public Notification for HAA5 was issued due to the exceedance of the MCL at one sample location.
- Sample results from June 2021 were all below the MCL for HAA5.
- Public Notification for HAA5 was issued in October 2021 due to an exceedance of the MCL during September 2021 sampling.

### **Solutions**

- To address the HAA5 exceedance, the Commission optimizes its existing treatment processes to limit the formation of HAA5 as much as possible. These include making constant adjustments to the treatment process to account for varying reservoir water quality and includes adjusting coagulants, filtration processes, chlorination application, water storage, and the implementation of system flushing.
- Design of treatment plant upgrades necessary to help reduce disinfection by-products, including HAA5, is currently underway, and is being informed by the results of the pilot study.
- In September 2021, the Commission announced it secured a low-interest loan from the U.S. Environmental Protection Agency's (EPA) Water Infrastructure Finance and Innovation Act (WIFIA) to finance the treatment plant upgrades. WIFIA financing allows the Commission to advance the water treatment facilities improvement projects on a more accelerated schedule.
- More information on the Commission's Water and Wastewater Infrastructure Renewal Program and the West Parish Filters Water Treatment Plant Facilities Improvements is available on the Commission's website <https://waterandsewer.org/wifia/>.

### **Questions and Information**

Constituents may contact Town officials with questions about their water quality. Please refer these questions to:

- Springfield Water and Sewer Commission: **413-310-3501** or **info@waterandsewer.org**
- More information is also available on our website:

<http://waterandsewer.org/haa5-frequently-asked-questions/>



**SPRINGFIELD WATER AND SEWER COMMISSION  
P.O. BOX 995, SPRINGFIELD, MA 01101**

Date of Issuance: January 6, 2022

Contact: Springfield Water and Sewer Commission, (413) 310-3501  
info@waterandsewer.org

**IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER  
Haloacetic Acid 5 (HAA5) MCL Violation**

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

Este relatório contém informações importantes sobre a água potável. Ter alguém que traduza-lo para você, ou falar com alguém que entende-lo.

Báo cáo này có chứa thông tin rất quan trọng về nước uống của bạn. Xin vui lòng dịch nó hoặc nói chuyện với một ai đó hiểu nó.

The Springfield Water and Sewer Commission (Commission) (PWS ID# 1281000) recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we are doing to correct the situation.

The Commission routinely monitors for the presence of drinking water contaminants. Testing results from December 2, 2021, showed that levels for HAA5 at the 8 sample locations exceeded the maximum contaminant level (MCL) established by drinking water regulations. The MCL for HAA5 is 60 parts per billion (ppb), calculated as a 12-month running average of quarterly samples. The averages at the 8 locations were 65, 76, 75, 74, 76, 76, 78 and 76 ppb. The December 2, 2021 results ranged from 73 ppb to 93 ppb. The Commission first experienced elevated HAA5 in September 2018, which led to the violation of the drinking water standard in successive quarters until December 2020. In 2021, the Commission reported violations in March and September.

**What does this mean?**

**This is not an emergency.** If it had been an emergency, you would have been notified within 24 hours. HAA5 are five haloacetic acid compounds that form when a disinfectant (chlorine) reacts with dissolved natural organic matter (NOM) in the water.

The MCL is based on the potential health risks associated with drinking water with elevated levels of HAA5 over decades or a lifetime. *People who drink water containing HAA5 in excess of the MCL over many years may have an increased risk of getting cancer.* Please see <https://www.mass.gov/service-details/haa5-in-drinking-water-information-for-consumers> for a fact sheet on HAA5.

**What should I do?**

**There is nothing you need to do. You do not need to boil your water or take any other corrective actions.** If a situation arises where the water is not safe to drink, you will be notified within 24 hours.

If you have a severely compromised immune system, have an infant, are pregnant, or are elderly, you may be at increased risk and should seek advice from your health care providers about drinking this water.

### **Why did this happen?**

HAA5 forms when dissolved natural organic matter (NOM) interacts with chlorine. The amount of chlorine necessary to maintain safe disinfection is determined by the amount and types of dissolved NOM in Cobble Mountain Reservoir, the main source of the drinking water supply. Sample results from December 2020, March 2021, and June 2021 indicated that dissolved NOM levels had decreased from previously elevated levels and that the water treatment process had been effective in the reduction of HAA5. The higher-than-average rainfall in July and August 2021 has resulted in an increase in the amount of dissolved NOM in Cobble Mountain Reservoir. Additionally, annual reservoir turnover, during which the top layer of water shifts to the bottom of the reservoir, occurred in fall 2021, impacting raw water quality. The increase in NOM in the raw water and necessary chlorine dosages contributed to elevated HAA5 levels in the distribution system. Our current treatment process is limited in its ability to reduce NOM, resulting in the elevated levels of HAA5 in our drinking water.

### **What is the Commission doing to resolve the problem?**

The Commission has modified its existing treatment process and system operations to reduce the levels of HAA5 in the distribution system as much as possible while maintaining safe chlorine levels. We continue to advance efforts on a permanent solution. A pilot study was completed between fall 2019 and fall 2020 to determine the most effective treatment process to remove more dissolved NOM and reduce HAA5. Results from the pilot study are being used to complete a Facilities Plan and to design permanent treatment plant upgrades necessary to reduce disinfection by-products, including HAA5.

The procurement for the selection of a design firm for the permanent treatment plant upgrades is underway. After the design is approved by MassDEP, construction is anticipated to begin in FY24, or earlier if possible, at an estimated cost of \$168 million. The project is being financed with support from the U.S. Environmental Protection Agency's (EPA) Water Infrastructure Finance and Innovation Act (WIFIA) Program.

The Commission is accelerating this work as quickly as possible while committing significant resources to the process. The pilot study built upon an already ongoing comprehensive evaluation of water quality and the water treatment process that began four years prior. A panel of national experts convened by the Commission is guiding these activities. The Commission also regularly implements land management tools according to its Source Water Protection Plan to optimize raw water quality.

### **What can I do to help?**

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

### **What if I have further questions?**

Please contact 413-310-3501 or [info@waterandsewer.org](mailto:info@waterandsewer.org) if you have any questions about this notification.

More information is also available at <https://waterandsewer.org/haa5-frequently-asked-questions/>.

Sent by Springfield Water and Sewer Commission. PWSID#1281000. Date Distributed: January 6, 2022.