

FAQ: Public Notice for TTHMs and HAA5

What are disinfection by-products?

All drinking water sources have potential to contain microorganisms, such as bacteria, viruses, and protozoa that may cause serious illnesses. Frankfort's water is disinfected with chlorine to destroy or inactivate those microorganisms. Chlorine is an effective disinfectant. However, when chlorine is added to water with organic matter, by-products can form. Trihalomethanes (TTHMs) and haloacetic acids (HAA5) are the most common types of disinfection by-products found in chlorinated drinking water.

What are the standards for TTHM and HAA5 in drinking water?

The ILEPA standard for TTHMs in drinking water is 0.080 milligrams per liter (mg/l) based upon the average of four samples over a twelve-month period.

The ILEPA standard for HAA5 in drinking water is 0.060 milligrams per liter (mg/l) based upon the average of four samples over a twelve-month period.

What levels of TTHMs and HAA5 were detected in Frankfort's water system?

The current twelve-month rolling average TTHM level at the sample site in question is 0.135 mg/l (*exceeds the 0.080 standard*). The sample result at the site that exceeded the standard for TTHMs was 0.436 mg/l. All prior samples at this site during the past year were far below the standard (0.0416, 0.0403, and 0.0213 mg/l). Subsequent re-samples taken at the site in question were back below the standard (0.0394 mg/l).

The current twelve-month rolling average HAA5 level at the sample site in question is 0.061 mg/l (*exceeds the 0.060 standard*). The sample result at the site that exceeded the standard for HAA5 was 0.210 mg/l. All prior samples at this site during the past year were far below the standard (0.015, 0.011, and 0.006 mg/l). Subsequent re-samples taken at the site in question were back below the standard (0.017 mg/l).

What was the cause for the sudden and temporary increase in TTHMs and HAA5?

Village of Frankfort water operators attribute the sudden rise in TTHMs and HAA5 to temporary factors including ongoing maintenance and system repairs that were occurring at the time the sample was taken. In response Village staff intensified flushing efforts and adjusted chlorine feed rates. Subsequent re-samples were back below the standard.

What are the potential health concerns related to TTHMs and HAA5?

Long-term exposure to elevated TTHM levels could pose health issues with the liver, kidneys, central nervous system, and an increased risk of cancer. Short-term use of drinking water that exceeds the standards is unlikely to have an impact on human health. As a precautionary measure, drinking water standards are set to ensure a very low level of potential health risk over a typical lifetime of exposure.

People who drink water containing HAA5 in excess of the standard over many years may have an increased risk of getting cancer. Short-term use of drinking water that exceeds the guidelines is unlikely to have an impact on human health. As a precautionary measure, drinking water standards are set to ensure a very low level of potential health risk over a typical lifetime of exposure.