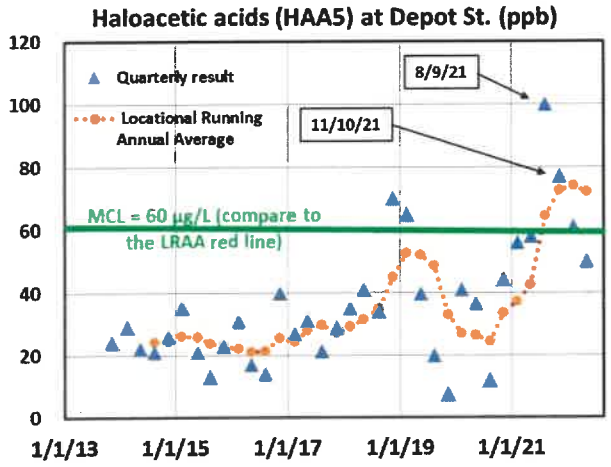
HOUSATONIC WATER WORKS COMPANY

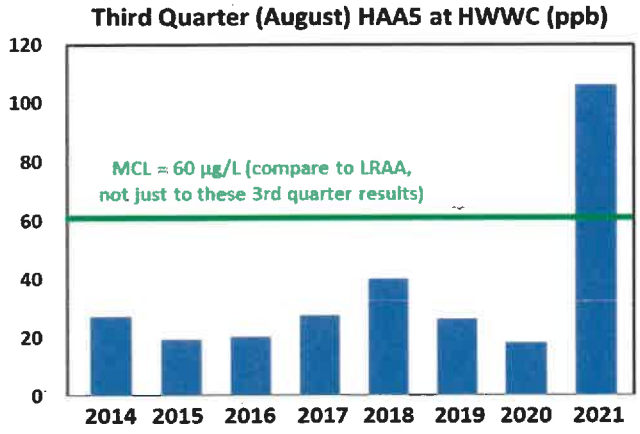
SINCE 1897

PRESS RELEASE
June 13, 2022

Housatonic Water Works Company, Inc. (HWWC) has announced in a letter to customers today the 2nd quarter 2022 monitoring results for disinfection byproducts in the treated drinking water supply.

- The May 2022 (2nd quarter) result for the DBP class of haloacetic acids (HAA5) was down to 50 µg/L (or parts per billion, ppb), well below last August's high of 103 ppb.
- The Massachusetts Department of Environmental Protection (MassDEP) has established a Maximum Contaminant Level (MCL) of 60 ppb for HAA5. Compliance the MCL is based on the calculated Locational Running Annual Average (LRAA).
- Including the May results, the LRAA for HAA5 is now 72 ppb (average of 103, 74, 61, and 50 ppb for the most recent August, November, February, and May results), still above the MCL of 60 ppb. This is the fourth consecutive quarter the MCL was exceeded going back to last August. This was expected given the atypically high result from 3rd quarter 2021, and that MCL compliance is based on an annual average.
- The next monitoring will be conducted in August 2022, and that result will replace the August 2021 result for calculating the LRAA. Given the trend of decreasing HAA5 since last August, the calculated LRAA is likely to be below the MCL when the August 2022 result is obtained.





HAA5 are disinfection byproducts (DBPs) that form when the chlorine disinfectant reacts with natural organic matter in the water. Per the MassDEP, people who drink water containing HAA5 in excess of the MCL over many years may have an increased risk of getting cancer.

HWWC has submitted to the MassDEP an evaluation of the cause of the relatively high HAA5 compounds found in August and November 2021. Those uncharacteristically high results (see above plots) were likely caused by historically heavy rainfall in July 2021.

80 Maple Avenue, Suite 1, Great Barrington, MA 01230

Tel: 413.528.1780
Fax: 413.528.3024
E-mail: housatonicwater@gmail.com
www.housatonicwater.com

As shown in the table below, HAA5 levels vary seasonally, with HWWC's higher levels generally being in February (1st quarter) and lower levels in August (3rd quarter). That's part of why last August's high results were so unexpected.

Historical average HAA5 (2013 – 2021) vs. recent results (since August 2021) in µg/L (ppb)

Month	Recent result	Historical average	Recent difference from average	Recent sample date
August	103	22	+ 81	8/9/21
November	77	33	+ 44	11/10/21
February	61	40	+ 21	2/9/22
May	50	33	+ 17	5/11/22

The good news is that not only have the HAA5 sample results been decreasing since last August's atypically high value, but the difference compared to the historical average for their seasons continues to decrease, cutting in about half from August to November, then again in half from November to February, and then some more from February to May. This suggests the water is returning to its more normal state in terms of the potential for formation of HAAs. Several other water systems in western Massachusetts also had similar experiences, with abnormally high DBPs following the July 2021 rain, and then DBP concentrations subsequently decreasing over time and returning toward normal levels.

The sudden increase last August in HAA5 does not appear to be due to an increase in natural organic matter (as measured by total organic carbon (TOC) levels), a change in pH, or any other water quality characteristic for which there are data. The true cause is not known, and since that water is now gone it is not possible to identify and study the cause of that change in the water. And since TOC levels were not elevated last fall, removing additional TOC is not necessarily a guaranteed solution to the high HAAs.

HWWC's current slow sand filtration plant already does a very good job at removing natural organic matter, with TOC removals measured at 34% to 55%. The recent monitoring results from May showed a 44% decrease in TOC from the filters, going from 2.6 mg/L down to only 1.4 mg/L, which is a relatively low level. That is impressive for slow sand filters, which typically are expected to remove only ~15 to 20% of the TOC. Perhaps this success is partly due to the well-established age of the microbial population and HWWC's custom hydraulic rake filter cleaning system. Periodically cleaning the sand surface with water instead of physically removing the top layer of sand has allowed the sand to not be replaced in many years, providing better treatment while also saving customers money.

In response to the HAA5 results, HWWC has lowered the chlorine residual level while maintaining more than enough to exceed all disinfection requirements, and will be conducting increased monitoring TOC in both the source water and treated water. HWWC has also submitted to MassDEP a pilot study proposal for removing the manganese that causes the periodic colored-water episodes, and we are waiting on their approval. The pilot study is scheduled for this summer. The proposed chlorine oxidation/greensand filtration system would be added to the HWWC treatment plant after the existing slow sand filters. The proposed pilot study also includes an evaluation of factors affecting the formation of HAAs and how the proposed new treatment system would impact that.