



Clover Hill III FAQs

What is Disinfection?

Disinfection is a chemical process used in water systems where chemicals are added to inactivate or kill pathogens (i.e., disease causing organisms) found in source water (i.e., lakes, reservoirs, or groundwater sources). Chlorine is the chemical used in Frederick County water systems.

What are Disinfection Byproducts?

Disinfection byproducts are formed when disinfectants used in water treatment react with bromine and/or natural organic matter (i.e., decaying vegetation) present in the source water. Disinfection byproducts, which are typically found in Frederick County drinking water include **trihalomethanes (TTHMs)** and **haloacetic acids**.

How are Disinfection Byproducts and Pathogens Related?

Current disinfection methods used in water systems can inactivate pathogens, but can also form disinfection byproducts that may be harmful to human health. EPA regulations for disinfection byproducts are intended to both protect people from waterborne disease and the potential harmful effects of disinfection byproducts.

What are Haloacetic Acids?

Haloacetic acids are five haloacetic acid compounds (HAA5), which form when disinfectants react with natural organic matter in the water.

Is the water safe to drink?

Yes. The health risks associated with haloacetic acids are only seen after many years of exposure to levels above the MCL. With the exception of haloacetic acids, the water in Clover Hill III meets all other state and federal drinking water requirements.

Will my home drinking water filter remove HAA5?

Most home treatment systems, including a refrigerator filter (using activated carbon) or a drinking water filters (using activated carbon), which reduce chlorine, also reduce HAA5.

How is compliance determined with the regulations?

Compliance is based upon the Locational Running Annual Average for each sample site and is calculated using quarterly monitoring results from February, May, August and November of each year. An annual (4-quarter) average is used because concentrations fluctuate throughout the year. Typically, the highest concentrations are found in August of each year when temperatures are high and source water contains the greatest amount of organic matter, while the lowest concentrations are found throughout the winter.

Is Clover Hill III in compliance with the HAA5 drinking water standard currently?

Yes. The Clover Hill III water system has been in compliance with the Haloacetic Acids (HAA5) standards since May 2018. The standard is 60 ppb based upon a Locational Running Annual Average, which is calculated by averaging the quarterly test results at each individual sampling location for the prior 12 months.

What is a “part per billion”?

It is a unit of measure. For comparison, 1 part per billion equals:

- 1 penny in 10 million dollars
- 1 second in 32 years
- 1 foot of a trip to the moon
- 1 blade of grass on a football field.
- 1 drop of water in an Olympic-size swimming pool.

What is being done?

Because the water the County provides to our customers in Clover Hill III is produced by the City of Frederick, we are working closely with their staff to find a resolution. We have taken immediate steps to increase water quality monitoring and have increased the frequency of routine flushing of the water system. At the same time, City of Frederick staff are looking at methods to improve treatment at their Fishing Creek source, which provides the majority of your drinking water.

How long will it take to correct this issue?

While our flushing efforts have resulted in some improvements to water quality, improvements to source water treatment will be needed to fully address the HAA5 issue. To that end, the City of Frederick has approved funding to design and install treatment improvements at the Fishing Creek Reservoir and Lester Dingle Water Treatment Plant. Engineering studies have shown that these improvements will significantly decrease HAA5 formation. Recent communications with staff from the City of Frederick during September 2019 indicate that procurement efforts to select a consultant are underway. Once selected, design efforts are anticipated to last 9 months followed by a construction period of 1 year with completion in the Summer of 2021.

Clover Hill III used to receive water from wells located within the community. Why can't we switch back to them as a water source?

The County operated the Clover Hill III Water Treatment Plant, which used wells as source of water, until April 2016. At that time, the water distribution system was connected to the City of Frederick's water system as part of an on-going effort to consolidate regional water systems with the City. Once this connection was made, the treatment plant was decommissioned and the water appropriations for the wells were relinquished, so this is no longer an option.

Does the County have this problems on its other water systems?

No. The County has 13 individual water system, with its Potomac River supply being the largest providing water to nearly 50,000 residents. Average HAA5 levels on these systems ranged from 'not detected' to a high of 89.2 ppb in 2017. For more comparative information view our Water Quality Reports at www.FrederickCountyMD.gov/WaterQualityReports.